

Pismo Beach General Plan/ Local Coastal Plan Update

Final Program Environmental Impact Report

SCH# 2021010158

prepared by

City of Pismo Beach
Community Development Department
760 Mattie Road
Pismo Beach, California 93449
Contact: Matt Downing, Community Development Director

prepared with the assistance of

Rincon Consultants, Inc.
1530 Monterey Street, Suite D
San Luis Obispo, California 93401

October 2023

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Environmental Scientists | Planners | Engineers
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Executive Summary

This document is a Final Program Environmental Impact Report (EIR) analyzing the environmental effects of the proposed City of Pismo Beach General Plan and Local Coastal Plan (GP/LCP) Update. It is composed of a revised version of the Draft EIR (with ~~strikethrough~~ and underline showing changes from the original text), technical appendices, comments received during the public review period, and responses to those comments. This section of the EIR summarizes the details of the EIR public review process and the characteristics of, alternatives to, and the environmental impacts and mitigation measures associated with the proposed GP/LCP Update.

Public Review Process

A Notice of Preparation (NOP) of a Draft EIR was circulated to potentially interested parties from January 15, 2021 to February 15, 2021. The City received three responses to the NOP. The NOP and comment letters are included in Appendix A. As detailed in Section 1.4 of this EIR, the responses to the NOP comment letters are addressed, as appropriate, in the analysis contained in the various subsections of the EIR. The City also held a public scoping meeting for the EIR on January 28, 2021 via videoconference. No verbal comments were received at the scoping meeting.

The Draft EIR was circulated for a 45-day public review period that began on February 1, 2022 and ended on March 18, 2022. Three comment letters were received on the Draft EIR. Responses to the public comments are detailed in Section 7.0 of this EIR. In addition, minor revision to the GP/LCP element policies were made after public circulation of the Draft EIR. The changes that occurred between the Draft EIR and Final EIR in response to public comments and to reflect changes to the GP/LCP Update elements are shown in underline for text additions and ~~strikethrough~~ for text deletions in the applicable sections of the Final EIR. In addition, Appendix C (Conservation and Open Space Fact Sheet), Appendix D (Land Use Fact Sheet), and Appendix F (Safety Fact Sheet) of the Draft EIR are not included within this Final EIR because these documents are outdated as a result of the changes made to the GP/LCP Update between the timeframe of the Draft and Final EIR. The additional revisions made to the GP/LCP Update effectively function as updated versions of Appendix C, Appendix D, and Appendix F of the Draft EIR. The subsequent appendices were renumbered accordingly. Non-substantive changes to formatting and appendix lettering are not shown in underline and strikethrough. *State CEQA Guidelines, Section 15088.5*, requires that a lead agency recirculate a Draft EIR when significant new information is added to the EIR prior to certification. The revisions in the Final EIR do not constitute "significant new information" because they do not result in a new avoidable significant effect, do not substantially increase the severity of any environmental impacts, do not identify a feasible project alternative considerably different from others previously analyzed, and do not involve new mitigation measures or substantial revisions to mitigation measures that were proposed in the Draft EIR. Because the revisions clarify or strengthen the analysis of impacts in the EIR and do not constitute significant new information, recirculation of the Draft EIR is not required pursuant to CEQA Guidelines §15088.5.

Project Synopsis

Lead Agency Contact Person

Matt Downing, Community Development Director
City of Pismo Beach
Community Development Department
760 Mattie Road
Pismo Beach, California 93449
(805) 773-4658

Project Description

This EIR has been prepared to examine the potential environmental effects of the GP/LCP Update. The following is a summary of the full project description, which can be found in Section 2.0, *Project Description*.

Project Characteristics

The project analyzed in this EIR is the proposed City of Pismo Beach General Plan/Local Coastal Plan (GP/LCP) Update, which includes updates to the Land Use, Safety, Conservation and Open Space, Noise, ~~Facilities,~~ and Circulation Elements of the City's 1992 GP/LCP. The GP/LCP Update does not include updates to the Parks, Recreation, and Access Element and Housing Element. The Design, Facilities, and Growth Management Elements are being eliminated and incorporated into the other elements. ~~Land Use and Community Design Element~~. With the GP/LCP Update, the City GP/LCP will consist of the following ~~eight~~ seven elements: 1) Circulation, 2) Conservation and Open Space, ~~3) Facilities~~, ~~4~~ 3) Housing, ~~5~~ 4) Land Use and Community Design, ~~6~~ 5) Noise, ~~7~~ 6) Parks, ~~and~~ Recreation, and Access and ~~8~~ 7) Safety.

The GP/LCP Update presents the community's vision for Pismo Beach through the GP/LCP horizon (year 2040). The land use classifications included in the GP/LCP define the basic categories of land use allowed in the City and are the basis for the zoning districts established in the City Municipal Code, which contain more specific regulations and standards governing development on individual properties.

Table ES-1 identifies the development capacity associated with the planned distribution of land uses described in the Land Use and Community Design Element and summarizes the maximum residential and nonresidential levels of development that could occur from implementation of land use policies established by the GP/LCP Update.

Table ES-1 GP/LCP Update Projected Development at Full Buildout

Land Use	Number of Vacant or Underutilized Parcels	Potential Increase in Dwelling Units	Potential Increase in Non-Residential Building Area (sf)	Potential Increase in Population	Potential Increase in Jobs
Commercial	42	–	420,928	–	242
Central Commercial	26	–	248,000	–	33
High Density Residential	139	162	–	289	-12
Mixed Use	48	722	108,000	1,221	272
Medium Density Residential	32	228	–	471	–
Public/Semi Public	1	-1	6,340	-2	10
Total	**288**	**1,111**	**783,268**	**1,979**	**545**

Zoning Code and Coastal Implementation Plan Amendments

To maintain consistency with the GP/LCP Update, the project includes a Zoning Code Update which includes the Coastal Implementation Plan. Amendments included as part of the project include:

- Updating the allowed uses in all zones as necessary for consistency with the General Plan Land Use Designations.
- Establishing new zoning district(s) as necessary to implement the GP/LCP Update.
- Updating other development standards as necessary to implement the GP/LCP Update. This will include maximum height, setbacks, design standards and other standards.
- Updating administration and permitting to integrate coastal permit processes. Additional coastal-specific issues to be addressed include:
  - Parking and transportation demand management
  - Coastal access, beach use, and special events
  - Visitor-serving uses and tourism
  - Sea-level rise and coastal resilience
  - Stormwater management and water quality

The Zoning Code Update also addresses other issues, such as neighborhood compatibility and economic development, consistent with direction in the GP/LCP Update.

Required Discretionary Approvals

Following recommendations from the Planning Commission, the Pismo Beach City Council will need to take the following discretionary actions in conjunction with the project:

- Certify the Final PEIR
- Adopt the proposed GP/LCP Update
- Adopt the Zoning Code Update
- Adopt the Coastal Implementation Plan
- Adopt the Coastal Land Use Plan

The California Coastal Commission will also need to take the following discretionary actions in conjunction with the project:

- Certify the GP/LCP Update
- Certify the Zoning Code Update
- Certify the Coastal Implementation Plan
- Certify the Coastal Land Use Plan

Project Objectives

The GP/LCP Update is intended to function as a policy document to guide land use decisions within the City through the year 2040, consistent with the community vision and guiding principles. The vision for the city was developed with extensive community input. Based on this community input and in recognition of the state's planning priorities, a vision and values supporting the vision for the community were developed. The vision and guiding principles of the GP/LCP Update, which are also the project objectives, are contained in the Land Use and Community Design Element and are detailed in Section 2, *Project Description*.

A key objective of the GP/LCP Update is to ensure that the City's land use plan meets the fair share housing needs allocation established in the San Luis Obispo Council of Governments (SLOCOG) Regional Housing Needs Plan (RHNP).

Alternatives

As required by Section 15126.6 of the *CEQA Guidelines*, this EIR examines a range of reasonable alternatives to the proposed GP/LCP Update that could feasibly achieve similar objectives but would avoid or substantially lessen significant adverse impacts associated with the GP/LCP Update.

The following alternatives are evaluated in this EIR:

- **Alternative 1: No Project/Continue Using 1992 General Plan and Local Coastal Plan**. This alternative is comprised of a land use pattern that reflects the land use identified in the existing 1992 GP/LCP, most recently updated in 2018 (Land Use and Circulation Elements). Under this alternative, the proposed GP/LCP Update would not be adopted and the existing GP/LCP, including the land use map and all of the GP/LCP goals and policies, would remain in place through the horizon year of 2040.
- **Alternative 2: Reduced Residential Buildout.** Under the Reduced Residential Buildout Alternative, the maximum residential buildout that would occur within the 2040 planning horizon would be reduced by 50% for all residential land use designations (low-density, medium-density, high density, very high-density, and mobile home park). Under Alternative 2, up to approximately 556 new residential units would be constructed in the City limits (as compared to approximately 1,111 new residential units under the proposed GP/LCP Update). This would be a reduction in new residential development potential of approximately 555 units as compared to the proposed GP/LCP Update.
- **Alternative 3: Reduced Commercial Floor Area Ratio.** Under the Reduced Commercial Floor Area Ratio (FAR) Alternative, the maximum allowable FAR for new Commercial land use designations would be reduced from 2.0 to 1.5 and FAR for new Central Commercial land use designations would be reduced from 1.25 to 1.0 to reduce commercial density. Under

Alternative 3, approximately 630,000 square feet of new non-residential development could be constructed in the City limits (as compared to approximately 780,000 square feet of new non-residential development under the proposed GP/LCP Update). This would be a reduction in new commercial development potential of approximately 150,000 square feet as compared to the proposed GP/LCP Update.

- **Alternative 4: Proposed General Plan and Local Coastal Plan Update with Expanded Sphere of Influence Development.** Under this alternative, the project area would include expanded development potential within the City's Sphere of Influence (SOI), which includes land in Price Canyon and along Oak Park Boulevard and a small area along Mattie Road. This alternative assumes up to 10% of the City's 1,282 acres of SOI area would be developed during the 2040 planning horizon with a mix of single- and multi-family residential land uses reflecting a mix of densities similar to existing residential development throughout the City. Under Alternative 4 the City would annex portions of the SOI planned for urban land use development and provide municipal services. Up to 128 acres of new residential land use area in the Price Canyon and Los Robles del Mar areas of the SOI would become available for development, which may accommodate approximately 1,800 new single- and multi-family residential units. Full buildout of Alternative 4 would result in a population increase of approximately 5,185 and a total City-wide population of up to 13,422 in 2040. This would be approximately 3,000 more residents compared to the year 2040 population under full implementation of the proposed GP/LCP Update. Overall, Alternative 4 would increase the growth in population in Pismo Beach through the year 2040 by approximately 30 percent compared to the proposed GP/LCP Update.

Section 15126.6(e)(2) of the CEQA Guidelines requires that an analysis of project alternatives identify an environmentally superior alternative among the alternatives evaluated in the EIR. Based on the information presented in the EIR, Alternative 2 (Reduced Residential Buildout) would be the environmentally superior alternative when considering overall environmental impacts. Alternative 2 would reduce project-level and cumulative impacts to air quality to a less than significant level due to the overall reduction in residential development that would result in consistency with the 2001 Clean Air Plan (CAP). However, due to the increase local and regional VMT compared to existing conditions, project-level and cumulative transportation impacts under Alternative 2 would remain significant and unavoidable. In addition, reducing the overall residential development in Pismo Beach would be inconsistent with the vision and objectives of the GP/LCP Update because it would fail to ensure that the City's land use plan meets the fair share housing needs allocation established in the SLOCOG RHNP. Therefore, this alternative would not meet the basic project objective to manage growth in Pismo Beach. Refer to Section 7.0, *Alternatives*, for the complete alternatives analysis.

Areas of Known Controversy

The City received ~~two~~ three responses to the Notice of Preparation (NOP), from the California Department of Transportation (Caltrans) and the San Luis Obispo County Air Pollution Control District (APCD). The comment letters are included in Appendix A and summarized in Table 1-1 in Chapter 1.0, introduction. The comment letters raise concerns about several environmental topics including transportation impacts (such as vehicle miles traveled [VMT]), climate change, air contaminant emission, and project alternatives. These topics are addressed in the analysis contained in the various subsections of Section 4.0, *Environmental Impact Analysis*.

Public comments raised on the Draft EIR and responses to those comments are detailed in Section 7.0 of this EIR. The comment letters raised concerns about several environmental topics including biological resources, cultural resources, tribal cultural resources, and transportation.

Summary of Impacts and Mitigation Measures

Table ES-2 summarizes the identified environmental impacts for each issue area studied in the EIR, required mitigation measures (if any), and the level of significance after mitigation.

The City of Pismo Beach determined that there was no substantial evidence that the project would cause or otherwise result in significant environmental effects in the resource areas of agricultural resources and mineral resources. The substantiation for determining that these issues would result in no impact is described in Section 6, Effects Found to be Less than Significant.

As detailed in Table ES-2 below, impacts that were determined to be less than significant include:

- Aesthetics
- Air Quality (exposure of sensitive receptors to substantial pollutant concentrations and odors)
- Biological Resources
- Cultural and Tribal Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards, Hazardous Materials, and Wildfire
- Hydrology and Water Quality
- Land Use
- Noise
- Population and Housing
- Public Services and Recreation
- Transportation (conflict with circulation programs, plans, or ordinances; increased hazards due to design features; and inadequate emergency access)
- Utilities and Service Systems

Impacts that were determined to be less than significant with mitigation included:

- Air Quality (cumulative net increase in criteria pollutants)

Impacts that were determined to be significant and unavoidable and would require a statement of overriding considerations to be made per Section 15093 of the State CEQA Guidelines if the project is approved include:

- Air Quality (project-level and cumulative impacts related to conflict with an air quality plan)
- Transportation (project-level and cumulative VMT impacts)

Table ES-2 Summary of Environmental Impacts, Mitigation Measures, and Residual Impacts

Impact	Mitigation Measure(s)	Residual Impact
Aesthetics		
AES-1. Compliance with the GP/LCP Update Policies, Zoning Code, Downtown Strategic Plan, and the Shell Beach Design Standards and Guidelines would protect visual and aesthetic resources in the City from potential aesthetic impacts resulting from development facilitated by the General Plan/ LCP Update. This impact would be less than significant.	No mitigation measures are required.	N/A
AES-2. Compliance with existing standards and GP/LCP Update goals, policies, and actions would ensure that new development and redevelopment complements the existing visual character and quality of Pismo Beach, and does not conflict with zoning and regulations governing scenic quality. Therefore, the project would have a less than significant impact on visual character and quality.	No mitigation measures are required.	N/A
AES-3. New development facilitated by the GP/LCP Update would be subject to existing regulations in the City's Zoning Code, and GP/LCP Update Policies, to protect skyward nighttime views and to lessen or prevent glare. Therefore, the project would result in a less than significant impact associated with new sources of light and glare.	No mitigation measures are required.	N/A
Cumulative. The cumulative impacts associated with changes in the visual environment would not be significant, and the GP/LCP Update's contribution to these impacts would not be cumulatively considerable.	No mitigation measures are required.	N/A
Air Quality		
AQ-1. The GP/LCP Update would result in an increase in projected population that would exceed the 2001 Clean Air Plan projections for Pismo Beach, which would produce long-term operational criteria pollutant emissions beyond those planned for the region. This inconsistency with the SLOAPCD Clear Air Plan would be a significant and unavoidable impact.	No feasible mitigation strategies are available to reduce this impact, beyond the proposed GP/LCP Update policy framework.	Significant and Unavoidable

Impact	Mitigation Measure(s)	Residual Impact
AQ-2. Buildout of the GP/LCP Update would result in short-term emissions of criteria pollutants. Construction emissions from future projects in the planning area would be quantified once project details are known and evaluated for potential impacts in accordance with SLOAPCD guidance. SLOAPCD provides standard emissions reduction measures for construction emissions impacts which are included as required mitigation. Therefore, this impact would be less than significant with mitigation	*AQ-1 Standard Mitigation for Construction Equipment.* Proponents of individual land use projects, or other projects requiring grading or building permits, shall require construction contractors to incorporate the following standard mitigation measures, as applicable, to reduce reactive organic gases (ROG), nitrogen oxides (NO_X), and diesel particulate matter (DPM) emissions from construction equipment. Mitigation measures shall be listed on project construction plans and the project proponent shall perform periodic site inspections during construction to ensure that mitigation measures are being implemented. ▪ Maintain all construction equipment in proper condition according to manufacturer's specifications ▪ Fuel all off-road and portable diesel-powered equipment with California Air Resource's Board (CARB)-certified motor vehicle diesel fuel (non-taxed version suitable for use off-road) ▪ Use diesel construction equipment meeting CARB's Tier 2 certified engines or cleaner off-road heavy-duty diesel engines, and comply with the State off-road Regulation ▪ Use on-road heavy-duty trucks that meet CARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation ▪ Construction or trucking companies with fleets that that do not have engines in their fleet that meet the engine standards identified in the above two measures (e.g. captive or NOx exempt area fleets) may be eligible by proving alternative compliance ▪ All on and off-road diesel equipment shall not idle for more than 5 minutes. Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the 5 minute idling limit ▪ When feasible for project-specific occasions, diesel idling within 1,000 feet of sensitive receptors is not permitted	Less than Significant

Impact	Mitigation Measure(s)	Residual Impact
	▪ When feasible for project specific occasions, staging and queuing areas shall not be located within 1,000 feet of sensitive receptors ▪ Electrify equipment when feasible ▪ Substitute gasoline-powered in place of diesel-powered equipment, where feasible ▪ Use alternatively fueled construction equipment on-site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel.	
AQ-3. The GP/LCP Update Conservation and Open Space Element includes policies intended to minimize adverse effects associated with TACs through local actions and interagency coordination. The GP/LCP Update would not generate levels of traffic that would expose sensitive receptors to substantial pollutant concentrations, or result in new development that would expose sensitive receptors to hazards associated with naturally occurring asbestos. This impact would be less than significant.	No mitigation measures are required.	N/A
AQ-4. Implementation of the GP/LCP Update would not create objectionable odors that would impact a substantial number of people. Future development in Pismo Beach would be required to comply with SLOAPCD regulations prohibiting nuisance emissions (including odors). This would be a less than significant impact	No mitigation measures are required.	N/A
Cumulative. Buildout of the GP/LCP Update would result in an increase of population growth that exceeds the population projections used in the most recent SLOAPCD CAP for the same area. The population increase would result in individual development projects that may exceed regulatory thresholds. The 2001 Clean Air Plan (CAP) is intended to bring the County into attainment of the State ozone standard. Because the GP/LCP Update would be inconsistent with the CAP, the GP/LCP Update's contribution to cumulative regional air quality impacts would be significant and unavoidable. The GP/LCP Update includes an increase of commercial development and regional VMT. This could potentially increase emissions of Toxic Air Contaminants (TACs), Carbon Monoxide (CO), and odor nuisances in the region and potentially expose sensitive receptors to substantial pollutant concentrations. However, the GP/LCP Update includes goals, policies, and actions to minimize these effects. Individual project development may require implementation of project-specific mitigation measures to reduce pollutant exposure to sensitive receptors or nuisance odors.	No feasible mitigation strategies are available to reduce this impact, beyond the proposed GP/LCP Update policy framework.	Significant and Unavoidable

Impact	Mitigation Measure(s)	Residual Impact
Biological Resources		
BIO-1. New development facilitated by the GP/LCP Update could result in isolated impacts to habitat for special-status species and impacts to migratory bird nest sites. with compliance with existing regulations, and implementation of GP/LCP Update Policies, impacts with compliance with existing regulations, and implementation of GP/LCP Update Policies would be less than significant.	No mitigation measures are required.	N/A
BIO-2. The GP/LCP Update would facilitate development that could result in construction within riparian habitat, and direct placement of fill in wetlands. However, with compliance with existing regulations, and implementation of GP/LCP Update Policies potential impacts would be less than significant.	No mitigation measures are required.	N/A
BIO-3. Development facilitated by the GP/LCP could result in construction within streams and associated riparian zones that serve as wildlife movement corridors. However, with implementation of GP/LCP Update policies preserving streams, wetlands, and wildlife corridors, as well as open space, impacts would be less than significant.	No mitigation measures are required.	N/A
BIO-4. Development facilitated by the GP/ LCP Update may result in the removal of trees. However, the GP/LCP policies require new development to comply with the City's Tree Ordinance. With Adherence to the Tree Ordinance, as well as other applicable City codes, impacts would be less than significant.	No mitigation measures are required.	N/A
BIO-5. Development facilitated by the GP/LCP Update would not conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. This impact would be less that significant.	No mitigation measures are required.	N/A
Cumulative. Buildout of the GP/LCP Update would have incremental contribution to cumulative impacts associated with biological resources, however the impacts to biological resources would not be cumulatively considerable. Cumulative impacts would be less than significant.	No mitigation measures are required.	N/A
Cultural and Tribal Cultural Resources		
CR-1. Development facilitated by the GP/LCP Update has the potential to impact historical resources. Implementation of applicable GP/LCP Update actions, state and federal regulations, and the Pismo Beach Municipal Code would minimize or avoid potential adverse impacts to historical resources. This impact would be less than significant.	No mitigation measures are required.	N/A

Impact	Mitigation Measure(s)	Residual Impact
CR-2. Development facilitated by the GP/LCP Update has the potential to impact unique archaeological resources. Implementation of applicable GP/LCP Update goals, state and federal regulations, and the Pismo Beach Municipal Code would minimize or avoid potential adverse impacts to archaeological resources. This impact would be less than significant.	No mitigation measures are required.	N/A
CR-3. Development facilitated by the GP/LCP Update has the potential to adversely affect previously unknown human burials, but would be required to adhere to existing regulations regarding the treatment of human remains. This impact would be less than significant.	No mitigation measures are required.	N/A
CR-4. Development facilitated by the GP/LCP Update may involve excavation, which has the potential to impact previously unidentified tribal cultural resources. Impacts on tribal cultural resources would be less than significant.	No mitigation measures are required.	N/A
Cumulative. Compliance with applicable regulations and implementation of GP/LCP Update goals and policies would minimize cumulative impacts to cultural resources, and includes policy language and actions to address potential impacts to cultural resources on a project-by-project basis. Therefore, cumulative impacts to such resources would be less than significant.	No mitigation measures are required.	N/A
Energy		
E-1. Construction and operation of future development under the GP/LCP Update would require temporary and long-term consumption of energy resources. However, buildout of the GP/LCP Update would not result in the wasteful, inefficient, or unnecessary consumption of energy resources. Impact would be less than significant.	No mitigation measures are required.	N/A
E-2. The GP/LCP Update would be consistent with the energy efficiency and renewable energy policies of the City of Pismo Beach's Climate Action Plan. Therefore, impacts would be less than significant.	No mitigation measures are required.	N/A
Cumulative. the GP/LCP Update would not be expected to contribute substantially to a cumulative increase in energy demand, result in wasteful, inefficient, or unnecessary consumption of energy, or result in the need for construction of new major facilities or substantial alteration of existing facilities to meet projected energy demands and cumulative impacts would be less than significant.	No mitigation measures are required.	N/A

Impact	Mitigation Measure(s)	Residual Impact
Geology and Soils		
GEO-1. Construction of new buildings under the GP/LCP Update could result in would not exacerbate seismic hazards, but improperly constructed buildings may exacerbate landslide risk. Adherence to requirements of the California Building Code and implementation of these goals and policies of the GP/LCP Update would minimize the potential for loss, injury, or death following a seismic event, landslide, liquefaction, or other geologic hazards. This impact would be less than significant.	No mitigation measures are required.	N/A
GEO-2. Construction of new development under the GP/LCP Update would include ground disturbance that would result in loose or exposed soil that could be eroded by wind or during a storm event, resulting in the loss of topsoil. Compliance with applicable regulations, including the Clean Water Act, and implementation of goals and policies of the GP/LCP Update would minimize the potential for erosion and loss of topsoil and would ensure this impact would be less than significant	No mitigation measures are required.	N/A
GEO-3. New development facilitated by the GP/LCP Update would occur where existing sewer systems are in place, minimizing the need for development of new wastewater disposal systems. Therefore, the project would not result in a significant impact to soils that are incapable of supporting septic tanks or alternative wastewater disposal systems.	No mitigation measures are required.	N/A
GEO-4. Development facilitated by the 2040 General Plan has the potential to result in impacts to paleontological resources. Impacts would be less than significant.	No mitigation measures are required.	N/A
Cumulative. Cumulative impacts related to geology, paleontology, soils, and seismicity would be less than significant, and the GP/LCP Update would not result in a cumulatively considerable contribution to cumulative geology, paleontology, soils, or seismicity impacts.	No mitigation measures are required.	N/A
Greenhouse Gas Emissions		
GHG-1. Buildout of the GP/LCP Update would result in new GHG emissions that may exceed applicable GHG reduction targets established by SB 32. The GP/LCP Update identifies policies that would reduce GHG emissions, including setting reduction targets consistent with statewide GHG reduction goals and updating the climate action plan to ensure future development is consistent with statewide targets. This impact would be less than significant.	No mitigation measures are required.	N/A

Impact	Mitigation Measure(s)	Residual Impact
Cumulative. New individual development projects in Pismo Beach could result in GHG emissions that would be inconsistent with statewide per capita emissions goals established in the 2017 Scoping Plan and may exceed applicable SLOAPCD or City thresholds on a project-by-project basis. However, the GP/LCP Update would establish GHG reduction goals consistent with the State's 2030 and 2050 greenhouse gas emissions reduction goals, and the GP/LCP Update would be consistent with regional and State plans, policies, and regulations adopted for the purpose of reducing GHG emissions. Therefore, the GP/LCP Update's contribution to cumulative GHG and climate change impacts would be less than significant.	No mitigation measures are required.	N/A
Hazards and Hazardous Materials and Wildfire		
HAZ-1. Implementation of the GP/LCP Update could result in an incremental increase of the overall routine transport, use, storage, and disposal of hazardous materials. Compliance with applicable regulations related to the handling, transport, disposal, and storage of hazardous materials and adherence to proposed GP/LCP Update policies would minimize the risk of spills and the public's potential exposure to these substances and reduce the risk of adverse impacts of hazardous materials. This impact would be less than significant.	No mitigation measures are required.	N/A
HAZ-2. New development of residential and commercial uses facilitated by the GP/LCP Update could result in increased use and storage of hazardous materials within one quarter mile of existing schools. compliance with regulatory requirements of the San Luis Obispo County EHS and existing applicable state and federal regulations would ensure that risks from hazardous emissions or handling of hazardous materials, substances, or waste near existing or proposed schools would remain less than significant.	No mitigation measures are required.	N/A
HAZ-3. Implementation of the GP/LCP Update could result in development of sites contaminated with hazardous materials. However, compliance with applicable regulations relating to site cleanup and adherence to the GP/LCP policies would minimize the impacts related to development on listed contaminated site. This impact would be less than significant.	No mitigation measures are required.	N/A
HAZ-4. Population growth and increased development in coastal areas as a result of the GP/LCP Update could impact evacuation routes in the event of a coastal hazard or radiation hazard event in the City. Proposed policies and mapped evacuation routes in the GP/LCP Update would ensure effective emergency response following a natural or human caused disaster. Therefore, the GP/LCP Update would not result in interference with an adopted emergency response plan or emergency evacuation plan. This impact would be less than significant.	No mitigation measures are required.	N/A

Impact	Mitigation Measure(s)	Residual Impact
HAZ-5. The City includes a designated very high fire hazard area and is adjacent to fire hazard areas in the County. Goals and policies included in the GP/LCP Update would minimize exposure of people or structures to risk of loss, injury, or death involving wildfire and wildland fires. This impact would be less than significant.	No mitigation measures are required.	N/A
Cumulative. Cumulative impacts related to the transport, use, storage, or disposal of hazardous materials, upset conditions, hazardous emissions near schools, project locations on known or unknown hazardous materials sites, airport hazards, emergency response, and fire hazards would be less than significant.	No mitigation measures are required.	N/A
Hydrology and Water Quality		
HWQ- 1. Development facilitated by the GP/LCP Update could disturb soil during construction; increase impervious surfaces, stormwater runoff, erosion, and pollutants in stormwater; and/or alter drainage patterns. Compliance with NPDES permit requirements, city municipal code requirements, and GP/LCP Update policies and actions would reduce impacts related to water quality, erosion and siltation, stormwater runoff, discharges of pollutants, and changes to flood flows. This impact would be less than significant.	No mitigation measures are required.	N/A
HWQ-2. Development facilitated by the GP/LCP Update would incrementally increase the amount of impervious surface in the City and increase water use which could reduce the potential for groundwater recharge from infiltration and decrease groundwater supplies. Compliance with the City municipal code, Central Coast RWQCB's post construction requirements for stormwater management, and GP/LCP Update goals and policies would ensure that new impervious surfaces and increased water use would not substantially interfere with groundwater recharge or decrease groundwater supplies. This impact would be less than significant.	No mitigation measures are required.	N/A
HWQ-3. Development facilitated by the GP/LCP Update may occur in areas with potential for inundation by flooding, tsunami, and/or dam failure. Compliance with applicable municipal code requirements would ensure development within areas subject to inundation would be sited, designed and constructed as to not exacerbate risks from release of pollutants from inundation. These impacts would be less than significant.	No mitigation measures are required.	N/A
Cumulative. The GP/LCP Update would not contribute to a significant cumulative impact related to hydrology and water quality, and the cumulative impacts resulting from the implementation of the proposed GP/LCP Update would be less than significant.	No mitigation measures are required.	N/A

Impact	Mitigation Measure(s)	Residual Impact
Land Use		
LUP-1. Implementation of the proposed GP/LCP Update would provide for orderly development in Pismo Beach and would not physically divide an established community. This impact would be less than significant	No mitigation measures are required.	N/A
LUP-2. With an Update to the City's zoning ordinance and zoning map in conjunction with the GP/LCP Update, implementation of the GP/LCP Update would be consistent with applicable regional land use plans, policies, and regulations, such as the SLOCOG 2019 RTP/ SCS and City zoning districts and standards. This impact would be less than significant.	No mitigation measures are required.	N/A
Cumulative. The GP/LCP Update would not contribute to a significant cumulative impact related to the physical division of any established community and land use plan consistency, and the cumulative impacts resulting from the implementation of the proposed GP/LCP Update would be less than significant.	No mitigation measures are required.	N/A
Noise		
N-1. Construction of individual projects facilitated by the GP/LCP Update would temporarily produce high noise levels, affecting nearby noise-sensitive land uses. compliance with existing Municipal Code standards and the GP/LCP Update's policies and actions would ensure construction activity associated with new development would limit noise disturbance at noise-sensitive receivers in the City. Therefore, this impact would be less than significant.	No mitigation measures are required.	N/A
N-2. Development facilitated by the GP/LCP Update would incrementally increase traffic and associated noise in Pismo Beach, exposing noise-sensitive land uses located near roadways to incrementally greater noise levels. However, implementation of Goals, policies, and actions in the GP/LCP Update would ensure that traffic noise would have a less than significant impact.	No mitigation measures are required.	N/A
N-3. New development facilitated by the GP/LCP Update would introduce operational noise sources associated with residential and non-residential land uses. The continued regulation of on-site noise, consistent with the Pismo Beach Municipal Code, would minimize disturbance to adjoining uses. Therefore, on-site operational noise would have a less than significant impact.	No mitigation measures are required.	N/A
N-4. Construction of individual projects facilitated by the GP/LCP Update would temporarily generate groundborne vibration. Estimated vibration levels would not exceed applicable Caltrans criteria for human annoyance and structure damage, and the Pismo Beach Municipal Code's timing restrictions on construction activity would limit vibration disturbance. Therefore, this impact would be less than	No mitigation measures are required.	N/A

Impact	Mitigation Measure(s)	Residual Impact
N-5 Pismo Beach is located outside of noise contours associated with the nearest airports. Therefore, the impact from exposure to aircraft noise in the City would be less than significant.	No mitigation measures are required.	N/A
Cumulative. The GP/LCP Update would not contribute to a significant cumulative impact related to noise and vibration, and the cumulative impacts resulting from the implementation of the proposed GP/LCP Update would be less than significant.	No mitigation measures are required.	N/A
Population and Housing		
PH-1. The GP/LCP Update would not result in growth in the City that is substantially greater than projected in the SLOCOG regional growth forecast. This impact would be less than significant.	No mitigation measures are required.	N/A
PH-2. Implementation of the GP/LCP Update would not displace substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere. Impacts would be less than significant.	No mitigation measures are required.	N/A
Cumulative. The GP/LCP Update would not contribute to cumulative impacts related to displacement in the greater cumulative impact analysis area (San Luis Obispo County), and would not result in significant cumulative population growth impacts beyond the City. The incremental population impacts of the proposed GP/LCP Update would not be cumulatively considerable.	No mitigation measures are required.	N/A
Public Services and Recreation		
PUB-1. Development facilitated by the GP/LCP Update would result in an increase in the City's population. This would increase demand for fire, police, school, and other City services and potentially create the need for new police, fire, school, or other service facilities. However, ~~compliance with policies in the GP/LCP Update~~, payment of City required public facilities impact fees~~,~~ and management of future growth would avoid adverse environmental effects associated with the provision of new or physically altered fire, police, school, or other public facilities. This impact would be less than significant.	No mitigation measures are required.	N/A
PUB-2. Development associated with the GP/LCP Update would add population to the City that would increase use of parks and recreation facilities. However, park facilities have adequate capacity and with compliance with the GP/LCP Update policies impacts related to construction of park facilities would be less than significant.	No mitigation measures are required.	N/A

Impact	Mitigation Measure(s)	Residual Impact
Cumulative. The GP/LCP Update would result in less than significant impacts to fire, police, school, parks and recreational facilities, and other public services and facilities. Growth anticipated under the GP/LCP Update would be within SLOCOG projections. Therefore, although the GP/LCP Update would have an incremental contribution to cumulative impacts associated with public services and recreation, the contribution would not be cumulatively considerable. Cumulative impacts would be less than significant.	No mitigation measures are required.	N/A
Transportation and Traffic		
T-1. Implementation of the General Plan and Local Coastal Plan Update would increase vehicle traffic volumes which has the potential to interfere with pedestrian and bicycle travel on or along roadways. However, the GP/LCP Update includes goals and policies to improve safety, access, and performance of transit, vehicular, bicycle, and pedestrian transportation modes, consistent with the SLOCOG 2019 RTP Pismo Beach Bicycle and Pedestrian Master Plan, and Pismo Beach Complete Street Master Plan. This impact would be less than significant	No mitigation measures are required.	N/A
T-2. The GP/LCP Update anticipates growth that would result in an overall increase in vehicle miles traveled (VMT) in the region. The GP/LCP Update Circulation Element includes goals and policies that would establish local screening thresholds for streamlining VMT analysis. However, future development in Pismo Beach would result in an overall net increase in regional VMT as well as residential VMT per capita. No feasible mitigation is available that would fully address the anticipated increase in VMT. As a result, this impact would be significant and unavoidable.	No feasible mitigation measures are available.	Significant and Unavoidable
T-3. The GP/LCP Update is a program-level plan that does not implement specific design features. Future roadway improvements and site access measures would be designed and reviewed in accordance with federal, state, and city standards. This impact would be less than Significant.	No mitigation measures are required.	N/A
T-4. The proposed GP/LCP Update includes a program-level Circulation Element Update that identifies circulation improvements and policies to support emergency access throughout the City. This impact would be less than significant.	No mitigation measures are required.	N/A

Impact	Mitigation Measure(s)	Residual Impact
Cumulative. The cumulative growth evaluated under GP/LCP Update Conditions would result in an increase in the total regional VMT, daily VMT per capita, and daily VMT per employee. The individual potential impacts of future development in Pismo Beach are speculative; however, the cumulative impact of the increase in VMT in Pismo Beach and in San Luis Obispo County identified for the GP/LCP Update would be potentially significant. Future development in Pismo Beach would result in increased long-term VMT, even with implementation of identified goals and policies that would incrementally reduce VMT. Future individual development projects in Pismo Beach would require focused, project-level environmental review, and would require project-specific mitigation to reduce VMT where potential environmental impacts are identified. Implementation of the goals and policies in the GP/LCP Update would contribute to reducing VMT in Pismo Beach, but no additional feasible mitigation is available that would fully address the anticipated increase in VMT resulting from the GP/LCP Update. Therefore, cumulative transportation impacts from new VMT in the region would remain significant and unavoidable. There are existing federal, State, and local regulations that govern potential transportation hazards and emergency access associated with development and infrastructure projects. Regulations and oversight would effectively reduce the potential for individual projects to create a transportation hazards or emergency access impact within the City as well as in San Luis Obispo County. Thus, cumulative impacts related to the transportation hazards and emergency access would be less than significant.	No feasible mitigation measures are available.	Significant and Unavoidable
Utilities/Service Systems		
U-1. Development facilitated by the GP/LCP Update would increase the demand for water supply and water infrastructure. However, the City of Pismo Beach projects that City water supply is sufficient to meet the projected water demand under buildout associated with the GP/LCP Update. This impact would be less that significant.	No mitigation measures are required.	N/A
U-2. Development facilitated by the GP/LCP Update would increase demand for wastewater collection and treatment. However, replacement of old sewer lines and lift equipment under the City's Capital Improvement Plant and implementation of the goals and policies of the GP/LCP Update to ensure sufficient wastewater treatment capacity would generally occur in previously disturbed or developed areas. This impact would be less than significant.	No mitigation measures are required.	N/A

Impact	Mitigation Measure(s)	Residual Impact
U-3. Development facilitated by the GP/LCP Update would increase the demand for electric power, natural gas, telecommunications, and stormwater facilities. However, development facilitated by the GP/LCP Update would occur in developed areas of the City where these facilities exist and relocation, if applicable, would generally occur in previously disturbed or developed areas. This impact would be less that significant.	No mitigation measures are required.	N/A
U-4. Development facilitated by the GP/LCP Update would increase waste sent to area landfills. However, Cold Canyon Landfill would have capacity to serve the development envisioned in the GP/LCP Update. ~~Goals and policies in GP/LCP Update would increase the amount of waste that is diverted from the landfill and encourage reuse and recycling~~. This impact would be less than significant.	No mitigation measures are required.	N/A

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1 Introduction

This Environmental Impact Report (EIR) examines the potential environmental effects of the proposed City of Pismo Beach General Plan/Local Coastal Plan (GP/LCP) Update. The GP/LCP Update is defined as the proposed project for purposes of this environmental review. The environmental review process for the proposed project and legal basis for preparing an EIR are described below.

1.1 Environmental Impact Report Background

This document is an EIR that evaluates the potential environmental impacts associated with implementation of the City of Pismo Beach GP/LCP Update. The GP/LCP Update establishes the community's vision for the future development of the city and provides comprehensive polices for the City relating to land use, noise, circulation, ~~facilities,~~ conservation and open space, and safety.

This section of the EIR:

1. Provides an overview of the background behind the GP/LCP Update;
2. Describes the purpose of and legal authority of the EIR;
3. Summarizes the environmental scoping process
4. Summarizes the content of the EIR;
5. Lists lead, responsible, and trustee agencies for the EIR;
6. Describes the intended uses of the EIR;
7. Provides a synopsis of the environmental review process required under CEQA.

The contents of other EIR sections are as follows:

- Section 2, Project Description, provides a detailed discussion of the proposed project.
- Section 3, Environmental Setting, describes the general environmental setting for the City of Pismo Beach.
- Section 4, Environmental Impact Analysis, describes the potential environmental effects associated with development facilitated by the proposed project.
- Section 5, Other CEQA Required Sections, discusses issues such as growth inducement and significant, irreversible environmental effects.
- Section 6, Alternatives, discusses alternatives to the proposed project, including the CEQA-required "no project" alternative.
- Section 7, References, lists informational sources for the EIR and persons involved in the preparation of the document.

1.2 Overview of the GP/LCP Update

State law (Government Code Section 65300) requires that each city and county adopt and periodically update a comprehensive general plan. The California Coastal Act requires that each city or county within the Coastal Zone prepare an LCP. The City addresses both the California general plan law and the California Coastal Act requirements by integrating the GP and the LCP into one combined plan.

As described in Section 2.1 of Chapter 2.0, Project Description, State law requires that a GP contain the following mandatory subject areas, or "elements," including Land Use, Circulation, Housing, Open Space, Conservation, Noise, Safety, and Environmental Justice. State law also allows for optional elements that can be organized or combined at the City's discretion. The City's 1992 GP/LCP is divided into the following ten elements: 1) Circulation, 2) Conservation and Open Space, 3) Design, 4) Facilities, 5) Growth Management, 6) Housing, 7) Land Use, 8) Noise, 9) Parks and Recreation, and 10) Safety. These ten elements address the topics mandated by the State law and Coastal Commission, as well as additional topics of interest to the City.

The LCP consists of the City's Land Use Plan (LUP) and Implementation Plan. The LUP consists of goals, policies and actions that address the requirements of the Coastal Act and are integrated into applicable elements of the GP. The Implementation Plan provides the zoning regulations that implement the LUP goals, policies and actions and serves as the City's Coastal Zoning Ordinance. The California Coastal Act requires that the LCP be reviewed at least once every five years after certification to determine if the LCP is being effectively implemented in conformity with the policies of the Coastal Act.

The GP/LCP Update is an update of the City's 1992 GP/LCP that requires review and recommendation for adoption by the City's Planning Commission, and the discretionary approval by the City Council. The GP/LCP Update presents the community's vision for Pismo Beach through 2040 and establishes overarching City policies and priorities that describe how the community intends to use and manage its physical, social, and economic resources. The GP/LCP Update includes updates to the Land Use, Safety, Conservation and Open Space, Noise, ~~Facilities,~~ and Circulation Elements of the City's 1992 GP/LCP. The GP/LCP Update does not include updates to the Parks, Recreation, and Access Element, and Housing Element~~s~~. The Design, Facilities, and Growth Management Elements are being eliminated and incorporated into the other elements. ~~Land Use and Community Design Element~~. With the GP/LCP Update, the City GP/LCP will consist of the following ~~eight~~ seven elements: 1) Circulation, 2) Conservation and Open Space, ~~3) Facilities~~, ~~4~~ 3) Housing, ~~5~~ 4) Land Use and Community Design, ~~7~~ 5) Noise, ~~7~~ 6) Parks, ~~and~~ Recreation, and Access and ~~8~~ 7) Safety.

The GP/LCP Update is intended to function as a policy document to guide land use decisions within the planning area through 2040. The GP/LCP Update was developed through an extensive public outreach and involvement process, including careful analysis by advisory committees, City staff, elected officials, and the community. Each element of the plan addresses different aspects of the community and identifies measurable actions to guide residents, decision-makers, businesses, and City staff toward achieving the community vision. Goals established in the GP/LCP Update are intended to maintain the City's small beach town character, manage growth effectively, provide a safe community, and enhance the City's tourist-based economy. The GP/LCP Update establishes overarching City policies and priorities that describe how the community intends to use and manage its physical, social, and economic resources. The GP/LCP Land Use and Community Design Element guides the future development of Pismo Beach by establishing the allowable distribution, location, and extent of development across the city for residential, commercial, open space, public and semi-public facilities, and other uses.

1.3 Purpose and Legal Authority

This EIR has been prepared in accordance with CEQA and the CEQA Guidelines. In accordance with Section 15121 (a) of the CEQA Guidelines (California Code of Regulations, Title 14, Division 6, Chapter 3), the purpose of an EIR is to:

> Inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.

This EIR fulfills the requirements for a Program EIR. Although the legally required contents of a Program EIR are the same as those of a Project EIR, Program EIRs are by necessity more conceptual and may contain a more general discussion of impacts, alternatives, and mitigation measures than a Project EIR. As provided in Section 15168 of the CEQA Guidelines, a Program EIR may be prepared on a series of actions that may be characterized as one large project. Use of a Program EIR provides the City of Pismo Beach (as Lead Agency) with the opportunity to consider broad policy alternatives and program-wide mitigation measures and provides the City with greater flexibility to address environmental issues and/or cumulative impacts on a comprehensive basis. Agencies generally prepare Program EIRs for programs or a series of related actions that are linked geographically, are logical parts of a chain of contemplated events, rules, regulations, or plans that govern the conduct of a continuing program, or are individual activities carried out under the same authority and having generally similar environmental effects that can be mitigated in similar ways. By its nature, a Program EIR considers the broad effects associated with implementing a program (such as a General Plan or Specific Plan) and does not, and is not intended to, examine the specific environmental effects associated with specific projects that may be accommodated by the provisions of General or Specific Plans.

Once a Program EIR has been prepared, subsequent activities within the program must be evaluated to determine what, if any, additional CEQA documentation needs to be prepared. If the Program EIR addresses the program's effects as specifically and comprehensively as possible, many subsequent activities could be found to be within the Program EIR scope and additional environmental documentation may not be required (CEQA Guidelines Section 15168[c]). When a Lead Agency relies on a Program EIR for a subsequent activity, it must incorporate applicable mitigation measures and alternatives developed in the Program EIR into the subsequent activities (CEQA Guidelines Section 15168(c)(3)). If a subsequent activity would have effects not contemplated or not within the scope of the Program EIR, the Lead Agency must prepare a new Initial Study leading to a Negative Declaration, Mitigated Negative Declaration, or a project-level EIR. In this case, the Program EIR still serves a valuable purpose as the first-tier environmental analysis. The CEQA Guidelines (Section 15168[b]) encourage the use of Program EIRs, citing five advantages:

1. Provision of a more exhaustive consideration of impacts and alternatives than would be practical in an individual EIR.
2. Focus on cumulative impacts that might be slighted in a case-by-case analysis.
3. Avoidance of continual reconsideration of recurring policy issues.
4. Consideration of broad policy alternatives and programmatic mitigation measures at an early stage when the agency has greater flexibility to deal with them.
5. Reduction of paperwork by encouraging the reuse of data (through tiering).

As a wide-ranging environmental document, the Program EIR uses expansive thresholds as compared to the project-level thresholds that might be used for an EIR on a specific development project. It should not be assumed that impacts determined not to be significant at a program level would not be significant at a project level. In other words, determination that implementation of the proposed project as a program would not have a significant environmental effect does not necessarily mean that an individual project would not have significant effects based on project-level CEQA thresholds, even if the project is consistent with the GP/LCP Update.

This EIR has been prepared to analyze potentially significant environmental impacts associated with future development resulting from implementation of the GP/LCP Update, and also addresses appropriate and feasible mitigation measures or project alternatives that would minimize or eliminate these impacts. Additionally, this EIR will provide the primary source of environmental information for the City of Pismo Beach to use when considering the proposed project.

This EIR is intended to provide decision-makers and the public with information that enables intelligent consideration of the environmental consequences of the proposed project. This EIR identifies significant or potentially significant environmental effects, as well as ways in which those impacts can be reduced to less-than-significant levels, whether through the incorporation of mitigation measures or through the implementation of specific alternatives to the proposed project. In a practical sense, this document functions as a tool for fact-finding, allowing concerned citizens and agency staff an opportunity to collectively review and evaluate baseline conditions and project impacts through a process of full disclosure.

1.4 Environmental Scoping

In accordance with the CEQA Guidelines, a Notice of Preparation (NOP) of a Draft EIR was circulated to potentially interested parties from January 15, 2021 to February 15, 2021. The City received ~~two~~ three responses to the NOP. The NOP and comment letters are included in Appendix A. The City also held a public scoping meeting for the EIR on January 28, 2021 via videoconference. No verbal comments were received at the scoping meeting. The responses to the NOP comment letters are addressed, as appropriate, in the analysis contained in the various subsections of Section 4.0, Environmental Impact Analysis. Table 1-1 summarizes the comments received, by topic, in the comment letters.

Table 1-1 NOP Comments and EIR Response

Commenter	Comment/Request	How and Where It Was Addressed
Agency Comments		
California Department of Transportation (Caltrans)	Caltrans supports development that includes improvements to pedestrian, bicycle, and transit infrastructure.	Project components are discussed in Chapter 2, *Project Description*.
	Caltrans states that transportation impacts should be the analyzed with the Vehicle Miles Traveled (VMT) metric, which will help promote GHG emissions reductions.	Transportation impacts, including an analysis of the project's potential to result in new VMT, are addressed in Section 4.14, *Transportation and Traffic*. GHG emissions are discussed in Section 4.7, *Greenhouse Gas Emissions.*
	Caltrans encourages a Transportation Demand Strategies (TDM) plan that may contain strategies such as locating higher density projects near transit, incorporating complete streets, mixed-use development, and traffic calming measures.	Project components are discussed in Chapter 2, *Project Description*. Transportation impacts are addressed in section 4.14, *Transportation and Traffic.*
	Caltrans states that climate change impacts on the State Highway System and local roadway should be addressed given forecasted increases in wildfire, precipitation, and sea level rise, as state highways serve as main access routes for emergency response.	The effects of climate change on evacuation routes, due to projected increases in extreme weather events, wildfires, and sea level rise, are discussed in Section 4.7, *Greenhouse Gas Emissions/Climate Change*.
Native American Heritage Commission (NAHC)	The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the City of Pismo Beach.	The City completed Native American consultation pursuant to the requirements of Assembly Bill (AB) 52. As detailed in Section 4.4, *Cultural and Tribal Cultural Resources*, none of the tribes contacted responded to requests for consultation.
San Luis Obispo County Air Pollution Control District (APCD)	The DEIR should include a description of existing air quality and emissions in the impact area, including the attainment status of the APCD relative to State and Federal air quality standards and any existing regulatory restrictions to development.	Air quality is addressed in Section 4.2, *Air Quality*
	The DEIR should include a consistency analysis that evaluates the proposed update against the land use and transportation goals, policies, and population projections contained in the APCD Clean Air Plan, the San Luis Obispo Council of Government's Regional Transportation Plan, and local Climate Action Plans. APCD provides some recommended references.	Comment is addressed in Section 4.2, *Air Quality,* and Section 4.7, *Greenhouse Gas Emissions.*
	The DEIR should include a range of alternatives, with a consistency analysis as described in the previous comment provided for each.	Comment is addressed in Section 6, *Alternatives.*
	APCD does not support sensitive receptor development near Highway 101 and railroads, as DPM can present health risks to sensitive receptors. APCD provides some recommendations for development near Highway 101 and railroads, including further consideration if low-income residential units are sited near pollution sources.	Comment is addressed in Section 4.2, *Air Quality.*

1.5 Public Review of the Draft EIR

The Draft EIR was circulated for a 45-day public review period that began on February 1, 2022 and ended on March 18, 2022. Three comment letters were received on the Draft EIR. Responses to the public comments are detailed in Section 7.0 of this EIR. In addition, minor revision to the GP/LCP element policies were made after public circulation of the Draft EIR. The changes that occurred between the Draft EIR and Final EIR in response to public comments and to reflect changes to the GP/LCP Update elements are shown in underline for text additions and ~~strikethrough~~ for text deletions in the applicable sections of the Final EIR. In addition, Appendix C (Conservation and Open Space Fact Sheet), Appendix D (Land Use Fact Sheet), and Appendix F (Safety Fact Sheet) of the Draft EIR are not included within this Final EIR because these documents are outdated as a result of the changes made to the GP/LCP Update between the timeframe of the Draft and Final EIR. The additional revisions made to the GP/LCP Update effectively function as updated versions of Appendix C, Appendix D, and Appendix F of the Draft EIR. The subsequent appendices were renumbered accordingly. Non-substantive changes to formatting and appendix lettering are not shown in underline and strikethrough. *State CEQA Guidelines, Section 15088.5*, requires that a lead agency recirculate a Draft EIR when significant new information is added to the EIR prior to certification. The revisions in the Final EIR do not constitute "significant new information" because they do not result in a new avoidable significant effect, do not substantially increase the severity of any environmental impacts, do not identify a feasible project alternative considerably different from others previously analyzed, and do not involve new mitigation measures or substantial revisions to mitigation measures that were proposed in the Draft EIR. Because the revisions clarify or strengthen the analysis of impacts in the EIR and do not constitute significant new information, recirculation of the Draft EIR is not required pursuant to CEQA Guidelines §15088.5.

1.6 EIR Content

The focus of this EIR is to:

- Provide information about the GP/LCP Update for review and consideration by the City Council and the California Coastal Commission in their selection of the proposed GP/LCP Update, an alternative to the proposed GP/LCP Update, or a combination of various elements from the proposed GP/LCP Update and its alternatives, for approval.
- Review and evaluate the potentially significant environmental impacts that could occur as a result of the growth and development envisioned in the proposed GP/LCP Update.
- Identify feasible mitigation measures that may be incorporated into the proposed GP/LCP Update in order to reduce or eliminate potentially significant effects.
- Disclose any potential growth-inducing and/or cumulative impacts associated with the proposed GP/LCP Update.
- Examine a reasonable range of alternative growth scenarios (such as "no growth"/growth according to the existing GP/LCP, reduced growth, or growth in alternative locations) that could feasibly attain the basic objectives of the proposed GP/LCP Update, while eliminating and/or reducing some or all of its potentially significant adverse environmental effects.

Sections 4.1 through 4.15 of this EIR evaluates potential impacts in each of the following issues listed in the CEQA Checklist in Appendix G of the CEQA Guidelines:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural and Tribal Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards, Hazardous Materials, and Wildfire
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Population and Housing
- Public Services and Recreation
- Transportation
- Utilities and Service Systems

In addition, agricultural resources and mineral resources are discussed in Section 4.16, Less than Significant Environmental Effects.

1.7 Lead, Responsible, and Trustee Agencies

The City of Pismo Beach is the lead agency under CEQA for this EIR because it has primary discretionary authority to determine whether or how to approve the proposed GP/LCP Update.

Section 15381 of the CEQA Guidelines defines responsible agencies as other public agencies that are responsible for carrying out/implementing a specific component of a proposed project or for approving a project (such as an annexation) that implements the goals and policies of a General Plan. The California Coastal Commission would be a responsible agency for certification of the GP/LCP Update, Zoning Code Update, and Coastal Implementation Plan.

Although not responsible agencies under CEQA, several other agencies have review authority over aspects of the proposed project or approval authority over projects that could potentially be implemented in accordance with various objectives and policies included in the GP/LCP Update. These agencies and their roles are listed below.

- The State Geologist is responsible for the review of the City's program for minimizing exposure to geologic hazards and for regulating surface mining activities.
- The California Department of Transportation (Caltrans) has responsibility for approving future improvements to the state highway system, including State Route 1 (SR 1) and United States Highway 101 (U.S. 101).
- The California Department of Fish and Wildlife (CDFW) has responsibility for issuing take permits and streambed alteration agreements for any projects with the potential to affect plant or animal species listed by the State of California as rare, threatened, or endangered or that would disturb waters of the State.

Trustee agencies have jurisdiction over certain resources held in trust for the people of California but do not have a legal authority over approving or carrying out the project. CEQA Guidelines Section 15386 designates four agencies as trustee agencies:

1. CDFW with regard to the fish and wildlife of the state, to designated rare or endangered native plants, and to game refuges, ecological reserves, and other areas administered by the department;
2. The State Lands Commission with regard to state owned "sovereign" lands such as the beds of navigable waters and state school lands;

3. The California Department of Parks and Recreation, with regard to units of the State park System; and
4. The University of California, with regard to sites within the Natural Land and Water Reserves System.

1.8 Intended Uses of the EIR

This EIR is as an informational document for use in the City's review and consideration of the proposed GP/LCP Update. This document is a Program EIR. CEQA Guidelines Section 15168(a) states that:

> A Program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either: (1) geographically; (2) as logical parts in a chain of contemplated actions; (3) in connection with issuance of rules, regulations, plans, or other general criteria, to govern the conduct of a continuing program; or (4) as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.

As a programmatic document, this EIR presents and discloses a region-wide assessment of the environmental impacts of the GP/LCP Update. The information and analysis in this EIR will be used by the Pismo Beach Planning Commission and City Council, trustee agencies, and the general public.

The GP/LCP Update will guide subsequent actions taken by the City in its review of new development projects and the establishment of new and/or revised citywide or area-specific programs. This Program EIR serves as a first-tier environmental document under CEQA, supporting second-tier environmental documents for projects with detailed designs that have been developed for implementation within the City. Analysis of site-specific impacts of individual projects is not the intended use of a Program EIR. Many specific projects are not currently defined to the level that would allow for such an analysis at this time. Individual and specific environmental analysis of each project will be undertaken as necessary in the future by the City prior to each project being considered for approval. Therefore, the City, acting as the Lead Agency, would be able to prepare subsequent environmental documents that incorporate by reference the appropriate information from this Program EIR regarding secondary effects, cumulative impacts, broad alternatives, and other relevant factors. If the City finds that implementation of a later activity would have no new effects and that no new mitigation measures would be required, that activity would require no additional CEQA review. Where subsequent environmental review is required, such review would focus on significant effects specific to the project, or its site that have not been considered in this Program EIR.

The Sphere of Influence SOI (SOI), shown on Figure 2-3, defines the area to which the City intends to provide municipal services and allow the development of some urban land uses at a future date. As shown on Figure 2-6, future land use designations within the SOI are not specifically defined or included within the buildout assumptions of the GP/LCP Update. As such, this EIR analyzes impacts from reasonably foreseeable development within the City limits (shown in Figure 2-2). Although future uses may be developed within the SOI, they would be subject to annexation to the City of Pismo Beach in compliance with procedures identified by the San Luis Obispo County Local Agency Formation Commission (LAFCO) and would be subject to additional CEQA review.

The LCP forms the legal standard of review for issuance of Coastal Development Permits (CDP) within the City's coastal zone.

1.9 Environmental Review Process

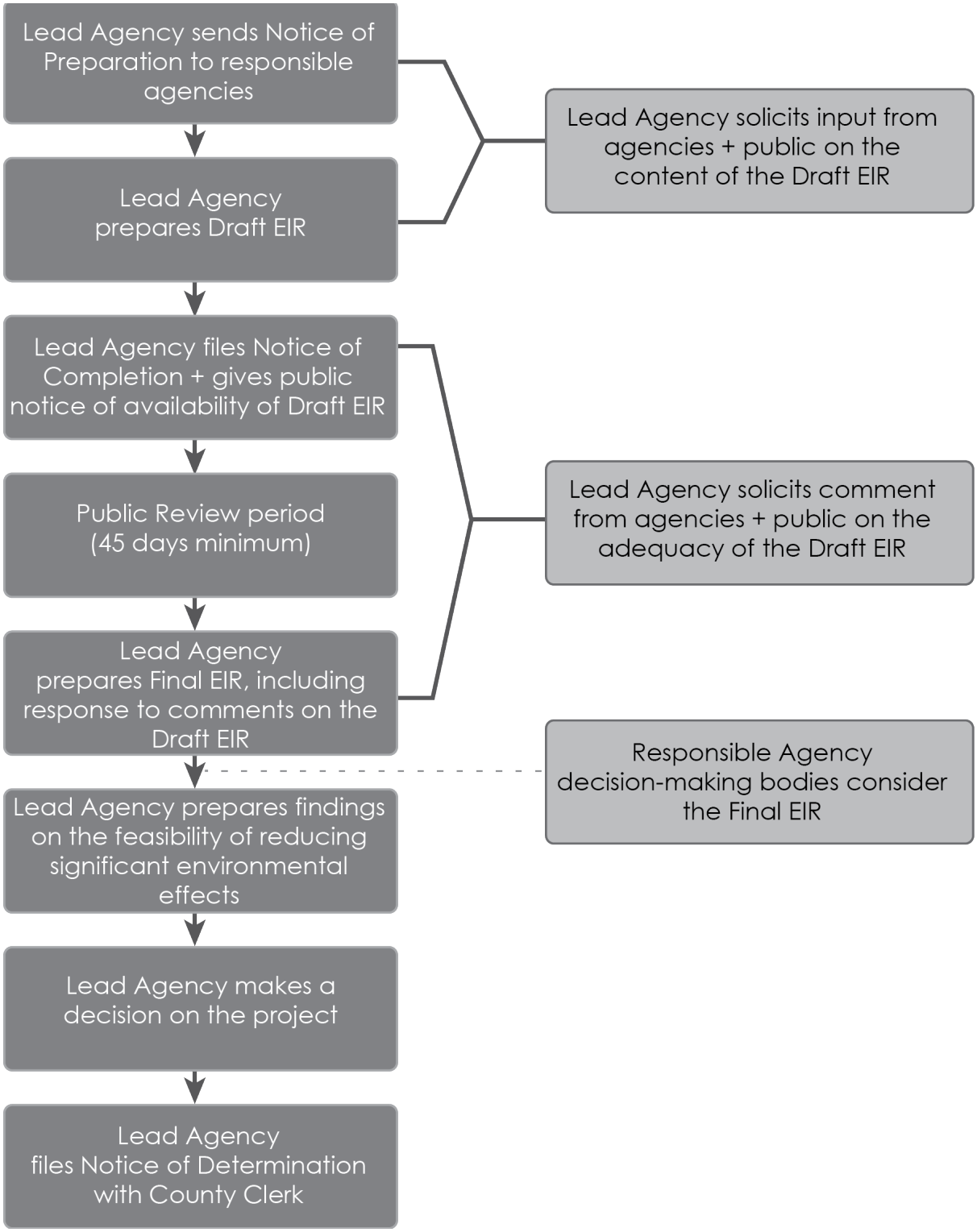
The environmental impact review process required under CEQA is summarized below and illustrated in Figure 1-1. The steps are presented in sequential order.

1. **Notice of Preparation (NOP)**. After deciding that an EIR is required, the lead agency (City of Pismo Beach) must file a NOP soliciting input on the EIR scope to the State Clearinghouse, other concerned agencies, and parties previously requesting notice in writing (*CEQA Guidelines* Section 15082; Public Resources Code Section 21092.2). The NOP must be posted in the County Clerk's office for 30 days.
2. **Draft EIR Prepared.** The Draft EIR must contain: a) table of contents or index; b) summary; c) project description; d) environmental setting; e) discussion of significant impacts (direct, indirect, cumulative, growth-inducing and unavoidable impacts); f) a discussion of alternatives; g) mitigation measures; and h) discussion of irreversible changes.
3. **Public Notice and Review.** A lead agency must prepare a Public Notice of Availability of an EIR. The Notice must be placed in the County Clerk's office for 30 days (Public Resources Code Section 21092) and sent to anyone requesting it. Additionally, public notice of Draft EIR availability must be given through at least one of the following procedures: a) publication in a newspaper of general circulation; b) posting on and off the project site; and c) direct mailing to owners and occupants of contiguous properties. The lead agency must consult with and request comments on the Draft EIR from responsible and trustee agencies, and adjacent cities and counties. The minimum public review period for a Draft EIR is 30 days. When a Draft EIR is sent to the State Clearinghouse for review, the public review period must be 45 days, unless a shorter period is approved by the Clearinghouse (Public Resources Code 21091). Distribution of the Draft EIR may be required through the State Clearinghouse.
4. **Notice of Completion.** A lead agency must file a Notice of Completion with the State Clearinghouse as soon as it completes a Draft EIR.
5. **Final EIR.** A Final EIR must include: a) the Draft EIR; b) copies of comments received during public review; c) list of persons and entities commenting; and d) responses to comments.
6. **Certification of Final EIR.** Prior to making a decision on a proposed project, the lead agency must certify that: a) the Final EIR has been completed in compliance with CEQA; b) the Final EIR was presented to the decision-making body of the lead agency; and c) the decision making body reviewed and considered the information in the Final EIR prior to approving a project (*CEQA Guidelines* Section 15090).
7. **Lead Agency Project Decision.** The lead agency may a) disapprove the project because of its significant environmental effects; b) require changes to the project to reduce or avoid significant environmental effects; or c) approve the project despite its significant environmental effects, if the proper findings and statement of overriding considerations are adopted (*CEQA Guidelines* Sections 15042 and 15043).
8. **Findings/Statement of Overriding Considerations**. For each significant impact of the project identified in the EIR, the lead agency must find, based on substantial evidence, that either: a) the project has been changed to avoid or substantially reduce the magnitude of the impact; b) changes to the project are within another agency's jurisdiction and such changes have or should be adopted; or c) specific economic, social, or other considerations make the mitigation measures or project alternatives infeasible (*CEQA Guidelines* Section 15091). If an agency approves a project with unavoidable significant environmental effects, it must prepare a written

Statement of Overriding Considerations that sets forth the specific social, economic, or other reasons supporting the agency's decision.

9. **Mitigation Monitoring Reporting Program.** When the lead agency makes findings on significant effects identified in the EIR, it must adopt a reporting or monitoring program for mitigation measures that were adopted or made conditions of project approval to mitigate significant effects.
10. **Notice of Determination (NOD).** The lead agency must file a NOD after deciding to approve a project for which an EIR is prepared (*CEQA Guidelines* Section 15094). A local agency must file the NOD with the County Clerk. The NOD must be posted for 30 days and sent to anyone previously requesting notice. Posting of the NOD starts a 30-day statute of limitations on CEQA legal challenges (Public Resources Code Section 21167[c]).

Figure 1-1 Environmental Review Process



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2 Project Description

The project analyzed in this Program EIR (PEIR) is the proposed City of Pismo Beach General Plan/Local Coastal Plan (GP/LCP) Update, which includes updates to the Land Use, Safety, Conservation and Open Space, Noise, ~~Facilities,~~ and Circulation Elements of the City's 1992 GP/LCP. The GP/LCP Update does not include updates to the Parks, Recreation, and Access Element and Housing Element. The Design, Facilities and Growth Management Elements are being eliminated and incorporated into the other elements. ~~Land Use and Community Design Element~~. This section of the PEIR describes the key characteristics of the GP/LCP Update, including the project proponent/lead agency, the geographic extent of the plan, project objectives, required approvals and types and extent of development forecasted under the GP/LCP Update.

2.1 Purpose of the GP/LCP Update

The GP/LCP Update is an update of the City's 1992 GP/LCP and presents the community's vision for Pismo Beach through the GP/LCP horizon (year 2040). The City's 1992 GP/LCP is divided into the following ten elements: 1) Circulation, 2) Conservation and Open Space, 3) Design, 4) Facilities, 5) Growth Management, 6) Housing, 7) Land Use, 8) Noise, 9) Parks, Recreation, and Access 10) Safety. With the GP/LCP Update, the City GP/LCP will consist of the following ~~eight~~ seven elements: 1) Circulation, 2) Conservation and Open Space, ~~3) Facilities,~~ ~~4~~ 3) Housing, ~~5~~ 4) Land Use and Community Design, ~~7~~ 5) Noise, ~~7~~ 6) Parks, ~~and~~ Recreation, and Access and ~~8~~ 7) Safety.

The GP/LCP Update was developed through an extensive public outreach and involvement process, including careful analysis by advisory committees, City staff, elected officials, and the community. Each element of the plan addresses different aspects of the community and identifies measurable actions to guide residents, decision-makers, businesses, and City staff toward achieving the community vision. Goals established in the GP/LCP Update are intended to maintain the City's small beach town character, manage growth effectively, provide a safe community, and enhance the City's tourist-based economy. The GP/LCP Update establishes overarching City policies and priorities that describe how the community intends to use and manage its physical, social, and economic resources. The GP/LCP Land Use and Community Design Element guides the future development of Pismo Beach by establishing the allowable distribution, location, and extent of development across the city for residential, commercial, open space, public and semi-public facilities, and other uses.

The California Governor's Office of Planning and Research (OPR) recognizes the relationship between General Plans and Local Coastal Plans for coastal cities and recommends that both requirements be addressed by integrating the General Plan and the Local Coastal Plan. An integrated plan allows the community to apply the vision and requirements for both documents in a comprehensive manner, facilitating a unified and efficient approach to complying with both California general plan law and the California Coastal Act. The majority of Pismo Beach is located in the Coastal Zone. Therefore, the City has found it appropriate to follow OPR's recommendation and integrate the updated GP/LCP.

The LCP consists of two parts as required by the Coastal Act: a Land Use Plan (LUP), which was last updated in 1993, and the Implementation Plan, which was last updated in 1983, with several amendments to both documents occurring since. The LUP consists of goals, policies and actions that

address the requirements of the Coastal Act and are integrated into applicable elements of the GP. The LCP must address priority issues for the California Coastal Commission including:

- Public access,
- Recreation and visitor serving facilities,
- Water quality protection,
- Environmentally Sensitive Habitat Areas (ESHA) and other natural resources,
- Agricultural resources,
- New development and cultural resources,
- Scenic and visual resources,
- Coastal hazards,
- Shoreline erosion and protective devices, and
- Energy and industrial development.

The Implementation Plan provides the zoning regulations that implement the LUP goals, policies and actions and serves as the City's Coastal Zoning Ordinance. New development in the City's Coastal Zone is required to be consistent with the combined GP/LCP and Coastal Zoning Ordinance. The GP/LCP may be amended to stay up to date with State laws and to continue to reflect the vision of the community.

State law (Government Code Sections 65300 through 65303.4) sets forth the requirement for each municipality to adopt and periodically update its General Plan, and sets the requirement that a General Plan contain the following mandatory subject areas, or "elements", including Land Use, Circulation, Housing, Open Space, Conservation, Noise, Safety, and Environmental Justice. California adopted Senate Bill 1000 on September 24, 2016 requiring cities to develop an Environmental Justice element, or related environmental justice goals and policies to reduce the unique or compounded health risks in "disadvantaged communities." Cities are required to incorporate environmental justice goals and policies into their general plan when they update two or more general plan elements on or after January 1, 2018. State law also allows for optional elements that can be organized or combined at the City's discretion. The GP/LCP Update includes the required subjects/elements as well as ~~three~~ four additional elements: Facilities, Design, and Growth Management (which ~~is~~ are being incorporated into other elements ~~the Land Use and Community Design Element~~), and Parks, Recreation, and Access, as detailed in Section 2.4.2, GP/LCP Update Organization. The environmental justice content required by SB 1000 is reflected in portions of the Land Use and Community Design, Housing, and Parks, Recreation, and Access Elements of the GP/LCP.

2.2 Project Proponent/Lead Agency

The City of Pismo Beach is the project proponent and the lead agency for the proposed GP/LCP Update. The City's Planning Division, located at 760 Mattie Road in the City of Pismo Beach, prepared this PEIR with the assistance of Rincon Consultants, Inc.

2.3 Project Location

2.3.1 Geographic Location

The City of Pismo Beach is located on the Central Coast of California, midway between San Francisco and Los Angeles. Pismo Beach is one of seven incorporated cities within San Luis Obispo County (County). The county is frequently divided into four general sub-regions: North Coast, Northeast County, South County, and Central San Luis Obispo. South County includes the incorporated cities of Pismo Beach, Grover City, and Arroyo Grande and the unincorporated communities of Avila Beach, Oceano, and Nipomo. Pismo Beach lies within the San Luis Bay Planning Area of the San Luis Obispo County General Plan. Pismo Beach has a total area of 13.5 square miles, the majority of which is located in the Coastal Zone. 9.9 square miles of the City is water and the remaining 3.6 square miles is land area. The GP/LCP Update and this PEIR only focus on the land area of the City. Pismo Beach is bordered by the beach and ocean on the southwest and hills to the northeast. The Cities of Grover Beach and Arroyo Grande are south and east of Pismo Beach and the unincorporated community of Avila Beach is just north of Pismo Beach.

The project area for the GP/LCP Update is defined as the City limits. The extended planning area for Pismo Beach also includes all area within the Sphere of Influence (SOI). The SOI includes land in Price Canyon and along Oak Park Boulevard and a small area along Mattie Road. The Price Canyon area of the SOI includes four parcels totaling approximately 1,100 acres. The Los Robles del Mar area of the SOI, west of Oak Park Boulevard, includes two separate parcels. One parcel is an approximately 152-acre ownership and the second site is a private school site of approximately 30 acres. A small area located closer to Mattie Road was added to the SOI in 2016 for a Preserve parking lot and restroom facilities. The SOI defines the area to which the City intends to provide municipal services and allow the development of some urban land uses at a future date. Future land use designations within the SOI are not specifically defined or included within the buildout assumptions of the GP/LCP Update. As such, the SOI is not include as part of the project area for the GP/LCP Update.

Figure 2-1 depicts a regional map of the City's relationship to nearby cities, communities, and the State highway system. Figure 2-2 shows the Pismo Beach City limits and Coastal Zone boundary in the City. Figure 2-3 shows the SOI.

2.3.2 Existing Land Form and Pattern

Pismo Beach's existing land use form is shaped by its topography, linear coastal orientation, natural resources and circulation patterns. The City is served by four main arteries: U.S. Highway 101 (U.S. 101), Cabrillo Highway (State Route 1), Shell Beach Road and Price Street, which all run northwest–southeast through the City. Price Canyon Road, Fourth Street, Oak Park Boulevard, and James Way are also main connector roads. Residential and commercial uses are mostly concentrated west of U.S. 101, while open space and industrial uses are clustered mostly east of U.S. 101. Figure 2-4 shows the City's existing on-the-ground distribution of land use in Pismo Beach.

As shown in Figure 2-4, Pismo Beach includes an assortment of residential, commercial, office, public and open space uses. The neighborhood planning areas listed in Table 2-1 are described in detail in Section 2.3.3.

Figure 2-1 Regional Location

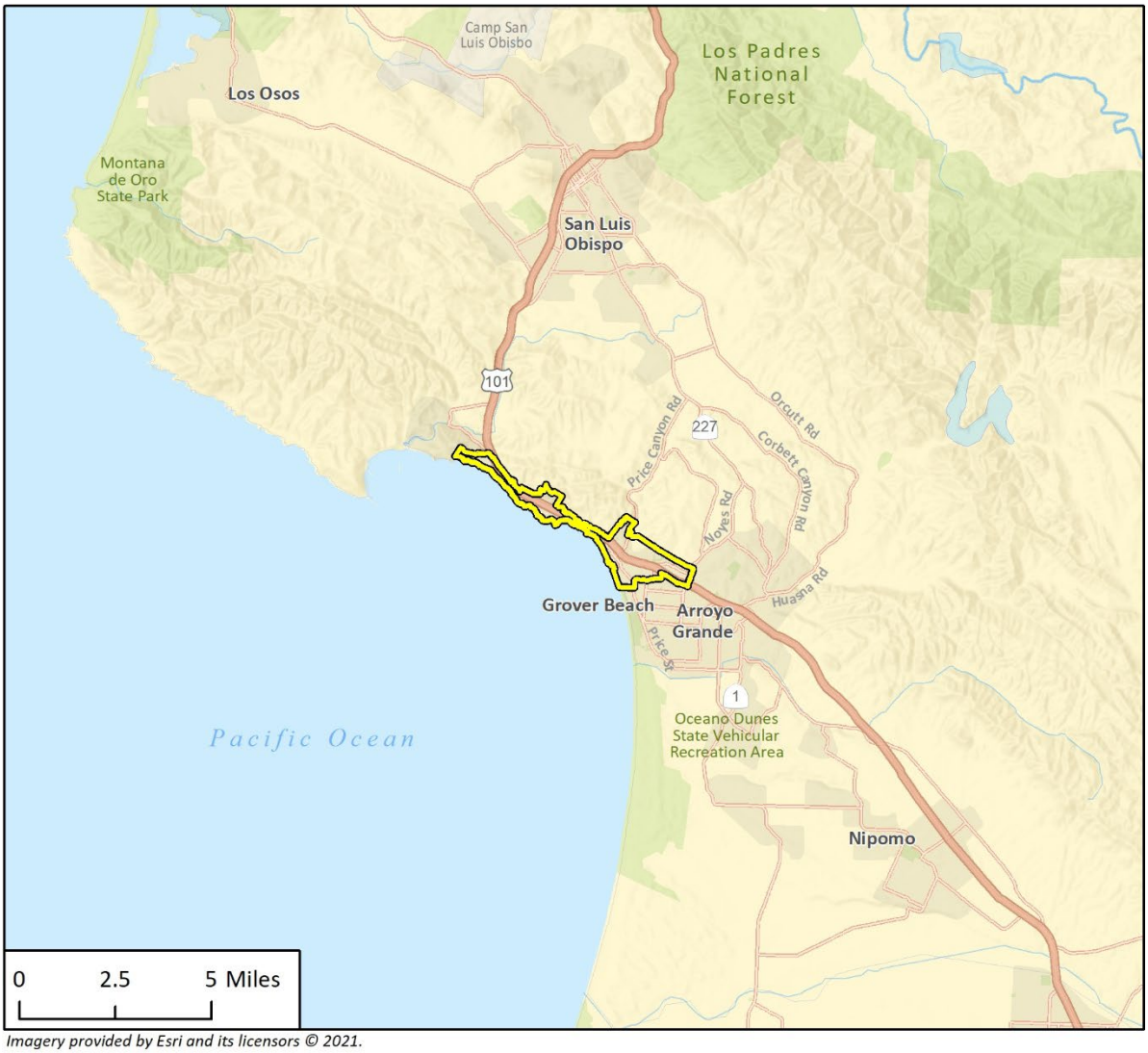
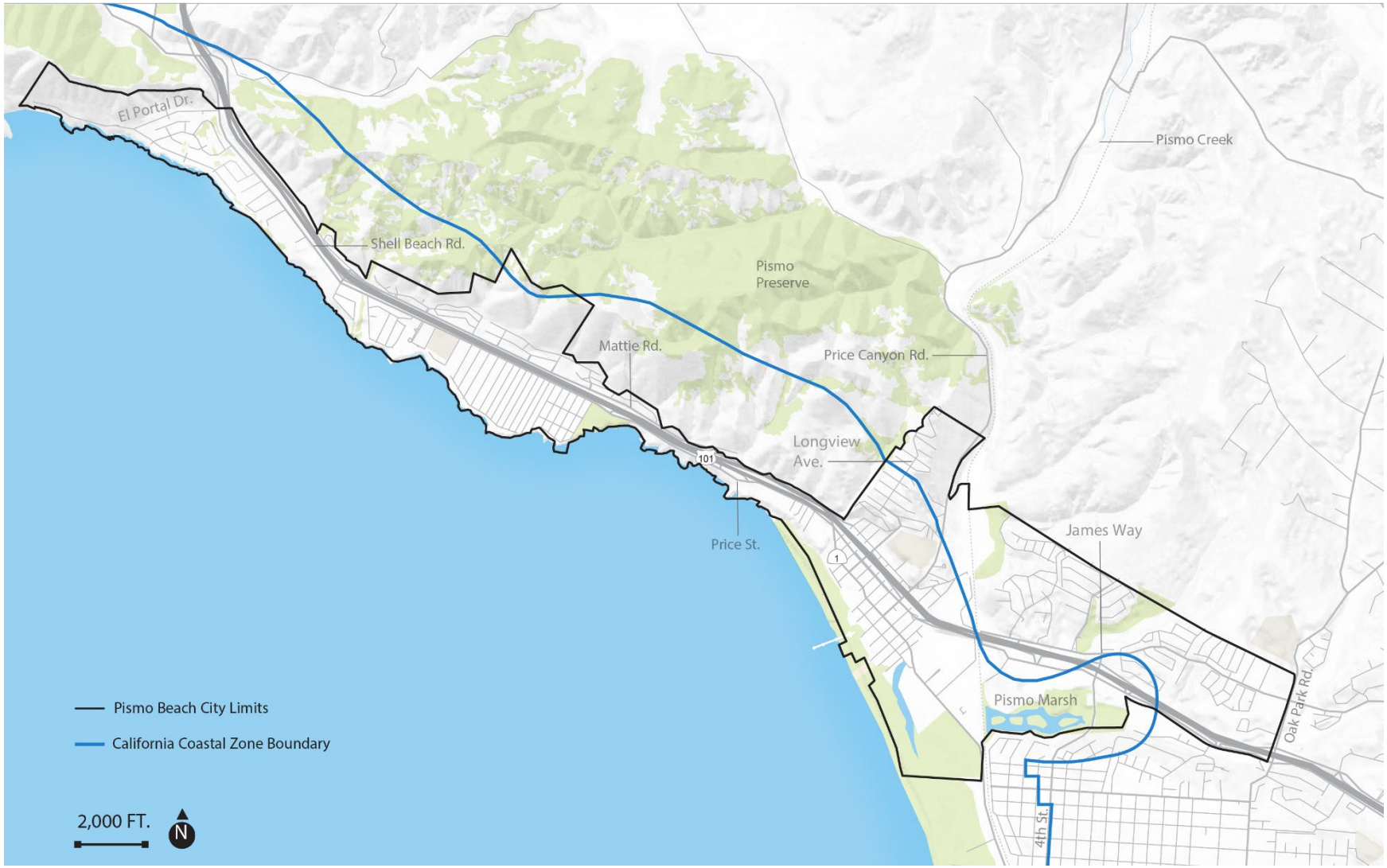
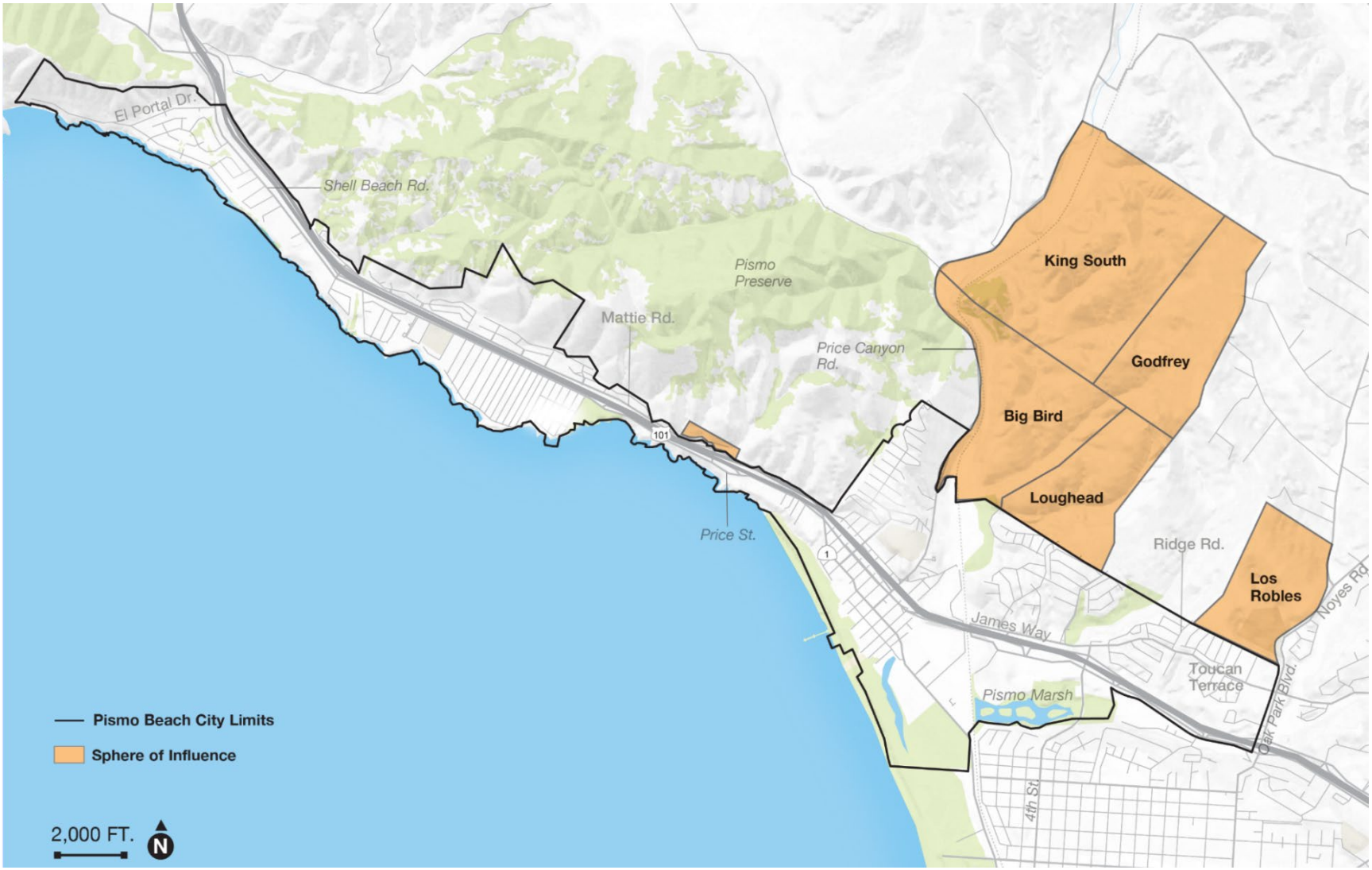


Figure 2-2 Pismo Beach City Limits and Coastal Zone Boundary



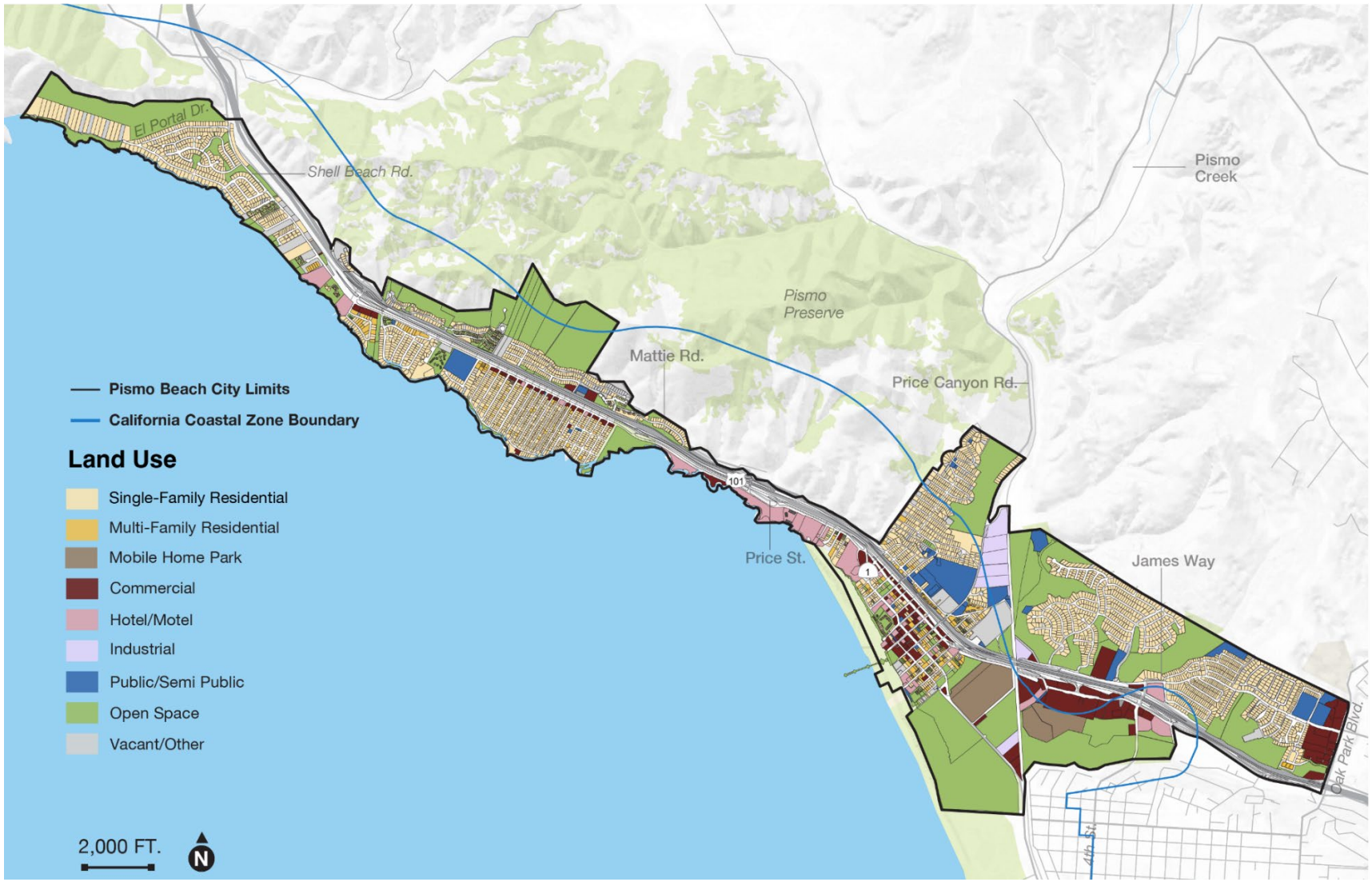
Note: For the purposes of this map, this figure does not include the submerged lands offshore that are within the Pismo Beach City Limits. See Figure LU-1 of the General Plan/Local Coastal Plan Land Use Element (Pismo Beach LAFCO-approved City Border) for the full Pismo Beach City Limits.

Figure 2-3 Pismo Beach City Limits and Sphere of Influence



Note: For the purposes of this map, this figure does not include the submerged lands offshore that are within the Pismo Beach City Limits. See Figure LU-1 of the General Plan/Local Coastal Plan Land Use Element (Pismo Beach LAFCO-approved City Border) for the full Pismo Beach City Limits.

Figure 2-4 Existing Land Use Pattern



Note: For the purposes of this map, this figure does not include the submerged lands offshore that are within the Pismo Beach City Limits. See Figure LU-1 of the General Plan/Local Coastal Plan Land Use Element (Pismo Beach LAFCO-approved City Border) for the full Pismo Beach City Limits.

Table 2-1 Existing Development by Neighborhood Planning Area

	Residential (units)			Visitor Serving (rooms)	Retail, Service, Office (1,000 square feet)			Open Space (acres)
Planning Area	Single Family	Multi-Family	Mobile Home	Resort Commercial	Commercial	Industrial	Public/ Semi-Public	Open Space
The Bluffs/Sunset Palisades/South Palisade	478	0	-	-	253.5	4	0.8	97
North Spyglass/ Spyglass	108	71	-	298	500.9	-	1.1	7.3
St. Andrews/ Spindrift	228	25	-	-	51	-	8.8	9.1
Shell Beach/ Dinosaur Caves	910	44	-	24	321.5	-	9.7	13.6
Motel	79	-	-	572	2,028.6	-	-	25.2
Downtown Core	512	279	-	596	1,672.7	-	16.4	150.1
Pismo Creek/Pismo Marsh	417	141	515	370	2,491.2	142.9	21.7	211.9
Oak Park Heights	1,189	-	-	120	1,968.9	1,172.6	207.8	113.4
Pismo Heights	656	46	-	-	-	-	49.2	3.4
Freeway Foothills/ Mattie Road	404	-	-	-	306.6	-	5.6	177.9
Total	**4,981**	**418**	**515**	**1,980**	**9,594.9**	**1,315.5**	**321.1**	**808.9**

2.3.3 Neighborhood Planning Areas

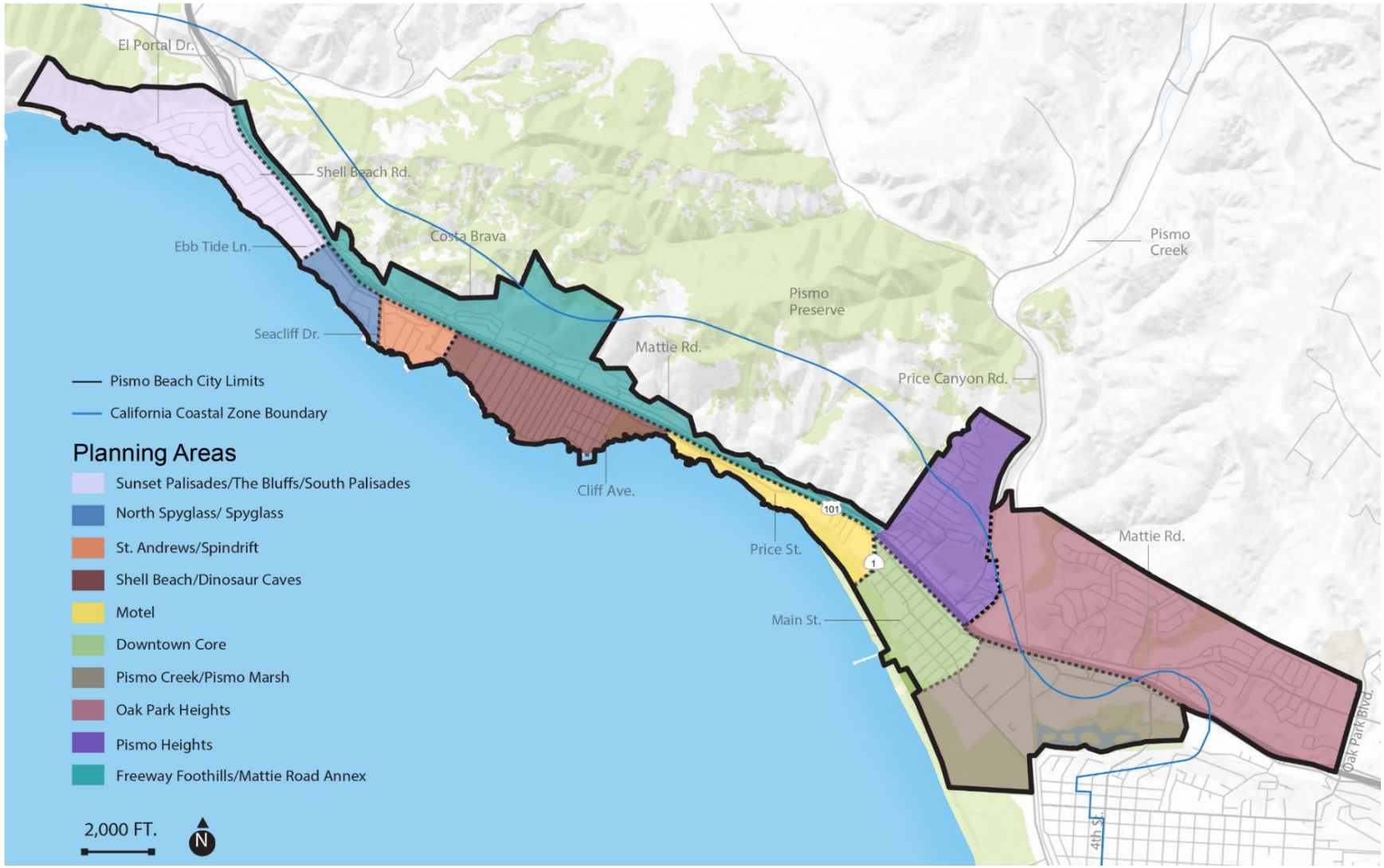
Pismo Beach is organized into neighborhood planning areas. The 1992 General Plan described 18 planning areas, which are consolidated into 10 planning areas for the GP/LCP Update. The 10 neighborhood planning areas in the GP/LCP Update are shown in Figure 2-5. Each of the planning areas is predominantly built-out to its maximum development potential based on the designated land uses and associated density limits, with little developable acreage remaining. As such, infill development and adaptive reuse are encouraged and commonly used practices within the City. Table 2-2 shows the relationship between the planning areas in the GP/LCP Update and the 1992 General Plan planning areas.

Table 2-2 Relationship Between GP/LCP Update Planning Areas and 1992 General Plan Planning Areas

Planning Area (GP/LCP Update)	Planning Areas (1992 General Plan)
Sunset Palisades/The Bluffs/ South Palisade	Sunset Palisades/Ontario Ridge (Planning Area A) South Palisades (Planning Area B)
North Spyglass/Spyglass	North Spyglass (Planning Area C) Spyglass (Planning Area D)
St. Andrews/Spindrift	St. Andrews (Planning Area E) Spindrift (Planning Area F)
Shell Beach/Dinosaur Caves	Terrace Avenue (Planning Area G) Shell Beach (Planning Area H) Dinosaur Caves (Planning Area I)
Motel	Motel (Planning Area J)
Downtown Core	Downtown (Planning Area K)
Pismo Creek/Pismo Marsh	Pismo Creek (Planning Area L) Pismo Marsh (Planning Area M)
Oak Park Heights	Oak Park Heights (Planning Area N) Industrial (Planning Area O)
Pismo Heights	Pismo Heights (Planning Area P)
Freeway Foothills/Mattie Road	Freeway Foothills (Planning Area Q)

Note: Portions of the Oak Park Heights (Planning Area N) and Freeway Foothills (Planning Area Q) planning areas, as well as all of the Price Canyon Area (Planning Area R) planning area identified in the 1992 General Plan were located within the Pismo Beach SOI but outside the City limits. The Planning Areas identified in the GP/LCP Update are limited to land within the City limits.

Figure 2-5 Neighborhood Planning Areas



Note: For the purposes of this map, this figure does not include the submerged lands offshore that are within the Pismo Beach City Limits. See Figure LU-1 of the General Plan/Local Coastal Plan Land Use Element (Pismo Beach LAFCO-approved City Border) for the full Pismo Beach City Limits.

Sunset Palisades/The Bluffs/South Palisades

Sunset Palisades/The Bluffs is an ocean-oriented, low-profile residential neighborhood with a backdrop of the coastal foothills. The planning area is almost totally developed with low-density residential use with a few scattered vacant residential lots. The bluffs atop the Sunset Palisades stretch of coast are under private ownership. South Palisades, south of Sunset Palisades, includes clustered multifamily and single-family residential development. The ocean bluffs range in height from 40 to 50 feet at the north end to 80 feet at the south end of the planning area. San Luis Obispo County has an easement from the toe of the bluff to the mean high tide line. A sandy beach extends for most of the length of the oceanfront in this area.

North Spyglass/Spyglass

The North Spyglass/Spyglass planning area is comprised of resort commercial uses. North Spyglass, located north of Spyglass Drive, consists of three large parcels with three major hotels (the Dolphin Bay Resort, Cliffs Hotel, Spyglass Inn). Key aspects of the area are a 50-foot-wide lateral access at the top of the bluffs, the stairway, and related public parking at the northern barranca. A bluff top trail spans the entire portion of this planning area that provides access to a stairway to the beach adjacent to the Cliffs Hotel and the South Palisades area. At the base of 50-foot bluffs is a narrow sandy beach accessible during normal tide. Bluff erosion is severe in this area.

South of Spyglass Drive is the Spyglass community, which is a fully developed residential area with multiple housing types, a small commercial center and the Spyglass Public Park. The area serves as a gateway to Pismo Beach as U.S. 101 on- and off-ramps are located in this area.

St. Andrews/Spindrift

St. Andrews Tract is comprised of predominantly low-density residential uses, with open space along the northern border, and high-density residential uses and the Pismo Beach Fire Department Station 63 on the northern end of Coburn Lane. South of the St. Andrews Tract area is Spindrift, a planned residential community consisting of multifamily housing uses in the larger southern parcel and single-family residential and open space/recreational uses to the north, west, and east.

Shell Beach/Dinosaur Caves

This Shell Beach/Dinosaur Caves planning area is comprised of Shell Beach and the neighboring Terrace Avenue and Dinosaur Caves areas. The Terrace Avenue area is home to Shell Beach Elementary School and a mix of low, medium, and high-density residential uses. South of the Terrace Avenue area is Shell Beach, also known as the Village, which is predominantly medium-density residential, with high-density residential uses between the medium-density residential and the commercial uses bordering the west side of Shell Beach Road. Just south of Cliff Avenue is Dinosaur Caves Park, which offers walking trails, a playground, and ocean views on an 11-acre park. The Dinosaur Caves planning area extends south covering a resort commercial parcel, currently the Inn at the Cove. The City adopted the Shell Beach Design Standards and Guidelines in 2017, which provides additional guidance for future residential, commercial and mixed-use development and redevelopment within the Shell Beach community.

Motel District

South of the Dinosaur Caves planning area is the Motel District, which is comprised of resort commercial uses (primarily hotel and restaurant) with some medium-density residential uses along Franklin Drive, Wilmar Avenue, and Harbor View Avenue.

Downtown Core

The Downtown Core has a variety of land uses, including resort commercial, commercial, public/semi-public, open space, high-density residential, and low-density residential uses. This planning area serves as Pismo Beach's downtown, providing uses like shops, restaurants, cafes, art studios, and the Pismo Beach Pier. The Pismo Beach Pier, plaza, and boardwalk offer ocean views, as well as a space for fishing and walking. The Downtown Core creates a public space for residents and visitors to eat, shop, and recreate in a small beach-town environment.

Pismo Creek/Pismo Marsh

The Pismo Creek planning area is separated from the Downtown Core by Pismo Creek, is bisected by the railroad tracks, and has no interior road connections to the Downtown Core planning area. This planning area is comprised of mobile home park, commercial, open space, and industrial uses. Along Pismo Creek, this planning area is used as commercial recreational areas in the form of recreational vehicle (RV) parks and mobile homes. The relatively large parcel in the center of the Pismo Creek planning area is a mobile home park. The Pismo Creek/Pismo Marsh planning area is comprised of open space in the form of Pismo Marsh, the Monarch butterfly grove, creek open space, walking trails, and campground uses. The commercial area is the home of the Pismo Beach Premium Outlets, which provides a range of retail for residents and visitors. The industrial portions this planning area primarily consist of uses such as a trailer storage and the commercial manufacturing use consists of a shopping center.

Oak Park Heights

The Oak Park Heights area includes the entire northeast quadrant of the City northeast of U.S. 101, northwest of North Oak Park Boulevard and southeast of the Southern Pacific Railroad. The area consists of the three neighborhood sub-areas of Toucan Terrace, Pismo Oaks, and Pacific Estates. The Land Use and Community Design Element includes policies for the entire planning area as a whole, including these four sub-areas. The Oak Park Heights planning area contains low- and medium-density residential uses with open space areas surrounding the residential. Additionally, there are commercial areas at the southern boundary of Pismo Beach and along U.S. 101. The commercial uses along the southern City boundary are strip malls and the commercial uses along U.S. 101 are office parks and hotels.

Pismo Heights

The Pismo Heights planning area is almost completely built out and is comprised of low-density residential uses with some medium-density residential uses in the southern portion of the planning area and high density residential uses along U.S. 101. This planning area includes Francis Judkins Junior High School, the Old City Hall complex, and Boosinger public park. Open space is located east of the low-density residential areas, and public/semi-public uses are located in the southeastern portion of the planning area. On the eastern side of this planning area is the City's sewage treatment plant, baseball fields, and the Pacific Gas and Electric transport and storage facility. Pismo

Creek runs through the planning area, which creates flooding constraints. Other constraints include poor vehicular access to the baseball fields, and the closure of the historic bridge due to structural problems.

Freeway Foothills/Mattie Road

The Freeway Foothills planning area is located east of U.S. 101 and consists of low and medium density residential neighborhoods, planned residential, a restaurant and small shopping complex, and a small undeveloped parcel at the northern end of the area. This planning area includes the specific plan areas of Baycliff and Spyglass Ridge, and Mattie Road area. This area is highly visible from U.S. 101 above Shell Beach and Sunset Palisades. The Freeway Foothills provide an important visual and open space backdrop for the northern half of the City. The planning area is physically separated from the other City areas by U.S. 101, with only two cross-highway underpasses connecting to Mattie Road from Shell Beach Road/Palisades Drive and Price Street. These accesses are via freeway underpasses located at Spyglass Drive and just north of the Shorecliff Lodge.

2.3.4 Access and Transportation Network

U.S. 101 traverses through the center of Pismo Beach, providing access to the adjacent cities of Arroyo Grande and Grover Beach, and cities such as San Luis Obispo to the north and Santa Maria to the south. State Route 1 (SR 1) also provides regional access between U.S. 101 and Grover Beach. SR 1 is known as Dolliver Street and the Pacific Coast Highway and is the primary route through downtown Pismo Beach. The downtown area is located in the southern portion of the City, bordered by U.S. 101 on the east, the intersection of Dolliver Street (SR 1) and Price Street on the north, and Pismo Creek on the south.

The Shell Beach area, which is part of the City of Pismo Beach, is located in the northern part of Pismo Beach and is predominantly a residential area with local businesses fronting Shell Beach Road. Shell Beach Road runs parallel to U.S. 101, providing frontage access to Shell Beach, and continues as Price Street south into downtown Pismo Beach. U.S. 101 provides nine full or partial access interchanges within the City limits, and only eight roadways provide access across U.S. 101 within the city. Generally, Pismo Beach's roadway system follows a cardinal grid system within downtown and the Shell Beach areas, which are parallel and perpendicular to U.S. 101.

U.S. 101 and the Union Pacific Railroad (UPRR) are manmade barriers across town, and the coastal mountains northeast of Pismo Beach and Pismo Creek in the southern part of the City are natural barriers. Access across U.S. 101, UPRR, and Pismo Creek is limited. Pismo Creek runs along Price Canyon just south of the mountains and is parallel to Price Canyon Road. Pismo Creek and UPRR are barriers between downtown, the residential areas in the southern part of the City, and the Pismo Beach Premium Outlets. Access across Pismo Creek is only provided via U.S. 101, Dolliver Street, and limited access via Cypress Street. Access across UPRR is limited to U.S. 101 within the City limits, and via SR 1/West Grand Avenue further south in Grover Beach.

The Pacific Coast Bike Route runs north-south through Pismo Beach, including SR 1/Dolliver Street.

2.4 Characteristics of the GP/LCP Update

The land use classifications included in the GP/LCP define the basic categories of land use allowed in the city and are the basis for the zoning districts established in the Zoning Code (Title 17 of the Municipal Code), which contain more specific regulations and standards governing development on individual properties.

Under State law, a property's zoning is required to be consistent with its General Plan land use classification (Government Code §65860). Section 65860(c) of the Government Code requires that when a General Plan is amended in a way that makes the Zoning Ordinance inconsistent with the General Plan, "the zoning ordinance shall be amended within a reasonable time so that it is consistent with the general plan as amended."

2.4.1 Objectives of the GP/LCP Update

The GP/LCP Update is intended to function as a policy document to guide land use decisions within the City through the year 2040, consistent with the community vision and guiding principles. The vision for the city was developed with extensive community input. Based on this community input and in recognition of the state's planning priorities, a vision and values supporting the vision for the community were developed. The vision and guiding principles of the GP/LCP Update, which are also the project objectives, are contained in the Land Use and Community Design Element and are summarized below.

A key objective of the GP/LCP Update is to ensure that the City's land use plan meets the fair share housing needs allocation established in the San Luis Obispo Council of Governments (SLOCOG) Regional Housing Needs Plan (RHNP).

Community Vision

The City conducts community outreach and engagement every two years to reconfirm the community's vision and set City goals that are prioritized and included in the fiscal year budgets for the following two-year cycle. Through this most recent engagement process for the Fiscal Year 2020 and 2021 Budgets, the following vision has been reconfirmed for Pismo Beach that serves to guide the GP/LCP Update:

- Provide a safe place
- Maintain the City's small beach town character
- Manage growth effectively
- Enhance a vibrant tourist-based economy, while becoming a world-renowned tourist destination

Guiding Principles

With the community vision in mind, the City has developed guiding principles to set the framework for the GP/LCP Land Use and Community Design Element. The Land Use and Community Design Element has been drafted to implement the community vision through its goals, policies, and actions, and is built around the following guiding principles:

Preserve the Historic Ambiance of Pismo Beach

Pismo Beach contains the historic "Classic California" ambiance of the small California beach town. This is particularly evident in the Downtown Core and Shell Beach Village. Although difficult to define, the preservation of this ambiance is important and the City shall encourage its preservation. This ambiance provides an attractive experience by creating a link to the past, a sense of place, and a slower pace. The Land Use and Community Design Element sets forth the tools for preservation of historic neighborhood character and retention of the classic downtown setting framed by original landmark architecture and character properties.
The historic character provides the setting to attract vibrant downtown uses that serve the needs of residents and visitors.

Support the Visitor Population While Enhancing the Quality of Life for all Residents

The California coast is an extremely desirable place to live, work and recreate that belongs to all the people. As such, congenial and cooperative use by both residents and visitors is recognized. Such use should capture the best attributes of the City and creatively determine the acceptable place, scale, intensity, rate and methods for development consistent with resource protection and public benefit. The Land Use and Community Design Element provides the tools for an economy built on visitor-serving uses that balances commercial and residential development. Through protection of existing visitor-serving overnight accommodations, promoting the development of new overnight accommodations, and attracting focused retail and services, the City can best support the visiting population that is so essential to the Pismo Beach economy, while also enhancing the quality of life for residents with a healthy year-round economy.

In addition to accommodations and retail services, the Land Use and Community Design Element provides policy for the health and well-being of local residents and visitors alike. These policies strive to be the catalyst for healthy and desirable living environments through the use of design guidelines, appropriate zoning, transit accessibility, and pedestrian and bicycle facilities.

Manage Growth Effectively

With the focus of this GP/LCP on providing a high quality of life for Pismo Beach citizens and visitors and protecting the community's natural and coastal resources, the Land Use and Community Design Element strives to provide a high level of service and infrastructure, and plan for new development that is thoughtfully concentrated within its urban boundaries. Through tools such as enforcement of development fees and annual reporting, the City can effectively manage and maintain its high level of service, valued resources, and the infrastructure needed to complement the City's growth. The Land Use and Community Design Element also provides the tools and incentives for the City to direct new development that responsibly concentrates development in areas where infill and adaptive reuse will contribute to a high quality of life for the entire community.

Preserve and Protect Natural Resources

The ocean, beach and the abutting land are recognized as an irreplaceable national resource to be enjoyed by the entire City and region. The Land Use and Community Design Element provides the tools to direct new development to preserve and enhance the natural resources of Pismo Beach, including the ocean and beaches, hills, valleys, canyons and cliffs, and the Pismo and Meadow Creek streams, marsh and estuaries. The Land Use and Community Design Element provides policies that further enhance the requirements provided within the Coastal

Act. Land use decisions shall also be made to retain ridgelines, hillsides, open space, and the other unique natural features within Pismo Beach. The Land Use and Community Design Element guides planning decisions in the Coastal Zone that ensure public coastal access, while maintaining coastal preservation and protection. (See related principles and policies in the Conservation Element and Safety Element.)

2.4.2 GP/LCP Update Organization

The GP/LCP Update includes updates to the Land Use, Safety, Conservation and Open Space, Noise, ~~Facilities,~~ and Circulation Elements of the City's GP/LCP. The GP/LCP Update does not include updates to the Parks, Recreation, and Access Element, and Housing Element. These elements address the topics mandated by the State law and Coastal Commission, as well as additional topics of interest to the City. The Design, Facilities, and Growth Management Elements are being eliminated and incorporated into the other elements. The elements included in the GP/LCP Update are summarized as follows:

- **Land Use and Community Design Element.** The Land Use and Community Design Element directs the placement and character of future development in Pismo Beach. This element consists of narrative, goals, policies, and actions, as well as a land use map that outlines the future development of Pismo Beach. It presents the pattern of land uses for the ultimate development of the City for the GP/LCP Update horizon (year 2040) through the land use designations shown on the land use map. This element identifies local goals that present how the pattern of land use development in Pismo Beach will look in 2040 and presents policies that measure progress toward the goals and actions that identify the regulatory tools the City can use to meet those goals.
- **Noise Element.** The Noise Element identifies the City's approach to controlling environmental noise and limiting community exposure to excessive noise levels. This element identifies and analyzes the major noise sources in the community and provides data and guidance to inform a pattern of land uses that minimizes exposure of community residents to excessive noise. The primary goals of the Noise Element are to protect quiet areas of a community from noise and provide a framework for developing implementation measures and strategies to address existing and foreseeable noise problems.
- **Conservation and Open Space Element.** The Conservation and Open Space Element guides the protection of natural, scenic, and cultural resources and conservation areas important to the environment and sustained economic prosperity of Pismo Beach. This element identifies local goals that present how the City's natural environment will look in 2040 and presents policies that measure progress toward the goals and actions that identify the regulatory tools the City can use to meet those goals.
- **Safety Element.** The Safety Element describes each of the hazards to which Pismo Beach is vulnerable, and presents goals, policies, and actions to increase the City's resilience to hazards through educating citizens, maintaining an effective emergency response, and protecting life, property, and natural landforms in potential hazard areas. The goals, policies, and actions of the Safety Element also address the potential impacts of climate change on each of Pismo Beach's hazards.
- ~~**Facilities Element.** The Facilities Element is a guideline to indicate future facilities needs as the City continues to develop. Facilities and services considered in this element include City administrative, fire, library, police, schools, solid waste, wastewater, and water services~~.

- **Circulation Element.** The Circulation Element provides the goals, policies, and programs pertaining to traffic circulation within the City, and identifies a comprehensive plan for multimodal transportation improvements that will maintain consistency with the concurrent update of the City's Land Use and Community Design Element. The goals, objectives, and policies establish a citywide strategy to achieve long-term mobility and accessibility for all travel modes within the City.

2.4.3 GP/LCP Update Goals

Based on the community vision, guiding principles, identified major strategies and physical improvements, and input from the community, the GP/LCP Update includes goals in each element to address specific needs, concerns, opportunities, or community desires. Goals are broad in both purpose and aim but are designed specifically to establish positions or directions. The goals in each chapter are listed in Table 2-3.

Table 2-3 GP/LCP Update Goals

General Plan Chapter	Goals	
Land Use	**Goal LU-1**	A community with a variety of well-regulated land uses that support the diverse needs of both ~~visitors~~ residents and ~~residents~~ visitors.
	Goal LU-2	A community with a classic California and small-town beach atmosphere.
	Goal LU-3	City Design. A functional community that is designed with compatible facades, architectural styles, and colors.
	Goal LU-4	A community economy built on visitor-serving uses while maintaining services for year-round community members.
	Goal LU-5	A community that supports the health, safety, and sustainability of all residents, visitors and structures.
	Goal LU-6	A community that provides and maintains a high level of service and infrastructure to all development.
	Goal LU-7	A community where growth is concentrated in corridors and neighborhood centers where adaptive land reuse will contribute to a high quality of life for the entire community.
	Goal LU-8	A community that protects and enhances natural and coastal resources within Pismo Beach.
Land Use – Neighborhood Planning Areas	**Goal LU-9**	**Sunset Palisades/The Bluffs/South Palisades**. An ocean-oriented residential neighborhood with an emphasis on preservation of natural resources, open space, coastal views and scenic corridors.
	Goal LU-10	**North Spyglass/Spyglass**. A planning area with a mix of visitor-serving hotel uses and a variety of housing types, with access to parks, the beach, and neighborhood shopping.
	Goal LU-11	**St. Andrews Tract/Spindrift**. A residential neighborhood where new additions and replacements are compatible with the scale and character of the existing development and where bluff tops, coastal access, trees and bird habitat are protected.
	Goal LU-12	**Terrace Avenue/Shell Beach/Dinosaur Caves**. A planning area focused on conserving the existing housing stock and character and improving the commercial and pedestrian environment of Shell Beach to enhance this beach community.
	Goal LU-13	**Motel District**. A planning area that serves as a key focus for Pismo Beach's visitor-serving industry with special consideration given to retaining and upgrading existing motel uses and preserving ocean views and bluff access.

General Plan Chapter	Goals	
	Goal LU-14	**Downtown Core**. A vibrant Downtown area that acts as a destination for all, providing motel and hotel uses, as well as supporting uses such as commercial, mixed use, high-density residential, and recreation.
	Goal LU-15	**Pismo Creek/Pismo Marsh**. A planning area oriented to visitor-serving activities, regional commercial uses, mobile home park, industrial and open space with a focus on protecting Pismo Creek, the marsh habitat, and coastal views.
	Goal LU-16	**Oak Park Heights**. A planning area with a mix of residential, open space, commercial and resort commercial uses with a focus on preserving open space, ocean views and views of Oak Park Heights.
	Goal LU-17	**Pismo Heights**. A planning area with a mix of residential housing types, as well as the Frances Judkins Junior High School, the ~~City Hall~~ public safety complex and Boosinger public park.
	Goal LU-18	**Freeway Foothills/Mattie Road**. A planning area with a mix of housing types, open space and commercial uses with an emphasis on preservation of the spectacular views and foothills that provide an important visual and open space backdrop for the entire northern one-half of the City.
Noise	**Goal N-1**	A quiet and healthful environment with minimal noise intrusion.
	Goal N-2	A pattern of land uses that protects residents and other sensitive receptors from excessive noise.
~~Facilities~~	~~**Goal F-1**~~	~~Emergency Services: Continue to provide excellent emergency services to the community.~~
	~~**Goal F-2**~~	~~Near zero waste. A highly efficient community that produces very little solid waste.~~
	~~**Goal F-3**~~	~~Sewer. Sewer management and facility operations that allow for adequate disposal within the community.~~
	~~**Goal F-4**~~	~~Water supply. Ensure a sustainable, clean, long-term water supply.~~
Conservation and Open Space	**Goal COS-1**	A community that conserves the important natural resources of Pismo Beach for the community's health, safety and enjoyment, including air quality, renewable energy, geology and soils, minerals, water quality and supply, and dark skies.
	Goal COS-2	A community that protects and enhances scenic roadways and vistas.
	Goal COS-3	A community that provides and protects a variety of conservation areas such as the ocean and beaches, bluffs, dunes, foothills, marshes, creeks, and wetlands that act as suitable coastal and inland habitat, migratory corridors, and ecologically valuable topography.
	Goal COS-4	A community that celebrates and protects its historical, tribal cultural, archaeological, and paleontological resources.
Safety	**Goal S-1**	A well prepared and educated community that can quickly and effectively respond to and recover from a hazardous event.
	Goal S-2	A community that minimizes damage to ~~the~~ public and private property from hazards.
	Goal S-3	A community that maintains its unique physiographic character, including its sandy and rocky beaches, to conserve soil resources and prevent excessive erosion due to wind and water.
Circulation	**Goal CIR-1**	Provide a circulation system that supports safe and efficient travel for all modes of transportation.
	Goal CIR-2	Plan and provide pedestrian and bicycle facilities to encourage and meet the walking and bicycling needs of the City.
	Goal CIR-3	Promote the use of public transit and seasonal shuttle services.
	Goal CIR-4	Provide connectivity and guidance for safe rail and truck movement of people and goods.

2.4.4 General Plan Land Use Designations and Density

The proposed land use designations establish the type, location and relation of land uses planned in the City. The maximum permitted land use densities and intensities are identified in the GP/LCP Update for these land use designations. The City's Zoning Ordinance contains more detailed provisions and standards. More than one zoning district may be consistent with a single GP/LCP land use designation. As the standards for each land use designation are applied to future development projects and land use decisions, properties will gradually transition from one use to another, and land uses and intensities will gradually shift to align with the intent of the GP/LCP Update. Within the future SOI area identified on Figure 2-3, future uses may be developed subject to annexation to the City of Pismo Beach in compliance with procedures identified by the San Luis Obispo County Local Agency Formation Commission (LAFCO).

Table 2-4 provides a description of the proposed land use designations. Table 2-5 summarizes the density and intensity ranges for each land use designation, as well as the total existing acreage in each land use category. Figure 2-6 shows the proposed land use designations, which illustrates the distribution of the proposed land use designations in correlation to the street network and natural landscapes in the City.

Table 2-4 Land Use Designations

Land Use Designation	Description
Low-Density Residential	The low-density residential land use designation provides for residential development at a density of 1 to 8 units per acre.
Medium-Density Residential	The medium-density residential land use designation provides for residential development at a density of 9 to 15 units per acre.
High-Density Residential	The high-density residential land use designation provides for residential development at a density of 16 to 30 units per acre.
Very High-Density Residential Overlay	The very high-density residential overlay provides for residential development at a density of 20 to 50 units per acre.
Mobile Home Park	The mobile home land use designation is intended to apply to mobile home parks and mobile home subdivisions.
Commercial	The Commercial land use designation allows for visitor-serving, neighborhood and regional commercial uses.
Resort Commercial	The Resort Commercial land use designation is comprised of resort commercial uses (primarily hotel and restaurant).
Central Commercial	The primary land use focus for the Central Commercial District is commercial, recreational and cultural
Mixed-Use	The Mixed-use land use designation provides for a wide variety of land uses including visitor lodging, commercial retail, restaurants, service uses, offices, and residential uses through the mixed-use designation and a mixed-use overlay zone.
Industrial	The Industrial land use designations shall permit nonpolluting, warehousing, distribution, assembly and light manufacturing uses.
Public/Semi Public	The Public and Semi-Public category designates land in public ownership that should be developed for public use and various public facilities. The Public/Semi-Public designation is intended for uses such as public buildings, schools, family care facilities, community centers and other public facilities.
Open Space	The Open Space land use designation specifies that open space lands, including public and private parks, shall not be developed intensively with buildings or other structures.

Table 2-5 Land Use Density/Intensity Limits

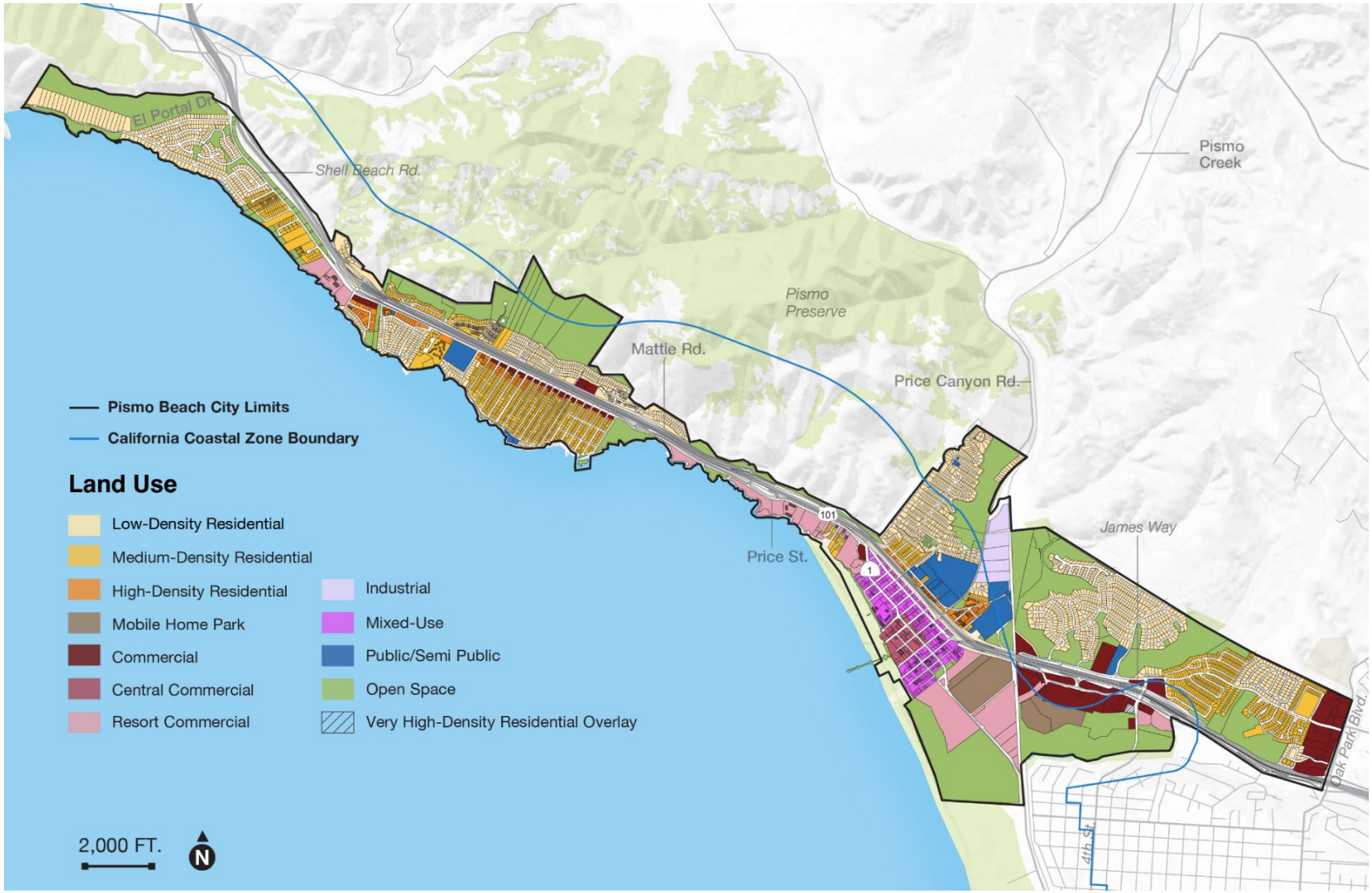
Land Use Designations	Floor Area Ration (FAR)/Density Coastal Zone/Non-Coastal Zone	Height (feet)[1,2] Coastal Zone	Implementing Zones	Total Acreage
Low-Density Residential	1 to 8 units per acre	25	R-1, R-R	76.5
Medium-Density Residential	9 to 15 units per acre	25 - 35	R-2, R-R	247.5
High-Density Residential	16 to 30 units per acre	25 - 35	R-3, R-R	22.2
Very High-Density Residential Overlay	20 to 50 units per acre	35-45[3]	R-3	1.1
Mobile Home Park	Maximum ~~8~~ 12 units ~~to the~~ per acre	-	M-H	58.5
Commercial	Maximum FAR of 2.0	25 - 42	R-4, R-R, C-R, C-1, C-2, C-M	32.5
Resort Commercial	Maximum FAR of 1.25	35	RR, R-4, and CR	73.9
Central Commercial	Maximum FAR of 1.25	35	R-4, R-R, MU	66.4
Mixed-Use	Residential 1.25 maximum Commercial uses: 2.0 maximum	~~Determined by overlay zone~~ 25-35	C-1, C-2, MU, ~~CD-M~~	57.2
Industrial	Maximum FAR of 0.5	25	C-M	30.2
Public/Semi Public	Maximum FAR of 2.0	25	G	468.38
Open Space	N/A	15	OS-1, OS-R	32.21

[1]Coastal height limits are provided to ensure that the scenic and visual qualities of coastal areas are considered and protected consistent with Coastal Act Section 30251.

[2]~~Overlay zones may impose additional standards for applicable properties~~. Please refer to the City of Pismo Beach Municipal Code for additional requirements.

[3]Buildings may be up to forty-five (45) feet in height where the Planning Commission finds that significant public views to and along the coast and other scenic areas are protected.

Figure 2-6 Proposed Land Use Designations



Note: For the purposes of this map, this figure does not include the submerged lands offshore that are within the Pismo Beach City Limits. See Figure LU-1 of the General Plan/Local Coastal Plan Land Use Element (Pismo Beach LAFCO-approved City Border) for the full Pismo Beach City Limits.

2.4.5 Key Updates

The proposed GP/LCP Update includes the following key updates to the existing GP/LCP to achieve the community's vision for Pismo Beach through 2040:

- Addressing sea level rise and resiliency throughout;
- Encouraging mixed-use, particularly in the downtown area and focused on affordability;
- Updates to comply with current State law; and
- Address lower-cost visitor-serving accommodations.

2.4.6 City Growth/General Plan Buildout

In 2019, the City's estimated population was 8,237 people, number of housing units was 5,832, and number of jobs was 4,919 (Department of Finance [DOF] 2020 and San Luis Obispo Council of Governments [SLOCOG] 2017). Table 2-6 identifies the projected development at full buildout associated with the planned distribution of land uses described in the Land Use and Community Design Element of the GP/LCP Update. As shown in this table, full buildout of the GP/LCP Update would result in the development of 288 vacant or underutilized properties. Full buildout of the GP/LCP Update would result an estimated increase of 1,111 housing units and 783,268 square feet of non-residential building area in Pismo Beach. The GP/LCP Update would represent an estimated population increase of 1,979 people and an employment increase of 545 jobs. The methodology for the projecting development at full buildout is included in Appendix B.

Table 2-6 GP/LCP Update Projected Development at Full Buildout

Land Use	Number of Vacant or Underutilized Parcels	Potential Increase in Dwelling Units	Potential Increase in Non-Residential Building Area (sf)	Potential Increase in Population	Potential Increase in Jobs
Commercial	42	-	420,928	-	242
Central Commercial	26	-	248,000	-	33
High Density Residential	139	162	-	289	-12
Mixed Use	48	722	108,000	1,221	272
Medium Density Residential	32	228	-	471	-
Public/Semi Public	1	-1	6,340	-2	10
Total	**288**	**1,111**	**783,268**	**1,979**	**545**

Note: Slight variations in population per dwelling unit are due to the prescribed building typology assumptions from Urban Footprint. See Appendix B for details of the buildout methodology.

With much of the City currently "built out," or developed, and the preservation of open space a priority, undeveloped land available for development is limited in Pismo Beach. Most of the development over the next 20 years is likely to take place on sites that are currently vacant and or underutilized. In addition, future development may come from expanded development on sites with existing structures or redevelopment of sites and structures that come to the end of their useful life over the next 20 years.

There are a number of smaller vacant sites in Pismo Beach, but many of these sites face substantial development constraints. Larger vacant lots are located in the Sunset Palisades, Pismo Heights and Oak Park Heights planning areas, east of planned residential developments. Ultimately, many of these vacant lots are located on steep slopes or face other environmental constraints, limiting development opportunities. Most vacant and underutilized sites outside of constrained areas tend to be in the Downtown Core and along the U.S. 101 corridor in Shell Beach. Much of the growth and change in Pismo Beach over the next 20 years is anticipated to occur in these areas, which are well served with existing public facilities and services, including transportation facilities, and commercial and community uses.

In addition to the future development described above, the Circulation Element envisions multimodal circulation improvements, including intersection signalization, intersection improvements, and new bicycle and pedestrian facilities. Additional improvements included in the Circulation Element update include:

- **Bello & Price Canyon:** Conversion of the stop-controlled intersection to a signalized intersection with minor geometric realignments and utility modifications.
- **Dolliver Street (Highway 1):** In addition to left turn pockets previously envisioned in the 2018 GP/LCP, implement right turn pockets in lieu of or in combination with left turn pockets along Dolliver Street/Wadsworth Avenue.

2.5 Zoning Code and Coastal Implementation Plan Amendments

To maintain consistency with the GP/LCP Update, the project includes a Zoning Code Update which includes the Coastal Implementation Plan. Amendments included as part of the project include:

- Updating the allowed uses in all zones as necessary for consistency with the General Plan Land Use Designations.
- Establishing new zoning district(s) as necessary to implement the GP/LCP Update.
- Updating other development standards as necessary to implement the GP/LCP Update. This will include maximum height, setbacks, design standards and other standards.
- Updating administration and permitting to integrate coastal permit processes. Additional coastal-specific issues to be addressed include:
  - Parking and transportation demand management
  - Coastal access, beach use, and special events
  - Visitor-serving uses and tourism
  - Sea-level rise and coastal resilience
  - Stormwater management and water quality

The Zoning Code Update also addresses other issues, such as neighborhood compatibility and economic development, consistent with direction in the GP/LCP Update.

2.6 Required Discretionary Approvals

Following recommendations from the Planning Commission, the Pismo Beach City Council will need to take the following discretionary actions in conjunction with the project:

- Certify the Final PEIR
- Adopt the proposed GP/LCP Update
- Adopt the Zoning Code Update
- Adopt the Coastal Implementation Plan
- Adopt the Coastal Land Use Plan

The California Coastal Commission will also need to take the following discretionary actions in conjunction with the project:

- Certify the GP/LCP Update
- Certify the Zoning Code Update
- Certify the Coastal Implementation Plan
- Certify the Coastal Land Use Plan

3 Environmental Setting

This section provides a general overview of the environmental setting for the proposed project. More detailed descriptions of the environmental setting for each environmental issue area can be found in Section 4.0, *Environmental Impact Analysis*.

3.1 Regional Setting

Pismo Beach is located along the Pacific Ocean in western San Luis Obispo County, approximately eight miles south of the City of San Luis Obispo. San Luis Obispo County is located in the central coast region of California. Pismo Beach is bordered by the beach and ocean on the southwest and hills of the Santa Lucia Mountains to the northeast. The Cities of Grover Beach and Arroyo Grande are south and east of Pismo Beach and the unincorporated community of Avila Beach is just north of Pismo Beach. The majority of the City is within the coastal zone. Figures 2-1 and 2-2 in Chapter 2.0, *Project Description* show the regional location of Pismo Beach, the City boundary, and coastal zone boundary within Pismo Beach.

3.2 Physical Setting

3.2.1 General Geographic Setting

Pismo Beach occupies a coastal terrace, framed on the southwest by the Pacific Ocean and on the northeast by the Santa Lucia Mountains. Regional access to the city is provided by U.S. Highway 101, which runs through the length of the City, as well as State Route 1, which extends from the southwest of the City. Local elevations range from sea level to approximately 500 feet above mean sea level.

3.2.2 Geologic Setting

Pismo Beach is located at the tectonically active southern end of the Coast Ranges geomorphic province. This area contains geologic units ranging in age from Jurassic-aged to present-aged. A list of the geologic units mapped at the surface within Pismo Beach is presented in Table 4.6-1 and mapped in Figure 4.6-1 in Section 4.6, *Geology and Soils*.

There are several faults in the County that have the potential to affect the City, including the Los Osos Fault, the Hosgri fault, the Oceanic-West Huasna fault, the Rinconada fault, the East Huasna fault, the La Panza fault, the San Andreas fault, and the Wilmar Avenue fault. Other faults not included in this list, as well as faults located outside of the Pismo Beach region, may be capable of generating earthquakes that could cause damage in the planning area. Known fault lines are shown on Figure 4.6-2 in Section 4.6, *Geology and Soils*.

3.2.3 Hydrologic Setting

The City extends across two watersheds of the South County sub-region: Pismo Creek Watershed and Arroyo Grande Creek Watershed. The major surface water bodies in the City are Pismo Creek, Pismo Creek Estuary, and Meadow Creek, which are within the Pismo Creek Watershed in the

southeastern portion of the City. The watershed boundaries and primary creeks providing drainage are detailed in Section 4.9, *Hydrology and Water Quality*.

3.2.4 Natural Setting

Pismo Beach's key natural features include its coastline, estuary, and woodlands comprising diverse shrub, herbaceous, terrestrial, and aquatic habitats. Pismo Beach has a wide diversity of tree (hardwood and coniferous forests, oak woodlands), shrub (chaparrals, coastal scrubs), and herbaceous (grasslands) terrestrial habitat types. Remaining areas include developed and sparsely vegetated/barren land cover types. The City has identified Environmentally Sensitive Habitat Areas (ESHA), which include portions of Pismo State Beach, Pismo Marsh, Price Canyon, Pismo Creek, Pismo Preserve, Meadow Creek, dunes habitat of the Pismo State Beach ~~the Oceano Dunes~~, and the Monarch Butterfly Grove. Natural features and habitats the City are described in detail in Section 4.3, *Biological Resources*, of this report (refer to Figures 4.3-1, 4.3-2, and 4.3-3, which depict vegetation communities, wetlands, and critical habitat in the City).

3.2.5 Climate

The planning area is characterized by a typical Mediterranean coastal climate, which is generally dry in the summer with mild, wet winters. The climate is moderated by the marine influence of the Pacific Ocean, which can bring persistent periods of wind and fog, especially during spring and summer months. The Western Regional Climate Center maintains average weather data for city. According to data collected at this weather station the warmest month of the year is September with an average maximum temperature of 72 degrees Fahrenheit, while the coldest month of the year is January with an average minimum temperature of 42 degrees Fahrenheit. Rainfall is concentrated in the winter months with the wettest months of the year being January and February, with average monthly rainfall totals of 3.6 and 3.5 inches, respectively (WRRC 2005).

3.3 Baseline and Cumulative Project Setting

3.3.1 EIR Baseline

Section 15125 of the California Environmental Quality Act (CEQA) Guidelines states that an Environmental Impact Report (EIR) "should include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published." Section 15125 states that this approach "normally constitute[s] the baseline physical conditions by which a lead agency determines whether an impact is significant."

This EIR evaluates impacts against existing conditions for the baseline year of 2019, which is the baseline year used in the Circulation, Land Use and Community Design, Safety, Conservation and Open Space, Noise, ~~Facilities,~~ and Parks, Recreation, and Access Elements of the GP/LCP Update. In addition, the buildout projections in the GP/LCP Update were based on the 2019 data from the San Luis Obispo County Assessor's Office. Therefore, 2019 was used as the existing conditions year in the EIR analyses. As discussed further below, the NOP was released in January 2021 during the Coronavirus 2019 (COVID-19) pandemic, which has resulted in temporary changes to the existing economic and physical conditions in California, San Luis Obispo County, and in Pismo Beach. As a result, 2019 more accurately reflects the baseline conditions in the City prior to the pandemic. Therefore, it was determined that a comparison to 2019 baseline conditions would provide the most relevant information for the public, responsible agencies and City decision-makers. For some

issue areas, this EIR also includes consideration of impacts against a forecast future baseline condition in addition to the current baseline conditions, controlling for impacts caused by population growth and other factors that would occur whether or not the GP/LCP Update is adopted. For certain issue areas (including air quality, greenhouse gas emissions/climate change, energy, noise and transportation/circulation), impacts would occur as a result of background population growth, urbanization and volume of average daily traffic increases in the region that would occur by 2040, with or without implementation of the GP/LCP Update. Thus, for these issue areas, a comparison to a future 2040 baseline is provided for informational purposes. However, all impact determinations are based on a comparison to 2019 baseline conditions.

As stated above, the NOP was released during the COVID-19 pandemic. On March 4, 2020, the Governor proclaimed a State of Emergency in California as a result of the threat of Coronavirus 2019 (COVID-19). On March 18, 2020, the Emergency Services Director for San Luis Obispo County issued a Shelter at Home Order for the County of San Luis Obispo. The threat of COVID-19, as well as the subsequent State and County proclamations and orders, have resulted in temporary changes to the existing economic and physical conditions in California and San Luis Obispo County regionally and in Pismo Beach locally. Temporary changes to existing environmental conditions have included reduced vehicle traffic and associated noise and pollutant emissions, reduced electricity consumption. In addition, the timing and likelihood of cumulative development and regional buildout assumptions may be affected during or after the threat of COVID-19. The magnitude and duration of the State of Emergency and associated State and County orders, or future orders related to the threat of COVID-19 cannot be ascertained. Accordingly, the effect of COVID-19 on future environmental conditions effects of COVID-19 is currently speculative. CEQA Guidelines §15064(d)(3) states that:

> An indirect physical change is to be considered only if that change is a reasonably foreseeable impact which may be caused by the project. A change which is speculative or unlikely to occur is not reasonably foreseeable.

Furthermore, CEQA Guidelines §15154 states that:

> If, after thorough investigation, a Lead Agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact.

It would be speculative for the EIR to assume what changes to cumulative baseline conditions might occur as a result of COVID-19 or the subsequent State and County proclamations and orders.

3.3.2 Approach for Impact Analysis

The programmatic nature of the GP/LCP Update necessitates a general approach to the evaluation of existing conditions and impacts associated with the proposed project. As a programmatic document, this EIR presents a regionwide assessment of the impacts of the GP/LCP Update. Because the EIR is a long-term document intended to guide actions over 20 years into the future, analysis relies on program-level and qualitative evaluation. Quantitative analyses are provided where applicable with available information. During future stages in planning and implementation of specific elements of the GP/LCP Update, project-specific CEQA documents will be prepared by the appropriate project implementation agency.

3.3.3 Approach for Cumulative Analysis

CEQA defines cumulative impacts as "two or more individual effects which, when considered together, are considerable, or which can compound or increase other environmental impacts." Section 15130 of the *CEQA Guidelines* requires that an EIR evaluate environmental impacts that are individually limited but cumulatively considerable. These impacts can result from the proposed project alone, or together with other projects. The *CEQA Guidelines* state: "The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects" (*CEQA Guidelines*, Section 15355). A cumulative impact of concern under CEQA occurs when the net result of combined individual impacts compounds or increases other overall environmental impacts (*CEQA Guidelines*, Section 15355). In other words, cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time. CEQA does not require an analysis of incremental effects that are not cumulatively considerable nor is there a requirement to discuss impacts which do not result in part from the project evaluated in the EIR.

Cumulative Impact Methodology

The GP/LCP Update addresses cumulative conditions by design. As such, the environmental analysis of the GP/LCP Update presented throughout this EIR is a cumulative analysis consistent with CEQA policies. Furthermore, this EIR contains detailed analysis of regional (cumulative) impacts, which are differentiated from localized impacts that may occur at the city level.

The cumulative impact analyses included in each of the environmental issue areas addressed in Section 4 of this EIR examine impacts associated with implementation of the GP/LCP Update, in addition to implementation of projected development for San Luis Obispo County, which surrounds Pismo Beach, to address cumulative effects from growth extending beyond the planning area.

When evaluating cumulative impacts, CEQA allows the use of either a list of past, present and probable future projects, including projects outside the control of the lead agency, or a summary of projections in an adopted planning document, or a combination of the two approaches. The cumulative analysis presented below uses a projections-based approach. (See *CEQA Guidelines* Section 15130B)(1). Land use and growth projections for the City, which are the subject of analysis throughout this EIR, are combined with the growth projections for the adjoining County. San Luis Obispo County adjoins the city to the north, south, and east. The County is largely agricultural, with population concentrated in four regions: North County, North Coast, San Luis Obispo and South County (San Luis Obispo County 2015). Therefore, for most issue areas, San Luis Obispo County is referred to in this analysis as the "cumulative impact analysis area." Table 3-1 shows the estimated 2016 population and projected population and housing units for the planning area as well as the cumulative impact analysis area. However, for some topics where cumulative impacts are more localized (e.g., noise) or broader (e.g., greenhouse gas emissions), the cumulative impact area may be smaller or larger than the County. If a different cumulative impact area other than the County was used, it is noted under the "cumulative impact" section in the applicable subsection of Chapter 4.

Table 3-1 Population and Housing Projections of Cumulative Analysis Area, 2019-2040

	Population		Housing Units	
	2019[a]	2040[2]	2019[1]	2040[2]
City of Pismo Beach	8,237	10,874[b]	5,832	7,125[b]
San Luis Obispo County	278,355	346,968[b]	122,810	150,858[b]

Sources:
[1] California Department of Finance [DOF] 2020. The existing conditions used for GP/LCP Update buildout projections was based on the 2019 data from the San Luis Obispo County Assessor's Office. Therefore, 2019 was used as the existing conditions year in the analysis for population and housing.
[2] San Luis Obispo Council of Governments (SLOCOG) 2017. The GP/LCP Update buildout projections were based on a maximum buildout scenario. Therefore, the SLOCOG "high scenario" for population growth was used in this analysis.

As shown in Table 3-1, the City comprises approximately 3.0 percent of the existing County population and 4.7 percent of the existing number of housing units in the County. By 2040, this proportion is expected to remain similar (approximately 3.1 percent of the County population and 4.7 percent of housing units in the County). Thus, under both current and forecasted future conditions, the City represents a relatively small portion of the growth in the cumulative analysis impact area.

Analysis of the cumulative effects of the GP/LCP Update for each environmental issue area is presented at the ends of Sections 4.1 through 4.15.

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4 Environmental Impact Analysis

This section discusses the possible environmental effects of the City of Pismo Beach General Plan/Local Coastal Plan (GP/LCP) Update for the specific issue areas that were identified through the scoping process as having the potential to experience significant effects. A "significant effect" as defined by the *CEQA Guidelines* §15382:

> Means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.

The assessment of each issue area begins with a discussion of the environmental setting related to the issue, which is followed by the impact analysis. In the impact analysis, the first subsection identifies the methodologies used and the "significance thresholds," which are those criteria adopted by the City and other agencies, universally recognized, or developed specifically for this analysis to determine whether potential effects are significant. The next subsection describes each impact of the proposed project, mitigation measures for significant impacts, and the level of significance after mitigation. Each effect under consideration for an issue area is separately listed in bold text with the discussion of the effect and its significance. Each bolded impact statement also contains a statement of the significance determination for the environmental impact as follows:

- **Significant and Unavoidable**. An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved per §15093 of the CEQA Guidelines.
- **Less than Significant with Mitigation Incorporated**. An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings under §15091 of the CEQA Guidelines.
- **Less than Significant**. An impact that may be adverse but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.
- **No Impact.** The proposed project would have no effect on environmental conditions or would reduce existing environmental problems or hazards.

Following each environmental impact discussion is a list of mitigation measures (if required) and the residual effects or level of significance remaining after implementation of the measure(s). In cases where the mitigation measure for an impact could have a significant environmental impact in another issue area, this impact is discussed and evaluated as a secondary impact. The impact analysis concludes with a discussion of cumulative effects, which evaluates the impacts associated with the proposed project in conjunction with other planned and pending developments in the area listed in Section 3.0, *Environmental Setting*.

Section 15065 of the *CEQA Guidelines* also requires the following specific Mandatory Findings of Significance be addressed as part of the environmental review for the project:

- The potential for the project to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory;
- Project impacts that are individually limited, but cumulatively considerable. ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects); and
- Environmental effects of the project which will cause substantial adverse effects on human beings, either directly or indirectly.

Section 4.3, Biological Resources, describes the project's potential effects on plant and animal species populations, habitats, communities, and migratory patterns. Section 4.4, Cultural Resources and Tribal Cultural Resources, describes the project's potential effects on important historical and prehistorical cultural and tribal cultural resources on the project site. Potential adverse environmental effects to human beings are discussed in Section 4.2, Air Quality, Section 4.6, Geology and Soils, Section 4.8, Hazards and Hazardous Materials, Section 4.9, Hydrology and Water Quality, Section 4.10, Land Use and Planning, and Section 4.11, Noise. Furthermore, as discussed above, each environmental analysis section of the EIR concludes with a discussion of the project's contribution to cumulative effects.

The Executive Summary of this Environmental Impact Report (EIR) summarizes all impacts and mitigation measures that apply to the proposed project.

4.1 Aesthetics

The analysis in this section describes current visual conditions in and around Pismo Beach and evaluates the potential aesthetic and visual impacts of the General Plan/Local Coastal Plan (GP/LCP) Update, including impacts to scenic vistas, scenic resources, visual character and quality, and light and glare.

4.1.1 Setting

a. Existing Visual Conditions

The City of Pismo Beach is situated adjacent to the Pacific Ocean in the southwestern portion of San Luis Obispo County. The primary arterial roadways in Pismo Beach include State Route (SR) 1 (also referred to as Highway 1) and U.S. Highway 101 (U.S. 101). Views west of Highway 1 and U.S. 101 include beaches and sand dunes, rocky bluffs along the coast, and cityscape of Pismo Beach. East of Highway 1 and U.S. 101, the Santa Lucia Range and surrounding foothills, with scattered developed on the lower elevations, provide a backdrop for the City. Northeast of U.S. 101, the City abuts the unincorporated Pismo Preserve property, which offers panoramic views of the Pacific Ocean, Pismo Beach, and adjacent coastal communities. Much of the beaches and undeveloped coastal lands along the western edge of Pismo Beach are designated as permanent open space for conservation and recreation, under the jurisdiction of the California State Parks System.

b. Scenic Resources

Most communities identify scenic resources as important assets that form community identity. Scenic resources can be natural or man-made features such as trees, rock formations, historic buildings, and public art. As described in the Conservation and Open Space Element of the GP/LCP Update, scenic resources in Pismo Beach include scenic roadways and scenic vistas. These are described below and depicted in Figure 4.1-1.

Scenic Vistas and Views

A scenic vista provides views of an aesthetically valued landscape that benefits the public. The term “vista” generally implies an expansive view, usually from an elevated point or open area. This designation may be officially designated or unofficially defined by a set of criteria. As described in the Conservation and Open Space Element of the GP/LCP Update, the values used to designate scenic vistas in Pismo Beach include the City’s small beach town character and sweeping coastal views. The Land Use and Community Design Element of the GP/LCP Update also recognizes the Pacific Ocean, the beach, and the abutting land as unique natural resources that provide value to the community. The City designates specific areas along the coast that offer panoramic views of the Pacific Ocean and coastline as scenic vistas, as shown in Figure 4.1-1.

Scenic Roadways

California’s Scenic Highway Program designates scenic highways with the intention of protecting these corridors from change that would diminish the aesthetic value of adjacent lands. A highway is designated as an eligible scenic highway when the California Department of Transportation (Caltrans) determines that the roadway corridor qualifies for official status. The status of an officially designated scenic highway changes when the local governing body applies to Caltrans for scenic

Figure 4.1-1 Scenic Vistas and Roadways



Source: City of Pismo Beach. ~~2021~~ 2023. Conservation and Open Space Element.
Note: For the purposes of this map, this figure does not include the submerged lands offshore that are within the Pismo Beach City Limits. See Figure LU-1 of the General Plan/Local Coastal Plan Land Use Element (Pismo Beach LAFCO-approved City Border) for the full Pismo Beach City Limits.

highway approval, adopts a Corridor Protection Program, and receives notification that the highway has been officially designated (Caltrans 2018). Scenic highways must have an approved Corridor Protection Program and remain in compliance to maintain scenic highway status. According to the Caltrans State Scenic Highway Map (2018) and list of eligible and officially designated State Scenic Highways (2018), Highway 1 and U.S. 101 are eligible for designation as State Scenic Highways, but not officially designated.

As shown in Figure 4.1-1, the City has designated several scenic roadways throughout Pismo Beach that offer views of a variety of landscapes. The policies and actions provided in the GP/LCP Update Conservation and Open Space Element supplement federal and State mandates relating to scenic resources and highways. The City has designated the following roadways as scenic:

- U.S. 101
- Price Canyon Road
- Highway 1/Dolliver Street
- Shell Beach Road
- Ocean Boulevard

c. Visual Character

As described in Section 2.3.3 of Chapter 2, Project Description, Pismo Beach is organized into ten neighborhood planning areas. The character-defining features of Pismo Beach vary by area of the City and generally include density, building height, building bulk, the location of buildings on a lot, lot size, architectural style, exterior colors and materials, similarities and differences between neighboring structures, and the year in which structures were built. Table 2-2 in Chapter 2, Project Description, shows the relationship between the planning areas in the GP/LCP Update and the 1992 General Plan planning areas. Figure 2-5 shows the neighborhood planning areas in the City, as defined by their unique features. As shown and described in detail in the Project Description, the 10 planning areas include the following:

- Sunset Palisades/The Bluffs/South Palisades
- North Spyglass/Spyglass
- St. Andrews/Spindrift
- Shell Beach/Dinosaur Caves
- Motel District
- Downtown Core
- Pismo Creek/Pismo Marsh
- Oak Park Heights
- Pismo Heights
- Freeway Foothills/Mattie Road

d. Light and Glare Conditions

Light and glare from indoor or outdoor uses can reduce visibility of the night sky, create potential hazards to drivers, and be a nuisance to residential areas. The City has typical light conditions found in suburban areas (e.g., roadway lighting, commercial parking lot and building lighting, residential buildings, headlights from motor vehicles). Sources of daytime glare include direct beam sunlight

and reflections from windows, architectural coatings, glass, and other shiny reflective surfaces. Nighttime lighting and glare are produced by both stationary and mobile sources. Stationary sources of nighttime light include structure illumination, decorative landscape lighting, lighted signs, and streetlights. As discussed in the GP/LCP Update Conservation and Open Space Element, the main sources of light pollution in Pismo Beach are streetlights and exterior lighting for the downtown area, as well as lighting along U.S. 101.The primary source of mobile nighttime light is motor vehicle headlights. Sources of light and glare in the downtown area and residential areas include street lighting along roadways, lit building exteriors and signage, and parking lot lighting.

4.1.2 Regulatory Setting

a. Federal Regulations

No existing federal regulations pertain to the visual resources in the City.

b. State Regulations

California Coastal Act and California Coastal Commission

The California Coastal Act of 1976 (Coastal Act; Public Resources Code Section 30000) and the California Coastal Commission, the State's coastal protection and planning agency, were established by voter initiative to plan for and regulate new development, and to create policies to protect public access to and along the shoreline. Section 30251, Scenic and Visual Qualities, of the Coastal Act mandates that scenic and visual qualities of coastal areas be considered and protected as resources of public importance. Pursuant to the Coastal Act, permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas designated in the Department of Parks and Recreation California Coastline Preservation and Recreation Plan (CCPRP) and by local government shall be subordinate to the character of its setting.

Caltrans Scenic Highways

Caltrans defines a scenic highway as any freeway, highway, road, or other public right-of-way, that traverses an area of exceptional scenic quality. Suitability for designations as a State scenic highway is based on the vividness, intactness, and unity of their view corridors, as described in Caltrans' Scenic Highway Guidelines (Caltrans 2008):

- *Vividness* is the extent to which the landscape is memorable. This is associated with the distinctiveness, diversity, and contrast of visual elements. A vivid landscape makes an immediate and lasting impression on the viewer.
- *Intactness* is the integrity of visual order in the landscape and the extent to which the natural landscape is free from visual intrusions (e.g., buildings, structures, equipment, grading).
- *Unity* is the extent to which development is sensitive to and visually harmonious with the natural landscape.

c. Local Regulations

Local Coastal Program and Coastal Land Use Plan

To ensure maximum public access to the coast and public recreation areas, the Coastal Act directs each local government lying within the Coastal Zone to prepare an LCP consistent with Section 30501 of the Coastal Act, in consultation with the Coastal Commission, and with public participation. Until the LCP has been adopted by the local jurisdiction and certified compliant with the Coastal Act, the Coastal Commission retains permitting authority within the portion of a local jurisdiction located in the Coastal Zone. Section 30519(a) of the Coastal Act specifies that once an LCP has been developed for a municipality, development review authority is delegated to that local government.

The City of Pismo Beach GP/LCP is a combined document that meets both the State General Plan requirements and State Coastal Act requirements. The City's current GP/LCP includes two parts as required by the Coastal Act: a Land Use Plan (LUP), last updated in 1993, and the Implementation Plan (IP), last updated in 1983, with several amendments to both documents occurring since. The LUP consists of goals, policies, and actions that address the requirements of the Coastal Act and are integrated into applicable elements of the General Plan. The IP provides the zoning regulations that implement the LUP goals, policies, and actions, and serves as the City's Coastal Zoning Ordinance. New development in the City's Coastal Zone is required to be consistent with the combined GP/LCP and Coastal Zoning Ordinance. Should conflicts arise between the GP/LCP other local planning documents, the policies and regulations of the GP/LCP take precedence within the Coastal Zone.

General Plan

California Government Code Section 65300 describes the scope and authority of local jurisdictions to prepare, adopt, and amend general plans. Communities prepare general plans to guide the long-term physical development of the jurisdiction, and any land within the jurisdiction's SOI. At a minimum, the California Government Code requires general plans to address land use, circulation, housing, noise, conservation, open space, and safety issues. As stated above, the City's current GP/LCP includes the LUP, last updated in 1993, and the IP, last updated in 1983. The General Plan is currently undergoing an update that includes a Conservation and Open Space Element and a Land Use and Community Design Element, which will govern aesthetics and visual resources in the City.

The Conservation and Open Space Element guides the protection of natural and cultural resources and conservation areas important to the environment, quality-of-life, and visual character of Pismo Beach. This element identifies local goals that present how the City's natural environment will look in 2040 and presents policies that measure progress toward the goals and actions that identify the regulatory tools the City can use to meet those goals.

The Land Use and Community Design Element provides the tools to direct new development to preserve and enhance the character and natural resources of Pismo Beach. This element identifies local goals that present how the pattern of land use development in Pismo Beach will look in 2040 and presents policies that measure progress toward the goals and actions that identify the regulatory tools the City can use to meet those goals. The Land Use and Community Design Element also guides planning decisions in the Coastal Zone that ensures public coastal access, while maintaining coastal preservation and protection. This element provides policies for coastal development that further enhance the requirements provided within the Coastal Act.

Pismo Beach Municipal Code – Title 17 (Zoning)

The Zoning Code (Title 17) of the City of Pismo Beach Municipal Code implements the General Plan, particularly the Land Use and Community Design Element. While General Plan designations are more generalized in nature, the Zoning Code and zoning districts provide specific controls on land use, density or intensity of development, and development standards to implement the City's GP/LCP goals and policies. The Zoning Code provides standards for protection of visual resources, compatible design, and illumination for new development in the City that is associated with zoning. Zoning Code Chapter 17.45 establishes standards for coastal bluff development specifically to protect public views and avoid adverse visual impacts. Zoning Code Chapter 17.68 provides a list of prohibited signage in the City. To maintain consistency with the GP/LCP Update, the Zoning Code is currently undergoing an update including development standards to implement the GP/LCP Update. This will include maximum height, setbacks, design standards and other standards, which may involve updates to existing standards effecting visual resources and lighting and glare in the City.

Pismo Beach Downtown Strategic Plan

In November 2014, the City adopted a strategic plan to help shape future development in the City's Downtown. The Pismo Beach Downtown Strategic Plan is a community-based visioning and guidance tool for future growth and change in the downtown area, and addresses the following design issues:

- Vision statement
- Vision plan
- Branding
- Districts
- Land uses
- Opportunity sites
- Placemaking
- Accessibility
- Beach access
- Long-term pier plaza vision
- Pier plaza interim option
- Plaza features
- Plaza improvements
- Public safety
- Circulation concepts
- Pedestrian and bike circulation
- Streetscape
- Parking

Shell Beach Design Standards and Guidelines

In February 2017, the City adopted residential, commercial, and mixed-use design guidelines for the community of Shell Beach. The guidelines address the following design issues:

- Site planning and neighborhood character
- Scale and massing
- Roof forms and roof decks
- Architectural features and articulation
- Garages, carports, and accessory structures
- Materials and colors
- Landscape areas and fencing
- Good neighbor
- Incentives for single-family residential (only applicable to single family residential)

- Parking (only applicable to commercial/mixed use development)
- Utilitarian and trash areas (only applicable to commercial/mixed use development)
- Lighting (only applicable to commercial/mixed use development)
- Signage (only applicable to commercial/mixed use development)
- Materials and Colors (only applicable to commercial/mixed use development)
- Public Spaces, Open Space and Landscape areas (only applicable to commercial/mixed use development)

4.1.3 Impact Analysis

a. Methodology

The assessment of aesthetic impacts involves qualitative analysis that is inherently subjective in nature. Different viewers react to views and aesthetic conditions differently. This evaluation measures the existing visual environment of the City, described above, against the proposed action (implementation of the GP/LCP Update), analyzing the nature of the anticipated change. The GP/LCP Update is an update to existing plans and does not contain specific development proposals. This analysis focuses on land use changes envisioned under the GP/LCP Update and the aesthetic impacts on the community in terms of arrangement of built to open space, density and intensity of development, and height, according to the thresholds of significance discussed below.

b. Significance Thresholds

The following thresholds of significance are based on Appendix G to the CEQA Guidelines. For the purposes of this EIR, implementation of the GP/LCP Update may have a significant adverse impact if it would do any of the following:

1. Have a substantial adverse effect on a scenic vista
2. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway
3. In non-urbanized areas, substantially degrade existing visual character or quality of public views of the site and its surroundings; or conflict with applicable zoning and other regulations governing scenic quality in urbanized areas
4. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area

c. Project Impacts and Mitigation Measures

Threshold 1:	Would the project have a substantial adverse effect on a scenic vista?
Threshold 2:	Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Impact AES-1 COMPLIANCE WITH THE GP/LCP UPDATE POLICIES, ZONING CODE, DOWNTOWN STRATEGIC PLAN, AND THE SHELL BEACH DESIGN STANDARDS AND GUIDELINES WOULD PROTECT VISUAL AND AESTHETIC RESOURCES IN THE CITY FROM POTENTIAL AESTHETIC IMPACTS RESULTING FROM DEVELOPMENT FACILITATED BY THE GENERAL PLAN/ LCP UPDATE. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

As shown in Figure 4.1-1, there are several points along the coast offering panoramic views of the Pacific Ocean and coastline that the City has designated as scenic vistas. According to the Caltrans State Scenic Highway Map (2019) and List of eligible and officially designated State Scenic Highways (2019), Highway 1 and U.S. 101 are eligible for designation as State Scenic Highways, but not officially designated. As shown in Figure 4.1-1, the City has designated several scenic roadways throughout Pismo Beach that offer views of a variety of landscapes, including U.S. 101, Price Canyon Road, Highway 1/Dolliver Street, Shell Beach Road, and Ocean Boulevard.

Pismo Beach is organized into 10 neighborhood planning areas in the GP/LCP Update, each with its own name and unique characteristics. All of these planning areas are predominantly built-out to their maximum development potential based on their designated land uses and associated density limits, with little to no developable areas remaining. The GP/LCP Update would largely preserve the existing pattern of land uses and, thus, scenic views from scenic vistas in the City. However, depending on the location, orientation, and height of new infill development and redeveloped properties, scenic vistas and scenic resources, including trees, rock outcroppings, and historic buildings, could be blocked or otherwise adversely affected in scenic areas as a result of the GP/LCP Update. Implementation of the following goals, policies, and actions in the Land Use and Community Design Element and Conservation and Open Space Element would minimize adverse effects on scenic vistas and resources:

Land Use and Community Design Element

Goal LU-1: A community with a variety of well-regulated land uses that support the diverse needs of both ~~visitors~~ residents and ~~residents~~ visitors.

- **Policy LU-1.6: Preserve Open Space.** Open space lands, including public and private parks, shall not be developed intensively with buildings or other structures.
  - **Action LU-1.6c: Citywide Open Space Network**. The City shall include the lake, creeks, and marsh as part of a Citywide and regional network of open space, parks, and – where appropriate – trails, all fostering understanding, enjoyment, and protection of the natural landscape and wildlife.
  - **Action LU-1.6e: View Corridors.** Through appropriate zoning, open space shall be arranged to maximize view corridors from public viewing areas to protect and maintain views of both the ocean and coastal foothills, as well as the visual sense of the coastal terrace landform. Accordingly, common open space shall have continuity throughout the Coastal Zone and shall not be interrupted by fences or other structures.

Goal LU-2: A community with a classic California and small-town beach atmosphere.

- **Policy LU-2.1: Neighborhood Preservation.** The City shall preserve, protect, and enhance the City's neighborhoods and strive to preserve and enhance their identity.
  - **Action LU-2.1f: Coastal Views Protection.** The public scenic and visual qualities shall be considered and protected. All development shall be sited and designed to protect views to and along the ocean and coastal areas; minimize alteration of natural landforms; be of low scale, limited heights, and appropriate building articulation; be visually compatible with the character of the surrounding area; and, where feasible, restore and enhance visual quality in visually degraded areas. Building heights shall be limited to the applicable height provided in the Zoning Ordinance.
  - **Action LU-2.1g: Side and Rear Yard View Corridors.** Where side and rear yards provide a view from the street to the ocean or a view to attractive hills and valleys, the ~~side~~ yards should be maintained as open visual access corridors the width of the required ~~side~~ yard setback. These areas shall be open to the sky and free from all visual obstructions ~~including trees and shrubs~~ (except for a see-through gate or fence) from the front property line to the rear property line. Design review shall be required to implement this ~~recommendation~~ action item. Existing structures are exempted from this policy as of the date of adoption of this General Plan/Local Coastal Program.
  - **Action LU-2.1h: Scenic Views Adjacent to the City.** The City shall encourage the County to retain the Ontario Hill and the hillsides adjacent to U.S. Highway 101 and Price Canyon Road as open space or grazing land and prohibit development on slopes over 30%.
  - ~~a~~ **Action LU-2.2d: Special Tree Preservation.** A number of special and important trees or tree grouping exist within Pismo Beach which shall be preserved. The types of trees that shall be preserved include oak trees. ~~:~~

    ~~1. Oak Trees~~

    ~~2. Monterey Pines and Monterey Cypress~~

    ~~3. Eucalyptus Trees~~

    ~~4. Monkey Trees~~

    ~~5. Sycamore Trees~~

  - **Action LU-2.2h: Special Landscape Features**. Special landscape features shall be preserved including but not limited to:
    - The large rock in the U.S. Highway 101 center divide – 'Crater Rock'.
    - Rock formations in the Judkins School and Boosinger Park areas, including donated hillside lots
    - Dinosaur Caves

Goal LU-3: City Design. A functional community that is designed with compatible facades, architectural styles, and colors.

- **Policy LU-3.1: Building Site Design.** Enforce design criteria for new development within the City.
  - **Action LU-3.1e: Special Design Considerations.** Special design considerations shall be made for areas of the City where special concern for urban design is necessary. These sites and features shall be included and addressed in the Zoning Ordinance, Architectural Review Overlay Zone. These areas may include, but are not limited to, places where preserving views and minimizing view impairment is a concern.

Goal LU-7: A community where growth is concentrated in corridors and neighborhood centers where adaptive land reuse will contribute to a high quality of life for the entire community.

- **Policy LU-7.1: Growth Areas.** Prioritize growth in areas that complement adjacent neighborhoods, consider market and policy demand for housing and commercial needs, and revitalize economically obsolete uses.
  - **Action LU-7.1a: Existing Developed Areas.** New residential, commercial, or industrial development shall be located within, contiguous with, or in close proximity to existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. In addition, land divisions, other than leases for agricultural uses, outside existing developed areas shall be permitted only where 50% of the usable parcels in the area have been developed and the created parcels would be no smaller than the average size of surrounding parcels.

    See also Policy 5.3d, Transit-Oriented Development, for additional policy related for focusing development in proximity to transit.

- **Policy LU-7.2: Adaptive Reuse.** Support and incentivize adaptive reuse of buildings and sites to utilize existing infrastructure while enhancing the character of the community.
  - **Action LU-7.2a: Incentivize Adaptive Reuse.** Incentivize adaptive reuse projects through expedited and discounted permitting and density bonuses, where appropriate.

Goal LU-8: A community that protects and enhances natural and coastal resources within Pismo Beach.

- **Policy LU-8.1: Natural Resources Compatibility.** Require all land use proposals to respect, preserve and enhance, to the maximum extent feasible, the sensitive habitats, natural landforms, scenic resources, and other coastal resources of Pismo Beach. Development shall only be authorized when the proposed use is allowed per the applicable land use designation, and when it meets all applicable GP/LCP policies and standards.
  - **Action LU-8.1a: Identify and Map Natural Resources.** The City shall prepare and maintain geographic information systems-based maps of the City, identifying the natural resources such as wildlife habitats and open space, viewsheds, terrain, and hillsides. The natural resource map shall also show development constraints such as flood hazard areas, geological hazard areas, soil hazard areas (subsidence, liquefaction), and Very High Fire Hazard Severity Zones. The maps shall provide the basis of determining where urban development is most appropriate, and where other needs of the community, or requirements to protect coastal resources, outweigh the desire or need for urban development. As a result of the findings of these maps, the City shall re-evaluate its land use

designations and future plans for undeveloped areas and revise the Land Use Map accordingly. Any revisions to the land use designations or Land Use Map shall require a GP/LCP amendment certified by the CCC.

Conservation and Open Space Element

Goal COS-2: A community that protects and enhances scenic roadways and vistas.

- **Policy COS-2.1: Protect Scenic Resources.** The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize natural landforms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. See Figure CO-1, Scenic Roadways and Vistas. ~~[of the Conservation and Open Space Element].~~

The policies identified in the GP/LCP Update would help preserve existing scenic vistas by incentivizing infill development and adaptive reuse to maintain the existing development pattern in the City. These policies and actions would also facilitate identification, designation, and protection of viewsheds and scenic vistas and by requiring new development to incorporate design features that protect or enhance existing scenic views and vistas. While General Plan designations are more generalized in nature, the Zoning Code and zoning districts provide specific controls on land use, density or intensity of development, and development standards to implement the City's GP/LCP goals and policies. The Zoning Code provides standards for protection of visual resources, compatible design, and illumination for new development in the City that is associated with zoning. Zoning Code Chapter 17.45 establishes standards for coastal bluff development specifically to protect public views and avoid adverse visual impacts. Zoning Code Chapter 17.68 provides a list of prohibited signage in the City.

New development or redevelopment facilitated by the GP/LCP Update would also be subject to the updated standards in the City Zoning Code, in association with the GP/LCP Update, relating to signage, design, and protection of visual resources in the City. Compliance with City's Zoning Code requirements and the goals, policies, and actions proposed in the GP/LCP Update would protect scenic resources upon development and redevelopment facilitated by the project. Therefore, impacts to scenic vistas or scenic resources in the City from implementation of the GP/LCP Update would be less than significant.

Mitigation Measures

No mitigation measures are required.

Threshold 3:	Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Impact AES-2 COMPLIANCE WITH EXISTING STANDARDS AND GP/LCP UPDATE GOALS, POLICIES, AND ACTIONS WOULD ENSURE THAT NEW DEVELOPMENT AND REDEVELOPMENT COMPLEMENTS THE EXISTING VISUAL CHARACTER AND QUALITY OF PISMO BEACH, AND DOES NOT CONFLICT WITH ZONING AND REGULATIONS GOVERNING SCENIC QUALITY. THEREFORE, THE PROJECT WOULD HAVE A LESS THAN SIGNIFICANT IMPACT ON VISUAL CHARACTER AND QUALITY.

Pismo Beach is a small coastal community with much of the land use pattern already established by existing development. The City was founded in 1891 and incorporated in 1946, and is known for its natural features, ocean views, tourism, and small-town character. According to the City's current (2020-2028) Housing Element, single-family attached and detached residences comprise more than two-thirds of all housing in the City. Mobile homes comprise 13 percent, and multiple-family housing comprises the remaining 18 percent of the housing stock. Most residential lots are small in area, and housing units have a mixture of styles and colors. Oak, Monterey pine, Monterey cypress, eucalyptus, monkey, and sycamore trees are concentrated in certain parts of the City, while some areas have few large trees, typical of a coastal plain in this part of California. The vegetated hillsides and coastline frame the City's neighborhoods, providing landscape views from nearly every part of the City. As shown in described in Section 4.1.1(c), the aesthetic character of Pismo Beach is a result of the combined individual characteristics of the ten neighborhood planning areas, each of which have distinctive physical and social characteristics.

Residential and commercial uses are mostly concentrated west of U.S. 101, while open space and industrial uses are clustered mostly east of U.S. 101. Many local businesses are located in the Downtown Core and Motel District areas, within close proximity to the surrounding residential neighborhoods. As described in the discussion of key updates to the GP/LCP in Chapter 2, Project Description, the GP/LCP Update encourages mixed uses in the downtown area and focused on affordability. This includes greater organization of uses in these areas on the City's proposed land use diagram (refer to Figure 2-6) to guide future development and designate appropriate locations for land uses.

The GP/LCP Update would facilitate development for housing and mixed uses on the remaining vacant and underutilized parcels. There are a number of smaller vacant sites in Pismo Beach, but many of these sites face substantial development constraints. Larger vacant lots are located in the Sunset Palisades, Pismo Heights and Oak Park Heights planning areas, east of planned residential developments. Ultimately, many of these vacant lots are located on steep slopes or face other environmental constraints, limiting development opportunities. Most vacant and underutilized sites outside of constrained areas tend to be in the Downtown Core and along the U.S. 101 corridor in Shell Beach. Much of the growth and change in Pismo Beach over the next 20 years is anticipated to occur in these areas.

The Land Use and Community Design Element of the GP/LCP Update specifically addresses the components of the City's unique style that would be preserved as the City changes over time. This element is intended to direct the placement and character of future development, shaping where people will live, work, play, and shop in Pismo Beach in future years.

The GP/LCP Update goal for the Shell Beach/Dinosaur Caves planning area (Goal LU-12) is for a planning area focused on conserving the existing housing stock and character and improving the commercial and pedestrian environment of Shell Beach to enhance the beach community. The GP/LCP Update goal for the Downtown Core planning area (Goal LU-14) is for a vibrant Downtown area that acts as a destination for all, providing motel and hotel uses, as well as supporting uses such as commercial, mixed-use, high-density residential, and recreation. In addition to these goals and the goals, policies, and actions, listed under Impact AES-1, the following actions in the GP/LCP Update Land Use and Community Design Elements would provide direction for the desired visual character and quality in Pismo Beach:

- **Action LU-1.2d: Drive-Thru Services Prohibited.** In order to maintain and promote a more pedestrian-oriented beach community character, as well as to reduce the high volume of vehicle trips attracted by drive-thru establishments, the City shall prohibit any new development of drive-thru services in restaurants, banks, dry cleaners and other business establishments in the Downtown Core and Shell Beach Planning Areas.
- **Action LU-1.3a: Mixed-Use Designation and ~~Overlay Zone~~ Zoning District.** Focus the mixed-use designation within the Downtown ~~Core~~ and create a mixed-use ~~overlay zone~~ zoning designation for other areas appropriate for mixed-use as directed by this Element. Downtown mixed-use shall be ~~beach visitor-serving-focused incorporating services, businesses, and multifamily units in a pedestrian-oriented community character along the primary beach area~~ community serving for local residents, including food markets, drug stores, and health services, and for mixed use projects including commercial, residential, hotels, and motels, and other multiple-use projects.
- **Action LU-2.1b: Special Communities.** New development shall, where appropriate, protect special communities and neighborhoods that, because of their unique characteristics, are popular visitor destination points for recreational uses.
- **Action LU-2.1c: Context Sensitive Development.** Modify the zoning ordinance to include bulk and scale regulations consistent with existing community character. These regulations should protect coastal views, encourage appropriate building articulation, and avoid domineering over other development in the adjacent vicinity.

- **Policy LU-9.2: Open Space.** Maintain the area between Shell Beach Road and the 101 Freeway as permanent open space. No further land divisions shall be in this approved area.
  - **Action LU-9.2a: Open Space Character.** Require that any development approved on site maintain the open space character. The amount of site area that may be developed with improvements shall not exceed 5,000 square feet or 60% of gross site area whichever is lesser.

Goal LU-11 (St. Andrews Tract/Spindrift): A residential neighborhood where new additions and replacements are compatible with the scale and character of the existing development and where bluff tops, coastal access, trees and bird habitat are protected.

- **Policy LU-11.1: ~~Compatible Development~~ Bluff-Top Open Space and Access.** ~~Protect the scale and character of existing housing~~ Protect the bluff-top open space and coastal access areas in this planning area.

- **Policy LU-14.1: Downtown Focus for Residents and Visitors.** Protect Downtown Pismo Beach as a City focal point with a blend of cultural, commercial, professional, residential and recreational uses catering to both visitors and residents of all ages.
    - **Action LU-14.1a: Local Signage Program.** Establish and give emphasis to a distinctive local character in Pismo Beach retailing through a comprehensive local signage program.

Beyond changes envisioned for the Shell Beach and Downtown Core areas, the GP/LCP Update does not anticipate substantial changes to the existing pattern of development in the City. Nevertheless, development and redevelopment facilitated by the GP/LCP Update would result in visual changes to the community. However, the changes effecting visual character and quality in the community that may occur during the lifetime of the GP/LCP Update would be governed by the above goals, policies, and actions as well as the associated updates to the standards contained in the City's Zoning Code. Additionally, future development would adhere to the vision and guidelines in the Pismo Beach Downtown Strategic Plan to addresses design issues as well as the residential, commercial, and mixed-use design guidelines for the community of Shell Beach. These plans and community standards have been developed with the goal of retaining Pismo Beach's visual character and quality, while providing visual enhancements in certain areas of the City. Impacts would be less than significant with implementation of applicable policies and regulations.

Mitigation Measures

No mitigation measures are required.

Threshold 4:	Would the project create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

Impact AES-3 NEW DEVELOPMENT FACILITATED BY THE GP/LCP UPDATE WOULD BE SUBJECT TO EXISTING REGULATIONS IN THE CITY'S ZONING CODE, AND GP/LCP UPDATE POLICIES, TO PROTECT SKYWARD NIGHTTIME VIEWS AND TO LESSEN OR PREVENT GLARE. THEREFORE, THE PROJECT WOULD RESULT IN A LESS THAN SIGNIFICANT IMPACT ASSOCIATED WITH NEW SOURCES OF LIGHT AND GLARE.

The GP/LCP Update would facilitate new development that could introduce new sources of light and glare in Pismo Beach, resulting in increased ambient nighttime lighting. New sources of light and glare could be introduced by infill development, new development on currently vacant or undeveloped lots, or modification of existing buildings. Specific sources of ambient lighting would include streetlights, parking lot lights, signage on business establishments, exterior building lights, illumination from interior lights, and lighting at outdoor recreational facilities. Reflective building and vehicle surfaces, and the headlights of motor vehicles, could generate additional glare in the City.

Implementation of the GP/LCP Update Conservation and Open Space Element and Land Use and Community Design goals, policies, and actions listed below would reduce new sources of light or glare that could impact views in the City.

Conservation and Open Space Element

Goal COS-1: A community that conserves the important natural resources of Pismo Beach for the community's health, safety and enjoyment, including air quality, renewable energy, geology and soils, minerals, water quality and supply, and dark skies.

- **Policy COS-1.9: Minimization of Lighting Impacts**. Eliminate or shield and direct exterior lighting away from biological resources to minimize adverse impacts to wildlife and protect the dark sky.

Land Use and Community Design Element

  - **Action LU-1.4b: Industrial Standards.** Industrial uses shall comply with industrial regulations and standards, including air pollution, noise, waste disposal, access for delivery vehicles and light and glare. These uses should be designed to present a pleasant appearance and shall include appropriate landscaping.

- **Policy LU-5.2: Pedestrian Orientation and Safety.** Through appropriate zoning and discretionary approvals, strive to create safe, walkable environments that include elements such as good lighting, safe crosswalks, and street trees that allow people of all ages and abilities to exercise and safely access public transportation, community centers, recreation, schools, and goods and services.
  - **Action LU-5.2b: Pedestrian-Oriented Development.** Discourage new "strip" commercial development with large street-fronting parking lots. New commercial developments should address enhancing the pedestrian environment through buildings oriented and accessible from the sidewalk, transparent ground-floor facades, pedestrian lighting and pedestrian-scaled buildings.
  - **Action LU-5.2e: Pedestrian-Scaled Street Lights.** Pedestrian-scaled streetlights shall be used throughout the community in new developments except for safety lighting used for intersection lighting. The City shall also consider a pedestrian scaled streetlight program for each planning area, as done for the Shell Beach planning area.
  - **Action LU-12.4a: Shell Beach Road Streetscape Plan.** Continue to implement and update when appropriate the Shell Beach Road Streetscape Plan for improved signage, street trees, sidewalk improvements, pedestrian scale streetlights, public parking, and public art. Require that new developments are consistent with the Shell Beach Streetscape Plan during the plan review process.

Implementation of these goals, policies, and actions would ensure that the updated Zoning Code establishes standards to prevent glare and protect the character of the City from inappropriate levels of lighting. Future development facilitated by the GP/LCP Update would be required to submit a lighting plan that complies with updated Zoning Code standards. Additionally, future development facilitated by the GP/LCP Update would require an independent environmental review that would determine the project-specific light and glare effects and subsequent mitigation measures, if required to comply with standards for lighting and building materials to prevent glare. As a result, the GP/LCP Update would have a less than significant impact related to the introduction of light and glare.

Mitigation Measures

No mitigation measures are required.

4.1.4 Cumulative Impacts

Cumulative development and redevelopment in the City would intensify urban development within the small coastal community of Pismo Beach. New development would incrementally contribute to regional urbanization in San Luis Obispo County. Additionally, as planned cumulative development occurs throughout San Luis Obispo County, the overall visual environment will change. However, compliance with City and County policies and standards for the protection of visual resources, compatible design for new development, maintaining visual character, and preserving dark skies would ensure that the combination of forecasted development in the City and planned development in neighboring communities would not result in a substantially different visual environment than currently exists. The cumulative impacts associated with changes in the visual environment would not be significant, and the GP/LCP Update's contribution to these impacts would not be cumulatively considerable.

4.2 Air Quality

This section describes current air quality conditions in and around Pismo Beach and analyzes the effects of the proposed General Plan/Local Coastal Plan (GP/LCP) Update on air contaminant emissions and associated impacts, as well as odors.

4.2.1 Setting

a. Climate

The GP/LCP Update planning area is part of the South Central Coast Air Basin (SCCAB) which includes all of San Luis Obispo, Santa Barbara, and Ventura counties. The climate of the San Luis Obispo County area and all of the SCCAB is strongly influenced by its proximity to the Pacific Ocean and the location of the semi-permanent high-pressure cell in the northeastern Pacific Ocean. The Mediterranean climate of the region produces moderate average temperatures, although slightly more extreme temperatures can be reached in the winter and summer. The warmest months of the year in Pismo Beach are September and October, with an average maximum temperature of 73 degrees Fahrenheit, while the coldest month of the year is December with an average minimum temperature of 42 degrees Fahrenheit. The climate is semi-arid, with rainfall concentrated in the winter months. Table 4.2-1 summarizes local climatic conditions.

Table 4.2-1 Climatic Conditions in Pismo Beach

Average annual rainfall	17.8 inches
Average maximum temperature (annual)	69 °F
Average minimum temperature (annual)	48 °F
Warmest month(s)	September & October
Coolest month(s)	December

Source: U.S. Climate Data 2021.

The region is subject to seasonal winds. Seasonal winds are strong northerly to northeasterly winds that originate from high-pressure areas centered over the desert of the Great Basin. These winds are usually warm, dry, northerly winds which blow offshore at 15 to 20 miles per hour (mph) but can reach speeds in excess of 60 mph. Seasonal winds are particularly strong in mountain passes and at the mouths of canyons. However, seasonal and local topographic conditions may alter the wind directionality.

Two types of temperature inversions (warmer air on top of cooler air) are created in the area: subsidence and radiational. The subsidence inversion is a regional effect created by the Pacific high in which air is heated as it is compressed when it flows from the high-pressure area to the low-pressure areas inland. This type of inversion generally forms at about 1,000 to 2,000 feet and can occur throughout the year, but it is most evident during the summer months. Radiational, or surface, inversions are formed by the more rapid cooling of air near the ground at night, especially during winter. This type of inversion is typically lower and is generally accompanied by stable air. Both types of inversions limit the dispersal of air pollutants within the regional airshed, with the more stable the air (low wind speeds, uniform temperatures), the lower the amount of pollutant dispersion.

b. Air Pollutants of Primary Concern

The State and federal Clean Air Acts mandate the control and reduction of certain air pollutants. Under these Acts, the United States Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (CARB) have established ambient air quality standards (AAQS) for certain "criteria" pollutants. Ambient air pollutant concentrations are affected by the rates and distributions of corresponding air pollutant emissions, as well as by the climactic and topographic influences discussed above. The primary determinant of concentrations of non-reactive pollutants (such as carbon monoxide [CO] and fine particulates [PM_{10}]) is proximity to major sources. Ambient CO levels usually closely follow the spatial and temporal distributions of vehicular traffic. A discussion of these primary criteria pollutants follows.

Federal and State standards have been established for ozone, CO, nitrogen dioxide (NO_2), sulfur dioxide (SO_2), lead, and fine particulates (PM_{10} and $PM_{2.5}$). Standards have been set at levels intended to be protective of public health. California's standards are more restrictive than federal standards for each of these pollutants except lead and the eight-hour average for CO. Table 4.2-2 illustrates the current federal and State AAQS for each of these pollutants.

Table 4.2-2 Current Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standard (CAAQS)	Federal Standard (NAAQS)
Ozone (O_3)	1-Hour	0.09 ppm	–
	8-Hour	0.070 ppm	0.070 ppm
Carbon Monoxide (CO)	8-Hour	9 ppm	9 ppm
	1-Hour	20 ppm	35 ppm
Nitrogen Dioxide (NO_2)	Annual	0.030 ppm	0.053 ppm
	1-Hour	0.18 ppm	0.100 ppm
Sulfur Dioxide (SO_2)	Annual	–	–
	24-Hour	0.04 ppm	–
	1-Hour	0.25 ppm	0.075 ppm
PM_{10}	Annual	20 µg/m^3	–
	24-Hour	50 µg/m^3	150 µg/m^3
$PM_{2.5}$	Annual	12 µg/m^3	12.0 µg/m^3
	24-Hour	–	35 µg/m^3
Lead	30-Day Average	1.5 µg/m^3	–
	Rolling 3-Month Average	–	0.15 µg/m^3

ppm = parts per million; µg/m^3 = micrograms per cubic meter
Source: CARB 2016

The San Luis Obispo County Air Pollution Control District (SLOAPCD) monitors criteria pollutant levels to assure that air quality standards are met, and if they are not met, develops strategies to meet the standards. Depending on if the standards are met or exceeded, the air basin is classified as being in "attainment" or as "non-attainment." As of January 2019 (the last date that SLOAPCD's attainment status was updated), San Luis Obispo County is in non-attainment for the 1-hour and 8-hour State standards for ozone and the 24-hour and annual State standards for PM_{10} (SLOAPCD

2019). (Eastern San Luis Obispo County is also in non-attainment for the 8-hour federal ozone standard, but the western County including Pismo Beach is in attainment for this standard.)

More than 250 air quality monitoring stations operated by federal, State, and local agencies comprise the California Ambient Air Monitoring Network, including 11 stations in San Luis Obispo County (CARB 2021a). Nine active State or Local Air Monitoring Stations (SLAMS) are located within San Luis Obispo County (SLOAPCD 2020a). A station in Grover Beach, which was formerly the closest to Pismo Beach and monitored wind but not pollutants, was permanently closed in July 2019. The nearest monitoring station to Pismo Beach is the San Luis Obispo-3220 South Higuera Street Station which is located within the city limits of San Luis Obispo. The data collected at this station is generally considered to be representative of the baseline air quality experienced in Pismo Beach. Table 4.2-3 summarizes the annual air quality data for the local airshed.

Table 4.2-3 Ambient Air Quality Data

Pollutant	2017	2018	2019
Ozone (ppm), Worst 1-Hour [1]	0.074	0.062	0.064
Number of days of State exceedances (>0.09 ppm) [1]	0	0	0
Ozone (ppm), 8-Hour Average [1]	0.066	0.053	0.060
Number of days of State exceedances (>0.07 ppm) [1]	0	0	0
Number of days of federal exceedances (>0.07 ppm) [1]	0	0	0
Carbon Monoxide (ppm), Highest 8-Hour Average [1]	*	*	*
Number of days of above State or federal standard (>9.0 ppm)[1]	*	*	*
Particulate Matter <10 microns, μg/m^3, Worst 24 Hours [1]	67.8	45.4	100.6
Number of days above State standard (>50 μg/m^3) [1]	5	0	1
Number of days above federal standard (>150 μg/m^3) [1]	0	0	0
Particulate Matter <2.5 microns, μg/m^3, Worst 24 Hours [1]	25.6	38.4	14.8
Number of days above federal standard (>35 μg/m^3) [1]	0	1	0

Notes: ppm = parts per million; μg/m^3 = micrograms per cubic meter

[1] Data from the San Luis Obispo-3220 South Higuera Street Station

* No data was available for the NCCAB to determine the value.

Source: CARB 2020, 2021b

The primary pollutants of concern in San Luis Obispo County are ozone (O_3) and coarse particulate matter (PM_{10}). Table 4.2-3 provides the annual number of days a pollutant exceeds the standard. The major local sources for PM_{10} are agricultural operations, vehicle dust, grading, and dust produced by high winds. Ozone is a secondary pollutant that is not produced directly by a source, but rather is formed by a reaction between nitrogen oxides (NO_X) and reactive organic gases (ROG) in the presence of sunlight. Reductions in ozone concentrations are dependent on reducing the amount of these precursors. In San Luis Obispo County, the major sources of ROG are motor vehicles, organic solvents, the petroleum industry, and pesticides; and the major sources of NO_X are motor vehicles, public utility power generation, and fuel combustion by various industrial sources (SLOAPCD 2001). In the Pismo Beach area, stationary sources include the oil wells in Price Canyon, gas stations, and dry-cleaning establishments.

c. Sensitive Receptors

Federal and State AAQS have been established to represent the levels of air quality considered sufficient, with an adequate margin of safety, to protect public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress, such as children under 14; the elderly over 65; persons engaged in strenuous work or exercise; and people with cardiovascular and chronic respiratory diseases.

Sensitive receptor locations are therefore typically associated with residences, schools, and hospitals. There are no hospitals located within Pismo Beach. The nearest hospital is in the City of Arroyo Grande, located 1.4 miles from Pismo Beach. Additional sensitive receptors in the study area include residences and K-12 schools located throughout the City. Schools in Pismo Beach are identified in Section 4.13, *Public Services and Recreation*.

d. Naturally Occurring Asbestos

Naturally occurring asbestos (NOA) can be released from serpentine and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. The U.S. Environmental Protection Agency and CARB identify asbestos as a toxic air contaminant. CARB has established an Air Toxics Control Measure (ACTM) for NOA, which is found in the California Code of Regulations (17 CCR 93105). This measure requires specified control measures for grading or land disturbance that meets certain conditions and allows for the local air pollution control district to exempt specific projects or areas from regulation upon review of a geological evaluation. As originally mapped by the SLOAPCD, the city of Pismo Beach and most of the area surrounding Pismo Beach are not areas of concern with known serpentine rock formation, which are potential sources of NOA (SLOAPCD 2020b).

e. Odors

The SLOAPCD's CEQA Air Quality Handbook identifies multiple odor-causing sources including but not limited to wastewater treatment plants, landfills, composting facilities, petroleum refineries, and chemical manufacturing (SLOAPCD 2012). The main objectionable odor released from wastewater treatment plants is associated with hydrogen sulfide (H_2S), which emits an odor similar to rotten eggs.

4.2.2 Regulatory Setting

The Federal Clean Air Act (FCAA) governs air quality in the United States. In addition to being subject to federal requirements, air quality in California is also governed by more stringent regulations under the California Clean Air Act (CCAA). At the federal level, the U.S. EPA administers the FCAA. Both CAAs are administered by CARB at the State level and at the regional and local levels by air quality management districts. SLOAPCD regulates air quality at the regional level for San Luis Obispo County.

a. Federal Regulations

Federal Clean Air Act

The U.S. EPA is responsible for enforcing the FCAA. The U.S. EPA is also responsible for establishing the NAAQS, which are a requirement under the 1977 FCAA and subsequent amendments. As shown in Table 4.2-2, NAAQS have been established for ozone, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and Pb. The U.S. EPA regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain types of locomotives. The agency has jurisdiction over emission sources outside state waters (e.g., beyond the outer continental shelf) and establishes various emission standards, including those for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission standards established by CARB.

b. State Regulations

California Clean Air Act

In California, CARB is responsible for meeting the state requirements of the FCAA, administering the CCAA, and establishing the California CAAQS. The CCAA, as amended in 1992, requires all air districts in the state to endeavor to achieve and maintain the CAAQS. These State standards have been established for ozone, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, Pb, vinyl chloride, hydrogen sulfide, sulfates, and visibility-reducing particulates. The CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles.

Tanner Air Toxics Act and Air Toxics Hot Spots Information and Assessment Act

TACs in California are primarily regulated through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588) (Hot Spots Act). As discussed above, HAPs/TACs are a broad class of compounds known to cause morbidity or mortality (cancer risk). HAPs/TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, state and federal level.

AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. To date, CARB has identified 21 TACs and adopted U.S. EPA's list of HAPs as TACs (CARB 2021c). In 1998, diesel PM was added to CARB's list of TACs. Once a TAC is identified, CARB adopts an Airborne Toxic Control Measure for sources that emit that TAC. If a safe threshold exists at which no toxic effect occurs from a substance, the control measure must reduce exposure below that threshold. If no safe threshold exists, the measure must incorporate Best Available Control Technology (BACT) to minimize emissions.

The Hot Spots Act requires existing facilities that emit toxic substances above a specified level to prepare a toxic emissions inventory and a risk assessment. If the emissions are significant, then the project should notify the public of significant risk levels through the environmental document and prepare and implement risk reduction measures.

c. Regional Regulations

SLOAPCD Clean Air Plan

SLOAPCD regulates air quality in the portion of the SCCAB that is in San Luis Obispo County and is responsible for attainment planning related to criteria air pollutants, and for district rule development and enforcement. Under state law, the SLOAPCD is required to prepare an overall plan for air quality improvement for their jurisdiction within the SCCAB, which is known as the Clean Air Plan (CAP). The most recent CAP was prepared in 2001. The 2001 CAP is the third update to the original 1991 CAP, adopted in 1992. The 2001 CAP describes the air quality setting for the County in detail, including the local climate and meteorology, current and projected air quality, and the regulatory framework for the management of air quality. The 2001 CAP is intended to bring the County into attainment of the State ozone standard through a comprehensive set of control measures designed to reduce ozone precursor emissions from a wide variety of stationary and mobile sources. The 2001 CAP is incorporated by reference and is available for review at the SLOAPCD web site, www.slocleanair.org.

4.2.3 Impact Analysis

a. Methodology

Operational emissions for buildout of the GP/LCP Update were modeled based on the potential development capacity in the GP/LCP horizon (year 2040) relative to existing conditions using the California Emissions Estimator Model (CalEEMod), version 2020.4.0 (i.e., the project comprises the anticipated net change between existing and 2040 conditions). Information presented in Table 2-6 in Section 2.0, Project Description, was used to determine the proposed project's land uses, number of residential units, and non-residential areas, which were entered into CalEEMod. An explanation of the methods and assumptions used to derive these inputs, along with the CalEEMod outputs, are provided in Appendix F. In addition, the emissions analysis assumed that future development under the GP/LCP Update would comply with SLOAPCD rules, such as Rule 504, which restricts residential wood burning, and Rule 433, which sets limits on VOHC content in architectural coatings.

Because project-level details are not currently known and it was assumed that full buildout of the land use plan would occur, the operational emissions as modeled provide a worst-case scenario estimate and are included in this EIR for informational purposes. As indicated above, the significance of air quality impacts related to the project's operational emissions are determined through qualitative analysis in accordance with SLOAPCD guidance.

Construction emissions were not modeled due to the high dependence of emission estimates on project-level construction details, which are not known at this time for future land use development that may potentially occur under the land use scenario envisioned by the proposed GP/LCP Update. Individual development projects that are subject to CEQA would be required to provide a project-specific analysis to estimate their potential emissions and incorporate mitigation measures to reduce their emissions as necessary.

b. Significance Thresholds

Based on Appendix G of the CEQA Guidelines, a project may be deemed to have a significant impact on air quality if it would:

1. Conflict with or obstruct implementation of the applicable air quality plan;
2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard;
3. Expose sensitive receptors to substantial pollutant concentrations; or
4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

As stated in the CEQA Guidelines, the significance criteria established by the regional air quality pollution control district may be relied upon to make determinations of significance. SLOAPCD's recommended significance criteria are established in its CEQA Air Quality Handbook (SLOAPCD 2012) and applicable criteria are described below.

Consistency with the 2001 CAP

Section 3.2 of the CEQA Air Quality Handbook states that a consistency analysis with the 2001 CAP is required for program level environmental review and that a project consistent with the land use and transportation control measures and strategies outlined in the 2001 CAP is considered consistent with the CAP. The 2001 CAP guidance for project consistency analysis states that the following questions should be evaluated:

- Are the population projections used in the plan or project equal to or less than those used in the most recent CAP for the same area?
- Is rate of increase in vehicle trips and miles traveled less than or equal to the rate of population growth for the same area?
- Have all applicable land use and transportation control measures from the CAP been included in the plan or project to the maximum extent feasible?

According to the 2001 CAP, if the answer to all of the above questions is yes, then the project is consistent with the CAP. If the answer to any of the above questions is no, the project is inconsistent with the CAP. For the purpose of this analysis the project's consistency with the 2001 CAP is determined through a consistency analysis with specific land use and transportation measures and strategies included in the CAP, as well as evaluation of the three questions listed above. However, to evaluate question two, vehicle miles traveled (VMT) is used instead of vehicle trips because VMT provides a better indicator of mobile source emissions and the number of vehicle trips is built into the VMT, which is equal to the number of vehicle trips multiplied by the average trip length.

Operational Emissions

As stated in Section 3.5 of the CEQA Air Quality Handbook, a program level environmental review, such as for the proposed project, does not require a quantitative air emissions analysis at the project scale; instead, a qualitative analysis should be provided based on criteria such as prevention of urban sprawl and reduced dependence on automobiles and evaluation for consistency with transportation and land use planning strategies outlined in the 2001 CAP. Therefore, the significance of the project's operational emissions is determined qualitatively.

Although not applicable to the GP/LCP Update, the SLOAPCD has established significance thresholds for evaluating project-level operational emissions. Future development projects subject to CEQA would be required to compare project air pollutant emissions to the most current SLOAPCD thresholds and incorporate mitigation if emissions exceed threshold levels. Table 4.2-4 provides SLOAPCD's project-level significance thresholds for operational emissions.

Table 4.2-4 SLOAPCD Operational Emissions Significance Thresholds

	Threshold	
Pollutant	**Daily (lbs/day)**	**Annual (tons/year)**
ROG + NO_X (combined)[1]	25.00	25
Diesel Particulate Matter (DPM)[1]	1.25	–
Fugitive Particulate Matter (PM_{10}), Dust	25.00	25
CO	550.00	–

[1] SLOAPCD specifies that CalEEMod winter emission outputs should be compared to operational thresholds for these pollutants (2012).
Source: SLOAPCD 2012

Construction Emissions

The SLOAPCD has developed quantitative daily and quarterly significance thresholds for project construction emissions. The daily thresholds apply to projects that would be completed in less than one quarter (90 days). The quarterly construction thresholds apply to projects that would be completed in more than one quarter. Quarterly thresholds are subdivided into Tier 1 and Tier 2, which are tied to different mitigation requirements. Projects exceeding the higher Tier 2 threshold are required to implement more stringent mitigation measures. Table 4.2-5 provides SLOAPCD's project-level significance thresholds for construction emissions.

Table 4.2-5 SLOAPCD Construction Emissions Significance Thresholds

	Threshold		
Pollutant	**Daily (lbs)**	**Quarterly Tier 1 (tons)**	**Quarterly Tier 2 (tons)**
ROG + NO_X (combined)[1]	137	2.50	6.30
Diesel Particulate Matter (DPM)[1]	7	0.13	0.32
Fugitive Particulate Matter (PM_{10}), Dust	–	2.50	–

[1] SLOAPCD specifies that CalEEMod winter emission outputs should be compared to operational thresholds for these pollutants (2012).
Source: SLOAPCD 2012

As with the SLOAPCD's operational thresholds, these thresholds are intended for project-level review rather than program-level environmental review as construction emissions are highly dependent on project-specific details. Thus, the significance of the construction emissions associated with buildout of the GP/LCP Update is evaluated qualitatively. However, future development projects subject to CEQA would be required to evaluate the significance of project air pollutant emissions using the current SLOAPCD thresholds and incorporate mitigation if emissions exceed threshold levels in accordance with SLOAPCD guidance.

Toxic Air Contaminants

As stated in the CEQA Air Quality Handbook, a project that has the potential to emit toxic or hazardous air pollutants or is in close proximity to sensitive receptors, may have a significant health impact related to toxic air contaminants (TACs). A qualitative analysis is provided to determine whether the GP/LCP Update would result in increased exposure of sensitive receptors to diesel particulate matter (DPM) or other toxics by siting receptors along major roadways or in proximity to industrial facilities. Individual projects developed under the GP/LCP would be required to determine if the individual project would result in potential risks to nearby sensitive receptors.

Odor

Table 3-3 of the CEQA Air Quality Handbook provides potential screening distances for nuisance sources. Projects locating sensitive receptors, or other uses where people congregate, within the screening distance of nuisance sources require further evaluation to determine whether the project would be exposed to significant odor impact. For a project that will be located near an existing odor source, the project would have a significant odor impact if it sites receptors as close or closer to the source than a location that has experienced: 1) more than one confirmed complaint per year averaged over a three year period, or 2) three unconfirmed complaints per year averaged over a three year period. A qualitative discussion is provided to determine whether the GP/LCP Update would facilitate new development that would result in odor-related conflicts.

Threshold 1:	Would the project conflict with or obstruct implementation of the applicable air quality plan?
Threshold 2:	Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

IMPACT AQ-1 THE GP/LCP UPDATE WOULD RESULT IN AN INCREASE IN PROJECTED POPULATION THAT WOULD EXCEED THE 2001 CLEAN AIR PLAN PROJECTIONS FOR PISMO BEACH, WHICH WOULD PRODUCE LONG-TERM OPERATIONAL CRITERIA POLLUTANT EMISSIONS BEYOND THOSE PLANNED FOR THE REGION. THIS INCONSISTENCY WITH THE SLOAPCD CLEAR AIR PLAN WOULD BE A SIGNIFICANT AND UNAVOIDABLE IMPACT.

As described in Section 4.2.3, SLOAPCD determines consistency with the 2001 CAP based on whether the project would exceed the population projections used in the CAP for the same area, whether the vehicle trips generated by the project would exceed the rate of population growth for the same area, and whether all applicable land use management strategies and transportation control measures from the 2001 CAP have been included in the project to the maximum extent feasible. The consistency of the GP/LCP Update with each of these criteria is discussed in the following paragraphs.

Population Growth Consistency

Buildout of the General Plan would add an estimated 1,979 residents to Pismo Beach by 2040 (see Table 2-6 in Section 2, Project Description). When added to the existing population within the City of approximately 8,237 (California Department of Finance 2020), projected buildout of the City would increase the City's total population to an estimated 10,216 residents, or an increase of 24.0 percent. The 2001 CAP uses growth forecasts provided by the San Luis Obispo Council of Governments (SLOCOG) in the Regional Growth Forecast to project population-related emissions for the SCCAB

(SLOAPCD 2001; SLOCOG 2017). In turn, SLOCOG population forecasts are based on the land use assumptions presented in the existing general plans of local governments within the SCCAB. When a general plan is updated, land uses are also updated to accommodate future growth projected based on recent population growth trends. Consequently, an updated general plan prepared for a local jurisdiction experiencing a higher rate of population growth than assumed in the previous general plan would have projected growth exceeding previous general plan and SLOCOG projections.

Implementation of the GP/LCP Update would cause the population of Pismo Beach to exceed the City and SLOCOG projected 2040 population of 9,901 residents. However, future SLOCOG growth projections would incorporate the GP/LCP Update land use assumptions and would inform future air quality management in the SCCAB.

Vehicle Miles Traveled Increase

The proposed GP/LCP Update Circulation Element (Appendix B) provides estimates of annual VMT within the City's existing land uses and existing transportation network, current General Plan Buildout, and proposed General Plan Buildout. Future VMT estimates were developed as part of the Pismo Beach Circulation Element Update Final Technical Report (refer to Table 10 in Appendix C). Annual net VMT under existing conditions reflects the current roadway network and traffic volumes collected in 2010, calibrated for 2019 existing conditions. Annual net VMT under buildout plus project conditions reflects anticipated buildout under the GP/LCP Update for 2040.

Total existing annual net VMT in the County is estimated at 11,226,484. Total annual net VMT in the County under the proposed GP/LCP Buildout is estimated to be 13,476,666, Based on these projections, VMT would increase by approximately 20 percent by 2040 with implementation of the GP/LCP Update. Regional Residential VMT per Capita and Work VMT per employee rates are also projected to grow due to the proposed Land Use and Community Design Element. The increase in miles traveled would not exceed the rate of population growth for the same area (23 percent) for the same time period, therefore the project would be consistent with projections on which the 2001 CAP is based.

Implementation of Land Use and Transportation Control Measures

Five of the transportation control measures and four of the land use planning strategies in the 2001 CAP are applicable to the proposed GP/LCP Update. The GP/LCP Update's consistency with the 2001 CAP's applicable land use and transportation control measures is evaluated in Table 4.2-6.

Table 4.2-6 GP/LCP Update Consistency with Applicable 2001 CAP Land Use and Transportation Control Measures

2001 CAP Control Measure	Project Consistency
Land Use Planning Strategies	
L-1 Planning Compact Communities. Maintaining compact city and village areas reduces reliance on the automobile by enhancing the viability of public transit and maximizing the potential for walking and bicycling to work, shopping, and other destinations.	**Consistent** The GP/LCP Update would focus new development primarily in Pismo Beach's city limits, as illustrated in the land use plan and as supported by the following policies included in the GP/LCP Update Land Use and Community Design Element: ▪ **Policy LU-6.2: Maintenance of Infrastructure.** Continue to regulate new and existing development and infrastructure so as not to overburden the City's infrastructure. ▪ **Policy LU-7.1: Growth Areas.** Prioritize growth in areas that complement adjacent neighborhoods, consider market and policy demand for housing and commercial needs, and revitalize economically obsolete uses. ▪ **Policy LU-7.2: Adaptive Reuse.** Support and incentivize adaptive reuse of buildings and sites to utilize existing infrastructure while enhancing the character of the community. In addition, the GP/LCP Update Circulation Element includes policies to reduce vehicle use and promote use of transit and active transportation, including the following: ▪ **Policy CIR-4.1.48: Promote Walking and Bicycling.** Promote walking and bicycle riding for transportation, recreation, commuting, and improvement of public and environmental health. Make downtown more functional and enjoyable for bicyclists and pedestrians. Pedestrian walkways and bicycle paths shall receive at least the same emphasis and attention in future planning as facilities designed for the automobile**.** ▪ **Policy CIR-4.1.51 Existing Facilities.** Maintain and improve existing multimodal circulation and transportation systems and facilities, to maximize alternatives to new street and highway construction. Complete a network of bicycle lanes and paths, sidewalks and pedestrian paths within existing developed parts of the City and extend the system to serve new growth areas. ▪ **Policy CIR-4.1.52: Integration of Land Use Planning.** Implement land use policies designed to create a pattern of activity that makes it easy to shop, recreate, commute, and conduct personal business without driving. ▪ **Policy CIR-4.1.58: Bikeways Encouraged.** Bikeways shall be encouraged within the City and adjoining jurisdictions as a complement to Pismo Beach's visitor and recreation emphasis, to reduce automobile trips and for the convenience of visitors and residents. The City's bikeway plan will be coordinated with the San Luis Obispo Area Coordinating Council and Regional Transportation Agency, and the County of San Luis Obispo Regional Transportation Plan. ▪ **Policy CIR-4.1.68: Pedestrian Circulation.** Sidewalks shall be required for all new developments in residential and commercial areas. Generally, the sidewalk shall be located so that a landscape strip or trees are located between the sidewalk and the vehicular travelled way. Techniques shall be encouraged to create a pleasant walking experience including concern for views, paving materials, landscape, street furniture, and pedestrian scaled lighting. <u>The City encourages the use of flashing beacons or lighted crosswalk systems, especially in highly trafficked areas. All new sidewalk areas shall be designed to accommodate the handicapped, compliant with the ADA. Also, the City shall install (or cause to be installed) sidewalks or footpaths along all collector or arterial streets that connect with commercial centers, public gathering areas and schools.</u>

2001 CAP Control Measure	Project Consistency
	▪ **Policy CIR-4.1.70: Pedestrian Connections to Employment Destinations.** Encourage the development of a network of continuous walkways within new commercial, town center, public, and industrial uses to improve workers' ability to walk safely around, to, and from their workplaces. Where possible, route pedestrians to grade separated crossings across US 101.
L-2 Providing for Mixed Land Use. Communities should allow a mixture of land uses that enables people to walk or bicycle to work or to purchase necessary household items or service, at locations convenient to their neighborhood.	**Consistent** The GP/LCP Update would support mixed-use development primarily through the Mixed-Use designation, as well as the Community, District, Neighborhood, and Visitor-Serving Commercial designations. In addition, the GP/LCP Update supports mixed-use development through the following Land Use Element policies: ▪ ~~**Policy**~~ **Action LU-1.3d: Transitional Areas.** Mixed-Use designations should be designed to promote transitional areas between core commercial areas and residential zoning, and to foster new commercial and mixed-use development in proximity to transit access. ▪ ~~**Policy**~~ **Action LU-5.1a: Mixed-Use Neighborhood**~~**s**~~**.** Create standards for each commercial zone to allow for mixed-use-residential areas within proximity and walking distance of commercial, office, recreation, and public uses. Furthermore, identify opportunities to provide a mix of commercial- and recreation uses within walking distance of residential neighborhoods to enable and encourage walking and biking between uses. ▪ ~~**Policy**~~ **Action LU-5.3d: Transit-Oriented Development.** Support the development of multifamily residential and mixed-use projects around the City's transit station, by allowing a reduction in the parking requirements or other development standards, and require new development to incorporate or improve pedestrian, bicycle, and where applicable, transit facilities.
L-3 Balancing Jobs and Housing. Within cities and unincorporated communities, the gap between the availability of jobs and housing should be narrowed and should not be allowed to expand.	**Consistent** The GP/LCP Update would allow for future development of new residential and employment spaces. Pismo Beach is a jobs-rich environment and a regional tourism destination, and as a result, increasing residential density is expected to reduce the gap between the availability of jobs and housing. In addition, the project would support balancing jobs and housing through the following Land Use Element policy and Community and Open Space Element action: ▪ ~~**Policy LU-3.4: Jobs/Housing Ratio.** SLOCOG's 2015 Regional Land Use Model estimated that Pismo Beach contains 4,898 jobs, which comprises 4% of the region's jobs. Pismo Beach contains 5,649 housing units, which is 4.7% of the region's housing units. Therefore, Pismo Beach's jobs/housing ratio is 0.86, meaning for every housing unit there is approximately 0.86 jobs.~~ ▪ **Action COS-1.1a. Community Trip Reduction.** In order to reduce pollution, the City shall emphasize various procedures to reduce the number of vehicle trips and the number of vehicle miles traveled in the community. Techniques shall include, but not be limited to, transportation management measures such as vanpools, carpools, and subsidized transit passes; jobs/housing balance; bikeways and facilities; pedestrian facilities; ~~electric vehicles~~ and related infrastructure and transit improvements.
L-4 Circulation Management. The primary goal of the recommended Circulation Management Policies and Programs is to encourage the design and construction of the county's transportation system in a manner that supports alternative travel modes and decreases	**Consistent** The GP/LCP Update includes policies to reduce vehicle use and promote use of transit and active transportation, including those listed under L-1 (above), T-3 (below), as well as the following Circulation Element policies to support parking management: ▪ **Policy CIR-4.1.20: Downtown Traffic and Parking.** ~~Consider utilization of existing parking district mechanisms to finance Downtown or remote parking and related improvements suggested in the Downtown Strategic Plan; Consider implementing a shuttle program between satellite parking areas~~

2001 CAP Control Measure	Project Consistency
reliance on single occupant motor vehicles. Policies include: Promoting accessibility in the transportation system Promoting walking and bicycling Parking management Transportation demand management	~~and Downtown as a Travel Demand Management strategy, to relieve traffic congestion and to reduce parking demand Downtown. Potential areas for satellite parking include sites east of the US 101 and to the north and south of Downtown; Update the City's Downtown parking in-lieu fee program~~. To discourage traffic in the Downtown area, improve Downtown parking and drop-off opportunities, and provide remote parking, the following strategies should be utilized: a. The City shall work with the lodging industry to 1) provide free (or very low rent) bicycles for guests, and 2) to develop and maintain a trolley system for summer months, weekends, and special events. b. Consider utilization of existing parking district mechanisms to finance Downtown or remote parking and related improvements suggested in the Downtown Strategic Plan (approved November 2014); c. Utilize the Downtown Strategic Plan to aid in identifying parking opportunities and concepts; d. Examine vacant or underutilized lots for off-street parking or remote parking facilities; e. Consider converting public parking spaces to designated rideshare pick-up / drop-off zones. f. Consider implementing a shuttle program between satellite parking areas and Downtown as a Travel Demand Management strategy, to relieve traffic congestion and to reduce parking demand Downtown. Potential areas for satellite parking include sites east of the US 101 and to the north and south of Downtown; g. Consider implementing and installing a Dockless Bike program throughout the City as a Travel Demand Management strategy, to relieve traffic congestion and to reduce parking demand Downtown; h. Install and maintain wayfinding and parking signs throughout the City, consider dynamic wayfinding and parking signs; i. Add both static and dynamic parking wayfinding systems including a dynamic system at the pier parking lot and a parking inventory control system; j. Update the City's Downtown parking in-lieu fee program; k. Consider Public/Private Partnership opportunities; and l. Rezone and develop parking structures in the Downtown area. m. Encourage / incentivize hotels to provide bicycles and e-bikes to hotel guests. ▪ **Policy CIR-4.1.40 Financing Program: Downtown Parking in Lieu Fee Program.** The City shall update and maintain a Parking In-lieu Fee Program that will fully fund expansion of public parking facilities such as parking garages to accommodate anticipated parking requirement that new development cannot satisfy on-site. The financing program will include an update to the existing Capital Improvements Plan consistent with AB 1600.

2001 CAP Control Measure	Project Consistency
Transportation Control Measures	
T-2A Local Transit System Improvements. The focus of this measure is on improving local transit service and infrastructure to increase ridership by enhancing the convenience and overall viability of the system.	**Consistent** The GP/LCP Update would support improvements to local transit service and infrastructure through the following Circulation Element policies: ▪ **Policy CIR-4.1.78: Downtown Transit Priority Area.** Strive to establish a downtown as a Transit Priority Area by establishing transit service of two or more major bus routes with a frequency of 15 minutes or less during the morning and afternoon peak commute periods. ▪ **Policy CIR-4.1.79: Comprehensive Transit Services.** The City shall support the availability of transit service as a means to reduce automobile congestion, to provide transportation for those who have no other form of transportation, as a means to reduce air pollution, and as a service to visitors. Such support should include, but not be limited to, SCT, Greyhound bus service, vanpools, shuttle bus systems, dial-a-ride services, and cab services. ▪ **Policy CIR-4.1.80: Vanpools and Ride Sharing.** The City shall encourage and support vanpools and ride sharing. A special program should be developed in cooperation with the visitor industry to encourage vanpools and ride sharing for hotel and related workers. Appropriate locations shall be designated for ride share parking lots.
T-2B Regional Public Transit Improvements. San Luis Obispo Regional Transit Authority (SLORTA) operates the regional fixed route system, Central Coast Area Transit (CCAT). The focus of this measure is to improve regional transit service and infrastructure with the goal of increasing ridership rates in excess of countywide population growth rates.	**Consistent** The GP/LCP Update would support improvements to regional transit service and infrastructure through implementation of the following Circulation Element policies: ▪ **Policy CIR-4.1.76: Work with Multiple Agencies and Jurisdictions.** Continue to cooperate with other agencies and jurisdictions to promote local and regional public transit, including SLORTA and SCT serving Pismo Beach. ▪ **Policy CIR-4.1.86: Funding for Transit Services.** Work with SLORTA and SLOCOG to continue to pursue federal and State funds to subsidize capital and operating costs associated with the City's transit operation. If federal funds are reduced and capital needs are not being met, transit may be added to the TIF through a Nexus Study after a public hearing process is approved by the City Council. ▪ **Policy CIR-4.1.87: Transit Usability.** Work with SLORTA to situate transit stops at locations that are convenient for transit users and promote increased transit ridership through the provision of shelters, benches, bike racks on buses, ADA compliance, and other amenities.
T-3 Bicycling and Bikeway Enhancements. To effectively encourage the modal shift to bicycles, a comprehensive program to promote bicycle use was adopted in the 1991 Clean Air Plan.	**Consistent** The GP/LCP Update would support increased bicycle use through policies listed under the L-1 above, including the following Circulation Element policies: ▪ **Policy CIR-4.1.58: Bikeways Encouraged.** Bikeways shall be encouraged within the City and adjoining jurisdictions as a complement to Pismo Beach's visitor and recreation emphasis, to reduce automobile trips and for the convenience of visitors and residents. The City's bikeway plan will be coordinated with the San Luis Obispo Area Coordinating Council and Regional Transportation Agency, and the County of San Luis Obispo Regional Transportation Plan. ▪ **Policy CIR-4.1.60: ~~Medians~~. Bicycle Parking Facilities.** The City ~~shall~~ should install bicycle parking facilities in public areas such as the beach, parks, park and ride lots, and at other public facilities to encourage bicycle use. Bicycle parking facilities ~~shall~~ should be designed to accommodate various types of bicycles. Bicycle parking facilities ~~shall~~ should be considered as a required condition of approval for new development applications for proposed commercial hotel and major residential projects. Bike lanes shall be located near restrooms, drinking water, and public telephones, and air for bicycle

2001 CAP Control Measure	Project Consistency
	tires should be provided near bicycle lanes. Showers and locker rooms should be provided where feasible. Funding may be provided for these facilities by incorporation into the TIF and be consistent with the Bicycle and Pedestrian Master Plan. ▪ **Policy CIR-4.1.62: Bicycle Use by City Employees.** Establish a program to encourage bicycle use among City employees**.**
T-4 Park and Ride Lots. To reduce vehicle miles traveled, this measure supports the development of new park and ride lots, including through the use of existing parking lots and developing agreements for park and ride lots when new commercial development occurs.	**Consistent** Pismo Beach has one formal park and ride lot located at the Premium Outlets. The Pismo Beach Bicycle and Pedestrian Master Plan includes proposed multimodal facilities to complete the multimodal transportation network throughout the City, including bicycle-parking facilities for City park and ride lots. The GP/LCP Update Circulation Element would support development of park and ride lots through the following policies: ▪ **Policy CIR-4.1.60: ~~Medians~~. Bicycle Parking Facilities.** The City ~~shall~~ should install bicycle parking facilities in public areas such as the beach, parks, park and ride lots, and at other public facilities to encourage bicycle use. Bicycle parking facilities should be designed to accommodate various types of bicycles. Bicycle parking facilities should be considered as a required condition of approval for new development applications for proposed commercial hotel and major residential projects. Bike lanes shall be located near restrooms, drinking water, and public telephones, and air for bicycle tires should be provided near bicycle lanes. Showers and locker rooms should be provided where feasible. Funding may be provided for these facilities by incorporation into the TIF and be consistent with the Bicycle and Pedestrian Master Plan. ▪ **Policy CIR-4.1.80 Vanpools and Ride Sharing.** The City shall encourage and support vanpools and ride sharing. A special program should be developed in cooperation with the visitor industry to encourage vanpools and ride sharing for hotel and related workers. Appropriate locations shall be designated for ride share parking lots. ▪ **Policy CIR-4.1.81 Multimodal Transfer Centers.** The City will continue to work with Caltrans, SCT, RTA, SLOCOG, and the commuting public to develop multimodal transfer areas or centers that will incorporate automobile parking areas, bike parking, bus, transit, pedestrian bike paths, and park and ride pick-up or drop-off points for carpooling. In addition, the 2019 RTP/SCS identifies active transportation projects, non-highway system projects, highway system projects, and a park and ride project in Pismo Beach. The 2019 RTP/SCS includes Policy 6.3 to "reduce GHG emissions from vehicles and improve air quality in the region."
T-6 Traffic Flow Improvements. This control measure focuses on traffic flow improvements and "traffic-calming" to improve the flow of all transportation modes. Traffic-calming refers to a full range of methods designed to improve the flow of nonmotorized transportation by slowing down the speed of motorized traffic. Traffic-calming is generally used in residential areas on non-arterial local streets and roads.	**Consistent** The GP/LCP Update would support improvements to traffic flow through the following Circulation Element policies: ▪ **Policy CIR-4.1.26: Traffic Calming.** Traffic calming techniques may be employed to mitigate the traffic effects of new development on minor and major collector streets. The City shall adopt and maintain Traffic Calming Handbook adopted 10/19/21 for application and design of traffic calming measures**.**

As shown in Table 4.2-6, the GP/LCP Update would be consistent with applicable land use and transportation control measures contained in the 2001 CAP. In addition, the GP/LCP Update includes goals and policies intended to promote compact development and reduce VMT, which would reduce criteria pollutant emissions associated with new development in the planning area. Implementation of the policies and actions in the GP/LCP Update Land Use and Community Design and Circulation Elements listed below would minimize adverse effects associated with long term criteria pollutant emissions. The GP/LCP Update Land Use and Community Design policies and actions include:

- ~~**Policy**~~ **Action LU-1.3d: Transitional Areas.** Mixed-Use designations should be designed to promote transitional areas between core commercial areas and residential zoning, and to foster new commercial and mixed-use development in proximity to transit access.
- ~~**Policy**~~ **Action LU-5.1a: Mixed-Use Neighborhoods.** Create standards for each commercial zone to allow for mixed-use-residential areas within proximity and walking distance of commercial, office, recreation, and public uses. Furthermore, identify opportunities to provide a mix of commercial- and recreation uses within walking distance of residential neighborhoods to enable and encourage walking and biking between uses.
- ~~**Policy**~~ **Action LU-5.3d: Transit-Oriented Development.** Support the development of multifamily residential and mixed-use projects around the City's transit station, by allowing a reduction in the parking requirements or other development standards, and require new development to incorporate or improve pedestrian, bicycle, and where applicable, transit facilities
- **Policy LU-6.2: Maintenance of Infrastructure.** Continue to regulate new and existing development and infrastructure so as not to overburden the City's infrastructure.
- **Policy LU-7.2: Adaptive Reuse.** Support and incentivize adaptive reuse of buildings and sites to utilize existing infrastructure while enhancing the character of the community.
- **Policy LU-7.3: Proactive Growth Planning.** Proactively maintain and plan for areas in the City as well as the sphere of influence.
    - **Action LU-7.3b: Extended Planning Area/Sphere of Influence.** Continue to identify areas outside the SOI to be included in the SOI in the future and identify these areas as "Extended Planning Areas."
        i. The City shall comprehensively evaluate the boundaries and potential land uses of the SOI at least every 10 years, but more often if appropriate. Such evaluations shall address, among other factors, whether the supply of land is adequate to accommodate projected housing needs allocated by the San Luis Obispo Council of Government (SLOCOG).
        ii. At each periodic comprehensive evaluation, the City Council shall determine whether the public interest would be served by designating additional lands to be provided municipal services and developed with urban uses.
    - **Action LU-7.3e: Roadway Distances**. Areas proposed for future growth should address roadway distances that would connect the new areas of development together with the existing City and would promote maximum connectivity between different land uses through walkways, bike paths, transit, or other means.
    - **Action LU-7.3f: Adjacent Development**. Any proposals within the SOI shall be phased such that properties adjacent to the existing City Limits are developed as part of the first phase of development.

- **Action LU-7.3g: Residential Growth Rate**. The City's residential growth rate shall be managed to assure that the amount of new development annually is commensurate with the availability of public services and infrastructure and will not result in a deterioration of the quality of service to existing or new residents. ~~The issuance of building permits for new residential units shall not exceed 3% per year, based on the number of units estimated by the California Department of Finance to exist within the City as of January 1 of the preceding year~~.
- **Action LU-7.3h: Required Plans**. The City shall not allow development of any newly annexed private land until the City has adopted a specific or development plan for land uses, open space protection, roads, utilities, the overall pattern of subdivision, and financing of public facilities for the area.

The GP/LCP Circulation Element policies include:

- **Policy CIR-4.1.48: Promote Walking and Bicycling.** Promote walking and bicycle riding for transportation, recreation, commuting, and improvement of public and environmental health. Make downtown more functional and enjoyable for bicyclists and pedestrians. Pedestrian walkways and bicycle paths shall receive at least the same emphasis and attention in future planning as facilities designed for the automobile.
- **Policy CIR-4.1.51: Existing Facilities.** Maintain and improve existing multimodal circulation and transportation systems and facilities, to maximize alternatives to new street and highway construction. Complete a network of bicycle lanes and paths, sidewalks and pedestrian paths within existing developed parts of the City and extend the system to serve new growth areas.
- **Policy CIR-4.1.52: Integration of Land Use Planning.** Implement land use policies designed to create a pattern of activity that makes it easy to shop, recreate, commute, and conduct personal business without driving.
- **Policy CIR-4.1.58: Bikeways Encouraged.** Bikeways shall be encouraged within the City and adjoining jurisdictions as a complement to Pismo Beach's visitor and recreation emphasis, to reduce automobile trips and for the convenience of visitors and residents. The City's bikeway plan will be coordinated with the San Luis Obispo Area Coordinating Council and Regional Transportation Agency, and the County of San Luis Obispo Regional Transportation Plan.
- **Policy CIR-4.1.60: ~~Medians~~. Bicycle Parking Facilities.** The City ~~shall~~ should install bicycle parking facilities in public areas such as the beach, parks, park and ride lots, and at other public facilities to encourage bicycle use. Bicycle parking facilities ~~shall~~ should be designed to accommodate various types of bicycles. Bicycle parking facilities ~~shall~~ should be considered as a required condition of approval for new development applications for proposed commercial hotel and major residential projects. Bike lanes shall be located near restrooms, drinking water, and public telephones, and air for bicycle tires should be provided near bicycle lanes. Showers and locker rooms should be provided where feasible. Funding may be provided for these facilities by incorporation into the TIF and be consistent with the Bicycle and Pedestrian Master Plan.
- **Policy CIR-4.1.62: Bicycle Use by City Employees.** Establish a program to encourage bicycle use among City employees.
- **Policy CIR-4.1.68: Pedestrian Circulation.** Sidewalks shall be required for all new developments in residential and commercial areas. Generally, the sidewalk shall be located so that a landscape strip or trees are located between the sidewalk and the vehicular travelled way. Techniques shall be encouraged to create a pleasant walking experience including concern for views, paving

materials, landscape, street furniture, and pedestrian scaled lighting. The City encourages the use of flashing beacons or lighted crosswalk systems, especially in highly trafficked areas. All new sidewalk areas shall be designed to accommodate the handicapped, compliant with the ADA. Also, the City shall install (or cause to be installed) sidewalks or footpaths along all collector or arterial streets that connect with commercial centers, public gathering areas and schools.

- **Policy CIR-4.1.70: Pedestrian Connections to Employment Destinations.** Encourage the development of a network of continuous walkways within new commercial, town center, public, and industrial uses to improve workers' ability to walk safely around, to, and from their workplaces. Where possible, route pedestrians to grade separated crossings across US 101.
- **Policy CIR-4.1.87: Transit Usability.** Work with SLORTA to situate transit stops at locations that are convenient for transit users and promote increased transit ridership through the provision of shelters, benches, bike racks on buses, ADA compliance, and other amenities.
- **Policy CIR-4.1.40: Financing Program: Downtown Parking in Lieu Fee Program.** The City shall update and maintain a Parking In-lieu Fee Program that will fully fund expansion of public parking facilities such as parking garages to accommodate anticipated parking requirement that new development cannot satisfy on-site. The financing program will include an update to the existing Capital Improvements Plan consistent with AB 1600.

2001 Clean Air Plan Consistency Conclusion

As discussed above, the GP/LCP Update would be consistent with the 2001 CAP guidance for VMT increase (20 percent) less than the rate of population growth (23 percent) and would implement applicable land use and transportation control measures contained in the 2001 CAP. However, the GP/LCP Update would conflict with SLOAPCD's assumptions for population growth. As a result, the GP/LCP Update could result in long-term operational criteria pollutant emissions that may obstruct implementation of the applicable air quality plan, which would be a significant impact.

Mitigation Measures

No feasible mitigation strategies are available to reduce this impact, beyond the proposed GP/LCP Update policy framework.

Significance After Mitigation

Additional policy-oriented mitigation is not available and/or feasible that would reduce the projected population increase such that it would not exceed projected population growth in the region. Therefore, the GP/LCP Update would be inconsistent with the 2001 CAP, and the impact to regional air quality associated with long-term operational emissions in Pismo Beach would remain significant and unavoidable.

Threshold 2:	Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

IMPACT AQ-2 BUILDOUT OF THE GP/LCP UPDATE WOULD RESULT IN SHORT-TERM EMISSIONS OF CRITERIA POLLUTANTS. CONSTRUCTION EMISSIONS FROM FUTURE PROJECTS IN THE PLANNING AREA WOULD BE QUANTIFIED ONCE PROJECT DETAILS ARE KNOWN AND EVALUATED FOR POTENTIAL IMPACTS IN ACCORDANCE WITH SLOAPCD GUIDANCE. SLOAPCD PROVIDES STANDARD EMISSIONS REDUCTION MEASURES FOR CONSTRUCTION EMISSIONS IMPACTS WHICH ARE INCLUDED AS REQUIRED MITIGATION. THEREFORE, THIS IMPACT WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION.

Buildout of the GP/LCP Update would result in short-term emissions associated with construction activities, such as construction worker travel to and from project sites, delivery and hauling of construction supplies and debris, fuel combustion by on-site construction equipment, and application of architectural coatings and other products. These construction activities would temporarily create emissions of dust, equipment exhaust, and other air contaminants, particularly during site preparation and grading. The magnitude of ROG and NO_X emissions would depend primarily on the quantity and type of equipment used and the hours of usage. The extent of $PM_{2.5}$ and PM_{10} emissions would depend upon the following factors: 1) the amount of disturbed soils; 2) the length of disturbance time; 3) whether existing structures are demolished; 4) whether excavation is involved; and 5) whether transporting excavated materials off-site is necessary. Dust emissions can lead to both nuisance and health impacts.

As discussed in Impact AQ-1, the GP/LCP Update Land Use and Community Design and Circulation Elements would limit criteria pollutant emissions by limiting VMT growth. In addition, the GP/LCP Update Conservation and Open Space Element provides a policy framework that would reduce wasteful and inefficient energy consumption through implementation of the following policies and actions:

- **Policy COS-1.2: Renewable Energy.** Support and incentivize renewable energy and non-renewable energy consumption.
  - **Action COS-1.2a: Solar Incentives.** The City shall promote and inform development applicants and existing home-owners and businesses of the following solar incentives and other incentives as may be appropriate:
    - California Solar Initiative Rebate Program
    - California Alternative Rates for Energy Program
    - California Energy Commission – New Solar Homes Partnership
    - GRID Alternatives - Single-Family Affordable Solar Housing Program
    - Community Action Partnership of San Luis Obispo Energy Services
    - emPower San Luis Obispo
  - **Action COS-1.2b: Community Choice Energy.** Evaluate the feasibility of a regional Community Choice Aggregation program to procure electricity from renewable resources.
  - **Action COS-1.2c: Energy Audits for Community Buildings.** Complete energy audits and benchmarking of all City-owned or -operated facilities, leveraging existing programs, such as Pacific Gas & Electric's Automated Benchmarking Service or the U.S. EPA's ENERGY STAR Challenge program.

- **Action COS-1.2d: Energy Efficient Upgrades.** Establish a prioritized list of energy efficiency upgrade projects and implement them as funding becomes available.

Future development projects in Pismo Beach would be evaluated for air quality impacts once project-level details are known and would be required to incorporate additional mitigation if construction emissions from individual development projects would exceed applicable project-level thresholds established by SLOAPCD. SLOAPCD provides standard mitigation measures for construction in the CEQA Air Quality Handbook. Because individual projects would be required to evaluate air quality impacts resulting from construction emissions and mitigate emissions as required by SLOAPCD guidance, construction air quality impacts associated with implementing the GP/LCP Update would be potentially significant, requiring implementation of Mitigation Measure AQ-1.

Mitigation Measures

AQ-1 Standard Mitigation for Construction Equipment

Proponents of individual land use projects, or other projects requiring grading or building permits, shall require construction contractors to incorporate the following standard mitigation measures, as applicable, to reduce reactive organic gases (ROG), nitrogen oxides (NO_X), and diesel particulate matter (DPM) emissions from construction equipment. Mitigation measures shall be listed on project construction plans and the project proponent shall perform periodic site inspections during construction to ensure that mitigation measures are being implemented.

- Maintain all construction equipment in proper condition according to manufacturer's specifications
- Fuel all off-road and portable diesel-powered equipment with California Air Resource's Board (CARB)-certified motor vehicle diesel fuel (non-taxed version suitable for use off-road)
- Use diesel construction equipment meeting CARB's Tier 2 certified engines or cleaner off-road heavy-duty diesel engines, and comply with the State off-road Regulation
- Use on-road heavy-duty trucks that meet CARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation
- Construction or trucking companies with fleets that that do not have engines in their fleet that meet the engine standards identified in the above two measures (e.g., captive or NOx exempt area fleets) may be eligible by proving alternative compliance
- All on and off-road diesel equipment shall not idle for more than 5 minutes. Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the 5 minute idling limit
- When feasible for project-specific occasions, diesel idling within 1,000 feet of sensitive receptors is not permitted
- When feasible for project specific occasions, staging and queuing areas shall not be located within 1,000 feet of sensitive receptors
- Electrify equipment when feasible
- Substitute gasoline-powered in place of diesel-powered equipment, where feasible
- Use alternatively fueled construction equipment on-site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel.

Significance After Mitigation

Mitigation Measure AQ-1 would reduce short-term criteria pollutant emissions generated by construction activities associated with future buildout of the proposed GP/LCP Update. With implementation of Mitigation Measure AQ-1, short-term construction impacts associated with the GP/LCP Update would be reduced to a less than significant level.

Threshold 3:	Would the project expose sensitive receptors to substantial pollutant concentrations?

IMPACT AQ-3 THE GP/LCP UPDATE CONSERVATION AND OPEN SPACE ELEMENT INCLUDES POLICIES INTENDED TO MINIMIZE ADVERSE EFFECTS ASSOCIATED WITH TACS THROUGH LOCAL ACTIONS AND INTERAGENCY COORDINATION. THE GP/LCP UPDATE WOULD NOT GENERATE LEVELS OF TRAFFIC THAT WOULD EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS, OR RESULT IN NEW DEVELOPMENT THAT WOULD EXPOSE SENSITIVE RECEPTORS TO HAZARDS ASSOCIATED WITH NATURALLY OCCURRING ASBESTOS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Toxic Air Contaminants

High levels of TACs, such as diesel particulate matter (DPM), formaldehyde, benzene, acetaldehyde, and polycyclic aromatic hydrocarbons (PAH), can result in health risks for sensitive populations. CARB recommends local jurisdictions adopt land use policies to separate sensitive land uses a minimum of 500 to 1,000 feet from common TAC sources, depending on the source. SLOAPCD permitting requirements would apply to new stationary sources of TACs in Pismo Beach. CARB also provides advisory recommendations for siting new sensitive land uses for common mobile and stationary sources of air toxics are presented in Table 4.2-7 and published in the Air Quality and Land Use Handbook: A Community Health Perspective (CARB 2005).

Table 4.2-7 Recommendations for Siting New Sensitive Land Uses in California

Source Category	Advisory Recommended Setback Distance
Freeways and High-traffic Roads	500 feet from a freeway or urban road with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day
Distribution Centers that accommodate than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week	1,000 feet. Avoid location of new sensitive land uses near entry and exit points
Rail Yards	1,000 feet. Within 1 mile, consider siting limitation and mitigation approaches
Ports	Immediately downwind. Consult local air district
Refineries	1,000 feet
Chrome Platers	1,000 feet
Dry Cleaners Using Perchloroethylene	300 feet. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district Do not site new sensitive land uses in the same building with perc dry cleaning operations
Gasoline Dispensing Facilities	300 feet for a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater) 50 feet for typical gas dispensing facilities

Source: CARB 2005

Development projected by the GP/LCP Update includes a net increase of approximately 668,928 square feet of commercial development, which could result in additional sources of TACs including new auto service/sales uses, dry cleaners, or gas stations. Therefore, the GP/LCP Update could increase the number of stationary or permitted sources that emit TACs in Pismo Beach. Additionally, new residential units may be constructed near existing stationary or permitted sources of TAC in Pismo Beach, which may expose sensitive receptors to unhealthy air.

The GP/LCP Update includes policies intended to maintain and improve local air quality through local actions and interagency coordination. Implementation of the policies in the GP/LCP Update Conservation and Open Space Element listed below would minimize adverse effects associated with criteria pollutants and TACs. These include:

- **Policy COS-1.1: Improve Air Quality.** The City shall support health and enjoyment for those who live or work in the City and for visitors.
  - **Action COS-1.1c: Electric Vehicles.** Establish electric vehicle parking spaces and charging requirements to lower pollution, and reduce the City's reliance on gasoline.
  - **Action COS-1.1d: City Fleet Replacement.** Develop and adopt a low- and zero- emissions replacement/purchasing policy for official City vehicles and equipment. This would not apply to vehicles with special performance requirements.
  - **Action COS-1.1g: Manage Toxic Air Contaminants.** Continue to address and enforce federal and state regulation that aim to maintain attainment. Through implementation and enforcement of CEQA mitigation, the City shall manage toxic air contaminants to protect public health and meet ~~applicable TAC~~ state-mandated risk compliance thresholds.

Compliance with existing applicable regulations, SLOAPCD permitting requirements, and GP/LCP Update policies would minimize risks associated with criteria pollutant and TAC emissions. Oversight by the appropriate State and local agencies and compliance by new development with applicable regulations would minimize the risk of the public's potential exposure to TAC emissions. Therefore, health risk impacts from TAC emissions would be less than significant.

Carbon Monoxide Hotspots

The GP/LCP Update is anticipated to increase regional VMT (refer to Section 4.13, Transportation). Areas with high vehicle density, such as congested intersections, have the potential to create high concentrations of CO ("CO hotspots") and could potentially expose sensitive receptors to substantial pollutant concentrations. The CARB considers freeways and urban roadways with more than 100,000 vehicles per day and rural roadways with more than 50,000 vehicles per day to pose a potential health risk to sensitive receptors within 500 feet due to DPM emissions (CARB 2005). In addition, the Bay Area Air Quality Management District (BAAQMD) has established a volume of 44,000 vehicles per hour as the level above which traffic volumes may contribute to a violation of CO standards (BAAQMD 2017).According to the Traffic Impact Analysis (TIA) conducted for the GP/LCP Update (GHD 2021), there are several intersections that operate at level of service (LOS) D or lower in Pismo Beach. However, existing traffic volumes along all of the studied roadway segments in Pismo Beach under existing, buildout, or buildout with project conditions do not exceed 50,000 vehicles per day or 44,000 vehicles per hour at any location (Appendix C). Therefore, the GP/LCP Update would not result in volumes of traffic that would create, or substantially contribute to, hazardous levels of TACs or the exceedance of State and federal AAQS for CO.

Naturally Occurring Asbestos

NOA has been identified by the State Air Resources Board as a toxic air contaminant. Serpentine and ultramafic rocks are common in San Luis Obispo County and may contain NOA. According to the SLOAPCD NOA Map for San Luis Obispo County, Pismo Beach is not within an area of concern for serpentine rock formation, which are potential sources of NOA (SLOAPCD 2018a). Future development under the GP/LCP Update would result in excavation and grading. However, as Pismo Beach is not located within a serpentine rock formation, future development in Pismo Beach would not be expected to encounter NOA. Therefore, impacts associated with naturally occurring asbestos within the project area would be less than significant.

Mitigation Measures

No additional policy-oriented mitigation would be required to address this impact. As individual development projects are proposed, focused, project-level environmental review may be required, which could result in the implementation of project-specific mitigation measures.

Threshold 4:	Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

IMPACT AQ-4 IMPLEMENTATION OF THE GP/LCP UPDATE WOULD NOT CREATE OBJECTIONABLE ODORS THAT WOULD IMPACT A SUBSTANTIAL NUMBER OF PEOPLE. FUTURE DEVELOPMENT IN PISMO BEACH WOULD BE REQUIRED TO COMPLY WITH SLOAPCD REGULATIONS PROHIBITING NUISANCE EMISSIONS (INCLUDING ODORS). THIS WOULD BE A LESS THAN SIGNIFICANT IMPACT.

Potential odor sources identified in SLOAPCD's CEQA Air Quality Handbook include manufacturing plants, coffee roasters, composting facilities, landfills, transfer stations, and wastewater treatment plants. Planned development under the proposed GP/LCP Update includes commercial, residential, public space, and mixed-use land uses. These land uses typically do not produce objectionable odors. The GP/LCP Update does not envision new industrial uses.

The proposed GP/LCP Land Use and Community Design Element includes Action 2.1 d and Goal LU-1, which demonstrate the objective to address potential odor conflicts in the proposed GP/LCP Update for certain commercial uses such as agriculture livestock and wastewater treatment plant.

Goal LU-1: A community with a variety of well-regulated land uses that support the diverse needs of both ~~visitors~~ residents and ~~residents~~ visitors.

- **Action-LU-2.1d: Compatible Uses:** Enforce buffers and screening techniques to reduce the impact of noise, air pollution, traffic, or other nuisances from industrial or certain commercial uses.

Because the proposed GP/LCP Update includes goals, policies, and actions intended to minimize odor conflicts between future land uses in Pismo Beach, odors resulting from buildout of the GP/LCP would be primarily limited to those associated with construction activities and vehicle and engine exhaust and idling. During construction activities, only short-term, temporary odors from vehicle exhaust and construction equipment engines would occur. SLOAPCD Rule 402 prohibits discharge of air contaminants or other materials, including odors, that cause injury, detriment, nuisance, or annoyance to any to any considerable number of persons or to the public, or to a business or property. Rule 402 exempts odors from agricultural operations; however, Pismo Beach is approximately two miles northwest of the nearest agricultural operations, and as a result would not be expected to result in odor conflicts that would impact a substantial number of people. Implementation of the land use scenario envisioned by the GP/LCP, including compliance with General Plan Action LU-2.1 d, would not result in a substantial number of sensitive receptors being located near sources of odors, and this impact would be less than significant.

Mitigation Measures

This impact would be less than significant, and no additional policy-oriented mitigation would be required. As individual development projects are proposed, focused, project-level environmental review may be required, which could result in the implementation of project-specific mitigation measures to reduce potential odor conflicts.

4.2.4 Cumulative Impacts

Pismo Beach is located in San Luis Obispo County, which is a part of the SCCAB, along with Santa Barbara and Ventura Counties. All of the City's neighboring jurisdictions are also located in San Luis Obispo County and within the SCCAB. Air quality in the SCCAB is regulated by SLOAPCD, which has prepared an air quality plan to improve conditions and meet federal and state air quality standards. San Luis Obispo County is in non-attainment for the 1-hour and 8-hour state standards for ozone and the 24-hour state standard for PM10 (SLOAPCD 2019). Future development throughout San Luis Obispo County would create ozone and PM10 emissions, which would contribute to continued or exacerbated violation of state emissions standards, resulting in a significant cumulative impact to air quality. As discussed under Impact AQ-1, buildout of the GP/LCP Update would result in an increase of population growth that exceeds the population projections used in the most recent SLOAPCD CAP for the same area. The population increase would result in individual development projects that may exceed regulatory thresholds. The 2001 CAP is intended to bring the County into attainment of the State ozone standard. Because the GP/LCP Update would be inconsistent with the CAP, the GP/LCP Update's contribution to cumulative regional air quality impacts would be significant and unavoidable.

The GP/LCP Update includes an increase of commercial development and regional VMT. This could potentially increase emissions of TACs, CO, and odor nuisances in the region and potentially expose sensitive receptors to substantial pollutant concentrations. However, the GP/LCP Update includes goals, policies, and actions to minimize these effects. Individual project development may require implementation of project-specific mitigation measures to reduce pollutant exposure to sensitive receptors or nuisance odors.

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4.3 Biological Resources

This section addresses the existing environmental conditions and regulatory setting for biological resources in the City of Pismo Beach and its sphere of influence (SOI) and provides an assessment of the potential for direct and indirect impacts to sensitive natural communities, special status species, regulated waterways and wetlands, sensitive habitat and mature native trees, and wildlife movement corridors.

4.3.1 Setting

The City of Pismo Beach is located along the Central Coast of California, midway between San Francisco and Los Angeles. Pismo Beach is boarded by the beach and the Pacific Ocean to the southwest and hills of the Pismo Preserve to the northeast. The Cities of Grover Beach and Arroyo Grande are to the south and east of Pismo Beach, and the unincorporated community of Avila Beach lies just to the north. The City includes a variety of land use types, including residential, commercial, and industrial areas, as well as open undeveloped space consisting of native and non-native vegetation communities.

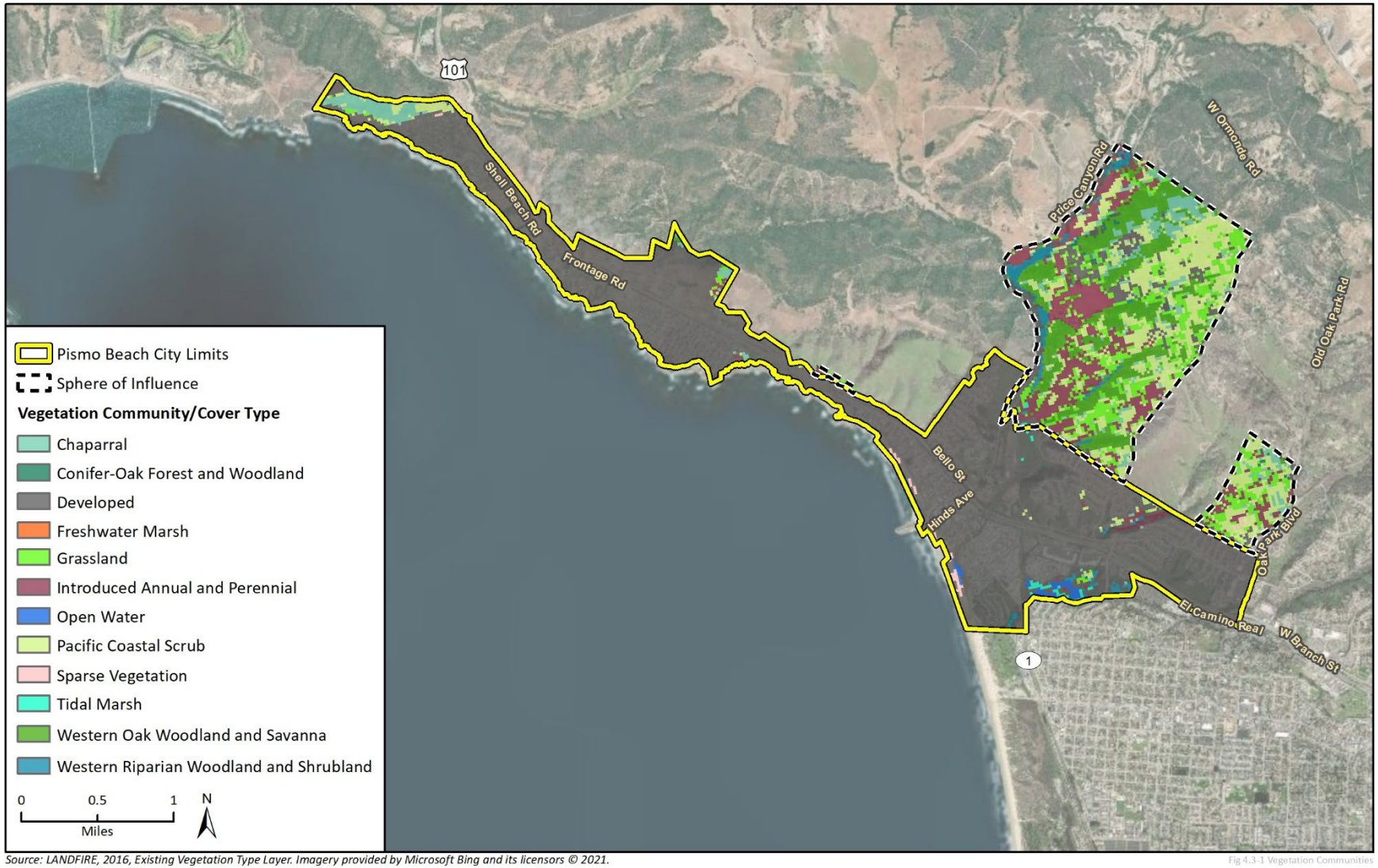
a. Vegetation Communities and Other Land Cover Types

Pismo Beach has a wide diversity of tree (hardwood and coniferous forests, oak woodlands), shrub (chaparrals, coastal scrubs), and herbaceous (grasslands) terrestrial habitat types. Remaining areas include developed and sparsely vegetated/barren land cover types.

Vegetation communities provide wildlife habitat components including food, shelter, movement corridors, and breeding opportunities for wildlife species. They are classified in general terms with an emphasis on vegetation structure, vegetation species composition, soil structure, and water availability. Some wildlife species are generalists that use a variety of habitats, while other species are adapted to very specific habitats. Species that are limited to a single habitat type are more vulnerable to habitat loss and disturbance than are generalists and, therefore, may be more at risk to experience population declines.

Figure 4.3-1 displays the major vegetation communities and other land cover types present in Pismo Beach and the SOI. This information is based on data from the United States Department of Agriculture (USDA) Forest Service Landfire GIS database (USDA 2016). The Landfire GIS database identifies vegetation communities based on Terrestrial Ecological Systems of the United States (NatureServe 2009). Vegetation communities range from grasslands to areas of scrub, to areas with forest cover. However, the majority of the vegetation communities are within the SOI. The majority of the area within City limits is developed and does not contain vegetation communities. Descriptions of each vegetation community in the City and SOI are provided below.

Figure 4.3-1 Vegetation Communities and Land Cover Types in Pismo Beach



Source: LANDFIRE, 2016, Existing Vegetation Type Layer. Imagery provided by Microsoft Bing and its licensors © 2021.

Fig 4.3-1 Vegetation Communities

Note: For the purposes of this map, this figure does not include the submerged lands offshore that are within the Pismo Beach City Limits. See Figure LU-1 of the General Plan/Local Coastal Plan Land Use Element (Pismo Beach LAFCO-approved City Border) for the full Pismo Beach City Limits.

Chaparral

Chaparral vegetation is characterized by hard-leafed shrubs and dwarf trees, the branches of which are often very stiff and woody. Chaparral often occupies hot, dry slopes but can occur on a variety of substrates including valleys and sand dunes. Most dominant chaparral species have adaptations to fire that allow them to survive fires and/or enhance their seeds' germination rates (Holland and Keil 1995). Chaparral vegetation communities include California mesic chaparral, northern and central California dry-mesic chaparral, and southern California dry-mesic chaparral.

California mesic chaparral tends to be dominated by a variety of mixed or single species of shrubs with thick, evergreen leaves that resprout from buds in the remaining root mass following fire. Common species include scrub oak (*Quercus berberidifolia*), interior live oak (*Quercus wislizeni var. frutescens*), mountain mahogany (*Cercocarpus betuloides*), flowering ash (*Fraxinus dipetala*), ashy silk tassel (*Garrya flavescens*), coast silk tassel (*Garrya elliptica*), toyon (*Heteromeles arbutifolia*), honeysuckle (*Lonicera spp*.), holly leaf cherry (*Prunus ilicifolia*), redberry (*Rhamnus crocea*), holly leaf redberry (*Rhamnus ilicifolia*), poison oak (*Toxicodendron diversilobum*), gooseberry/currant (*Ribes spp*.), and elderberry (*Sambucus spp.*).

Northern and central California dry-mesic chaparral, and southern California dry-mesic chaparral occur on coarse-grained soils with annual precipitation up to approximately 30 inches. Characteristic species of Northern and central California dry-mesic chaparral include chamise (*Adenostoma fasciculatum*), buck brush (*Ceanothus cuneatus*), whiteleaf manzanita, common manzanita (*Arctostaphylos manzanita*), big berry manzanita, Eastwood's manzanita (*Arctostaphylos glandulosa*), Stanford's manzanita (*Arctostaphylos stanfordiana*), flannel bush (*Fremontodendron californicum*), bush mallow (*Malacothamnus fasciculatus*), bush poppy (*Dendromecon rigida*), and chaparral pea (*Pickeringia montana*).

Characteristic species of Southern central California dry-mesic chaparral include big pod Ceanothus (*Ceanothus megacarpus*), hoary leaved Ceanothus (*Ceanothus crassifolius*), chaparral whitethorn (*Ceanothus leucodermis*), desert Ceanothus (*Ceanothus greggii*), chamise, red shanks (*Adenostoma sparsifolium*), big berry manzanita, mountain mahogany (*Cercocarpus betuloides*), smooth mountain mahogany (*Cercocarpus minutiflorus*), sugar sumac (*Rhus ovata*), and mission manzanita (*Xylococcus bicolor*).

Chaparral communities occur in the northeastern portion of the City extending towards the hills along Price Canyon Road and within the SOI to the northwest of the City limits.

Conifer-Oak Forest and Woodland

This community is primarily found in the valley margins and foothills of the Sierra Nevada and Coast Ranges of California approximately 360 to 3600 feet in elevation on rolling plains or dry slopes. High-quality occurrences often consist of open park-like stands of California Foothill pine (*Pinus sabiniana*), with oaks and other various broadleaf tree and shrub species, including blue oak (*Quercus douglasii)*, interior live oak, Coast live oak (*Quercus agrifolia*; primarily in the central and southern Coast Ranges), valley oak (*Quercus lobata)*, California buckeye (*Aesculus californica)*, manzanita (*Arctostaphylos* spp.), Eastern redbud (*Cercis canadensis)*, buck brush, coffeeberry (*Frangula californica)*, gooseberry, California juniper (*Juniperus californica)*, and Coulter pine (*Pinus coulteri*; in the central and southern Coast Ranges). California Foothill pine tends to drop out all together in the driest and more southerly sites, which are often dominated by blue oak. The California central coast region may have open stands of just California juniper, with a grassy

understory. These vegetation communities are sparsely scattered throughout the foothills in the hillside area of the SOI east of Price Canyon Road.

Freshwater Marsh

Freshwater marshes are habitats intermittently or persistently flooded with water from non-tidal systems. As the name suggests, the water in these marshes is not salty or brackish. The water in freshwater marshes may arise from groundwater, streams, surface runoff, or precipitation. Freshwater marshes primarily consist of sedges, grasses, and emergent plants. Freshwater marshes are usually found near the mouths of rivers, along lakes, and are present in areas with low drainage like abandoned oxbow lakes. Freshwater marsh covers less than one percent of the City and SOI and is located in the hills along Price Canyon Road in the SOI northeast of the City.

Grassland

Grassland vegetation communities are distributed throughout the foothills of the SOI along Price Canyon Road and to the east of Pismo Creek. This community is found within fine-textured soils, moist or even waterlogged in the winter, but very dry in the summer. Characteristic plant species include purple needlegrass (*Stipa pulchra*), threeawn (*Aristida spp*.), common yarrow (*Achillea millefolium*), blow wives (*Achyrachaena mollis*), mountain dandelion (*Agoseris heterophylla*), golden stars (*Bloomeria crocea*), golden Brodiaea (*Triteleia ixioides*), soap plant (*Chlorogalum pomeridianum*), purple clarkia (*Clarkia purpurea*), Jeffrey's shooting star (*Dodecatheon jeffreyi*), blue wildrye (*Elymus glaucus*), valley wild rye (*Leymus triticoides*), California fescue (*Festuca californica*), California melic grass (*Melica californica*), narrow leaved owl's clover (*Castilleja attenuata*), and pine bluegrass (*Poa secunda*).

Introduced Annual and Perennial

Introduced annual and perennial vegetation communities are comprised of grasses and forbs introduced during and since the Spanish colonial period (Holland and Keil 1995). Introduced annual and perennial vegetation communities include introduced upland vegetation-annual and biennial forbland, introduced upland vegetation-perennial grassland and forbland, and California annual grassland. Characteristic species of introduced forb and grassland communities include ripgut brome (*Bromus diandrus*), soft chess brome (*Bromus hordeaceus*), foxtail barley (*Hordeum murinum*), broad leaf filaree (*Erodium botrys*), redstem filaree (*Erodium cicutarium*), slender wild oats (*Avena barbata*), wild oats (*Avena fatua*), California goldfields (*Lasthenia californica*), bicolored lupine (*Lupinus bicolor*), and Italian rye grass (*Lolium multiflorum*). Introduced communities are widely spread throughout the northeastern portion of the SOI in the foothills along Price Canyon Road.

Pacific Coast Scrub

Pacific Coast Scrub vegetation communities include northern California coastal scrub and southern California coastal scrub communities. Pacific coast scrub is located in the northeastern portion of the City and is scattered throughout the foothills in the hillside area of the SOI east of Price Canyon Road. Northern California coastal scrub is restricted to coastal plateaus and lower slopes of the Coast Ranges where precipitation range from approximately 20 to 80 inches annually. These communities are dominated by evergreen shrubs; drought-deciduous species are unimportant or absent in this system. Dense shrublands typically include a well-developed woody and herbaceous understory. Characteristic species of northern California coastal scrub include coyote brush

(*Baccharis pilularis*), yellow bush lupine (*Lupinus arboreus*), blueblossom (*Ceanothus thyrsiflorus*), seaside golden yarrow (*Eriophyllum staechadifolium*), sticky monkeyflower (*Mimulus aurantiacus*), poison oak (*Toxicodendron diversilobum*), California blackberry (*Rubus ursinus*), thimbleberry (*Rubus parviflorus*), salmon berry (*Rubus spectabilis*), California coffeeberry (*Frangula californica*), ocean spray (*Holodiscus discolor*), salal (*Gaultheria shallon*), common cowparsnip (*Heracleum maximum*), and sword fern (*Polystichum munitum*).

Southern California coastal scrub is dominated by drought-deciduous shrubs but at times can have characteristic resprouting, deep-rooted shrubs with thick and leathery evergreen leaves. Soils vary from coarse gravels to clays, but typically only support plant-available moisture with winter and spring rain. Most predominant shrubs include California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), white sage (*Salvia apiana*), purple sage (*Salvia leucophylla*), California brittlebush (*Encelia californica*), California buckwheat (*Eriogonum fasciculatum*), ashyleaf buckwheat (*Eriogonum cinereum*), prickly pear (*Opuntia littoralis*), sticky monkeyflower, deerweed (*Acmispon glaber*) in early seral stages that follow a fire, and coyote brush in moister, disturbed sites.

Tidal Marsh

Tidal marshes are a subset of estuarine wetlands defined by the presence of emergent vegetation types uniquely adapted to sheltered intertidal zones of temperate and subtropical coastal plains (Holland and Keil 1995). They are found across a full range of salinity conditions from seawater on the immediate coast to freshwater tidal reaches of estuarine river systems. Marshes are transitional ecosystems that provide critical connections between adjacent subtidal and terrestrial ecosystems within the estuarine landscape.

Vegetation of tidal marsh communities are mostly low-growing herbaceous perennials that consists of halophytic species, which are species that prefer growing in water with high salinity. Most species have reduced leaves, and several are succulents (Holland and Keil 1995). Tidal marsh is located near Pismo Lake at the southernmost edge of the City. This community is often permanently or seasonally flooded and dominated by herbaceous plants including cattails, bulrush, and ditch-grass.

Western Oak Woodland and Savanna

Western oak woodlands are dominated by trees, mostly oaks, 15 to 70 feet tall. These woodlands vary from open savannas to dense, closed-canopy communities. The most common woodland type consists of scattered trees and shrubs with an understory of grasses and forbs. However, in savanna woodlands shrubs are often entirely absent, and the ground is essentially the same as that of grasslands (Holland and Keil 1995). Western oak woodland and savanna includes California central valley mixed oak savanna, California coastal live oak woodland and savanna, and southern California oak woodland and savanna. California central valley mixed oak savanna occurs on alluvial terraces and flat plains, often with deep, fertile soils. Valley oak (*Quercus lobata*) is the characteristic oak species of these savannas, though other characteristic species include interior live oak (*Quercus wislizeni*), coast live oak, blue oak (*Quercus douglasii*), California buckeye (*Aesculus californica*), western redbud (*Cercis occidentalis*), California juniper (*Juniperus californica*), and purple needlegrass (*Stipa pulchra*). California coastal live oak woodland and savanna are dominated by coast live oak and vary in canopy cover from dense conditions that support sparse understory vegetation of California blackberry, snowberry (*Symphoricarpos mollis*), toyon, and poison oak, to more open conditions with perennial bunchgrass understory. Southern California oak woodlands and savannas are dominated by a mixed closed or open canopy of coast live oak, interior live oak,

Engelmann oak (*Quercus engelmannii*), black oak, and/or Southern California black walnut (*Juglans californica*). Southern chaparral species such as chamise, California sagebrush, lemonade berry (*Rhus integrifolia*), sugar sumac (*Rhus ovata*), fragrant sumac (*Rhus aromatica*), ceanothus, gooseberry/currant, and manzanita (*Arctostaphylos spp*.) are also characteristic. These vegetation communities are scattered throughout the foothills in the hillside area of the SOI east of Price Canyon Road.

Western Riparian Woodland and Shrubland

Western Riparian Woodland and Shrubland communities occur along drainages in high mountain areas. These communities are typically dominated by deciduous trees or large shrubs; however, evergreen species may be common or dominant depending on local temperature effects (Holland and Keil 1995). Western Riparian Woodland and Shrubland, consisting of California montane riparian systems, is located in the depressions between hillsides in the foothills of the hillside area of the SOI along Price Canyon Road and along Pismo Creek. This community often occurs as a mosaic of multiple communities that are tree dominated with a diverse shrub component.

The variety of plant associations connected to this community reflects elevation, stream gradient, floodplain width, and flooding events. Dominant trees may include white alder (*Alnus rhombifolia*), boxelder (*Acer negundo*), red alder (*Alnus rubra*), Fremont cottonwood (*Populus fremontii*), red willow (*Salix laevigata*), Goodding's black willow (*Salix gooddingii*), Douglas fir, California sycamore (*Platanus racemosa*), and coast live oak. Dominant shrubs include narrowleaf willow (*Salix exigua*) and arroyo willow (*Salix lasiolepis*).

b. Wetlands

The U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) is a publicly available resource that provides detailed information on the abundance, characteristics, and distribution of wetlands. It should be noted that some wetland and stream features, such as freshwater seeps and springs, are generally not identified as part of the NWI because of the general scale of the mapping effort. Therefore, the extent of the major wetland and waterways in Pismo Beach, based on NWI mapping, is shown below in Figure 4.3-2. Wetland features that have been mapped either within or near Pismo Beach include estuarine and marine deepwater and wetlands, freshwater emergent wetlands, freshwater forested/shrub wetlands, and freshwater ponds (USFWS 2021a). As shown in Figure 4.3-2 below, NWI mapping has also identified riverine features. Riverine features correspond with streams and creeks, including Pismo Creek extending east into the foothills of the SOI along Price Canyon Road and its tributaries.

As shown in Figure 4.3-2, estuarine and marine wetlands are located in the southwestern part of the City, close to the Pismo Creek Estuary. Along the coastline, there are salt-influenced seasonal wetlands, with vegetation such as pickleweed (*Salicornia spp*.). Freshwater emergent wetlands occur at Pismo Lake and are surrounded by freshwater pond and freshwater forested/shrub wetlands. Freshwater forested/shrub wetlands also are located along Pismo Creek in the northeastern extent of the SOI. Freshwater marshes and wetlands have water at or near the surface, have soils differing from those of adjacent uplands, and vegetation adapted to wet conditions. Often, freshwater wetlands can be important waterfowl habitat.

Figure 4.3-2 Wetlands in Pismo Beach



Note: For the purposes of this map, this figure does not include the submerged lands offshore that are within the Pismo Beach City Limits. See Figure LU-1 of the General Plan Land Use Element (Pismo Beach LAFCO-approved City Border) for the full Pismo Beach City Limits.

Based on aerial photography, NWI mapping, and proximity to the Pacific Ocean, the streams and the majority of the wetlands in Pismo Beach are likely subject to U.S. Army Corps of Engineers (USACE) jurisdiction under section 404 of the Clean Water Act. In addition, these wetlands and streams are subject to California Department of Fish and Wildlife (CDFW) and State Water Resources Control Board (SWRCB) jurisdiction.

c. Sensitive Natural Communities, ESHA, and Critical Habitats

Definitions

Sensitive natural communities are vegetation types, associations, or sub-associations that support concentrations of special status plant and/or wildlife species, are of relatively limited distribution, and/or are of particular value to wildlife. According to the CDFW Vegetation Program, Alliances with State ranks of S1-S3 and certain other specified associations are considered imperiled, and thus, potentially of special concern. Natural communities with these ranks are generally addressed during California Environmental Quality Act (CEQA) environmental review with compensatory mitigation prescribed for impacts as applicable. Riparian areas are also considered sensitive natural communities by CDFW. Similarly, the California Coastal Act Section 30107.5 of the California Code of Regulations (CCR), discusses sensitive natural communities as Environmentally Sensitive Areas, which include any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem, and which could be easily disturbed or degraded by human activities and developments. The California Coastal Act criteria for determining whether a vegetation community qualifies as an Environmentally Sensitive Habitat Area (ESHA) are based upon the habitat's ecological importance, including the rarity or function of the habitat. Many of the vegetation communities that meet CDFW's definition as sensitive are also ESHAs.

Critical habitat is a term used in the federal Endangered Species Act (ESA) and defined as a specific geographic area (or areas) that contain features essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical habitat may include an area that is not currently occupied by the species but that will be needed for its recovery. These areas provide notice to the public and land managers of the importance of these areas to the conservation of a listed species. Special protections and/or restrictions are possible in these areas when Federal funding, permits, licenses, authorizations, or actions occur or are required.

Sensitive Habitats within the City and SOI

In coastal areas, sensitive natural communities and riparian areas as defined by CDFW are also typically considered to be ESHAs. Many ESHAs are vegetation communities that are included in the CDFW sensitive natural community list; however, ESHA also includes areas with breeding, roosting, or other essential habitat for protected species even when the vegetation itself is not sensitive.

Generally, ESHAs include many types of woodlands, riparian areas, coastal plains and prairies. Pismo Beach's ESHAs include portions of Pismo State Beach, Pismo Marsh, Price Canyon, Pismo Creek, Pismo Preserve, Meadow Creek, dunes habitat of the Pismo State Beach ~~the Oceano Dunes~~, and the Monarch Butterfly Grove. Habitat which supports endangered species in the area would likely qualify as ESHA. An important component of the combined General Plan/Local Coastal Plan (GP/LCP) is to ensure that ESHA are identified and protected in future development proposals consistent with Coastal Act requirements. The Coastal Act restricts development within ESHA to only resource-dependent uses and requires that ESHA be protected against significant disruption of

habitat values (Section 30240). The Coastal Act also requires areas adjacent to ESHA to be sited and designed to prevent degradation of ESHA and to be compatible with the continuance of those habitat areas. This is typically established through ESHA buffers, among other policies.

For portions of Pismo Beach outside the coastal zone, ESHA designations would not apply. Sensitive natural communities in these areas include drainages, riparian and wetland communities, and could also include unique chaparral alliances and perennial grasslands consistent with CDFW's definitions of a sensitive natural community.

The USFWS Critical Habitat Mapper (2021b) and the National Marine Fisheries Service (NMFS) West Coast Critical Habitat website (2021) depict designated critical habitats in Pismo Beach. The only designated critical habitat within or immediately adjacent to Pismo Beach includes habitat suitable for tidewater goby (*Eucyclogobius newberryi*), as shown on Figure 4.3-3. Critical habitat for tidewater goby is located in Pismo Creek as it drains into the Pacific Ocean at the southwestern edge of the City.

d. Special Status Species

For the purpose of this analysis, special status species are those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the United States Fish and Wildlife Services (USFWS) and National Marine Fisheries Service (NMFS) under the federal Endangered Species Act; those listed or proposed for listing as threatened or endangered by the CDFW under the California Endangered Species Act; plants listed as rare by the CDFW under the Native Plant Protection Act; and animals designated as "Species of Special Concern," "Fully Protected," or "Watch List" by the CDFW. Those plants ranked as California Rare Plant Rank (CRPR) 1 or 2 are typically regarded as rare, threatened, or endangered under CEQA by lead agencies and were considered as such in this EIR. The CRPR utilizes the following code definitions:

- **List 1A** = Plants presumed extinct in California
- **List 1B.1** = Rare or endangered in California and elsewhere; seriously endangered in California (over 80 percent of occurrences are threatened or have a high degree and immediacy of threat)
- **List 1B.2** = Rare or endangered in California and elsewhere; fairly endangered in California (20 to 80 percent of occurrences are threatened)
- **List 1B.3** = Rare or endangered in California and elsewhere but not very endangered in California (less than 20 percent of occurrences threatened or no current threats known)
- **List 2** = Rare, threatened or endangered in California, but more common elsewhere

CRPR List 3 species are "review list," and CRPR 4 species are considered "watch list" species. CRPR 3 and 4 species do not typically warrant analysis under CEQA except where they are part of a unique community, from the type locality, or designated as rare or significant by local governments, or where cumulative impacts could result in population–level effects. The CRPR 3 and 4 species reported from the region are not locally designated as rare or significant by the City of Pismo Beach and County of San Luis Obispo, Local Coastal Programs (LCPs) or General Plans and are not part of a unique community, and the project area is not known to be the type locality for any ranked plant species. Therefore, potential impacts to CRPR 3 and CRPR 4 species were not considered further in this analysis.

Figure 4.3-3 Critical Habitat in Pismo Beach



Imagery provided by Microsoft Bing and its licensors © 2021.

Fig 4.3-3 Critical Habitat

Note: For the purposes of this map, this figure does not include the submerged lands offshore that are within the Pismo Beach City Limits. See Figure LU-1 of the General Plan Land Use Element (Pismo Beach LAFCO-approved City Border) for the full Pismo Beach City Limits.

Pismo Beach is home to several species protected by federal and State agencies, and the area surrounding the city also supports suitable habitat for many special status species. Information regarding the occurrences of special-status species in the vicinity of the City limits was obtained from a query of CDFW's California Natural Diversity Database (CNDDB) (CDFW 2021a), the USFWS Information for Planning and Conservation (IPaC) (USFWS 2021c), and the CNPS *Inventory of Rare and Endangered Plants of California* (CNPS 2021). The query of these data sources was for the U.S. Geological Survey (USGS) *Pismo Beach* and six surrounding 7.5-minute series quadrangles (*Morro Bay South*, *San Luis Obispo*, *Lopez Mtn*., *Port San Luis*, *Arroyo Grande NE*, *Oceano*), and it was conducted in February 2021. This query range encompasses the City limits and a five-mile buffer of the City limits. This is a sufficient distance to accommodate for regional habitat diversity and to overcome the limitations of the CNDDB, because the CNDDB is based on reports of actual occurrences and does not constitute an exhaustive inventory of every resource. See Appendix D for detailed species lists.

Listed Species

Federal, State, and local authorities under a variety of legislative acts share regulatory authority over biological resources. The CDFW has direct jurisdiction under law for biological resources through the State Fish and Game Code and under the California Endangered Species Act (CESA). The federal Endangered Species Act (FESA) also provides direct regulatory authority over specially designated organisms and their habitats to the USFWS. These acts specifically regulate listed and candidate endangered and threatened species, which are defined as:

- **Endangered Species:** any species that is in danger of extinction throughout all or a significant portion of its range
- **Threatened Species:** any species that is likely to become an endangered species within the foreseeable future throughout all or a significant part of its range

Special Status Plants

Based on the database and literature review, 76 special status plant species are known to occur, or have potential to occur, within the City, SOI, or surrounding area. Many of these species are associated with ESHAs, or with sensitive natural communities in areas outside the coastal zone. Table D-1 in Appendix D lists these special status plant species, their listing status, and their CRPR.

Special status plants that are known or have potential to occur in the City and surrounding area can occupy a broad range of habitat types. Some are associated with foredune and backdune systems, such as beach spectacle pod (*Dithyrea maritima*), dune larkspur (*Delphinium parryi ssp. Blochmaniae*), Blochman's leafy daisy (*Erigeron blochmaniae*), and coast woolly-heads (*Nemacaulis denudata var. denudate*). Others are associated with chaparral communities, such as several of the manzanita species. Some species occur in serpentine-influenced soils, including Jones' layia (*Layia jonesii*) and the fritillaries. Others are associated with coastal salt marsh and estuary habitats, including marsh sandwort (*Arenaria paludicola*). Additionally, some of the species listed are not currently known from within the City limits or Sphere of Influence but are regionally occurring species that could occur in the surrounding area.

Special Status Wildlife

Based on the database and literature review, 36 special status wildlife species are known, or have potential to occur within the City, SOI, or surrounding area. Many of these species are associated with ESHAs or with sensitive natural communities outside the coastal zone. Table D-2 in Appendix D lists these special status wildlife species, their listing status, and other status designations.

Generally, special status species are most likely to occur in undeveloped areas and open space areas. However, riparian areas that intersect urban development may also provide habitat and movement corridors for special status species.

Pismo Beach and the surrounding area also provides important habitat for avian wildlife, including several listed species and other special status species. Western snowy plover (*Charadrius nivosus nivosus*) is known to nest in dune habitats within the city. Additionally, rookeries of herons, egrets, and cormorants are known to occur in Pismo Beach and surrounding area. Species such as tricolored blackbird (*Agelaius tricolor*) and white-tailed kite (*Elanus leucurus*) are not reported to nest within the City but could nest in more rural portions of the area surrounding the city. Populations of California black rail (*Laterallus jamaicensis coturniculus*) and California least tern (*Sternula antillarum browni*) are also known to occur south of Pismo Beach at the Oceano Dunes State Vehicular Recreation Area.

Ponds, wetlands, streams, and riparian areas provide habitat for aquatic and semi-aquatic amphibians and reptiles, including California red-legged frog (*Rana draytonii*), foothill yellow-legged frog (*Rana boylii*), and western pond turtle (*Emys marmorata*). Critical habitat for tidewater goby (*Eucyclogobius newberryi*) is located in the brackish portion of Pismo Creek as it meets the Pacific Ocean. Additionally, streams in the City provide potentially suitable habitat and passage for steelhead (*Oncorhynchus mykiss irideus*).

e. Wildlife Movement Corridors

Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Others may be important as dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network.

The habitats within the link do not necessarily need to be the same as the habitats that are being linked. Rather, the link merely needs to contain sufficient cover and forage to allow temporary inhabitation by ground-dwelling species. Typically, habitat linkages are contiguous strips of natural areas, though dense plantings of landscape vegetation can be used by certain disturbance-tolerant species. Depending upon the species using a corridor, specific physical resources (such as rock outcroppings, vernal pools, or oak trees) may need to be located within the habitat link at certain intervals to allow slower-moving species to traverse the link. For highly mobile or aerial species, habitat linkages may be discontinuous patches of suitable resources spaced sufficiently close together to permit travel along a route in a short period of time.

Wildlife movement corridors can be both large and small scale. Regionally, Pismo Beach is not located within an Essential Connectivity Area (ECA), as mapped in the report, *California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California* (Spencer et al. 2010). Essential Connectivity Areas represent principle connections between Natural Landscape Blocks.

Essential Connectivity Areas are regions in which land conservation and management actions should be prioritized to maintain and enhance ecological connectivity. Essential Connectivity Areas are mapped based on coarse ecological condition indicators, rather than the needs of particular species and thus serve the majority of species in each region.

Small scale habitat corridors are present in Pismo Beach in the coastal zone and inland areas and include drainages and other topographic features that facilitate movement, and contiguous areas of natural vegetation, including the coastal dunes and the Pismo Preserve. Perennial streams, wetlands, shallow bays and estuaries, including Pismo Creek and Pismo Marsh, provide potential fish and other aquatic wildlife movement habitat. Pismo Creek is critical habitat for tidewater goby and provides essential habitat connectivity between the Pacific Ocean and spawning habitat upstream.

4.3.2 Regulatory Setting

Federal, State, and local authorities under a variety of statutes and guidelines share regulatory authority over biological resources. The primary authority for general biological resources lies within the land use control and planning authority of local jurisdictions, which in this instance includes the City of Pismo Beach and for areas outside city limits, the County of San Luis Obispo. The CDFW is a trustee agency for biological resources throughout the State as defined in CEQA and also has direct jurisdiction under the California Fish and Game Code, which includes, but is not limited to, resources protected by the State of California under the CESA. In addition, the local Regional Water Quality Control Board (RWQCB) is a responsible agency for waters of the State. The California Coastal Commission also has the authority to approve the LCP and has the right to appeal development projects within the Coastal Zone. Below are summaries of the federal, State, and local regulations or guiding documents that could apply.

a. Federal Regulations

Endangered Species Act

Under the ESA, authorization is required to "take" a listed species. Take is defined under Section 3 of the ESA as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Under federal regulation (50 Code of Federal Regulations [CFR] Sections 17.3, 222.102); "harm" is further defined to include habitat modification or degradation where it would be expected to result in death or injury to listed wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Critical habitat is a specific geographic area(s) that is essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical habitat may include an area that is not currently occupied by the species but that will be needed for its recovery. Section 7 of the federal Endangered Species Act outlines procedures for federal interagency cooperation to conserve federally listed species and designated critical habitat.

Section 7(a)(2) of the ESA and its implementing regulations require federal agencies to consult with USFWS or NMFS to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species, or result in the destruction or adverse modification of critical habitat. For projects where federal action is not involved and take of a listed species may occur, the project proponent may seek to obtain an incidental take permit under Section 10(a) of the ESA. Section 10(a) allows USFWS to permit the incidental take of listed species if

such take is accompanied by a Habitat Conservation Plan (HCP) that includes components to minimize and mitigate impacts associated with the take.

The USFWS and NMFS share responsibility and regulatory authority for implementing the ESA (7 United States Code [USC] Section 136, 16 USC Section 1531 et seq.).

Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act

The Migratory Bird Treaty Act authorizes the Secretary of the Interior to regulate the taking of migratory birds. The act provides that it is unlawful, except as permitted by regulations, "to pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, […] any migratory bird, or any part, nest, or egg of any such bird" (16 USC Section 703(a)). The Bald and Golden Eagle Protection Act is the primary law protecting eagles, including individuals and their nests and eggs. The USFWS implements the Migratory Bird Treaty Act (16 USC Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668). Under the Bald and Golden Eagle Protection Act's Eagle Permit Rule (50 CFR 22.26), USFWS may issue permits to authorize limited, non-purposeful take of bald eagles and golden eagles.

Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) regulates marine fisheries in U.S. federal waters. The Magnuson-Stevens Act was first passed in 1976 and was revised in 1996 and 2007. The purpose of the Magnuson-Stevens Act is to provide long-term biological and economic sustainability of U.S. marine fisheries.

The NMFS has regulatory authority for implementing the Magnuson-Stevens Act. The NMFS requires regional fishery management councils to develop Fisheries Management Plans (FMPs) specific to their regions, fisheries and fish stocks. For waters off the U.S. West Coast, the Pacific Fishery Management Council has developed four FMPs, which are implemented through fisheries regulations for coastal pelagic species, groundfish species, highly migratory species and salmon species. These FMPs also identify Essential Fish Habitat, which is broadly defined as those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity.

Section 10 of the River and Harbors Act

Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the Secretary of the Army, acting through the U. S. Army Corps of Engineers (USACE), for the construction of any structure in or over any navigable water of the United States. Regulated activities include dredging or disposal of dredged materials, excavation, filling, rechannelization and construction of any structure or any other modification of a navigable water of the United States.

Clean Water Act

Under Section 404 of the Clean Water Act, the USACE, with U.S. Environmental Protection Agency (EPA) oversight, has authority to regulate activities that result in discharge of dredged or fill material into wetlands or other "waters of the United States." Perennial and intermittent creeks are considered waters of the United States if they are hydrologically connected to other jurisdictional waters. In achieving the goals of the Clean Water Act, the USACE seeks to avoid adverse impacts and offset unavoidable adverse impacts on existing aquatic resources. Any discharge of dredged or fill material into jurisdictional wetlands or other jurisdictional "waters of the United States" would require a Section 404 permit from the USACE prior to the start of work. Typically, when a project

involves impacts to waters of the United States, the goal of no net loss of wetlands is met by compensatory mitigation; in general, the type and location options for compensatory mitigation should comply with the hierarchy established by the USACE/EPA 2008 Mitigation Rule (in descending order): (1) mitigation banks; (2) in-lieu fee programs; and (3) permittee-responsible compensatory mitigation. Also, in accordance with Section 401 of the Clean Water Act, applicants for a Section 404 permit must obtain water quality certification from the SWRCB or appropriate RWQCB.

b. State Regulations

California Endangered Species Act

CESA (Fish and Game Code Section 2050 et seq.) prohibits take of State-listed threatened and endangered species without a CDFW incidental take permit. Take under CESA is restricted to direct harm of a listed species and does not prohibit indirect harm by way of habitat modification.

Protection of fully protected species is described in California Fish and Game Code Sections 3511, 4700, 5050 and 5515. These statutes prohibit take or possession of fully protected species. Incidental take of fully protected species may be authorized under an approved Natural Communities Conservation Plan.

Natural Community Conservation Planning Act

The Natural Communities Conservation Planning Act was established by the California Legislature, is directed by the CDFW, and is implemented by the State, as well as public and private partnerships as a means to protect habitat in California. The Natural Communities Conservation Planning Act takes a regional approach to preserving habitat. A Natural Communities Conservation Plan identifies and provides for the regional protection of plants, animals and their habitats, while allowing compatible and appropriate economic activity. Once a Natural Communities Conservation Plan has been approved, CDFW may provide take authorization for all covered species, including fully protected species, Section 2835 of the California Fish and Game Code.

California Fish and Game Code Sections 3503, 3503.5 and 3511

California Fish and Game Code Sections 3503, 3503.5 and 3511 describe unlawful take, possession, or destruction of birds, nests and eggs. Fully protected birds (California Fish and Game Code Section 3511) may not be taken or possessed except under specific permit. Section 3503.5 protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs.

Native Plant Protection Act

The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (California Fish and Game Code Section 1900 et seq.). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under Section 1913(c) of the NPPA, the owner of land where a rare or endangered native plant is growing is required to notify the CDFW at least 10 days in advance of changing the land use to allow for salvage of the plant(s).

Section 1600 et seq. of the California Fish and Game Code

Section 1600 et seq. of the California Fish and Game Code prohibits, without prior notification to CDFW, the substantial diversion or obstruction of the natural flow of, or substantial change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. In order for these activities to occur, the CDFW must receive written notification regarding the activity in the manner prescribed by the CDFW and may require a lake or streambed alteration agreement. Lakes, ponds, perennial and intermittent streams and associated riparian vegetation, when present, are subject to this regulation.

Porter-Cologne Water Quality Control Act

Pursuant to Section 401 of the Clean Water Act, projects that apply for a USACE permit for discharge of dredge or fill material must also obtain water quality certification under Section 401 from the RWQCB. Additionally, the SWRCB and each of nine local RWQCBs have jurisdiction over "waters of the State" pursuant to the Porter-Cologne Water Quality Control Act, which are defined as any surface water or groundwater, including saline waters, within the boundaries of the State. The SWRCB has issued general Waste Discharge Requirements (WDRs) regarding discharges to "isolated" waters of the State (Water Quality Order No. 2004-0004-DWQ, Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction). The local RWQCB implements this general order for isolated waters not subject to federal jurisdiction.

The Clean Water Act and associated federal regulations (Title 40 of the CFR 123.25(a)(9), 122.26(a), 122.26(b)(14)(x) and 122.26(b)(15)) require nearly all construction site operators engaged in clearing, grading, and excavating activities that disturb one acre or more, including smaller sites in a larger common plan of development or sale, to obtain coverage under a National Pollutant Discharge Elimination System (NPDES) permit for their stormwater discharges, and develop a Storm Water Pollution Prevention Plan (SWPPP). The NPDES Program is a federal program which has been delegated to the State of California for implementation through the SWRCB and RWQCBs.

California Coastal Act

The California Coastal Act (Coastal Act) outlines standards for development within the coastal zone and includes specific policies (see Division 20 of the Public Resources Code) that address issues such as terrestrial and marine habitat protection, commercial fisheries, and water quality. The coastal zone encompasses 1.5 million acres of land and stretches from three miles at sea to an inland boundary that varies from several blocks in urban areas to as much as five miles in less developed areas. The majority of the Pismo Beach is located within the coastal zone. The coastal zone extends into federal waters under the federal Coastal Zone Management Act.

Chapter 3 of the Coastal Act contains the standards used by the California Coastal Commission in the review of coastal development permits and local coastal plans. The seven articles within Chapter 3 govern all development along the coast, and mandate protection of public access, recreational opportunities, and marine and land resources. Chapter 3, Article 4 addresses protection of the marine environment including water quality issues, wetlands protections, and coastal armoring. Chapter 3, Article 5 includes protections for environmentally sensitive habitat.

c. Local Regulations

Pismo Beach Municipal Code

The Pismo Beach Municipal Code Title 12, Chapter 12.12, City tree regulations, outlines a comprehensive plan for the planting and maintenance of trees in, on, or within the public right-of-way, provides rules and regulations for the planting, care and maintenance of such trees, and defines landmark and specimen trees.

The Pismo Beach Municipal Code Title 17, Article 3, Section 17.30.070, Oak tree preservation, establishes standards for the preservation of native oak species (*Quercus agrifolia*, *Quercus lobata*, *Quercus chrysolepis*), in compliance with Policy CO-13 of the conservation and open space element of the GP/LCP. This section prohibits the cutting, removal, encroachment into, or brush removal from the protected zone of any oak tree, or the removal or transplanting of any oak tree on public or private property within the city, unless the removal has been authorized with approval of a land use permit as described in Section 17.30.070.

The Pismo Beach Municipal Code Title 17, Zoning, implements the GP/LCP. The Pismo Beach Zoning Ordinance Chapter 17.16.050, Special Development Standards for Conditional Uses in the Open Space District, identifies ESHAs to be protected and preserved, including buffers, outlines allowed uses, and restricts new uses and expansions of existing uses in these areas. Reduction of buffers requires consultation with CDFW, mitigation, and consistency with existing policies in the coastal land use plan. This chapter also requires that no development be allowed within an ESHA identified in GP/LCP.

4.3.3 Impact Analysis

a. Methodology

Environmental impacts to biological resources may be assessed using impact significance criteria from federal, State, and local regulations. CEQA, Chapter 1, Section 21001 (c) states that it is the policy of the State of California to "prevent the elimination of fish and wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities." Environmental impacts relative to biological resources may be assessed using impact significance criteria encompassing *CEQA Guidelines* and federal, State and local plans, regulations, and ordinances.

The impact analysis is based on available literature regarding the existing biological resources within Pismo Beach and the SOI. Data used for this analysis are summarized in the Section 4.3.1.

b. Significance Thresholds

The following thresholds are based on Appendix G of the *CEQA Guidelines*. Impacts would be significant if the adoption and implementation of the GP/LCP Update would result in any of the following:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS

2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS
3. Have a substantial adverse effect on State or federally protected wetlands (including but not limited to, marsh vernal pool, coastal, etc.) through direct removal, filling, or hydrological interruption, or other means
4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan

The following section presents an analysis of the potential for impacts to sensitive biological resources from the adoption and implementation of the GP/LCP Update.

c. Project Impacts and Mitigation Measures

The following section presents an analysis of the potential for impacts to sensitive biological resources from the adoption and implementation of the GP/LCP Update.

Threshold 1:	Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS?
Threshold 2:	Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS?

Impact BIO-1 NEW DEVELOPMENT FACILITATED BY THE GP/LCP UPDATE COULD RESULT IN ISOLATED IMPACTS TO HABITAT FOR SPECIAL-STATUS SPECIES AND IMPACTS TO MIGRATORY BIRD NEST SITES. WITH COMPLIANCE WITH EXISTING REGULATIONS, AND IMPLEMENTATION OF GP/LCP UPDATE POLICIES, IMPACTS WITH COMPLIANCE WITH EXISTING REGULATIONS, AND IMPLEMENTATION OF GP/LCP UPDATE POLICIES WOULD BE LESS THAN SIGNIFICANT.

As indicated above under Section 4.3.1, *Setting*, the majority of the City is developed and does not provide habitat for special-status species reported or known to occur in or near Pismo Beach. Areas that may provide habitat for special-status species are primarily located in the open space and undeveloped hillside in the SOI immediately to the south of Price Canyon Road as well as the marsh and wetlands habitat adjacent to Pismo Creek Estuary and Pismo Lake in the southwestern part of the City.

State and/or federally listed animal species with the potential to occur as year-round residents in the City include western snowy plover, California red-legged frog, steelhead (south-central California coast DPS), and tidewater goby. Several additional listed species of birds, including tri-colored blackbird, California least tern and California black rail are known to have local breeding populations adjacent to the City and SOI or have been reported wintering or migrating through the City. The non-listed fully protected species, white tailed kite, is known to occur in the foothills

adjacent to the City and therefore may occur within the City's SOI or surrounding area. Other native birds are also known to nest in the planning area, including species protected by the Migratory Bird Treaty Act as well as native birds whose nests are protected by California Fish and Game Code. Several non-listed species of special concern are also known or have potential to occur in Pismo Beach, including Northern California legless lizard, coast horned lizard, western pond turtle, Townsend's big-eared bat, and American badger. Suitable habitat for special status wildlife is primarily associated with areas identified as ESHA within current City limits, and with native vegetation communities in the surrounding area.

State and/or federally listed plant species known or with the potential to occur Pismo Beach include marsh sandwort, surf thistle, Pismo clarkia, and beach spectacle pod. Potentially suitable habitat in the surrounding area is also present for La Graciosa thistle, Indian knob mountainbalm, Nipomo Mesa lupine, and Gambel's water cress, as well as numerous additional non-listed special status plants. Suitable habitat for special-status plants is primarily associated with ESHA within the existing City limits, and within native vegetation communities in the surrounding area.

The goals, policies, and implementation actions of the GP/LCP Update allow for growth and redevelopment within the existing City limits of Pismo Beach. Future development within the SOI is not included within the buildout assumptions of the GP/LCP Update. More specifically, the GP/LCP Update would facilitate development of up to 1,111 new residential units and 783,268 square feet of non-residential building area within the Pismo Beach City limits. The GP/LCP Update would focus on infill development and redevelopment within the existing City limits. These areas are currently developed with residential and non-residential uses and do not provide habitat suitable for the aforementioned special-status species. The GP/LCP Update designates the undeveloped marsh and wetlands at the southern boundary of the City as well as the chaparral dominated area at the northwestern extent of the City as Open Space. This land use designation would prevent substantial development of the habitat that these sensitive communities provide.

The GP/LCP Update does not include changes to existing Open Space land use designations, including along creeks, waterways, and wetlands in the City. Therefore, the GP/LCP would not facilitate permanent development in riparian vegetation along these creeks. Because the development facilitated by the GP/LCP Update would occur as redevelopment and infill within developed areas of the City, existing roads, water, and sewer are already in place and would minimize the need for construction of new utilities and infrastructure. However, the GP/LCP Update increases the allowable density that could be constructed on some infill and redevelopment sites within the City, which could require upgraded utilities. The construction of these upgraded facilities could require work within riparian vegetation along creeks and waterways in the City, resulting in potential temporary riparian and aquatic habitat impacts. These habitats could support several special-status species, such as tidewater goby or California red-legged frog. Additionally, development facilitated by the GP/LCP Update could impact isolated trees and pockets of vegetation in the urbanized areas of Pismo Beach. These trees and isolated pockets could provide habitat for special-status species, including migratory nesting birds.

The development facilitated under the GP/LCP Update would be subject to the provisions of the various federal and State natural resources regulations and their respective permitting processes. Additionally, the GP/LCP Update contains goals, policies, and actions that call for the preservation and protection of natural resources and the managed production of natural resources. These goals, policies and actions, listed below, would reduce impacts to special-status species and their habitats.

Land Use and Community Design Element

- **Policy LU-1.4. Non-Polluting Industrial Uses.** The Industrial land use designations shall permit nonpolluting, warehousing, distribution, assembly and light manufacturing uses.
  - **Action LU-1.4a. Pismo Creek and Pismo Marsh Impacts**.Industrial development shall not adversely impact the sensitive habitats of Pismo Creek or Pismo Marsh.
- **Policy LU-1.6: Preserve Open Space.** Open space lands, including public and private parks, shall not be developed intensively with buildings or other structures.
  - **Action LU-1.6c: Citywide Open Space Network.** The City shall include the lake, creeks, and marsh as part of a Citywide and regional network of open space, parks, and – where appropriate – trails, all fostering understanding, enjoyment, and protection of the natural landscape and wildlife.
  - **Action LU-1.6d: Permanent Open Space.** The area between Shell Beach Road and the 101 Freeway shall remain in permanent open space. No further land divisions shall be approved in this area.
  - **Action LU-1.6f: Freeway Underpass Open Space.** The open hills on the eastern end of the Spyglass underpass of Highway 101 shall remain in permanent open space.
  - **Action LU-2.2d: Special Tree Preservation.** A number of special and important trees or tree grouping exist within Pismo Beach which shall be preserved. The types of trees that shall be preserved include oak trees.

Goal LU-8: A community that protects and enhances natural and coastal resources within Pismo Beach.

- **Policy LU-8.1: Natural Resources Compatibility.** Require all land use proposals to respect, preserve and enhance, to the maximum extent feasible, the sensitive habitats, natural landforms, scenic resources, and other coastal resources of Pismo Beach. Development shall only be authorized when the proposed use is allowed per the applicable land use designation, and when it meets all applicable GP/LCP policies and standards.
  - **Action LU-8.1a: Identify and Map Natural Resources.** The City shall prepare and maintain geographic information systems-based maps of the City, identifying the natural resources such as wildlife habitats and open space, viewsheds, terrain, and hillsides. The natural resource map shall also show development constraints such as flood hazard areas, geological hazard areas, soil hazard areas (subsidence, liquefaction), and Very High Fire Hazard Severity Zones. The maps shall provide the basis of determining where urban development is most appropriate, and where other needs of the community, or requirements to protect coastal resources, outweigh the desire or need for urban development. As a result of the findings of these maps, the City shall re-evaluate its land use designations and future plans for undeveloped areas and revise the Land Use Map accordingly. Any revisions to the land use designations or Land Use Map shall require a GP/LCP amendment certified by the CCC.
  - **Action LU-8.1b: Coastal Resources.** New development and improvements to existing development shall be sited and designed to avoid adverse impacts on coastal resources, including environmentally sensitive habitat areas, wetlands, and other areas of the City of biological or natural significance. Development shall be consistent with the resource protection policies of the GP/LCP, including the Conservation and Open Space Element.

- **Action LU-8.1~~c~~d: Reduce Adjacent Density.** Prohibit land divisions within~~, or immediately adjacent to,~~ environmentally sensitive habitat. Discourage development immediately adjacent to environmentally sensitive areas to keep development intensity as low as possible. ~~immediately adjacent to the sensitive habitat~~.

Conservation and Open Space Element

Goal COS-3. A community that provides and protects a variety of conservation areas such as the ocean and beaches, bluffs, dunes, foothills, marshes, creeks, and wetlands that act as suitable coastal and inland habitat, migratory corridors, and ecologically valuable topography.

- **Policy COS-3.1 – Conserve Marine Resources.** The Pacific Ocean and shoreline provide a plethora of valuable habitat and resources for marine mammals, fish, plant life, and other wildlife. Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will (1) sustain the biological productivity of coastal waters, (2) help ensure the continuation of a healthy, self-renewing marine ecosystem, and (3) help ensure the long-term survival of healthy populations of marine plants and animals. To ensure conservation of these resources, the City shall restrict the allowed activities within or in proximity to the Pacific Ocean.
  - **Action COS-3.1a: Marine Mammal Habitat.** Prohibit Marine Mammal habitats from being altered or disturbed by development of recreational facilities or any other new land uses.
  - **Action COS-3.1b: Northern Rocky Beach Areas.** In order to preserve the habitat, the clifftops, eroding bluffs, caves, and sandy pocket beaches provided in the northern rocky beach areas, the City shall restrict recreational public access along the eroding bluffs to maintain bluff stability and provide habitat free of human disturbance.
  - **Action COS-3.1c: Intertidal Zone.** The intertidal zone is a valuable recreational resource area for beach-going, fishing, bird watching and jogging. The City shall seek balance between the recreational uses of the intertidal zone and the preservation of the natural resources in the intertidal zone. In order to preserve and enhance intertidal habitat, the City shall:
    1. Maintain and enhance areas of rocky intertidal habitat that provide multiple ecological benefits while also reducing wave energy and erosion at the bluff toe, which are threatened by habitat loss due to sea level rise and coastal squeeze. These areas shall have restricted public access to preserve habitat value.
    2. Analyze the effects on intertidal habitat when considering coastal erosion measures such as shoreline protective devices.
    3. Prohibit machinery at any time to the extent feasible in the intertidal zone.
  - **Action COS-3.1d: Clam Beds.** The clam bed preserves within the City of Pismo Beach shall be protected.
  - **Action COS-3.1e: Fish Habitat.** Nearshore shallow fish habitats and shore fishing shall be preserved, and where appropriate and feasible, restored or enhanced.
  - **Action COS-3.1f: Subtidal Zone.** Although the subtidal zone is beyond the City's jurisdiction, the City has an indirect responsibility for activities that affect the natural resources of the zone. Considering the subtidal zone provides habitat for protected wildlife and marine mammals, the City shall:

1. Prevent and capture land sources of trash before they enter the ocean within the City's jurisdiction.
2. Develop the most effective ways of restoring and protecting listed rare and endangered species such as eelgrass, black abalone, and sea turtles.
3. Discourage offshore federal leasing of offshore land for the purpose of oil drilling operations that would thus jeopardize inhabitants of the lower subtidal zone through accidental oil spills.

- **Action COS-3.1g: Sand Dunes. Protect sand dunes from adverse impacts due to a proposed development project and provide appropriate habitat buffers.**
- **Action COS-3.1h: Maintain Beach Resources and Shoreline as Open Space.** The ocean shore is, and shall continue to be, the principle open space feature of Pismo Beach. Ocean front land shall be used for open space, recreation and related uses where feasible and where such uses do not deteriorate the natural resource. Reserve sandy beach areas for low intensity recreational activities that do not require intensive development. Any permitted structures shall be the alternative with the least impact on coastal resources and recreation, the minimum size necessary, and shall provide any necessary mitigation. Recreational uses that can be accommodated elsewhere shall be discouraged on the sandy beach (i.e., sport courts and similar facilities permanently displacing sandy beach). Non-sandy beach dependent active recreational activities shall be discouraged and accommodated elsewhere.
- **Action COS-3.1j: Beach Grooming.** "Beach wrack," or the mounds of seaweed and other organic material that washes ashore, is an important nutrient source for the beach ecosystem, contributes to the establishment of coastal strand and dune habitat, and provides a micro-habitat for a variety of organisms, including California grunion, as well as the western snowy plover and California least tern. Discourage beach grooming, or the removal of beach wrack in order to maintain species richness, abundance, and diversity and encourage healthy beach ecosystems.

- **Policy COS-3.2 Environmentally Sensitive Habitat Area (ESHA).** Environmentally sensitive habitat areas (ESHA) shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. Limited public access improvements, minor educational interpretive and research activities, and restoration may be considered resource-dependent uses. Development in areas adjacent to ESHA and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.
  - **Action COS-3.2a: Definition of ESHA.** Environmentally Sensitive Habitat Area (ESHA) shall be defined as any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments. An area shall be considered ESHA if it fits this Coastal Act definition, and likely includes portions of Pismo State Beach, Pismo ~~Marsh~~ Lake, Price Canyon, Pismo Creek, Pismo Preserve, Meadow Creek, ~~the Oceano Dunes~~ dunes habitat of the Pismo State Beach, and the Monarch Butterfly Grove.
  - **Action COS-3.2b: ESHA Assessment.** Applications for development within or near ESHA, including wetlands and streams, shall be accompanied by a site-specific habitat assessment

prepared by a qualified biologist and a botanical survey by a qualified expert prepared at the owner's expense, prior to consideration of a project within the City.

- **Action COS-3.2c:** The habitat assessment and botanical survey shall, at a minimum, identify and confirm the extent of the ESHA, document any site constraints and the presence of sensitive species, recommend buffers and development setbacks and standards to protect the ESHA, recommend mitigation measures to address any allowable impacts, and include any other information and analyses necessary to understand potential ESHA impacts, including cumulative impacts, as well as measures necessary to protect the ESHA resource as required by the GP/LCP. The habitat assessment shall also include an analysis of available literature and biological databases, to determine if any sensitive biological resources have been reported as historically occurring in the proposed development project vicinity. At a minimum, the California Department of Fish and Wildlife's Natural Diversity Database (CNDDB) must be used to determine if the site of the proposed project is known to support or has the potential to support sensitive habitat, vegetation communities, plants, and/or animals**.**
- **Action COS-3.2~~c~~d: ESHA Buffers.** Development adjacent to ESHAs shall minimize impacts to habitat values or sensitive species to the maximum extent feasible. Native vegetation buffer areas shall be provided around ESHAs to serve as transitional habitat (not fuel modification zones) and provide distance and physical barriers to human intrusion. Buffers shall be of a sufficient size to ensure the biological integrity and preservation of the ESHA they are designed to protect. All buffers around (non-wetland) ESHA shall be a minimum of 100 feet in width. A smaller width may be approved by the Planning Division and the Fire Department in consultation with the CDFW, USFWS, and CCC when conditions of the site as demonstrated in a site specific biological survey, the nature of the proposed development, etc. show that a smaller buffer would provide adequate protection. In such cases, the CDFW must be consulted that a reduced buffer is appropriate and the City, or CCC, must find that the development could not be feasibly constructed without a reduced buffer. ~~However, in no case shall the buffer be less than 50 feet, excluding fuel modification zones~~. Fuel modification zones shall occur outside, not within, ESHA buffers.
- **Action COS-3.2~~d~~e: Existing Development Within ESHA Buffers.** Existing development that was legally permitted and constructed prior to certification of this policy that is located in the required buffers identified in Action 3.2d, ESHA Buffers, is allowed to be maintained or remodeled so long as the remodel or maintenance is not considered a substantial redevelopment, at which point the entire development must conform with all applicable ESHA policies and standards, and the existing development does not increase the encroachment into the required setback/buffer from the ESHA. Any expansion or addition to existing development shall not increase the nonconformity and conform to the required setback.
- **Action COS-3.2~~e~~d: ESHA Dedication.** In conjunction with new development, require that all preserved ESHA, buffers, and all mitigation areas, on site and off site, be conserved/dedicated (e.g., open space direct dedication, offer to dedicate [OTD], conservation easement, or deed restriction), in such a manner as to ensure that the land is conserved in perpetuity, if those preserved lands total one acre or more. A management plan and funding shall be required to ensure appropriate management of the habitat area in perpetuity. The City shall maintain an inventory of open space dedications or OTDs to ensure such areas are known to the public and are protected through the coastal

development permit process. Require all direct open space dedications or OTDs to be made to a public agency or other appropriate entity that will manage the open space area on behalf of the public.

- **Action COS-3.2~~f~~g: ESHA Mitigation.** For allowable resource-dependent development in ESHA that cannot avoid ESHA through siting and design alternatives, habitat creation and/or substantial restoration shall be required. Priority shall be given to on-site mitigation. Off-site mitigation measures shall only be approved when it is not feasible to fully mitigate impacts on site. Mitigation shall not substitute for implementation of a project alternative that would avoid impacts to ESHA. Sea level rise should be incorporated into the planning of any new coastal habitat restoration, creation, or enhancement projects.
- **Action COS-3.2h:** Apply the following mitigation ratios for allowable impacts to upland vegetation: 4:1 for wetlands; 3:1 for riparian habitats; 3:1 for other habitats that support state or federal rare, threatened, or endangered species, species of special concern or California Rare Plant Society (CNPS) 1b or 2 listed plants; 2:1 for coastal sage scrub not occupied by listed species. The ratios represent the acreage of the area to be restored/created to the acreage impacted.
- **Action COS-3.2g~~i~~: Habitat Mitigation Plan and Monitoring Plan.** Development that would result in impacts to ESHA or significant biological resources shall include a Mitigation Plan and a Mitigation Monitoring Plan as a filing requirement for a Coastal Development Permit application. Mitigation Monitoring Plans shall be for a minimum of 5 years of monitoring to ensure success criteria is met.
- **Action COS-3.2~~h~~j: Monarch Butterfly Habitat Protection.** The City shall cooperate with the California Department of Parks and Recreation to preserve and enhance the monarch butterfly habitat against significant disruption of habitat values and only uses or development dependent on and compatible with maintaining such resources shall be allowed within the habitat area and its buffer areas. Specific actions shall include but not be limited to:
  a) No development, except as otherwise allowed by this policy shall be allowed within monarch butterfly habitat or habitat buffer,
  b) If any tree is removed or lost due to disease or threat to life or property, it shall be replaced with appropriate species.
  c) Development within the park adjacent to the butterfly habitat shall have a minimum setback of 50 feet from the area of development/impact to the habitat.
  d) The City shall pursue, with Grover Beach and the Union Pacific Railroad, mutual regulations to preserve the groves on the east side of Dolliver Street that supplement and support the habitat.
  e) The City should request the California Department of Parks and Recreation to place appropriate signing and develop adequate visitor parking and restrooms for the Monarch Butterfly ~~Reserve~~ Grove. Public trails and access ways are considered resource-dependent uses and may be located within a monarch habitat area or its buffer; however, such features shall be sited to avoid or minimize impacts to the habitat. Interpretive signage is allowed within a monarch habitat area or its buffer, but it shall be designed to be visually unobtrusive.

- **Policy COS-3.3: Oak Tree Protection.** Native species of oak (e.g., *Quercus agrifolia, Quercus chrysolepis*) should be preserved within the City of Pismo Beach, both as an aesthetic resource benefiting the entire community and for their ecological value.
  - **Action COS-3.3a:** Oak Tree Protection Requirements and Mitigation. The City shall require the protection of oak trees when considering discretionary planning permits and see implementing ordinance for accompanying standards and guidelines for protection of oak trees. Adverse impacts to and or removal of mature native trees for new development in a highly developed area shall be fully mitigated.
- **Policy COS-3.4: Nesting and Foraging Habitat.** The City shall ensure the protection of bird nesting habitat protected by the Migratory Bird Treaty Act and the long-term protection of breeding, roosting, and nesting habitat of bird species listed pursuant to the federal or California Endangered Species Acts, California bird species of special concern, and wading birds (such as herons or egrets) as well as owls or raptors.
  - **Action COS-3.4a: Trimming and Removal of Trees.** The City shall ensure that the trimming and/or removal of any trees that have been used for breeding and nesting by the above identified species within the past five (5) years, as determined by a qualified biologist or ornithologist shall be undertaken in compliance with all applicable codes and regulations of the California Department of Fish and Game, the U.S. Fish and Wildlife Service and the U.S. Migratory Bird Treaty Act, and shall be conducted under the parameters of a Tree Maintenance Program which shall be prepared and included as part of the GP/LCP's Implementation Plan.
  - **Action COS-3.4b: Construction Near Nesting and Foraging Habitat.** The City shall amend the Municipal code to include standards related to construction noise adjacent to nesting and foraging habitat.
  - **Action COS-3.4c: Tree Trimming and Removal.** The City shall prepare Tree Maintenance Procedures for the trimming and/or removal of trees that directs when tree trimming or removal may occur and ensures that trees which provide habitat for sensitive bird species are preserved to the extent feasible.
- **Policy COS-3.6: Riparian Habitat and Natural Drainage Protection.** Protect riparian and natural drainage areas as these resources support a variety of species and are unique features in Pismo Beach.
  - **Action COS-3.6a: Water supply and flood control.** Channelization, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to:
    a) necessary water supply projects,
    b) flood control projects were no other method for protecting existing structures in the flood plain is feasible and where such protection is necessary for public safety or to protect existing development, or
    c) developments where the primary function is the improvement of fish and wildlife habitat.
  - **Action COS-3.6b:** Riparian Corridors. Development adjacent to streams or riparian corridors shall avoid removal of native vegetation; prevent erosion, sedimentation and runoff; provide for sufficient passage of native and anadromous fish; prevent wastewater

discharges and entrapment; prevent groundwater depletion or substantial interference with surface and subsurface flows; and protect and re-establish natural vegetation buffers.

- **Action COS-3.6c: Drainage Channels.** Drainage channels shall remain in a natural open space state with minimal or no use of concrete channels. Dredging, filling and grading within stream corridors shall be limited to activities necessary for flood control purposes, bridge construction, water supply projects, or laying of pipelines when no alternative route is feasible. Revegetation and restoration of the natural setting shall be required. Alteration of existing drainage patterns shall be prohibited unless special studies prove that the proposed alteration will not cause any adverse impacts down- stream or to other aspects of the environment. Prior to approval of any new development, a detailed analysis of surface water runoff patterns shall be undertaken to determine storm drain needs and identify mitigations for any with possible adverse environmental impacts. No runoff that will negatively affect the Pismo ~~Marsh~~ Lake shall be permitted.

- **Policy COS-3.7: Pismo Creek.** Pismo Creek shall be retained in its natural state and protected from significant alterations.
  - **Action COS-3.7a: Streamside Protection Zone.** There shall be a minimum streamside protection zone to conserve the environmentally sensitive habitats of the creek. This buffer zone shall be measured from the outer edge of the riparian vegetation or, where there is no riparian vegetation, from the top of the creek bank. The minimum width of the buffer shall be as follows:

West Bank	100 feet/Cypress northward to City limits
	25 feet/Cypress to the ocean
East Bank	100 feet/U.S. 101 northward to City limits
	50 feet/U.S. 101 to Dolliver Street
	25 feet/Dolliver to the ocean

    A lesser buffer may be permitted if: 1) the minimum widths set forth above would render a parcel inaccessible or unusable for the purpose designated in the land-use plan; or 2) there is a showing by an applicant through the resource assessment study identified in item "h" that a lesser buffer will not result in loss of, or adverse effects on, streamside vegetation or the biotic quality of the stream. Alternative mitigations shall be required where lesser buffers are authorized. No new construction or vegetation removal, except for normal maintenance, shall be allowed in the buffer zone with the exception of public roadways or bridges identified in the Circulation Element, paths, trails, fences, flood control structures, and other similar structures deemed not to adversely affect the creek.

  - **Action COS-3.7b: Pismo Creek Regulations.** New development proposed adjacent to Pismo Creek shall comply with the ESHA and/or wetland policies of this GP/LCP.
  - **Action COS-3.7c: Open Space.** The sandpit and channel where Pismo Creek enters the ocean and those portions of parcels located within the creek channel shall remain as open space and no structures or fill shall be permitted thereon.
  - **Action COS-3.7d: Conservation Dedication.** Any new development shall be required to dedicate as a condition of any discretionary approval, an easement for the protection of the streamside buffer area. In addition, new development shall provide access amenities adjacent to the creek for the City to use as a greenbelt and/or recreation corridor.

- **Action COS-3.7e: Financial Support.** The City shall seek and secure funding to complete restoration projects to the Pismo Creek defined in the Pismo Creek/Edna Area Watershed Management Plan.
- **Action COS-3.7f: Riparian Woodland. T**he City should protect and enhance the riparian woodland along Pismo Creek for the purpose of improving the scenic quality as well as its ecological value.

- ~~**Action** **Policy COS-3.8~~7~~l**~~: **Resource Protection Plan**. A Resource Assessment and Protection Plan shall be required and approved concurrent with City action on projects located on parcels which have a portion within the streamside protection zone. The plan shall include appropriate measures to protect the creeks biological and visual aspects.
- **Policy COS-3.9: Pismo ~~Marsh~~ Lake Protection.** Pismo ~~Marsh~~ Lake shall be retained in its natural state and protected from significant alteration.
- **Policy COS-3.10: Foothills.** The coastal and upland foothills of Pismo Beach, located in the Freeway Foothills, Pismo Oaks, and Pismo Heights planning areas, shall be conserved and enhanced to provide valuable recreational and habitat resources.

These goals and policies and the associated implementation to limit habitat loss, maintain habitat integrity and connectivity, and protect special status species would minimize, and often avoid, impacts from potential direct and indirect effects to special status species and sensitive habitats. Additionally, all development under the GP/LCP Update would be subject to the provisions of the various federal and State natural resources regulations (discussed in subsection 4.3.1(f), Regulatory Setting) and their respective permitting processes.

Policy COS-3.2, and the associated actions would require site-specific habitat and biological resources assessments to be prepared by a qualified biologist for development within or near the boundary of a defined ESHA. This policy includes specific language that would address avoidance, minimization, and mitigation of effects to special-status species and provides mitigation ratios for allowable impacts to wetlands, riparian habitats, or other habitats that support State or federally listed species, CDFW species of special concern, or CNPS listed plants. The requirement of biological surveys and compensatory mitigation for impacts would ensure that potential special-status species that could be impacted by future development would be identified and potential impacts would be reduced or avoided. Therefore, implementation of these policies and actions would avoid potential direct impacts to sensitive species identified in Appendix D.

While the policies above would prevent impacts to large tracts of open space that provides habitat for special status species, as with most urbanized environments, landscape features within the urbanized areas of the City, such as trees, shrubs, herbaceous plants, and parklands, could serve as temporary habitats for nesting migratory birds. Migratory bird species may use areas of the City for nesting during the breeding season and are protected under the MBTA. Construction-related activities such as building demolition and/or relocation, grading, materials laydown, access, and infrastructure improvements, and building construction, could result in the disturbance of nesting migratory birds. The most identifiable potential direct impact to migratory species would involve the removal of vegetation, particularly trees and landscaping shrubs that may serve as perching or nesting sites for migratory birds.

Chapter 12.12 of the Pismo Beach Municipal Code outlines a comprehensive plan for the planting and maintenance of trees in, on, or within the public right-of-way, provides rules and regulations for the planting, care and maintenance of such trees, and defines landmark and specimen trees. This

chapter was developed to limit the removal or significant trees within Pismo Beach and retain as many trees as possible. Impacts related to the removal of vegetation not covered under the ordinance could have adverse effects on nesting migratory species. However, GP/LCP Update Policy COS-3.4 would require that the City protect breeding, roosting and nesting bird habitat. Action COS-3.4a would ensure that any trimming or removal of trees used for breeding or nesting within the last five years, as determined by a qualified biologist, would be undertaken in with all applicable codes and regulations of CDFW, the USFWS and the MBTA, and shall be conducted under the parameters of a Tree Maintenance Program. Action COS-3.4~~b~~c would amend the Pismo Beach Municipal code to include standards related to limiting construction noise adjacent to nesting and foraging habitat. Action COS-3.4~~c~~d would require the City to prepare Tree Maintenance Procedures for the trimming or removal of trees that such that trees which provide habitat for sensitive bird species are preserved to the extent feasible. These policies and actions protect active nest sites from disruption during construction of development facilitated by the GP/LCP Update. Therefore, impacts to special-status species and their habitats would be less than significant.

Mitigation Measures

No mitigation measures are required.

Threshold 2:	Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by CDFW or USFWS?
Threshold 3:	Would the project have a substantial adverse effect on state or federally protected wetlands (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Impact BIO-2 THE GP/LCP UPDATE WOULD FACILITATE DEVELOPMENT THAT COULD RESULT IN CONSTRUCTION WITHIN RIPARIAN HABITAT, AND DIRECT PLACEMENT OF FILL IN WETLANDS. HOWEVER, WITH COMPLIANCE WITH EXISTING REGULATIONS, AND IMPLEMENTATION OF GP/LCP UPDATE POLICIES POTENTIAL IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Sensitive natural communities in the City and its immediately surroundings include central maritime chaparral, central dune scrub, central foredunes, and coastal and valley freshwater marsh. These sensitive natural communities, as mapped by CDFW (2021a), are located within the City boundary in the Pismo Marsh Conservation Area, and outside of the City to the south in the Oceano Dunes State Vehicular Recreation Area and in the hills north of the City. The Pismo Marsh area is designated as Open Space in the GP/LCP Update. This land use designation would prevent substantial development of the habitat that these sensitive communities provide. The GP/LCP Update does not include changes to the Open Space land use designations and includes several policies providing for the protection of ESHAs which includes these sensitive natural communities. Therefore, the GP/LCP Update would not facilitate permanent development within the sensitive natural communities designated by CDFW.

Wetlands in the City include estuarine and marine wetlands, estuarine and marine deepwater, freshwater emergent wetlands, freshwater forested/shrub wetlands, riverine, and freshwater ponds. Pismo Creek and Meadow Creek are major streams in the City, and the Pismo Marsh and estuary are important coastal aquatic habitats. The Pacific Ocean occurs along the southwestern edge of the City. Known wetlands, riparian areas, salt marsh, estuary, shallow bay and other aquatic resources within current city limits are designated as ESHA, and policies in the GP/LCP Update

outline conservation and setbacks from aquatic resource ESHAs, and prescribe mitigation for situations in which impacts are unavoidable.

The GP/LCP Update would facilitate infill development within existing urbanized areas of the City. Because these areas are urbanized and currently developed, they are unlikely to contain jurisdictional wetlands or other surface waters and associated riparian vegetation zones. However, the infill development facilitated by the GP/LCP Update would increase density in some areas, which could require upgraded utilities or stormwater drainage. The construction of these upgraded facilities could require work, including dredge or fill, within jurisdictional wetlands and streams and could require ground disturbance in riparian habitat associated with these wetlands and streams. Detailed wetland delineations would be needed to determine the extent of any jurisdictional wetlands and other waters at specific locations and each agency is responsible for making a final determination on the extent of jurisdictional waters for a particular site.

The extent of jurisdictional waters, as well as project specific details and plans would be necessary to determine the acres of wetlands and stream channels that could be impacts from development facilitated by the GP/LCP Update. Wetlands and waterways may be subject to USACE, RWQCB and/or CDFW jurisdiction(s), as well as subject to the Clean Water Act. However, Compliance with the requirements of the Clean Water Act, Porter-Cologne, and California Fish and Game Code would be required for any project proposed under the GP/LCP Update. In addition, the following goals, policies, and actions from the Conservation and Open Space Element of the GP/LCP Update listed below and Policies COS-3.1 through COS-3.4, and Policies COS-3.6 through COS-3.10 listed above, would reduce impacts to wetlands and riparian habitat through preservation and enhancement of these habitats.

Conservation and Open Space Element

- **Policy COS-3.5: Wetland Protection.** The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with the other applicable policies of the GP/LCP, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:
  a. New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.
  b. Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.
  c. In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.
  d. Incidental public service purposes including, but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines;
  e. Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.
  f. Restoration purposes; and
  g. Nature study, aquaculture, or similar resource-dependent activities.

  - **Action COS-3.5a: Definition of Wetlands.** Wetlands shall include lands within the coastal zone which may be covered periodically or permanently with shallow water and include

saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens. Wetlands, as detailed by Section 13577 (b)(l) of Title 14 of the California Code of Regulations, also include land where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent and drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salts or other substances in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some time during each year and their location within, or adjacent to vegetated wetlands or deep-water habitats. Any areas that meet the above wetlands criteria are deemed wetlands and shall be accorded all of the protections provided for wetlands in the GP/LCP. An area shall be considered a wetland if it fits these Coastal Act and California Public Resources Code definitions, regardless of its quality; poorly functioning or degraded wetlands are afforded the same protection under the Coastal Act.

- **Action COS-3.5b: Wetland Protection.** Any area determined to have previously been wetland shall not be deprived of protection, as required by the policies and provisions of the GP/LCP, on the basis that habitat has been illegally removed, filled, degraded, or that species of concern have been illegally eliminated.
- **Action COS-3.5c: Biological Study/Wetland Delineation.** Where a project site has the potential for wetlands to be present, the City shall require the submittal of a detailed biological study of the site, prepared by a qualified biologist, including a formal wetland delineation of all wetland areas on the project site. Wetland delineations shall be conducted according to the protocols developed by the Army Corp of Engineers. Wetland delineations involve surveying for three parameters; hydrology, hydric soils, and hydrophytic plants. This policy incorporates the Coastal Commission's one parameter definition for wetlands. That is, if a wetland delineation study finds evidence of hydric soils, or hydrophytic vegetation, or hydrology in the form of areas lacking hydric soils and hydrophytic vegetation as a result of frequent and drastic fluctuation of surface water levels, wave action, water flow, turbidity or high concentrations of salts or other substances in the substrate, then the area meets the definition of a Coastal Commission wetland. ~~The delineation report shall include at a minimum a map at a scale of 1":200' or larger with polygons delineating all wetland areas, polygons delineating all areas of vegetation with a preponderance of wetland indicator species, and the location of sampling points. The report should also include a description of the surface indicators used for delineating the wetland polygons. Wetland polygons shall be based on paired sample points that indicate inside vs. outside wetland boundaries~~.
- **Action COS-3.5d: Wetland Buffers.** Buffer areas shall be provided around wetlands to serve as transitional habitat and provide distance and physical barriers to human intrusion. Buffers shall be of a sufficient size to ensure the biological integrity and preservation of the wetland they are designed to protect. All wetland buffers shall be a minimum of 100-feet in width. A wetland buffer may be reduced only where it can be demonstrated that (1) the required buffer width is not possible due to site-specific constraints, and (2) the proposed narrower buffer would be sufficiently protective of the biological integrity of the wetland to avoid significant adverse impacts to the wetland given the site-specific characteristics of the resource, and the type and intensity of disturbance. In such cases, the CDFW must be consulted and agree that a reduced buffer is appropriate and the City must find that the development could not be feasibly constructed without a reduced buffer.

- **Action COS-3.5e: Existing Development Within Wetlands Buffers.** Existing development that was legally permitted and constructed prior to certification of this policy that is located within the required buffers identified in Action 3.2d, Existing Development Within ESHA Buffers, are allowed to be maintained or remodeled so long as the remodel or maintenance is not considered a substantial redevelopment and the existing development does not increase the encroachment into the required setback/buffer from the wetland. Any expansion or addition to existing development shall not increase the nonconformity and conform to the required setback.
- **Action COS-3.5f: Wetlands Restoration and Monitoring.** All preferred restoration programs should remove fill from a formerly productive wetland or estuary that is now biologically unproductive dry land. Restoration programs should incorporate sea level rise into the planning of any coastal wetland habitat projects. Since restoration projects necessarily involve many uncertainties, restoration should precede the diking or filling project. When a restoration project is mitigation for a new development project, a Restoration and Monitoring Plan shall be included with the CDP application. A Restoration Monitoring Plan shall include a minimum of 5 years monitoring to ensure success criteria are met. The CDP shall be conditioned to require that restoration will occur prior to, or simultaneously with project construction.

The GP/LCP policies and actions listed above would require wetland delineations prior to new development on sites with potential wetlands. Additionally, GP/LCP Update goals, policies, and actions would require preservation of wetland and riparian habitat, compliance with State and federal regulations, and prohibition of specific development near riparian corridors. Therefore, the GP/LCP Update would not result in significant adverse effects on riparian areas and other sensitive natural communities, drainages, wetlands and other aquatic habitats and impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Threshold 4:	Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Impact BIO-3 DEVELOPMENT FACILITATED BY THE GP/LCP COULD RESULT IN CONSTRUCTION WITHIN STREAMS AND ASSOCIATED RIPARIAN ZONES THAT SERVE AS WILDLIFE MOVEMENT CORRIDORS. HOWEVER, WITH IMPLEMENTATION OF GP/LCP UPDATE POLICIES PRESERVING STREAMS, WETLANDS, AND WILDLIFE CORRIDORS, AS WELL AS OPEN SPACE, IMPACTS WOULD BE LESS THAN SIGNIFICANT.

The majority of Pismo Beach is developed and urbanized and does not provide for wildlife movement corridors or native wildlife nursery sites. Wildlife movement corridors in Pismo Beach are present in the Pismo Beach coastal zone and include drainages and other topographic features that facilitate movement, and contiguous areas of natural vegetation, including the coastal dunes and the hills in Pismo Preserve. Perennial streams, wetlands, shallow bays and estuaries, including Pismo Creek and Pismo Marsh, provide potential fish and other aquatic wildlife movement habitat. The GP/LCP Update designates the undeveloped marsh and wetlands at the southern boundary of the City as well as the chaparral dominated area at the northwestern extent of the City as Open Space.

This land use designation would prevent substantial development of the habitat that these sensitive communities provide. The GP/LCP Update does not include changes to existing Open Space land use designations, including along creeks and waterways in the City. Therefore, the GP/LCP Update would not facilitate permanent development within these wildlife movement corridors.

As described above, infill development could require construction of upgraded utilities and infrastructure, which could require temporary work in stream corridors. However, the GP/LCP Update contains Policy COS-3.7, listed above, which requires any new development along Pismo Creek to dedicate conservation easements for the protection of the streamside buffer area. GP/LCP Update Policies COS-3.5 and COS-3.6, listed above, supports restoration of wetlands and streams, which would restore wildlife movement corridors provided by streams following construction activities within these areas. Additionally, Goal COS-3 in the GP/LCP Update Conservation and Open Space Element, listed below, along with the policies listed above under Impacts BIO-1 and BIO-2 would protect conservation areas including migratory corridors.

Goal COS-3: A community that provides and protects a variety of conservation areas such as the ocean and beaches, bluffs, dunes, foothills, marshes, creeks, and wetlands that act as suitable coastal and inland habitat, migratory corridors, and ecologically valuable topography.

Considering that the GP/LCP Update would not facilitate development in open space areas, including stream corridors, and that it contains policies to reduce impacts to stream corridors and protect wildlife movement corridors, native wildlife nursery sites, and open space, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Threshold 5:	Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Impact BIO-4 DEVELOPMENT FACILITATED BY THE GP/ LCP UPDATE MAY RESULT IN THE REMOVAL OF TREES. HOWEVER, THE GP/LCP POLICIES REQUIRE NEW DEVELOPMENT TO COMPLY WITH THE CITY'S TREE ORDINANCE. WITH ADHERENCE TO THE TREE ORDINANCE, AS WELL AS OTHER APPLICABLE CITY CODES, IMPACTS WOULD BE LESS THAN SIGNIFICANT.

The development facilitated by the GP/LCP Update would occur in already developed areas of the City, largely as either infill or redevelopment. However, there are street trees and other trees in these areas that could be removed or substantially pruned for construction of the development facilitated by the GP/LCP Update. Development would be subject to all applicable local policies and regulations related to the protection of important biological resources. Specifically, development under the GP/LCP Update would be required to comply with the Pismo Beach Municipal Code Chapter 12.12 – City Tree Regulations. The ordinance outlines a comprehensive plan for the planting and maintenance of trees in, on, or within the public right-of-way, provides rules and regulations for the planting, care and maintenance of such trees, and defines landmark and specimen trees. The ordinance requires a tree removal application review and approval of a tree removal permit by the Director of Public Works. In addition to requiring tree removal permits, the ordinance also requires measures to protect existing trees during project construction.

Policies and actions in the GP/LCP Update, listed under Impact BIO-1 above, would also minimize impacts to the City's trees. Action LU-2.2~~d~~c, *Special Tree Preservation*, designates several types of

trees that would be preserved including oak trees, Monterey pines, Monterey cypress, eucalyptus, monkey trees, and sycamores. Policy COS-3.3, *Oak Tree Protection*, requires that native species of oak be preserved within the City and requires mitigation for the removal or trimming of these trees.

Additionally, the goals, policies, and actions listed under Impacts BIO-1 and BIO-2 would ensure that buildout in the City under the GP/LCP Update occurs in a manner that supports Zoning Ordinance Chapter 17.16.050, intended to protect and preserve ESHA. Therefore, the GP/LCP Update would not conflict with applicable local policies and regulations, and this impact would be less than significant.

Mitigation Measures

No mitigation measures are required.

Threshold 6:	Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Impact BIO-5 DEVELOPMENT FACILITATED BY THE GP/LCP UPDATE WOULD NOT CONFLICT WITH AN ADOPTED HABITAT CONSERVATION PLAN, NATURAL COMMUNITY CONSERVATION PLAN, OR OTHER APPROVED LOCAL, REGIONAL, OR STATE HABITAT CONSERVATION PLAN. THIS IMPACT WOULD BE LESS THAT SIGNIFICANT.

There are no adopted Habitat Conservation Plans (HCP) or Natural Community Conservation Plans within the City limits (CDFW 2021b; USFWS 2021d). One HCP is proposed and is currently undergoing environmental review for the Oceano Dunes District. This HCP would include the California Department of Parks and Recreation managed Pismo State Beach and Oceano Dunes State Vehicular Recreation Area. The HCP area would overlap with the southern extent of the City in the dunes habitat of the Pismo State Beach and Pismo Lake. Upon approval, the HCP would serve as a comprehensive habitat conservation plan, pursuant to Section (a)(1)(B) of the federal ESA. The primary intent of the HCP is to provide for the conservation of a range of plants and animals and in return, provide take coverage and mitigation for covered projects throughout the Oceano Dunes District to avoid the cost and delays of mitigating biological impacts on a project-by-project basis. It would allow the incidental take (for development purposes) of species and their habitat from development.

The areas covered under the proposed HCP are also designated as Open Space and ESHAs in the GP/LCP Update. The GP/LCP Update does not include changes to the Open Space land use designations and includes several Policies providing for the protection of ESHAs. Therefore, the GP/LCP Update would not facilitate permanent development within the proposed HCP plan area. The proposed GP/LCP Update would not conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

4.3.4 Cumulative Impacts

Biological resources impacts as described above are related to the potential for direct and indirect impacts to sensitive natural communities, special-status species, regulated waterways and wetlands, sensitive habitat and mature native trees, and wildlife movement corridors. Implementation of the land use development patterns under the GP/LCP Update could result in impacts on special-status species, riparian, wetland, or other sensitive natural communities, as well as wildlife movement in the City, and contribute to cumulative impacts to these resources within the greater cumulative impact area (adjacent communities, including San Luis Obispo county). Due to the potential direct and indirect impacts that may occur as a result of the GP/LCP Update, the proposed GP/LCP Update could contribute to this impact.

However, goals and policies in the GP/LCP Update would conserve existing natural resource and limit impacts on special status-species. GP/LCP Update goals and policies set requirements for surveys and actions to be taken if biological resources have potential to be impacted by development under the GP/LCP Update. These goals and policies would reduce impacts to sensitive species and habitats along the bay shore, marsh, and other sensitive habitats of Pismo Beach and ensure that development would not result in reductions in local population size, habitat fragmentation, or lower reproductive success by promoting conservation and preservation of the EHSAs. Furthermore, impacts on biological resources associated with the individual development projects would be less than significant with mitigation incorporated. Therefore, buildout of the GP/LCP Update would have incremental contribution to cumulative impacts associated with biological resources but the impacts to biological resources would not be cumulatively considerable. Cumulative impacts would be less than significant.

4.4 Cultural and Tribal Cultural Resources

The analysis in this section considers potential impacts to archaeological, historic, and tribal cultural resources. This section includes a brief summary of cultural resources background information and a review of known archaeological, built environment historical, and tribal cultural resources as well as potential impacts to these resources as a result of the General Plan/Local Coastal Plan (GP/LCP) Update.

4.4.1 Setting

a. Prehistoric Background

Pismo Beach is located in the Central Coast archaeological region. The Central Coast is defined as extending from south of San Francisco Bay to the northern edge of the Southern California Bight (Jones et al. 2007). The prehistoric cultural chronology for the Central Coast can be generally divided into six periods: Paleo-Indian (ca. 10,000–8,000 B.C.), Millingstone/Early Archaic (8,000- 3,500 B.C.), Early (3,500-600 B.C.), Middle (600 B.C.-A.D. 1000), Middle-Late Transition (A.D. 1000-A.D. 1250), and Late (A.D. 1250-contact [ca. A.D. 1769]). These periods are described below.

Paleo-Indian Period (ca. 10,000–8,000 B.C.)

Recent data from Paleo-Indian sites in Southern California indicate that the economy was a diverse mixture of hunting and gathering, with a major emphasis on aquatic resources in many coastal areas and on Pleistocene lake shores in eastern California. Although few Clovis-like or Folsom-like fluted point arrowheads have been found in Southern California, it is generally considered that the emphasis on hunting may have been greater during the Paleo-Indian period than in later periods (Mills et al. 2005; Jones et al. 2007).

Millingstone/Early Archaic Period (8,000- 3,500 B.C.)

The Millingstone[1] period is characterized by an ecological adaptation to collecting suggested by the appearance and abundance of well-made milling implements. Millingstones occur in large numbers for the first time in the region's archaeological record, and are even more numerous near the end of this period. Aside from millingstones, typical artifacts during this period include crude core and cobblecore tools, flake tools, large side-notched projectile points, and pitted stones (Jones et al. 2007).

Early Period (3,500-600 B.C.)

An extensive series of shoreline midden[2] deposits are within the Central Coast region dating to the Early period, signifying an increase in occupation of the open coast (Jones 1995; Jones and Waugh 1995, 1997). Sites dating to this period are marked by large lithic[3] artifact assemblages, which include Central Coast Stemmed Series and side-notched projectile points. The material culture recovered from Early period sites within the Central Coast region provides evidence for continued exploitation of inland plant and coastal marine resources. Artifacts include milling slabs and handstones, as well as mortars and pestles, which were used for processing a variety of plant

[1] Millingstones are stone tools used for grinding grounds, seeds, plants, or other materials
[2] A midden is a dump site for domestic waste
[3] A lithic artifact is a rock or stone artifact

resources. Bipointed bone gorge hooks were used for fishing. Shell beads and obsidian are hallmarks of the trade and exchange networks of the Central and Southern California coasts. The archaeological record indicates a substantial increase in the abundance of obsidian at Early period sites in the Monterey Bay and San Luis Obispo areas (Jones and Waugh 1997).

Middle Period (600 B.C.-A.D. 1000)

A pronounced trend toward greater adaptation to regional or local resources occurred during the Middle period. For example, the remains of fish, land mammals, and sea mammals are increasingly abundant and diverse in archaeological deposits along the coast. Related chipped stone tools suitable for hunting were more abundant and diversified, and shell fishhooks became part of the toolkit during this period. Larger knives, a variety of flake scrapers, and drill-like implements are common during this period. Projectile points include large side-notched, stemmed, and lanceolate or leafshaped forms. Bone tools, including awls, are more numerous than in the preceding period, and the use of asphaltum adhesive became common. Sites from this period show a retention of stemmed points and the disappearance of the larger side-notched points (Jones and Klar 2007; Jones et al. 2007).

Middle-Late Transition Period (A.D. 1000-A.D. 1250)

The Middle-Late Transition period is marked by relative instability and change, with major changes in diet, settlement patterns, and interregional exchange. The relatively ubiquitous Middle period shell midden sites found along the Central Coast were abandoned by the end of the Middle-Late Transition period, so most Transition period and Late period sites were first occupied during those periods (Jones and Ferneau 2002). One site (Site SLO-239) in the County has been tentatively dated to the Middle-Late Transition period and contains the only residential feature, a circular house floor, dating to this time period (Jones et al. 2007; Mikkelsen et al. 2000).

Late Period (A.D. 1250-contact [ca. A.D. 1769])

Late period sites are marked by small, finely worked projectile points, such as desert side-notched and cottonwood points, as well as temporally diagnostic shell beads. The small projectile points are associated with bow and arrow technology and indicate influence from the Takic migration from the deserts into Southern California. Common artifacts identified at Late period sites include bifacial bead drills, bedrock mortars, hopper mortars, lipped and cupped Olivella shell beads, and steatite[4] disk beads. The presence of beads and bead drills suggest that low-level bead production was widespread throughout the Central Coast region (Jones et al. 2007).

b. Ethnographic Background

The City is within the Chumash ethnographic territory. The Chumash were a diverse Native American population living in settlements along the California coast from Malibu Creek in the south to Estero Bay in the north, and from Tejon Pass, Lake Casitas and the Cuyama River inland to the islands of San Miguel, Santa Rosa, and Santa Cruz. The boundaries for the Chumash territory is currently being debated. The ethnographic territory of the Chumash was placed by Kroeber (1925) a few miles north of what is now San Luis Obispo and extending south to Malibu Canyon. The boundary of the Northern Chumash traditional territory has been contested and, as a result, numerous territorial boundaries have been suggested (Milliken and Johnson 2005). Recent work by

[4] A mineral talc, also known as soapstone.

Milliken and Johnson based on mission records and summarizing previous work proposed the Salinan-Chumash interface to be a few miles south of the Mission San Miguel, between the mission and San Marcos Creek. The Chumash spoke six languages, Obispeño being associated with the Northern Chumash represented in the City.

Groups neighboring the Chumash included the Salinan to the north, the Southern Valley Yokuts and Tataviam to the east, and the Gabrielino (Tongva) to the south. Chumash place names in the project vicinity include Pismu (Pismo Beach), Tematatimi (along Los Berros Creek), and Tilhini (near San Luis Obispo) (Greenwood 1978). Only a general outline of the lifeways of the Obispeño Chumash is known based on the little ethnographic information available (Greenwood 1978).

Although their language was closer to Southern Chumash groups, the material culture and lifeways of the Northern Chumash appear to have been more similar to their northern neighbors, the Salinan. Accordingly, their populations in this area are thought to have been substantially lower than in the Santa Barbara Channel area, their villages smaller, and their livelihood less based on intensive use of marine fisheries (Glassow, Wilcoxen, and Erlandson 1988; Greenwood 1978).

Permanent Chumash villages included hemispherical dwellings arranged in close groups, with the chief having the largest for social obligations (Brown 2001). Each Chumash village had a formal cemetery marked by tall painted poles and often with a defined entrance area (Gamble, Walker, and Russell 2001). Archaeological studies have identified separate sections for elite versus commoner families within the cemetery grounds (King 1969).

The acorn was a dietary staple for the mainland Chumash, though its dominance varied by coastal or inland location. Chumash diet also included cattail roots, fruits and pads from cactus, and bulbs and tubers of plants such as amole (Miller 1988). On the coast, the wooden plank canoe (tomol) was employed in the pursuit of marine mammals and fish. The tomol not only facilitated marine resource procurement but also facilitated an active trade network maintained by frequent crossings between the mainland and the Channel Islands.

Chumash populations were decimated by the effects of European colonization and missionization (Johnson 1987). Traditional lifeways largely gave way to laborer jobs on ranches and farms in the Mexican and early American periods. Today, the Santa Ynez Band of Chumash Indians is the only federally recognized Chumash tribe, though many people of Chumash descent continue to live throughout their traditional territory.

c. Historical Background

Post-European contact history for the State of California is generally divided into three periods: the Spanish period (1769–1822), the Mexican period (1822–1848), and the American period (1848–present). The Juan Rodrigues Cabrillo expedition reached the San Luis Obispo region in 1542, possibly landed in Morro Bay, and sailed as far north as San Francisco Bay. For more than 200 years, other Spanish, Portuguese, British, and Russian explorers sailed the Alta (upper) California coast and made limited inland expeditions, but they did not establish permanent settlements.

Spanish Period (1769–1822)

The earliest detailed descriptions of the area come from members of Gaspar de Portolá's land expedition, which passed through the region in 1769. Early travelers in the Central Coast region reported seeing no large Native American villages like those noted in the Santa Barbara Channel area. Gaspar de Portolá and Franciscan Father Junípero Serra established the first Spanish settlement in Alta California at Mission San Diego de Alcalá in 1769. This was the first of 21 missions

erected by the Spanish between 1769 and 1823. Portolá continued north, passing through the project vicinity and reaching San Francisco Bay in 1769. Mission San Luis Obispo de Tolosa was founded in 1772, the fifth of 21 missions established by the Spanish in Alta California.

Mexican Period (1822–1848)

The Mexican period commenced when news of the success of the Mexican Revolution (1810-1821) against the Spanish crown reached California in 1822. This period was an era of extensive interior land grant development and exploration by American fur trappers west of the Sierra Nevada Mountains. The California missions declined in power and were ultimately secularized in 1834. Governor Pío Pico and his predecessors made more than 600 rancho grants between 1833 and 1846, putting most of the State's lands into private ownership for the first time. The secularization of the missions during the Mexican period resulted in approximately 500,000 acres of former mission lands being granted to Mexican citizens in San Luis Obispo County.

American Period (1848–present)

The American period began with the signing of the Treaty of Guadalupe Hidalgo in 1848, in which the United States agreed to pay Mexico $15 million for the conquered territory, including California, Nevada, Utah, and parts of Colorado, Arizona, New Mexico, and Wyoming. Settlement of Southern California continued to increase during the early American period. Many ranchos in the County were sold or otherwise acquired by Americans, and most were subdivided into agricultural parcels or towns. Rancho San Bernardo was patented to Vincent Canet in 1865, and a patent was issued for Rancho Moro y Cayucos to James McKinley in 1878. The County of San Luis Obispo was founded in 1850. Roads were constructed throughout the County in the 1870s, primarily by Chinese laborers, leading to increased mobility throughout the County. In 1872, Captain John Harford began construction on the Pacific Coast Railway. During the 1920s, numerous housing developments were carved out of ranches and farms. In the early twentieth century Port Harford was renamed Port San Luis and oil from the Santa Maria and Taft-Coalinga fields was shipped beginning in 1907 and 1913, respectively. The California Polytechnic School was established in 1901 as a high school and eventually became California Polytechnic State University (Cal Poly). The County's agriculture and ranching production supplied US troops during World War I and helped its residents weather the Great Depression of the 1930s. At the start of World War II, the US War Department transferred nearly 100,000 military personnel to bases at Morro Bay, Camp San Luis, Camp Roberts, and Cambria.

d. Previously Identified Cultural Resources

Evidence of the culture and occupations by the Chumash may be found at numerous sites in the vicinity of Pismo Beach. In addition, an important archaeological site directly adjacent to Francis Judkins Junior High School, on Lucia Mar School District Property, exists in the Pismo Heights planning area.

There is one officially designated historic building, also considered a point of interest, in Pismo Beach, listed on the National Register of Historic Places (NRHP) and by the State Office of Historic Preservation (SHPO): the John Price House. The Price Historical Park was formed and dedicated to the City and a private non-profit group was established to care for the Price House and grounds. The Price House Park contains many historical components, including the Meherin House and the Ortega-Price Adobes. The Meherin House was home to the daughter of John Price, Mary Anne Price, and her large family. The City maintains an updated classified record of archaeological sites in the

planning area. However, one known archaeological site is located in the Pismo Heights planning area.

4.4.2 Regulatory Setting

Cultural resources, including built environment and archaeological resources, may be designated as historic by National, State, or local authorities. In order for a resource to qualify for listing in the NRHP, the California Register of Historical Resources (CRHR), or as a locally significant resource, it must meet one or more identified criteria of significance. The resource must also retain sufficient historic integrity, defined in National Register Bulletin 15 as the "ability of a property to convey its significance" (National Park Service [NPS] 1990). Explanations of these criteria are included in the regulatory setting discussions that follow.

a. State Regulations

California Register of Historical Resources

The CRHR is a guide to cultural resources that must be considered when a government agency undertakes a discretionary action subject to the California Environmental Quality Act (CEQA). The CRHR helps government agencies identify, evaluate, and protect California's historical resources, and indicates which properties are to be protected from substantial adverse change (PRC Section 5024.1(a)). The CRHR is administered through SHPO that is part of the California State Parks system.

A cultural resource is evaluated under four CRHR criteria to determine its historical significance. A resource must be significant at the local, state, or national level in accordance with one or more of the following criteria set forth in the CEQA Guidelines Section 15064.5(a)(3):

1. It is associated with events that have made a significant contribution to the broad pattern of California's history and cultural heritage;
2. It is associated with the lives of persons important in our past;
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. It has yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting one or more of the above criteria, the CRHR requires that sufficient time must have passed to allow a "scholarly perspective on the events or individuals associated with the resource." Fifty years is used as a general estimate of the time needed to understand the historical importance of a resource according to SHPO publications. The CRHR also requires a resource to possess integrity, which is defined as "the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association." Archaeological resources can sometimes qualify as "historical resources" (CEQA Guidelines Section 15064.5[c][1]).

According to CEQA, all buildings constructed over 50 years ago and that possess architectural or historical significance may be considered potential historical resources. Most resources must meet the 50-year threshold for historic significance. However, resources less than 50 years in age may be eligible for listing on the CRHR if it can be demonstrated that sufficient time has passed to understand their historical importance.

In addition, if a project can be demonstrated to cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC Section 21083.2[a], [b], and [c]).

PRC Section 21083.2(g) defines a unique archaeological resource as an artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information; or
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Impacts to significant cultural resources that affect the characteristics of any resource that qualify it for the NRHP or adversely alter the significance of a resource listed in or eligible for listing in the CRHR are considered a significant effect on the environment. These impacts could result from physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired (CEQA Guidelines Section 15064.5 (b)(1), 2000). Material impairment is defined as demolition or alteration in an adverse manner [of] those characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the CRHR (CEQA Guidelines Section 15064.5[b][2][A]).

Codes Governing Human Remains

CEQA Guidelines Section 15064.5 also assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. The disposition of human remains is governed by Health and Safety Code Section 7050.5 and PRC Sections 5097.94 and 5097.98, and falls within the jurisdiction of the Native American Heritage Commission (NAHC). If human remains are discovered, the County Coroner must be notified within 48 hours and there should be no further disturbance to the site where the remains were found. If the remains are determined by the coroner to be Native American, the coroner is responsible for contacting the NAHC within 24 hours. The NAHC, pursuant to PRC Section 5097.98, will immediately notify those persons it believes to be most likely descended from the deceased Native Americans so they can inspect the burial site and make recommendations for treatment or disposal.

Senate Bill 18

California Government Code Section 65352.3 (adopted pursuant to the requirements of Senate Bill 18 [SB 18]) requires local governments to contact, refer plans to, and consult with tribal organizations prior to making a decision to adopt or amend a general or specific plan. The tribal organizations eligible to consult have traditional lands in a local government's jurisdiction, and are identified, upon request, by the NAHC. As noted in the California Office of Planning and Research's Tribal Consultation Guidelines (2005), "The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places."

Assembly Bill 52

California Assembly Bill 52 of 2014 (AB 52) was enacted in July 2015 and expanded CEQA by defining a new resource category, "tribal cultural resources." Assembly Bill 52 states that "A project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (California Public Resources Code [PRC] Section 21084.2). It further states that the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3). PRC Section 21074(a)(1)(A) and (B) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and meets either of the following criteria:

a) Listed or eligible for listing in the CRHR, or in a local register of historical resources as defined in PRC Section 5020.1(k), or
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified. AB 52 requires that lead agencies "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." Native American tribes to be included in the process are those that have requested notice of projects proposed within the jurisdiction of the lead agency.

b. Local Regulations

Pismo Beach Municipal Code

The Pismo Beach Municipal Code Section 17.24.020 sets property development and use standards related to archaeological and historical resources. Surface surveys are required where development is proposed on areas identified as archaeologically sensitive, per Figures 3-1 and 3-2 of the Municipal Code, when applying for a land use permit. The survey shall be performed by a qualified archeologist and include an evaluation of the likely presence of cultural resources, their significance, and recommendations for all appropriate mitigation measures for the project. Pismo Beach Municipal Code Section 17.24.020(B) includes construction practices for unanticipated discovery of archaeological resources during grading, excavation, or other construction activities. If archaeological resources are discovered all construction activities shall cease and the City shall be notified so that a qualified archaeologist may evaluate the significance of the find and make recommendations for disposition, mitigation, and/or salvage.

4.4.3 Impact Analysis

a. Methodology and Significance Thresholds

AB 52 and SB 18 Consultation

In accordance with AB 52 and SB 18, the City of Pismo Beach notified the Barbareño/Ventureño Band of Mission Indians, Chumash Council of Bakersfield, Coastal Band of the Chumash Nation,

Northern Chumash Tribal Council, Salinan Tribe of Monterey, San Luis Obispo County Chumash Council, Santa Ynez Band of Chumash Indians, and the yak tityu tityu yak tiłhini Northern Chumash Tribe of the GP/LCP Update and invited them to participate in consultation. The City prepared and mailed letters and a draft copy of the GP/LCP Update in accordance with SB 18 and AB 52 on May 8 and November 6, 2020. None of the tribes contacted responded to requests for consultation.

Significance Thresholds

The following thresholds of significance are based on Appendix G to the CEQA Guidelines. For the purposes of this EIR, implementation of the GP/LCP Update may have a significant adverse impact on cultural resources or tribal cultural resources if it would do any of the following:

1. Cause a substantial adverse change in the significance of an historical resource as defined in Section 15064.5;
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5;
3. Disturb any human remains, including those interred outside of dedicated cemeteries
4. Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)
5. Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1

The significance of a cultural resource and, subsequently, the significance of any impact are determined by consideration of whether that resource can increase our knowledge of the past. The determining factors are site content and degree of preservation. A finding of archaeological significance follows the criteria established in the CEQA Guidelines.

CEQA Guidelines Section 15064.5 (Determining the Significance of Impacts to Archaeological Resources) states:

- (3) […] Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the CRHR (PRC Section 5024.1, Title 14 CCR Section 4852).
- (4) The fact that a resource is not listed in, or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to PRC Section 5020.1(k)), or identified in an historical resources survey (meeting the criteria in PRC Section 5024.1(g)) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC Sections 5020.1(j) and 5024.1.
- (b) A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.

Historical resources are "significantly" affected if there is demolition, destruction, relocation, or alteration of the resource or its surroundings. Generally, impacts to historical resources can be mitigated to below a level of significance by following the Secretary of the Interior's Guidelines for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and

Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (Guidelines Section 15064.6(b)). In some circumstances, documentation of a historical resource by way of historic narrative photographs or architectural drawings will not mitigate the impact of demolition below the level of significance (Guidelines Section 15126.4(b)(2)). Preservation in place is the preferred form of mitigation for archaeological resources as it retains the relationship between artifact and context, and may avoid conflicts with groups associated with the site (Guidelines Section 15126.4 (b)(3)(A)). If an archaeological resource does not meet either the historic resource or the more specific "unique archaeological resource" definition, impacts do not need to be mitigated (Guidelines Section 15064.5(e)). Where the significance of a site is unknown, it is presumed to be significant for the purpose of the EIR investigation.

b. Project Impacts and Mitigation Measures

Threshold 1:	Would the project cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

IMPACT CR-1 DEVELOPMENT FACILITATED BY THE GP/LCP UPDATE HAS THE POTENTIAL TO IMPACT HISTORICAL RESOURCES. IMPLEMENTATION OF APPLICABLE GP/LCP UPDATE ACTIONS, STATE AND FEDERAL REGULATIONS, AND THE PISMO BEACH MUNICIPAL CODE WOULD MINIMIZE OR AVOID POTENTIAL ADVERSE IMPACTS TO HISTORICAL RESOURCES. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Based on CEQA Guidelines Section 15064.5, the GP/LCP Update, including future development activities facilitated by the GP/LCP Update, would have a significant impact on historical resources if it would cause a substantial adverse change in the significance of a historical resource. Historical resources include properties eligible for listing on the NRHP, the CRHR, or the local register of historical resources. In addition, as explained in Section 15064.5, "[s]ubstantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired." Although there are no specific development projects associated with the GP/LCP Update, implementation of the proposed GP/LCP Update would guide development in the planning area though the year 2040. Development facilitated by the GP/LCP Update could result in adverse effects to known or unknown historic resources.

Goals, policies, and actions in the Conservation and Open Space Element of the GP/LCP Update that are applicable to historical resources in Pismo Beach include:

Goal COS-4: A community that celebrates and protects its historical, tribal cultural, archaeological, and paleontological resources.

- **Policy COS-4.1: Historical Resources.** Preserve, protect, and make accessible sites of historical significance, where feasible.
  - **Action COS-4.1a: CEQA Determination.** As part of the CEQA review process, the City shall require a professional, qualified historian to conduct a literature search and/or survey for any project that entails demolition or modification of an existing structure that may be of historical value in relation to the City's cultural heritage. Sites of statewide or national significance shall be nominated for inclusion in the Registry of California Historic Landmarks or National Historic Landmark Program.

- **Action COS-4.1b: Historic Building Guidelines.** Require projects involving modification or rehabilitation of structures that may be of historical value to incorporate the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings.
- **Action COS-4.1c: Resources Inventory.** The City shall create, maintain and periodically update Pismo Beach's inventory of historic properties for buildings, objects, structures, and monuments having importance to the history or architecture of Pismo Beach. Maintain a liaison between State Historic Preservation Officer and the City relative to cultural/historic structures and properties to advise and assist the City, as appropriate, in carrying out their historic preservation responsibilities.
- **Action COS-4.1d: Protect Landmarks.** Ensure that listed landmarks and cultural resources identified by ordinance are not demolished without notice and hearing.
- **Action COS-4.1e: Historic Demolition.** Require projects involving demolition of an existing structure that may be of historical value to consult with local museums or cultural societies and incorporate mitigation, such as photo documentation, collection of oral histories, and physical or digital model, as necessary.
- **Action COS-4.1f: Seek Funding.** Continue to seek funding that can be used to further the City's historic preservation goals and policies.

- **Policy COS-4.2: Cultural Resources.** Protect cultural resources, including historical and archaeological features, in the Coastal Zone.
  - **Action COS-4.2e: Archaeology – Historic Sites Overlay Zone.** Continue to implement and designate new areas as the Archaeology – Historic Sites Overlay Zone. The archaeology – Historic Sites Overlay Zone is intended to preserve, protect and maintain land and water areas, structures and other sites which have significant, historical, archaeological or cultural importance and provide for the designation of areas which may be of unique value for scientific or educational purposes.

Goals, policies, and actions included in the Conservation and Open Space Element are intended to preserve and protect site-specific historic resources. Additionally, future development under the GP/LCP Update would be subject to the provisions of applicable federal and State historic resource regulations, as well as the City's Municipal Code Section 17.24.020 (discussed in subsection 4.4.2(b), *Regulatory Setting*). Development facilitated by the GP/LCP Update would be required to comply with GP/LCP actions, federal and state regulations, and the City's Municipal Code which would require identification, evaluation, and protection of historic resources throughout the City. Impacts would be less than significant.

Mitigation Measures

None required.

Threshold 2:	Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

IMPACT CR-2 DEVELOPMENT FACILITATED BY THE GP/LCP UPDATE HAS THE POTENTIAL TO IMPACT UNIQUE ARCHAEOLOGICAL RESOURCES. IMPLEMENTATION OF APPLICABLE GP/LCP UPDATE GOALS, STATE AND FEDERAL REGULATIONS, AND THE PISMO BEACH MUNICIPAL CODE WOULD MINIMIZE OR AVOID POTENTIAL ADVERSE IMPACTS TO ARCHAEOLOGICAL RESOURCES. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Effects on archaeological resources can only be determined once a specific project has been proposed because the effects are highly dependent on both the individual project site conditions and the characteristics of the proposed ground-disturbing activity. Ground-disturbing activities associated with development facilitated by the GP/LCP Update have the potential to damage or destroy previously unknown archaeological resources that may be present on or below the ground surface. As shown in the City's map of Archaeologically Sensitive Areas, archeologically sensitive areas are located throughout the City, including in the following planning areas: Sunset Palisades/The Bluffs/South Palisades, North Spyglass/Spyglass, southern portion of the Shell Beach/Dinosaur Caves, Motel, southern portion of Pismo Heights, Downtown Core, Oak Park Heights, and Pismo Creek/Pismo Heights. Potential impacts to archaeological resources are most likely to occur in areas that have not previously been developed with urban uses, have not been studied through a cultural resource investigation, or when excavation extends to new depths. Consequently, damage to or destruction of previously-unknown sub-surface cultural resources could occur as a result of development facilitated by the GP/LCP Update.

Goals, policies, and actions in the Conservation and Open Space Element of the GP/LCP Update that are applicable to historical resources in Pismo Beach include:

Goal COS-4: A community that celebrates and protects its historical, tribal cultural, archaeological, and paleontological resources.

- **Policy COS-4.2: Cultural Resources.** Protect cultural resources, including historical and archaeological in the Coastal Zone.
  - **Action COS-4.2a: Native American Consultation.** As part of the CEQA process for all new discretionary projects, the City will conduct consultations with any federally-recognized California Tribal government listed on the most recent notice of the United States Federal Register, and/or any non-federally recognized California Tribe listed on the California Tribal Consultation List maintained by the California Native American Heritage Commission that identifies as native to the Pismo Beach area, including the Chumash, in accordance with state law. Native American tribal groups with cultural affiliation to the project site area as identified by the Native American Heritage Commission shall have the opportunity to review and comment on the pre-development plan as required by AB52 (2014). Archaeologists and representatives from Native American tribal groups shall provide monitoring during grading/excavation and construction activities of any approved development that has the potential to adversely impact any on-site significant cultural resources, based on the results of a Phase 1 cultural assessment.
  - **Action COS-4.2b: Chumash Cultural Resources Preservation.** The coastal Chumash are the dominant archaeological group in Pismo Beach. Appropriate measures for Chumash Cultural Resources Preservation shall be provided with future development of private and public property, including California Environmental Quality Act compliance and meaningful consultation with local Chumash groups, as noted on the Native American Heritage

Commission's "California Tribal Consultation List." Archaeological studies shall be performed by members of the Register of Professional Archaeologists and should follow the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation.

- **Action COS-4.2c: Protect Archaeological and Paleontological Resources.** The City shall have available a map that identifies the possible location of archaeological resources. As part of the CEQA process for all new discretionary projects, all known or potential archaeological resources shall be fully investigated by a qualified archaeologist recognized by the State Historic Preservation Office. While most sites are currently developed, appropriate protections shall be established to avoid impacts to archaeological and paleontological resources with new development, with part of the review process including:
  a) Locations within the City known to have a high probability of occurrence of archaeological sites shall be zoned in the Archaeology-Historic Sites overlay district.
  b) Specific recommendations prepared by the archaeologist shall be incorporated into project approval including: avoidance of portions of sites containing resources, minimizing the impacts of the development on the archaeological resources, preserving a full archaeological record, and/or partial site dedication, and providing a native American monitor on site to observe excavations in locations where there is a possibility of discovery of human remains. In situ preservation and avoidance are the preferred alternative over recovery and/or relocation in the protection of paleontological and archaeological resources. When in situ preservation or site capping is not feasible, recovery and/or relocation may be considered.

- **Action COS-4.2d: Mitigation Plan.** Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required pursuant to Section 30244 of the Coastal Act. Require that a mitigation plan, adequate to protect the archaeological resource and prepared by a qualified archaeologist, be submitted for review and, if approved, be implemented as part of the project.
- **Action COS-4.2e: Archaeology – Historic Sites Overlay Zone.** Continue to implement and designate new areas as the Archaeology – Historic Sites Overlay Zone. The archaeology – Historic Sites Overlay Zone is intended to preserve, protect and maintain land and water areas, structures and other sites which have significant, historical, archaeological or cultural importance and provide for the designation of areas which may be of unique value for scientific or educational purposes.
- **Action COS-4.2f: Construction Suspension.** Should archaeological or paleontological resources be disclosed during any construction activity, all activity that could damage or destroy the resources shall be suspended until a qualified archaeologist has examined the site. Construction shall not resume until mitigation measures have been developed and carried out to address the impacts of the project on these resources.
- **Action COS-4.2g: Confidentiality of Archaeological Sites.** The City shall, within its power, maintain confidentiality regarding the locations of archaeological and paleontological sites in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts.
- **Action COS-4.2h: Protect and Preserve Artifacts.** Ensure the protection and preservation of artifacts in those areas already identified as containing archaeological remains and require that all sites with potential resources likely to be disturbed by a proposed project be analyzed by a qualified archaeologist with local expertise.

These goals, policies, and actions are intended to preserve and protect site-specific historic and cultural resources. Additionally, future development under the GP/LCP Update would be subject to the provisions of applicable federal and State cultural resource regulations, as well as the City's Municipal Code (discussed in subsection 4.4.2(b), *Regulatory Setting*). Individual projects facilitated under the GP/LCP Update would be required to implement actions included in the GP/LCP to reduce impacts to archaeological resources, as well as adhere to state, federal, and local regulations, including Section 17.24.020 of the Pismo Beach Municipal Code, which requires archaeological surveys for new development with mitigation, if necessary. Compliance with GP/LCP Update and applicable regulations would reduce impacts to archaeological resources to less than significant.

Mitigation Measures

None required.

Threshold 3:	Would the project disturb any human remains, including those interred outside of formal cemeteries?

IMPACT CR-3 DEVELOPMENT FACILITATED BY THE GP/LCP UPDATE HAS THE POTENTIAL TO ADVERSELY AFFECT PREVIOUSLY UNKNOWN HUMAN BURIALS, BUT WOULD BE REQUIRED TO ADHERE TO EXISTING REGULATIONS REGARDING THE TREATMENT OF HUMAN REMAINS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Human burials outside of formal cemeteries often occur in prehistoric archaeological archeological contexts. The potential exists for these resources to be present in areas where development has not yet occurred. Excavation during construction activities in the planning area would have the potential to disturb these resources, including Native American burials.

Human burials, in addition to being potential archaeological resources, are subject to specific provisions for treatment in PRC Section 5097. The California Health and Safety Code (Sections 7050.5, 7051, and 7054) has specific provisions for the protection of human burial remains. Existing regulations prohibit interfering with human burial remains; protect human remains from disturbance, vandalism, or destruction; and establish procedures to be implemented if Native American skeletal remains are discovered. PRC Section 5097.98 also addresses the disposition of Native American burials, protects such remains, and established the NAHC to resolve any related disputes. In addition, Action COS-4.2i of the GP/LCP Update, listed below, states that human remains discovered during implementing of public and private projects should be fully comply with the California Native American Graves Protect and Repatriation Act and other appropriate laws.

- **Action COS-4.2i: Human Remains.** Treat with respect and dignity any human remains discovered during implementation of public and private projects within the City and fully comply with the California Native American Graves Protection and Repatriation Act and other appropriate laws.

All development facilitated by the GP/LCP Update would be required to adhere to existing regulations regarding the treatment of human remains. Therefore, this impact would be less than significant.

Mitigation Measures

None required.

Threshold 4:	Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?
Threshold 5:	Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1?

IMPACT CR-4 DEVELOPMENT FACILITATED BY THE GP/LCP UPDATE MAY INVOLVE EXCAVATION, WHICH HAS THE POTENTIAL TO IMPACT PREVIOUSLY UNIDENTIFIED TRIBAL CULTURAL RESOURCES. IMPACTS ON TRIBAL CULTURAL RESOURCES WOULD BE LESS THAN SIGNIFICANT.

Effects on tribal cultural resources can only be known once a specific project has been proposed because the effects are highly dependent on the individual project site conditions, and the characteristics of the proposed activity, including but not limited to the level of ground disturbance associated with construction activities. Although the current SB 18 and AB 52 consultation for this document did not identify any specific tribal cultural resources within the City, new tribal cultural resources may be identified or established during implementation of the GP/LCP Update which is expected to occur over many years. Therefore, as specific projects are proposed, consultation with tribes under AB 52 would occur to determine if any tribal cultural resources may be impacted by specific projects. If tribal cultural resources are identified during AB 52 consultation, compliance with AB 52 on a project by project basis, as required, would ensure that development under the proposed GP/LCP Update does not have a detrimental effect on tribal cultural resources.

Goals, policies, and actions in the Conservation and Open Space Element of the GP/LCP Update that are applicable to tribal cultural resources in Pismo Beach include:

Goal COS-4: A community that celebrates and protects its historical, tribal cultural, archaeological, and paleontological resources.

- **Policy COS-4.2: Cultural Resources.** Protect cultural resources, including historical and archaeological features, in the Coastal Zone.
  - **Action COS-4.2a: Native American Consultation.** As part of the CEQA process for all new development projects, the City will conduct consultations with any federally-recognized California Tribal government listed on the most recent notice of the United States Federal Register, and/or any non-federally recognized California Tribe listed on the California Tribal Consultation List maintained by the California Native American Heritage Commission that identifies as native to the Pismo Beach area, including the Chumash, in accordance with state law. Native American tribal groups with cultural affiliation to the project site area as identified by the Native American Heritage Commission shall have the opportunity to review and comment on the pre-development plan as required by AB52 (2014). Archaeologists and representatives from Native American tribal groups shall provide monitoring during grading/excavation and construction activities of any approved development that has the potential to adversely impact any on-site significant cultural resources, based on the results of a Phase 1 cultural assessment.

- **Action COS-4.2b: Chumash Cultural Resources Preservation.** The coastal Chumash are the dominant archaeological group in Pismo Beach. Appropriate measures for Chumash Cultural Resources Preservation shall be provided with future development of private and public property, including California Environmental Quality Act compliance and meaningful consultation with local Chumash groups, as noted on the Native American Heritage Commission's "California Tribal Consultation List." Archaeological studies shall be performed by members of the Register of Professional Archaeologists and should follow the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation.

Action COS-4.2a of the GP/LCP requires all new discretionary projects in the City to conduct tribal consultations as part of the CEQA process. Action COS-4.2b requires consultation and appropriate protection of coastal Chumash resources for future development projects. With implementation of state regulations and actions included in the GP/LCP Update, impacts to tribal cultural resources would be less than significant.

Mitigation Measures

None required.

4.4.4 Cumulative Impacts

Development in the San Luis Obispo County region (the cumulative impact analysis area) would increase under buildout of the GP/LCP Update. The increase in growth in previously undisturbed areas would contribute to regional impacts on existing and previously undisturbed and undiscovered historical, archaeological, and tribal cultural resources. Implementation of the GP/LCP Update goals, policies, and actions discussed in Impacts CR-1, CR-2, and CR-4 are intended to provide a plan for developing project-level mitigation necessary to ensure protection of cultural and tribal cultural resources during future development in the planning area. Additionally, future development under the GP/LCP Update would be subject to the provisions of applicable federal, State, and local cultural resource regulations (discussed in subsection 4.4.2, Regulatory Setting). Compliance with applicable regulations and implementation of GP/LCP Update goals and policies would minimize cumulative impacts to cultural resources, and includes policy language and actions to address potential impacts to cultural resources on a project-by-project basis. Therefore, cumulative impacts to such resources would be less than significant.

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4.5 Energy

This section discusses the potential energy impacts of the City of Pismo Beach General Plan/Local Coastal Plan (GP/LCP) Update. This analysis follows the guidance for evaluation of energy impacts contained in Appendix F and Appendix G of the *CEQA Guidelines*. The physical environmental impacts associated with the generation of electricity and burning of fuels have been accounted for in Section 4.2, *Air Quality*, and Section 4.7, *Greenhouse Gas Emissions/Climate Change*.

4.5.1 Setting

Energy use relates directly to environmental quality because energy use can adversely affect air quality and can generate greenhouse gas (GHG) emissions that contribute to climate change. Fossil fuels are burned to create electricity that powers residences, heats and cools buildings, and powers vehicles. Transportation energy use is dependent on the fuel efficiency of cars, trucks, and public transportation; the different travel modes such as auto, carpool, and public transit; and the miles traveled using these modes. Construction and routine operation and maintenance of transportation infrastructure also consume energy.

a. Energy Supply

Petroleum

California is one of the top producers of petroleum in the nation with drilling operations occurring throughout the state but concentrated primarily in Kern and Los Angeles counties. A network of crude oil pipelines connects production areas to oil refineries in the Los Angeles area, the San Francisco Bay area, and the Central Valley. California oil refineries also process Alaskan and foreign crude oil received at ports in Los Angeles, Long Beach, and the San Francisco Bay area (California Energy Commission [CEC] 2021a). According to the United States Energy Information Administration, California's field production of crude oil totaled 161.5 million barrels in 2019 (United States Energy Information Administration 2021a).

Petroleum Infrastructure in the City

There are six gasoline stations but no petroleum refineries in the city (GasBuddy 2021). According to the California Department of Conservation Division of Oil, Gas, and Geothermal Resources (DOGGR), there are eight plugged dry hole wells in Pismo Beach, all of which are located north of the U.S. 101, east of Price Canyon Road, and west of Oak Park Boulevard (DOGGR 2021). No operational oil or gas extraction infrastructure occurs within or adjacent to the city.

Alternative Fuel

A variety of alternative fuels are used to reduce petroleum-based fuel demand. Their use is encouraged through various statewide regulations and plans, such as the Low Carbon Fuel Standard and Senate Bill (SB) 32. Alternative vehicle fuels include hydrogen, biodiesel, and electricity. Currently, 45 hydrogen and nine biodiesel refueling stations are located in California, but none are located in the City (United States Department of Energy 2021). There are approximately 49 electric vehicle charging stations in Pismo Beach (PlugShare 2021).

Electricity

In 2019, California's in-state electricity generation totaled 200,475 megawatts (CEC 2021b). Primary fuel sources for the state's electricity generation in 2019 included natural gas, hydroelectric, solar photovoltaic, wind, nuclear, geothermal, biomass, and solar thermal. According to the 2019 Integrated Energy Policy Report, California's electric grid relies increasingly on clean sources of energy such as solar, wind, geothermal, hydroelectricity, and biomass. In addition, by 2025 the use of electricity sourced from out-of-state coal generation will be eliminated. As this transition advances, the grid is also expanding to serve additional loads produced by building and vehicle electrification among other factors. California produces more renewable energy than any other state in the United States with 23,313 megawatts of installed renewable capacity (CEC 2020a; U.S. EIA 2020).

Pacific Gas & Electric

Pacific Gas and Electric (PG&E) is responsible for providing electric power supply to the City. PG&E is one of the nation's largest electric and gas utility companies, and it maintains 106,681 circuit miles of electric distribution lines and 18,466 circuit miles of interconnected transmission lines (PG&E 2021). In 2020, PG&E's power mix, including all PG&E-owned generation plus the company's power purchases, consisted of 31 percent renewable resources (wind, geothermal, biomass, solar, and small hydro), 34 percent nuclear generation, 15 percent natural gas and other fuels, and 13 percent large hydroelectric facilities (PG&E 2021b). According to PG&E's 2020 Integrated Resource Plan, PG&E anticipates meeting a 2030 energy load demand of 28,907 gigawatt-hours (PG&E 2020).

Electric Power Infrastructure in the City

There are no electric power plants in the City (U.S. EIA 2019b).

Natural Gas

California's net natural gas production for 2019 was 166 billion cubic feet, or approximately 172,142 billion British thermal units (Btu; DGEM 2020). The state relies on out-of-state natural gas imports for nearly 90 percent of its supply (CEC 2021c). The CEC estimates that approximately 45 percent of the natural gas burned across the state is used for electricity generation, and the remainder is consumed in the residential (21 percent), industrial (25 percent), and commercial (9 percent) sectors. Building and appliance energy efficiency standards account for up to 39 percent in natural gas demand savings between 1975 and 2010 (CEC 2021c).

Southern California Gas

The City is in the natural gas service area of Southern California Gas Company (SoCalGas), which spans central and southern California (CEC 2018a). Natural gas stocks are currently 80.0 billion cubic feet (Bcf) compared with 77.4 Bcf a year ago (EIA 2021). SoCalGas' service area is equipped with over 102,000 miles of gas transmission, distribution, and service pipelines (SoCalGas 2013). Natural gas supplied by SoCalGas is sourced from gas fields in several sedimentary basins in the western U.S. and Canada including supply basins located in New Mexico (San Juan Basin), West Texas (Permian Basin), Rocky Mountains, western Canada, and local California supplies (California Gas and Electric Utilities 2020).

Natural Gas Infrastructure in the City

There are no natural gas processing plants located in the city (U.S. EIA 2021b). A main transmission line/high pressure distribution line runs parallel to U.S. 101 from Avila Beach to Price Canyon Road, where the line veers north around the Pismo Beach Wastewater Treatment Plant (SoCal Gas 2021).

b. Energy Demand

The smallest scale at which energy consumption information is readily available is the county level. Therefore, energy consumption in San Luis Obispo County is used herein to characterize the city's existing consumption of petroleum, electricity, and natural gas as detailed in the following subsections.

Petroleum

As shown in Table 4.5-1, San Luis Obispo County consumed an estimated 138 million gallons of gasoline and 22 million gallons of diesel fuel in 2019 (CEC 2021d). Based on San Luis Obispo County's 2019 population of 277,259 (California Department of Finance [DOF] 2020) and 2019 employment of 118,150 (Bureau of Labor Statistics 2020), San Luis Obispo County's annual per service population fuel consumption in 2019 consisted of 349 gallons of gasoline and 55.6 gallons of diesel fuel. As shown in Table 4.5-1, the County consumed an average of approximately 45.4 million Btu per service population of transportation fuel in 2019.

Table 4.5-1 2019 Annual Gasoline and Diesel Consumption

Fuel Type	San Luis Obispo County (gallons)	County Per Service Population Consumption (gallons)	County Per Service Population Consumption (MMBtu)
Gasoline	138,000,000	349	38.3
Diesel	22,000,000	55.6	7.1
Total	**160,000,000**	**404.6**	**45.4**

[1] For reference, the population of San Luis Obispo County (277,259 persons) is approximately 0.7 percent of the population of California (39,782,870 persons) (California Department of Finance 2020).

Source: CEC 2021d

Electricity

As shown in Table 4.5-2, San Luis Obispo County consumed approximately 1,715 GWh in 2019 (CEC 2020b, 2020c). San Luis Obispo County's 2019 per service population electricity consumption was approximately 4,337 kWh. As shown in Table 4.5-2, the County's per service population electricity consumption was approximately 14.8 million Btu in 2019.

Table 4.5-2 2019 Annual Electricity Consumption

Energy Type	San Luis Obispo County (GWh)	County Per Service Population Consumption (kWh)	County Per Capita Consumption (MMBtu)
Electricity	1,715	4,337.3	14.8

For reference, the population of San Luis Obispo County (277,259 persons) is approximately 0.7 percent of the population of California (39,782,870 persons) (California Department of Finance 2020).

Sources: CEC 2020b, 2020c

Natural Gas

In 2018, SoCalGas customers consumed a total of approximately 8.8 million U.S. therms of natural gas, including residential and non-residential use, electricity generation, and wholesale purchases. Residential users accounted for approximately 27 percent of SoCal Gas' natural gas consumption. From 2020 to 2035, SoCalGas expects residential use and core, non-residential use (including core commercial, industrial, and natural gas vehicles) to decline at an average rate of approximately 1 percent annually. The expected decline in residential use is primarily driven by aggressive energy efficiency goals and associated programs.

As shown in Table 4.5-3, San Luis Obispo County consumed approximately 90 million U.S. therms in 2019 (CEC 2021d, 2021e). San Luis Obispo County's 2019 per service population natural gas consumption was approximately 227.6 U.S. therms. As shown in Table 4.5-3, the County's per service population natural gas consumption in 2019 was approximately 21.2 million Btu.

Table 4.5-3 2019 Annual Natural Gas Consumption

Energy Type	San Luis Obispo County (millions of US therms)	County Per Service Population Consumption (U.S. Therms)	County Per Capita Consumption (MMBtu)
Natural Gas	90	227.6	21.2

For reference, the population of San Luis Obispo County (277,259 persons) is approximately 0.7 percent of the population of California (39,782,870 persons) (California Department of Finance 2020).

Sources: CEC 2020d, 2020e

4.5.2 Regulatory Setting

a. Federal Regulations

Energy Independence and Security Act of 2007

The Energy Independence and Security Act, enacted by Congress in 2007, is designed to improve vehicle fuel economy and help reduce the United States' dependence on foreign oil. It expands the production of renewable fuels, reducing dependence on oil and confronting climate change. Specifically, it does the following:

- Increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard that requires fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Reduces United States demand for oil by setting a national fuel economy standard of 35 miles per gallon, an increase in fuel economy standards of 40 percent as compared to 2007 levels.

The Energy Independence and Security Act of 2007 also set energy efficiency standards for lighting (specifically light bulbs) and appliances. Development would also be required to install photosensors and energy-efficient lighting fixtures consistent with the requirements of 42 United States Code Section 17001 et seq.

Energy Policy and Conservation Act

Enacted in 1975, the Energy Policy and Conservation Act established fuel economy standards for new light-duty vehicles sold in the United States. The law placed responsibility on the National Highway Traffic and Safety Administration (NHTSA) for establishing and regularly updating vehicle standards. The United States Environmental Protection Agency (U.S. EPA) is responsible for

administering the Corporate Average Fuel Economy program, which determines vehicle manufacturers' compliance with existing fuel economy standards. In 2012, the U.S. EPA and National Highway Traffic and Safety Administration established final passenger car and light truck Corporate Average Fuel Economy standards for model years 2017 to 2021, which will require a combined average fleet-wide fuel economy of 40.3 to 41.0 miles per gallon in model year 2021 (United States Department of Transportation 2014).

Energy Star Program

Energy Star is a voluntary labeling program introduced by U.S. EPA to identify and promote energy-efficient products to reduce GHG emissions. The program applies to major household appliances, lighting, computers, and building components such as windows, doors, roofs, and heating and cooling systems. Under this program, appliances that meet specifications for maximum energy use established under the program are certified to display the Energy Star label. In 1996, the U.S. EPA joined with the Energy Department to expand the program, which now also includes certifying commercial and industrial buildings as well as homes (U.S. EPA 2021).

Construction Equipment Fuel Efficiency Standard

The U.S. EPA sets emission standards for construction equipment. The current iteration of emissions standards for construction equipment are the Tier 4 efficiency requirements contained in 40 Code of Federal Regulations Parts 1039, 1065, and 1068. The Tier 4 emission standards—phased-in from 2008 through 2015—introduce substantial reductions of nitrogen oxides (for engines above 56 kW) and particulate matter (above 19 kW), as well as more stringent hydrocarbon limits. The Tier 4 standards require that emissions of particulate matter and nitrogen oxide from construction equipment be further reduced by approximately 90%. Such emission reductions can be achieved through control technologies including advanced exhaust gas aftertreatment (DieselNet 2017).

b. State Regulations

Assembly Bill 1493: Reduction of Greenhouse Gas Emissions

Assembly Bill (AB) 1493 (2002), California's Advanced Clean Cars program (referred to as "Pavley"), requires the California Air Resources Board (CARB) to develop and adopt regulations to achieve "the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles." On June 30, 2009, the U.S. EPA granted the waiver of Clean Air Act preemption to California for its GHG emission standards for motor vehicles, beginning with the 2009 model year, which allows California to implement more stringent vehicle emission standards than those promulgated by the U.S. EPA. Pavley I regulated model years from 2009 to 2016 and Pavley II, now referred to as "LEV (Low Emission Vehicle) III GHG," regulates model years from 2017 to 2025. The Advanced Clean Cars program coordinates the goals of the Low Emission Vehicle, Zero Emissions Vehicles, and Clean Fuels Outlet programs, and would provide major reductions in GHG emissions (CARB 2011). However, on September 19, 2019, the U.S. EPA withdrew California's Clean Air Act preemption waiver and issued the One National Program Rule, which prohibits states from establishing their own separate fuel economy standards or passing laws that substantially affect fuel economy standards. As a result, California may no longer promulgate and enforce its tailpipe GHG emission standard and zero emission vehicle mandate (U.S. EPA 2019).

Assembly Bill 2076: Reducing Dependence on Petroleum

Pursuant to Assembly Bill (AB) 2076 (Chapter 936, Statutes of 2000), the CEC and the CARB prepared and adopted a joint-agency report, *Reducing California's Petroleum Dependence,* in 2003. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita vehicle miles traveled (VMT). One of the performance-based goals of AB 2076 is to reduce petroleum demand to 15 percent below 2003 demand (CEC 2003).

Energy Action Plan

In 2003, the CEC and California Public Utilities Commission set forth their energy policy vision in the Energy Action Plan. The CEC adopted an update to the Energy Action Plan in February 2008 (EAP II) that supplements the earlier Energy Action Plan and examines the state's ongoing actions in the context of global climate change. The nine major action areas in the Energy Action Plan include energy efficiency, demand response, renewable energy, electricity adequacy/reliability/ infrastructure, electricity market structure, natural gas supply/demand/infrastructure, transportation fuels supply/demand/infrastructure, research/development/demonstration, and climate change (California Public Utilities Commission 2008).

Bioenergy Action Plan (Executive Order S-06-06)

Executive Order (EO) S-06-06 establishes targets for the use and production of biofuels and biopower and directs state agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The EO establishes the following in-state production targets to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources:

- Produce 20 percent of biofuels used in California by 2010,
- Produce 40 percent of biofuels used in California by 2020, and
- Produce 75 percent of biofuels used in California by 2050.

EO S-06-06 also calls for the state to meet a target for use of biomass electricity. The 2011 Bioenergy Action Plan identifies potential barriers and recommends actions to address them so the state can meet its clean energy, waste reduction, and climate protection goals. The 2012 Bioenergy Action Plan updates the 2011 Plan and provides a more detailed action plan to achieve the following goals:

- Increase environmentally and economically sustainable energy production from organic waste
- Encourage development of diverse bioenergy technologies that increase local electricity generation, combined heat and power facilities, renewable natural gas, and renewable liquid fuels for transportation and fuel cell applications
- Create jobs and stimulate economic development, especially in rural regions of the state
- Reduce fire danger, improve air and water quality, and reduce waste.

Assembly Bill 1007: State Alternative Fuels Plan

In response to AB 1007, the CEC prepared the State Alternative Fuels Plan in partnership with the CARB and in consultation with other federal, state, and local agencies. The State Alternative Fuels Plan presents strategies and actions California must take to increase the use of alternative non-petroleum fuels in a manner that minimizes costs to California and maximizes the economic benefits of in-state production. The State Alternative Fuels Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-state production of biofuels without causing substantial degradation of public health and environmental quality (CEC 2007).

Senate Bill 350

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires a doubling of the energy efficiency savings in electricity and natural gas for retail customers through energy efficiency and conservation by December 31, 2030.

2017 Climate Change Scoping Plan

On December 14, 2017, the CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the State's 2030 GHG emissions reduction target of 40 percent below 1990 levels. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, and implementation of recently adopted policies and legislation. The 2017 Scoping Plan includes a wide variety of goals related to energy efficiency and renewable energy that are intended to help meet the State's 2030 target (CARB 2017).

California Renewable Portfolio Standard and Senate Bill 100

Approved by former Governor Brown on September 10, 2018, SB 100 accelerates the state's Renewable Portfolio Standard program, which was last updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

California Energy Efficiency Action Plan

The CEC is responsible for preparing the California Energy Efficiency Action Plan, which covers issues, opportunities, and savings estimates related to energy efficiency in California's building, industrial, and agricultural sectors. The 2019 California Energy Efficiency Action Plan focuses on three goals:

1. Doubling energy efficiency savings by 2030 (SB 350)
2. Removing and reducing barriers to energy efficiency in low-income and disadvantaged communities
3. Reducing GHG emissions from the building sector

The plan offers several recommendations to advance these goals, including expanding funding sources for energy efficiency programs beyond ratepayer portfolios, improving energy efficiency data, integrating energy efficiency into long-term utility planning, enhancing the energy efficiency workforce, improving demand flexibility, and expanding building decarbonization (CEC 2019).

California Building Energy Efficiency Standards – California Code of Regulations, Title 24, Part 6

California Code of Regulations, Title 24, Part 6, is California's Energy Efficiency Standards for Residential and Non-residential Buildings. The 2019 Building Energy Efficiency Standards (California Energy Code), adopted on May 9, 2018, became effective on January 1, 2020. The 2019 Standards move toward cutting nonrenewable energy use in new homes by more than 50 percent and require installation of solar photovoltaic systems for single-family homes and multi-family buildings of three stories and less. The 2019 Standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; 4) and nonresidential lighting requirements (CEC 2018). Section 15.04.010 of the Pismo Beach Municipal Code incorporates the 2019 edition of the California Energy Code by reference (City of Pismo Beach 2020).

California Green Building Standards Code – California Code of Regulations Title 24, Part 11

The California Green Building Standards Code, referred to as CALGreen, was added to Title 24 as Part 11, first in 2009 as a voluntary code, which then became mandatory effective January 1, 2011 (as part of the 2010 CBC). The 2019 CALGreen institutes mandatory minimum environmental performance standards for all ground-up new construction of non-residential and residential structures. It also includes voluntary tiers (I and II) with stricter environmental performance standards for these same categories of residential and non-residential buildings. Local jurisdictions must enforce the minimum mandatory CALGreen standards and may adopt additional amendments for stricter requirements.

The 2019 mandatory standards require:

- Inspections of energy systems to ensure optimal working efficiency;
- Dedicated circuitry to facilitate installation of electric vehicle charging stations in newly constructed attached garages for single-family, duplex dwellings, and nonresidential developments; and
- Designation of at least ten percent of parking spaces for multi-family residential developments and six percent for nonresidential developments as electric vehicle charging spaces capable of supporting future electric vehicle supply equipment

The Tier I and Tier II voluntary standards require stricter energy efficiency requirements and cool/solar reflective roofs. Section 15.04.010 of the Pismo Beach Municipal Code incorporates the 2019 CALGreen by reference (City of Pismo Beach 2020).

Advanced Clean Trucks Regulation

On June 25, 2020, CARB approved the Advanced Clean Trucks Regulation, which requires truck manufacturers (any manufacturer that certifies vehicles over 8,500 pounds gross vehicle weight rating) with sales in California to transition from diesel trucks and vans to electric zero-emission trucks beginning in 2024. By 2045, all new trucks sold in California must be zero-emission.

c. Local Regulations

San Luis Obispo Council of Governments 2019 Regional Transportation Plan

The 2019 Regional Transportation Plan (RTP) is a comprehensive assessment of all forms of transportation available in San Luis Obispo County and the region's blueprint for a transportation system that meets the mobility needs of the region's residents and visitors. The 2019 RTP contains a Sustainable Communities Strategy (SCS) as required by SB 375. Enacted in 2008, SB 375 requires that each Metropolitan Planning Organization include an SCS that provides an integrated land use and transportation plan for meeting greenhouse gas emission reduction targets set forth by the California Air Resources Board (CARB). The 2019 RTP coordinates land use, housing, and transportation planning to reduce the amount the amount of time people spend on the road. This effort is part of a statewide strategy to reduce greenhouse gas emissions to meet regional targets, and may help attract funding for our communities and streamline permitting processes

Pismo Beach Climate Action Plan (PBCAP)

The following measures and implementation actions from the PBCAP would apply to energy consumption related to the proposed project (City of Pismo Beach 2014):

- **Measure C-1 City Government Energy Efficiency Retrofits and Upgrades.** Establish a target to reduce City government energy use by 10 percent by 2020 and implement cost-effective improvements and upgrades to achieve that target.
  - **Action C-1.1:** Adopt a City government energy use target.
  - **Action C-1.4:** Establish a prioritized list of energy efficiency upgrade projects and implement them as funding becomes available.
  - **Action C-1.5:** Install an energy management system that monitors energy use and controls heating, cooling, and ventilation to increase efficiency.
- **Measure C-3 Energy Efficiency Requirements for New City-owned Buildings.** Adopt a policy to exceed minimum Title 24 Building Energy Efficiency Standards by a certain percentage for the construction or renovation of new City buildings and facilities.
  - **Action C-3.1:** Adopt a policy to exceed Title 24 building efficiency standards by 30 percent.
- **Measure C-4 Renewable Energy Systems on City Property.** Pursue on-site small-scale renewable energy generation at City government facilities.
  - **Action C-4.2:** Install small-scale solar photovoltaic (PV) systems, solar hot water heaters, or other renewable energy projects at select City government facilities.
- **Measure C-6 Zero- and Low-Emission City Fleet Vehicles.** Continue to replace official City vehicles and equipment with more efficient and/or alternatively fueled vehicles.
- **Measure E-4 Incentives for Exceeding Title 24 Energy Efficiency Building Standards.** Provide incentives (e.g., priority permitting, reduced permit fees, etc.) for new development and/or major remodels that voluntarily exceed State energy efficiency standards.
  - **Action E-4.2:** Identify, provide and promote incentives (e.g., expedited or streamlined permitting, deferred fees, public recognition, etc.) for applicants whose project exceeds State requirements by a specified percent.

- **Action E-4.3:** Update building permit process to incentivize higher building performance (e.g., buildings that integrate and optimize major high-performance building attributes, including energy efficiency, durability, and life-cycle performance).

- **Measure E-5 On-Site Small-Scale Solar PV Incentive Program.** Facilitate the voluntary installation of on-site small-scale solar PV systems and solar hot water heaters in the community through expanded promotion of existing financial incentives, rebates, and financing programs, and by helping residents and business owners overcome common regulatory barriers and upfront capital costs.
  - **Action E-5.4:** Participate in and promote a renewable energy financing program to encourage investment in small-scale on-site solar PV systems.

- **Measure TL-8 Electric Vehicle Network and Alternative Fueling Stations.** Continue to work with the APCD, Central Coast Clean Cities Coalition, and neighboring jurisdictions to create and implement the electric vehicle readiness plan.
  - **Action TL-8.2:** Provide streamlined installation and permitting procedures for vehicle charging facilities, utilizing tools provided in the electric vehicle readiness plan (e.g., sample charging permits, model ordinances, development guidelines, outreach programs).

- **Measure TL-9 Smart Growth.** Facilitate mixed-use, higher density, and infill development near existing or planned transit stops, in existing community centers/downtown, and in other designated areas.
  - **Action TL-9.1:** Provide and promote incentives (e.g., parking reductions, priority permitting, etc.) for mixed-use and very high-density development that has a minimum density of 20 dwelling units per acre and is located within ¼-mile of an existing or planned transit stop or park and ride facility with regularly scheduled, daily service.
  - **Action TL-9.2:** Develop a form-based zoning code for the central business district/downtown. Form-based codes emphasize building form rather than use. This increases flexibility for a variety of complementary uses to be permitted in the same area, and the potential for mixed-use development, which helps to reduce vehicle miles traveled.

4.5.3 Impact Analysis

a. Methodology and Significance Thresholds

Significance Thresholds

Appendix G of the CEQA Guidelines considers a project to have a significant impact on energy resources if the project would:

- Result in wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Methodology

Public Resources Code Section 21100(b)(3) states that an EIR shall include "mitigation measures proposed to minimize significant effects on the environment, including, but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy." The physical

environmental impacts associated with the use of energy, including the generation of electricity and burning of fuels, have been accounted for in Section 4.2, *Air Quality*, and Section 4.7, *Greenhouse Gas Emissions/Climate Change*.

Energy consumption is categorized herein in terms of "direct" and "indirect" energy. Direct energy accounts for energy consumed during operation of the transportation system and land use scenario envisioned under the GP/LCP Update, such as fuel consumed by vehicles, natural gas consumed for heating and/or power, and electricity consumed for power. Indirect energy is the energy needed for construction and maintenance of the transportation system and land use scenario facilitated by the GP/LCP Update. The analysis of direct energy involves the quantification of anticipated transportation fuel, natural gas, and electricity consumption under the GP/LCP Update and a qualitative discussion of the efficiency, necessity, and wastefulness of the energy consumption. Analysis of indirect energy involves a qualitative discussion of construction and maintenance energy requirements anticipated under 2040 buildout of the GP/LCP Update.

Buildout of the GP/LCP Update would generate direct energy consumption from transportation fuel from the anticipated growth of residential, commercial and industrial land uses. Currently, there is not sufficient detail regarding the new development under the GP/LCP Update; therefore, 2040 buildout assumptions for direct energy impacts have been used to estimate energy usage for land use buildout.

Projections for transportation fuel consumption under 2040 buildout conditions were calculated based on the Mobile Source Emission Inventory (EMFAC) 2014 database. As such, direct energy consumption from transportation fuel for the GP/LCP Update is discussed based on EMFAC 2014 projections and qualitatively. For 2040 natural gas and electricity consumption under buildout of the land use scenario envisioned by the GP/LCP Update, consumption factors were drawn from the California Emissions Estimator Model (CalEEMod) Version 2020.4.0. The CalEEMod data is provided as Appendix E. Transportation fuel, natural gas, and electricity per capita consumption in 2040 is presented in comparison to 2019 per capita consumption for informational purposes.

b. Project Impacts and Mitigation Measures

Threshold:	Would the GP/LCP Update result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during construction or operation?

Impact E-1 CONSTRUCTION AND OPERATION OF FUTURE DEVELOPMENT UNDER THE GP/LCP UPDATE WOULD REQUIRE TEMPORARY AND LONG-TERM CONSUMPTION OF ENERGY RESOURCES. HOWEVER, BUILDOUT OF THE GP/LCP UPDATE WOULD NOT RESULT IN THE WASTEFUL, INEFFICIENT, OR UNNECESSARY CONSUMPTION OF ENERGY RESOURCES. IMPACT WOULD BE LESS THAN SIGNIFICANT.

The GP/LCP Update would result in the use of energy during construction and operation of new development in the City. Energy use during construction would be primarily in the form of fuel consumption to operate heavy equipment, light-duty vehicles, machinery, and generators for lighting. Temporary grid power may also be provided to construction trailers or electric construction equipment. Long-term operation of development projects would require permanent grid connections for electricity and natural gas service to power internal and exterior building lighting, and heating and cooling systems. In addition, the increase in vehicle trips associated with potential development would increase fuel consumption.

Indirect Construction and Maintenance Energy Use

Construction and maintenance of future land use development envisioned under GP/LCP Update would result in short-term consumption of energy resulting from the use of construction equipment and processes. CALGreen includes specific requirements related to recycling, construction materials, and energy efficiency standards that would apply to construction of future development envisioned by the GP/LCP Update and would minimize wasteful, inefficient, and unnecessary energy consumption. Construction and operation of projects facilitated by the GP/LCP Update would be required to comply with relevant provisions of CALGreen and Title 24 of the California Energy Code, which would further avoid wasteful, inefficient, and unnecessary energy consumption.

New Direct Natural Gas and Electricity Consumption

Operation of new development facilitated by the GP/LCP Update would consume natural gas and electricity for building heating and power, lighting, and water conveyance, among other operational requirements. Table 4.5-4 shows net new per service population natural gas and electricity consumption under buildout of the GP/LCP Update.

Table 4.5-4 Projected 2040 Annual Natural Gas and Electricity Consumption in Pismo Beach

Year	Per Service Population Consumption	Direct Energy Consumption (Daily Per Service Population MMBtu)
Natural Gas	**U.S. Therms**	
2019 (SLO County Existing)	227.6	21.2
2040 (Pismo Beach Buildout)	80.2	7.5
Electricity	**kWh**	
2019 (SLO County Existing)	4,317	14.74
2040 (Pismo Beach Buildout)	4,172.6	14.2

Notes: Per service population consumption in 2040 is derived from dividing estimated 2040 buildout energy consumption by service population anticipated by 2040. Per service population energy consumption is expressed in U.S. therms for natural gas, kilowatt-hours (kWh) for electricity, and millions of Btu (MMBtu) for both.

As shown in Table 4.5-1, new per service population natural gas consumption with buildout of the land use scenario envisioned under the GP/ LCP Update would be approximately 7.5 MMBtu for natural gas and approximately 14.2 MMBtu for electricity. These estimates represent a decrease in per service population energy consumption with the GP/LCP Update. Therefore, stricter emissions regulations and increased energy efficiencies of buildings in the GP/LCP Update would result in the decrease in per service population energy consumption.

The Conservation and Open Space Element and Land Use and Community Design Element of the General Plan contains goals, policies, and actions that would prevent inefficient, wasteful, and unnecessary energy consumption during construction and operation of development facilitated by the General Plan. The GP/LCP Update Conservation and Open Space goals, policies, and actions that present the greatest potential for reducing wasteful, inefficient, and unnecessary energy consumption are as follows:

Goal COS-1 – A community that conserves the important natural resources of Pismo Beach for the community's health, safety and enjoyment, including air quality, renewable energy, geology and soils, minerals, water quality and supply, and dark skies.

- **Policy COS-1.1: Improve Air Quality.** The City shall support health and enjoyment for those who live or work in the City and for visitors.
  - **Action COS-1.1a: Community Trip Reduction.** In order to reduce pollution, the City shall emphasize various procedures to reduce the number of vehicle trips and the number of vehicle miles traveled in the community. Techniques shall include, but not be limited to, transportation management measures such as vanpools, carpools, and subsidized transit passes; jobs/housing balance; bikeways and facilities; pedestrian facilities; ~~electric vehicles~~ and related infrastructure and transit improvements.
  - **Action COS-1.1b: City Employee Trip Reduction.** Develop, implement, and promote a TDM program for City employees that includes incentives to reduce single-occupancy vehicle trips, such as ride matching services and assistance, flexible work schedules or telecommuting opportunities, end of trip facilities (parking, showers, lockers), subsidized transit passes, etc.
  - **Action COS-1.1c: Electric Vehicles.** Establish electric vehicle parking spaces and charging requirements to lower pollution, and reduce the City's reliance on gasoline.
  - **Action COS-1.1d: City Fleet Replacement.** Develop and adopt a low- and zero- emissions replacement/purchasing policy for official City vehicles and equipment. This would not apply to vehicles with special performance requirements.

- **Policy COS-1.2: Renewable Energy.** Support and incentivize renewable energy and non-renewable energy consumption.
  - **Action COS-1.2a – Solar Incentives.** The City shall promote and inform development applicants and existing home-owners and businesses of the following solar incentives <u>and other incentives as may be appropriate</u>:
    - California Solar Initiative Rebate Program
    - California Alternative Rates for Energy Program
    - California Energy Commission – New Solar Homes Partnership
    - GRID Alternatives - Single-Family Affordable Solar Housing Program
    - Community Action Partnership of San Luis Obispo Energy Services
    - emPower San Luis Obispo
  - **Action COS-1.2b: Community Choice Energy.** Evaluate the feasibility of a regional Community Choice Aggregation program to procure electricity from renewable resources.
  - **Action COS-1.2c: Energy Audits for Community Buildings.** Complete energy audits and benchmarking of all City-owned or -operated facilities, leveraging existing programs, such as Pacific Gas & Electric's Automated Benchmarking Service or the U.S. EPA's ENERGY STAR Challenge program.
  - **Action COS-1.2d: Energy Efficient Upgrades.** Establish a prioritized list of energy efficiency upgrade projects and implement them as funding becomes available.

The GP/LCP Update Land Use and Community Design goals, policies, and actions that present the greatest potential for reducing wasteful, inefficient, and unnecessary energy consumption are as follows:

Goal LU-1: A community with a variety of well-regulated land uses that support the diverse needs of both ~~visitors~~ residents and ~~residents~~ visitors.

- **Policy LU-1.2: Commercial Uses.** The City shall include land use designations that allow for visitor-serving, neighborhood and regional commercial uses.
  - **Action LU-1.2d: Drive-Thru Services Prohibited.** In order to maintain and promote a more pedestrian-oriented beach community character, as well as to reduce the high volume of vehicle trips attracted by drive-thru establishments, the City shall prohibit any new development of drive-thru services in restaurants, banks, dry cleaners and other business establishments in the Downtown Core and Shell Beach Planning Areas.

Goal LU-5: A community that supports the health, safety, and sustainability of all residents, visitors and structures.

- **Policy LU-5.1: Complete Neighborhood.** Provide well-connected and complete neighborhoods that enable healthy lifestyles and provide for the daily needs of residents.
  - **Action LU-5.1a: Mixed-Use Neighborhoods.** Create standards for each commercial zone to allow for mixed-use-residential areas within proximity and walking distance of commercial, office, recreation, and public uses. Furthermore, identify opportunities to provide a mix of commercial- and recreation uses within walking distance of residential neighborhoods to enable and encourage walking and biking between uses.
  - **Action LU-5.1b: Transit Accessibility.** Locate and design all new commercial and high-density residential development to facilitate provision or extension of transit service to the development to the extent feasible. Major employment, retail, visitor-serving facilities, and entertainment districts and major coastal recreational areas should be well served by public transit and easily accessible to pedestrians and people who bike.

- **Policy LU-5.3: Sustainable Community Strategies.** Ensure land uses decisions and community strategies are designed to reduce energy and water consumption, waste and noise generation, air quality impacts; and support multimodal transport for a sustainable Pismo Beach.
  - **Action LU-5.3a:** Sustainable Infrastructure. The City shall:
    1. Promote infrastructure expansion where it will be more efficient and effective and does not promote growth inducement or result in adverse impacts to coastal resources. See also Goal LU-7 for policies and actions related to growth management.
    2. Focus infrastructure improvements in designated growth areas and contiguous to existing development.
  - **Action LU-5.3b: Sustainable Design Incentive Program.** Consider the feasibility of providing incentives for new and renovated projects that incorporate sustainable design features such as the construction of new buildings that reduce energy demand though natural features, such as green roofs and walls or energy efficiency above and beyond the current building code. Inform applicants of the benefits and incentives for green building practices and pursuit of LEED certification.
  - **Action LU-5.3c: Trail and Bikeway System.** Update and expand the trail and bikeway system to connect residential uses to commercial uses, and workplace and recreation nodes. Such

trails and bikeways shall consider following natural features like Pismo Creek and the shoreline, while avoiding adverse impacts to the natural features.

- **Action LU-5.3d: Transit-Oriented Development.** Support the development of multifamily residential and mixed-use projects around the City's transit station, by allowing a reduction in the parking requirements or other development standards, and require new development to incorporate or improve pedestrian, bicycle, and where applicable, transit facilities.

In addition to the above goals, policies, and actions, the GP/LCP Update encourages compact mixed-use development and multimodal transportation to reduce overall energy consumption and result in greater energy efficiency throughout Pismo Beach. Compact mixed-use developments improve energy efficiency as the resulting development pattern places City residents closer to places of employment, businesses residents patronize, and public transit opportunities. By placing new services and amenities closer to where people live and work, the GP/LCP Update would minimize the need to drive and reduce per service population energy consumption.

Direct Transportation Energy Use

Daily operation of the regional transportation system uses energy in the form of fuel consumed by propulsion of passenger vehicles, including automobiles, vans and trucks, and transit vehicles, including buses and trains. Increases in motor vehicle trips are primarily a combined function of population and employment growth.

Table 4.5-5 shows annual VMT and estimated fuel consumption translated into energy use (Btu) in the Pismo Beach under existing conditions and future 2040 conditions with implementation of the GP/LCP Update.

Table 4.5-5 Direct Transportation Energy Use in Pismo Beach

Year	Service Population (Residents + Employees)	Daily VMT [1]	Direct Energy Consumption (Daily Per Service Population MMBtu) [2]
(Existing)	13,156	30,757	45.4
2040 (New Development Only)	2,420	6,015	31.2
2040 (Buildout + New Development)	15,576	36,897	31.2

[1] Daily VMT for Existing and Buildout + New Development GP/LCP Update were applied to the existing and 2040 scenarios, respectively.

[2] Daily VMT and county-level fuel consumption information was used to derive a per capita daily Btu per VMT consumption factor. (refer to Table 4.5-1).

Notes: Per Service Population Btu/VMT factor is expressed in singular Btu while Daily Per Service Population Direct Energy Consumption is expressed in millions of Btu (MMBtu).

As shown in Table 4.5-5 direct transportation energy demand would decrease from 45.4 daily MMBtu per service population to approximately 31.2 daily MMBtu per service population. The reduction from existing to 2040, which is observed across all 2040 scenarios shown in Table 4.5-5, is primarily the result of the increase in vehicle fuel efficiency anticipated by 2040 (refer to Section 4.5.1(b), Energy Demand, for a discussion of consumption of gasoline and diesel fuel under existing conditions).

The decrease in per service population energy consumption shown in Table 4.5-5 is based on a business-as-usual estimate of 2040 VMT and does not account for proposed GP/LCP Update Policies from the Circulation Element that would further improve the availability of alternative

transportation modes and help reduce congestion and overall demand for transportation fuels. The Circulation Element contains policies to promote a reduction in VMT through support of alternative transportation. The Circulation Element identifies priorities for upgrades to bicycle facilities, sidewalks, and other amenities for alternative modes of transportation. The relevant Circulation Element policies are:

- **Policy CIR-4.1.7: Neighborhood Context.** Support safe, complete and well-connected neighborhoods for street, bicycle, and pedestrian access. Connections should balance circulation needs within the neighborhood context.
- **Policy CIR-4.1.48: Promote Walking and Bicycling.** Promote walking and bicycle riding for transportation, recreation, commuting, and improvement of public and environmental health. Make downtown more functional and enjoyable for bicyclists and pedestrians. Pedestrian walkways and bicycle paths shall receive at least the same emphasis and attention in future planning as facilities designed for the automobile.
- **Policy CIR- 4.1.51: Existing Facilities.** Maintain and improve existing multimodal circulation and transportation systems and facilities, to maximize alternatives to new street and highway construction. Complete a network of bicycle lanes and paths, sidewalks and pedestrian paths within existing developed parts of the City and extend the system to serve new growth areas.
- **Policy CIR-4.1.52: Integration of Land Use Planning.** Implement land use policies designed to create a pattern of activity that makes it easy to shop, recreate, commute, and conduct personal business without driving.
- **Policy CIR-4.1.58: Bikeways Encouraged.** Bikeways shall be encouraged within the City and adjoining jurisdictions as a complement to Pismo Beach's visitor and recreation emphasis, to reduce automobile trips and for the convenience of visitors and residents. The City's bikeway plan will be coordinated with the San Luis Obispo Area Coordinating Council and Regional Transportation Agency, and the County of San Luis Obispo Regional Transportation Plan.
- **Policy CIR-4.1.68: Pedestrian Circulation.** Sidewalks shall be required for all new developments in residential and commercial areas. Generally, the sidewalk shall be located so that a landscape strip or trees are located between the sidewalk and the vehicular travelled way. Techniques shall be encouraged to create a pleasant walking experience including concern for views, paving materials, landscape, street furniture, and pedestrian scaled lighting. The City encourages the use of flashing beacons or lighted crosswalk systems, especially in highly trafficked areas. All new sidewalk areas shall be designed to accommodate the handicapped, compliant with the ADA. Also, the City shall install (or cause to be installed) sidewalks or footpaths along all collector or arterial streets that connect with commercial centers, public gathering areas and schools.
- **Policy CIR-4.1.70: Pedestrians Connections to Employment Destinations.** Encourage the development of a network of continuous walkways within new commercial, town center, public, and industrial uses to improve workers' ability to walk safely around, to, and from their workplaces. Where possible, route pedestrians to grade separated crossings across US 101.
- **Policy CIR-4.1.71: Pedestrian Connections to Schools.** Continue developing the existing network of walkways between schools and residential uses and encourage the development of new continuous walkways between schools and residential uses. Where possible, route pedestrians to grade separated crossings across US 101.
- **Policy CIR- 4.1.75: Promote Safe, Efficient, and Convenient Public Transportation.** Promote the use of public transportation for daily trips, including to schools and workplaces, as well as other purposes.

- **Policy CIR-4.1.77: Improve Local Transit Operations.** Work with RTA and SCT to continue the present course of expanding the SCT fixed route services and improving operations.
- **Policy CIR 4.1.78: Downtown Transit Priority Area.** Strive to establish a downtown as a Transit Priority Area by establishing transit service of two or more major bus routes with a frequency of 15 minutes or less during the morning and afternoon peak commute periods.
- **Policy CIR-4.1.79: Comprehensive Transit Services.** The City shall support the availability of transit service as a means to reduce automobile congestion, to provide transportation for those who have no other form of transportation, as a means to reduce air pollution, and as a service to visitors. Such support should include, but not be limited to, SCT, Greyhound bus service, vanpools, shuttle bus systems, dial-a-ride services, and cab services.
- **Policy CIR-4.1.81: Multimodal Transfer Centers.** The City will continue to work with Caltrans, SCT, RTA, SLOCOG, and the commuting public to develop multimodal transfer areas or centers that will incorporate automobile parking areas, bike parking, bus, transit, pedestrian bike paths, and park and ride pick-up or drop-off points for carpooling.

Implementation of the GP/LCP Update goals and policies listed above, as well as other policies and implementation actions contained in the GP/LCP Update that would result in indirect energy conservation (such as the promotion of alternative transportation, water conservation, and waste reduction) would promote greater energy efficiency in municipal and community operations and development. Furthermore, the GP/LCP Update land use strategy actively promotes infill and mixed-use development, which would result in increased energy efficiency overall for City residents, businesses, and City operations. Therefore, the GP/LCP Update would not result in wasteful, inefficient, or unnecessary consumption of energy. As a result, this impact would be less than significant.

Mitigation Measure

No mitigation is required because this impact would be less than significant.

Threshold:	Would the GP/LCP Update conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Impact E-2 THE GP/LCP UPDATE WOULD NOT CONFLICT WITH THE ENERGY EFFICIENCY GOALS IN THE PISMO BEACH CLIMATE ACTION PLAN. CONSTRUCTION AND OPERATION OF PROJECTS FACILITATED BY THE GP/LCP UPDATE WOULD COMPLY WITH RELEVANT PROVISIONS OF THE STATE'S CALGREEN PROGRAM AND TITLE 24 OF THE CALIFORNIA ENERGY CODE. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

As discussed in Section 4.7, *Greenhouse Gas Emissions*, Impact GHG-1 ,the GP/LCP Update would not conflict with regional and State plans, policies, and regulations adopted for the purpose of reducing GHG emissions, which would also reduce energy consumption. The PBCAP contains measures intended to increase energy efficiency, expand the use of renewable energy. and facilitate new infill development, which would be located in close proximity to existing transit connections, City services, and employment centers. However, the PBCAP only contains targets to meet the State's 2020 GHG reduction goals established in AB 32. Implementation of GP/LCP Update Conservation and Open Space Element Policy COS-1.1h would establish GHG reduction goals consistent with the State's 2030 and 2050 greenhouse gas emissions reduction goals. Conservation Element Policies COS-1.1i, COS-1.1j, and COS-1.1k would require the City to update the CAP to comply with evolving state goals and requirements and would ensure that the CAP continues to

provide measures for future development projects in the planning area to assess their consistency with City GHG reduction goals. The PBCAP transportation and land use measures recognize that energy-efficient designs or growth that facilitates mixed-use, higher density, and infill development near transit stops, in existing community centers, allows for more efficient use of existing infrastructure and improves City-wide efforts to reduce GHG emissions (City of Pismo Beach 2014). Therefore, the GP/LCP Update would facilitate the consistency of future development projects with both mandatory and voluntary measures of the CAP, resulting in reduced per service population energy consumption. Therefore, the GP/LCP Update would not conflict with local plans for renewable energy and energy efficiency.

As described in Impact E-1, construction and operation of new development facilitated by the GP/LCP Update would result in indirect energy conservation (such as the promotion of alternative transportation, water conservation, and waste reduction) would promote greater energy efficiency in municipal and community operations and development. New development that would be facilitated by the GP/LCP Update would be required to comply with relevant provisions of CALGreen and Title 24 of the California Energy Code. Therefore, this impact would be less than significant.

Mitigation Measures

This impact would be less than significant, and no additional mitigation is required.

4.5.4 Cumulative Impacts

The analysis in this section examines impacts of the GP/LCP Update on cumulative energy impacts throughout the County of San Luis Obispo (the cumulative impact analysis area) and is cumulative in nature. Based on the comparisons of GP/LCP Update buildout electricity, natural gas, and fuel demand to existing local demand for these resources shown in Table 4.5-4 and Table 4.5-5, energy demand associated with GP/LCP Update buildout would result in a decrease in cumulative energy demand over the life of the GP/LCP Update. As described in Impact E-1, construction and operation of all new development facilitated by the GP/LCP Update would be consistent with the City's adopted goals and policies to increase energy efficiency and would be required to comply with relevant provisions of CALGreen and Title 24 of the California Energy Code. Furthermore, California's use of non-renewable electricity and natural gas are expected to continue to decline as a proportion of overall energy demand due to stringent energy efficiency measures and a growing acceptance of solar power by residential and commercial customers. Therefore, the GP/LCP Update would not be expected to contribute substantially to a cumulative increase in energy demand, result in wasteful, inefficient, or unnecessary consumption of energy, or result in the need for construction of new major facilities or substantial alteration of existing facilities to meet projected energy demands and cumulative impacts would be less than significant.

4.6 Geology and Soils

This section of the EIR analyzes the potential physical environmental effects related to seismic hazards, underlying soil characteristics, slope stability, and erosion from implementation of the proposed General Plan/Local Coastal Plan (GP/LCP) Update.

4.6.1 Setting

a. Geologic Setting

Pismo Beach lies at the tectonically active southern end of the Coast Ranges geomorphic province and contains geologic units ranging in age from Jurassic to recent. The Coast Ranges extend about 600 miles from the Oregon border south to the Santa Ynez River in Santa Barbara County and are characterized by numerous north-south–trending peaks and valleys that range in elevation from approximately 500 feet above mean sea level (amsl) to 7,581 feet amsl at the highest summit (California Geological Survey 2002). The basement rocks of the Coast Ranges include the Jurassic to Cretaceous rocks of the Franciscan Assemblage, which consist of over 55,000 feet of greywacke, greenstone, bluestone, metasedimentary rocks, and ophiolite sequences. During the Mesozoic and into the Cenozoic, the area of the present-day Coast Ranges was covered by marine waters, resulting in the thick accumulation of marine and nonmarine shale, sandstone, and conglomerate on the Franciscan basement rock. Later, these deposits were unconformably overlain by Paleocene to Pliocene continental shelf marine sedimentary rocks. During the Late Miocene to the Late Pliocene, a mountain-building episode occurred in the vicinity of the present-day Coast Ranges, resulting in their uplift above sea level. Subsequently, from the Late Pliocene to Pleistocene, extensive deposits of terrestrial material, including alluvial fans and fluvial sediments, were deposited in the Coast Ranges (Norris and Webb 1990). Ongoing tectonic deformation and sea level change related to Pleistocene climate fluctuations continued through the Quaternary Period, resulting in the formation of marine terrace platforms along the Coast Ranges.

b. Geologic and Seismic Hazards

Geologic and seismic hazards are caused by the movement of the earth's surface. The most common geologic or seismic hazards are associated with earthquakes, which cause the earth's surface to move rapidly and the ground to shake. Pismo Beach has experienced the effects of several seismic events in the past 150 years. The most recent earthquake that impacted Pismo Beach was the San Simeon earthquake in 2003, which resulted in building damage and small fires in San Luis Obispo County.

There are no Alquist-Priolo earthquake fault zones within the City. There are seven seismically active faults that have been identified in San Luis Obispo County, with potential to affect the City of Pismo Beach (City). These faults include the Los Osos Fault, the Hosgri fault, the Oceanic-West Huasna fault, the Rinconada fault, the East Huasna fault, the La Panza fault, the San Andreas fault, and the Wilmar Avenue fault. Other faults not included in this list, as well as faults located outside of the Pismo Beach region, may be capable of generating earthquakes that could cause damage in the City. The only fault within City limits is the Wilmar Avenue fault, which terminates on the south end of the City. The Wilmar Avenue Fault is exposed in the sea cliff near Pismo Beach and is considered potentially active. In addition, there may be unknown faults in the area that could cause significant ground shaking or fault rupture. Figure 4.6-1 identifies the location of known fault lines in the vicinity of Pismo Beach.

Seismic activity can trigger other types of hazards, including surface rupture, groundshaking, liquefaction, landslides, subsidence and tsunamis. The effects of tsunamis are discussed in detail in Section 4.9, Hydrology and Water Quality. These effects of surface rupture, groundshaking, liquefaction, landslides, and subsidence are described below.

Fault Rupture

Fault rupture is the movement of the ground surface along a fault line when the plates slip past each other. Depending on the type of fault, the movement may be vertical, horizontal, or both. The damage can be severe, as any building or structure that straddles the fault is effectively pulled in two directions at once. However, the damage area from fault rupture is generally limited to locations on the fault itself. Some earthquakes can occur without causing fault rupture. Such earthquakes are usually small, but some can be much more substantial, such as the 2003 San Simeon earthquake. These events are known as "blind thrust earthquakes." As shown on Figure 4.6-1, the Wilmar Avenue fault is located within the City, terminating on the south end of the City, and poses a risk of fault rupture hazard along the fault trace.

Groundshaking

Groundshaking occurs when the passage of seismic waves causes the ground to shake, resulting in damage to structures. Groundshaking is triggered by seismic activity on faults and is most likely to occur near regional fault lines shown on Figure 4.6-1.

Liquefaction

Liquefaction occurs when loose soil loses strength and behaves like a liquid during an earthquake, creating the potential for structural damage to buildings in the vicinity, as shown in Figure 4.6-2. There is only one area of high liquefaction risk, on the beach west of North Beach Campground and at the mouth of Pismo Creek. Areas of moderate liquefaction risk can be found in the southernmost coastal area of Pismo Beach as well as along Pismo Creek (San Luis Obispo County Planning and Building Department 2016).

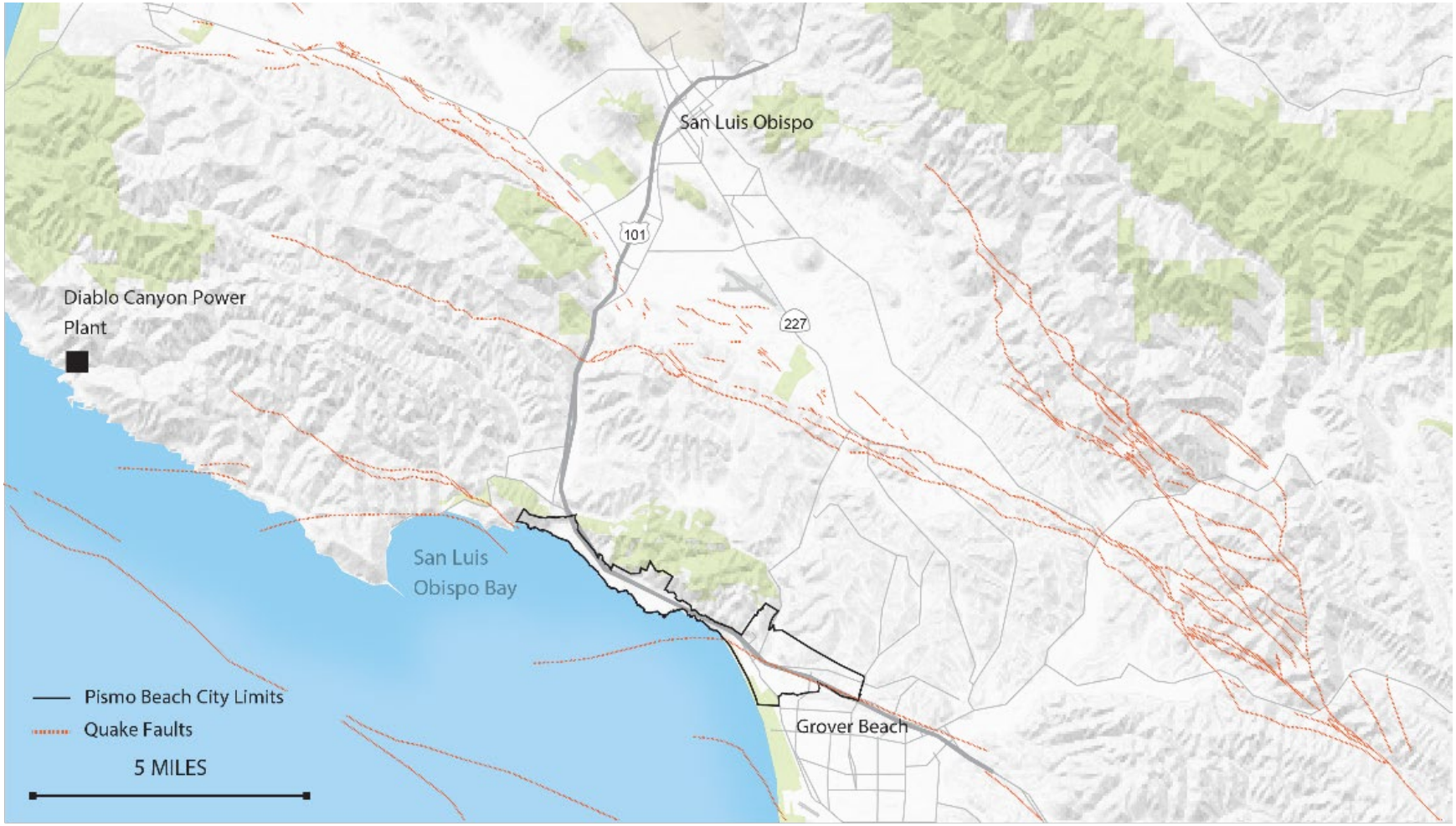
Landslides

Landslides can be caused by shaking of an earthquake causing loose material to slide down a slope. Landslide risk is higher in the eastern portion of the City, as shown in Figure 4.6-3. Areas that are considered high or very high risk are concentrated in the eastern portion of the City where development is sparse. These areas include some residential, commercial, and natural lands east of U.S. 101.

Expansive Soils

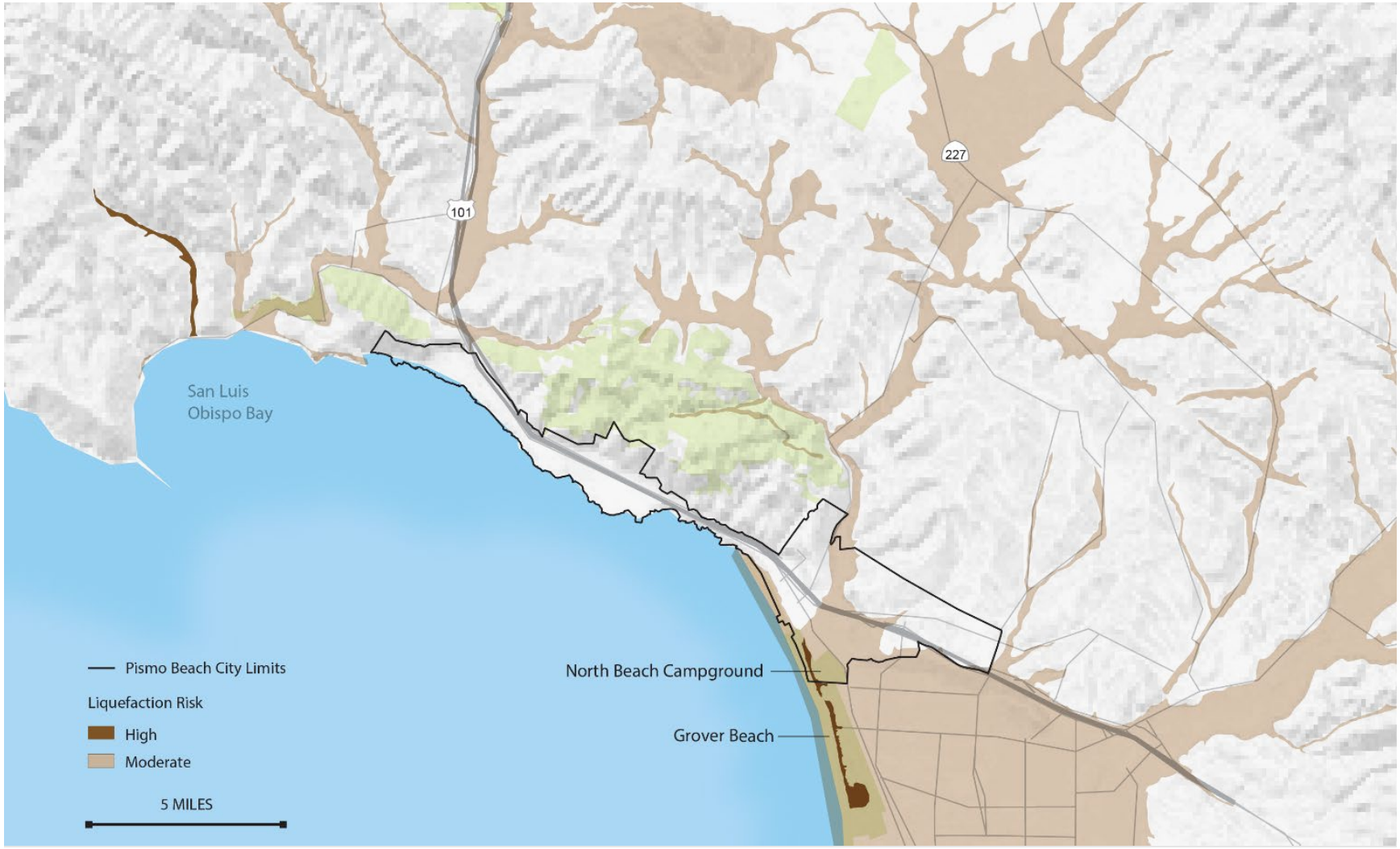
Soils have the ability to damage houses by being especially expansive or corrosive. There are three soil types present within Pismo Beach city limits. The primary soil type are mollisols, with entisols and alfisols covering a smaller portion of land in eastern Pismo Beach (NRCS 1994). None of these soils are considered expansive.

Figure 4.6-1 Regional Fault Lines



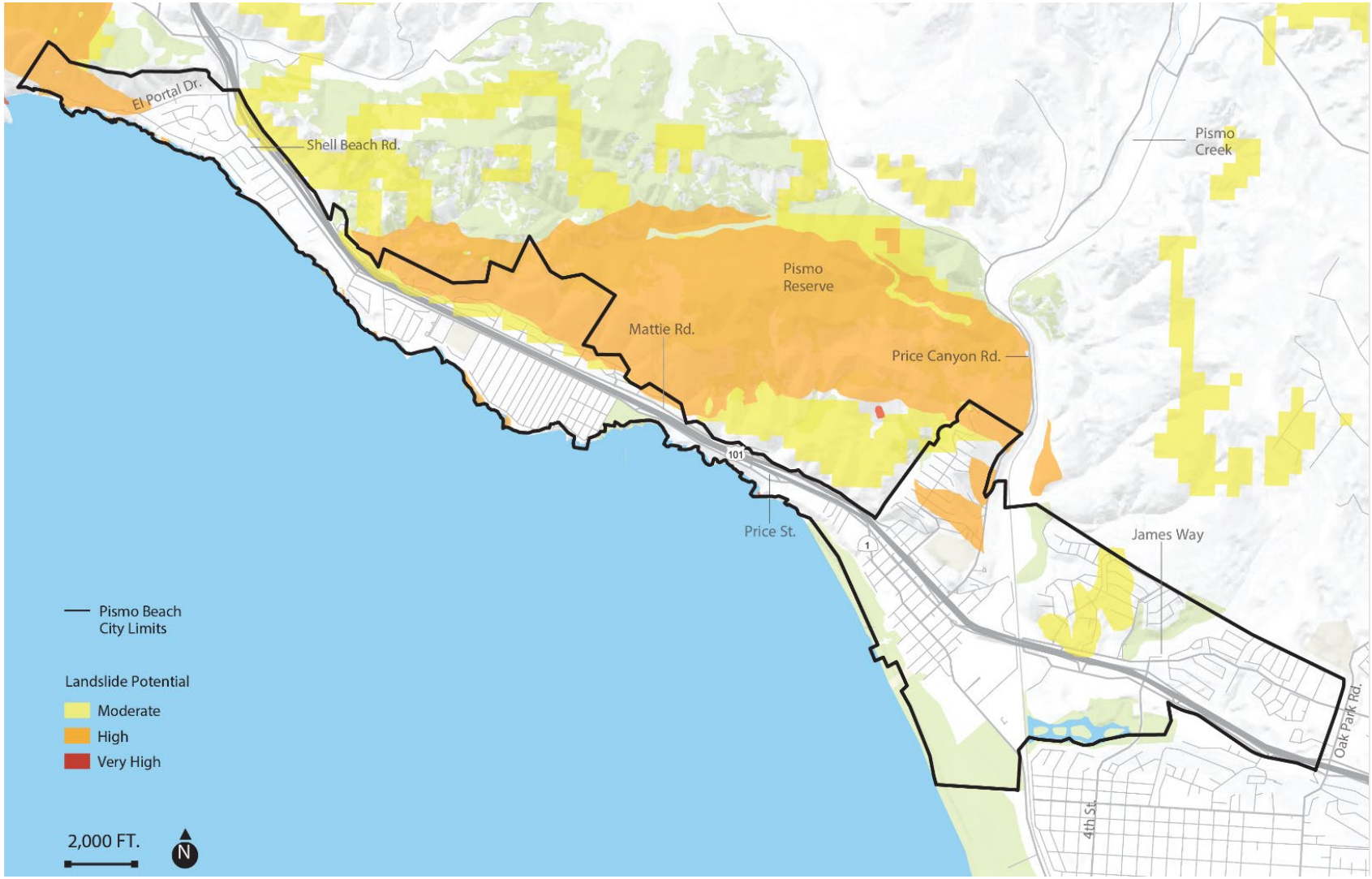
Note: For the purposes of this map, this figure does not include the submerged lands offshore that are within the Pismo Beach City Limits. See Figure LU-1 of the General Plan/Local Coastal Plan Land Use Element (Pismo Beach LAFCO-approved City Border) for the full Pismo Beach City Limits.

Figure 4.6-2 Liquefaction Susceptibility



Source: County of San Luis Obispo 2019.
Note: For the purposes of this map, this figure does not include the submerged lands offshore that are within the Pismo Beach City Limits. See Figure LU-1 of the General Plan/Local Coastal Plan Land Use Element (Pismo Beach LAFCO-approved City Border) for the full Pismo Beach City Limits.

Figure 4.6-3 Landslide Susceptibility



Source: County of San Luis Obispo 2019.

Note: For the purposes of this map, this figure does not include the submerged lands offshore that are within the Pismo Beach City Limits. See Figure LU-1 of the General Plan/Local Coastal Plan Land Use Element (Pismo Beach LAFCO-approved City Border) for the full Pismo Beach City Limits.

Coastal Bluff Erosion

Slope and bluff erosion and instability has historically been a common hazard in Pismo Beach, and is expected to increase as a result of sea level rise. Approximately five miles of the northwestern coastline of the City consists of cliffs and bluffs, which range from 10 to 100 feet tall. There is a high risk for erosion across nearly all of Pismo Beach's coastline (Herberger 2009). Erosion has claimed public and private investments in the past and continues to threaten these abutting properties today. High tides and waves can cause erosion of beach environments, including sand dunes, at varying rates, depending of the types of geologic units in the area. Over time, erosion can degrade coastal access, decrease beach quality, and weaken dunes that help to protect coastal structures. While erosion is driven by natural processes, human activities such as shoreline hardening, dredging, and coastal structures can alter natural processes and exacerbate erosion.

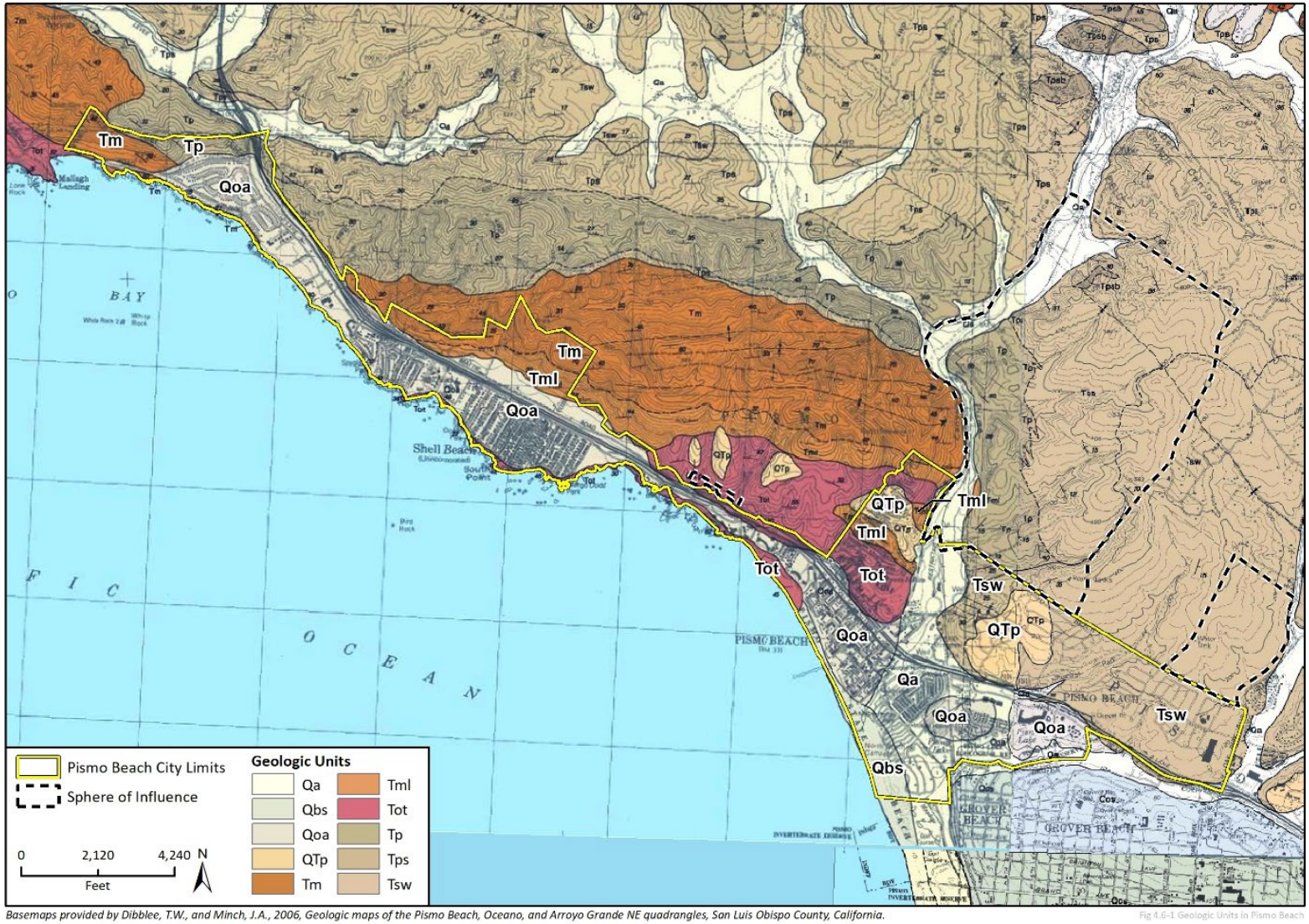
Residential and recreational development are the primary uses that occupy bluff areas, including The Bluffs residential planning area and South Palisades Park. Developments on top of the bluffs are endangered by erosion and subject to considerable setbacks and other measures to ensure that development will not occur on plots that are in imminent danger of erosion.

Paleontological Resources

Paleontological resources, or fossils, are the remains and/or traces of prehistoric life. Fossils are typically preserved in layered sedimentary rocks and the distribution of fossils is a result of the sedimentary history of the geologic units within which they occur. Fossils occur in a non-continuous and often unpredictable distribution within some sedimentary units, and the potential for fossils to occur within sedimentary units depends on several factors. Although it is not possible to determine whether a fossil will occur in any specific location, it is possible to evaluate the potential for geologic units to contain scientifically significant paleontological resources, and therefore evaluate the potential for impacts to those resources and provide mitigation for paleontological resources if they do occur during construction. A list of the geologic units mapped at the surface within Pismo Beach is provided in Figure 4.6-4 (Dibblee and Minch 2006a, b).

Significant paleontological resources are determined to be fossils or assemblages of fossils that are unique, rare, diagnostically important, or are common but have the potential to provide valuable scientific information for evaluating evolutionary patterns and geologic processes. New or unique specimens can provide new insights into evolutionary history; however, additional specimens of even well represented lineages can be equally important for studying evolutionary pattern and process and evolutionary rates. As such, common fossils, especially vertebrates, may be scientifically important. Refer to Table 4.6-1 for the paleontological sensitivities of the geologic units mapped within the City of Pismo Beach.

Figure 4.6-4 Geologic Units in the City of Pismo Beach



Basemaps provided by Dibblee, T.W., and Minch, J.A., 2006, Geologic maps of the Pismo Beach, Oceano, and Arroyo Grande NE quadrangles, San Luis Obispo County, California.

Fig 4.6-1 Geologic Units in Pismo Beach

Note: For the purposes of this map, this figure does not include the submerged lands offshore that are within the Pismo Beach City Limits. See Figure LU-1 of the General Plan/Local Coastal Plan Land Use Element (Pismo Beach LAFCO-approved City Border) for the full Pismo Beach City Limits.

Table 4.6-1 Geologic Units in the City of Pismo Beach

Geologic Unit[1]	Description	Age	Sensitivity
(Qa) Quaternary young alluvial deposits	Active and recently active floodplain deposits of. Consists of unconsolidated sandy, silty, and clay-bearing alluvium.	Late Holocene	Low at the surface, increases at depth (high sensitivity at depths below 5 feet)
(Qbs) Quaternary young beach sand	Unconsolidated beach deposits consisting mostly of fine- to medium-grained well-sorted sand.	Late Holocene	Low
(Qoa) Quaternary old alluvial deposits	Moderately consolidated, slightly dissected gravel, sand, silt and clay-bearing alluvium, capped by moderate to well-developed soils	Late to middle Pleistocene	High
(QTp) Paso Robles Formation	Alluvial gravel, sand and clay, light medium gray, pebbles mostly of white siliceous shale from Monterey Formation.	Pleistocene to Pleiocene	High
(Tsw) Squire Sandstone	Sandstone, white to gray-white, fine to medium grained, arkosic, friable; equivalent to Careaga Sandstone of Santa Maria basin and Squire Member of Pismo Formation.	Pliocene	High
(Tp, Tps) Pismo Formation	Tp-- Claystone, siltstone, gray, weathered tan, vaguely bedded, includes sandstone, similar to Tps Tps--Massive, white, calcareous, fine- to medium-grained, quartzose to arkosic, silty sandstone. Sand grains subrounded to subrangular; 75-80% quartz, 15-20% feldspar; less than 15% mafic minerals. Contains lenses of white, well-rounded pebbles and cobbles of Monterey and Obispo Formation clasts near mouth of San Luis Obispo Creek. Bioturbated with greenish glauconitic sand coatings and clay and silt interbeds in footwall of Wilmar Avenue Fault at Pismo Beach.	Early Pliocene to late Miocene	High
(Tm, Tml) Monterey Formation	Tm- Bedded, resistant chert, color varies from white and gray to brown and reddish-brown, weathering to chalky white. Brittle, conchoidal fracturing, commonly sheared, beds ½ to 6-inches thick, commonly laminated, locally interbedded with diatomite. Tml- Shale, cream-white-weathered, thin-bedded, fissible; includes thin calcareous layers, mostly at base	Late to middle Miocene	High
(Tot) Obispo Formation	Tuff and tuff breccia, white to creamy-white, locally silicified or zeolitized to coherent rock	Early to middle Miocene	Low

A review of the museum records maintained in the University of California Museum of Paleontology (UCMP) online collections database did not result in any vertebrate fossil localities within late Holocene alluvial deposits (Qa), late Holocene beach sand (Qbs), or early to middle Miocene Obispo Formation (Tot) (UCMP 2021). However, the UCMP reports at least one vertebrate fossil locality (V6546) in San Luis Obispo County from Quaternary old (Pleistocene) alluvial deposits (e.g., Qoa), which yielded specimens of camelid (Camelidae). Three vertebrate fossil localities (V5406, V97131, V97132) from Pleistocene to Pliocene Paso Robles Formation (QTp), which produced specimens of Hagerman horse (*Equus simplicidens*), were documented in San Luis Obispo and Monterey counties.

The UCMP reports six additional vertebrate fossil localities (V6616, V70148, V73143, V74087, V75025, V99650) in San Luis County from Pliocene Squire Sandstone (Tsw) and Early Pliocene to late Miocene Pismo Formation (Tp, Tps), which yielded specimens of Cuesta sea cow (*Hydrodamalis cuestae*), toothed whale (Odontoceti), baleen whale (Mysticeti), seal (Pinnipedia), dugong (*Dusisiren*), hooked-tooth mako shark (*Isurus planus*) horse (*Equus*), and bird (Gavia concinna). Furthermore, numerous vertebrate localities have been documented from the Monterey Formation (Tm, Tml), which yielded specimens of large sea turtles, whale, dolphins, sea lions, shark bones and teeth, sea cows, desmostylians, fish, birds, and many other fauna (Bramlette 1946; Paleobiology Database 2021; UCMP 2021).

4.6.2 Regulatory Setting

a. Federal Regulations

Clean Water Act

Congress enacted the Clean Water Act (CWA), formerly the Federal Water Pollution Control Act of 1972, with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and non-point source discharges to surface water. Those discharges are regulated by the National Pollutant Discharge Elimination System (NPDES) permit process (CWA Section 402). NPDES permitting authority is administered by the California State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs). Pismo Beach extends across two watersheds of the South County sub-region: Pismo Creek Watershed (No. 8) and Arroyo Grande Creek Watershed (No. 9), which is administered by the Central Coast RWQCB.

Individual projects within the City that disturb more than one acre would be required to obtain coverage under the California *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Construction General Permit). The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) describing Best Management Practices (BMPs) the discharger would use to manage storm water runoff and to reduce soil erosion.

Disaster Mitigation Act of 2000

Congress passed the Disaster Mitigation Act of 2000 to amend the Robert T. Stafford Disaster Relief and Emergency Assistance Act by invoking new and revitalized approaches to mitigation planning. Section 322 of the Act emphasized the need for state and local government entities to closely coordinate on mitigation planning activities and makes the development of a hazard mitigation plan a specific eligibility requirement for any local government applying for federal mitigation grant funds. Communities with an adopted and federally-approved hazard mitigation plan thereby become pre-positioned and more apt to receive available mitigation funds before and after the next declared disaster.

To implement the new Stafford Act provisions, FEMA published requirements and procedures for local hazard mitigation plans in the Code of Federal Regulations (CFR) at Title 44, Chapter 1, Part 201.6. These regulations specify minimum standards for developing, updating, and submitting local hazard mitigation plans for FEMA review and approval at least once every five years.

b. State Regulations

California Building Code

The California Building Code (CBC), Title 24, Part 2 provides building codes and standards for the design and construction of structures in California. The 2019 CBC is based on the 2015 International Building Code with the addition of more extensive structural seismic provisions. Chapter 16 of the CBC contains definitions of seismic sources and the procedure used to calculate seismic forces on structures. The CBC requires addressing soil-related hazards, such as treating hazardous soil conditions involving removal, proper fill selection, and compaction. In cases where soil remediation is not feasible, the CBC requires structural reinforcement of foundations to resist the forces of expansive soils.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 was passed into law following the destructive February 9, 1971 San Fernando earthquake. The Alquist-Priolo Act provides a mechanism for reducing losses from surface fault rupture on a statewide basis. The intent of the Alquist-Priolo Act is to ensure public safety by prohibiting the siting of most structures for human occupancy across traces of active faults that constitute a potential hazard to structures from surface faulting or fault creep. The Alquist-Priolo Act groups faults into categories of active, potentially active, and inactive. Historic and Holocene age faults are considered active, Late Quaternary and Quaternary age faults are considered potentially active, and pre-Quaternary age faults are considered inactive.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (the Act) of 1990 was passed into law following the destructive October 17, 1989 Loma Prieta earthquake. The Act directs the CGS to delineate Seismic Hazard Zones. The purpose of the Act is to reduce the threat to public health and safety and to minimize the loss of life and property by identifying and mitigating seismic hazards. Cities, counties, and State agencies are directed to use seismic hazard zone maps developed by CGS in their land-use planning and permitting processes. The Act requires that site-specific geotechnical investigations be performed prior to permitting most urban development projects within seismic hazard zones.

California Environmental Quality Act

Paleontological resources are protected under CEQA, which states in part a project will “normally” have a significant effect on the environment if it, among other things, will disrupt or adversely affect a paleontological site except as part of a scientific study. Specifically, in Section VII(f) of Appendix G of the State CEQA Guidelines, the Environmental Checklist Form, the question is posed thus: “Will the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.” To determine the uniqueness of a given paleontological resource, it must first be identified or recovered (i.e., salvaged). Therefore, CEQA mandates mitigation of adverse impacts, to the extent practicable, to paleontological resources.

CEQA does not define "a unique paleontological resource or site." However, the Society of Vertebrate Paleontology (SVP) has defined a "significant paleontological resource" in the context of environmental review as follows:

> Fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are typically to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years) (SVP 2010).

The loss of paleontological resources meeting the criteria outlined above (i.e., a significant paleontological resource) would be a significant impact under CEQA, and the CEQA lead agency is responsible for ensuring that impacts to paleontological resources are mitigated, where practicable, in compliance with CEQA and other applicable statutes.

California Public Resources Code

Section 5097.5 of the Public Resources Code states:

> No person shall knowingly and willfully excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

Here "public lands" means those owned by, or under the jurisdiction of, the state or any city, county, district, authority, or public corporation, or any agency thereof. Consequently, public agencies are required to comply with Public Resources Code Section 5097.5 for their own activities, including construction and maintenance, and for permit actions (e.g., encroachment permits) undertaken by others.

c. Local Regulations

General Plan

California Government Code Section 65300 describes the scope and authority of local jurisdictions to prepare, adopt, and amend general plans. Communities prepare general plans to guide the long-term physical development of the jurisdiction, and any land within the jurisdiction's sphere of influence (SOI). At a minimum, the California Government Code requires general plans to address land use, circulation, housing, noise, conservation, open space, and safety issues. The City's current GP/LCP includes two parts as required by the Coastal Act: a Land Use Plan (LUP), which was last updated in 1993, and the Implementation Plan (IP), which was last updated in 1983, with several amendments to both documents occurring since.

The Conservation and Open Space Element guides the protection of natural and cultural resources and conservation areas important to the environment, quality-of-life, and visual character of Pismo Beach. This element identifies local goals that present the projected characteristics of the City's natural environment in 2040, policies that measure progress toward the goals, and actions that

identify the regulatory tools the City can use to meet those goals, including those relating to reducing erosion.

The Safety Element includes goals, policies, and actions to guide development towards locations and patterns that reduce risk and increase resilience to hazard events. Like many California coastal communities, Pismo Beach is most susceptible to hazards involving earthquakes, flooding, landslides, and wildfires. As a result of climate change and sea level rise, Pismo Beach is forecasted to experience more severe fire and flooding and worsening air pollution, coastal erosion, and extreme heat.

Pismo Beach Municipal Code

The Buildings and Construction Ordinance of the City of Pismo Beach, Title 15 of the Pismo Beach Municipal Code, adopts by reference the 2019 CBC (Volumes 1 and 2). Municipal Code Chapter 15.08 includes construction regulations for seismic safety requiring structural analysis of buildings to be conducted by a civil or structural engineer or architect licensed by the State and requires any noncomplying structures to be altered or demolished. Municipal Code Chapter 17.078 regulates bluff development, sets standards for development that protect coastal bluff in Pismo Beach from erosion, and establishes a bluff and bluff setback zones where projects may be required to apply for conditional use permit and undergo review by the Planning Division to ensure erosion and other seismic and geologic hazards are minimized. Municipal Code Chapter 13.14 regulates discharge from septic tanks in the City by prohibiting dumping or discharging septic tank cleanings or any raw or chemically treated sewage from septic tanks. Chapter 13.28 regulates stormwater discharge and requires erosion and sediment controls when a project requiring a grading permit may create a source of pollution. Chapter 17.24.020 of the Municipal Code requires an archeological surface survey and contains unanticipated discovery measures for paleontological materials during construction.

Local Hazard Mitigation Plan/Multi-Jurisdictional Hazard Mitigation Plan

In 2014 the City of Pismo Beach adopted a Local Hazard Mitigation Plan (2014 HMP). The 2014 HMP is a plan to improve resiliency in the community by identifying natural hazards present in Pismo Beach, determining the community's vulnerability to each hazard, and identifying development mitigation strategies to reduce vulnerability before emergency situations develop. The 2014 HMP identifies earthquakes (including fault rupture and liquefaction), floods, landslides, bluff erosion, and hazardous material releases as the most significant hazards present in the community, and includes goals, objectives, and mitigation to improve resiliency to these hazards.

In 2019 Pismo Beach participated in the development of the County of San Luis Obispo Multi-Jurisdictional Hazard Mitigation Plan (HMP; County of San Luis Obispo 2019). The County of San Luis Obispo HMP was originally developed in 2005, updated in 2011 and 2013, and underwent a comprehensive update in 2019. A significant change to the plan in 2019 was the inclusion of other County municipalities and special districts, broadening it from a County-specific plan to a multi-jurisdictional document prepared in coordination with the participating entities and input from the public. The County Multi-Jurisdictional HMP entails adopting, implementing, assigning responsibility, monitoring, and reviewing this hazard mitigation plan over time, to ensure the goals and objectives are being achieved and the plan remains a relevant document.

4.6.3 Impact Analysis

a. Methodology

This section describes the potential environmental impacts of the GP/LCP Update relevant to geology and soils. The impact analysis is based on conditions in the City outlined in the Conservation and Open Space and Safety Elements of the GP/LCP Update (Appendix B), including topography, geologic and soil conditions, and seismic hazards, as described under Section 4.61, Setting. This analysis identifies potential impacts based on the predicted interaction between the affected environment and construction, operation, and maintenance activities related to development facilitated by the GP/LCP. This section describes impacts in terms of location, context, duration, and intensity.

Paleontological Resources Sensitivity

Paleontological sensitivity refers to the potential for a geologic unit to produce scientifically important fossils. Direct impacts to paleontological resources occur when earthwork activities, such as grading or trenching, cut into the geologic deposits within which fossils are buried and physically destroy the fossils. Since fossils are the remains of prehistoric animal and plant life, they are considered to be nonrenewable. Such impacts have the potential to be significant. Sensitivity is determined by rock type, past history of the geologic unit in producing significant fossils, and fossil localities recorded from that unit. Paleontological sensitivity is derived from the known fossil data collected from the entire geologic unit, not just from a specific survey.

The discovery of a vertebrate fossil locality is of greater significance than that of an invertebrate fossil locality, especially if it contains a microvertebrate assemblage. The recognition of new vertebrate fossil locations could provide important information on the geographical range of the taxa, their radiometric age, evolutionary characteristics, depositional environment, and other important scientific research questions. Vertebrate fossils are almost always significant because they occur more rarely than invertebrates or plants. Thus, geological units having the potential to contain vertebrate fossils are considered the most sensitive.

The (SVP) outlines in its Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources guidelines for categorizing paleontological sensitivity of geologic units within a project area (SVP 2010). The SVP describes sedimentary rock units as having a high, low, undetermined, or no potential for containing significant nonrenewable paleontological resources (2010). This criterion is based on rock units within which vertebrates or significant invertebrate fossils have been determined by previous studies to be present or likely to be present. Significant paleontological resources are fossils or assemblages of fossils, which are unique, unusual, rare, uncommon, diagnostically or stratigraphically, taxonomically, or regionally. The paleontological sensitivity of Pismo Beach has been evaluated according to the following SVP (2010) categories, which are presented below.

High Potential (Sensitivity)

Rock units from which significant vertebrate or significant invertebrate fossils or significant suites of plant fossils have been recovered are considered to have a high potential for containing significant non-renewable fossiliferous resources. These units include but are not limited to, sedimentary formations and some volcanic formations which contain significant nonrenewable paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or

lithologically suitable for the preservation of fossils. Sensitivity comprises both (a) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, or botanical and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, ecologic, or stratigraphic data. Areas which contain potentially datable organic remains older than recent, including deposits associated with nests or middens, and areas that may contain new vertebrate deposits, traces, or trackways are also classified as significant. Full-time monitoring is typically recommended during any project-related ground disturbance in geologic units with high sensitivity.

Low Potential (Sensitivity)

Sedimentary rock units that are potentially fossiliferous, but have not yielded fossils in the past or contain common and/or widespread invertebrate fossils of well documented and understood taphonomic (processes affecting an organism following death, burial, and removal from the ground), phylogenetic species (evolutionary relationships among organisms), and habitat ecology. Reports in the paleontological literature or field surveys by a qualified vertebrate paleontologist may allow determination that some areas or units have low potentials for yielding significant fossils prior to the start of construction. Generally, these units will be poorly represented by specimens in institutional collections and will not require protection or salvage operations.

Undetermined Potential (Sensitivity)

Specific areas underlain by sedimentary rock units for which little information is available are considered to have undetermined fossiliferous potentials. Field surveys by a qualified vertebrate paleontologist to specifically determine the potentials of the rock units are required before programs of impact mitigation for such areas may be developed.

No Potential

Rock units of metamorphic or igneous origin are commonly classified as having no potential for containing significant paleontological resources. For geologic units with no sensitivity, a paleontological monitor is not required.

b. Significance Thresholds

The following thresholds of significance are based on Appendix G of the CEQA Guidelines. For the purposes of this EIR, implementation of the GP/LCP Update may have a significant adverse impact if it would do any of the following:

1. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
    a) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault
    b) Strong seismic ground shaking
    c) Seismic-related ground failure, including liquefaction
    d) Landslides

2. Result in substantial soil erosion or the loss of topsoil
3. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse
4. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property
5. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater
6. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

There are three soil types present within Pismo Beach city limits. The primary soil type are mollisols, with entisols and alfisols covering a smaller portion of land in eastern Pismo Beach (NRCS 1994). None of these soils are considered expansive. Therefore, development under the GP/LCP Update would not result on development on expansive soils; impacts related to Threshold 4 would not occur and Threshold 4 is not analyzed further below.

This section does not analyze the exposure of new structures to geologic hazards because it is an impact of the environment on the project. The California Supreme Court held in a December 2015 opinion (*BIA v. BAAQMD*) that an analysis of impacts of the environment on a project is not required for CEQA compliance.

c. Project Impacts and Mitigation Measures

Threshold 1a:	Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?
Threshold 1b:	Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?
Threshold 1c:	Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?
Threshold 1d:	Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?
Threshold 3:	Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Impact GEO-1 CONSTRUCTION OF NEW BUILDINGS UNDER THE GP/LCP UPDATE WOULD NOT EXACERBATE SEISMIC HAZARDS, BUT IMPROPERLY CONSTRUCTED BUILDINGS MAY EXACERBATE LANDSLIDE RISK. ADHERENCE TO REQUIREMENTS OF THE CALIFORNIA BUILDING CODE AND IMPLEMENTATION OF THESE GOALS AND POLICIES OF THE GP/LCP UPDATE WOULD MINIMIZE THE POTENTIAL FOR LOSS, INJURY, OR DEATH FOLLOWING A SEISMIC EVENT, LANDSLIDE, LIQUEFACTION, OR OTHER GEOLOGIC HAZARDS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

As discussed in Section 4.5.1, Setting, there are seven seismically active faults that have been identified in San Luis Obispo County, with potential to affect the City. Faults depicted in Figure 4.6-1, as well as unknown faults may also be capable of generating earthquakes.

Development under the GP/LCP Update would result in additional residential and nonresidential development in the City. While additional residents and employees and new structures would be exposed to the effects of existing seismic hazards, including fault rupture, seismic groundshaking, liquefaction, and landslides from local and regional earthquakes, but the project would not exacerbate the risk of seismic hazards occurring. The GP/LCP Update would encourage infill development and redevelopment of existing underutilized land uses, which would in some cases replace older buildings subject to seismic damage with newer structures built to current seismic standards that would better withstand the adverse effects of strong ground shaking.

Structures built on steep slopes could be exposed to an existing risk of landslide or if improperly constructed could exacerbate existing landslide conditions through improper weight distribution. Potential structural damage and exposure of people to the risk of injury or death from structural failure would be minimized through required compliance with CBC engineering design and construction measures. Foundations and other structural support features are required to be designed to resist or absorb damaging forces from strong ground shaking and liquefaction.

In addition to mandatory compliance with CBC requirements, implementation of the following GP/LCP Update Safety Element goals and policies would further reduce the potential for loss, injury, or death from seismic hazards by prohibiting development in areas of landslide risk or liquefaction without site-specific analysis, including areas of geologic and seismic hazards in the Hazardous Overlay and Protection Zone, and other relevant policies.

- **Policy S-2.6 – Geologic and Seismic Hazards.** Land areas subject to hazards associated with steep slopes, slope instability, and/or drainage problems shall be included in the Hazardous Overlay and Protection Zone. Generally, all lands in excess of 10% slope shall be included.
  - **Action S-2.6a – Development Review in Seismic Hazard Areas.** Geologic reports shall be required and shall be reviewed by the appropriate decision-making body, prior to approval of any development permits for any projects located within the Hazardous Overlay Zone.
  - **Action S-2.6b – Landslide Hazards.** Prohibit development in landslide risk areas without a site-specific slop stability analysis.
  - **Action S-2.6c – Liquefaction Hazards.** Prohibit development in areas of high potential liquefaction without a site-specific analysis of liquefaction potential.
  - **Action S-2.6d – New Construction Across Faults.** Prohibit new construction directly astride or across known faults, or fault zones. Nonstructural land uses shall not be allowed.
  - **Action S-2.6e – Brick and Masonry Nonreinforced Buildings.** Reduce the hazards from brick or masonry nonreinforced buildings by requiring building strengthening or demolition as these properties make substantial redevelopments.
  - **Action S-2.6f – Pipelines.** Target pipelines in seismic areas for upgrades and automatic seismic shut-off switches on pipelines that supply natural gas to customers.

Implementation of these GP/LCP Update goals and policies would minimize risks associated with potential fault rupture, seismic shaking, and other geologic hazards in the City. Action 2.6b and 2.6c would prohibit new development in areas subject to liquefaction and/or landslide hazards unless a site-specific analysis is prepared. A detailed review of design and construction plans and incorporation of additional structural safety features would be required on a project-by-project basis, as necessary, for structures that would be located on steep slopes or in areas subject to seismic hazards such as extreme ground shaking or high risk liquefaction areas of the City. These policies would also ensure that adequate emergency response is available during seismic events and would educate the public on earthquake preparedness. Implementation of these goals and policies, in addition to compliance with applicable laws and regulations, would minimize the potential for loss, injury, or death following a seismic event. Therefore, this impact would be less than significant.

Mitigation Measures

No mitigation measures are required.

Threshold 2: Would the project result in substantial soil erosion or the loss of topsoil?

Impact GEO-2 CONSTRUCTION OF NEW DEVELOPMENT UNDER THE GP/LCP UPDATE WOULD INCLUDE GROUND DISTURBANCE THAT WOULD RESULT IN LOOSE OR EXPOSED SOIL THAT COULD BE ERODED BY WIND OR DURING A STORM EVENT, RESULTING IN THE LOSS OF TOPSOIL. COMPLIANCE WITH APPLICABLE REGULATIONS, INCLUDING THE CLEAN WATER ACT, AND IMPLEMENTATION OF GOALS AND POLICIES OF THE GP/LCP UPDATE WOULD MINIMIZE THE POTENTIAL FOR EROSION AND LOSS OF TOPSOIL AND WOULD ENSURE THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

New development in Pismo Beach under the GP/LCP Update would involve construction activities such as stockpiling, grading, excavation, paving and other earth disturbing activities. These construction activities may result in loose and disturbed soils in the City, which can increase the potential for erosion and loss of topsoil.

Construction activities that disturb one or more acres of land surface are subject to the NPDES *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Order No. 2022-0057-DWQ ~~2012-0006-DWQ, amended by 2010-0014-DWQ and 2012-0006-DWQ~~) adopted by the State Water Resources Control Board (SWRCB) under the Clean Water Act. Compliance with the permit requires that each project that disturb greater than 1 acre of soil, unless eligible for an erosivity waiver, file a Notice of Intent with the SWRCB. Permit conditions require development of a SWPPP, which must describe the site, the facility, and BMPs to manage storm water runoff and to reduce soil erosion. More specifically, the SWPPP must describe erosion and sediment control BMPs, stormwater quality monitoring, means of waste disposal, and BMP maintenance responsibilities. Inspection of construction sites before and after storms is also required to identify storm water discharge from the construction activity and to identify, implement, and maintain erosion controls, where necessary.

Compliance with the Construction General Permit is enforced in Section 13.28 of the Municipal Code, which regulates storm water discharge in the City and requires erosion and sediment controls when a project requiring a grading permit may create a source of pollution. The City has also prepared the Stormwater Management Program, under which the City educates and involves the community in stormwater pollution prevention, regulates stormwater runoff from construction sites, investigates non-stormwater discharges, and reduces non-stormwater run-off from municipal operations. Individual projects within the City that disturb more than one acre are required to obtain NPDES coverage under the Construction General Permit. Chapter 17.078.050 of the Municipal Code provides regulatory standards to ensure erosion associated with bluff development are minimized.

Adherence to the Clean Water Act NPDES permitting requirements would ensure that potential impacts associated with soil erosion and loss of topsoil would be less than significant. Implementation of GP/LCP Conservation and Open Space Element policies listed below would reduce the potential for erosion and loss of topsoil. In addition, implementation of the following GP/LCP Update Safety Element goals and policies regarding bluff erosion would also apply in relevant areas, such as Policy 3.2, Bluff Management.

- **Policy COS-1.7: Minimization of Water Quality Impacts During Construction.** Development shall minimize water quality impacts during construction by minimizing land disturbance and soil compaction, minimizing erosion and sedimentation, and minimizing the discharge of other pollutants resulting from construction activities.

- **Action COS-1.7c: Minimize Land Disturbance During Construction.** When reviewing development applications, the City shall require applicants to exemplify how the development minimizes land disturbance activities of construction (e.g., clearing, grading, cut-and-fill, and soil compaction), especially in erosive areas (including steep slopes, unstable areas, and erosive soils), to avoid detrimental water quality impacts caused by increased erosion or sedimentation.
- **Action COS-1.7d: Minimize Erosion and Sedimentation During Construction.** Require that construction be conducted using measures to minimize soil erosion and off-site transport of sediment and debris originating at the construction site.
- **Action COS-3.9g: Erosion Control Measures.** Any development within the ESHA buffer shall incorporate erosion control measures such as distillation basins and energy dissipaters, within grading plans as necessary.

Implementation of these GP/LCP Update goals and policies would ensure that construction projects implement erosion minimization measures control loss of topsoil. Implementation of these goals and policies, in addition to compliance with applicable laws and regulations related to stormwater, would minimize the potential for erosion and loss of topsoil during construction of projects within the City. Therefore, this impact would be less than significant.

Mitigation Measures

No additional policy-oriented mitigation would be required to reduce this impact. As individual development projects are proposed, focused, project-level environmental review may be required, which could result in the implementation of project-specific mitigation measures.

Threshold 5:	Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Impact GEO-3 NEW DEVELOPMENT FACILITATED BY THE GP/LCP UPDATE WOULD OCCUR WHERE EXISTING SEWER SYSTEMS ARE IN PLACE, MINIMIZING THE NEED FOR DEVELOPMENT OF NEW WASTEWATER DISPOSAL SYSTEMS. THEREFORE, THE PROJECT WOULD NOT RESULT IN A SIGNIFICANT IMPACT TO SOILS THAT ARE INCAPABLE OF SUPPORTING SEPTIC TANKS OR ALTERNATIVE WASTEWATER DISPOSAL SYSTEMS.

The GP/LCP Update encourages growth management and development within Pismo Beach city limits. Focusing development in these areas would minimize encroachment into open space areas where wastewater infrastructure does not currently exist. In general, new development under the GP/LCP Update would occur where existing roads, water, and sewer systems are in place, minimizing the need to develop new wastewater disposal systems. Therefore, the project would not result in a significant impact associated with soils that are incapable of supporting septic tanks or alternative wastewater disposal systems.

Mitigation Measures

No mitigation measures are required.

Threshold 6:	Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Impact GEO-4 DEVELOPMENT FACILITATED BY THE 2040 GENERAL PLAN HAS THE POTENTIAL TO RESULT IN IMPACTS TO PALEONTOLOGICAL RESOURCES. IMPACTS WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED.

In accordance with SVP (2010) guidelines, Rincon determined the paleontological sensitivity within Pismo Beach based on a review of geologic maps, published literature and online paleontological databases. The results of this paleontological assessment indicate that the paleontological sensitivity within the Pismo Beach city limits range from low to high paleontological sensitivity, varying at the surface and at depth.

Quaternary young (late Holocene) beach sand (Qbs) and alluvial deposits (Qa) are too young to contain paleontological resources and are considered to have low paleontological sensitivity at the surface (SVP 2010). Although Holocene sedimentary deposits (e.g., Qa, Qbs) are generally too young to contain paleontological resources at the surface, these younger geologic units may preserve significant paleontological resources at unknown depths where the deposits exceed 5,000 years in age. Accurately assessing the boundaries between younger and older units within Pismo Beach generally requires site-specific stratigraphic data, some form of radiometric dating, or fossil analysis from nearby sites. Conservative estimates of the depth at which paleontologically sensitive units may occur reduces potential for impacts to paleontological resources. Based on the findings of Hall, the depths at which these younger Holocene units (i.e., Qa, Qbs) become old enough to yield fossils is highly variable, but is likely to occur at depths between 25 and 100 feet below ground surface (1973). Therefore, Quaternary young (late Holocene) beach sand (Qbs) and alluvial deposits (Qa) within the City are considered to have a high paleontological sensitivity at depths below 25 feet (Dibblee and Minch 2006a,b; Hall 1973; SVP 2010).

Quaternary old (late to middle Pleistocene) alluvial deposits (Qoa), Pleistocene Paso Robles Formation (QTp), Pliocene Squire Sandstone (Tsw), early Pliocene to late Miocene Pismo Formation (Tp, Tps), and late to middle Miocene Monterey Formation (Tm, Tml) have yielded numerous scientifically significant paleontological resources in San Luis Obispo County and throughout California (Paleobiology Database 2021; UCMP 2021). Therefore, Quaternary old (late to middle Pleistocene) alluvial deposits (Qoa), Pleistocene Paso Robles Formation (QTp), Pliocene Squire Sandstone (Tsw), early Pliocene to late Miocene Pismo Formation (Tp, Tps), and late to middle Miocene Monterey Formation (Tm, Tml) are considered to have a high paleontological sensitivity.

Pyroclastic-volcanic rocks of the Early to middle Miocene Obispo Formation, mapped within the central portion of Pismo Beach, have no paleontological sensitivity since the physical parameters of their formation are not conducive to fossil preservation. Artificial fill or disturbed sediments related to prior development, consists of recently compacted sediments and as such, it is also assigned no paleontological sensitivity.

Paleontological resources may be encountered during any ground-disturbing activities associated with construction (e.g., grading, excavation, or other ground disturbing construction activity) in areas with high paleontological sensitivity. Construction activities may result in the destruction, damage, or loss of undiscovered scientifically important paleontological resources.

Adverse effects to paleontological resources can only be determined once a specific project has been proposed because the effects are highly dependent on both the individual project conditions and the characteristics of the proposed ground-disturbing activity. Ground-disturbing activities

associated with development facilitated by the GP/LCP Update, particularly in areas that have not previously been developed with urban uses, have the potential to damage or destroy paleontological resources that may be present on or below the ground surface in previously undisturbed areas of high paleontological sensitivity. Therefore, development associated with the implementation of the proposed GP/LCP Update, including construction-related and earth-disturbing activities, could damage or destroy fossils in these geologic units, representing a potentially significant impact.

The following GP/LCP Update goals, policies, and actions are applicable to paleontological resources in Pismo Beach:

Goal COS-4: A community that celebrates and protects its historical, tribal cultural, archaeological, and paleontological resources.

- **Policy COS-4.3: Paleontological Resources.** Protect paleontological resources during construction activities.
  - **Action COS-4.3a: Protect Paleontological Resources.** The City shall have available a map that identifies the areas of the City underlain by geologic units with high paleontological sensitivity at the surface (i.e., Qoa, QTp, Tsqw, Tp, Tps, Tm, Tml) or high sensitivity at depths greater than 25 feet (Qa, Qbs). As part of the CEQA process for all new development projects, all sites located in areas with high paleontological sensitivity shall be fully investigated by a qualified paleontologist meeting the qualifications specified by the Society of Vertebrate Paleontology. While most sites are currently developed, appropriate protections shall be established to avoid impacts to paleontological resources with new development, with part of the review process including:
    a) Locations within the City known to have a Qoa, QTp, Tsqw, Tp, Tps, Tm, Tml, Qa, Qbs soils shall be mapped as having high probability of occurrence of paleontological resources. Locations within the City known to have Qa, Qbs soils shall be mapped as having high probability of occurrence of paleontological resources at depths greater than 25 feet.
    b) Specific recommendations prepared by the qualified paleontologist shall be incorporated into project approval including: avoidance of portions of sites containing resources, construction worker training, providing a paleontological monitor on site to observe excavations in soils with high paleontological sensitivity, and recovery and curation of paleontological resources encountered during construction.
  - **Action COS-4.3b: Mitigation Plan.** Where development may adversely impact paleontological resources as identified by the qualified paleontologist, reasonable mitigation measures shall be required pursuant to Section 30244 of the Coastal Act. Require that a Paleontological Resources Impact Mitigation Plan, adequate to protect the paleontological resource and prepared by a qualified paleontologist, be submitted for review and, if approved, be implemented as part of the project.
  - **Action COS-4.3c: Paleontological Monitoring.** Paleontological monitoring shall be conducted by a qualified paleontologist for ground disturbing construction activities in previously undisturbed sediments with high paleontological sensitivity (i.e., Qoa, QTp, Tsqw, Tp, Tps, Tm, Tml, Qa, Qbs, Qa, Qbs) where the qualified paleontologist has determined construction activities have the potential to encounter paleontological resources.

- **Action COS-4.3d: Paleontological Worker Environmental Awareness Program (WEAP).** Where construction activities have the potential to encounter paleontological resources as identified by the qualified paleontologist, a Paleontological WEAP shall be developed and implemented by the qualified paleontologist prior to ground disturbing activities. The training for construction personnel shall include training on the appearance of fossils and the procedures for halting construction activities and notifying paleontological staff if unanticipated fossils are discovered by construction staff.
- **Action COS-4.3e: Construction Suspension.** Should paleontological resources be encountered during any construction activity, all activity that could damage or destroy the resources shall be suspended until a qualified paleontologist has examined the site. Construction shall not resume until mitigation measures included in the Paleontological Resources Impact Mitigation Plan are carried out to address the impacts of the project on these resources.

The City would abide by Actions COS-4.3a through COS-4.3e in the GP/LCP Update, which require paleontological resource studies for projects that involve ground disturbance in project areas mapped as high paleontological sensitivity at the surface (i.e., Qoa, QTp, Tsw, Tp, Tps, Tm, Tml) or subsurface (i.e., Qa, Qbs). Additionally, these measures require suspension of construction activity in the event that a paleontological resource is disclosed, retention of a qualified paleontologist to examine the site, and implementation of measures to protect the paleontological resource. Compliance with the GP/LCP Update policies and actions would ensure that construction impacts related to paleontological resources and unique geologic features would be less than significant.

Mitigation Measures

No mitigation measures are required.

4.6.4 Cumulative Impacts

Cumulative geology, soils, and seismicity impacts may be related to exacerbation of seismic hazards and increased erosion and/or loss of topsoil. These effects occur independently of one another, and result from site-specific and project-specific characteristics and conditions. In addition, existing regulations, such as the CBC, specify mandatory actions that must occur during project development, which minimize effects from construction of new structures related to geology, soils and seismicity as discussed above.

Cumulative development under the GP/LCP Update could disturb areas that may potentially contain paleontological resources. The potential for impacts from individual developments is site-specific and depends on the location and extent of ground disturbance associated with each individual development proposal. All future development projects would continue to be subject to existing state and local requirements and discretionary projects may be subject to project-specific mitigation requirements under CEQA. In addition, future development in the City would comply with GP/LCP Update policies and goals to ensure that paleontological resources encountered during construction would be properly recovered and curated. Therefore, the proposed project's contribution to cumulative impacts related to the destruction, damage, or loss of undiscovered scientifically important paleontological resources would be less than significant. Cumulative impacts related to geology, paleontology, soils, and seismicity would be less than significant, and the GP/LCP Update would not result in a cumulatively considerable contribution to cumulative geology, paleontology, soils, or seismicity impacts.

4.7 Greenhouse Gas Emissions/Climate Change

This section discusses the potential for the General Plan/Local Coastal Plan (GP/LCP) Update to contribute to impacts related to climate change. The analysis includes an estimate of GHG emissions generated by development facilitated by the GP/LCP Update and evaluates the GP/LCP Update's consistency with applicable GHG reduction plans, policies, and regulations, including the Pismo Beach Climate Action Plan (PBCAP). Potential flooding effects associated with sea level rise are discussed in Section 4.9, *Hydrology and Water Quality*.

4.7.1 Setting

a. Climate Change and Greenhouse Gases

Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period. The term "climate change" is often used interchangeably with the term "global warming," but climate change is preferred because it conveys that changes are occurring in addition to rising temperatures. The baseline against which these changes are measured originates in historical records that identify temperature changes that occurred in the past, such as during previous ice ages. The global climate is changing continuously, as evidenced in the geologic record which indicates repeated episodes of substantial warming and cooling. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming over the past 150 years. The United Nations Intergovernmental Panel on Climate Change (IPCC) has expressed a high degree of confidence (95 percent or greater chance) that the global average net effect of human activities has been the dominant cause of warming since the mid-twentieth century (IPCC 2014a).

Gases that absorb and re-emit infrared radiation in the atmosphere are called GHGs. The gases widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane, nitrous oxide, fluorinated gases such as hydrofluorocarbons and perfluorocarbons, and sulfur hexafluoride. Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and natural processes, such as oceanic evaporation, largely determine its atmospheric concentrations.

GHGs are emitted by natural processes and human activities. Of these gases, CO_2 and methane are emitted in the greatest quantities from human activities. Emissions of CO_2 are usually by-products of fossil fuel combustion, and methane typically results from off-gassing associated with agricultural practices and landfills as well as leakages in the extraction and distribution of natural gas. Human-made GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases and sulfur hexafluoride (United States Environmental Protection Agency [U.S. EPA] 2020). Different types of GHGs have varying global warming potentials (GWP). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emitted, referred to as "carbon dioxide equivalent" (CO_2e), and is the amount of GHG emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane has a 100-year GWP of 25, meaning its global

warming effect is 25 times greater than carbon dioxide on a molecule per molecule basis (IPCC 2014b).[1]

The accumulation of GHGs in the atmosphere regulates the Earth's temperature. Without the natural heat-trapping effect of GHGs, the Earth's surface would be about 33 degrees Celsius (°C) cooler (World Meteorological Organization 2020). However, emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, are believed to have elevated the concentration of these gases in the atmosphere beyond the level of concentrations that occur naturally.

b. Greenhouse Gas Emissions Inventory

California Emissions Inventory

Based on the California Air Resource Board's (CARB) California Greenhouse Gas Inventory for 2000-2019, California produced 418.2 MMT of CO_2e in 2019. The major source of GHG emissions in California is transportation, contributing 40 percent of the state's total GHG emissions. The industrial sector is the second largest source, contributing 21 percent of the state's GHG emissions while electric power accounts for approximately 14 percent (CARB 2021). California emissions are due in part to its large size and large population compared to other states. However, a factor that reduces California's per capita fuel use and GHG emissions, as compared to other states, is its relatively mild climate. In 2016, the State of California achieved its 2020 GHG emission reduction targets as emissions fell below 431 MMT of CO_2e (CARB 2019).

Local Emissions Inventory

In May 2014, Pismo Beach adopted a PBCAP, which includes a 2005 baseline inventory of GHG emissions resulting from community-wide activities and City government facilities and operations within Pismo Beach (Pismo Beach 2014). The PBCAP also includes a 2020 business-as-usual forecast of how emissions would change over time as a result of population and job growth if consumption trends and efficiencies remained at their 2005 levels, absent any new policies or actions that would reduce emissions. Since 2005, several State regulations and local initiatives such as The Low Carbon Fuel Standard, Solar Energy Installations, and Construction and Demolition Debris Diversion have been implemented that would reduce Pismo Beach's GHG emissions in comparison to the 2020 business-as-usual forecast. The PBCAP GHG emissions inventory also included a 2020 adjusted forecast to account for the impact of these measures to provide a more accurate picture of future emissions growth in 2020.

The community-wide GHG emissions inventory identified that the City's 2005 GHG emissions were 87,077 MT CO_2e (Pismo Beach 2014). The 2020 adjusted forecast, which accounted for growth from 2005 to 2020, but also anticipated GHG reductions from State and local emissions reduction measures, estimated that the City's 2020 GHG emissions would be 95,782 MT CO_2e.

c. Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme

[1] The IPCC's (2014b) *Fifth Assessment Report* determined that methane has a GWP of 28. However, modeling of GHG emissions was completed using the California Emissions Estimator Model version 2020.4.0, which uses a GWP of 25 for methane, consistent with the IPCC's (2007) *Fourth Assessment Report*.

climate changes during the twenty-first century than were observed during the twentieth century. Each of the past three decades has been warmer than all the previous decades in the instrumental record, and the decade from 2000 through 2010 has been the warmest. The observed global mean surface temperature (GMST) from 2015 to 2017 was approximately 1.0°C higher than the average GMST over the period from 1880 to 1900 (National Oceanic and Atmospheric Administration 2020). Furthermore, several independently analyzed data records of global and regional Land-Surface Air Temperature (LSAT) obtained from station observations jointly indicate that LSAT and sea surface temperatures have increased. Due to past and current activities, anthropogenic GHG emissions are increasing global mean surface temperature at a rate of 0.2°C per decade. In addition to these findings, there are identifiable signs that global warming is currently taking place, including substantial ice loss in the Arctic over the past two decades (IPCC 2014a and 2018).

According to *California's Fourth Climate Change Assessment*, statewide temperatures from 1986 to 2016 were approximately 0.6 to 1.1°C higher than those recorded from 1901 to 1960. Potential impacts of climate change in California may include reduced water supply from snow pack, sea level rise, more extreme heat days per year, more large forest fires, and more drought years (State of California 2018). While there is growing scientific consensus about the possible effects of climate change at a global and statewide level, current scientific modeling tools are unable to predict what local impacts may occur with a similar degree of accuracy. A summary follows of some of the potential effects that could be experienced in California as a result of climate change.

Air Quality

From 1950 to 2005, average annual maximum temperature in the Bay Area increased by approximately 0.95°C, consistent with the global mean temperature change attributable to anthropogenic influences over a similar time period. Even with significant efforts to mitigate climate change, the Bay Area will likely see annual mean warming of approximately 1.8°C by 2050 as compared to 2005 (State of California 2018). Higher temperatures are conducive to air pollution formation and could worsen air quality in California as they rise. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect, and therefore its indirect effects, are uncertain. As temperatures have increased in recent years, the area burned by wildfires throughout the state has increased, and wildfires have occurred at higher elevations in the Sierra Nevada Mountains (State of California 2018). If higher temperatures continue to be accompanied by an increase in the incidence and extent of large wildfires, air quality would worsen, but if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution. This would effectively reduce the number of large wildfires, thereby ameliorating the pollution associated with them. Severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state (California Natural Resources Agency 2009).

Water Supply

Analysis of paleoclimatic data (such as tree-ring reconstructions of stream flow and precipitation) indicates a history of naturally and widely varying hydrologic conditions in California and the West, including a pattern of recurring and extended droughts. Uncertainty remains with respect to the overall impact of climate change on future precipitation trends and water supplies in California. Year-to-year variability in statewide precipitation levels has increased since 1980, meaning that wet and dry precipitation extremes have become more common (California Department of Water Resources 2018). This uncertainty regarding future precipitation trends complicates the analysis of

future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. The average early spring snowpack in the western U.S., including the Sierra Nevada Mountains, decreased by about 10 percent during the last century. During the same period, sea level rose over 0.15 meter along the central and southern California coasts (State of California 2018). The Sierra snowpack provides the majority of California's water supply, as snow that accumulates during wet winters is released slowly during the dry months of spring and summer. A warmer climate is predicted to reduce the fraction of precipitation that falls as snow and result in less snowfall at lower elevations, thereby reducing the total snowpack (State of California 2018). Projections indicate that average spring snowpack in the Sierra Nevada and other mountain catchments in central and northern California will decline by approximately 66 percent from its historical average by 2050 (State of California 2018).

Hydrology and Sea Level Rise

Climate change could affect the intensity and frequency of storms and flooding, and the Bay Area's largest winter storms are likely to become more intense and potentially more damaging in future decades (State of California 2018). Furthermore, climate change could induce substantial sea level rise in the coming century. Rising sea level increases the likelihood of and risk from flooding. The rate of increase of global mean sea levels over the 2001-2010 decade, observed by satellites, ocean buoys, and land gauges, was approximately 3.2 millimeters per year, double the twentieth century trend of 1.6 millimeters per year. Global mean sea levels averaged over the last decade were about 0.20 meter higher than those of 1880 (World Meteorological Organization 2013). Sea levels are rising faster now than in the previous two millennia, and the rise will probably accelerate, even with robust GHG emission control measures. The most recent IPCC report predicts a mean sea-level rise of 0.25 to 0.94 meter by 2100 (IPCC 2018). Over the past century, the sea level in the Bay Area has risen by over 0.2 meter. A rise in sea levels could erode 31 to 67 percent of southern California beaches and cause flooding of approximately 370 miles of coastal highways during 100-year storm events. This would also jeopardize California's water supply due to saltwater intrusion and induce groundwater flooding and/or exposure of buried infrastructure (State of California 2018). Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Agriculture

California has an over $50 billion annual agricultural industry (approximately $2.2 billion of which is from the Bay Area) that produces over a third of the country's vegetables and two-thirds of the country's fruits and nuts (California Department of Food and Agriculture 2020). Higher CO_2 levels can stimulate plant production and increase plant water-use efficiency, but if temperatures rise and drier conditions prevail, certain regions of agricultural production could experience water shortages of up to 16 percent. This would increase water demand as hotter conditions lead to the loss of soil moisture; crop-yield could be threatened by water-induced stress and extreme heat waves; and plants may be susceptible to new and changing pest and disease outbreaks (State of California 2018). Temperature increases could change the time of year certain crops bloom or ripen, thereby affecting their quality (California Climate Change Center 2006). In particular, nearly 70 percent of California's existing area of wine production will be vulnerable under future climate change projections by 2050, and wine grape production in the Bay Area could suffer from extreme temperatures and temperature-related water scarcity (State of California 2018).

Ecosystems and Wildlife

Climate change and the potential resulting changes in weather patterns could have ecological effects on the global and local scales. Increasing concentrations of GHGs are likely to accelerate the rate of climate change. Scientists project that the annual average maximum daily temperatures in California could rise by 2.4 to 3.2°C in the next 50 years and by 3.1 to 4.9°C in the next century (State of California 2018). Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals: timing of ecological events; geographic distribution and range of species; species composition and the incidence of nonnative species within communities; and ecosystem processes, such as carbon cycling and storage (Parmesan 2006; State of California 2018). In the Bay Area, the future climate will become less suitable for evergreen forests such as redwoods and Douglas fir and more favorable for heat-adapted vegetation such as chaparral shrubland (State of California 2018).

Local Effects

Rising temperatures affect local and global climate patterns, and these changes are forecasted to manifest themselves in a number of ways that may impact the Central Coast region. Potential climate changes that could occur in Pismo Beach by the end of this century are discussed in detail in the Pismo Beach Climate Action Plan (PBCAP) and the Integrated Climate Change Adaptation Planning in San Luis Obispo County report:

- Increased temperatures – Average temperatures in San Luis Obispo County may increase by 2 to 4 degrees by mid-century and up to 4 to 8 degrees by late century. Greater warming is expected to occur in the summer months compared to winter.
    - Pismo Beach may experience more significant temperature increases if coastal fog decreases.
    - Pismo Beach should anticipate more frequent heat waves, with at least one more per year by 2050 and four to eight more per year by 2100.
    - A secondary impact of increased temperatures is poorer air quality, largely due to increased ground level ozone and potentially increased particulate matter levels and allergens, such as pollen.
- Changed precipitation – Precipitation, except during winter months, is anticipated to change little in the near future. However, climate models forecast drier conditions throughout San Luis Obispo County by 2075 as a result of a five to fifteen percent reduction in average annual rainfall. As a result, droughts may become more frequent, longer, and more severe. Models also show that when rainfall does occur, it is likely to fall in the form of more intense rainstorms. Increased drought conditions are contributing to longer and more intense fire seasons. Fires in the vicinity of Pismo Beach could potentially result in the temporary closure of U.S. Highway 101 (U.S. 101), preventing its use as an evacuation route.
- Sea level rise – According to Cal-Adapt land in Pismo Beach is vulnerable to a 100-year flood event as sea level rises will increase thirteen percent. Secondary impacts of sea level rise include increased erosion of coastal bluffs and beaches, coastal flooding, permanent inundation of coastal wetlands, and saltwater intrusion into coastal freshwater wells.

- Storm surges – Sea level rise combined with the tidal effect of larger and more intense oceanic storms is expected to create higher periodic storm surges. These extreme "high tides" can cause impacts over and above those predicted to occur as a result of sea level rise mentioned above. Impacts from storm surges may include the following: flooding of low-lying coastal areas, beach and cliff erosion, and inundation of infrastructure and wetlands.

The Sea Level Rise Vulnerability Assessment prepared for the GP/LCP Update finds that some transportation infrastructure in Pismo Beach is, or could become, vulnerable to extreme flood events and sea level rise. U.S. 101 and Dolliver Street may be currently vulnerable to extreme flood impacts where they cross Pismo Creek. As noted in the proposed GP/LCP Update Safety Element, U.S. 101 is the primary evacuation route in Pismo Beach. The Sea Level Rise Vulnerability Assessment does not identify sea level rise or storm surge as threats to U.S. 101, due to the highway's higher elevation in Pismo Beach. The vulnerability of Price Street, situated between U.S. 101 and eroding bluffs, has motivated an in-progress bluff armoring and stabilization project. Increased erosion of unarmored bluffs is predicted to threaten the stability of several local roadways in Pismo Beach. City-owned parking lots, the region's primary railway, and County regional transit stops are also within erosion and flood risk zones from downtown to near the City's southern boundary. In extreme sea level rise scenarios, nearly the entire railway segment from U.S. 101 to the southern city limit is predicted to be subject to tidal flooding.

4.7.2 Regulatory Setting

a. Federal

Federal Clean Air Act

The U.S. Supreme Court determined in *Massachusetts et al. v. Environmental Protection Agency et al.* ([2007] 549 U.S. 05-1120) that the U.S. EPA has the authority to regulate motor vehicle GHG emissions under the federal Clean Air Act. The U.S. EPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009. This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters, and manufacturers of heavy-duty and off-road vehicles and vehicle engines and requires annual reporting of emissions. In 2012, the U.S. EPA issued a Final Rule that established the GHG permitting thresholds that determine when Clean Air Act permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities.

In *Utility Air Regulatory Group v. Environmental Protection Agency* (134 S. Ct. 2427 [2014]), the U.S. Supreme Court held the U.S. EPA may not treat GHGs as an air pollutant for purposes of determining whether a source can be considered a major source required to obtain a Prevention of Significant Deterioration or Title V permit. The Court also held that Prevention of Significant Deterioration permits otherwise required based on emissions of other pollutants may continue to require limitations on GHG emissions based on the application of Best Available Control Technology.

b. State

The CARB is responsible for the coordination and oversight of state and local air pollution control programs in California. There are numerous regulations aimed at reducing the state's GHG emissions. These initiatives are summarized below.

California Global Warming Solutions Act of 2006 (Assembly Bill 32 and Senate Bill 32)

The "California Global Warming Solutions Act of 2006," Assembly Bill (AB) 32, outlines California's major legislative initiative for reducing GHG emissions. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 and requires the CARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHG emissions to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Based on this guidance, CARB approved a 1990 statewide GHG level and 2020 target of 431 MMT of CO_2e. CARB approved the Scoping Plan on December 11, 2008 and the Plan included measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among others (CARB 2008). Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since the Plan's approval.

The CARB approved the 2013 Scoping Plan update in May 2014. The update defined the CARB's climate change priorities for the next five years and set the groundwork to reach post-2020 statewide goals. The update highlighted California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluated how to align the State's longer term GHG reduction strategies with other State policy priorities, including those for water, waste, natural resources, clean energy, transportation, and land use (CARB 2014).

On September 8, 2016, the governor signed Senate Bill (SB) 32 into law, extending the California Global Warming Solutions Act of 2006 by requiring the State to further reduce GHG emissions to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, the CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, and implementation of recently adopted policies and legislation, such as SB 1383 (discussed later). The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan Update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally appropriate quantitative thresholds consistent with statewide per capita goals of six MT of CO_2e by 2030 and two MT of CO_2e by 2050 (CARB 2017). As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, sub-regional, or regional level), but not for specific individual projects because they include all emissions sectors in the state (CARB 2017).

Senate Bill 375

SB 375, signed in August 2008, enhances the State's ability to reach AB 32 goals by directing the CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles by 2020 and 2035. SB 375 aligns regional transportation planning efforts, regional GHG reduction targets, and affordable housing allocations. Metropolitan Planning Organizations (MPOs) are required to adopt a Sustainable Communities Strategy (SCS), which allocates land uses in the MPO's Regional Transportation Plan (RTP). Qualified projects consistent with an approved SCS or Alternative Planning Strategy (categorized as "transit priority projects") would receive incentives to streamline CEQA processing.

On March 22, 2018, CARB adopted updated regional targets for reducing per capita GHG emissions from passenger vehicles from 2005 levels by 2020 and 2035. The Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) were assigned targets of a 10 percent reduction in per capita GHG emissions from passenger vehicle sources below 2005 levels by 2020 and a 19 percent reduction in per capita GHG emissions from passenger vehicle sources below 2005 levels by 2035. MTC and ABAG adopted *Plan Bay Area 2040* in July 2017, which includes the region's SCS and meets the requirements of SB 375 in place at its time of adoption (i.e., a 7 percent reduction by 2020 and a 15 percent reduction by 2035) (MTC and ABAG 2017a and 2017b). The updated 2018 SB 375 targets will be addressed in the next plan update, *Plan Bay Area 2050*.

Senate Bill 1383

Adopted in September 2016, SB 1383 requires the CARB to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants. SB 1383 requires the strategy to achieve the following reduction targets by 2030:

- Methane – 40 percent below 2013 levels
- Hydrofluorocarbons – 40 percent below 2013 levels
- Anthropogenic black carbon – 50 percent below 2013 levels

SB 1383 also requires the California Department of Resources Recycling and Recovery, in consultation with the CARB, to adopt regulations that achieve specified targets for reducing organic waste in landfills.

Senate Bill 100

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the State's Renewables Portfolio Standard (RPS) Program, which was last updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

Executive Order B-55-18

On September 10, 2018, the former Governor Brown issued Executive Order (EO) B-55-18, which established a new statewide goal of achieving carbon neutrality by 2045 and maintaining net negative emissions thereafter. This goal is in addition to the existing statewide GHG reduction targets established by SB 375, SB 32, SB 1383, and SB 100.

California Building Standards Code

California Code of Regulations, Title 24 – California Building Code

The California Code of Regulations (CCR) Title 24 is referred to as the California Building Standards Code, or CBC. It consists of a compilation of several distinct standards and codes related to building construction including plumbing, electrical, interior acoustics, energy efficiency, and handicap accessibility for persons with physical and sensory disabilities. The CBC's energy-efficiency and green building standards are outlined below.

Part 6 – Building Energy Efficiency Standards/Energy Code

CCR Title 24, Part 6 is the Building Energy Efficiency Standards or California Energy Code. This code, originally enacted in 1978, establishes energy-efficiency standards for residential and non-residential buildings in order to reduce California's energy demand. The Energy Code is updated periodically (currently every three years) to incorporate and consider new energy-efficiency technologies and methodologies as they become available. New construction and major renovations must demonstrate their compliance with the current Energy Code through submittal and approval of a Title 24 Compliance Report to the local building permit review authority and the California Energy Commission (CEC).

Pismo Beach has adopted the 2019 California Energy Code in Section 14.04.010 of the Pismo Beach Municipal Code (Pismo Beach 2020). In general, under the 2019 Standards, non-residential buildings will be 30 percent more energy-efficient compared to the 2016 Standards (Energy CodeAce 2019). In addition, per Section 110.10 of the 2019 Standards, non-residential buildings must incorporate a solar zone area with a minimum area of 15 percent of the total roof area excluding any skylight area for nonresidential buildings with three habitable stories or fewer (other than healthcare facilities) (see the 2019 Standards for exceptions). Solar zones must be comprised of areas that have no dimension less than five feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. See the 2019 Standards for additional requirements regarding the azimuth, shading, interconnection pathways, and electrical service panels of solar zones.

PART 11 – CALIFORNIA GREEN BUILDING STANDARDS/CALGREEN

The California Green Building Standards Code, referred to as CALGreen, was added to Title 24 as Part 11, first in 2009 as a voluntary code, which then became mandatory effective January 1, 2011 (as part of the 2010 CBC). The 2019 CALGreen institutes mandatory minimum environmental performance standards for all ground-up new construction of non-residential and residential structures. It also includes voluntary tiers (I and II) with stricter environmental performance standards for these same categories of residential and non-residential buildings. Local jurisdictions must enforce the minimum mandatory CALGreen standards and may adopt additional amendments for stricter requirements.

The 2019 mandatory standards require:

- 20 percent reduction in indoor water use relative to specified baseline levels;[2]
- 65 percent construction/demolition waste diverted from landfills;
- Inspections of energy systems to ensure optimal working efficiency;
- Low-pollutant emitting exterior and interior finish materials such as paints, carpets, vinyl flooring, and particleboards;
- Dedicated circuitry to facilitate installation of electric vehicle charging stations in newly constructed attached garages for single-family and duplex dwellings; and

[2] Similar to the compliance reporting procedure for demonstrating Energy Code compliance in new buildings and major renovations, compliance with the CALGreen water reduction requirements must be demonstrated through completion of water use reporting forms. Buildings must demonstrate a 20 percent reduction in indoor water use by either showing a 20 percent reduction in the overall baseline water use as identified in CALGreen or a reduced per-plumbing-fixture water use rate.

- Designation of at least ten percent of parking spaces for multi-family residential developments as electric vehicle charging spaces capable of supporting future electric vehicle supply equipment
- PV systems battery, storage systems, and solar ready for newly constructed residential dwellings, including single-family, and low-rise (three or fewer habitable floors) multifamily buildings.

The voluntary standards require:

- **Tier I:** stricter energy efficiency requirements, stricter water conservation requirements for specific fixtures, 65 percent reduction in construction waste with third-party verification, 10 percent recycled content for building materials, 20 percent permeable paving, and 20 percent cement reduction.
- **Tier II:** stricter energy efficiency requirements, stricter water conservation requirements for specific fixtures, 75 percent reduction in construction waste with third-party verification, 15 percent recycled content for building materials, 30 percent permeable paving, and 25 percent cement reduction

Similar to the compliance reporting procedure for demonstrating Energy Code compliance in new buildings and major renovations, compliance with the CALGreen water-reduction requirements must be demonstrated through completion of water use reporting forms for new non-residential buildings. Buildings must demonstrate a 20 percent reduction in indoor water use by either showing a 20 percent reduction in the overall baseline water use as identified in CALGreen or a reduced per-plumbing-fixture water use rate.

c. Regional and Local

San Luis Obispo Council of Governments 2019 Regional Transportation Plan/Sustainable Communities Strategy

The San Luis Obispo Council of Governments (SLOCOG) is required by State and federal law to prepare, update, and adopt a Regional Transportation Plan (RTP) every four years. Senate Bill (SB) 375, California's Sustainable Communities and Climate Protection Act, was enacted in 2008, requiring all RTPs to include a Sustainable Communities Strategy (SCS) that reduces GHG emissions from passenger vehicles and light-duty trucks. The most recent update to the RTP was completed by SLOCOG in 2019. The 2019 RTP/SCS builds on prior plans and the Preliminary Sustainable Communities Strategy (PSCS) developed in the 2010 RTP/PSCS and 2014 RTP/PSCS and serves as the blueprint for the region's transportation system over the next 20 years. The 2019 RTP/SCS identifies active transportation projects, non-highway system projects, highway system projects, and a park and ride project in Pismo Beach. The 2019 RTP/SCS includes Policy 6.3 to "reduce GHG emissions from vehicles and improve air quality in the region."

Pismo Beach Climate Action Plan

In 2014, Pismo Beach adopted the PBCAP to guide the reduction of GHG emissions in accordance with AB 32. The PBCAP describes community and municipal GHG emissions, compares future emissions to state-designated targets, and defines actions and strategies the City will take to meet both state and local GHG reduction goals. Both community-wide and government operations emissions were inventoried for the PBCAP, studying emissions from energy use, transportation,

waste, water, and off-road emissions, resulting in specific and attainable goals for GHG reductions. The PBCAP was developed to be consistent with State CEQA Guidelines Section 15183.5 and SLOAPCD's CEQA Air Quality Handbook to mitigate emissions and climate change impacts and serves as a Qualified GHG Reduction Strategy for Pismo Beach. The PBCAP's target mirrors that of AB 32, setting a goal of 15 percent below baseline (2005) levels by 2020. The City has not yet formally initiated an update of the PBCAP to address updated statewide targets for 2030 associated with SB 32 and the 2017 Scoping Plan.

4.7.3 Impact Analysis

a. Methodology

Operational emissions for buildout of the GP/LCP Update were modeled based on the potential development capacity in 2040 relative to existing conditions using the California Emissions Estimator Model (CalEEMod), version 2020.4.0. Information presented in Table 2-6 in Section 2.0, *Project Description*, was used to determine the proposed project's land uses, number of residential units, and non-residential areas, which were entered into CalEEMod. A detailed accounting of the methods and assumptions used to derive these inputs, along with the CalEEMod outputs, are provided in Appendix F.

Because project-level details are not currently known and it was assumed that full buildout of the proposed GP/LCP Update land use plan would occur, the operational emissions as modeled provide a conservative estimate of future GHG emissions in Pismo Beach and are included in this EIR for informational purposes. Construction emissions were not modeled due to the high dependence of emission estimates on project-level construction details, which are not known at this time for future land use development that may potentially occur under the land use scenario envisioned by the proposed GP/LCP Update.

Operational emissions for buildout of the GP/LCP Update would comply with SLOAPCD rules, such as Rule 504, which restricts residential wood burning. Individual development projects that are subject to CEQA would be required to provide a project-specific analysis to estimate their potential GHG emissions and incorporate mitigation measures to reduce their emissions as necessary.

b. Significance Thresholds

Based on Appendix G of the CEQA Guidelines, impacts related to GHG emissions would be significant if the project would:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; and/or
2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The vast majority of projects do not generate sufficient GHG emissions to directly influence climate change. However, physical changes caused by a project can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a project are limited. The issue of climate change typically involves an analysis of whether a project's contribution towards an impact would be cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the

effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15064[h][1]).

According to *CEQA Guidelines* Section 15183.5, project analysis can tier off of a qualified GHG reduction plan, which allows for project-level evaluation of GHG emissions through the comparison of the project's consistency with the GHG reduction policies included in a qualified GHG reduction plan. This approach is considered by the Association of Environmental Professionals (AEP) in their white paper, *Best Practices in Implementing Climate Action Plans*, to be the most defensible approach presently available under CEQA to determine the significance of a project's GHG emissions (AEP 2018). However, the PBCAP only contains targets to meet AB 32 2020 reduction goals, and Pismo Beach has not published a qualified GHG reduction plan that is consistent with SB 32 and 2017 Scoping Plan goals. Therefore, this approach is not currently feasible for this analysis.

In the absence of a qualified GHG reduction plan, the 2017 Scoping Plan recommends statewide targets that are appropriate at the plan level. As discussed in the 2017 Scoping Plan goals, local jurisdictions may demonstrate consistency with Scoping Plan goals (i.e., SB 32's emission reduction target) by establishing communitywide emissions targets tied to the statewide per capita goals of 6 metric tons of carbon dioxide equivalent (MT of CO_2e) per capita by 2030

The project's service population was determined by summing the number of residents and employees that would be accommodated by the project (Appendix F). As discussed in Section 2, Project Description, the proposed Specific Plan would accommodate approximately 1,875 residents and approximately 545 employees. Therefore, the project's service population would be 2,420 persons (1,875 residents + 545 employees). As shown in Table 4.7-1, the communitywide emissions target of 6.0 MT of CO_2e may be equated to approximately 4.6 MT of CO_2e per service population (SP) in the year 2030. However, the project would not reach buildout until 2040. Thus, the 2040 GHG emissions target was linearly interpolated using the derived 2030 per capita emission target of 4.6 MT of CO_2e/SP in 2030 and the CARB recommended statewide target of 2 MT of CO_2e per capita by 2050. The interpolated 2040 community wide emissions target would be 3.3 MT of CO_2e/SP/year. This adjusted service population threshold is used in the analysis to determine whether the proposed GP/LCP Update would result in a significant GHG impact.

Table 4.7-1 GHG Performance Threshold Determination

Metric	Quantity
Service Population	
2030 Population	1,875 persons
2030 Employment	545 jobs
2030 Service Population	2,420 SP
2040 Communitywide Target Derivation	
Per Capita Target	6.0 MT of CO_2e per capita
Mass Emissions Target[1]	11,250 MT of CO_2e
2030 Service Population Target[2]	4.6 MT of CO_2e/SP
Interpolated 2040 Service Population Target[3]	3.3 MT of CO_2e/SP

MT of CO_2e = metric tons of carbon dioxide equivalent; SP = service population.

[1] 6.0 MT of CO_2e per capita * 1,875 persons = 11,250 MT of CO_2e

[2] 11,250 MT of CO_2e/2,420 SP = 4.6 MT of CO_2e/SP

[3] Linearly interpolated between 2030 4.6 MT of CO_2e and 2050 2.0 MT of CO_2e

c. Project Impacts and Mitigation Measures

Threshold 1:	Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
Threshold 2:	Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

IMPACT GHG-1 BUILDOUT OF THE GP/LCP UPDATE WOULD RESULT IN NEW GHG EMISSIONS THAT MAY EXCEED APPLICABLE GHG REDUCTION TARGETS ESTABLISHED BY SB 32. THE GP/LCP UPDATE IDENTIFIES POLICIES THAT WOULD REDUCE GHG EMISSIONS, INCLUDING SETTING REDUCTION TARGETS CONSISTENT WITH STATEWIDE GHG REDUCTION GOALS AND UPDATING THE CLIMATE ACTION PLAN TO ENSURE FUTURE DEVELOPMENT IS CONSISTENT WITH STATEWIDE TARGETS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

General Plan/LCP Update Emissions Inventory

Table 4.7-2 provides an annualized estimate of potential new GHG emissions within the planning area that may result from implementation of the GP/LCP Update. This estimate was modeled using CalEEMod based on methods described in Section 4.7.3. Individual project-level details regarding new development that may occur under the GP/LCP Update are not known at this time. As a result, this analysis conservatively assumes that maximum build-out of the proposed land use plan would occur by 2040.

Table 4.7-2 GP/LCP Update Greenhouse Gas Emissions

Source	Annual Emissions (MT of CO_2e per year)
Operational	
Area	25
Energy	2,542
Mobile	3,467
Solid Waste	660
Water	297
Total Emissions	**6,991**
	GHG Emissions Efficiency Estimates
Pismo Beach New Service Population (Residential Population + Employment)	2,420
GP/LCP Update 2040 MT CO_2e per Service Population [1]	**2.9**
2040 Interpolated Plan-level Service Population GHG threshold	3.3
Exceed Threshold?	**No**

Notes: Emissions were modeled in CalEEMod. See Appendix F for modeling worksheets. Some numbers may not sum exactly due to rounding. Emission data is from "mitigated" results, which account for compliance with regulations and project design features.
[1] Project specific 2040 population increase (1,875) and new employment 2040 increase (545) from Section 2, Project Description divided by total operational emissions (6,991) from CalEEMod Appendix F.

As shown in Table 4.7-2, buildout of the GP/LCP Update would result in 2040 emissions that would not exceed the 2040 Interpolated Plan-level Service Population GHG threshold of 3.3 MT per service population.

Pismo Beach Climate Action Plan Consistency

The PBCAP contains climate action measures, which includes reduction measures used by the City to demonstrate project-level compliance with the PBCAP. The City requires applicants for new development to comply with mandatory measures from the PBCAP. Mandatory measures in the PBCAP include:

- City Government Energy Efficiency Retrofits and Upgrades;
- City Government Energy Efficient Public Realm Lighting;
- Energy Efficiency Requirements for New City-owned Buildings;
- Renewable Energy Systems on City Property;
- Transportation Demand Management (TDM) Program for City Employees;
- Zero-and Low-Emission City Fleet Vehicles;
- City Government Solid Waste Reduction;
- Energy Efficiency Outreach and Incentive Programs;
- Energy Audit and Retrofit Program;
- Income-Qualified Energy Efficient Weatherization Programs;
- Incentives for Exceeding Title 24 Energy Efficiency Building Standards;
- On-Site Small-Scale Solar PV Incentive Program;
- Income-Qualified Solar PV Program;
- Bicycle Network;
- Pedestrian Network;
- Expand Transit Network;
- Increase Transit Service Frequency/Speed;
- TDM Incentives;
- Parking Supply Management;
- Public Parking Pricing;
- Electric Vehicle Network and Alternative Fueling Stations;
- Smart Growth;
- Off-Road Equipment Upgrades, Retrofits, and Replacements;
- Solid Waste Diversion; and
- Tree Planting Program.

For projects that are not found consistent with the PBCAP, project applicants are required to demonstrate that the project's GHG emissions fall below applicable GHG significance thresholds, and that the project would not substantially interfere with implementation of the PBCAP.

The GP/LCP Update would revise and update the land use designations and policy provisions of the City's General Plan and would result in new development within the City limit that would be located close to existing transit connections, City services, and employment centers. PBCAP Climate Action Measure TL-9 recognizes that energy-efficient project design or growth that facilitates mixed-use, higher density, and infill development near existing or planned transit stops, in existing community centers/downtown, and in other designated areas to improve city wide efforts to reduce GHG emissions (City of Pismo Beach 2014). Therefore, the GP/LCP Update would facilitate the

consistency of future development projects with both mandatory and voluntary measures of the PBCAP.

General Plan/LCP Update Policies to Reduce GHG Emissions

The GP/LCP Update includes goals and policies intended to reduce GHG emissions from future development in Pismo Beach by promoting mixed-use and compact development and supporting bike, pedestrian, and mass transit. Implementation of the policies and actions in the GP/LCP Update Land Use and Community Design, Circulation, and Conservation and Open Space Elements listed below would minimize adverse effects associated with GHG emissions. The Land Use and Community Design Element policies and actions include:

- **Action LU-2.1d: Compatible Uses**. Enforce buffers and screening techniques to reduce the impact of noise, air pollution, traffic, or other nuisances from industrial or certain commercial uses.

- **Policy LU-5.2: Pedestrian Orientation and Safety.** Through appropriate zoning and discretionary approvals, strive to create safe, walkable environments that include elements such as good lighting, safe crosswalks, and street trees that allow people of all ages and abilities to exercise and safely access public transportation, community centers, recreation, schools, and goods and services.
  - **Action LU-5.2b: Pedestrian-Oriented Development**. Discourage new "strip" commercial development with large street-fronting parking lots. ~~, and work with property owners on a streetscape plan and design guidelines to provide a pedestrian orientation~~. New commercial developments ~~Guidelines~~ should address enhancing the pedestrian environment through buildings oriented and accessible from the sidewalk, transparent ground-floor facades, pedestrian lighting and pedestrian-scaled buildings.

- **Policy LU-5.3: Sustainable Community Strategies.** Ensure land uses decisions and community strategies are designed to reduce energy and water consumption, waste and noise generation, air quality impacts; and support multimodal transport for a sustainable Pismo Beach.
  - **Action LU-5.3b: Sustainable Design Incentive Program**. Consider the feasibility of providing incentives for new and renovated projects that incorporate sustainable design features such as the construction of new buildings that reduce energy demand though natural features, such as green roofs and walls or energy efficiency above and beyond the current building code. Inform applicants of the benefits and incentives for green building practices and pursuit of LEED certification.

The Circulation Element policies include:

- **Policy CIR-4.1.7: Neighborhood Context.** Support safe, complete and well-connected neighborhoods for street, bicycle, and pedestrian access. Connections should balance circulation needs within the neighborhood context.
- **Policy CIR-4.1.48: Promote Walking and Bicycling.** Promote walking and bicycle riding for transportation, recreation, commuting, and improvement of public and environmental health. Make downtown more functional and enjoyable for bicyclists and pedestrians. Pedestrian walkways and bicycle paths shall receive at least the same emphasis and attention in future planning as facilities designed for the automobile.

- **Policy CIR- 4.1.51: Existing Facilities.** Maintain and improve existing multimodal circulation and transportation systems and facilities, to maximize alternatives to new street and highway construction. Complete a network of bicycle lanes and paths, sidewalks and pedestrian paths within existing developed parts of the City and extend the system to serve new growth areas.
- **Policy CIR-4.1.52: Integration of Land Use Planning.** Implement land use policies designed to create a pattern of activity that makes it easy to shop, recreate, commute, and conduct personal business without driving.
- **Policy CIR-4.1.58: Bikeways Encouraged.** Bikeways shall be encouraged within the City and adjoining jurisdictions as a complement to Pismo Beach's visitor and recreation emphasis, to reduce automobile trips and for the convenience of visitors and residents. The City's bikeway plan will be coordinated with the San Luis Obispo Area Coordinating Council and Regional Transportation Agency, and the County of San Luis Obispo Regional Transportation Plan.
- **Policy CIR-4.1.68: Pedestrian Circulation.** Sidewalks shall be required for all new developments in residential and commercial areas. Generally, the sidewalk shall be located so that a landscape strip or trees are located between the sidewalk and the vehicular travelled way. Techniques shall be encouraged to create a pleasant walking experience including concern for views, paving materials, landscape, street furniture, and pedestrian scaled lighting. The City encourages the use of flashing beacons or lighted crosswalk systems, especially in highly trafficked areas. All new sidewalk areas shall be designed to accommodate the handicapped, compliant with the ADA. Also, the City shall install (or cause to be installed) sidewalks or footpaths along all collector or arterial streets that connect with commercial centers, public gathering areas and schools.
- **Policy CIR-4.1.70: Pedestrians Connections to Employment Destinations.** Encourage the development of a network of continuous walkways within new commercial, town center, public, and industrial uses to improve workers' ability to walk safely around, to, and from their workplaces. Where possible, route pedestrians to grade separated crossings across US 101.
- **Policy CIR-4.1.71: Pedestrian Connections to Schools.** Continue developing the existing network of walkways between schools and residential uses and encourage the development of new continuous walkways between schools and residential uses. Where possible, route pedestrians to grade separated crossings across US 101.
- **Policy CIR- 4.1.75: Promote Safe, Efficient, and Convenient Public Transportation.** Promote the use of public transportation for daily trips, including to schools and workplaces, as well as other purposes.

The Conservation and Open Space Element policies and actions include:

- **Policy COS-1.1: Improve Air Quality.** The City shall support health and enjoyment for those who live or work in the City and for visitors.
  - **Action COS-1.1a: Community Trip Reduction**. In order to reduce pollution, the City shall emphasize various procedures to reduce the number of vehicle trips and the number of vehicle miles traveled in the community. Techniques shall include, but not be limited to, transportation management measures such as vanpools, carpools, and subsidized transit passes; jobs/housing balance; bikeways and facilities; pedestrian facilities; ~~electric vehicles~~ and related infrastructure and transit improvements.
  - **Action COS-1.1b: City Employee Trip Reduction**. Develop, implement, and promote a TDM program for City employees that includes incentives to reduce single-occupancy vehicle trips, such as ride matching services and assistance, flexible work schedules or

telecommuting opportunities, end of trip facilities (parking, showers, lockers), subsidized transit passes, etc.

- **Action COS-1.1c: Electric Vehicles**. Establish electric vehicle parking spaces and charging requirements to lower pollution and reduce the City's reliance on gasoline.
- **Action COS-1.1d: City Fleet Replacement**. Develop and adopt a low- and zero- emissions replacement/purchasing policy for official City vehicles and equipment. This would not apply to vehicles with special performance requirements.

- **Policy COS-1.2: Renewable Energy.** Support and incentivize renewable energy and non-renewable energy consumption.
  - **Action COS-1.2a: Solar Incentives.** The City shall promote and inform development applicants and existing home-owners and businesses of the following solar incentives and other incentives as may be appropriate:
    - California Solar Initiative Rebate Program
    - California Alternative Rates for Energy Program
    - California Energy Commission – New Solar Homes Partnership
    - GRID Alternatives - Single-Family Affordable Solar Housing Program
    - Community Action Partnership of San Luis Obispo Energy Services
    - emPower San Luis Obispo
  - **Action COS-1.2d: Energy Efficient Upgrades**. Establish a prioritized list of energy efficiency upgrade projects and implement them as funding becomes available.

In addition to these policies to directly reduce energy and mobile GHG emissions from future development in the planning area, updates to the Conservation and Open Space Element includes actions that require the city to update and refine existing GHG planning efforts and thresholds. These include:

- **Action COS-1.1h Emissions Reduction Target.** By 2020, reduce community-wide greenhouse gas emissions to 15 percent below 2005 levels. By 2040, reduce greenhouse gas emissions by 53.33 percent below the 2020 target, placing the community on a path to meet the state's 2050 greenhouse gas emissions reduction goals.
- **Action COS-1.1i Climate Action Plan.** Continue to implement and regularly evaluate the Pismo Beach Climate Action Plan and greenhouse gas inventory to evaluate progress, celebrate successes, and adjust strategies as needed to meet emissions goals.
- **Action COS-1.1j Greenhouse Gas Inventory.** Continue to update the greenhouse gas inventory to determine whether emissions are within recommended levels.
- **Action COS-1.1k Greenhouse Gas Reduction Strategies.** Pursue a variety of greenhouse gas reduction strategies across the transportation, residential, waste, and commercial sectors, commensurate with their share of the community's greenhouse gas emissions.

The GP/LCP Update includes goals and policies that would reduce GHG emissions from future development in Pismo Beach, and would not conflict with regional and State plans, policies, and regulations adopted for the purpose of reducing GHG emissions. Implementation of GP/LCP Update Conservation and Open Space Element Action COS-1.1h would establish GHG reduction goals consistent with the State's 2030 and 2050 greenhouse gas emissions reduction goals. Conservation Element Actions COS-1.1i, COS-1.1j, and COS-1.1k would require the City to update the CAP to

comply with evolving state goals and requirements and would ensure that the CAP continues to provide measures for future development projects in the planning area to assess their consistency with City GHG reduction goals. Therefore, the GP/LCP Update would be consistent with regional and State plans, policies, and regulations adopted for the purpose of reducing GHG emissions, and this impact would be less than significant.

Mitigation Measures

No mitigation is required.

4.7.4 Cumulative Impacts

GHG emissions are, by definition, cumulative impacts, as they add to the global accumulation of greenhouse gases in the atmosphere. The policies listed above would reduce GHG emissions associated with buildout of the GP/LCP Update and contribute to the Pismo Beach's fair share of statewide reduction targets. As discussed in Impact GHG-1, new individual development projects in Pismo Beach could result in GHG emissions that would be inconsistent with statewide per capita emissions goals established in the 2017 Scoping Plan and may exceed applicable SLOAPCD or City thresholds on a project-by-project basis. However, the GP/LCP Update would establish GHG reduction goals consistent with the State's 2030 and 2050 greenhouse gas emissions reduction goals, and the GP/LCP Update would be consistent with regional and State plans, policies, and regulations adopted for the purpose of reducing GHG emissions. Therefore, the GP/LCP Update's contribution to cumulative GHG and climate change impacts would be less than significant.

4.8 Hazards, Hazardous Materials, and Wildfire

This section addresses impacts associated with hazardous materials use and transportation, the accidental release of hazardous materials, new development or re-development on contaminated sites, air traffic hazards, interference with emergency response and evacuation plans, and the risk of exposure to wildland fires.

4.8.1 Setting

a. Definition of Hazardous Materials

A material is considered hazardous if it appears on a list of hazardous materials prepared by a federal, state, or local agency, or if it has characteristics defined as hazardous by such an agency. A hazardous material is defined in Title 22 of the California Code of Regulations as follows:

"A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed (California Code of Regulations, Title 22, Section 66261.10)."

Chemical and physical properties cause a substance to be considered hazardous. Such properties include toxicity, ignitability, corrosiveness, and reactivity. California Code of Regulations, Title 22, Sections 66261.20 through 66261.24 defines the aforementioned properties. The release of hazardous materials into the environment can contaminate soils, surface water, and groundwater supplies.

b. Land Use Patterns

Past and present land use patterns are good predictors of the potential for past contamination by hazardous materials and the current use and storage of hazardous materials. Military, industrial, and certain commercial land uses, such as dry cleaners and auto service, are more likely to use and store large quantities of hazardous materials than residential land uses. Small quantities of hazardous materials are also routinely used and stored in other commercial and retail businesses, educational facilities, medical facilities, and households. Commercial land uses in the City of Pismo Beach (City) are scattered throughout all neighborhood planning areas, but are most concentrated in the Pismo Creek/Pismo Marsh, Downtown Core, Oak Park Heights, and Freeway Foothills/Mattie Road. Light industrial uses are located in the Downtown Core, the Bluffs/Sunset Palisades/South Palisade, and Terrace Avenue/Shell Beach/Dinosaur Caves neighborhood planning areas.

Land use patterns are also useful for identifying the location of sensitive receptors, such as schools, day-care facilities, hospitals, and nursing homes. Shell Beach Elementary School is located within the Terrace Avenue planning area and the Francis Judkins Junior High School is located within the Pismo Heights planning area. Happy Time Co-op Preschool is located within the Freeway Foothills/Mattie Road planning area. There are no hospitals or nursing homes within the City.

c. Existing Hazardous Material Contamination

The following databases were searched in March 2021 for records related to any known hazardous materials contamination within the City:

- United States Environmental Protection Agency (U.S. EPA) Superfund Enterprise Management System database (U.S. EPA 2021);
- California State Water Resources Control Board (SWRCB 2019a) GeoTracker search for leaking underground fuel tanks;
- California Department of Toxic Substances Control (DTSC 2019) EnviroStor database;
- SWRCB (2021b) solid waste disposal sites, active Cease and Desist Orders (CDOs), and Cleanup and Abatement Orders (CAOs); and
- Cortese list (California Environmental Protection Agency 2021).

The City does not contain any active CDOs and CAOs from the SWRCB, military cleanup sites or Federal Superfund sites. According to the California State Water Resources Control Board (SWRCB) GeoTracker database and the California Department of Toxic Substances Control (DTSC) EnviroStor database, the City does not have any leaking underground storage tanks (UST) sites. No other active hazardous materials contamination sites within the planning area were identified. DTSC maintains a list known as the Cortese List, which identifies sites where hazardous materials are present and cleanup activities are necessary. There are no facilities in Pismo Beach on the Cortese List.

Additionally, the Diablo Canyon Power Plant, located about 3 miles north of Pismo Beach, may pose a hazardous materials risk to the City. Diablo Canyon is the one remaining operational nuclear power plant in California, and is expected to remain in operation until its license expires in ~~2025~~ 2030. PG&E is also pursuing relicensing which would extend the plant operations. The facility is built on a fault line and is located on the coast, exposing it to seismic hazards and coastal hazards such as tsunamis, although Diablo Canyon is designed to be highly resilient to these emergency situations. Additionally, the PG&E's Pismo Beach Materials Handling Facility is located within the City along Price Canyon Road. The Pismo Beach Materials Handling Facility supports PG&E's operations and has been used for various equipment and material storage and transport needs in support of the Diablo Canyon Power Plant. During decommissioning of the Diablo Canyon Power Plant, hazardous materials will be trucked to the Pismo Beach Materials Handling Facility and transferred to rail for disposal (PG&E 2021).

d. Airports and Airport Hazards

Airport-related hazards can occur if departing or landing aircraft pose a safety risk to nearby development, or vice versa. The nearest public airports to the study area are the San Luis Obispo County Regional Airport located approximately 5 miles due northwest, and the Oceano County Airport located approximately 2 miles to the south. The City is located outside of the existing and proposed safety zones associated with runway activities at these airports (San Luis Obispo County Airport Land Use Commission 2005).

e. Emergency Response Plans

The City of Pismo Beach developed its own Local Hazard Mitigation Plan (HMP) in 2014. Although the plan is meant to be a multi-hazard plan, its primary function is to address mitigation for natural hazards and other environmentally related, human caused events or incidents (Pismo Beach 2014). The goals of the 2014 HMP intend to reduce the possibility of damage associated with hazards,

promote disaster-resistant development. The 2014 HMP incorporates all applicable operations plans and geo- technical reports in relevant hazard mitigation ordinances, regulations, and plans. The 2014 HMP coordinates activities between agencies, provides safety information and establishes training and exercise goals related to emergency management. In 2019 Pismo Beach participated in the development of the County of San Luis Obispo Multi-Jurisdictional Hazard Mitigation Plan (HMP; County of San Luis Obispo 2019). The County Multi-Jurisdictional HMP refers to other emergency response plans developed by the County of San Luis Obispo Office of Emergency Services and other County municipalities and special districts.

In addition, the City of Pismo Beach is included in the Emergency Operations Plan, which was revised in 2016 and developed by the County of San Luis Obispo. The Emergency Operations Plan covers policies and concepts for responding to any and all emergencies that could affect the health, safety, and property of the public within city limits, including earthquakes, hazardous materials, multi-casualty events, storms and floods, wildland fires, terrorism, nuclear power plant events, and tsunamis (County of San Luis Obispo 2016). The City is also included in the County's Local Hazard Mitigation Plan. The County is currently updating the 2014 Local Hazard Mitigation Plan.

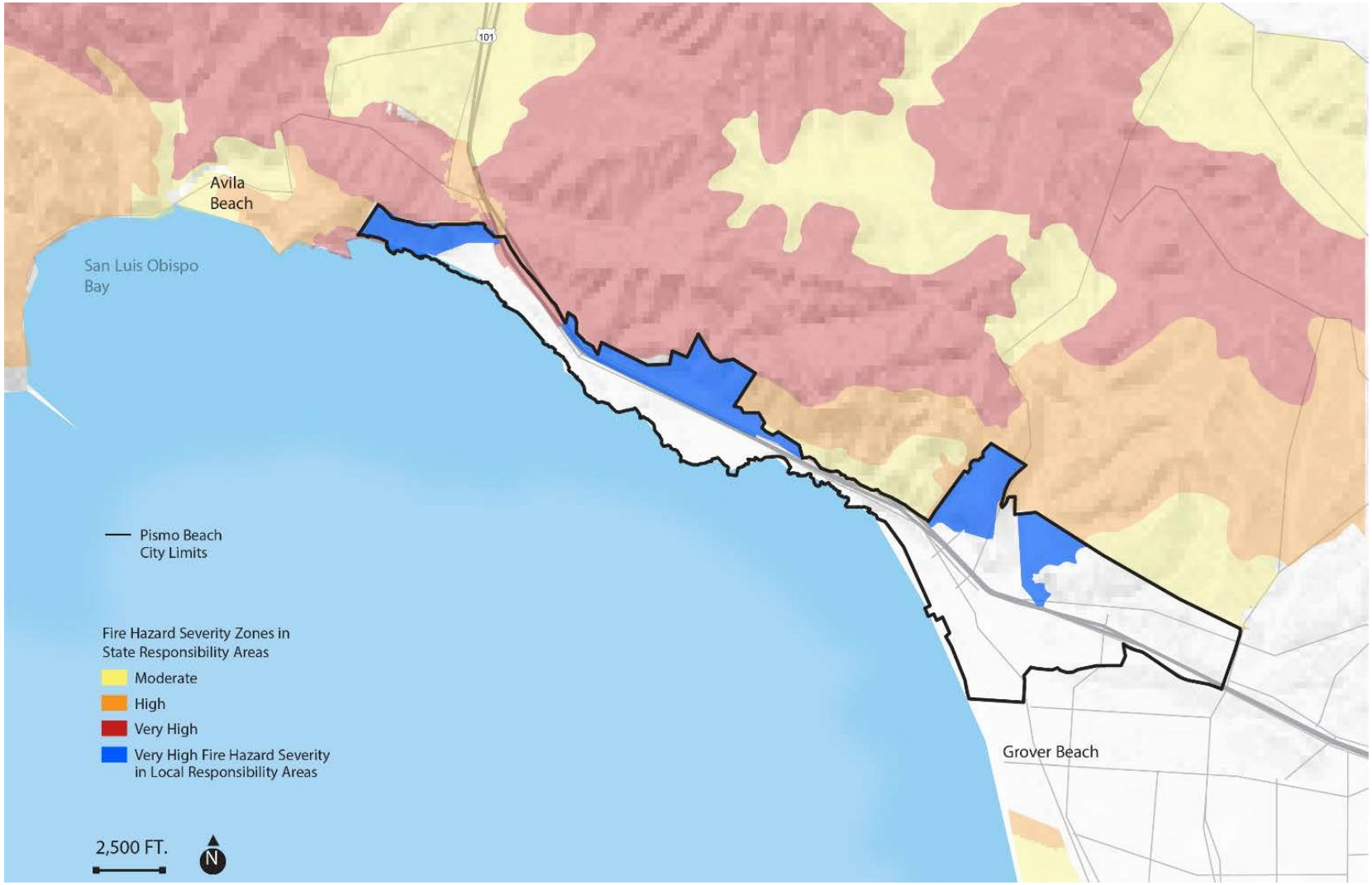
In addition, the City of Pismo Beach is included in the Tsunami Emergency Response Plan, which was revised in 2016 and developed by the San Luis Obispo Office of Emergency Services. The Tsunami Emergency Response Plan identifies potential tsunami inundation zones and covers warning messages, reverse 911 messages, and warning news releases in the event of a tsunami inundation, which could affect the health, safety, and property of coastal areas in San Luis Obispo County, including the City of Pismo Beach (County of Pismo Beach 2005).

f. Wildland Fire Hazards

Fires in wildland areas can destroy vegetation and wildlife, and threaten urban areas located on the fringe of wildland areas. Wildland fires can also have serious impacts on downstream development and water supplies. When vegetation is burned away, erosion becomes a more serious problem, especially during the rainy season. Consequently, mudslides and landslides can threaten downhill development as a result of wildland fires.

Wildland fire risk is determined by a combination of factors including precipitation, winds, temperature, and landscape and vegetation conditions. CAL FIRE determines fire hazard severity zones based on the potential fire hazard that is expected to prevail there. Factors in determining fire hazard severity zones include fuel (material that can burn), slope, and weather. CAL FIRE identifies three zones, based on increasing hazard severity: moderate, high, and very high. Moderate hazard zones are typically identified as either wildland areas supporting areas of typically low fire frequency and relatively modest fire behavior, or are developed/urbanized areas with a very high density of inflammable surfaces including roadways, irrigated lawn/parks, and low total vegetation cover (less than 30 percent) that is highly fragmented and low in flammability (e.g., irrigated, manicured, managed vegetation). There are major fire hazards surrounding Pismo and along the northern and western portions of the City. Pismo Beach is bordered to the north and west with open space. These open spaces are more at risk of burning, and much of the native vegetation relies on fire to reproduce. The majority of the developed portion of Pismo Beach is located outside of a mapped fire hazard severity zone. Figure 4.8-1 below illustrates Fire Hazard Severity zones in the City. The areas of greatest risk to fire hazards in Pismo Beach are the northern portion of the City reaching into the foothills, northeast near Price Canyon, and northwest toward Avila Beach. Approximately 26 percent of the City is in a Very High Fire Hazard Severity Zone. Additionally, as human development continues to encroach on natural areas, human life and property are more susceptible

Figure 4.8-1 Fire Hazard Severity Zones



Source: CAL FIRE 2007.

Note: For the purposes of this map, this figure does not include the submerged lands offshore that are within the Pismo Beach City Limits. See Figure LU-1 of the General Plan Land Use Element (Pismo Beach LAFCO-approved City Border) for the full Pismo Beach City Limits.

to fire hazard. The risk of wildland fires is greatest near the City limits where development meets rural areas of combustible vegetation (County of San Luis Obispo 2019). This encroachment occurs in areas called the wildland-urban interface (WUI), where structures and human development meet or intermingle with undeveloped wildland or vegetative fuels that experience elevated risks of wildfire.

Development within very high fire hazard areas is unsafe where fire suppression is impeded by lack of water, rugged terrain, and delayed response times. The City is designated as a Local Responsibility Area (LRA), wherein the local government has responsibility for fire protection (CAL FIRE 2009). The San Luis Obispo County Fire Department is responsible for fire protection in Pismo Beach. There are two fire stations in Pismo Beach which are located at 760 Mattie Road and 2555 Shell Beach Road. In 2023, the City Council approved a contract to design and build a new fire station and police station on Bello Street.

Climate change is expected to exacerbate periodic drought conditions, potentially increasing the frequency of wildfires and altering the distribution and character of natural vegetation. The California Climate Change Center reported a projected increase wildfire frequency, statewide, between 11 percent under a lower-range warming scenario and 55 percent under a medium-range warming scenario (California Climate Change Center 2006).

CAL FIRE works in cooperation with the Governor's Office of Emergency Services (CalOES, formerly California Emergency Management Agency [CalEMA]), as well as neighboring state governments through a network of mutual aid agreements to fight wildland fires. CAL FIRE is also a dedicated firefighting partner to the federal government, with experience contributing to firefighting efforts on the 45 million acres of federal lands in California. CAL FIRE is the largest multipurpose fire protection agency in the United States, responsible for wildland fire protection of over 31 million acres of California's privately owned watershed lands, as well as services in 150 counties, cities, and districts via contracts with local governments.

g. Coastal Hazards

Coastal hazards in Pismo Beach pose a threat due to risk of coastal flooding. Storm events and, tsunamis may occur along the shore, although the risk of a serious tsunami for Pismo Beach remains low. The northwestern portion of Pismo Beach coastline consists of steep bluffs, while the southern shoreline is characterized by wide, sandy beaches. The small Meadow Creek and larger Pismo Creek meet to form a lagoon behind the beach in the southern portion of Pismo Beach. The northern, bluff portion of the City is referred to as the Bluffs and the southern area abutting Meadow Creek and Pismo Creek is referred to as the low-lying area. Downtown Pismo Beach is located between the Bluffs and the low-lying areas. The Bluffs are currently exposed to coastal erosion, especially during extreme storm events. Seawalls and other bluff stabilization measures have previously been constructed in some sections of the Bluffs. The downtown area is currently exposed to coastal erosion, wave runup, and flooding during extreme events, although a sea wall offers some protection. The low-lying area is most prone to coastal and riverine flooding.

Flood potential could increase substantially in this area due to sea level rise, if left unmitigated. Although sea levels have generally not risen enough to pose a substantial threat to Pismo Beach, future sea level rise may be great enough to create hazardous conditions. A Sea Level Rise Vulnerability Assessment was prepared for the City in 2019, which evaluated sea level rise scenarios between 1.6 feet to 9.8 feet. According to the Sea Level Rise Vulnerability Assessment, incremental sea level rise will exacerbate existing erosion hazards to the first row of development in the Bluffs

area. However, additional parcels beyond the first row of development in the Bluffs are not projected to be exposed to erosion hazard until the extreme sea level rise scenarios of 8.2 feet and 9.8 feet rise. Sea level rise hazard to the Downtown area is projected to be limited to temporary flooding during large storm events for sea level rise below the extreme sea level rise scenarios of 8.2 feet and 9.8 feet. However, temporary flooding hazards are a concern because even minor flooding of the developed areas could lead to extensive structural damages. In the low-lying areas, shoreline erosion and increased water surface elevations in Pismo Creek from sea level rise is projected to increase coastal flooding risks to development southeast of Pismo Creek. Tidal flooding of the recreational vehicle (RV) facilities southwest of Dolliver Street is predicted to occur by the 3.3 feet sea level rise scenario. In addition, tidal flooding is predicted to affect development northeast of Dolliver Street at the 6.6 feet sea level rise scenario. For more information on flood hazards related to tsunami and seiches, refer to Section 4.9, Hydrology.

4.8.2 Regulatory Setting

The management of hazardous materials and hazardous wastes is regulated at the federal, state, and local levels, including through programs administered by the USEPA; agencies within the California Environmental Protection Agency (CalEPA), such as the DTSC; Federal and State occupational safety agencies; and the San Luis Obispo County Environmental Health Services (EHS), Hazardous Materials Program, which is designated as the local Certified Unified Program Agency (CUPA).

a. Federal Regulations

The Federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA)

These acts established a program administered by the USEPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the "cradle to grave" system of regulating hazardous wastes. Among other things, the use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by HSWA.

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (enacted 1980), amended by the Superfund Amendments and Reauthorization Act (SARA) (1986)

This law provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. Among other things, CERCLA established requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be identified. CERCLA also enabled revision of the National Contingency Plan (NCP), which provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also established the National Priorities List (NPL).

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

FIFRA (7 USC 136 et seq.) provides Federal control of pesticide distribution, sale, and use. USEPA was given authority under FIFRA not only to study the consequences of pesticide usage, but also to require users (farmers, utility companies, and others) to register when purchasing pesticides. Later amendments to the law required users to take exams for certification as applicators of pesticides. All pesticides used in the United States must be registered (licensed) by USEPA. Registration assures that pesticides will be properly labeled and that, if used in accordance with specifications, they will not cause unreasonable harm to the environment.

Lead-Based Paint Elimination Final Rule 24 Code of Federal Regulations

Regulations for Lead-Based Paint (LBP) are contained in the Lead-Based Paint Elimination Final Rule 24 Code of Federal Regulations (CFR) 33, governed by the U.S. Housing and Urban Development (HUD), which requires sellers and lessors to disclose known LBP and LBP hazards to perspective purchasers and lessees. Additionally, all LBP abatement activities must be in compliance with California and Federal OSHA and with the State of California Department of Health Services requirements. Only LBP-trained and -certified abatement personnel are allowed to perform abatement activities. All LBP removed from structures must be hauled and disposed of by a transportation company licensed to transport this type of material at a landfill or receiving facility licensed to accept the waste.

U.S. Environmental Protection Agency

USEPA is the agency primarily responsible for enforcement and implementation of Federal laws and regulations pertaining to hazardous materials. Applicable Federal regulations pertaining to hazardous materials are contained in the Code of Federal Regulations (CFR) Titles 29, 40, and 49. Hazardous materials, as defined in the CFR, are listed in 49 CFR 172.101. The management of hazardous materials is governed by the following laws:

- Resource Conservation and Recovery Act of 1976 (RCRA) (42 U.S. Code [USC] 6901 et seq.); Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA, also called the Superfund Act) (42 USC 9601 et seq.);
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (7 USC 136 et. Seq.); and
- Superfund Amendments and Reauthorization Act (SARA) of 1986 (Public Law 99 499).

These laws and associated regulations include specific requirements for facilities that generate, use, store, treat, and/or dispose of hazardous materials. USEPA provides oversight and supervision for Federal Superfund investigation/remediation projects, evaluates remediation technologies, and develops hazardous materials disposal restrictions and treatment standards.

National Fire Plan

The National Fire Plan was developed under Executive Order 11246 in August 2000, following a historic wildland fire season. Its intent is to establish plans for active response to severe wildland fires and their impacts to communities while ensuring sufficient firefighting capacity. The plan addresses firefighting, rehabilitation, hazardous fuels reduction, community assistance, and accountability.

b. State Regulations

Department of Toxic Substances Control

As a department of the CalEPA, the DTSC is the primary agency in California that regulates hazardous waste, cleans up existing contamination, and looks for ways to reduce the hazardous waste produced in California. DTSC regulates hazardous waste in California primarily under the authority of RCRA and the California Health and Safety Code.

DTSC also administers the California Hazardous Waste Control Law (HWCL) to regulate hazardous wastes. While the HWCL is generally more stringent than RCRA, until USEPA approves the California program, both state and federal laws apply in California. The HWCL lists 791 chemicals and approximately 300 common materials that may be hazardous; establishes criteria for identifying, packaging, and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal, and transportation; and identifies some wastes that cannot be disposed of in landfills.

Government Code Section 65962.5 requires the DTSC, the State Department of Health Services, the SWRCB, and CalRecycle to compile and annually update lists of hazardous waste sites and land designated as hazardous waste sites throughout the state. The Secretary for Environmental Protection consolidates the information submitted by these agencies and distributes it to each city and county where sites on the lists are located. Before the lead agency accepts an application for any development project as complete, the applicant must consult these lists to determine if the site at issue is included.

If any soil is excavated from a site containing hazardous materials, it would be considered a hazardous waste if it exceeded specific criteria in Title 22 of the California Code of Regulations. Remediation of hazardous wastes found at a site may be required if excavation of these materials is performed, or if certain other soil disturbing activities would occur. Even if soil or groundwater at a contaminated site does not have the characteristics required to be defined as hazardous waste, remediation of the site may be required by regulatory agencies subject to jurisdictional authority. Cleanup requirements are determined on a case-by-case basis by the agency taking jurisdiction.

Hazardous Waste Control Act

The hazardous waste management program enforced by DTSC was created by the Hazardous Waste Control Act (California Health and Safety Code Section 25100 et seq.), which is implemented by regulations described in CCR Title 26. The State program is similar to, but more stringent than, the Federal program under RCRA. The regulations list materials that may be hazardous, and establish criteria for their identification, packaging, and disposal. Environmental health standards for management of hazardous waste are contained in California Code of Regulations (CCR) Title 22, Division 4.5. In addition, as required by California Government Code Section 65962.5, DTSC maintains a Hazardous Waste and Substances Site List for the State called the Cortese List.

California Department of Pesticide Regulation, Department of Food and Agriculture, and the Department of Public Health

The California Department of Pesticide Regulations (DPR), a division of CalEPA, in coordination with the California Department of Food and Agriculture (CDFA), a division of Measurement Standards and the California Department of Public Health (CDPH) have the primary responsibility to regulate pesticide use, vector control, food, and drinking water safety. CCR Title 3 requires the coordinated

response between the County Agricultural Commissioner and SBDEH to address the use of pesticides used in vector control for animal and human health on a local level. DPR registers pesticides, and pesticide use is tracked by the County. Title 22 is used also to regulate both small and large CDPH water systems.

California Fire Code (2019)

The 2019 California Fire Code is based on the 2018 International Fire Code. The Fire Code establishes the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety, and general welfare for the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. The provisions of this code apply to the construction, alteration, movement enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure or any appurtenances connected or attached to such building structures throughout the State of California.

The California Fire Plan

The Strategic Fire Plan for California is the State's road map for reducing the risk of wildfire. The most recent version of the Plan was finalized in January 2019 and directs each CAL FIRE Unit to prepare a locally specific Fire Management Plan (CAL FIRE 2019). In compliance with the California Fire Plan, individual CAL FIRE units are required to develop Fire Management Plans for their areas of responsibility. These documents assess the fire situation within each of the 21 CAL FIRE units and six contract counties. The plans include stakeholder contributions and priorities and identify strategic areas for pre-fire planning and fuel treatment as defined by the people who live and work with the local fire problem. The plans are required to be updated annually.

Wildland Urban Interface Building Standard

On September 20, 2007, the Building Standards Commission approved the Office of the State Fire Marshal emergency regulations amending the California Code of Regulations, Title 24, Part 2, known as the California Building Code. These codes include provisions for ignition-resistant construction standards in the wildland urban interface.

State Emergency Plan

The foundation of California's emergency planning and response is a statewide mutual aid system which is designed to ensure that adequate resources, facilities, and other support is provided to jurisdictions whenever their own resources prove to be inadequate to cope with a given situation.

The California Disaster and Civil Defense Master Mutual Aid Agreement (California Government Code Sections 8555–8561) requires signatories to the agreement to prepare operational plans to use within their jurisdiction, and outside their area. These plans include fire and non-fire emergencies related to natural, technological, and war contingencies. The State of California, all state agencies, all political subdivisions, and all fire districts signed this agreement in 1950.

Section 8568 of the California Government Code, the "California Emergency Services Act," states that "the State Emergency Plan shall be in effect in each political subdivision of the state, and the governing body of each political subdivision shall take such action as may be necessary to carry out the provisions thereof." The Act provides the basic authorities for conducting emergency operations

following the proclamations of emergencies by the Governor or appropriate local authority, such as a City Manager. The provisions of the act are further reflected and expanded on by appropriate local emergency ordinances. The Act further describes the function and operations of government at all levels during extraordinary emergencies, including war.

All local emergency plans are extensions of the State of California Emergency Plan. The State Emergency Plan conforms to the requirements of California's Standardized Emergency Management System (SEMS), which is the system required by Government Code 8607(a) for managing emergencies involving multiple jurisdictions and agencies (California Emergency Management Agency [CalEMA] 2009). The SEMS incorporates the functions and principles of the Incident Command System (ICS), the Master Mutual Aid Agreement (MMAA), existing mutual aid systems, the operational area concept, and multi-agency or inter-agency coordination. Local governments must use SEMS to be eligible for funding of their response-related personnel costs under state disaster assistance programs. The SEMS consists of five organizational levels that are activated as necessary, including: field response, local government, operational area, regional, and state. CalOES divides the state into several mutual aid regions. The City of Pismo Beach is located in Mutual Aid Region I, which includes San Luis Obispo, Santa Barbara, Ventura, Los Angeles and Orange Counties (CalEMA 2011).

b. Regional Regulations

County of San Luis Obispo Environmental Health Services Hazardous Materials Program

San Luis Obispo County EHS's, Hazardous Materials Program is designated as the local CUPA. This agency is responsible for inspecting facilities in the County to verify proper storage, handling and disposal of hazardous materials and hazardous wastes. The Hazardous Materials Program administers programs for Hazardous Materials Business Plans, hazardous waste generator requirements, USTs, above ground petroleum storage, prevention of accidental releases (California Accidental Release Prevention program), and hazardous materials management plans.

County of San Luis Obispo Emergency Operations Plan

The San Luis Obispo County Emergency Operations Plan (EOP) addresses the planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies in or affecting San Luis Obispo County (County of San Luis Obispo 2016). A key intent of the County's EOP is to explain how overall emergency management is coordinated countywide, to address concerns related to continuity of government for the County of San Luis Obispo, and related emergency management issues. The EOP is also intended to serve as a policy and planning reference. The EOP also identifies roles for departments within the County of San Luis Obispo and other local governments and encourages these agencies to develop and implement supporting emergency plans, standard operating procedures (SOPs) or emergency response checklists based on the provisions of the EOP.

County of San Luis Obispo Tsunami Emergency Response Plan

The County of San Luis Obispo Tsunami Emergency Response Plan establishes and defines emergency management procedures, organizational response and coordination related to receipt of a tsunami information statement, watch, advisory, or warning or an actual tsunami along the San Luis Obispo County coastline. This plan is a component of the San Luis Obispo County EOP in order

to provide initial response action. The administrative portion of the plan contains an overview, hazard assessment, explains the emergency management system, and explains the concept of operations.

c. Local Regulations

Airport Land Use Compatibility Plans

The Section 65302.3 of the Government Code requires general plans and applicable specific plans to be consistent with amended Comprehensive Airport Land Use Plans (CALUP). The nearest public airports to the study area are the San Luis Obispo County Regional Airport located approximately 5 miles due northwest, and the Oceano County Airport located approximately 2 miles to the south. The City is not located in the airport land use plan area for either of these airports.

Local Hazard Mitigation Plan/Multi-Jurisdictional Hazard Mitigation Plan

The 2014 HMP is a plan to improve resiliency in the community by identifying natural hazards present in Pismo Beach, determining the community's vulnerability to each hazard, and identifying development mitigation strategies to reduce vulnerability before emergency situations develop. The 2014 HMP identifies earthquakes (including fault rupture and liquefaction), floods, landslides, bluff erosion, and hazardous material releases as the most significant hazards present in the community, and includes goals, objectives, and mitigation to improve resiliency to these hazards.

In 2019 Pismo Beach participated in the development of the County of San Luis Obispo Multi-Jurisdictional Hazard Mitigation Plan (HMP; County of San Luis Obispo 2019). The County of San Luis Obispo HMP was originally developed in 2005, updated in 2011 and 2013, and underwent a comprehensive update in 2019. A significant change to the plan in 2019 was the inclusion of other County municipalities and special districts, broadening it from a County-specific plan to a multi-jurisdictional document prepared in coordination with the participating entities and input from the public. The County Multi-Jurisdictional HMP entails adopting, implementing, assigning responsibility, monitoring, and reviewing this hazard mitigation plan over time, to ensure the goals and objectives are being achieved and the plan remains a relevant document.

4.8.3 Impact Analysis

a. Methodology

This section describes the potential environmental impacts of the proposed project relevant to hazards and hazardous materials. The impact analysis is based on an assessment of baseline conditions in the City, including locations of hazardous materials use and storage, existing contaminated sites, air traffic hazards, emergency response and evacuation plan requirements, and the risk of exposure to wildland fires. This analysis identifies potential impacts based on the predicted interaction between the affected environment and construction, operation, and maintenance activities related to the predicted development that would occur under the proposed project. This section describes impacts in terms of location, context, duration, and intensity.

b. Significance Thresholds

The following thresholds of significance are based on Appendix G of the CEQA Guidelines. For the purposes of this EIR, implementation of the proposed project may have a significant adverse impact if it would do any of the following:

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials
2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school
4. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment
5. Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and result in a safety hazard or excessive noise for people residing or working in the project area
6. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan
7. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

Additional hazard related issues are addressed in other sections of this EIR. Hazards associated with tsunamis, seiches, and floods are addressed in Section 4.7, Hydrology and Water Quality.

This section also analyzes threshold related to wildfire. For the purposes of this EIR, implementation of the proposed project may have a significant adverse impact if it would do any of the following:

1. If located in or near a state responsibility area, substantially impair an adopted emergency response plan or emergency evacuation plan
2. If located in or near a state responsibility area, due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire
3. If located in or near a state responsibility area, require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk
4. If located in or near a state responsibility area, expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

The nearest public airports to the study area are the San Luis Obispo County Regional Airport located approximately 5 miles due northwest, and the Oceano County Airport located approximately 2 miles to the south. The City is located outside of the existing and proposed safety zones associated with runway activities at these airports (San Luis Obispo County Airport Land Use Commission 2005). Therefore, there would be no impacts related to airport-related hazards, and Threshold 5 is not discussed further below.

This section does not analyze the exposure of future development within the City to hazards because it is an impact of the environment on the project. The California Supreme Court held in a December 2015 opinion (*BIA v. BAAQMD*) that an analysis of impacts of the environment on a project is not required for CEQA compliance.

c. Project Impacts and Mitigation Measures

Threshold 1:	Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
Threshold 2:	Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

IMPACT HAZ-1 IMPLEMENTATION OF THE GP/LCP UPDATE COULD RESULT IN AN INCREMENTAL INCREASE OF THE OVERALL ROUTINE TRANSPORT, USE, STORAGE, AND DISPOSAL OF HAZARDOUS MATERIALS. COMPLIANCE WITH APPLICABLE REGULATIONS RELATED TO THE HANDLING, TRANSPORT, DISPOSAL, AND STORAGE OF HAZARDOUS MATERIALS AND ADHERENCE TO PROPOSED GP/LCP UPDATE POLICIES WOULD MINIMIZE THE RISK OF SPILLS AND THE PUBLIC'S POTENTIAL EXPOSURE TO THESE SUBSTANCES AND REDUCE THE RISK OF ADVERSE IMPACTS OF HAZARDOUS MATERIALS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Implementation of the GP/LCP Update would facilitate new development in the City, increasing the residential and commercial uses in Pismo Beach. An additional 1,979 residents and 783,268 square feet of commercial uses may be added to the City by the year 2040. New residential and commercial development may involve the routine use, storage, and disposal of hazardous materials. Additional development in the City could increase transport of hazardous materials along the transportation corridors within the City. The additional development may result in and increased risk of accidental release of hazardous materials on a transportation route and exposure to hazardous materials to existing development within the City.

As stated above, buildout of the City envisioned in the GP/LCP Update would facilitate up to 783,268 new square feet of non-residential land uses by the year 2040. New commercial land uses could require use and storage of hazardous materials in proximity to residential uses. Additionally, mixed use areas that are identified in the City may result in new residential units adjacent to commercial and industrial land uses. Mixed use areas would be located mostly in the Downtown Core (Figure 2-6).

Hazardous Materials Storage and Disposal

Although the overall quantity of hazardous materials and waste generated in the City could incrementally increase as a result of implementation of the GP/LCP Update, all new developments that handle or use hazardous materials would be required to comply with the regulations, standards, and guidelines established by the USEPA, the State of California, San Luis Obispo County, and the City of Pismo Beach related to storage, use, and disposal of hazardous materials. The San Luis Obispo County EHS is designated as the local CUPA and performs inspections to prevent exposure to environmental health hazards for businesses and residents in San Luis Obispo County, including in the City of Pismo Beach.

California Building Code requirements prescribe safe accommodations for materials that present a moderate explosion hazard, high fire or physical hazard, or health hazards. Compliance with all applicable federal and State laws related to the storage of hazardous materials would maximize containment (through safe handling and storage practices described above) and provide for prompt and effective cleanup if an accidental release occurs.

CalEPA requires all businesses that handle more than specified amounts of hazardous materials to submit business plans through the California Environmental Reporting System (CERS). Specifically,

any new business that meets the specified criteria must submit a full hazardous materials disclosure report that includes an inventory of the hazardous materials generated, used, stored, handled, or emitted; and emergency response plans and procedures to be used in the event of a significant or threatened significant release of a hazardous material. The report must identify the procedures to follow for immediate notification to all appropriate agencies and personnel in the event of a release, identification of local emergency medical assistance appropriate for potential accident scenarios, contact information for all company emergency coordinators of the business, a listing and location of emergency equipment at the business, an evacuation plan, and a training program for business personnel.

For those employees that would work with hazardous materials, the amounts of hazardous materials that are handled at any one time are generally relatively small, reducing the potential consequences of an accident during handling. Business-specific practices would be required to comply with federal and State laws to eliminate or minimize the potential consequence of hazardous materials accidents. For example, employees who would work around hazardous materials are required to wear appropriate protective equipment, and safety equipment is routinely available in all areas where hazardous materials are used.

The San Luis Obispo County EHS allows businesses that handle and store hazardous materials above threshold quantities and are regulated by EHS through certification of Hazardous Materials Handler Annual Business Plan (San Luis Obispo County EHS 2018). CalOES provides emergency response to hazardous materials incidents in the City. Additional emergency response capabilities are not anticipated to be necessary to respond to the potential incremental increase in the number of incidents that could result from implementation of the GP/LCP Update. Furthermore, adherence to applicable regulations as discussed above would be required to reduce any potential consequences of a hazardous materials operational accident.

Demolition Activities

Demolition activities related to future development and re-development projects in the City would potentially result in emission of lead and asbestos. Lead-based materials and asbestos exposure are regulated by the California Occupational Safety and Health Administration (Cal OSHA). The California Code of Regulations (CCR), §1532.1, requires testing, monitoring, containment, and disposal of lead-based materials such that exposure levels do not exceed Cal OSHA standards. Under this rule, construction workers may not be exposed to lead at concentrations greater than fifty micrograms per cubic meter of air averaged over an eight-hour period and exposure must be reduced to lower concentrations if the work day exceeds eight hours. Similarly, CCR §1529 sets requirements for asbestos exposure assessments and monitoring, methods of complying with exposure requirements, safety wear, communication of hazards, and medical examination of workers.

The San Luis Obispo Air Pollution Control District (SLOAPCD) enforces Asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP), which regulate the control of asbestos during the renovation and demolition of buildings under the Federal Clean Air Act (FCCA; SLOAPCD 2018a; SLOAPCD 2018b). The FCAA requires a thorough inspection for asbestos where demolition will occur and specifies work practices to control emissions, such as removing all asbestos-containing materials, adequately wetting all regulated asbestos-containing materials, sealing the material in leak tight containers and disposing of the asbestos-containing waste material as expediently as practicable (USEPA 2016).

Hazardous Materials Transport

Hazardous materials may be transported into and throughout the City on State Route 1 (SR 1) or United States Highway 101 (US 101), and accidents on these roadways could result in the release of hazardous materials. Additionally, hazardous materials may be transported via aircraft or watercraft in the City, resulting in potential for hazardous materials release from accidents involving such vessels.

The U.S. Department of Transportation's Office of Hazardous Materials Safety regulates the transportation of hazardous materials, as described in Title 49 of the Code of Federal Regulations, and implemented by Title 13 of the CCR. Documentation of compliance with hazardous materials regulations codified in Titles 8, 22, and 26 of the California Code of Regulations, and their enabling legislation set forth in Chapter 6.95 of the California Health and Safety Code, is required for all hazardous waste transport. In addition, individual contractors and property owners are required to comply with all applicable federal, State, and local laws and regulations pertaining to the transport, use, disposal, handling, and storage of hazardous waste, including but not limited to, Title 49 of the Code of Federal Regulations.

The San Luis Obispo County Fire Department provides emergency response to hazardous materials incidents in the City. Major hazardous materials accidents associated with residential, industrial, and retail-commercial uses are infrequent, and additional emergency response capabilities are not anticipated due to implementation of the GP/LCP Update.

The goals and policies in the GP/LCP Update Safety Element listed below would minimize any impacts related to the use, storage, transport, and release of hazardous materials in the City. These policies direct the City to develop and maintain a multi-hazard emergency response plan, update plans and agreements with other agencies, and regulate use, location, storage, and transportation of hazardous materials.

Goal S-1 – A well prepared and educated community that can quickly and effectively respond to and recover from a hazardous event.

- **Policy** S-**1.2 – Emergency Disaster Response Programs.** Regularly update plans and agreements with other agencies to response to changing hazard risks.
  - **Action S-1.2a – San Luis Obispo County Multi-Jurisdictional Hazard Mitigation Plan.** Coordinate across City departments and seek to align the City's portion of the County's Multi-Jurisdictional Hazard Mitigation Plan (HMP; County of San Luis Obispo 2019) with the General Plan/Local Coastal Program (GP/LCP) to ensure that proactive adaptation efforts are coordinated and responses to damage from future hazards, including with climate change, are streamlined. Identify future adaptation projects that meet the goals of both the GP/LCP and HMP and leverage Federal Emergency Management Agency (FEMA) funding opportunities for hazard mitigation and other related funding mechanisms to implement such projects.
  - **Action S-1.2b – Emergency Response Plan.** Develop and maintain a multi-hazard emergency response plan that conforms to state and federal requirements. Objectives of the plan shall be:
    1. To save lives and property;
    2. To provide a basis for direction and control of emergency operations;
    3. To provide for continuity of government;
    4. To repair and restore essential systems and services;

5. To provide for the protection, use, and distribution of remaining resources;
6. To coordinate operations with other neighboring jurisdictions;
7. To enable the City to be self-sufficient in the weeks following a severe disaster event;
8. To provide for emergency medical facilities, temporary shelter, emergency communication equipment, and emergency food and water supplies;
9. To establish a priority system for roads, services, and other vital needs during an emergency event;
10. To train volunteers to assist police, fire, and civil defense personnel after an emergency event; and
11. To anticipate an accident during the transportation of hazardous materials, including an accident on the Southern Pacific rail line or U.S. Highway 101.

- **Action S-1.2c – Coordination with Stakeholder Agencies.** The City shall consult with regional, state, and federal agencies on the effects of climate change on local hazards, including sea level rise. This should include coordination with California Department of Transportation (Caltrans), California State Parks, Union Pacific Railroad, San Luis Obispo Regional Transit Authority, South County Transit, and other stakeholder government agencies that own/manage public infrastructure along the shoreline. This coordination should aim to protect public access to the coast and minimize the impacts of sea level rise on assets such as Pismo State Beach (including the North Beach campground and the Monarch Butterfly Grove), U.S. Highway 101, Dolliver Street Bridge, Pismo Lake Ecological Reserve, and the railroad. The intent of this coordination should be the implementation of planning solutions before coastal hazards are accelerated by sea level rise and impacts start to occur. Such consultation shall help prevent the squeeze of the beach between rising sea levels and infrastructure and shall work to maintain a minimum beach width that supports public access, recreation, beach ecology, and the function of the beach as a buffer for coastal hazards.
- **Action S-1.2h – Hazardous Materials Regulation.** Regulate the location, use, storage, and transportation of hazardous and toxic materials to protect the public and the environment from these hazards.
- **Action S-2.1d – Hazardous Materials.** A use permit shall be required for any commercial or industrial use involving potentially hazardous materials. Hazardous waste management plans shall be required as a condition of approval for such permits.

Compliance with existing applicable regulations and GP/LCP Update policies would minimize risks from routine use, transport, handling, storage, disposal, and release of hazardous materials. Oversight by the appropriate federal, State, and local agencies and compliance by new development with applicable regulations related to the handling and storage of hazardous materials would minimize the risk of the public's potential exposure to these substances. Therefore, impacts from a hazard to the public or the environmental through routine transport, use or disposal of hazardous materials would be less than significant.

Mitigation Measures

No mitigation would be required.

Threshold 3:	Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

Impact HAZ-2 NEW DEVELOPMENT OF RESIDENTIAL AND COMMERCIAL USES FACILITATED BY THE GP/LCP UPDATE COULD RESULT IN INCREASED USE AND STORAGE OF HAZARDOUS MATERIALS WITHIN ONE QUARTER MILE OF EXISTING SCHOOLS. COMPLIANCE WITH REGULATORY REQUIREMENTS OF THE SAN LUIS OBISPO COUNTY EHS AND EXISTING APPLICABLE STATE AND FEDERAL REGULATIONS WOULD ENSURE THAT RISKS FROM HAZARDOUS EMISSIONS OR HANDLING OF HAZARDOUS MATERIALS, SUBSTANCES, OR WASTE NEAR EXISTING OR PROPOSED SCHOOLS WOULD REMAIN LESS THAN SIGNIFICANT.

Under the GP/LCP Update, new development of residential and commercial uses could result in increased use and storage of hazardous materials within one quarter mile of existing or proposed schools. Commercial uses that may use or store hazardous materials include gas stations, dry cleaners, auto-body shops, and medical laboratories. Schools in the City are discussed in Section 4.13, *Public Services and Recreation*, and as stated therein, there are two schools located in Pismo Beach: Shell Beach Elementary School and Judkins Middle School.

Since the GP/LCP Update does not include any specific development projects, the precise quantity of hazardous materials proposed for use by future commercial developments within the City is currently unknown. Accidental release or combustion of hazardous materials at new commercial developments could endanger residents or students in the surrounding community.

Hazardous materials and waste generated from future development would not pose a substantial health risk to nearby schools because all businesses that handle or have on-site storage of hazardous materials would be regulated by the San Luis Obispo County EHS and any additional elements as required in the California Health and Safety Code Article 1 Chapter 6.95 for Business Emergency Plan. As described in Section 4.6.1(h), both the federal and State governments require all businesses that handle more than a specified amount of hazardous materials to submit a business plan to San Luis Obispo County EHS. Compliance with regulatory requirements of the San Luis Obispo County EHS and existing applicable State and federal regulations would minimize the risks associated with exposure of sensitive receptors to hazardous materials. This impact would be less than significant.

Mitigation Measures

No mitigation would be required.

Threshold 4:	Would the project be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Impact HAZ-3 IMPLEMENTATION OF THE GP/LCP UPDATE COULD RESULT IN DEVELOPMENT OF SITES CONTAMINATED WITH HAZARDOUS MATERIALS. HOWEVER, COMPLIANCE WITH APPLICABLE REGULATIONS RELATING TO SITE CLEANUP AND ADHERENCE TO THE GP/LCP POLICIES WOULD MINIMIZE THE IMPACTS RELATED TO DEVELOPMENT ON LISTED CONTAMINATED SITE. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

The DTSC maintains the Cortese List, which identifies sites where hazardous materials are present and cleanup activities are necessary. There are no facilities in the City on the Cortese List (DTSC 2018).

In the event that an unidentified underground storage tank (UST) is uncovered or disturbed during construction activities of future development envisioned in the GP/LCP, it would be closed and abandoned in place or removed, consistent with applicable regulations. Tank removal activities could pose both health and safety risks, such as the exposure of workers, tank handling personnel, and the public to tank contents or vapors. Potential risks, if any, posed by USTs would be minimized by managing the tank according to existing standards contained in Division 20, Chapters 6.7 and 6.75 (Underground Storage Tank Program) of the California Health and Safety Code as enforced and monitored by the Environmental Programs Division.

Existing federal and State regulatory requirements associated with hazardous waste contamination would minimize this impact. New development on documented hazardous materials sites in the City would be preceded by remediation under the supervision of applicable regulatory agencies. Therefore, this impact would be less than significant.

Mitigation Measures

No mitigation would be required.

Threshold 6:	Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Impact HAZ-4 **POPULATION GROWTH AND INCREASED DEVELOPMENT IN COASTAL AREAS AS A RESULT OF THE GP/LCP UPDATE COULD IMPACT EVACUATION ROUTES IN THE EVENT OF A COASTAL HAZARD OR RADIATION HAZARD EVENT IN THE CITY. PROPOSED POLICIES AND MAPPED EVACUATION ROUTES IN THE GP/LCP UPDATE WOULD ENSURE EFFECTIVE EMERGENCY RESPONSE FOLLOWING A NATURAL OR HUMAN CAUSED DISASTER. THEREFORE, THE GP/LCP UPDATE WOULD NOT RESULT IN INTERFERENCE WITH AN ADOPTED EMERGENCY RESPONSE PLAN OR EMERGENCY EVACUATION PLAN. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.**

The GP/LCP Update would facilitate increased urban development and population growth in the City. Increased development in coastal areas would increase the number of residents in areas susceptible to coastal hazards described in the County of San Luis Obispo Multi-Hazard Emergency Response Plan or 2014 HMP, such as tsunamis, as well as radiation hazards from the Diablo Canyon Power Plant. Population growth would incrementally increase traffic which could impacting evacuation routes in the City. As described under Impact HAZ-1, the Safety Element of the GP/LCP Update identifies goals and policies to protect and maintain public safety in the event of an emergency.

Until 2025, Diablo Canyon will continue to receive radioactive material and the risk of release of these materials would to remain the same as existing conditions. However, even after Diablo Canyon closes, nuclear material would still be stored on-site and (at least temporarily), and so some degree of risk of nuclear materials release would continue, although potentially at lower levels. Additionally, during decommissioning hazardous materials may be transported within the City to the Pismo Beach Materials Handling Facility.

Although the Diablo Canyon Power Plant will not be relicensed to operate after 2025, there will continue to be some risk of nuclear material release from the site. The United States lacks a long-term repository for high-level radioactive waste produced by nuclear power plants; thus, this material is stored on a power plant site, even after the plant has ceased operations. While the Diablo Canyon facility and its on-site storage containers have a number of systems to prevent the

release of radioactive material and are built to withstand natural disasters such as earthquakes, a radiation event is nevertheless possible.

Beyond advocating for policies that reduce the amount of nuclear material at the Diablo Canyon site or increase the safety standards that apply to the facility and any storage sites, the City cannot affect the chances of a release of radioactive material from Diablo Canyon. The odds of such an event are low, and the GP/LCP Update would not increase the likelihood of such an event.

Fire Department review of new development applications for adequate emergency access and evacuation routes, in addition to implementation of the GP/LCP Update Safety Element policies listed above, would ensure adequate emergency response. Therefore, potential impacts to emergency response and evacuation would be less than significant.

Mitigation Measures

No mitigation would be required.

Threshold 7:	If located in or near a state responsibility area, would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?
Threshold 8:	If located in or near a state responsibility area, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?
Threshold 9:	If located in or near a state responsibility area, due to slope, prevailing winds, and other factors, would the project exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?
Threshold 10:	If located in or near a state responsibility area, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk?
Threshold 11:	If located in or near a state responsibility area, would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Impact HAZ-5 THE CITY INCLUDES A DESIGNATED VERY HIGH FIRE HAZARD AREA AND IS ADJACENT TO FIRE HAZARD AREAS IN THE COUNTY. GOALS AND POLICIES INCLUDED IN THE GP/LCP UPDATE WOULD MINIMIZE EXPOSURE OF PEOPLE OR STRUCTURES TO RISK OF LOSS, INJURY, OR DEATH INVOLVING WILDFIRE AND WILDLAND FIRES. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

The City of Pismo Beach has been identified by CAL FIRE as being within a wildland-urban interface (CAL FIRE 2018), which includes areas where homes or other structures are built near or among lands prone to wildland fire. Pismo Beach's proximity to undeveloped natural areas increases the potential for exposure to wildland fire.

The majority of the developed portion of Pismo Beach is located outside of a mapped fire hazard severity zone. However, as shown in Figure 4.8-1, within Pismo Beach, there are Very High Fire Hazard Severity Zones in the northern portion of the City reaching into the foothills, northeast near Price Canyon, and northwest toward Avila Beach, as shown on Figure 4.8-1. Development within a very high fire hazard zone is unsafe when fire suppression activities would be impeded by lack of

water, rugged terrain, or delayed response times. The majority of the areas mapped as very high fire hazard zones would be designated as Open Space under the GP/LCP Update, as shown in Figure 2-2. The Open Space land use designation specifies that open space lands, including public and private parks, shall not be developed intensively with buildings or other structures. Therefore, the majority of the very high fire hazard zone would not be developed with residential dwelling units or other uses subject to substantial wildfire risk.

However, some areas in the very high fire hazard severity zone would be redesignated for low-density residential use. All development located in a very high fire hazard zone within a Local Responsibility Area (LRA) would be required to comply with standards in California Government Code 51182 to minimize fire risk. These standards include maintaining a firebreak of at least 30 feet, removing all flammable vegetation and combustible growth, and additional firebreaks within 100 feet by the removal of all brush, flammable vegetation, or combustible growth. In addition, prior to construction of a new dwelling that requires a building permit, California Government Code 51182 requires that the owner obtain certification from the local building official that the building complies with all applicable state and local fire standards. New development also would be subject to statewide standards for fire safety in the California Fire Code.

The GP/LCP Update would result in an increase in population that would result from project implementation is within the anticipated growth forecasts by the San Luis Obispo Council of Governments, as described in Section 4.12, *Population and Housing*. Therefore, the population increase encouraged by the project would not impair adopted emergency response and emergency evacuation plans, as it is within the growth projections of adopted plans. Additionally, as described in Section 4.13, *Public Services*, the project would not result in the need for new or expanded emergency services, including police and fire protection. Therefore, the implementation of emergency response procedures would not be affected. The project would not impair an emergency response or emergency evacuation plan and impacts would be less than significant.

Prevailing winds in Pismo Beach are generally from the west off the Pacific. Therefore, the prevailing winds would generally move wildfire in the northeastern area and the related smoke and air pollutants, eastward, away from the urbanized areas of the City. Additionally, fire tends to burn and spread uphill, and the hillside area generally slopes uphill toward the east, away from the developed areas of the City.

As previously stated, the GP/LCP Update would result in infill development, and the majority of roads and utility infrastructure required for growth facilitated by project would be existing or would occur in currently developed areas, resulting in negligible temporary or ongoing environmental impacts. Because this development would occur in urbanized areas of Pismo Beach, where large tracts of vegetation cover are not present, the risk of wildfire would not be exacerbated.

Severe wildfires damage the forest or shrub canopy, the plants below, as well as the soil. This can result in increased runoff after intense rainfall, which can put homes and other structures below a burned area at risk of localized floods and landslides. Slopes at risk of wildfire in Pismo Beach are limited to the foothill and canyon areas on the eastern border of the City. If a severe wildfire were to occur in the foothill area, structures downslope would be at risk of flooding or landslides. However, the GP/LCP Update would not change zoning this area or otherwise intensify uses to this downslope area that would increase risk of wildfire in the area. Other areas of Pismo Beach are generally flat to gently sloping, and developed with little to no wildfire fuels or vegetation cover prone to ignition. If a structural fire or large urban fire were to occur in the more flat and urbanized areas of Pismo Beach, the risk of flooding or landslides afterward would be negligible because of the nearly flat topography and because little soil would be exposed due to the developed conditions.

The following GP/LCP Update Safety Element goals and policies provide guidance for preventative measures and practices to avoid and minimize wildland fire risks, including one action specifically regarding new structures in the WUI.

- **Policy S-2.7 – Fire Hazards.** Minimize the City's fire risk through careful siting of development and appropriate vegetation management.
  - **Action S-2.7a – Wildfire and Climate Change.** Monitor wildfire mapping and hazard conditions for future changes in conditions as a result of climate change.
  - **Action S-2.7b – Vegetation Management.** Maintain the City's vegetation management program that provides vegetation management services to elderly, disabled, or low-income property owners who lack the resources to remove flammable vegetation from around their homes. The program is approved by the California Department of Forestry and Fire Protection (CAL FIRE).
  - **Action S-2.7c – Fuel Modification Program.** Continue to implement a fuel modification program, which includes residential maintenance requirements and enforcement, plan submittal and approval process, guidelines for planting, and a list of undesirable plant species. Require builders and developers to submit their plans, complete with proposed fuel modification zones, to the local fire department for review and approval prior to beginning construction. Fuel modification shall be designed and implemented consistent with the requirements of the Conservation and Open Space Element regarding fuel modification in habitat areas.
  - **Action S-2.7d – Funding and Incentives.** Develop and provide funding and/or incentives for defensible space measures (e.g., free chipping day, free collection day for tree limbs).
  - **Action S-2.7e – Annexation.** The City shall require a wildland fire analysis and plan as part of all future annexations that include an area designated by CAL FIRE as a Fire Hazard Severity Zone. At a minimum, these plans shall specify:
    1. Fuel clearance and management techniques consistent with the Federal Land Assistance, Management, and Enhancement Act of 2009;
    2. Adequate right-of-way for emergency response vehicles and evacuation;
    3. Standards for traffic signals;
    4. Standards for the placement of electrical utilities;
    5. Provision of adequate water supply for the approved density; and
    6. Level of service and response time from the fire department.
  - **Action S-2.7f – New Structures in the Wildland-Urban Interface (WUI).** New structures in areas designated by CAL FIRE as a Fire Hazard Severity Zone shall:
    1. Prohibit locating any critical infrastructure in the WUI, unless it is critical to health and safety;
    2. Include building setbacks and fuel breaks consistent with the most recent building code;
    3. Utilize fire-resistant building materials consistent with the most recent building code or best practices;
    4. Ensure adequate water supply and fire flow to protect the additional structure; and
    5. Evaluate the adequacy of access routes to and from hazard areas relative to the degree of development or use (e.g., road width, road type, length of dead-end roads).

- **Action S-2.7g – Fire Hazard Severity Zones.** The City shall encourage the clustering of development outside of the highest Fire Hazard Severity Zones.
- **Action S-2.7h – Interjurisdictional Cooperation.** Continue enhancing interjurisdictional communication systems between public agencies with responsibility for fire protection.

Compliance with the goals and policies listed above would minimize potential wildfire and wildland fire impacts to future growth associated with the GP/LCP update. Additionally, with implementation of State requirements for very high fire hazard areas, California Fire Code standards for new structures, and fire hazard policies in the GP/LCP Update that apply to fire hazard areas, the impact of wildland fire hazards would be less than significant.

Mitigation Measures

No mitigation would be required.

4.8.4 Cumulative Impacts

The analysis in this section examines impacts of the GP/LCP Update on hazards and hazardous materials throughout the County of San Luis Obispo (the cumulative impact analysis area), and is cumulative in nature. Some types of hazards and hazardous materials impacts are related to site- and project-specific characteristics and conditions, and would not be significantly affected by other development outside of the City. As discussed in Impacts HAZ-1 and HAZ-2, there are existing federal, State, and local regulations that effectively reduce the inherent hazard associated with routine transport, use, storage, and disposal of hazardous materials. Regulations and oversight, as outlined in the impacts analysis above, would also effectively reduce the potential for individual projects to create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions, within the City as well as in San Luis Obispo County. Thus, cumulative impacts related to the transport, use, storage, or disposal of hazardous materials, upset conditions, hazardous emissions near schools, and project locations on known or unknown hazardous materials sites, would be less than significant.

The project would have no impact related to airport hazards, and would not contribute to a cumulative impact in this area.

Emergency response plans are generally specific to a particular city or county or parts thereof. For example, in the event of an imminent emergency in Pismo Beach, emergency response would typically be from police, ambulance and fire departments local to the City or County (through mutual aid agreements), and not from areas outside of San Luis Obispo County. Thus, the cumulative impacts related to conflict with emergency response plans would be less than significant.

The land use plan in the GP/LCP Update would facilitate development near areas mapped as very high fire hazards. The risk of loss from existing development and the anticipated growth within San Luis Obispo County would result in cumulative impacts related to wildland fire hazards due to development in or near fire hazard zones. As described in Impact HAZ-5, the project would result in a less than significant impact to wildfire, and compliance with City and County policies related to fire protection, as well as implementation of State requirements for very high fire hazard areas, California Fire Code standards for new structures, and fire hazard policies in the GP/LCP Update that apply to fire hazard areas, would minimize potential cumulative wildland fire impacts. Therefore, the project would not have a considerable contribution to cumulative wildland fire risk.

4.9 Hydrology/Water Quality

This section evaluates the potential environmental effects of the General Plan/Local Coastal Plan (GP/LCP) Update related to water quality, drainage, groundwater, and flooding. The analysis includes a review of surface water, groundwater, inundation zones, and water quality. Water supply is discussed in Section 4.15, *Utilities/Service Systems*. Issues regarding wetlands and waters of the United States are discussed in Section 4.3, *Biological Resources*.

4.9.1 Setting

The City of Pismo Beach (City) is located on the Central Coast of California, midway between San Francisco and Los Angeles. Weather in the City is characterized by a typical Mediterranean coastal climate, which is generally dry in the summer with mild, wet winters. Rainfall is concentrated in the winter months with the wettest months being January, February, and March, which have average monthly rainfall totals of 3.58, 3.86, and 3.46 inches, respectively (U.S. Climate Data 2021).

a. Surface Water

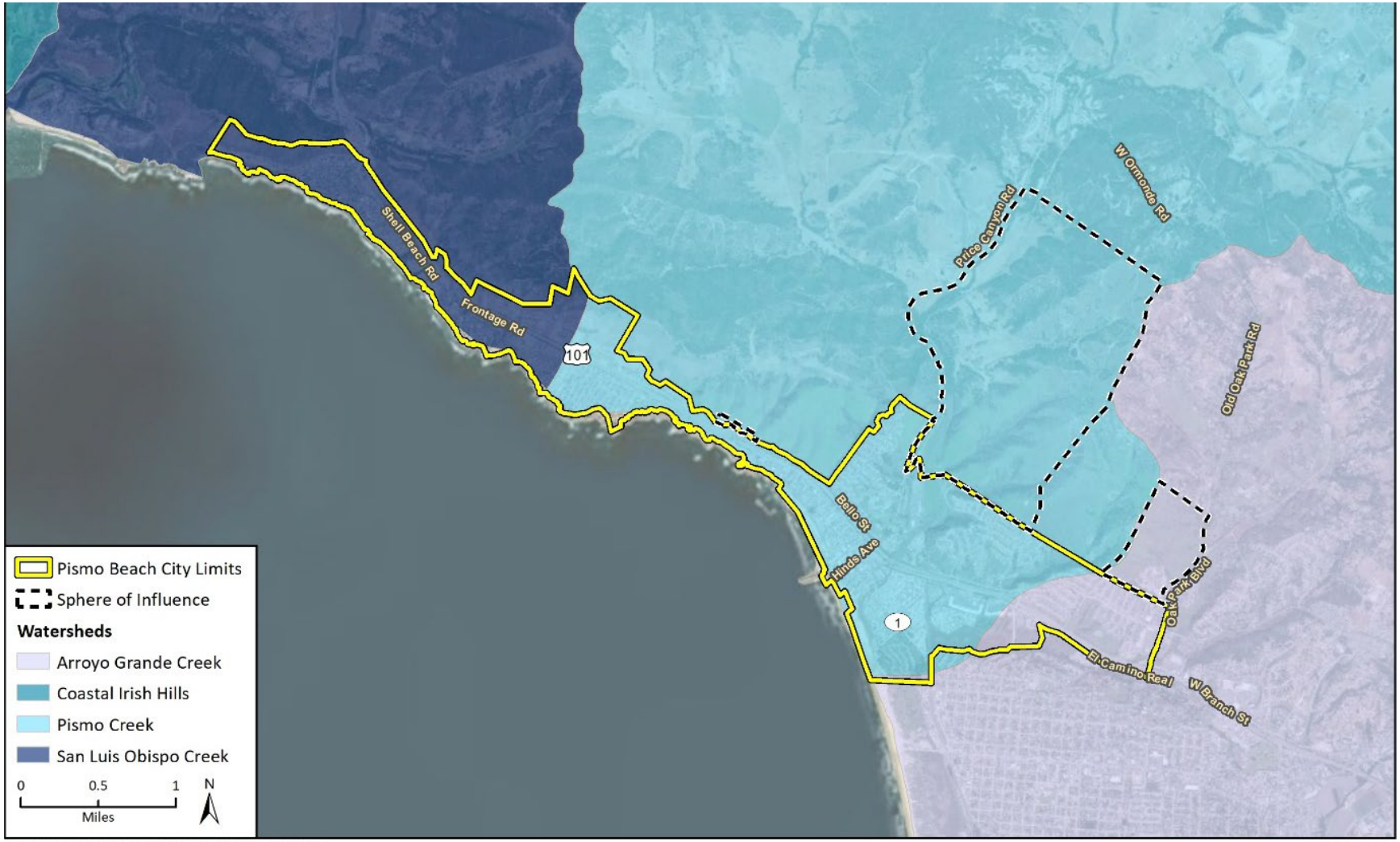
The California Department of Water Resources (DWR) divides surface watersheds in California into 10 hydrologic regions. The City lies within the Central Coast hydrologic region, a large coastal region in central California that consists of approximately 7.22 million acres (DWR 2003). The hydrologic region includes all of Santa Cruz, Monterey, San Luis Obispo, and Santa Barbara counties, most of San Benito County, and parts of San Mateo, Santa Clara, and Ventura counties (DWR 2003).

DWR subdivides hydrologic regions into hydrologic units. Within the Central Coast hydrologic region, the City is located entirely in the Estero Bay hydrologic unit (California Department of Forestry and Fire Protection 2002). The Estero Bay hydrologic unit is an area that corresponds to the coastal watersheds west of the Coastal Range and stretches roughly 80 miles between the Santa Maria River and the Monterey County line. The Central Coast Regional Water Quality Control Board (RWQCB) governs basin planning and water quality within this hydrologic unit (Central Coast RWQCB 2019).

Within the Estero Bay hydrologic unit, the City extends across three watersheds: the San Luis Obispo Creek Watershed, Pismo Creek Watershed, and Arroyo Grande Creek Watershed (refer to Figure 4.9-1). The northwestern portion of the City is within the San Luis Obispo Creek Watershed. The San Luis Obispo Creek Watershed drains approximately 83 square miles. San Luis Obispo Creek originates in the Santa Lucia Ranges and flows into the Pacific Ocean at the unincorporated community of Avila Beach. Land use in the San Luis Obispo Creek Watershed is dominated by agricultural land uses including ranches and open space, but also includes the urban core of the City of San Luis Obispo (SLO Watershed Project 2021).

The central portion of the City is within the Pismo Creek Watershed. The Pismo Creek Watershed drains approximately 41 acres. Pismo Creek originates in the Santa Lucia Ranges, generally follows Price Canyon Road, and flows to the Pacific Ocean at the Pismo Creek Estuary within the southeastern portion of the City of Pismo Beach. Land uses in the upper reaches of the Pismo Creek watershed are dominated by agricultural uses including vineyards, ranches, and row crops (SLO Watershed Project 2021).

Figure 4.9-1 Watersheds



Imagery provided by Microsoft Bing and its licensors © 2021.
Additional data provided by San Luis Obispo Watershed Project, 2014

Note: For the purposes of this map, this figure does not include the submerged lands offshore that are within the Pismo Beach City Limits. See Figure LU-1 of the General Plan/Local Coastal Plan Land Use Element (Pismo Beach LAFCO-approved City Border) for the full Pismo Beach City Limits.

The southeastern portion of the City is within the Arroyo Grande Creek Watershed. The Arroyo Grande Creek Watersheds drain approximately 95,998 acres. Arroyo Grande Creek originates in the Santa Lucia Ranges and flows into the Pacific Ocean through an estuary adjacent to the Oceano lagoon at Pismo State Beach. Land uses within the upper reaches of the Arroyo Grande Creek Watershed are dominated by agricultural land uses including vineyards, ranches and row crops. The urban cores of the cities of Arroyo Grande and Grover Beach are located in the lower reaches of the watershed (SLO Watershed Project 2021).

Surface waters within the City are shown in Figure 4.9-2. The major surface water bodies in the City are Pismo Creek, Pismo Creek Estuary, and Meadow Creek, which are within the Pismo Creek Watershed in the southeastern portion of the City (SLO Watershed Project 2021).

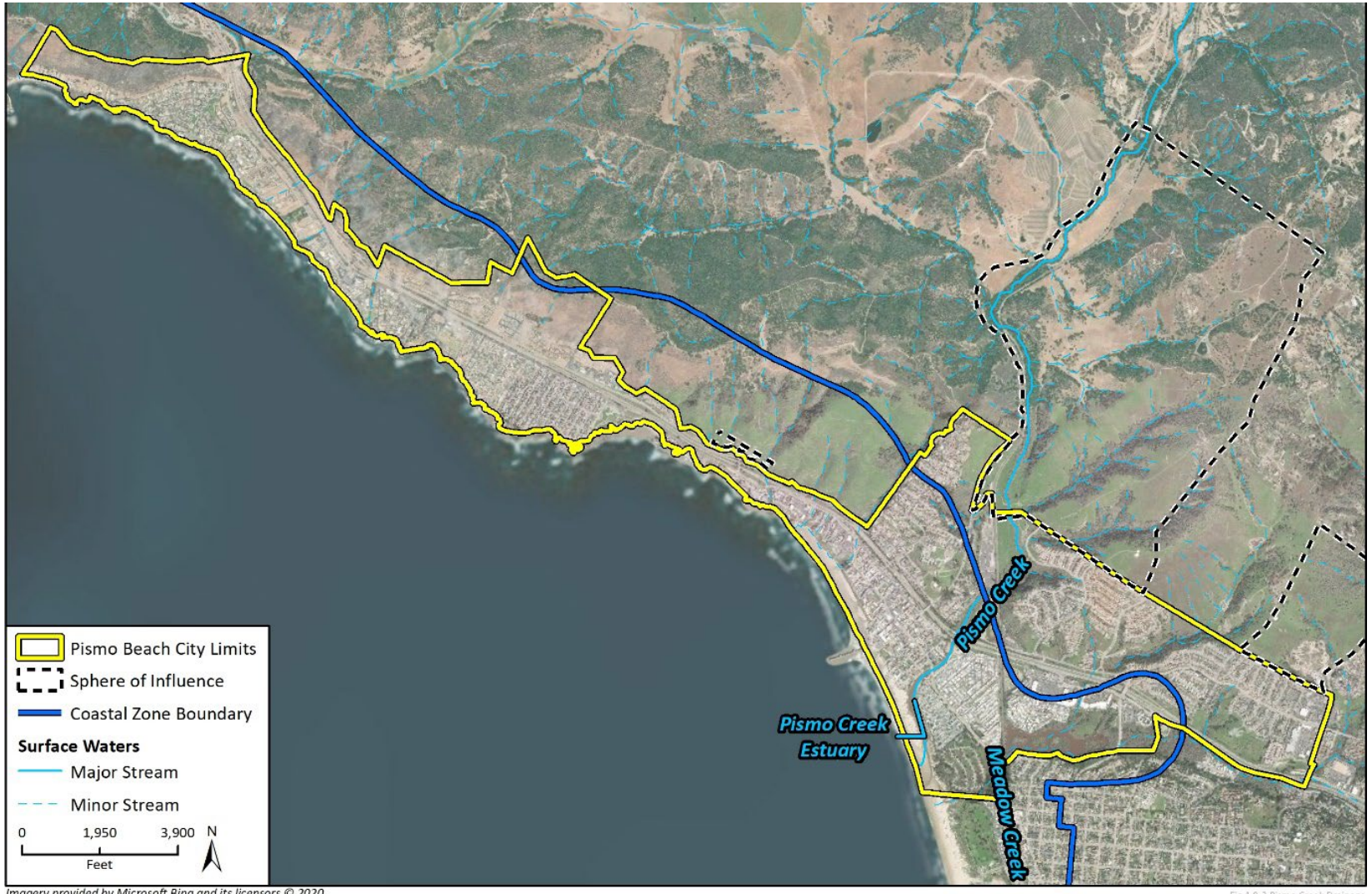
b. Groundwater

The southeastern portion of the City overlies the Santa Maria Groundwater Basin. Figure 4.9-3 shows the boundaries of the underlying groundwater basin. There is no designated groundwater basin beneath the remainder of the City. The Santa Maria Groundwater Basin is an approximately 175 square mile alluvial basin that underlies the Santa Maria Valley, Nipomo Mesa, Tri-Cities Mesas, Arroyo Grande Plain, Nipomo Valley, Arroyo Grande Valley, and Pismo Creek Valley. The Santa Maria Groundwater Basin is bounded on the north by the San Luis and Santa Lucia Ranges, on the east by the San Rafael Mountains, on the south by the Solomon Hills and the San Antonio Creek Valley Groundwater Basin, on the southwest by the Casmalia Hills, and on the west by the Pacific Ocean. The total storage capacity of the Santa Maria Groundwater Basin is greater than 14.9 million acre-feet. Natural recharge to the Santa Maria Groundwater Basin is primarily from percolation of flow from the major streams, percolation of rainfall, and subsurface flow (DWR 2004).

Beginning in the late 1990s, groundwater pumping rights in the Santa Maria Groundwater Basin were contested in court. The physical solution set forth in the Superior Court of California's 2005 Stipulation and 2008 final order ("Adjudication Judgment") established requirements and goals for the management of the entire Santa Maria Groundwater Basin. The Court defined three separate basin management areas: the Northern Cities Management Area (NCMA), Nipomo Mesa Management Area, and Santa Maria Valley Management Area. The southeastern portion of the City is located in the NCMA, which consists of the northwestern portion of the Santa Maria Groundwater Basin. The agencies that manage groundwater in the NCMA consist of the cites of Arroyo Grande, Grover Beach, and Pismo Beach, and the Oceano Community Services District. The Adjudication Judgment established a groundwater safe yield of 9,500 acre-feet per year (AFY) for the NCMA portion of the Santa Maria Groundwater Basin. It provides allotments of 5,300 AFY for agricultural irrigation, 4,000 AFY for urban use, and 200 AFY for subsurface outflow to the ocean (NCMA Technical Group 2019).

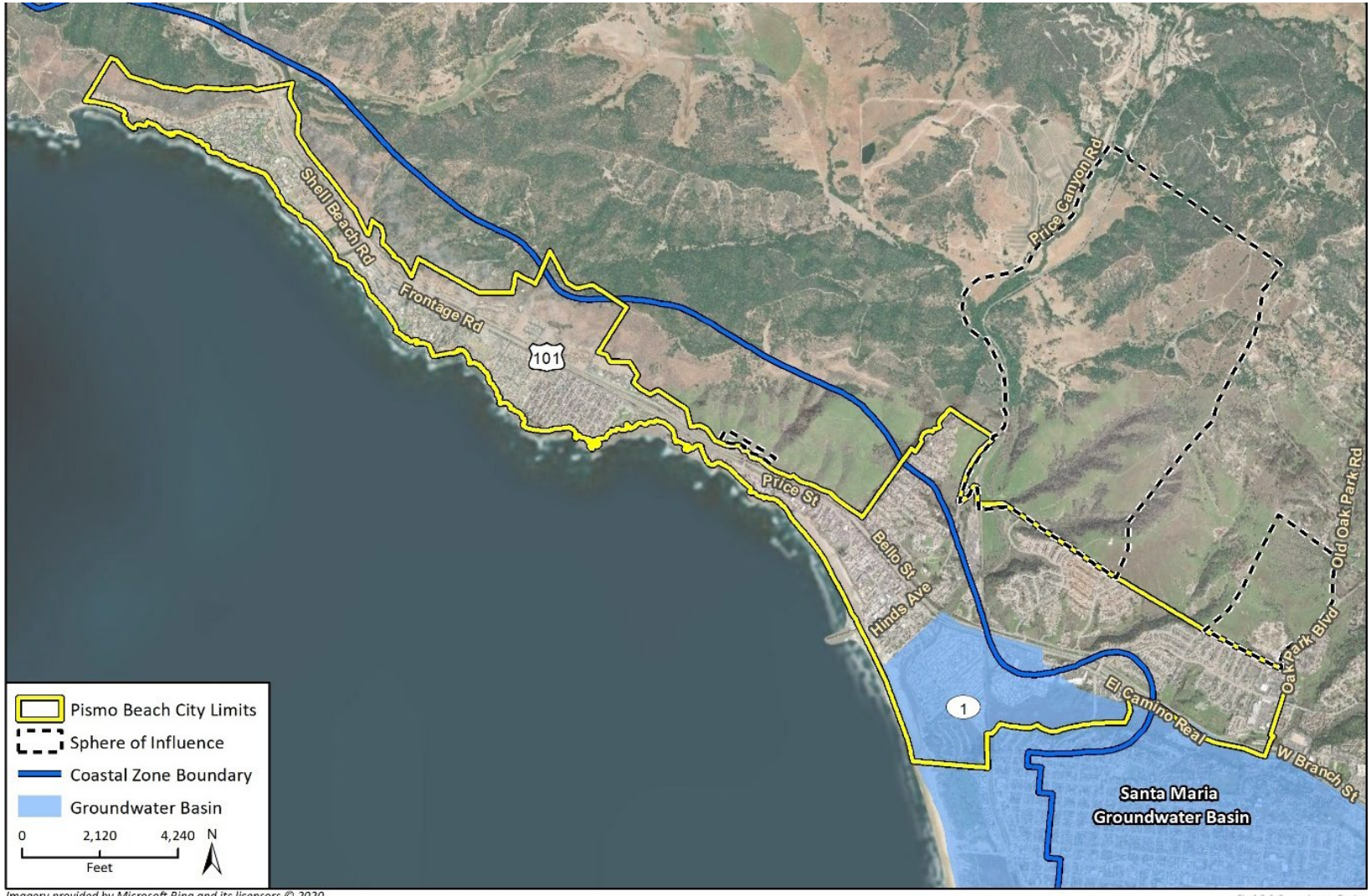
In the NCMA, water supply aquifers are located within alluvial deposits of the Paso Robles Formation, Careaga Formation, and Pismo Formation. Recharge to the NCMA comes primarily from precipitation, agricultural return flows, seepage from stream flow, and subsurface inflow from adjacent groundwater management areas. In addition, some imported water return flows occur from Lopez Lake and the California State Water Project (NCMA Technical Group 2019). Recharge in the City is primarily provided by percolation of flow from Pismo Creek (DWR 2004).

Figure 4.9-2 Surface Waters



Note: For the purposes of this map, this figure does not include the submerged lands offshore that are within the Pismo Beach City Limits. See Figure LU-1 of the General Plan/Local Coastal Plan Land Use Element (Pismo Beach LAFCO-approved City Border) for the full Pismo Beach City Limits.

Figure 4.9-3 Groundwater Basins



Note: For the purposes of this map, this figure does not include the submerged lands offshore that are within the Pismo Beach City Limits. See Figure LU-1 of the General Plan/Local Coastal Plan Land Use Element (Pismo Beach LAFCO-approved City Border) for the full Pismo Beach City Limits.

Water availability in the NCMA is constrained by water rights and water quality issues. Groundwater elevations along the coastline have dropped due to changing climatic conditions, including more frequent periods of extended drought resulting in reduced inflow into the groundwater basin, and increased demands on groundwater supplies resulting in a higher rate of groundwater extraction. These lower groundwater levels decrease the flow of freshwater out toward the ocean, which reduces the effectiveness of groundwater as a barrier to seawater. From 2007 to 2009, groundwater production in the Santa Maria Groundwater Basin peaked in comparison to the previous 30 years, contributing to a seawater intrusion event in the coastal wells in 2009. From 2011 to 2016, a period during which annual precipitation levels were consistently lower than average, groundwater elevations exhibited a steady decline to near or below sea level (NCMA Technical Group 2019).

As discussed in more detail in Section 4.15, *Utilities/Service Systems*, the City is currently working jointly with the cities of Arroyo Grande and Grover Beach, and community of Oceano to develop Central Coast Blue. Central Coast Blue is a local recycled water sustainability project that will create a new, high quality, and reliable water supply. In addition to a new recycled water facility in the City of Grover Beach and process upgrades to the Pismo Beach wastewater treatment plant (WWTP) and South San Luis Obispo County Sanitation District WWTP, the Central Coast Blue facility would include injection wells located outside the City to recharge the groundwater basin with purified water and a piping network to carry the purified water from the advanced treatment process to the injection wells. As of the date of this EIR, the Groundwater Basin Evaluation is currently underway. The project is expected to be completed in 2023.

c. Water Quality

Surface Waters

Water quality in the City is governed by the Central Coast RWQCB, which sets water quality standards in the *Water Quality Control Plan for the Central Coast Basin* (Basin Plan, Central Coast RWQCB 2019). The Basin Plan identifies beneficial uses for surface water and groundwater and establishes water quality objectives to attain those beneficial uses. The identified beneficial uses and water quality objectives to maintain or achieve those uses are together known as water quality standards. The Central Coast RWQCB designates beneficial uses for some individual water bodies in the Central Coast Basin. All other water bodies not designated individually are assigned the designated uses of municipal and domestic water supply and protection of recreation and aquatic life. Table 4.9-1 presents the designated beneficial uses listed in the Basin Plan for the surface waters in the City.

Table 4.9-1 Beneficial Uses for Surface Waters in the City

Water Body	Beneficial Uses
Pismo Creek	Municipal and Domestic Supply; Agricultural Supply; Industrial Service Supply; Groundwater Recharge; Water Contact Recreation; Non-Contact Water Recreation; Wildlife Habitat; Cold Freshwater Habitat; Warm Freshwater Habitat; Migration of Aquatic Organisms; Spawning, Reproduction, and/or Early Development; Preservation of Biological Habitats of Special Significance; Rare, Threatened, or Endangered Species; Fresh Water Replenishment; Commercial and Sport Fishing
Pismo Creek Estuary	Groundwater Recharge, Water Contact Recreation, Non-Contact Water Recreation, Wildlife Habitat, Cold Freshwater Habitat, Migration of Aquatic Organisms; Spawning, Reproduction, and/or Early Development; Preservation of Biological Habitats of Special Significance; Rare, Threatened, or Endangered Species; Estuarine Habitat; Commercial and Sport Fishing; Shellfish Harvesting
Meadow Creek	Municipal and Domestic Supply, Agricultural Supply, Groundwater Recharge, Water Contact Recreation, Non-Contact Water Recreation, Wildlife Habitat, Cold Freshwater Habitat, Preservation of Biological Habitats of Special Significance, Rare, Threatened, or Endangered Species, Commercial and Sport Fishing

Source: Central Coast Regional Water Quality Control Board 2019

In the City, stormwater runoff transports pollutants from urban development. streets, parking lots, and other sources to creeks, estuaries, and the Pacific Ocean. Natural flow from headwaters located inland also contribute stormwater runoff with elevated concentrations of pesticides and nutrients from upstream agricultural activities. Activities such as land clearing, excavation and filling, illegal dumping, municipal operations, improper disposal of pet waste, and use of fertilizers, pesticides, and herbicides can generate stormwater pollution. Water quality concerns resulting from stormwater pollution include suspended sediment, nutrients, pathogens, nitrates, chlorides, sodium, heavy metals, polychlorinated biphenyls (PCBs), and low dissolved oxygen levels (City of Pismo Beach 2011).

When designated beneficial uses of a particular water body are compromised by poor water quality, Section 303(d) of the Clean Water Act requires states to identify and list that water body as impaired. Once a water body has been deemed impaired, a Total Maximum Daily Load (TMDL) must be developed for each impairing water quality constituent. A TMDL is an estimate of the total load of pollutants from point, nonpoint, and natural sources that a water body can receive without exceeding applicable water quality standards (often with a "factor of safety" included, which limits the total load of pollutants to a level well below that which could cause the standard to be exceeded). Once established, the TMDL is allocated among current and future dischargers into the water body. In the City, Pismo Creek is listed on the 2014/2016 303(d) list as impaired as impaired for sodium, fecal coliform, turbidity, chloride, *Escherichia coli* (E. coli), and dissolved oxygen. There are no approved TMDLs for surface waters within the City.

Groundwater

As designated in the Basin Plan, beneficial uses of groundwater in the Santa Maria Groundwater Basin include agricultural water supply, municipal and domestic water supply, and industrial use.

The primary constituents of concern in groundwater in the NCMA, as well as the Santa Maria Groundwater Basin as a whole, are total dissolved solids, including nitrates, which are primarily associated with agricultural activities (SLO County FCWCD 2019).

d. Flooding

Flooding during storm events occurs when the amount of rainfall exceeds the infiltration capacity of the surrounding landscape or the conveyance capacity of the storm water drainage system. The Federal Emergency Management Agency (FEMA) delineates regional flooding hazards on Flood Insurance Rate Maps (FIRMs) as part of the National Flood Insurance Program. Higher flood risk zones are called Special Flood Hazard Areas; these areas have a 1 percent chance or greater of flooding in any given year (also called the 100-year floodplain). Areas have a 0.2 percent chance of flooding in any given year are called the 500-year floodplain. There are several flood-prone areas in the City, which are generally located in low-lying areas near Pismo Creek and the coastline. Figure 4.9-4 shows the portions of the City that are located within the 100-year and 500-year FEMA designated flood hazard zones.

Inundation can also occur as a result of tsunamis and seiches. A tsunami is a wave generated by the sudden displacement of a large amount of water. Tsunamis can be triggered by earthquakes, volcanic eruptions, or similar events that occur under the water or the shore. Impacts of tsunamis can be both immediate and long-term. While tsunamis are relatively rare, they pose risks to the entire waterfront and other low-lying areas of the City. These risks are generally greater in the southeastern portion of the City near the Pismo Beach Estuary. Figure 4.9-5 shows the potential tsunami inundation zone in the City. The majority of the tsunami inundation zone within the City lies with the Downtown Core and Pismo Creek/Pismo Marsh planning areas.

As discussed in the Safety Element of the Pismo Beach GP/LCP Update, Pismo Beach has had a history of tsunami events, with eight events occurring in the last 141 years. Most of these events resulted in little to no wave run-up, except during the 1927 tsunami which resulted in 6-foot waves and the 1960, 2010, and 2011 tsunamis which resulted in 4-foot waves. Much of the City is protected from tsunami inundation by the high bluffs, dunes, and wide beaches; however, the low-lying areas near Pismo Estuary are considered to be at moderate risk of tsunami inundation. With sea level rise, tsunami inundation areas could increase in the future.

Seiches are a related hazard that can occur when a sudden displacement event or very strong winds happen in an enclosed or semi-enclosed body of water such as a lake. Due to the lack of large lakes within the City, inundation by seiche is not a potential hazard within the City.

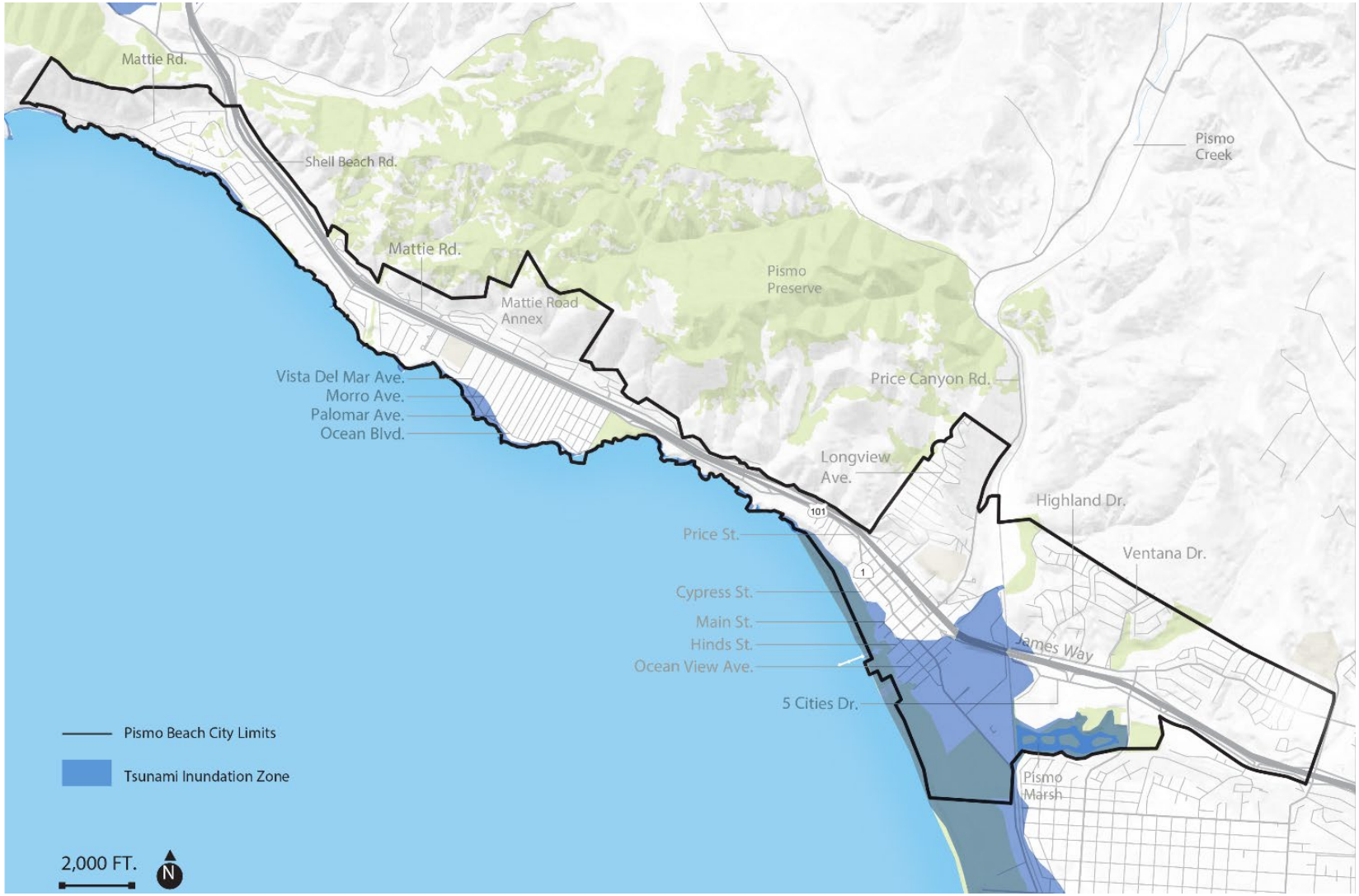
Lopez Lake is a reservoir near the City of Arroyo Grande and is formed by Lopez Dam, an earthen dam located along Arroyo Grande Creek. As shown in Figure 4.9-6, inundation of the southern portion of Pismo Beach within the Pismo Creek/Pismo Marsh planning area could occur as a result of failure of Lopez Dam.

Figure 4.9-4 Flood Hazard Zones



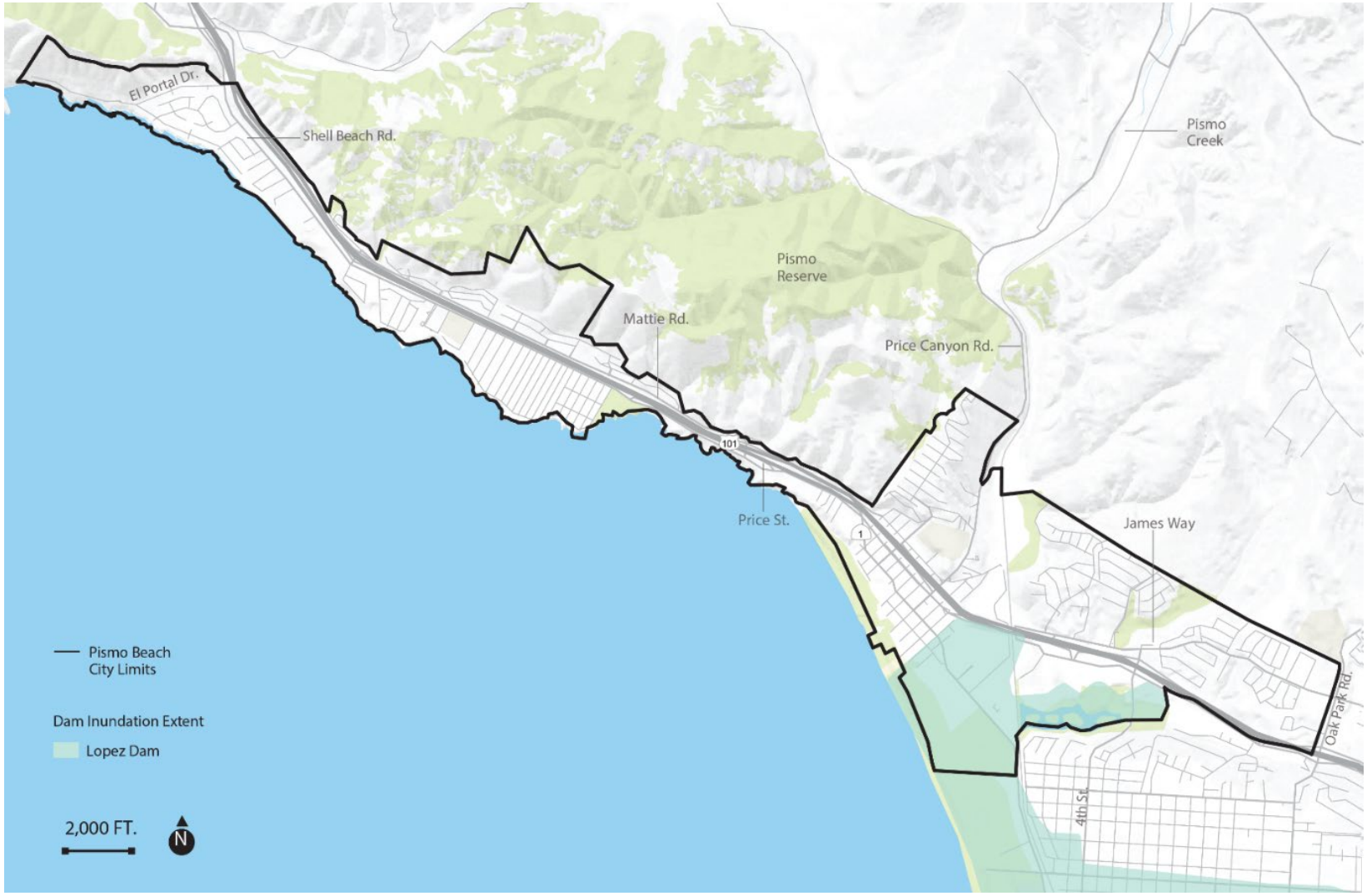
Note: For the purposes of this map, this figure does not include the submerged lands offshore that are within the Pismo Beach City Limits. See Figure LU-1 of the General Plan/Local Coastal Plan Land Use Element (Pismo Beach LAFCO-approved City Border) for the full Pismo Beach City Limits.

Figure 4.9-5 Tsunami Inundation Zones



Note: For the purposes of this map, this figure does not include the submerged lands offshore that are within the Pismo Beach City Limits. See Figure LU-1 of the General Plan/Local Coastal Plan Land Use Element (Pismo Beach LAFCO-approved City Border) for the full Pismo Beach City Limits.

Figure 4.9-6 Dam Inundation Zones



Source: County of San Luis Obispo 2019

Note: For the purposes of this map, this figure does not include the submerged lands offshore that are within the Pismo Beach City Limits. See Figure LU-1 of the General Plan/Local Coastal Plan Land Use Element (Pismo Beach LAFCO-approved City Border) for the full Pismo Beach City Limits.

e. Sea Level Rise

Flood potential could increase substantially in the City due to sea level rise. Although sea levels have generally not risen enough to pose a substantial risk of flooding to Pismo Beach, future sea level rise may be great enough to exacerbate existing flooding and erosion. A *Sea Level Rise Vulnerability Assessment* was prepared for the City in 2019, which evaluated sea level rise scenarios between 1.6 feet to 9.8 feet. According to the Sea Level Rise Vulnerability Assessment, incremental sea level rise is anticipated to exacerbate existing erosion to the first row of development in the Bluffs area. However, additional parcels beyond the first row of development in the Bluffs are not projected to be exposed to increased erosion until the extreme sea level rise scenarios of 8.2 feet and 9.8 feet rise. Sea level rise effects in the Downtown area is projected to be limited to temporary flooding during large storm events for sea level rise below the extreme sea level rise scenarios of 8.2 feet and 9.8 feet. In the low-lying areas, shoreline erosion and increased water surface elevations in Pismo Creek from sea level rise is projected to increase coastal flooding at the developments southeast of Pismo Creek. Tidal flooding of the recreational vehicle (RV) facilities southwest of Dolliver Street is predicted to occur by the 3.3 feet sea level rise scenario. In addition, tidal flooding is predicted to affect development northeast of Dolliver Street at the 6.6 feet sea level rise scenario.

4.9.2 Regulatory Setting

a. Federal

Clean Water Act

The federal Clean Water Act (Clean Water Act), enacted by Congress in 1972 and amended several times since, is the primary federal law regulating water quality in the United States and forms the basis for several State and local laws throughout the country. The Clean Water Act established the basic structure for regulating discharges of pollutants into the waters of the United States. The Clean Water Act gave the U.S. Environmental Protection Agency (U.S. EPA) the authority to implement federal pollution control programs, such as setting water quality standards for contaminants in surface water, establishing wastewater and effluent discharge limits for various industry contaminants in surface water, establishing wastewater and effluent discharge limits for various industry categories, and imposing requirements for controlling nonpoint-source pollution. At the federal level, the Clean Water Act is administered by the U.S. EPA and U.S. Army Corps of Engineers. At the state and regional levels in California, the Clean Water Act is enforced by the State Water Resources Control Board (SWRCB) and the nine RWQCBs.

Clean Water Act Section 303(d)

Section 303(d) of the Clean Water Act requires states to identify water bodies that do not meet water quality objectives and are not supporting their beneficial uses. Each state must submit an updated biennial list, called the 303(d) list, to the U.S. EPA. In addition to identifying the water bodies that are not supporting beneficial uses, the list also identifies the pollutant or stressor causing impairment and establishes a priority for developing a control plan to address the impairment. If a water body is designated as “impaired,” then a TMDL is developed and identified for the affected water body. A TMDL establishes the maximum daily amount of a pollutant allowed in an identified water body and is used as a planning tool in addressing water quality impairments and improving water quality.

Clean Water Act Section 401

Under Section 401 of the Clean Water Act, the RWQCBs have regulatory authority over actions in waters of the United States and/or the State of California through the issuance of water quality certifications, which are issued in conjunction with any federal permit (e.g., permits issued by the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act, described below). Section 401 of the Clean Water Act provides the SWRCB and the RWQCBs with the regulatory authority to waive, certify, or deny any proposed activity that could result in a discharge to surface waters of the State. To waive or certify an activity, these agencies must find that the proposed discharge would comply with State water quality standards, including those protecting beneficial uses and water quality. If these agencies deny the proposed activity, the federal permit cannot be issued. This water quality certification is generally required for projects involving the discharge of dredge or fill material to wetlands or other bodies.

Clean Water Act Section 402

Section 402 of the Clean Water Act requires that all construction sites on an acre or greater of land, as well as municipal, industrial and commercial facilities discharging wastewater or stormwater directly from a point source (e.g., pipe, ditch, or channel) into a surface water of the United States must obtain permission under the National Pollutant Discharge Elimination System (NPDES) permit. All NPDES permits are written to ensure that the surface water receiving discharges will achieve specified water quality standards.

According to federal regulations, NPDES permit coverage for stormwater discharges associated with construction activity can be obtained through individual state permits or general permits. Individual permitting involves the submittal of specific data on a single construction project to the appropriate permitting agency that will issue a site-specific NPDES permit to the project. NPDES coverage under a general permit involves the submittal of a Notice of Intent by the regulated construction project that they intend to comply with a general permit to be developed by U.S. Environmental Protection Agency or a state with delegated permitting authority. In California, the NPDES program is administered by the SWRCB through the nine RWQCBs. Further discussion of the NPDES program and permits in California relevant to the City is provided in discussion of State regulations, below.

Clean Water Act Section 404

Under Section 404 of the Clean Water Act, proposed discharges of dredged or fill material into waters of the United States require U.S. Army Corps of Engineers authorization. Waters of the United States generally include tidal waters, lakes, ponds, rivers, streams (including intermittent streams), and wetlands (with the exception of isolated wetlands).

National Flood Insurance Program

The National Flood Insurance Program is a program administered by FEMA to provide subsidized flood insurance for property owners in communities. The National Flood Insurance Program established regulations that limit development in flood-prone areas. The boundaries of flood-prone areas are delineated on FEMA's Flood Insurance Rates Maps, which provide flood information and identify the flood hazard in the community. In certain high-risk areas, federally regulated or insured lenders require property owners to have flood insurance before issuing a mortgage.

b. State

Porter-Cologne Water Quality Control Act of 1970

The federal Clean Water Act places the primary responsibility for the control of water pollution and planning the development and use of water resources with the states, although it does establish certain guidelines for the states to follow in developing their programs. California's primary statute governing water quality and water pollution is the Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act). The Porter-Cologne Act grants the SWRCB and the nine RWQCBs broad powers to protect water quality and is the primary vehicle for the implementation of California's responsibility under the federal Clean Water Act. The Porter-Cologne Act grants the SWRCB and RWQCBs the authority and responsibility to adopt plans and policies, to regulate discharges to surface water and groundwater, to regulate waste disposal sites, and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, oil, or petroleum product. Each RWQCB must formulate and adopt a water quality control plan for its region. The regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State water policy. The Porter-Cologne Act also provides that an RWQCB may include in its region a regional plan with water discharge prohibitions applicable to particular conditions, areas, or types of waste. The City is within the jurisdictional boundaries of the Central Coast RWQCB (Region 3).

California Toxics Rule

Because California had not established a complete list of acceptable water quality criteria for toxic pollutants, EPA Region IX established numeric water quality criteria for toxic constituents in the form of the California Toxics Rule (CTR). The CTR provides water quality criteria for certain potentially toxic compounds for inland surface waters, enclosed bays, estuaries, and waters designated for human health or aquatic life uses. The CTR is often used by the RWQCBs when establishing water quality objectives and TMDLs. Although the CTR criteria do not apply directly to discharges of storm water runoff, they are utilized as benchmarks for toxics in urban runoff. The CTR is used as a benchmark to evaluate the potential ecological impacts of storm water runoff to receiving waters. The CTR establishes acute and chronic surface water quality standards for certain water bodies. Acute criteria provide benchmarks for the highest permissible concentration below which aquatic life can be exposed for short periods of time without deleterious effects. Chronic criteria provide benchmarks for an extended period of time (i.e., 4 days or more) without deleterious effects. The acute CTR criteria have a shorter relevant averaging period (less than 4 days) and provide a more appropriate benchmark for comparison for storm water flows.

CTR criteria apply to the receiving water body and are calculated based on the probable hardness values of the receiving waters. At higher hardness values for receiving waters, certain constituents (including copper, lead, and zinc) are more likely to be complexed (bound with) components in the water column. This in turn reduces the bioavailability and resulting potential toxicity of these metals.

Phase II Municipal Storm Water Permit

The Municipal Storm Water Permitting Program regulates storm water discharges from Municipal Separate Storm Sewer Systems (MS4s). The NPDES MS4 permits in California are issued in two phases by the SWRCB and RWQCBs. Phase I MS4 permits are issued by the RWQCBs to medium (i.e.,

serving between 100,000 and 250,000 people) and large (i.e., serving more than 250,000 people) municipalities. Most of these permits are issued to a group of co-permittees encompassing an entire metropolitan area. The Phase II MS4 Permit is issued by the SWRCB and is applicable to smaller municipalities (i.e., populations of less than 100,000 people) and nontraditional small MS4s (e.g., military bases, public campuses, and prison and hospital complexes). The Phase II MS4 Permit (*Waste Discharge Requirements [WDRs] for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems [MS4s] General Permit],* Order No. 2013-0001-DWQ, NPDES No. CAS000004) became effective on July 1, 2013 and covers Phase II permittees statewide, including the City of Pismo Beach. The Phase I and Phase II MS4 Permits require the permittees to develop a storm water management program and individual dischargers to develop and implement Storm Water Quality Management Plans (SWMP) to manage discharges to municipal storm drain systems.

Construction Activity General Stormwater Permit

The *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities*, Order No. 2022-0057-DWQ ~~2009-0009-DWQ~~, NPDES No. CAS000002~~, as amended by Order Nos. 2010-0014-DWQ and 2012-0006-DWQ~~ (Construction General Permit), adopted by the SWRCB, regulates construction activity that includes clearing, grading, and excavation resulting in soil disturbance of at least one acre of total land area. The Construction General Permit authorizes the discharge of stormwater to surface waters from construction activities. The Construction General Permit requires that all developers of land where construction activities will occur over more than 1 acre do the following:

- Complete a Risk Assessment to determine pollution prevention requirements pursuant to the three risk levels established in the General Permit;
- Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the United States;
- Develop and implement a Stormwater Pollution Prevention Plan (SWPPP) that specifies BMPs that will reduce pollution in stormwater discharges to the Best Available Technology/ Economically Achievable/Best Conventional Pollutant Control Technology standards;
- Perform inspections and maintenance of all BMPs; and
- Conduct stormwater sampling, if required based on risk level.

To obtain coverage under the Construction General Permit, a project applicant must electronically file all permit registration documents with the SWRCB prior to the start of construction. Permit registration documents must include a:

- Notice of Intent (NOI),
- Risk Assessment,
- Site map,
- SWPPP,
- Annual fee, and
- Signed certification statement.

Typical BMPs contained in SWPPPs are designed to minimize erosion during construction, stabilize construction areas, control sediment, and control pollutants from construction materials. The SWPPP must also include a discussion of the program to inspect and maintain all BMPs.

California Coastal Act

The California Coastal Act of 1976 (Coastal Act) and the California Coastal Commission (CCC), the state's coastal protection and planning agency, were established by voter initiative in 1972 to plan for and regulate new development, and to protect public access to and along the shoreline. The Coastal Act considers water quality and water-related public safety concerns as issues of public importance. To provide maximum public access to the coast and public recreation areas, the Coastal Act directs each local government located within the coastal zone to prepare a Local Coastal Program consistent with Section 30501 of the Coastal Act, in consultation with the Coastal Commission and with public participation.

California Ocean Plan

The Ocean Plan is one of five statewide water quality control plans established by the SWRCB to preserve and enhance California's territorial ocean waters for the use and enjoyment of the public. The Ocean Plan provides control for the discharge of waste to ocean waters and ensures the protection of beneficial uses of ocean waters. Discharge of waste can include stormwater runoff, municipally-treated sewage outflow, and other discharges by industry under RWQCB and SWRCB permits. The Ocean Plan sets forth water quality objectives for protection of marine aquatic life as well as objectives for bacterial, physical, chemical, and biological characteristics for ocean waters (SWRCB 2019).

The Ocean Plan is reviewed every three years to guarantee its water quality objectives are adequate to prevent degradation of marine species and protect public health. The Ocean Plan was first adopted by the SWRCB on July 6, 1972 and has been amended several times. The most recent amendment to the Ocean Plan was in 2019 to incorporate revised statewide bacteria water quality objectives and implementation options to protect recreational users from the effects of pathogens (SWRCB 2019).

The water quality objectives in the Ocean Plan are applicable to all point source discharges to the ocean, including effluent from the Pismo Beach WWTP. The effluent limits are imposed such that the Ocean Plan water quality objectives are not exceeded in the receiving water upon completion of initial dilution. If a conflict exists between the Ocean Plan water quality objectives and the NPDES permit effluent limits, the more stringent provision apply.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA) of 2014 is a comprehensive three-bill package that Governor Jerry Brown signed into California state law in September 2014. The SGMA provides a framework for sustainable management of groundwater supplies by local authorities, with a limited role for State intervention, if necessary, to protect the resource. The plan is intended to ensure a reliable groundwater supply for California for years to come. The SGMA requires governments and water agencies of high- and medium-priority basins to halt overdrafts of groundwater basins. The SGMA requires the formation of local groundwater sustainability agencies that are required to adopt groundwater sustainability plans to manage the sustainability of the groundwater basins.

Adjudicated basins, such as the Santa Maria Groundwater Basin, are exempt from forming a groundwater sustainability agency and developing a groundwater sustainability plan (County of San Luis Obispo 2021). However, SGMA requires that watermasters or managers of adjudicated groundwater basins annually submit information to DWR on groundwater elevations,

groundwater production, surface water supply used or available for groundwater recharge, total water use, change in groundwater storage, and annual report submitted to court.

Assembly Bill 70

Assembly Bill 70 requires cities and counties that have "unreasonably approved" development in an area with known flood risks to share liability for flood control damage with State entities.

Assembly Bill 162

Assembly Bill 162 requires cities and counties to address flood-related matters in the land use, conservation, safety, and housing elements of their general plans. The general plan must contain a statement of development policies and include a diagram or diagrams and text setting forth objectives, principles, standards, and plan proposals. The land use element must identify and annually review those areas covered by the plan that are subject to flooding identified by flood plain mapping prepared by FEMA. The conservation element must identify rivers, creeks, streams, flood corridors, riparian habitats, and land that may accommodate floodwater for the purposes of groundwater recharge and stormwater management. The safety element is required to identify information regarding:

- Flood hazards, including flood hazard zones
- National Flood Insurance Program maps published by FEMA
- Information about flood hazards that is available from the United States Army Corps of Engineers
- Dam failure inundation maps
- Awareness Floodplain Mapping Program maps
- Levee protection zone maps
- Historical data on flooding
- Existing and planned development in flood hazard zones, including structures, roads, utilities, and essential public facilities
- Local, State, and federal agencies with responsibility for flood protection.
- The safety element must establish a set of comprehensive goals, policies, objectives, and feasible implementation measures based on the information identified above for the protection of the community from unreasonable risks of flooding, including but not limited to:
- Avoiding or minimizing the risks of flooding to new development
- Evaluating whether new development should be located in flood hazard zones, and identifying construction methods or other methods to minimize damage if new development is located in a flood hazard zone
- Maintaining the structural and operational integrity of essential public facilities during flooding
- Locating, when feasible, new essential public facilities outside of flood hazard zones
- Establishing cooperative working relationships among public agencies with responsibility for flood protection.

California Drainage Law, Government Code 65302

Government Code Section 65302(a) requires cities and counties to review the Land Use, Conservation, and Safety elements of the general plan "for the consideration of flood hazards,

flooding, and floodplains" to address flood risks. The code also requires cities and counties to annually review the land use element within “those areas covered by the plan that are subject to flooding identified by floodplain mapping prepared by FEMA or the California DWR.”

c. Regional and Local

Water Quality Control Plan

The Central Coast RWQCB has adopted a Basin Plan for their region of responsibility that delineates water resource area boundaries based on hydrological features. For the purposes of achieving and maintaining water quality protection, specific beneficial uses have been identified for each of the surface waters and groundwater management zones described in the Basin Plan. Once beneficial uses are designated, appropriate water quality objectives are established, and programs that maintain or enhance water quality are implemented to ensure the protection of beneficial uses.

The Basin Plan also established implementation programs to achieve water quality objectives to protect beneficial uses and require monitoring to evaluate the effectiveness of the programs. These objectives must comply with the State antidegradation policy (SWRCB Resolution No. 68-16), which is designed to maintain high-quality waters while allowing some flexibility if beneficial uses are not unreasonably affected.

Post-Construction Stormwater Management Requirements

The Central Coast RWQCB adopted the *Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region* (Resolution R3- 2013-0032) in July 2013, which outlines runoff reduction and treatment requirements. Specifically, Resolution R3-2013-0032 outlines post-construction requirements (PCRs) for development projects in the Central Coast Region. The PCRs mandate that development projects use Low Impact Development (LID) to detain, retain, and treat runoff. LID incorporates and conserves on-site natural features, together with constructed hydrologic controls to more closely mimic pre-development hydrology and watershed processes. Regulated projects include all new development or redevelopment projects that create and/or replace 2,500 square feet or more of impervious surfaces.

Low Threat Discharge Permit

The Central Coast RWQCB has a general permit for discharges that pose a low threat to water quality (*Waste Discharge Requirements National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges with Low Threat to Water Quality*; Order No. R3-2017-0042, NPDES No. CAG993001). Its provisions cover discharges of untreated wastewater streams that will not affect receiving water quality, including groundwater dewatering during construction. This permit specifies the discharge prohibitions, receiving water limitations, and monitoring and reporting program requirements for discharges. Permittees are required to monitor their discharges to ensure that water quality standards are not exceeded.

Pismo Beach Stormwater Management Program

The Pismo Beach Stormwater Management Program (SWMP) serves as a guide for developing and implementing the Phase II MS4 Permit requirements for stormwater discharges and describes recommended BMPs that address the six required minimum control measures required by the Phase II MS4 Permit. The SWMP also describes the reporting and monitoring plan the City will follow to verify the objectives of the plan are being met.

The Phase II MS4 Permit requires the City to develop a Program Effectiveness Assessment and Improvement Plan (PEAIP), which tracks and assesses the long-term effectiveness and success of the City's stormwater program. Additionally, the Phase II MS4 Permit requires the City to submit an annual summary that describes the implementation of the PEAIP, summarizing data obtained through effectiveness assessment measures, describes short and long term progress of the stormwater program, and provides an analysis of the data to improve program effectiveness in order to protect water quality.

In compliance with the Phase II MS4 Permit, the City of Pismo Beach developed a Stormwater Program Guidance Document. Under this program, the City educates the community in stormwater pollution prevention, regulate stormwater run-off from construction sites, investigate non-stormwater discharges and reduce non-stormwater run-off from municipal operations.

Pismo Beach Municipal Code

Section 13.14.210 of the City Municipal Code prohibits unauthorized discharges to the City's storm drain system. Section 13.28.150 requires preparation of a SWPPP for any activity that may contribute pollution to the City storm drain system, and implementation of BMPs for new development and redevelopment projects.

Section 16.52.020 requires that parcel and tentative maps comply with requirements for grading and erosion control. Section 17.078.020 includes requirements for drainage, runoff, and erosion controls in for projects within areas with slopes greater than 10 percent.

Chapter 15.44 of the Municipal Code regulates development within flood hazard areas, including requirements that new development be elevated above the base flood elevations.

4.9.3 Impact Analysis

a. Methodology

This section describes the potential environmental impacts of implementation of the GP/LCP Update associated with hydrology and water quality. The impact analysis is based on an assessment of baseline conditions for the City, including watersheds and surface waters, groundwater, and inundation areas, as described above under Section 4.9.1, Setting. This analysis identifies potential impacts related to hydrology and water quality resulting from construction, operation, and maintenance activities of future development that could occur under the GP/LCP Update. Potential impacts to hydrology and water quality are evaluated based on the adherence to local, State, and federal standards and implementation of BMPs for control of surface runoff and reduction of pollutants in stormwater runoff.

b. Significance Thresholds

The following thresholds of significance are based on CEQA Guidelines Appendix G. For the purposes of this EIR, implementation of the GP/LCP Update may have a significant impact if it would:

1. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface of ground water quality;
2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;

3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would:
   (i) Result in substantial erosion or siltation on- or off-site;
   (ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
   (iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
   (iv) Impede or redirect flood flows
4. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation
5. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan

The Santa Maria Groundwater Basin is designated as very-low threat by the Department of Water Resources (DWR) pursuant to the SGMA. In addition, the Santa Maria Groundwater Basin is adjudicated and exempt from forming a groundwater sustainability agency and developing a groundwater sustainability plan pursuant to SGMA. Because there is not an applicable sustainable groundwater management plan, conflict with sustainable groundwater movements plans (Threshold 5) is not discussed further.

c. Project Impacts and Mitigation Measures

Threshold 1:	Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?
Threshold 3(i):	Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site?
Threshold 3(ii):	Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?
Threshold 3(iii):	Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?
Threshold 3(iv):	Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows?
Threshold 5:	Would the project conflict with or obstruct implementation of a water quality control plan?

Impact HWQ-1 DEVELOPMENT FACILITATED BY THE GP/LCP UPDATE COULD DISTURB SOIL DURING CONSTRUCTION; INCREASE IMPERVIOUS SURFACES, STORMWATER RUNOFF, EROSION, AND POLLUTANTS IN STORMWATER; AND/OR ALTER DRAINAGE PATTERNS. COMPLIANCE WITH NPDES PERMIT REQUIREMENTS, CITY MUNICIPAL CODE REQUIREMENTS, AND GP/LCP UPDATE POLICIES AND ACTIONS WOULD REDUCE IMPACTS RELATED TO WATER QUALITY, EROSION AND SILTATION, STORMWATER RUNOFF, DISCHARGES OF POLLUTANTS, AND CHANGES TO FLOOD FLOWS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Construction

Construction activities for new development and redevelopment under the GP/LCP Update could result in the alteration of existing drainage patterns and soil erosion due to earth-moving activities such as stockpiling, excavation, trenching, dredging, paving, soil compaction, cut and fill activities, and grading. Disturbed soils would be susceptible to erosion from wind and rain, resulting in sediment transport via stormwater runoff from the construction sites. The types of pollutants contained in runoff from construction sites would be typical of urban and suburban areas, and may include sediments and contaminants such as oils, fuels, paints, and solvents. Additionally, other pollutants, such as nutrients, trace metals, and hydrocarbons, can attach to sediment and be transported to downstream drainages and ultimately into collecting waterways, contributing to degradation of water quality.

Potential water quality impacts would be specific to individual construction locations. Local topography, the amount of soil disturbance, the duration that disturbed soil would be exposed, the amount of rainfall and wind that would occur during construction, and the proximity of the nearest water body all affect the potential for water quality degradation during construction.

Individual construction activities that disturb one or more acres would be subject to the requirements of the General Construction Permit. The General Construction Permit requires development and implementation of a SWPPP, which describes the erosion and sediment controls BMPs, good housekeeping BMPS, runoff water quality monitoring, BMP inspections, means of waste disposal, maintenance responsibilities, and non-storm water management controls to be implemented during construction. Inspection of construction sites before and after storms is also required to identify storm water discharge from the construction site, required BMP maintenance, and to identify and additional erosion and sediment controls that may be needed. Compliance with the Construction General Permit is reinforced through the City Municipal Code (Sections 13.28.150 and 16.52.020) and the City's Stormwater Management Program. Pursuant to the City's Municipal Code, all construction activities requiring a grading permit shall implement a SWPPP and erosion and sediment BMPs during construction.

In addition, the City Director of Public Works, or designee, has the authority to inspect construction sites, including the erosion and sediment control measures. The City Director of Public Works is authorized to issue a notice of violation and/or stop work order for violations of the City's grading, erosion control, and stormwater discharge requirements. Likewise, the Central Coast RWQCB or its designee may conduct periodic monitoring of construction sites for compliance with the Construction General Permit, including inspections of the construction BMPs and erosion control measures implemented pursuant to the SWPPP.

Projects requiring excavation have the potential to encounter groundwater, particularly in the southeastern portion of the City above the Santa Maria groundwater basin. Excavation in the remainder of the City may encounter perched groundwater (i.e., subsurface water not associated with a groundwater basin). If groundwater is encountered during construction, it may be discharged to the storm drain system which can degrade water quality. Any groundwater dewatering would be

required to comply with the *Waste Discharge Requirements National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges with Low Threat to Water Quality*; Order No. R3-2017-0042, NPDES No. CAG993001). This permit requires testing of discharge to ensure water quality standards are not exceeded.

In addition to the regulatory requirements discussed above, implementation of GP/LCP Conservation and Open Space Element policies listed below would also reduce the potential for water quality degradation, including from erosion, during construction activities.

- **Policy COS-1.7: Minimization of Water Quality Impacts During Construction.** Development shall minimize water quality impacts during construction by minimizing land disturbance and soil compaction, minimizing erosion and sedimentation, and minimizing the discharge of other pollutants resulting from construction activities.
  - **Action COS-1.7c: Minimize Land Disturbance During Construction.** When reviewing development applications, the City shall require applicants to exemplify how the development minimizes land disturbance activities of construction (e.g., clearing, grading, cut-and-fill, and soil compaction), especially in erosive areas (including steep slopes, unstable areas, and erosive soils), to avoid detrimental water quality impacts caused by increased erosion or sedimentation.
  - **Action COS-1.7d: Minimize Erosion and Sedimentation During Construction.** Require that construction be conducted using measures to minimize soil erosion and off-site transport of sediment and debris originating at the construction site.
  - **Action COS-1.7e: Minimize Discharge of Construction Pollutants.** Development shall minimize pollution of runoff and coastal waters by construction chemicals and materials through waste management BMPs and "good housekeeping" BMPs.
  - **Action COS-1.7f: Avoid Construction Staging on the Beach.** The City shall require any construction occurring on the beach or beach fronting lots to provide the location of their staging areas within their project plans prior to the issuance of a grading permit. Construction on or adjacent to the sandy beach shall avoid staging/material storage on sandy beaches or within any other biological resource area.
  - **Action COS-3.9g: Erosion Control Measures.** Any development within the ESHA buffer shall incorporate erosion control measures such as distillation basins and energy dissipaters, within grading plans, as necessary.

Compliance with the regulations and GP/LCP Update goals and policies discussed above would reduce the risk of water degradation within the City from soil erosion and other pollutants related to construction activities. Because violations of water quality standards would be minimized through compliance with existing regulations and the GP/LCP Update goals and policies, impacts to water quality from construction activities facilitated by the GP/LCP Update would be less than significant.

Operation

Development facilitated by the GP/LCP Update would result in long-term alterations to drainage patterns in the City, such as changes in ground surface permeability due to new paving, and changes in topography due to grading and excavation. If uncontrolled, operation of future development facilitated by the GP/LCP Update could result in increased stormwater runoff and the addition of sediment, silt, and contaminants such as oil, grease, metals, and landscaping chemicals (pesticides, herbicides, fertilizers, etc.) into the City's stormwater drainage system, and ultimately untreated

discharge into surface waters and the Pacific Ocean. Such a discharge could be a potential violation of the Clean Water Act and NPDES regulations, depending on the pollutant and quantity discharged.

Discharges to the City's storm drain system is regulated by the Phase II MS4 Permit. The purpose of this permit is to require implementation of BMPs to reduce the discharge of stormwater and pollutants into the City's storm drain system. To ensure compliance with the permit requirements and conditions of the Phase II MS4 Permit, Section 13.14.210 of the City Municipal Code prohibits unauthorized discharges to the City's storm drain system. Section 13.28.150 requires implementation of BMPs for new development and redevelopment projects. Section 17.078.020 includes requirements for drainage, runoff, and erosion controls in for projects within areas with slopes greater than 10 percent.

Post-construction stormwater management requirements for new development were adopted by the Central Coast RWQCB in 2013. These requirements are applicable to development and redevelopment projects that create and/or replace 2,500 square feet or more of impervious surface. Post-construction requirements include low impact design measures, treating runoff before discharge from a project site, prevention of off-site discharge up to the 95th percentile rainfall event, and controlling off-site discharge so that peak flows do not exceed pre-existing flows for the 2-year and 10-year event. The post-construction requirements also require routine maintenance of permanent BMPs intended to reduce stormwater runoff, protect water quality, and prevent discharges of pollutants to the municipal stormwater system. Compliance with these requirements would also minimize erosion and siltation that could adversely affect water quality in the City.

The policies and actions of GP/LCP Conservation and Open Space Element ~~policies~~ listed below would also reduce the potential for hydrology and water quality impacts during operation of new development or redevelopment within the City.

- **Policy COS-1.5: Water Quality:** The City shall protect and restore the City's water quality through identifying and managing point sources and non-point sources.
  - **Action COS-1.5a: Meadow Creek Watershed Protection**. Runoff from any new development projects within the Meadow Creek watershed, which drains to the marsh, shall be evaluated with a hydrology report to determine if its runoff exceeds the existing volume rate of flow or suspended solids content. Existing rates should not be exceeded unless restoration plans are developed. The utilization of permeable ground materials to the greatest extent possible is encouraged as one method of limiting increased runoff. Erosion control measures, such as distillation basins and energy dissipaters, shall be incorporated within any grading plan, as necessary.
  - **Action COS-1.5b: Watershed Protection.** Existing and new development shall not degrade Pismo Beach's coastal resources or water quality. The City shall require development projects to comply with water quality and watershed protection requirements per the 2013 Phase II Small MS4 General Permit (Order No. 2013-0001 DWQ, effective July 1, 2013, or any amendment to or re-issuance thereof), approved by the Central Coast Regional Water Quality Control Board. The City shall continue collaborations with other San Luis Obispo County jurisdictions on the development and implementation of watershed protection principles and implementation of best management practices for specific land uses.
  - **Action COS-1.5c: Minimize Adverse Impacts from Stormwater Outfall Discharges.** Avoid construction of new stormwater outfalls, and direct stormwater to existing facilities with appropriate treatment and filtration, where feasible. Where new stormwater outfalls

cannot be avoided, plan, site, and design outfalls to minimize adverse impacts to coastal resources from outfall discharges.

- **Policy COS-1.6: Coastal Waters.** The biological productivity of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.
  - **Action COS-1.6a: Transport of Pollutants from Development.** Plan, site, and design development to minimize the transport of pollutants from development into runoff and coastal waters. The City shall require adequate provision of erosion control measures as part of new development to minimize sedimentation of streams and drainage channels.
  - **Action COS-1.6b: Minimize Changes in the Site's Runoff Flow Regime.** Plan, site, and design development to minimize post-development changes in the site's runoff flow regime (i.e., volume, flow rate, timing, and duration), to preserve the pre-development hydrologic balance and prevent adverse changes in the hydrology of coastal waters (i.e., hydromodification).
  - **Action COS-1.6c: Address Runoff Management Early in Site Design Planning.** Address runoff management early in site design planning and alternatives analysis, integrating existing site characteristics that affect runoff (such as topography, drainage patterns, vegetation, soil conditions, natural hydrologic features, and infiltration conditions) in the design of strategies that minimize post-development changes in the runoff flow regime, control pollutant sources, and, where necessary, remove pollutants.
  - **Action COS-1.6d: Low Impact Development Strategies.** New development and redevelopment shall give precedence to the use of a Low Impact Development (LID) approach to stormwater management, which integrates site design strategies (e.g., minimizing the building footprint, preserving vegetation, and protecting natural drainage features) with small-scale, distributed Best Management Practices (BMPs) (e.g., permeable pavement surfaces, rain barrels and cisterns, and bioretention techniques) to replicate the site's natural hydrologic balance through infiltration, evapotranspiration, harvesting, detention, or retention of stormwater close to the source, to the maximum extent appropriate and feasible.
  - **Action COS-1.6e: Protect and Restore Hydrologic Features.** Plan, site, and design development to protect and, where feasible, restore hydrologic features such as stream corridors, drainage swales, topographical depressions, groundwater recharge areas, floodplains, and wetlands.
  - **Action COS-1.6f: Preserve or Enhance Vegetation.** Plan, site, and design development to preserve or enhance non-invasive vegetation, to achieve water quality benefits such as transpiration, interception of rainfall, pollutant uptake, shading of waterways to maintain water temperature, and erosion control.
  - **Action COS-1.6g: Infiltration.** Modify the Stormwater regulations in the Municipal Code maintain or enhance on-site infiltration of runoff, where appropriate and feasible. If on-site infiltration of runoff may potentially result in adverse impacts, including, but not limited to, geologic instability, flooding, or pollution of coastal waters, the development shall

substitute alternative BMPs (e.g., flow-through planter box, green roof, or cistern) that do not involve on-site infiltration in order to minimize changes in the runoff flow regime to the extent appropriate and feasible. Alternative BMPs shall also be used where infiltration BMPs are not adequate to treat a specific pollutant of concern attributed to the development, or where infiltration practices would conflict with regulations protecting groundwater.

- **Action COS-1.6h: Impervious Surfaces.** New development shall be planned, sited and designed to minimize the installation of impervious surfaces, where feasible, especially impervious areas directly connected to the municipal storm drain system, in order to minimize increases in stormwater or dry weather runoff. Redevelopment projects shall, where feasible, increase the area of pervious surfaces.
- **Action COS-1.6i: Priority Development Projects.** Require a Water Quality Management Plan for Priority Development Projects, (PDPs) as defined in the NPDES MS4 Permit, that includes permanent post-construction treatment control BMPs to address pollutants of concern specific to the PDP's land use and impairments of surface waters to which the project drains. PDPs will also require post-construction runoff control BMPs to minimize adverse changes in the PDP's runoff flow regime. The Water Quality Management Plan will provide for the operation and maintenance of the permanent treatment control and runoff control BMPs and shall be implemented for the life of the development.
- **Action COS-1.7a: Use Source Control BMPs**. Require new development to incorporate Source Control BMPs, which can be structural features (such as a roof over an outdoor storage area) or operational actions (such as proper application of pesticides and fertilizers) to control pollutant sources and keep pollutants segregated from runoff, in order to minimize the transport of pollutants in runoff from the development.
- **Action COS-1.7b: Manage BMPs for the Life of the Development.** Modify the Stormwater regulations in the Municipal Code to include to implement appropriate protocols to manage BMPs (including installation and removal, ongoing operation, inspection, and maintenance) in all development, to protect coastal water resources for the life of the development.

- **Policy COS-1.8: Water Quality BMPs in New Development and Redevelopment.** All Coastal Development Permits (CDPs) shall incorporate Best Management Practices in new development and redevelopment.
  - **Action COS-1.8a: Stormwater Runoff Plans.** All projects that require a CDP and have the potential for adverse water quality or hydrology impacts to coastal waters shall prepare both a construction-phase and a post-development runoff plan.
  - **Action COS-1.8b: Runoff Plan Requirements.** Runoff management shall be addressed early in the development's planning and design stages. As part of CDP approval, the City shall require that the runoff plans include stormwater pollution control and runoff control measures or systems, and a maintenance program, as necessary, for both the construction-phase and post-development runoff plans. The post-development maintenance program shall be for the life of the development. The level of detail provided to address the plan's requirements shall be commensurate with the type and scale of the development, and with the potential for adverse water quality and hydrology impacts to coastal waters.

In addition, implementation of the following GP/LCP Update Safety Element goals and policies regarding bluff erosion would also apply in relevant areas:

- **Policy S-3.2: Bluff Management.** Manage natural bluff features to conserve soil resources and prevent excessive erosion due to wind and water.
  - **Action S-3.2a: Development on Bluff Face.** No new development shall be permitted on any bluff face, except engineered staircases or accessways to provide public beach access where no feasible alternative means of public access exists, and pipelines for scientific research or coastal-dependent industry. Drainpipes shall be allowed only where no other less environmentally damaging drain system is feasible, and the drainpipes shall be designed and placed to minimize impacts to the bluff face, toe, and beach. Drainage devices extending over the bluff face shall not be permitted if the property can be drained away from the bluff face, toe, and beach. Any development permitted on a bluff face per this section shall:
    a. Be designed and constructed to minimize landform alteration of the oceanfront bluff face;
    b. Not contribute to further erosion or cause, expand, or accelerate instability of the bluff;
    c. Be visually compatible with the surrounding areas;
    d. Avoid the need for shoreline protection to the maximum extent feasible; and
    e. Be sited and designed to be easily relocated or removed without significant damage to the bluff or shoreline.
  - **Action S-3.2b: Bluff-top Lot Drainage and Erosion.** New development, including substantial redevelopment, on a bluff-top lot shall provide adequate drainage and erosion control facilities that convey site drainage in a non-erosive manner away from the bluff edge to minimize hazards, site instability, and erosion.
  - **Action S-3.2c: Bluff-top Landscaping.** All landscaping for new bluff-top development or redevelopment shall consist of native, non-invasive, drought-tolerant, and fire-resistant species. Any permanent irrigation system shall be low volume (drip, micro jet, etc.) and shall only be permitted on the street-facing portion of the lot. Irrigation systems along the bluff or shoreline portion of a lot shall only be allowed on a temporary basis for initial plant establishment (90 days) and shall be removed after vegetation has established. Excessive irrigation on bluff lots is prohibited. Temporary bluff-top landscaping must be set back from the bluff edge by at least ten feet.

The projected growth from new development envisioned in the GP/LCP Update would increase wastewater generation and increase treatment demand at the Pismo Beach WWTP. However Central Coast Blue, anticipated to be completed in 2023, would assist with the treatment of wastewater and capture of water for recharge of the Santa Maria Groundwater Basin and would provide a new source of recycled water. The Pismo Beach WWTP currently treats and discharges an average of 0.9 million gallons per day (mgd) and is permitted to discharge up to 1.9 mgd to the Pacific Ocean under its existing Waste Discharge Requirements (WDRs) Order No. R3-2015-0016 as of February 2016 (City of Pismo Beach 2015). The permit requires that discharges from the plant meet applicable water quality standards before release into the Pacific Ocean. Required compliance with applicable WDRs would ensure that wastewater discharged to the ocean are properly and effectively treated to meet or exceed discharge requirements so as to not degrade water quality.

Compliance with the regulations and GP/LCP Update policies and actions discussed above would reduce discharge of additional stormwater runoff and associated pollutants from new development and redevelopment within the City. Because violations of water quality standards would be

minimized through compliance with existing regulations and the GP/LCP Update policies and actions, impacts to water quality facilitated by the GP/LCP Update would be less than significant.

Mitigation Measures

No mitigation would be required.

Threshold 2:	Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Impact HWQ-2 DEVELOPMENT FACILITATED BY THE GP/LCP UPDATE WOULD INCREMENTALLY INCREASE THE AMOUNT OF IMPERVIOUS SURFACE IN THE CITY AND INCREASE WATER USE WHICH COULD REDUCE THE POTENTIAL FOR GROUNDWATER RECHARGE FROM INFILTRATION AND DECREASE GROUNDWATER SUPPLIES. COMPLIANCE WITH THE CITY MUNICIPAL CODE, CENTRAL COAST RWQCB'S POST CONSTRUCTION REQUIREMENTS FOR STORMWATER MANAGEMENT, AND GP/LCP UPDATE GOALS AND POLICIES WOULD ENSURE THAT NEW IMPERVIOUS SURFACES AND INCREASED WATER USE WOULD NOT SUBSTANTIALLY INTERFERE WITH GROUNDWATER RECHARGE OR DECREASE GROUNDWATER SUPPLIES. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Development facilitated by the GP/LCP Update in the southeastern portion of the City, which is located above the Santa Maria Groundwater Basin, would incrementally increase the amount of impervious surface within the City, which could reduce the potential for groundwater recharge from infiltration. However, the majority of the City is not located above a designated groundwater basin and would not affect recharge to the Santa Maria Groundwater Basin. Compliance with the City Municipal Code, as well as the Central Coast RWQCB post-construction requirements for stormwater management would maximize the on-site infiltration capacity for new development and redevelopment projects within the southeastern portion of the City. This would reduce the quantity of stormwater runoff that enters the storm drainage system and discharges to surface waters and the Pacific Ocean. Therefore, the incremental increase of impervious surface would not substantially interfere with groundwater recharge.

For the existing conditions of the City's groundwater supply, and the expected effects of increased water demand from development facilitated by the GP/LCP Update, refer to Section 4.15, *Utilities/Service Systems*. Although development within the City would increase water demand, including demand for groundwater, the agencies managing groundwater in the NCMA, including Pismo Beach, are responsible for ensuring the basin is sustainably managed. The GP/LCP Update Conservation and Open Space Element also includes the following actions and polices for groundwater management:

- **Policy COS-1.4: Water Supply.** The City shall provide residents and visitors of Pismo Beach a reliable and sustainable water supply through the use of new or enhanced water supply programs, water conservation efforts, and routine reporting.
  - **Action COS-1.4d: Groundwater Management Plan.** The City may consider coordination with other agencies within the Santa Maria Groundwater Basin to develop a more comprehensive groundwater management plan.
  - **Action COS-1.4e: Seawater Intrusion into Groundwater Aquifers.** The City shall continue to implement best practices to prevent seawater intrusion into groundwater aquifers, by alternating disinfectants used in water treatment and monitoring chemical levels.

For these reasons, development under the GP/LCP Update would not substantially interfere with groundwater supplies. This impact would be less than significant.

Mitigation Measures

No mitigation measures are required.

Threshold 4:	In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

Impact HWQ-3 DEVELOPMENT FACILITATED BY THE GP/LCP UPDATE MAY OCCUR IN AREAS WITH POTENTIAL FOR INUNDATION BY FLOODING, TSUNAMI, AND/OR DAM FAILURE. COMPLIANCE WITH APPLICABLE MUNICIPAL CODE REQUIREMENTS WOULD ENSURE DEVELOPMENT WITHIN AREAS SUBJECT TO INUNDATION WOULD BE SITED, DESIGNED AND CONSTRUCTED AS TO NOT EXACERBATE RISKS FROM RELEASE OF POLLUTANTS FROM INUNDATION. THESE IMPACTS WOULD BE LESS THAN SIGNIFICANT.

The majority of the City is located within the coastal zone and adjacent to the Pacific Ocean. As shown in Figure 4.9-4, the coastline and southeastern portions of the City are subject to inundation from flooding during storm events. As shown in Figure 4.9-5 and Figure 4.9-6, the southeastern portion of the City is subject to inundation from tsunami or dam failure. Existing land uses in the areas subject to inundation include residential and commercial developments.

The GP/LCP Update designates a large portion of the area subject to inundation as open space and does not facilitate development of the area. However, the areas subject to inundation also include mixed-use, mobile home park, and resort commercial land use designations. These areas could experience development or redevelopment under the GP/LCP Update.

Facilities that use or store large quantities of hazardous materials could harm the environment if inundated by a flood. However, the hazardous materials used for residential and commercial uses in the areas subject to inundation would be products typically used for cleaning and landscaping and would not be used or stored hazardous materials in large quantities.

Additionally, the California Building Code and Chapter 15.44 of the Municipal Code contain guidelines for development within flood hazard areas, including requirements that new development be elevated above the base flood elevations. Elevating new development above the areas subject to inundation would minimize the risk of release of pollutants.

The following policy within the GP/LCP Update Land Use Element would reduce the risk of pollutant release in areas of flood hazard by restricting development within the Floodplain Overlay Zone.

- **Action LU-8.1ef: Floodplain Overlay Zone.** Continue to implement the Floodplain Overlay Zone to restrict, prohibit or condition development within hazardous floodplain areas to assure that the type and intensity of use are consistent with the protection and preservation of people, property and significant resources and consistent with all policies of the GP/LCP, including but not limited to the policies of the Safety Element.

Additionally, the following policies and actions within the GP/LCP Update Safety Element would also reduce the risk of pollutant release in areas of flood hazard by restricting development within the Floodplain Overlay Zone.

- **Policy S-2.5: Flood Hazards.** New development and substantial redevelopment in flood hazard areas shall be sited and designed to avoid hazards and protect coastal resources.
  - **Action S-2.5a: Flood Plain Zoning.** Areas subject to flooding, including those shown on the most current FEMA Flood Insurance Rate Maps (FIRMs) and areas projected to be impacted by flooding with sea level rise as shown on Figures S-2 to S-9 (of the Safety Element)**,** shall be mapped within and subject to the requirements of the Floodplain Overlay Zone.
  - **Action S-2.5b: Restrictions on New Development Within the 100-Year Floodplain.** ~~D~~ New development in the Floodplain Overlay shall not result in an obstruction to flood control or adversely affect migrating tidelands, coastal wetlands, estuaries, or other sensitive habitat areas within the floodplain.
  - **Action S-2.5c: Shoreline Setbacks.** All structures shall be setback a sufficient distance to avoid flood hazards, including those associated with wave run-up from a 100-year storm event, accounting for sea level rise and long-term shoreline retreat, over the anticipated lifespan of the development. Structures that cannot feasibly avoid all flood hazards shall be setback as far as possible and minimize flood risks. ~~as required by Action 2.5d.~~
  - ~~**Action S-2.5d: Floodplain Zoning Standards.** Development within the floodplain shall adhere to the following standards:~~

    ~~1. Within flood hazard areas as mapped by the FEMA, development shall meet the minimum elevation requirements as determined by the Pismo Beach Building Code of the Base Flood Elevation assigned to the specific flood zones on a FIRM, or the sea level rise amount projected for the anticipated lifespan of the development, whichever is greater.~~

    ~~2. Within areas that are not within FEMA mapped flood zones but are identified on Figures S-2 to S-9 (of the Safety Element), development shall be constructed such that the lowest habitable finished floor exceeds the projected sea level rise expected at the site for the anticipated lifespan of the structure. If it is infeasible for new development, including redevelopment, to avoid flood hazards completely, development should be sited and designed to minimize risks from flooding, including as influenced by sea level rise, over the anticipated life of the development, and constructed using design techniques that will limit damage caused by floods. Based on a site-specific coastal hazard analysis, flood hazard mitigation design techniques may include, but shall not be limited to:~~

       ~~a. Locating only non-habitable space below the flood hazard elevation;~~

       ~~b. Elevating mechanical and utility installations;~~

       ~~c. Eliminating basements;~~

       ~~d. Using flood vents and anchoring structures where appropriate; and~~

       ~~e. Other appropriate mitigation measures identified in the most recent FEMA regulations.~~

    ~~3. No habitable structure shall be approved for construction within the area of the 100-year floodplain unless the applicant demonstrates that the finished floor elevations are at least 1 foot above the projected elevation of the 100-year flood, except as allowed by FEMA regulations.~~

    ~~4. No new fill, structure, or other obstruction shall be permitted to be placed or constructed within a flood-way unless a detailed hydrologic study has been prepared by~~

~~the applicant and approved by the City Engineer ensuring that the proposed project will not obstruct passing floodwaters in any way.~~

5. ~~No new development shall be allowed in the 100-year floodplain that will contribute to or increase flood hazards on the same or other properties, or which would require construction of flood-control devices.~~
6. ~~In addition to the coastal hazard report required per Action 2.2d, any application for development on a parcel any portion of which is within the boundary of the 100-year floodplain shall be required to submit a hydrological engineer's report which assesses the nature of the flood risks, identifies the boundary of the 100-year floodplain, and specifies the protective measures that should be undertaken to attain compliance with the City's floodplain zoning and with FEMA regulations~~.

Adherence to the GP/LCP actions and compliance with applicable laws and regulations would minimize the potential impact of pollutant release in the event of inundation of structures in areas subject to inundation. Impacts would be less than significant.

As discussed in Section 4.7, *Greenhouse Gas Emissions*, climate change has the potential to induce substantial sea level rise in the coming century. The rising sea level increases the likelihood, frequency, and risk of flooding and release of pollutants due to inundation, including pollutants associated with increased erosion. Sea levels are rising faster now than in the previous two millennia, and the rise is expected to accelerate, even with robust greenhouse gas emission control measures. Sea level rise could affect flooding along the creeks in the City and at the development in the southeastern portion of City. Additionally, loss of the City beaches from sea level rise would reduce the natural wave buffer and exacerbate flooding in the downtown area. The City prepared a *Sea Level Rise Vulnerability Assessment* (City of Pismo Beach 2019), consistent with the CCC's adopted *Sea Level Rise Policy Guidance* (CCC 2018). As part of the Safety Element update, the *Sea Level Rise Vulnerability Assessment* used a range of sea level rise projections, based on multiple greenhouse gas emissions scenarios. The *Sea Level Rise Vulnerability Assessment* used the sea level rise projections, combined with coastal hazard models, to map areas that may be subject to coastal hazards with sea level rise. The results of the *Sea Level Rise Vulnerability Assessment* and the recommendations of the Sea Level Rise Adaptation Plan were used to guide the development of the policies and actions in the GP/LCP Update.

In addition to compliance with mandatory Clean Water Act requirements (NPDES Construction General Permit and Phase II MS4 Permit), City Municipal Code requirements, the Central Coast RWQCB's post-construction requirements for stormwater management, and implementation of Policies 2.5 and 8.1 and Actions 2.5a through 2.5~~d~~c (listed above), implementation of the following GP/LCP Update Safety Element goals and policies would minimize potential risk of release of pollutants, including pollutants from erosion, from inundation by limiting development in the areas potential subject to additional flooding from sea level rise:

- **Action S-1.2c: Coordination with Stakeholder Agencies.** The City shall consult with regional, state, and federal agencies on the effects of climate change on local hazards, including sea level rise. This should include coordination with California Department of Transportation (Caltrans), California State Parks, Union Pacific Railroad, San Luis Obispo Regional Transit Authority, South County Transit, and other stakeholder government agencies that own/manage public infrastructure along the shoreline. This coordination should aim to protect public access to the coast and minimize the impacts of sea level rise on assets such as Pismo State Beach (including the North Beach campground and the Monarch Butterfly

Grove), U.S. Highway 101, Dolliver Street Bridge, Pismo Lake Ecological Reserve, and the railroad. The intent of this coordination should be the implementation of planning solutions before coastal hazards are accelerated by sea level rise and impacts start to occur. Such consultation shall help prevent the squeeze of the beach between rising sea levels and infrastructure and shall work to maintain a minimum beach width that supports public access, recreation, beach ecology, and the function of the beach as a buffer for coastal hazards.

- **Policy S-1.4: Sea Level Rise Resiliency.** Support efforts to develop a better understanding of sea level rise and participate in coordination and collaboration to increase resiliency.
  - **Action S-1.4a: GP/LCP Updates.** The City will conduct an evaluation at least every 10 years to determine whether additional policies and/or actions are necessary for inclusion in the GP/LCP in order to better address the impacts of sea level rise and other coastal hazards. Such GP/LCP amendments may include updates to hazard overlay maps, policies, and/or the zoning code if such updates are needed to address changed conditions, updates to the best available science that provides new information and alters the projected timing or amount of sea level rise, and/or changes to the sea level rise adaptation strategies based on the observed efficacy of whatever adaptation strategies have been implemented. The scope of each update is expected to vary depending on the extent to which conditions have changed over time.
  - **Action S-1.4b: Sea Level Rise Information.** The best available scientific information regarding sea level rise projections and effects shall be considered in the preparation of findings and recommendations for all geologic, geotechnical, hydrologic, coastal hazards, and engineering investigations.
  - **Action S-1.4c: Sea Level Rise Monitoring.** The City, or other entity authorized by the City, shall conduct monitoring and shall keep a record of all monitoring data and reports to track the increase in local sea levels over time. The City shall establish a baseline condition for each of the following monitoring methods within 5 years of the date of certification of the GP/LCP. Monitoring sites and methods shall be consistent in timing, location, and technique. The City should collaborate with other local, regional, state, and federal entities to establish consistent monitoring methods and to collaboratively track the effects of sea level rise, where feasible. Supplementary surveys should be performed immediately following any significant bluff or shoreline erosion events. Monitoring shall include the following:
    1. **Beach Monitoring.** Conduct annual or seasonal beach profile surveys documenting shoreline width, slope, height, or other features, as necessary. This data will be useful to verify projected rates of shoreline retreat along the Downtown and low-lying study areas and quantify the efficacy of any beach nourishment or additional sediment management activities. The City will use the beach width data collected within 5 years of certification of the LCP as a baseline for future monitoring.
    2. **Bluff Monitoring.** Conduct coastal bluff surveys in the northern portion of the City at 5-year intervals using technology such as LIDAR to document the bluff top and toe position, nearshore slope, ~~bluff face slope~~, and other bluff features as needed. This monitoring will provide actionable data in the face of uncertain projections and be useful for the site-specific geologic hazard analyses that are required for development along the bluffs. The City will use the bluff data collected within 5 years of certification of the LCP as a baseline for future monitoring. Opportunities to coordinate and collaborate with other agencies on large-scale studies and efforts should be pursued.

3. **Fluvial Monitoring.** Fluvial flooding conditions from Pismo Creek shall be monitored, (e.g., frequency of overbank/flood events).

- **Action S-1.4d: Additional Research.** Encourage opportunities to conduct additional research on combined fluvial and coastal flood hazards in the low-lying areas bordering Pismo Creek and Meadow Creek.
- **Action S-1.4e: Inventory of Existing Shoreline Protective Devices.** The City shall support CCC efforts to establish an inventory of all existing shoreline protective devices, and provide relevant information such as their associated design lives, capacity to function under near-term sea level rise scenarios, and a general assessment of the existing principal structure the device is needed to protect, as it is available. The City shall identify maintenance and improvement requirements for the existing, city-owned protective devices and an initial feasibility analysis of alternatives to shoreline protection or opportunities to minimize and mitigate adverse impacts to coastal resources. As part of necessary maintenance or replacement of an existing, city-owned protective device, opportunities to incorporate additional protective capacity to account for sea level rise hazards should be included. Any maintenance and improvement of existing shoreline protective devices shall be consistent with the requirements of the GP/LCP.
- **Action S-1.4g: Regional Sediment Management Planning.** To increase efficiency and reduce costs, the City should advocate for regionally coordinated sediment management programs that benefit multiple jurisdictions, including those outlined in the County of San Luis Obispo Coastal Regional Sediment Management Plan (May 2016). The City should consider taking a more active role in regional planning by appointing a local elected official to represent Pismo Beach on the San Luis Obispo Council of Governments Policy Advisory Committee, which serves as the implementation body for the County of San Luis Obispo Coastal Regional Sediment Management Plan.
- **Action S-1.4h: Opportunistic Beach Nourishment.** In coordination with the CCC and other permitting agencies, the City shall explore the potential for opportunistic beach nourishment to serve as a viable adaptation strategy for the bluffs region of the City and to reduce the adverse impacts of both current and future beach and bluff erosion. Potential sediment sources that should be considered include material dredged from Port San Luis and upland sources for construction or maintenance of flood control infrastructure such as debris basins and channels. The City should consider how replenishment options may need to change over time as sea level rises. Any beach nourishment program for sediment deposition shall:
  1. Be designed to minimize adverse impacts to beaches, marine resources, onshore and offshore ecological resources, restoration sites, water quality, coastal access, and recreational activities;
  2. Be designed to match existing beach sediment size and aesthetics as closely as feasible;
  3. Consider the method, location, and timing of placement. Opportunistic sediment removed from catchment basins may be disposed of in the littoral system if it is tested and found to be safe and of suitable grain size and type. The program shall identify and designate appropriate beaches or offshore feeder sites in the littoral system for placement of suitable materials from catchment basins;
  4. Incorporate appropriate mitigation measures for any unavoidable coastal resource impacts;

5. Include adequate monitoring protocols to measure impacts on beach width and elevation, as well as impacts on biological resources; and
6. Sand retention devices may be necessary in conjunction with sand nourishment to protect public beaches in danger of erosion, but should be sited and designed to first avoid, then minimize and mitigate adverse impacts to coastal resources to the maximum feasible extent, consistent with California Coastal Act Section 30235.

Beach nourishment in the Downtown area of the City should also be considered; however, a detailed study of the potential impact of sea level rise and beach nourishment on fluvial flooding must be part of any feasibility analysis.

- **Action S-1.4i: Capital Improvement Projects.** Incorporate the probability of sea level rise and coastal hazards into the Capital Improvement Planning process as an effective way to ensure that public projects account for future hazard risks and as an opportunity to include strategies that build adaptive capacity into coastal infrastructure. The City shall facilitate a science-based approach to sea level rise hazard analysis for capital improvement projects by identifying a design life and risk tolerance, consistent with the requirements of this element and current state and federal guidance. For future facility or infrastructure development, as necessary, the City will analyze and evaluate a combination of structural and non-structural adaptation measures as part of a Coastal Development Permit (CDP) or other processes (e.g., public works plan) with a preference towards non-structural solutions, including beach nourishment, dune restoration or living shorelines, and relocating infrastructure, unless the structural solutions are less environmentally damaging.
- **Action S-1.4j: Nature-Based Adaptation.** Encourage the establishment of pilot programs that utilize soft or natural shoreline protection methods, such as dune restoration, living shorelines, rocky intertidal habitat restoration, and other "green" infrastructure as alternatives to hard shoreline protective devices. Soft shoreline protection devices shall be fully evaluated for coastal resource impacts, and shall only be approved if found consistent with the GP/LCP policies related to shoreline protection. The City should consider how these options may need to change over time as sea level rises and identify adaptive management strategies for maintenance over time and/or removal if deemed necessary. Opportunities to study and monitor such projects over time and share lessons learned with other jurisdictions should be encouraged.
- **Action S-2.2b: Risk Aversion.** The level of risk aversion for development in the coastal zone is used to determine which sea level rise scenario should be evaluated in a coastal hazard analysis (Action S-2.2d). Risk aversion is based on the type of development and considers the level of acceptable risk associated with that development type, as well as the ability of that development to adapt to or recover from hazard conditions. Risk aversion for a particular development should be determined based on the following general definitions and guidelines:
    1. **Low Risk Aversion:** This level of risk aversion may be used for projects that would have limited consequences should they be exposed to hazards and/or a higher ability to adapt, such as sections of unpaved coastal trail, public accessways, and other small or temporary structures that are easily removable and would not have high costs if damaged. The upper value for the "likely range" of sea level rise (which has approximately a 17% chance of being exceeded) should be evaluated over the anticipated lifespan of these development types.

2. **Medium-High Risk Aversion:** Development with a medium-high level of risk aversion have greater consequences and/or a lower ability to adapt to coastal hazards, and include projects such as residential and commercial structures. The 1-in-200 chance (or 0.5% probability of exceedance) should be evaluated over the anticipated lifespan of development with this level of risk aversion.
3. **Extreme Risk Aversion:** This level of risk aversion should be used for projects with little to no adaptive capacity that would be irreversibly destroyed or significantly costly to repair following a hazards incident, and/or would have considerable public health, public safety, or environmental impacts. Development types with this level of risk aversion may include new wastewater treatment plants, power stations, highways, or other critical infrastructure. Coastal hazard evaluations for these development types should consider the H++ scenario, which accounts for extreme ice loss.

- **Action S-2.2c: Anticipated Lifespan of Development.** The anticipated lifespan of development in the coastal zone is used to determine the amount of sea level rise that should be evaluated in the coastal hazard analysis (Action S-2.2d), according to a development's appropriate risk aversion. The anticipated lifespan of development is not an entitlement to retain the structure, nor does it guarantee safety over that period. A development's anticipated lifespan is generally defined by the following time frames, unless a site or project-specific analysis proves otherwise:
  1. Temporary structures or portable/moveable construction: up to 5 years
  2. Ancillary development or amenity structures (e.g., detached garages, sheds, gazebos, public restrooms): 25 years
  3. Mobile homes: 30–55 years
  4. Residential or commercial structures: 75–100 years
  5. Critical infrastructure:
     - Asphalt roadways: 25–50 years
     - Concrete pavement: 50–75 years
     - Bridges: 75 years
     - Water mains: 100 years
     - Storm drains: 100 years
     - Electrical and gas: 100 years

- **Action S-2.2d: Coastal Hazard Analysis.** CDP applicants for non-exempt development within a coastal hazard area shall submit a site-specific coastal hazard analysis that evaluates potential coastal hazards at the site, including with sea level rise. This coastal hazard analysis shall:
  1. Be prepared by a qualified professional, and use the best available science;
  2. Provide an analysis of the site's potential exposure to coastal hazards, including but not limited to inundation, flooding, wave run-up and overtopping, erosion;
  3. Assess the potential change in coastal hazards due to the effects of sea level rise. The amount of sea level rise to be considered shall be based on the anticipated lifespan of the proposed development and according to an appropriate level of risk aversion for the proposed development type, as defined in Actions S-2.2b and S-2.2c, and be based on the best available science (Action S-1.4b);

4. Assume no reliance upon existing or future shoreline protective devices; and
5. If the proposed development cannot fully minimize hazard risks by avoiding all coastal hazards without reliance upon existing or future shoreline protection, the report shall discuss possible adaptation responses to the hazards to reduce risk as feasible and mitigate impacts to coastal resources.

- **Action S-2.2e: New Development.** New, non-exempt development, including substantial redevelopment, in a coastal hazard area shall be sited to avoid hazards, taking into account predicted sea level rise over the anticipated lifespan of the development, as defined in Actions 2.2b and 2.2c. If hazards cannot be completely avoided, then development shall be sited and designed to protect coastal resources and minimize risks to life and property to the maximum extent feasible.
- **Action S-2.2i: Removal of Development.** Except for coastal-dependent development, a CDP for new development, including substantial redevelopment, in a coastal hazard area shall be conditioned to require the property owner to record a deed restriction that acknowledges and agrees that the development shall be removed and the affected area restored to its previous or natural condition if:
  1. The City has issued a final order that the development is not to be occupied currently and permanently due to the imminent threat from coastal hazards or sea level rise to the health and safety of its occupants;
  2. The City has determined that services to the site can no longer be maintained (e.g., utilities, roads) due to coastal hazards or sea level rise;
  3. The development requires new and/or augmented shoreline protective devices that conflict with LCP or relevant California Coastal Act policies;
  4. The development becomes unstable, loses structural integrity, or becomes threatened by coastal hazards or sea level rise; and/or
  5. The development becomes located on public trust lands and authorization to retain the development is not obtained.

  For new development, where relocation and/or structure removal might be necessary at some time in the future, ensure that foundation designs or other aspects of the development will accommodate future relocation and/or structure removal. Such relocation and/or removal shall be demonstrated in final plans, and may be phased over time. Alternative design options should be considered and employed where appropriate and if site conditions allow, such as constructing smaller structures, increasing finished floor elevations, and installing wall flood vents.

Compliance with NPDES permits requirements, City Municipal Code requirements, and GP/LCP Update goals and policies would reduce the risk of discharge of pollutants from inundation, including inundation due to sea level rise. Therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

4.9.4 Cumulative Impacts

The analysis in this section examines impacts of the GP/LCP Update on hydrology and water quality throughout the cumulative impact analysis area, which for hydrology and water quality is San Luis Obispo Creek Watershed, Pismo Creek Watershed, Arroyo Grande Creek Watershed, and Santa Maria Groundwater Basin. Cumulative development in combination with the GP/LCP would gradually increase development and population and would therefore gradually increase the potential for impacts to hydrology and water quality, including increased stormwater runoff, erosion, pollutant discharge to waterbodies, increased risk of release of pollutants from inundation, and decreased groundwater infiltration capacity.

Some types of impacts to hydrology and water quality that may be additive in nature, and thus cumulative, include violation of water quality standards, interference with groundwater recharge, increased erosion, increased non-point source pollution, and increased runoff. Cumulative development would increase erosion and sedimentation resulting from grading and construction, as well as changes in drainage patterns which could degrade surface and ground water quality. Cumulative development overlying the Santa Maria Groundwater Basin would increase the amount of impervious surfaces, and could combine with the effects of the development within the southeastern portion of the City to potentially reducing groundwater recharge to the basin. Cumulative development relying on groundwater as a source of water supply could also combine with increased development within the City to decrease available water supplies in the Santa Maria Groundwater Basin. In addition, new development would increase the generation of urban pollutants that may adversely affect water quality in the long term.

Development of individual projects in the cumulative impact analysis area would be required to comply with applicable water quality regulations, as discussed in Impact HWQ-1 above. Compliance with these existing requirements would require implementation of BMPS to reduce impacts associated with stormwater and pollutant discharge during construction and operation of projects and reduce adverse changes to hydrology water quality throughout the cumulative impact area. Therefore, cumulative impacts related to water quality and drainage patterns would be less than significant.

As discussed in Impact HWQ-2, development of individual projects throughout the cumulative impact area would increase impervious surfaces and reduce groundwater recharge, but compliance with applicable policies related to impervious surfaces would reduce impacts throughout the cumulative impact area. Therefore, cumulative impacts related to groundwater recharge would be less than significant. Although cumulative development would increase demand for groundwater, the agencies managing groundwater in the NCMA, including Pismo Beach, are responsible for ensuring the basin is sustainably managed. Groundwater management takes into consideration increased demand from anticipated development to ensure groundwater is not over drafted. Therefore, cumulative impacts related to groundwater supplies would be less than significant.

Similarly, as discussed in Impact HWQ-3, compliance with applicable laws and regulations would regulate development in flood prone areas and minimize the potential for release of pollutants from inundation. Therefore, cumulative impacts related to risk of release of pollutants would be less than significant.

4.10 Land Use and Planning

This section summarizes Pismo Beach's land use characteristics and analyzes existing plans and focus areas with development potential in order to determine the potential environmental effects of the proposed General Plan/Local Coastal Plan (GP/LCP) Update related to land use and planning. This section also analyzes the General Plan/LCP Update's consistency with applicable local, regional, and State land use policies. Consistency with the San Luis Obispo County Air Pollution Control District (SLOAPCD) 2001 Clean Air Plan (CAP) for the San Luis Obispo County region is discussed in Section 4.2, Air Quality. Land use compatibility conflicts associated with growth facilitated by the GP/LCP Update are discussed in other sections of this EIR, including Sections 4.1, Aesthetics, 4.2, Air Quality, 4.8, Hazards, Hazardous Materials, and Wildfire and 4.11, Noise.

4.10.1 Setting

a. Existing Land Use Patterns

Pismo Beach's existing land use form is shaped by its topography, linear coastal orientation, natural resources, and circulation patterns. The City is served by four main arteries: U.S. Highway 101 (U.S. 101), Cabrillo Highway (State Route 1), Shell Beach Road, and Price Street, which all run generally northwest–southeast through the City. Residential and commercial uses are mostly concentrated southwest of U.S. 101, and are interspersed with some commercial and hotel/motel uses that directly abut Highway 101 in the southeastern portion of the City. Mobile Home Park uses are also concentrated in the southeastern portion of the City. Open spaces are interspersed throughout the City but are primarily clustered in the eastern portion of the City. Northeast of U.S. 101, the area is characterized by a mix of residential, public/semi-public, and industrial uses.

The City adopted a Sphere of Influence Update in September 2019. The SOI includes approximately 1,230 acres outside of the City limits but within Pismo Beach's Sphere of Influence (SOI). The SOI includes land in Price Canyon and along Oak Park Boulevard and a small area along Mattie Road. The SOI defines the area to which the City intends to provide municipal services and allow the development of some urban land uses for the lifetime of the GP/LCP Update. The GP/LCP Land Use and Community Design Element guides the future development of Pismo Beach by establishing the allowable distribution, location, and extent of development across the City for residential, commercial, open space, public and semi-public facilities, and other uses. The local controls in the Land Use and Community Design Element include restrictions on land uses and parcel sizes in the SOI. Figure 2-2 in Chapter 2, *Project Description* shows the Pismo Beach City limits and the Coastal Zone boundary in the City. Figure 2-3 in Chapter 2, *Project Description,* shows the Pismo Beach City limits and SOI.

As shown in Table 4.10-1, Pismo Beach includes an assortment of residential, commercial, office, public and open space uses. Figure 2-4 in Chapter 2, *Project Description*, shows the City's existing on-the-ground distribution of land use in Pismo Beach.

Table 4.10-1 Pismo Beach Existing On-The-Ground Land Use Distribution

Land Use Designation	
Residential	**Units**
Single-Family Residential	4,981
Multi-Family Residential	418
Mobile Home	515
Visitor Serving	**Rooms**
Resort Commercial	1,980
Retail, Service, Office	**Square Footage (1,000 square feet)**
Commercial	9,594.9
Industrial	1,315.5
Public/Semi-Public	321.1
Open Space	**Acreage**
Open Space	808.9

Source: Land Use and Community Design Element of the GP/LCP Update

Neighborhood Planning Areas

As described in Chapter 2, *Project Description*, Pismo Beach is organized into 10 neighborhood planning areas, each with its own name and unique characteristics. Refer to Figure 2-5 in Chapter 2, *Project Description*, which shows the location of each planning area. The neighborhood planning areas are identified as follows:

- **Sunset Palisades/The Bluffs/South Palisades:** The planning area is almost totally developed with low density residential use with a few scattered vacant residential lots.
- **North Spyglass/Spyglass:** The North Spyglass planning area consists of three large parcels with three major hotels. The Spyglass planning area is a fully developed residential area with multiple housing types, a small commercial center, and the Spyglass Public Park.
- **St. Andrews/Spindrift:** The St. Andrews Tract is comprised of predominantly low-density residential uses, with open space along the northern border, and high-density residential uses. The Spindrift planning area is a planned residential community consisting of multifamily housing uses in the larger southern parcel and single-family residential and open space/recreational uses to the north, west, and east.
- **Shell Beach/Dinosaur Caves:** The planning area is comprised of a mix of low. medium, and high-density residential uses and the Dinosaur Caves Park.
- **Motel District:** The Motel District is comprised of resort commercial uses (primarily hotel and restaurant) with some medium-density residential uses along Franklin Drive, Wilmar Avenue, and Harbor View Avenue.
- **Downtown Core:** The Downtown Core consists of a variety of land uses, including resort commercial, commercial, public/semi-public, open space, high-density residential, and low-density residential uses.
- **Pismo Creek/Pismo Marsh:** The Pismo Creek/Pismo Marsh planning area is comprised of mobile home park, commercial, open space, and industrial uses.
- **Oak Park Heights:** The Oak Park Heights planning area consists of low-and medium-density residential uses with open space areas surrounding the residential, and some commercial uses.

- **Pismo Heights:** The Pismo Heights planning area is almost entirely built out and is comprised of low-density residential uses with some medium-density residential uses and high-density residential uses.
- **Freeway Foothills/Mattie Road:** The Freeway Foothills/Mattie Road planning area is comprised of low and medium density residential neighborhoods, planned residential, commercial areas, and some undeveloped areas.

b. Existing Plans and Studies

City of Pismo Beach General Plan/Local Coastal Program

State law (Government Code Section 65300) requires that each city and county adopt and periodically update a comprehensive general plan. The California Coastal Act requires that each city or county within the Coastal Zone prepare an LCP. The City addresses both the California general plan law and the California Coastal Act requirements by integrating the GP and the LCP into one combined plan. Pismo Beach adopted its existing GP/LCP in 1992, which was most recently updated in 2014.

The City is currently preparing an update to the GP/LCP, which includes updates to the Land Use and Community Design, Safety, Conservation and Open Space, Noise, ~~Facilities,~~ and Circulation Elements of the City's GP/LCP. This Program EIR (PEIR) is intended to review the update of the City's GP/LCP. As such, this PEIR identifies revised and refined goals, policies, and implementation programs as appropriate, which are designed to avoid or mitigate environmental impacts of the GP/LCP Update.

c. Proposed GP/LCP Update

The proposed GP/LCP Update would update the Land Use and Community Design, Safety, Conservation and Open Space, Noise, ~~Facilities,~~ and Circulation Elements and would supersede the 1992 General Plan. The description of each land use designation includes allowed maximum density or intensity of development and specific guidance on the intended physical character of future development, including building placement on a lot, lot coverage, building frontage, streetscape character, and parking location and access. Table 2-4 in Chapter 2, *Project Description*, describes the 12 proposed land use designations.

A principal intention of the GP/LCP Update is to guide land use decisions within the City through the year 2040 while helping the community enhance and maintain its small beach town character, manage growth effectively, provide a safe community, and enhance the City's tourist-based economy. The GP/LCP Update contains the goals listed in Table 4.10-2 related to land use planning. The GP/LCP Update also includes goals specific to each of the 10 neighborhood planning areas related to land use planning and the vision for development within these areas.

Table 4.10-2 GP/LCP Update Goals

General Plan Chapter	Goals	
Land Use	**Goal LU-1**	A community with a variety of well-regulated land uses that support the diverse needs of both ~~visitors~~ residents and ~~residents~~ visitors.
	Goal LU-2	A community with a classic California and small-town beach atmosphere.
	Goal LU-3	City Design. A functional community that is designed with compatible facades, architectural styles, and colors.
	Goal LU-4	A community economy built on visitor-serving uses while maintaining services for year-round community members.
	Goal LU-5	A community that supports the health, safety, and sustainability of all residents, visitors and structures.
	Goal LU-6	A community that provides and maintains a high level of service and infrastructure to all development.
	Goal LU-7	A community where growth is concentrated in corridors and neighborhood centers where adaptive land reuse will contribute to a high quality of life for the entire community.
	Goal LU-8	A community that protects and enhances natural and coastal resources within Pismo Beach.

4.10.2 Regulatory Setting

a. Federal

Coastal Zone Management Act

The Coastal Zone Management Act was passed by Congress in 1972. It provides for management of coastal resources and aims to protect, restore, and enhance coastal resources through three programs administered by the National Oceanic and Atmospheric Administration in partnership with coastal States. In California, the Coastal Zone Management Act is administered in partnership with the California Coastal Commission. The National Coastal Zone Management Program balances competing land and water issues. Programs under the Coastal Zone Management Act include the National Estuarine Research Reserve System, which protects estuaries for use as field laboratories that improve understanding of estuaries, and the Coastal and Estuarine Land Conservation Program, which assists with acquisition of coastal property or easements for conservation purposes.

b. State

General Plan Law (California Government Code Section 65300)

California Government Code Section 65300 regulates the substantive and topical requirements of general plans. State law requires that each city and county adopt a general plan "for the physical development of the county or city, and any land outside its boundaries which bears relation to its planning." The California Supreme Court has called the general plan the "constitution for future development." The general plan expresses the community's development goals and embodies public policy relative to the distribution of future land uses, both public and private.

California Government Code Section 65301

Section 65301 of the California Government Code requires a general plan to address the geographic territory of the local jurisdiction and any other territory outside its boundaries that bears relation to the planning of the jurisdiction. The jurisdiction may exercise their own judgment in determining what areas outside of its boundaries to include in the planning area. The State of California General Plan Guidelines denotes that the planning area for a city should include (at minimum) all land within the city limits and all land within the city's SOI.

California Government Code Section 65860

In charter cities with a population of more than two million, counties, and general law cities, zoning provisions must be consistent with the general plan. Charter cities with a population of under two million are exempt from the zoning consistency requirement unless their charters provide otherwise. The City of Pismo Beach is a general law city and is, therefore, required to have zoning consistency with its general plan.

California Coastal Act

The California Coastal Commission currently regulates coastal development in the State. Local municipalities such as the City of Pismo Beach may elect to prepare their own LCPs and, once the LCP is certified, development control reverts to the local government. However, action taken by the City on a coastal development permit application following certification of the LCP may still be appealed to the California Coastal Commission. Amendments to the City's land use plan (LUP) must also be approved by the California Coastal Commission.

An LCP consists of City land use plans and land use controls that implement the provisions of the CCA. The CCA (Public Resources Code Section 30000 et seq.) is intended to "protect, maintain, and where feasible, enhance and restore the overall quality of the coastal zone environment and its natural and artificial resources." All development in the coastal zone requires approval of a coastal development permit, which are issued by the California Coastal Commission, in compliance with the LCP.

The City's LCP consists of two parts as required by the Coastal Act: a Land Use Plan (LUP), which was last updated in 1993, and the Implementation Plan, which was last updated in 1983, with several amendments to both documents occurring since. The LUP consists of goals, policies and actions that address the requirements of the Coastal Act and are integrated into applicable elements of the General Plan. The Implementation Plan provides the zoning regulations that implement the LUP goals, policies and actions and serves as the City's Coastal Zoning Ordinance. As a package, these documents implement the CCA at the local level in Pismo Beach. The adopted and certified LCP forms the legal standard of review for issuance of Coastal Development Permits (CDP) within the City's coastal zone and is legally binding on the City. The LCP may be amended to stay up to date with state laws and to continue to reflect the vision of the community. The LUP applies to all areas of the City in the coastal zone. Any future development resulting from the GP/LCP Update would be subject to the requirements of the CCA, Pismo Beach LCP, and the Zoning Code.

Cortese Knox Hertzberg Local Government Reorganization Act of 2000

The Cortese Knox Hertzberg Local Government Reorganization Act (CKH Act) established procedures for local agency changes of organization, including city incorporation, annexation to a city or special district, and consolidation of cities or special districts (Section 56000, et seq.). Local Agency Formation Commissions (LAFCOs) have numerous powers under the CKH Act, but the most important are the power to act on local agency boundary changes and to adopt SOIs for local agencies. The law states that in order to update a SOI, LAFCOs are required to first conduct a review of the municipal services provided by the local agency. The CKH Act requires LAFCOs to update SOIs for every city and special district every five years. The original deadline was January 2006, five years following the CHK Act becoming State law. That deadline was extended two years to January 2008. Every SOI update must be accompanied by an update of the municipal services review (MSR). San Luis Obispo LAFCO completed a MSR for Pismo Beach in 2019. San Luis Obispo LAFCO has a goal to update SOIs every five years or as necessary. The next MSR for Pismo Beach will occur whenever an amendment is considered.

c. Regional and Local

San Luis Obispo Council of Governments 2019 Regional Transportation Plan/Sustainable Communities Strategy

The San Luis Obispo Council of Governments (SLOCOG) is required by State and federal law to prepare, update, and adopt a Regional Transportation Plan (RTP) every four years. Senate Bill (SB) 375, California's Sustainable Communities and Climate Protection Act, was enacted in 2008, requiring all RTPs to include a Sustainable Communities Strategy (SCS) that reduces greenhouse gas emissions from passenger vehicles and light-duty trucks. The most recent update to the RTP was completed by SLOCOG in 2019. The 2019 RTP builds on prior plans and the Preliminary Sustainable Communities Strategy (PSCS) developed in the 2010 RTP/PSCS and 2014 RTP/~~P~~SCS, and serves as the blueprint for the region's transportation system over the next 20 years. The 2019 RTP identifies active transportation projects, non-highway system projects, highway system projects, and a park and ride project in Pismo Beach.

The 2019 RTP includes the following goals:

- Preserve the transportation system.
- Improve intermodal mobility and accessibility for all people.
- Support a vibrant economy.
- Improve public safety and security.
- Foster livable, healthy communities and promote social equity.
- Practice environmental stewardship.
- Practice financial stewardship.

Pismo Beach Municipal Code

The Zoning Code (Title 17 of the Municipal Code) is the primary tool used by the City to carry out the goals, objectives, and policies of the Pismo Beach General Plan by classifying and regulating the uses of land and structures within the City, consistent with the General Plan. Zoning is the instrument that implements the land use designations of a general plan. In addition to establishing permitted uses, zoning may also establish development standards relating to issues such as intensity, setbacks,

height, and parking. Projects submitted to the City for review and approval are generally evaluated for consistency with the zoning designations.

The City's Subdivision Ordinance, Title 16 of the Municipal Code, provides standards for the processing of subdivision requests, including new tract maps, parcel maps, and lot line adjustments. The Zoning Code describes various types of zoning districts and land use classifications, land use regulations, development standards, and environmental performance standards. The Zoning Code applies to all land uses and development within the City of Pismo Beach. The zoning ordinance is adopted to:

> "protect and promote the public health, morals, safety, peace, comfort, convenience, prosperity and general welfare of the citizens of the City of Pismo Beach. More specifically, the zoning ordinance is adopted to achieve the following objectives:
>
> A. To provide a precise guide for the physical development of the City and to achieve the progressive arrangement of land uses as depicted in the general plan/local coastal program land use plan;
> B. To foster a harmonious, convenient, workable relationship among land uses;
> C. To ensure that public and private lands ultimately are used for the purposes which are most appropriate and most beneficial for the City as a whole;
> D. To facilitate the appropriate location of community facilities;
> E. To minimize congestion by promoting a safe, effective traffic circulation system and to foster the provision of adequate off-street parking and loading facilities;
> F. To provide for adequate light, air, privacy and open space;
> G. To protect residential and commercial properties from noise, odor, dust, dirt, smoke, vibration, heat, glare, and other objectionable influences, and from fire, explosion, noxious fumes and other hazards;
> H. To preserve the natural beauty and quality of the City's site as well as other desirable environmental features.
> I. To protect public views from scenic highways;
> J. To ensure the implementation of goals, policies, programs and land use designations certified in the City's local coastal program land use plan including the maximum protection and provision of public access and recreational opportunities along the coast." (Section 17.003.010)."

As shown in Table 4.10-3, the Zoning Code update would divide the City into 12 primary zoning districts with several special treatment overlays. Existing on-the-ground land uses in the City are shown in Figure 2-4.

Table 4.10-3 Zoning Districts that Apply to Property within the City of Pismo Beach

District Abbreviation	Name of District
Primary Districts	
R-1	One-family Residential
R-2	Two-Family Residential
R-3	Three-family Residential
VL	Visitor Lodging
R-R	Resort-Residential
C-R	Commercial Recreation
M-H	Mobile Home
C-1	Retail Commercial
C-2	General Commercial
SI	Service Industrial
OS	Open Space
PF	Public Facilities
Special Treatment Overlay	
A	Archaeology – Historic Sites
AC	Coastal Access
CA	Coastal Appeal
F	Floodplain
H	Hazards and Protection
HL	Height Limitations
P	Public or Visitor Parking
V	View Considerations

Source: Lisa Weiss Consulting, December 2021

4.10.3 Impact Analysis

a. Methodology and Significance Thresholds

The analysis in this section focuses on the compatibility of land uses identified in the proposed GP/LCP Update with existing and planned land uses in the City, as well as consistency with any applicable land use plans, policies, or regulations. The following thresholds of significance are based on Appendix G of the CEQA Guidelines. For purposes of this PEIR, implementation of the proposed GP/LCP Update may have a significant adverse impact if it would do any of the following:

- Physically divide an established community; and/or
- Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

b. Project Impacts and Mitigation Measures

Threshold 1: Would the project physically divide an established community?

Impact LUP-1 IMPLEMENTATION OF THE PROPOSED GP/LCP UPDATE WOULD PROVIDE FOR ORDERLY DEVELOPMENT IN PISMO BEACH AND WOULD NOT PHYSICALLY DIVIDE AN ESTABLISHED COMMUNITY. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Based on the buildout capacity of the City under the GP/LCP Update, an estimated 1,979 new residents, 1,111 new dwelling units, and approximately 783,268 square feet of non-residential development could be added to Pismo Beach. The overall residential growth is roughly equivalent to an annual growth rate of approximately 1 percent through the year 2040.

The City of Pismo Beach Housing Element identified 56 acres of Pismo Beach as vacant land which could accommodate approximately 332 residential units. The GP/LCP Update would result in the development of 288 vacant or underutilized properties. As a result, new growth would likely involve increased development density in developed areas, redevelopment of existing developed parcels, or annexation of new land into the City. Specifically, the GP/LCP Update calls for redevelopment of the Downtown Core and along Highway 101 in the Shell Beach planning areas which would primarily consist of infill development and redevelopment or development of vacant or underutilized sites. The projected growth and redevelopment of these areas would not physically divide the City of Pismo Beach.

The GP/LCP Update does not include substantial land use or circulation changes that would physically divide an established community, residential, or otherwise (for example, no major roads or other facilities would be constructed that would physically divide an established community). The goals and policies in the Land Use and Community Design Element would increase the connectivity of the City's circulation network. The GP/LCP Update Land Use and Community Design Element includes the following goals, policies, and actions that would facilitate connectivity throughout the City and to the coast:

Goal LU-5: A community that supports the health, safety, and sustainability of all residents, visitors and structures.

- **Policy LU-5.1: Complete Neighborhood.** Provide well-connected and complete neighborhoods that enable healthy lifestyles and provide for the daily needs of residents.
  - **Action LU-5.1a: Mixed-Use Neighborhoods.** Create standards for each commercial zone to allow for mixed-use residential areas within proximity and walking distance of commercial, office, recreation, and public uses. Furthermore, identify opportunities to provide a mix of commercial- and recreation uses within walking distance of residential neighborhoods to enable and encourage walking and biking between uses.
  - **Action LU-5.1b: Transit Accessibility.** Locate and design all new commercial and high-density residential development to facilitate provision or extension of transit service to the development to the extent feasible. Major employment, retail, visitor-serving facilities, and entertainment districts and major coastal recreational areas should be well served by public transit and easily accessible to pedestrians and people who bike.

- **Policy LU-5.2: Pedestrian Orientation and Safety.** Through appropriate zoning and discretionary approvals, strive to create safe, walkable environments that include elements such as good lighting, safe crosswalks, and street trees that allow people of all ages and abilities to exercise and safely access public transportation, community centers, recreation, schools, and goods and services
  - **Action LU-5.2e: Pedestrian-Scaled Street Lights.** Pedestrian-scaled streetlights shall be used throughout the community in new developments except for safety lighting used for intersection lighting. The City shall also consider a pedestrian scaled streetlight program for each planning area, as done for the Shell Beach planning area.
- **Policy LU-5.3: Sustainable Community Strategies.** Ensure land uses decisions and community strategies are designed to reduce energy and water consumption, waste and noise generation, air quality impacts; and support multimodal transport for a sustainable Pismo Beach
  - **Action LU-5.3c: Trail and Bikeway System.** Update and expand the trail and bikeway system to connect residential uses to commercial uses, and workplace and recreation nodes. Such trails and bikeways shall consider following natural features like Pismo Creek and the shoreline, while avoiding adverse impacts to the natural features.
  - **Action LU-5.3d: Transit Oriented Development.** Support the development of multifamily residential and mixed-use projects around the City's transit station, by allowing a reduction in the parking requirements or other development standards, and require new development to incorporate or improve pedestrian, bicycle, and where applicable, transit facilities.

These goals and policies would facilitate connectivity and mobility by providing for a balanced land use pattern and access throughout the City. This connectivity would be provided through equitable access for residents, employees, and tourists to daily needs, strategic land use planning for new development and redevelopment, reduction in conflict between land uses, and preservation and provision of lateral and vertical access points and multimodal access.

The GP/LCP Update includes strategies, goals, and policies that would provide for orderly development and would not physically divide an established community. Therefore, this impact would be less than significant.

Mitigation Measure

No mitigation is required.

Threshold 2:	Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Impact LUP-2 WITH AN UPDATE TO THE CITY'S ZONING ORDINANCE AND ZONING MAP IN CONJUNCTION WITH THE GP/LCP UPDATE, IMPLEMENTATION OF THE GP/LCP UPDATE WOULD BE CONSISTENT WITH APPLICABLE REGIONAL LAND USE PLANS, POLICIES, AND REGULATIONS, SUCH AS THE SLOCOG 2019 RTP AND CITY ZONING DISTRICTS AND STANDARDS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Several regionally- and locally-adopted land use plans, policies, and regulations apply to development under the GP/LCP Update. These include the SLOCOG 2019 RTP and the SLOAPCD 2001 CAP for San Luis Obispo County. Consistency of the GP/LCP Update with the 2001 CAP is discussed in Section 4.2, *Air Quality*.

The SLOCOG 2019 RTP is a long-range land use and transportation plan for the San Luis Obispo region. The 2019 RTP includes nine goals, with respective objectives and policies to meet these goals, which are expected to result in significant benefits to the region, not only with respect to transportation and mobility, but also economic activity, safety, and social equity. Table 4.10-4 includes the 2019 RTP goals, objectives, and policies related to land use, and describes consistency of the proposed land use designations and patterns in the GP/LCP Update with these goals, objectives, and policies.

Table 4.10-4 GP/LCP Update Land Use Consistency with the SLOCOG 2019 RTP

SLOCOG 2019 RTP Goals and Policy Objectives	GP/LCP Update Consistency
Goal 2 Mobility	
Objective 2.2: Improve opportunities for businesses and citizens to easily access goods, jobs, services, and housing. **Objective 2.5:** Support cooperative planning activities that lead to an integrated intermodal transportation system.	**Consistent.** The Land Use and Community Design Element of the GP/LCP Update include goals and policies that support equitable access for residents and employees to the coast, visitor amenities and services, housing, employment, retail, services, education, and recreation. **Goal LU-1** is to support the diverse needs of both ~~visitors~~ residents and ~~residents~~ visitors. All of the policies under **Goal LU-1** support accessibility in the community. **Goal LU-5** is to ensure that the community form of Pismo Beach supports the health, safety, and sustainability of all residents, visitors and structures. The following policies support accessibility in the community: ▪ **Policy LU-5.1 – Complete Neighborhood** ▪ **Policy LU-5.2 – Pedestrian Orientation and Safety** ▪ **Policy LU-5.3 – Sustainable Community Strategies** **Goal LU-6** is to ensure that the community provides and maintains a high level of service and infrastructure to all development; the following policies supports this goal: ▪ **Policy LU-6.1 – Community-Serving Facilities** **Goal LU-7** is to provide a high quality of life for the entire community through concentrating growth in corridors and neighborhood centers with adaptive land reuse. All of the policies under **Goals LU-6 and LU-7** are generally intended to provide equitable access to goods and spaces in the planning area.

SLOCOG 2019 RTP Goals and Policy Objectives	GP/LCP Update Consistency
Goal 5 Healthy Communities	
Objective 5.1: Reflect community values while integrating land use and transportation planning to connect communities through a variety of transportation choices that promote healthy lifestyles. **Objective 5.2:** Integrate public health and social equity in transportation planning and decision-making. **Objective 5.3:** Support efforts to increase the supply and variety of housing, jobs, and basic services in locations that reduce trips, travel distances, and congestion on U.S. Route 101. **Objective 5.4:** Make investments and develop programs that support local land use decisions that implement the SCS and other strategies to reduce GHG emissions and make our communities more healthy, livable, sustainable, and mobile.	**Consistent.** The GP/LCP Update has been developed through an extensive public outreach and involvement process and following careful analysis by an advisory committee, commissions, City staff, elected officials, and the community. This approach is intended to provide a plan that encompasses community values and captures the community vision for the planning area. **Goal LU-1** is to support the diverse needs of both ~~visitors~~ residents and ~~residents~~ visitors. All of the policies under **Goal LU-1** support accessibility in the community. **Goal LU-5** is to ensure that the community form of Pismo Beach supports the health, safety, and sustainability of all residents, visitors and structures. The following policies support accessibility in the community: ▪ **Policy LU-5.1 – Complete Neighborhood** ▪ **Policy LU-5.2 – Pedestrian Orientation and Safety** ▪ **Policy LU-5.3 – Sustainable Community Strategies** **Goal LU-6** is to ensure that the community provides and maintains a high level of service and infrastructure to all development; the following policies supports this goal: ▪ **Policy LU-6.1 – Community-Serving Facilities** **Goal LU-7** is to provide a high quality of life for the entire community through concentrating growth in corridors and neighborhood centers with adaptive land reuse. All of the policies under **Goals LU-6 and LU-7** are generally intended to provide equitable access to goods and spaces in the planning area.
Goal 6 Environment	
Objective 6.1: Integrate environmental considerations in all stages of planning and implementation. **Objective 6.2:** Preserve aesthetic resources and promote environmental enhancements. **Objective 6.3:** Reduce GHG emissions from vehicles and improve air quality in the region **Objective 6.4:** Conserve and protect natural, sensitive, and agricultural resources.	**Consistent.** The Land Use and Conservation and Open Space Elements of the GP/LCP Update include goals and policies that support environmental protection in the planning area. The Land Use and Community Design Element provides the framework for the future layout of the community and includes policies that would promote development in a manner that protects environmental resources in the planning area. Conservation and Open Space Element goals and policies relate to the conservation of natural resources using open space areas within the planning area. The Conservation and Open Space Element addresses the protection of natural habitat and wildlife by designating open space areas throughout the community. **Policy LU-5.3 – Sustainable Community Strategies** is to ensure land use decisions and community strategies are designed to reduce energy and water consumption, waste and noise generation, air quality impacts; and support multimodal transport for a sustainable Pismo Beach. **Goal LU-8 of the Land Use and Community Design Element** is to protect and enhance natural and coastal resources within Pismo Beach. The following policies support **Goal LU-8** and protection and enhancement of the environment. ▪ **Policy LU-8.1 – Natural Resources Compatibility** ▪ **Policy LU- 8.2 – Maximizing Public Access** **Goal COS-1 of the Conservation and Open Space Element** is to conserve the natural resources of Pismo Beach for the community's health, safety, and enjoyment including air quality, renewable energy, geology and soils,

SLOCOG 2019 RTP Goals and Policy Objectives	GP/LCP Update Consistency
	minerals, water quality and supply, and dark skies. The following policies support **Goal COS-1** and protection and enhancement of the environment: ▪ **Policy COS-1.1 – Improve Air Quality** ▪ **Policy COS-1.2 – Renewable Energy** ▪ **Policy COS-1.4 –Water Supply** ▪ **Policy COS-1.5 – Water Quality** ▪ **Policy COS 1.6 – Coastal Waters** ▪ **Policy COS 1.9 – Minimization of Lighting Impacts** **Goal COS-2** of the Conservation and Open Space Element is to ensure that scenic roadways and vistas are protected and enhanced. The policy and actions under **Goal COS-2** support the protection of scenic roadways and vistas. **Goal COS-3** of the Conservation and Open Space Element is to ensure the protection of conservation areas such as the ocean and beaches, bluffs, dunes, foothills, marshes, creeks, and wetlands. All ten of the policies under Goal COS-3 support the preservation of natural and sensitive resources.

Source: SLOCOG 2019

As summarized in Table 4.10-4, the proposed land uses and land use patterns in the GP/LCP Update are consistent with the related goals and policies in the SLOCOG 2019 RTP. The determination of GP/LCP Update consistency is within the discretion of the City Council. The GP/LCP Update is consistent with the SLOCOG 2019 RTP.

The Pismo Beach Municipal Code is one of the primary means of implementing the General Plan. Adoption of the GP/LCP Update would requires a review of the Zoning Ordinance and Zoning Map to ensure that it is consistent with the GP/LCP Update. Specifically, revisions to the Zoning Map will be consistent with the GP/LCP Update, incorporating revisions to the land use categories and other recommended design and development standards. The land use designations in the Land Use and Community Design Element of the GP/LCP Update have been updated from the City's 1992 General Plan to better match the existing, on-the-ground land uses and established land use pattern in the City as well as meet the vision and future needs of the community. These designations include allowable uses and building density, but also address building placement on individual lots, parking location and access, building frontage, and streetscape design. As described in the GP/LCP Update, this land use update is consistent with the community's desire to ensure equitable access to the coast, visitor amenities and services, and housing, employment, retail and services, education, and recreation for residents and employees, and allows the City to establish zoning designations that similarly communicate these desires.

For each land use designation, the uses allowed and the standards for development intensity (dwelling units per acre for residential development, and floor area ratio [FAR] for non-residential development) are specified. While land use designations are broad, the zoning districts set forth specific allowances and prohibitions of uses (including conditional uses), dimensional requirements, such as building setbacks, parking standards, and building heights. While land use designations and zoning districts must be compatible, they need not be exactly identical. Zoning districts must be within the range of allowed intensity and uses found in the GP/LCP Update.

Required updates to the Zoning Ordinance and Zoning Map in the Pismo Beach Municipal Code would be to ensure consistency with the GP/LCP Update, will ensure compatibility between the land use designations and zoning districts and standards within the City. Therefore, impacts related to policy consistency would be less than significant. As noted previously, the above discussion is intended to guide policy interpretation, but is not intended to replace or supplant City decision-makers. The final determination of consistency will be made by City decision-makers when they act on the proposed project.

Mitigation Measures

No mitigation is required.

4.10.4 Cumulative Impacts

Planned growth in the County of San Luis Obispo surrounding Pismo Beach in combination with development proposed under the GP/LCP Update may have significant cumulative land use impacts related to either physical division of communities or conflicts with land use goals, policies, and plans adopted for the purpose of avoiding or mitigating environment effects. To achieve the growth management policies established in the GP/LCP Update, the City would coordinate closely with other agencies, particularly San Luis Obispo County. Therefore, the GP/LCP Update would not contribute to a significant cumulative impact relative to the physical division of any established communities.

The cities and communities surrounding the City are subject to the applicable City or County zoning standards. Additionally, the goals, policies, programs and regulations in the 2019 RTP apply to surrounding communities in the same manner as they apply to Pismo Beach, thereby avoiding potential for cumulative considerable conflict between the land use and planning for the City and these communities. Therefore, the cumulative impacts resulting from the implementation of the proposed GP/LCP Update related to conflict with plans, policies and regulations would be less than significant.

4.11 Noise

This section analyzes noise impacts from buildout of the General Plan/Local Coastal Plan (GP/LCP) Update. Impacts related to construction, traffic, trains, on-site equipment, aircraft, and vibration are addressed. The environmental setting relies on data presented in the Technical Background Report prepared by Dudek for the proposed Noise Element update in October 2021 (Appendix C).

4.11.1 Setting

a. Overview of Noise and Vibration

Noise

Sound is a vibratory disturbance created by a moving or vibrating source, which is capable of being detected by hearing organs (e.g., the human ear). Noise is defined as sound, which is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment (Caltrans 2013).

Noise levels are commonly measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels to be consistent with the human hearing response, which is most sensitive to frequencies around 4,000 Hertz (Hz) and less sensitive to frequencies around and below 100 Hz (Kinsler et al. 1999). Decibels are measured on a logarithmic scale, which quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as a doubling of traffic volume, would increase the noise level by 3 dB; similarly, dividing the energy in half would result in a decrease of 3 dB (Crocker 2007).

Human perception of noise has no simple correlation with sound energy; the perception of sound is not linear in terms of dBA or in terms of sound energy. Two sources do not "sound twice as loud" as one source. It is widely accepted the average healthy ear can barely perceive an increase (or decrease) of up to 3 dBA in noise levels (i.e., twice [or half] the sound energy); a change of 5 dBA is readily perceptible (8 times the sound energy); and an increase (or decrease) of 10 dBA sounds twice (or half) as loud (10.5 times the sound energy) (Crocker 2007).

Sound changes in both level and frequency spectrum as it travels from the source to the receiver. The most obvious change is the decrease in sound level as the distance from the source increases. The manner by which noise reduces with distance depends on factors such as the type of noise source (e.g., point or line), the path the sound will travel, site conditions, and obstructions. Noise levels from a point source (e.g., construction, industrial machinery, ventilation units) typically attenuate, or drop off, at a rate of 6 dBA per doubling of distance. Noise from a line source (e.g., roadway, pipeline, railroad) typically attenuates at about 3 dBA per doubling of distance (Caltrans 2013). Noise levels may also be reduced by intervening structures; the amount of attenuation provided by this "shielding" depends on the size of the object and the frequencies of the noise levels. Natural terrain features, such as hills and dense woods, and man-made features, such as buildings and walls, can substantially alter noise levels. Generally, any large structure blocking line of sight will provide at least a 5-dBA reduction in source noise levels at the receiver (Federal Highway Administration [FHWA] 2011). Structures can substantially reduce occupants' exposure to

noise as well. The FHWA's guidelines indicate modern building construction generally provides an exterior-to-interior noise level reduction of 20 to 35 dBA with closed windows.

The time of day when noise occurs and the duration of the noise are also important. Most noise lasting for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors have been developed. One of the most frequently used noise metrics is the equivalent noise level (L_{eq}), which considers both duration and sound power level. L_{eq} is defined as the single steady A-weighted level equivalent to the same amount of energy contained in the actual fluctuating levels over a period of time (essentially, the average noise level). Typically, L_{eq} is summed over a one-hour period (1H). L_{max} is the highest root mean squared (RMS) sound pressure level within the sampling period, and L_{min} is the lowest RMS sound pressure level within the measuring period (Crocker 2007). Normal conversational levels are in the 60 to 65 dBA L_{eq} range; ambient noise levels greater than 65 dBA L_{eq} can interrupt conversations (Federal Transit Administration [FTA] 2018).

Noise occurring at night tends to be more disturbing than noise occurring during the day. Community noise is usually measured using Day-Night Average Level (L_{dn}), which is the 24-hour average noise level with a +10 dBA penalty for noise occurring during nighttime hours (10:00 p.m. to 7:00 a.m.). Community noise can also be measured using Community Noise Equivalent Level (CNEL), which is the 24-hour average noise level with a +5 dBA penalty for noise occurring from 7:00 p.m. to 10:00 p.m. and a +10 dBA penalty for noise occurring from 10:00 p.m. to 7:00 a.m. (Caltrans 2013). Noise levels described by L_{dn} and CNEL usually differ by about 1 dBA. Quiet suburban areas typically have CNEL noise levels in the range of 40 to 50 CNEL, while areas near arterial streets are in the 50 to 60+ CNEL range.

Vibration

Groundborne vibration of concern in environmental analysis consists of the oscillatory waves that move from a source through the ground to adjacent structures. The number of cycles per second of oscillation makes up the vibration frequency, described in terms of Hz. The frequency of a vibrating object describes how rapidly it oscillates. The normal frequency range of most groundborne vibration that can be felt by the human body starts from a low frequency of less than 1 Hz and goes to a high of about 200 Hz (Crocker 2007).

While people have varying sensitivities to vibrations at different frequencies, in general they are most sensitive to low-frequency vibration. Vibration in buildings, such as from nearby construction activities, may cause windows, items on shelves, and pictures on walls to rattle. Vibration of building components can also take the form of an audible low-frequency rumbling noise, referred to as groundborne noise. Groundborne noise is usually only a problem when the originating vibration spectrum is dominated by frequencies in the upper end of the range (60 to 200 Hz), or when foundations or utilities, such as sewer and water pipes, physically connect the structure and the vibration source (FTA 2018). Although groundborne vibration is sometimes noticeable in outdoor environments, it is almost never annoying to people who are outdoors. The primary concern from vibration is that it can be intrusive and annoying to building occupants and vibration-sensitive land uses.

Vibration energy spreads out as it travels through the ground, causing the vibration level to diminish with distance away from the source. High-frequency vibrations diminish much more rapidly than low frequencies, so low frequencies tend to dominate the spectrum at large distances from the source. Discontinuities in the soil strata can also cause diffractions or channeling effects that affect the propagation of vibration over long distances (Caltrans 2020). When a building is impacted by

vibration, a ground-to-foundation coupling loss will usually reduce the overall vibration level. However, under rare circumstances, the ground-to-foundation coupling may actually amplify the vibration level due to structural resonances of the floors and walls.

Vibration amplitudes are usually expressed in peak particle velocity (PPV) or RMS vibration velocity. The PPV and RMS velocity are normally described in inches per second. PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is often used in monitoring of blasting vibration because it is related to the stresses that are experienced by buildings (Caltrans 2020).

b. Noise-Sensitive Land Uses/Sensitive Receivers

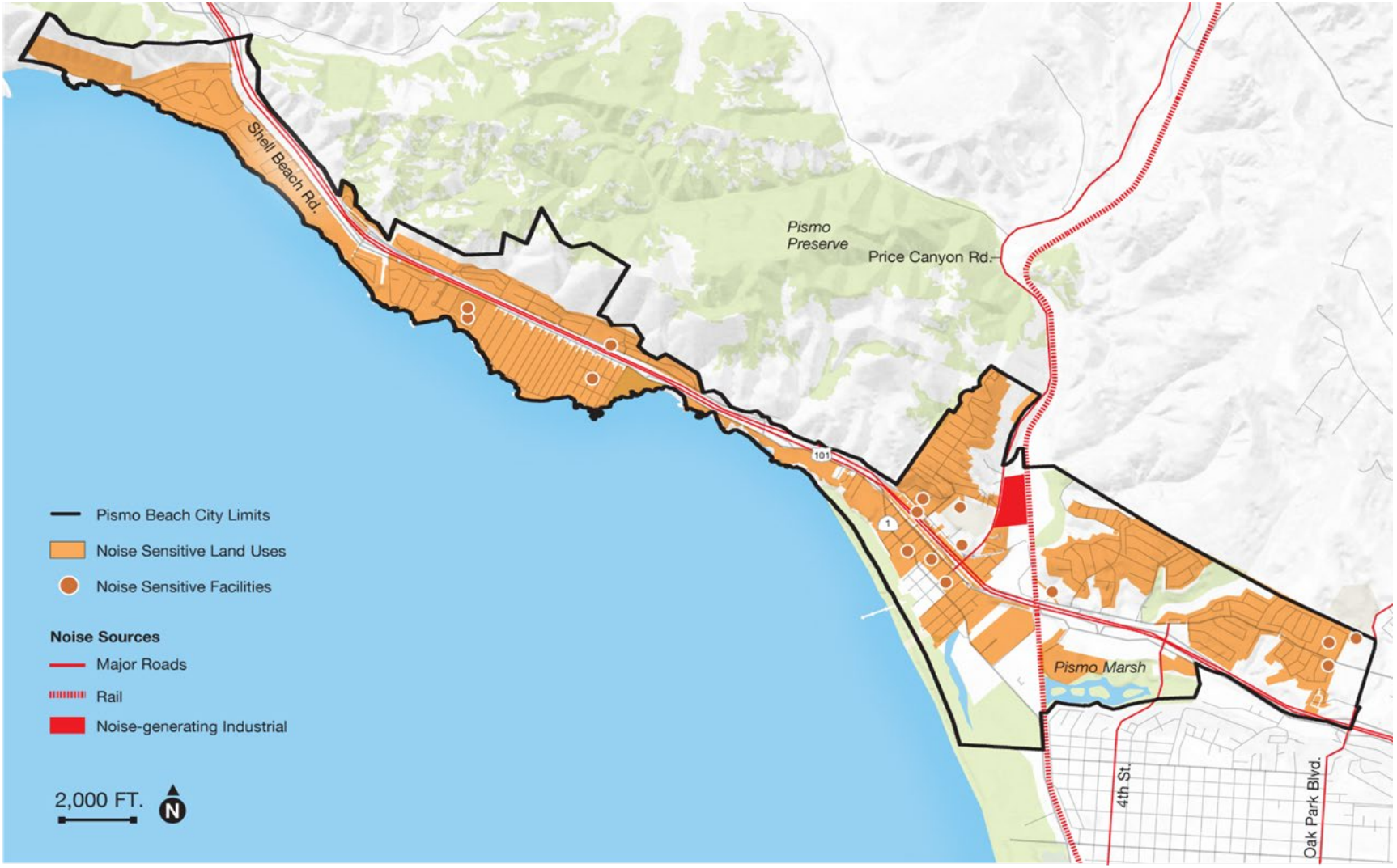
Noise-sensitive land uses are generally defined as locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Places where people live, sleep, recreate, worship, and study generally are considered to be sensitive to noise because intrusive noise can be disruptive to these activities. When community noise interferes with human activities or contributes to stress, public annoyance with the noise sources increases, and the acceptability of the environment for people decreases. The City defines noise-sensitive land uses as including the following:

- Residential uses
- Visitor lodging – hotels, motels, inns
- Schools
- Libraries
- Places of religious worship
- Hospitals
- Assisted living facilities
- Public parks

Figure 4.11-1 shows the locations of noise-sensitive land uses in the City, which include residences, Shell Beach Elementary School, Judkins Middle School, Shell Beach Library, and several parks and churches. Residences located near U.S. Highway 101 (U.S. 101) and Cabrillo Highway (State Route 1) and other major arterial routes in the City are currently exposed to elevated noise levels.

Vibration-sensitive receivers, which are similar to noise-sensitive receivers, include residences and institutional uses, such as schools, churches, and hospitals. However, vibration-sensitive receivers also include fragile/historic-era buildings and buildings where vibrations may interfere with sensitive equipment that is affected by vibration levels that may be well below those associated with human annoyance (e.g., recording studies or medical facilities with sensitive equipment).

Figure 4.11-1 Noise-Sensitive Land Uses and Major Noise Sources



Source: City of Pismo Beach. ~~2021~~ 2023. Noise Element.
Note: For the purposes of this map, this figure does not include the submerged lands offshore that are within the Pismo Beach City Limits. See Figure LU-1 of the General Plan/Local Coastal Plan Land Use Element (Pismo Beach LAFCO-approved City Border) for the full Pismo Beach City Limits.

c. Existing Noise Conditions and Major Noise Sources in the Community

Transportation Noise Sources

Roadways

The City's primary source of noise is traffic along U.S. 101, State Route 1, and arterial roads (Appendix C). Vehicular noise has three main component sources: engine/ transmission noise, exhaust noise, and tire noise. U.S. 101 is the loudest roadway in the City because it carries the highest traffic volumes. Since the highway roughly bisects Pismo Beach in the southern and central portions of the City, it produces traffic noise that affects much of the area within the City. State Route 1 is a separate two-lane at grade highway only within the southern section of the City, joining with U.S. 101 in the vicinity of Pismo Preserve. With more limited traffic and only two travel lanes, State Route 1 produces less traffic noise than U.S. 101. Arterial roadways including Price Canyon Road, Ocean Boulevard, North 4th Street, Mattie Road, North Oak Park Boulevard, and Shell Beach Road also contribute to ambient traffic noise. While traffic speeds are lower on these facilities than on highways, setback distances from travel lanes to adjacent uses tend to be less, and therefore noise from arterial roadways can result in unacceptably high noise levels at adjacent noise-sensitive land uses. Figure 4.11-1 shows the locations of major roadway noise sources in the City.

Trains/Railroads

The Union Pacific Railroad (UPRR) owns rail lines that traverse Pismo Beach, carrying UPRR freight trains and Amtrak passenger trains (Appendix C). The UPRR line extends from the Bello Street industrial area at the City's northern boundary, due south to the vicinity of Pismo State Beach before continuing south to the City of Grover Beach. Two northbound and two southbound trains on Amtrak's Pacific Surfliner route pass through Pismo Beach on a daily basis. Although trains run intermittently, they are a major source of noise due to their volume and groundborne vibration. Train noise consists of the sounds of the locomotive engine, wheel-on-rail noise, and train whistles near at-grade roadway crossings. For train horns to be an effective warning device for motorists, they must provide a sound level capable of initiating a response from the driver as the train approaches the crossing. Figure 4.11-1 shows the locations of UPRR railroad noise sources in the City.

Aviation

The nearest public airports are the San Luis Obispo County Regional Airport located approximately 5 miles due northwest, and the Oceano County Airport located approximately 2 miles to the south. According to the Airport Land Use Plan (Airport Land Use Commission of San Luis Obispo County [ALUC] 2005) the mapped 60 dB noise contour for the San Luis Obispo County Regional Airport extends no further than 1,000 feet from the runways in the direction of Pismo Beach; this 60 dB contour is therefore located more than 4.5 miles from Pismo Beach. According to the ALUP for Oceano County Airport (ALUC 2007), the 65 dB noise contour for Oceano Airport extends no closer to Pismo Beach than approximately Farroll Road in Grover Beach (approximately one mile south of the Pismo Beach City limits). High-altitude overflights for aircraft using the San Luis Obispo County Airport occur over the study area, but do not contribute substantially to the ambient noise environment within the study area.

Industrial-Commercial Noise Sources

Industrial Sites

Industrial operations often involve the use of mechanical equipment, generators, and vehicles that contribute to noise levels at industrial sites, particularly if operations occur outdoors (Appendix C). Pismo Beach has one area designated for industrial uses; the area is situated east of Price Canyon Road, generally north of Bello Street, and along the west side of the UPRR alignment. Currently this area serves as storage and staging for Pacific Gas and Electric (PG&E).

Commercial Sites

Most of the commercial businesses in Pismo Beach are aligned along Price Street, Shell Beach Road, 5 Cities Drive, and Hinds Avenue/Price Canyon Road. The Pismo Beach Premium Outlets represents the largest commercial use, by size and in relation to traffic generation. Commercial uses typically generate noise from heating, ventilation, and air conditioning (HVAC) equipment, on-site truck deliveries, trash hauling, and parking lot activity.

Noise Measurements

Existing noise conditions were inventoried by Dudek in October 2019 (Appendix C). Two types of sound-level measurements were taken: short-term (varying from 5 to 30 minutes) measurements along highways and major local roadways; and 24-hour measurements adjacent to the railroad, in the vicinity of the Price Canyon Road industrial area, and adjacent to the Pismo Beach Premium Outlets. Figure 4.11-2 shows the locations of noise measurements. Sound-level measurements were performed using two different integrating sound-level meters: a Rion Model NL-32 (American National Standards Institute [ANSI] Type I) meter, and three SoftdB Piccolo II Model (ANSI Type II) meters. ANSI Type I and Type II sound-level meters both have sufficient accuracy to be used for environmental noise evaluation.

Short-Term Measurements

Since roadway traffic is often a primary contributor to the noise environment in any community, short-term noise measurements were conducted adjacent to selected roadways in Pismo Beach (Appendix C). A total of 10 short-term noise measurements were conducted. Table 4.11-1 shows the noise measurement results. Field data for the noise measurements is provided in Appendix C.

As presented in Table 4.11-1, recorded traffic noise levels range from a high of 73 dBA L_{eq} to a low of 43 dBA L_{eq}. The highest traffic noise levels are associated with U.S. 101, North 4th Street, and Price Canyon Road, with each of these roadways carrying a large number of vehicles at higher speeds. Dugan Road (ST3) had the lowest recorded noise level; no vehicles passed the measurement point during the measurement. Although no vehicles passed the measurement point on Seacliff Drive (ST1) during the measurement, background surf noise was dominant at this measurement point along the sea cliff, which resulted in a moderate recorded noise level of 55 dBA L_{eq}.

Figure 4.11-2 Noise-Measurement Locations



Source: City of Pismo Beach. 2021. Technical Background Report. (Appendix C)

Note: For the purposes of this map, this figure does not include the submerged lands offshore that are within the Pismo Beach City Limits. See Figure LU-1 of the General Plan/Local Coastal Plan Land Use Element (Pismo Beach LAFCO-approved City Border) for the full Pismo Beach City Limits.

Table 4.11-1 Short-Term Sound Level Measurements

Measurement Number[1]	Date Measured[2]	Measurement Time Period	L_{eq} dBA[3]	L_{max} dBA	L_{min} dBA	Roadway
ST1	10/22/19	11:35 –11:50 a.m.	55	62	50	Seacliff Drive (between Paddock and Baker)
ST2	10/22/19	12:30 – 12:45 p.m.	54	61	49	Ocean Blvd (between Palisade and Seaview)
ST3	10/22/19	2:05 – 2:20 p.m.	43	46	41	Dugan Road (between Christine and Elaine)
ST4	10/22/19	9:40 – 9:45 a.m.	72	76	69	U.S. 101 (at southbound 5 Cities Drive ramps)
ST5	10/22/19	1:00 – 1:10 p.m.	69	83	51	State Route 1 (between Park and Addie)
ST6	10/22/19	10:10 – 10:20 a.m.	73	82	49	North 4th Street (south of 5 Cities Drive)
ST7	10/22/19	10:50 – 11:20 a.m.	66	80	62	Mattie Road (between Foothill and Bayfront)
ST8	10/22/19	1:50 – 2:00 p.m.	67	79	45	North Oak Park Blvd (south of Dell Ct.)
ST9	10/22/19	1:20 – 1:30 p.m.	71	86	48	Price Canyon Road (south of Meadowlark)
ST10	10/22/19	12:00 – 12:15 p.m.	66	83	55	Shell Beach Road (south of Ebb Tide Lane)

[1] Figure 4.11-2 shows the locations of short-term noise measurements.
[2] Field visit on October 22, 2019, using ANSI Type I integrating sound level meter.
[3] The single steady A-weighted level over a 15-minute period.
Source: City of Pismo Beach. 2021. Technical Background Report. (Appendix C)

Long-Term Measurements

Three long-term (24-hour) measurements were conducted to characterize environmental noise associated with industrial, commercial, and railroad operations. Table 4.11-2 summarizes the minimum (L_{min}) and maximum (L_{max}) sound levels recorded for each monitor location during the 24-hour measurement, as well as the calculated 24-hour weighted average noise level (CNEL).

Table 4.11-2 Long-Term Sound Level Measurements

Measurement Number[1]	Location[2]	Noise Source	Dates[1]	CNEL	L_{max} dBA[3]	L_{min} dBA[3]
LT1	Closest residences west of Price Canyon Industrial Area	Price Canyon Industrial Area	10/22/19-10/23/19	56	83	37
LT2	Adjacent to UPRR alignment, vicinity of Park View Avenue	UPRR train operations	10/22/19-10/23/19	66	95	43
LT3	Near closest residences, southwest corner of Pismo Premium Outlets	Pismo Premium Outlets	10/22/19-10/23/19	64	93	43

[1] Figure 4.11-2 shows the locations of long-term noise measurements.

[2] Field visit from October 22 to 23, 2019, using ANSI Type II integrating sound level meter.

[3] L_{max} and L_{min} values are rounded to the nearest integer.

Source: City of Pismo Beach. 2021. Technical Background Report. (Appendix C)

Industrial Noise Sources (LT1)

The only area designated for industrial uses in Pismo Beach is located along the west side of the UPRR alignment, north of Bello Street and east of Price Canyon Road. To characterize industrial noise levels, a 24-hour measurement was conducted along Dell Court, between two widely-spaced residences closest to the western boundary of the industrial area (LT1 in Table 4.11-2). The measurement location is approximately 300 feet from the western boundary of the industrial area. A 24-hour weighted noise level of 56 CNEL was calculated at this location based on measured hourly average noise levels.

Railroad Noise Sources (LT2)

To characterize community noise levels from train operations, a 24-hour measurement was conducted along the UPRR tracks, in the vicinity of Park View Avenue (LT2 in Table 4.11-2). The measurement location is approximately 40 feet from the center of the tracks. A 24-hour weighted noise level of 66 CNEL was calculated at this location based on measured hourly average noise levels.

Commercial Noise Sources (LT3)

The Pismo Beach Premium Outlets represents the largest commercial use, by size and in relation to traffic generation. To characterize noise levels associated with major commercial operations, a 24-hour measurement was conducted at the southwest corner of the Pismo Premium Outlets, near the closest adjacent residences (LT3 in Table 4.11-2). The measurement location is approximately 55 feet from the southern boundary of the Pismo Premium Outlets site. A 24-hour weighted noise level of 64 CNEL was calculated at this location based on measured hourly average noise levels.

Existing Noise Contours

The TNM 2.5 Traffic Noise Model (FHWA 2004) was used to model existing traffic noise (CNEL) along the roadway segments near the short-term measurement locations ST-2 and ST4 through ST10 (Appendix C). Traffic counts, vehicle speeds, roadway configuration, and noise levels recorded

during the measurements were used to set up and calibrate the model (Appendix C). The model used average daily trip (ADT) data from the Citywide Transportation Model and Circulation Study, Final Report (City of Pismo Beach 2016) for each of the selected highway and roadway segments. The distances from roadway centerlines to the 70, 65, and 60 CNEL contours were modeled, based on an outdoor attenuation rates of 3 dBA per doubling of distance for a line source. This calculation ignores topography, the presence of structures or walls, and the presence of vegetation, and is therefore very conservative (i.e., the presence of buildings along a roadway would partially or fully block the propagation of sound, reducing the distance from the roadway to the calculated noise contour boundary). Figure 4.11-3 shows existing noise contours.

4.11.2 Regulatory Setting

a. Federal Regulations

There are no federal noise requirements or regulations that apply directly to the implementation of the GP/LCP Update. However, there are federal regulations that influence the audible landscape, especially for projects where federal funding is involved. For example, FHWA requires abatement of highway traffic noise for highway projects through rules in the Code of Federal Regulations (23 CFR Part 772), the FTA, and Federal Railroad Administration (FRA). Each agency recommends thorough noise and vibration assessments through comprehensive guidelines for any highway, mass transit, or high-speed railroad projects that would pass by residential areas.

b. State Regulations

California Noise Insulation Standards (California Code of Regulations, Title 24)

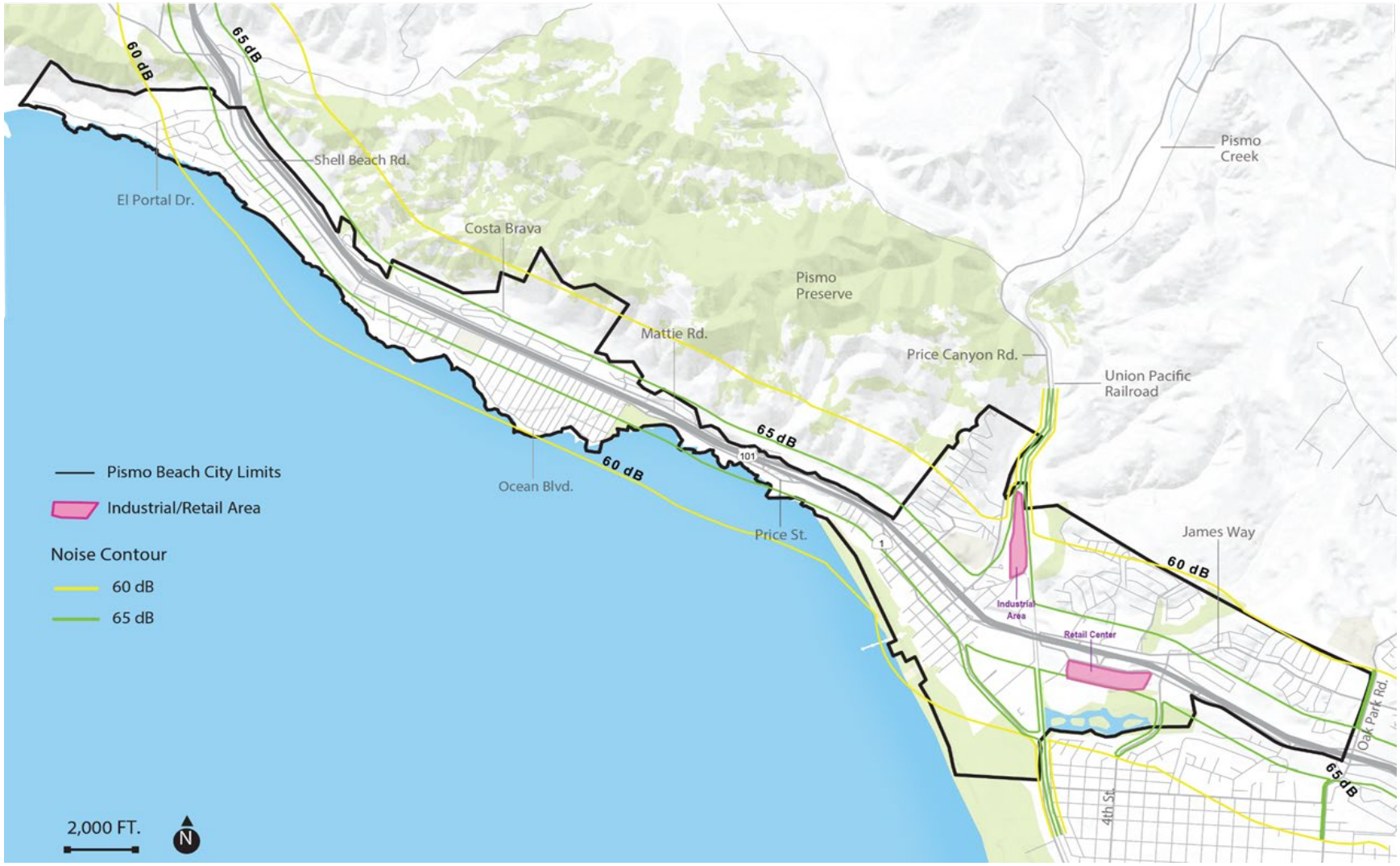
Title 24 of the California Code of Regulations establishes residential insulation standards to be implemented during the building permit and construction process. Title 24 establishes an interior noise standard of 45 dBA for multiple unit residential structures and hotel/motel structures.

Caltrans Project Development Procedures Manual (Section 2 of Chapter 30: Highway Traffic Noise Abatement) and 23 CFR 772

These documents specify the Noise Abatement Criteria (NAC) for noise-sensitive land uses. The NAC are applicable to new highways and changes to the horizontal or vertical alignment of existing highways and are required for Caltrans and local agency projects that receive Federal funding or require Federal Highway Administration (FHWA) approval action. The NAC is an exterior noise level of 67 dBA CNEL for noise sensitive land uses (i.e., picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals).

Caltrans has also published applicable guidelines for vibration annoyance caused by transient and intermittent sources, as shown in Table 4.11-3.

Figure 4.11-3 Existing Noise Contours



Source: City of Pismo Beach. ~~2021~~ 2023. Noise Element.
Note: For the purposes of this map, this figure does not include the submerged lands offshore that are within the Pismo Beach City Limits. See Figure LU-1 of the General Plan/Local Coastal Plan Land Use Element (Pismo Beach LAFCO-approved City Border) for the full Pismo Beach City Limits.

Table 4.11-3 Caltrans Criteria for Vibration Annoyance

	Maximum PPV (in/sec)	
Human Response	**Transient Sources[1]**	**Continuous/Frequent Intermittent Sources[1]**
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

[1] Caltrans defines transient sources as those that create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources can include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Source: Caltrans 2020

In addition, Caltrans has published guidelines for structural damage from vibration, as shown in Table 4.11-4.

Table 4.11-4 Caltrans Criteria for Vibration Damage

	Maximum PPV (in/sec)	
Structure and Condition	**Transient Sources**	**Continuous/Frequent Intermittent Sources**
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: Caltrans 2020

c. Local Regulations

City of Pismo Beach General Plan Noise Element

The GP/LCP Update includes updates to the ~~The~~ City of Pismo Beach General Plan Noise Element ~~(2014)~~. The Noise Element is intended to reduce the exposure of people to excessive noise through proactive long-range planning. It sets standards for the compatibility of land uses with ambient noise from transportation sources (identified as "community noise"). Under Policy N-2.1 of the ~~current~~ Noise Element, the City requires that all new development meet the noise compatibility guidelines shown in Table 4.11-5. Changes to the noise compatibility guidelines proposed as part of the GP/LCP Update are shown in underline and ~~strikethrough~~ in Table 4.11-5. These guidelines describe the ranges of community noise exposure that are acceptable, conditionally acceptable, or unacceptable for various noise-sensitive land uses in the City. For areas where the noise environment is conditionally acceptable for a particular land use, the City only allows development after noise mitigation has been incorporated into the project's design to reduce noise to acceptable levels.

Table 4.11-5 Land Use Compatibility Guidelines for Development

Land Use Category	Community Noise Exposure (CNEL or Ldn dBA)		
	Acceptable[1]	Conditionally Acceptable[2]	Unacceptable[3]
Single-Family Residential[4], Theaters, Auditoriums, Music Halls, Meeting Halls, Churches	<60	60-~~70~~65	>~~70~~65
Multi-Family Residential, Transient Lodging – Motels, Hotels	<~~60~~65	~~60-75~~ 65-70	>~~75~~70
~~Schools, Libraries, Museums~~, Hospitals, Nursing Homes	<60	60-~~75~~65	>~~75~~65
Playgrounds and Parks	<70	70-75	>75
Schools, Libraries, Museums, Office Buildings	<60	60-~~75~~70	>~~75~~70

[1] Acceptable: specified land use is satisfactory. No noise mitigation measures are required.
[2] Conditionally acceptable: use should be permitted only after careful study and inclusion of protective measures as needed to satisfy the policies of the Noise Element.
[3] Unacceptable: development is usually not feasible in accordance with the goals of the Noise Element.
[4] New single-family residences (individual parcel development) are to be exempt from noise studies but shall require a buyer beware notice that acknowledges the residence may experience noise higher than City standards. New single-family subdivision developments (such as Tecreation of multiple new residential lots) are subject to the noise study requirements and identified exterior noise exposure limits.
Source: City of Pismo Beach 2023 Noise Element ~~2014~~

Additionally, the Noise Element sets limits to noise exposure from stationary sources, which apply when a new noise-sensitive land use is proposed, as shown in Table 4.11-6. These noise limits are applied at the property line of the proposed noise-sensitive land use. New development of noise-sensitive land uses may be permitted only where location and design allow the development to meet the daytime and nighttime standards listed in Table 4.11-6. The GP/LCP Update would not change the noise standards for stationary sources shown in Table 4.11-6.

Table 4.11-6 Maximum Allowable Noise Exposure for Noise-Sensitive Uses: Stationary Noise Sources[1]

Metric	Daytime (7:00 a.m. to 10:00 p.m.)	Nighttime (10:00 p.m. to 7:00 p.m.)
Hourly L_{eq} dBA[2]	50	45
Maximum level dBA[2]	70	65
Maximum level, dBA-Impulsive Noise[3]	65	60

[1] As determined at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards may be applied on the receptor side of noise barriers or other property line noise mitigation measures.
[2] Sound level measurements shall be made with slow meter response.
[3] Sound level measurements shall be made with a fast meter response.
Source: City of Pismo Beach 2023 Noise Element ~~2014~~

The Noise Element also prohibits new development where the maximum existing or projected noise levels from transportation exceed the limits shown in Table 4.11-7. Changes to the allowable noise exposure levels proposed as part of the GP/LCP Update are shown in underline and ~~strikethrough~~ in Table 4.11-7. For most noise-sensitive land uses, the maximum allowable noise exposure from transportation sources in outdoor activity areas is 60 CNEL or L_{dn}. The maximum allowable interior noise exposure from transportation noise sources at residential, transient lodging, hospital, and

nursing home uses is 45 dBA L_{dn}. ~~The GP/LCP Update would not change the existing noise standards in Table 4.11-5, Table 4.11-6, or Table 4.11-7.~~

Table 4.11-7 Maximum Allowable Noise Exposure for Noise Sensitive Users: Transportation Noise Sources

	Outdoor Activity Areas[1]	Interior Spaces	
Land Use	**L_{dn}/CNEL dBA**	**CNEL or L_{dn} dBA**	**L_{eq} dBA[2]**
Single-Family Residential	60[3]	45	–
Transient Lodging, Multi-Family Residential	~~60[3]~~ 65	45	–
Hospitals, Nursing Homes	60~~[34]~~	45	–
Theaters, Auditoriums, Music Halls	60[4]	–	35
Churches, Meeting Halls~~, Office Buildings~~	60~~[34]~~	–	45
Office Buildings	60[5]	–	45
Schools, Libraries, Museums	60[5]	–	45
Playgrounds, Neighborhood Parks	70	–	–

[1] Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use.[2] As determined for a typical worst-case hour during periods of use.

[3] New single-family residences (individual parcel development) are to be exempt from noise studies but shall require a buyer beware notice that acknowledges the residence may experience noise higher than City standards. New single-family subdivision developments (such as creation of multiple new residential lots) are subject to the noise study requirements. For new multi-lot single-family residential development, where is it not possible to reduce noise in outdoor activity areas to 60 dBA L_{dn}/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level up to 65 dBA L_{dn}/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table. This determination will be made as the result of an acoustical study.

~~[34]~~ Where it is not possible to reduce noise in outdoor activity areas to 60 dBA L_{dp}/CNEL or less using a practical application of the best available noise reduction measures, an exterior noise level of up to 65 dBA L_{dp}/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table. This determination will be used as the result of an acoustical study.

[5] Where is it not possible to reduce noise in outdoor activity areas to 60 dBA L_{dn}/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level up to 70 dBA L_{dn}/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table. This determination will be made as the result of an acoustical study.

[6] Where is it not possible to reduce noise in outdoor activity areas to 65 dBA Ldn/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level up to 70 dBA Ldn/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table. This determination will be made as the result of an acoustical study.

[7] Where is it not possible to reduce noise in outdoor activity areas to 70 dBA Ldn/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level up to 75 dBA Ldn/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table. This determination will be made as the result of an acoustical study.

Source: City of Pismo Beach 2023 Noise Element ~~2014~~

Noise Ordinance (Pismo Beach Municipal Code, Chapter 9.24 Noise Control)

The Pismo Beach Noise Ordinance (Chapter 9.24 Noise Control of the Municipal Code) sets limits to noise generated on properties to protect noise-sensitive land uses. Section 9.24.060 establishes maximum permissible sound levels at receiving land uses. Table 4.11-8 shows exterior noise limits not to be exceeded more than 30 minutes in any hour.

Table 4.11-8 Exterior Noise Limits (Levels Not to be Exceeded More than 30 Minutes in Any Hour)

Zoning Category	Time Period	Noise Level (dBA)
R1, R2, OSR, OS1, Low Density Residential	10:00 p.m. – 7:00 a.m.	50
	7:00 a.m. – 10:00 p.m.	55
R3, R4, RR High Density Residential	10:00 p.m. – 7:00 a.m.	50
	7:00 a.m. – 10:00 p.m.	55
C-1, C-2, C-M, C-R Commercial	10:00 p.m. – 7:00 a.m.	60
	7:00 a.m. – 10:00 p.m.	65

[1] As determined at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards may be applied on the receptor side of noise barriers or other property line noise mitigation measures.
[2] Sound level measurements shall be made with slow meter response.
[3] Sound level measurements shall be made with a fast meter response.
Source: City of Pismo Beach 2014

In addition to the above exterior noise limits, Section 9.24.060 prohibits noise generated on a property from exceeding the following limits when measured on any other property.

- The noise standard shown in Table 4.11-8 plus 5 dB for a cumulative period of more than 15 minutes in any hour; or
- The noise standard shown in Table 4.11-8 plus 10 dB for a cumulative period of more than five minutes in any hour; or
- The noise standard shown in Table 4.11-8 plus 15 dB for a cumulative period of more than one minute in any hour; or
- The noise standard shown in Table 4.11-8 plus 20 dB for any period of time.

Section 9.24.050 provides noise standards for loading activity, construction, and mechanical equipment. Loading activity between the hours of 10 p.m. and 7 p.m. is prohibited if it causes a noise disturbance across a residential or visitor serving real property line, or if it exceeds the exterior noise standards in Section 9.24.060. Construction activity is prohibited between 7 p.m. and 7 a.m. on weekdays and anytime on weekends and holidays if it creates a noise disturbance across a residential or commercial real property line. Table 4.11-9 shows the City's standards for noise generated by mobile and stationary construction equipment, as received at residential properties. The mobile noise standards apply to equipment used less than 10 days, while the stationary noise standards apply to equipment used for 10 days or more.

Table 4.11-9 Construction Noise Limits at Residential Properties

Equipment	Time	Single-Family Residential Zone (R-1)	Multi-Family Residential Zones (R-2, R-3, R-4, R-R, OSR, OS1)	Mixed Residential/ Commercial (C-R, C-1, C-2, C-M)
Mobile	7:00 a.m. to 7:00 p.m. daily, except Sundays and legal holidays	75 dBA	80 dBA	85 dBA
	7:00 p.m. to 7:00 a.m. daily and all day Sunday and legal holidays	60 dBA	65 dBA	70 dBA
Stationary	7:00 a.m. to 7:00 p.m. daily, except Sundays and legal holidays	60 dBA	65 dBA	70 dBA
	7:00 p.m. to 7:00 a.m. daily and all day Sunday and legal holidays	50 dBA	55 dBA	60 dBA

Source: City of Pismo Beach 2020

Section 9.24.050 also sets standards for construction noise received at business properties. Noise levels from mobile equipment are limited to 85 dBA, while noise levels from stationary equipment may not exceed 75 dBA. All mobile stationary equipment or machinery powered by internal combustion engines shall be equipped with suitable exhaust and air-take silencers in proper working order.

This section also prohibits noise generated by residential air-conditioning and air-handling equipment from exceeding 55 dBA at neighboring property lines and 50 dBA outside the windows of neighboring living areas.

In addition, Section 9.24.050 prohibits the use of devices that generate vibration above the perception threshold of an individual at or beyond the property boundary of the source if on private property or at 150 feet if on a public space or right-of-way.

4.11.3 Impact Analysis

a. Methodology and Significance Thresholds

In accordance with Appendix G of the California Environmental Quality Act (CEQA) Guidelines, a significant noise impact would occur if new development facilitated by the GP/LCP Update would:

1. Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
2. Generate excessive groundborne vibration or groundborne noise levels; or
3. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

This section does not analyze the exposure of new noise-sensitive land uses to ambient noise because it is an impact of the environment on the project. The California Supreme Court held in a December 2015 opinion (*BIA v. BAAQMD*) that an analysis of impacts of the environment on a project is not required for CEQA compliance. It should also be noted that the GP/LCP Update is a programmatic land use plan update and does not propose specific new development. A qualitative discussion is provided to determine whether the GP/LCP Update would facilitate new development that would result in noise conflicts that would impact the environment.

Construction Noise

This section estimates construction noise from development facilitated by the proposed GP/LCP Update based on reference noise levels reported by the FTA's *Transit Noise and Vibration Impact Assessment Manual* (2018) for various pieces of construction equipment. This analysis makes a conservative assumption that construction equipment typically operates as close as 50 feet from the nearest receptors when construction activity occurs adjacent to sensitive receivers. Construction activity would usually occur farther from the property lines of sensitive receivers. Construction noise level estimates also do not account for the presence of intervening structures or topography, which could reduce noise levels at receptor locations. New development facilitated by the GP/LCP Update would have a significant impact if temporary construction noise during permitted daytime hours could expose sensitive receivers to noise levels that exceed the City's standards shown in Table 4.11-9, or that substantially exceed existing ambient noise levels.

Groundborne Vibration

Although Section 9.24.050 of the Pismo Beach Municipal Code prohibits the generation of vibration above the perception threshold of an individual at or beyond the property boundary, it does not provide a specific numeric threshold. This analysis assumes that Caltrans' criteria for distinctly perceptible vibration, as shown in Table 4.11-3, are representative of the Municipal Code's perception threshold. In addition, this analysis applies Caltrans' criteria for structural damage caused by vibration, as shown in Table 4.11-4. If development facilitated by the GP/LCP Update could generate vibration levels exceeding Caltrans' criteria for human annoyance or structural damage, a significant impact would occur.

As discussed above, train activity is a major operational source of vibration in Pismo Beach. Because the GP/LCP Update would not facilitate an increase in train activity or allow for the introduction of other major operational sources of vibration, this analysis focuses on potential vibration impacts during construction activity.

On-site Operational Noise

New development facilitated by the GP/LCP Update would include on-site noise sources such as HVAC equipment, delivery trucks, and trash hauling. On-site equipment and activities would have a significant impact if such activities would expose neighboring noise-sensitive land uses to noise levels exceeding applicable City's noise standards. Section 9.24.050 of the Municipal Code prohibits noise generated by residential air-conditioning and air-handling equipment from exceeding 55 dBA at neighboring property lines and 50 dBA outside the windows of neighboring living areas. Table 4.11-8 shows the City's limits for exterior noise generated on properties, as measured at receiving property lines.

Increase in Traffic Noise

This analysis relies on noise contour modeling prepared in the Technical Background Report for the GP/LCP Update (Appendix C). Highway noise contours for the year 2040 were modeled using forecasted average daily traffic in the Citywide Transportation Model and Circulation Study (City of Pismo Beach 2016) for each of the selected highway segments. City street noise contours for the year 2040 were modeled using forecasted average daily traffic in the proposed Circulation Element and Technical Background Report prepared by Dudek for the proposed Noise Element update (Appendix C) for each of the selected roadway segments. In order to extend the forecast to Year 2040, Dudek applied the annual growth rate of 0.053 percent indicated in the 2019 Regional Transportation Plan (SLOCOG 2019). To assess the increase in noise-sensitive receivers' exposure to traffic noise during buildout facilitated by the GP/LCP Update, existing and future noise contours are compared. Proposed GP/LCP Update policies are then evaluated to determine their ability in protecting noise-sensitive receivers from excessive increases in ambient noise.

b. Project Impacts and Mitigation Measures

Threshold 1:	Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Impact N-1 CONSTRUCTION OF INDIVIDUAL PROJECTS FACILITATED BY THE GP/LCP UPDATE WOULD TEMPORARILY PRODUCE HIGH NOISE LEVELS, AFFECTING NEARBY NOISE-SENSITIVE LAND USES. COMPLIANCE WITH EXISTING MUNICIPAL CODE STANDARDS AND THE GP/LCP UPDATE'S POLICIES AND ACTIONS WOULD ENSURE CONSTRUCTION ACTIVITY ASSOCIATED WITH NEW DEVELOPMENT WOULD LIMIT NOISE DISTURBANCE AT NOISE-SENSITIVE RECEIVERS IN THE CITY. THEREFORE, THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Noise from individual construction projects carried out under buildout of the GP/LCP Update would temporarily increase ambient noise levels near construction sites. Full buildout of the GP/LCP Update would involve substantial construction activity through the year 2040, adding an estimated 1,111 housing units and 783,268 square feet of non-residential building area in Pismo Beach. Since there are no specific plans or time scales for individual development projects at this time, it is not possible to determine exact noise levels, locations, or time periods for construction of such projects. However, sites adjacent to vacant and underutilized properties where development is anticipated to occur, especially in downtown Pismo Beach, would be exposed to the highest levels of construction noise for the longest duration.

Major noise-generating construction activities would include demolition of existing buildings and structures, site preparation, grading and excavation, building construction, and paving. Construction noise would vary based on the type of construction equipment, the location and sensitivity of nearby land uses, and the timing and duration of the construction activities at each individual project. Table 4.11-10 shows typical noise levels generated by common types of construction equipment at distances of 50, 100, and 200 feet from the source (FTA 2018).

Table 4.11-10 Noise Levels Generated by Common Construction Equipment

Equipment	Typical Noise Level 50 Feet from Source (dBA)	Typical Noise Level 100 Feet from Source (dBA)	Typical Noise Level 200 Feet from Source (dBA)
Air Compressor	80	74	68
Backhoe	80	74	68
Compactor	82	76	70
Concrete Mixer	85	79	73
Concrete Pump	82	76	70
Concrete Vibrator	76	70	64
Crane, Derrick	88	82	76
Crane, Mobile	83	77	71
Dozer	85	79	73
Generator	82	76	70
Grader	85	79	73
Jack Hammer	88	82	76
Loader	80	74	68
Paver	85	79	73
Pneumatic Tool	85	79	73
Roller	85	79	73
Scraper	85	79	73
Truck	84	78	72

Source: FTA 2018

As shown in Table 4.11-10, noise levels produced by individual construction equipment would reach an estimated 88 dBA at a distance of 50 feet from the source (e.g., cranes, jack hammers). This is representative of the exposure of sensitive receivers on adjacent properties to construction sites. Noise from stationary sources of equipment typically drops off at a rate of approximately 6 dBA per doubling of distance. Therefore, noise levels would be about 6 dBA lower at 100 feet from the noise source and 12 dBA lower at a distance of 200 feet from the noise source, in comparison to the minimum distance of 50 feet. In addition to the typical equipment listed in Table 4.11-10, pile drivers are sometimes used in construction of multi-story buildings (especially six stories or higher) with pile foundations. Pile drivers, if used, are the loudest construction equipment. As noted in Section 2, *Project Description*, the GP/LCP Update would not allow new buildings more than 45 feet tall. Because of height restrictions, this analysis assumes that pile drivers would not be required for new construction or redevelopment in Pismo Beach.

Construction noise generated by individual developments under buildout of the GP/LCP Update would be regulated by the allowed hours of operation and noise limits set by the Pismo Beach Municipal Code. Section 9.24.050 of the Municipal Code prohibits construction activity between 7 p.m. and 7 a.m. on weekdays and anytime on weekends and holidays if it creates a noise disturbance across a residential or commercial real property line. In addition, construction activity would be subject to the City's standards for noise generated by mobile and stationary construction equipment, as shown in Table 4.11-9.

The following policies and actions of the Noise Element of the GP/LCP Update would minimize the potential impacts associated with construction noise within the City:

- **Action N-1.1b Enforce Construction Noise Standards.** Enforce the construction noise standards as outlined in the Pismo Beach Noise Ordinance (Pismo Beach Municipal Code, Chapter 9.24 Noise Control) and identify applicable restrictions and controls for meeting these requirements with each building permit application.

- **Policy N-1.2 Noise Mitigation and Attenuation.** Mitigate the effect of noise from new commercial uses, project-generated traffic, and short-term construction on residential and other noise-sensitive land uses by applying feasible noise mitigation measures.

Pursuant to Action 1.1b (Enforce Construction Noise Standards), the City would continue to apply its existing Municipal Code standards for construction noise and would "identify applicable restrictions and controls for meeting these requirements with each building permit application." Policy 1.2 in the Noise Element also would require the use of feasible noise mitigation measures to control short-term construction noise at sensitive receivers.

The temporary nature of construction noise and the City's restrictions on the timing and manner of construction activities described in the Pismo Beach Municipal Code would reduce noise impacts at nearby noise-sensitive receivers. Policies and actions in the GP/LCP Update Noise Element would further reduce potential impacts to noise-sensitive receivers from temporary construction noise, ensuring that construction noise does not exceed the City's standards. Therefore, the impact of construction noise from development facilitated by the GP/LCP Update would be less than significant.

Mitigation Measures

No mitigation would be required.

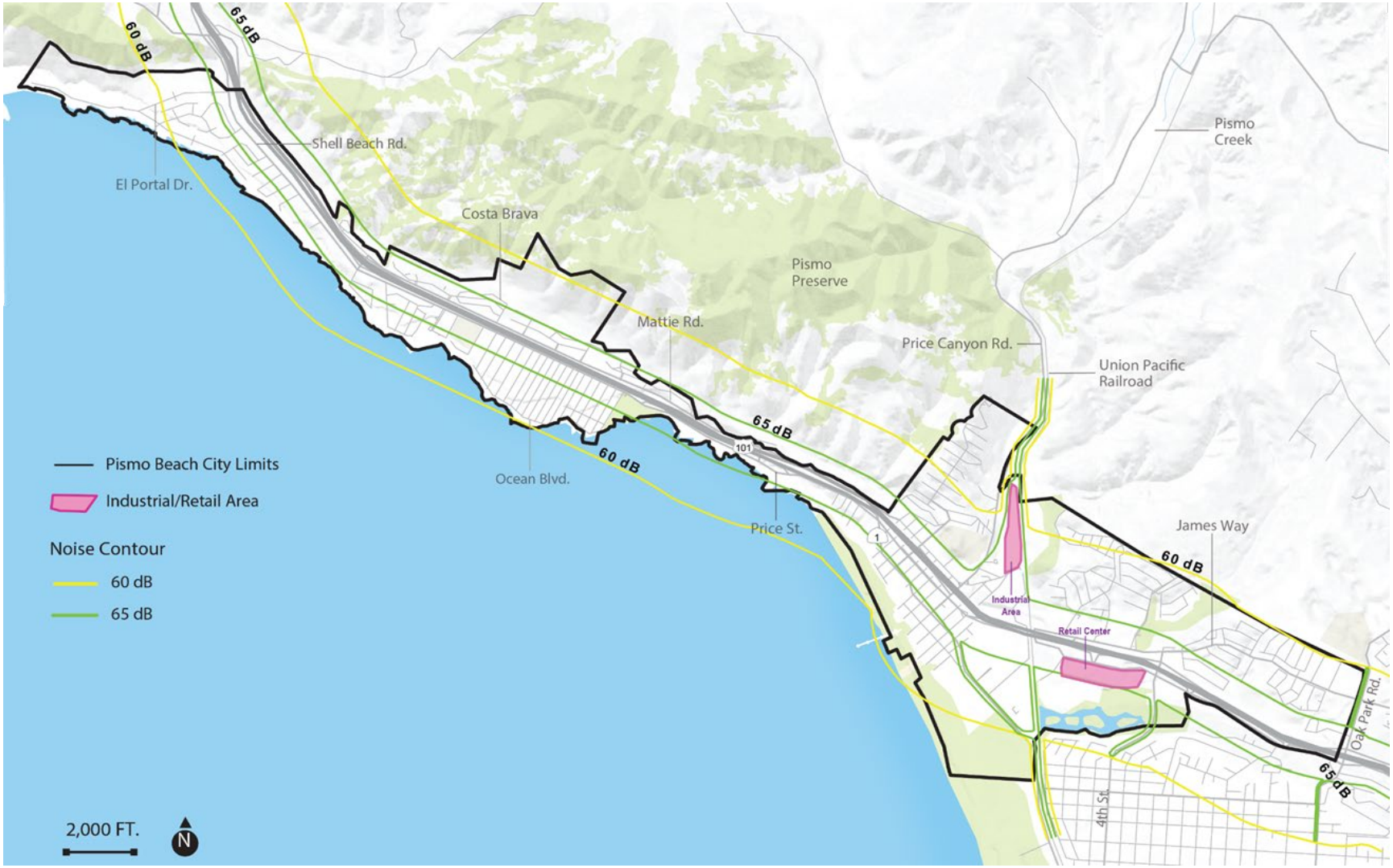
Threshold 1:	Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Impact N-2 DEVELOPMENT FACILITATED BY THE GP/LCP UPDATE WOULD INCREMENTALLY INCREASE TRAFFIC AND ASSOCIATED NOISE IN PISMO BEACH, EXPOSING NOISE-SENSITIVE LAND USES LOCATED NEAR ROADWAYS TO INCREMENTALLY GREATER NOISE LEVELS. HOWEVER, IMPLEMENTATION OF GOALS, POLICIES, AND ACTIONS IN THE GP/LCP UPDATE WOULD ENSURE THAT TRAFFIC NOISE WOULD HAVE A LESS THAN SIGNIFICANT IMPACT.

Full buildout of the GP/LCP Update, over a period of 20 years, is anticipated to add 1,111 housing units and 783,268 square feet of non-residential building area in Pismo Beach. Much of the growth and change in Pismo Beach would occur in vacant and underutilized sites in the Downtown Core and along the U.S. 101 corridor. New development on a given site would typically cause a net increase in vehicle trips, relative to trips generated by existing uses. By generating new vehicle trips, new development would incrementally increase the exposure of land uses along roadways in Pismo Beach to traffic noise.

Figure 4.11-4 shows the predicted noise contours from traffic activity in the year 2040. The U.S. 101 and Price Canyon Road corridors would be within the 65 CNEL contour. Most of the City would be within the 60 CNEL contour associated with traffic on U.S. 101.

Figure 4.11-4 2040 Noise Contours



Source: City of Pismo Beach. ~~2021~~ 2023. Noise Element.

Note: For the purposes of this map, this figure does not include the submerged lands offshore that are within the Pismo Beach City Limits. See Figure LU-1 of the General Plan/Local Coastal Plan Land Use Element (Pismo Beach LAFCO-approved City Border) for the full Pismo Beach City Limits.

These noise levels are a conservative estimate of future noise levels because they do not account for site-specific conditions that may reduce exposure to ambient noise, such as intervening structures and topography between noise sources and receivers. Table 4.11-11 shows the modeled change in distances to the 65 and 60 CNEL noise contours associated with studied roadway segments, comparing existing conditions to the year 2040.

Table 4.11-11 Existing and 2040 Roadway Noise Contours

Roadway	Existing Distance to 65 CNEL (feet)	Year 2040 Distance to 65 CNEL (feet)	Existing Distance to 60 CNEL (feet)	Year 2040 Distance to 60 CNEL (feet)
State Route 1	70	79	223	250
U.S. 101: Price St to Mattie Rd	561	629	1,774	1,991
U.S. 101: north of Avila Beach Dr	574	644	1,815	2,037
U.S. 101: south of Oak Park Blvd	574	644	1,815	2,037
U.S. 101: Price St South to Price St North	574	644	1,815	2,037
U.S. 101: Mattie Rd to Spyglass Dr	587	659	1,858	2,084
U.S. 101: Spyglass Dr to Avila Beach Dr	601	674	1,901	2,133
U.S. 101: Oak Park Blvd to Fourth St	723	811	2,285	2,564
US. 101: Fourth St to Price St	792	889	2,506	2,812
Ocean Blvd	N/A	N/A	N/A	N/A
North Fourth St	137	161	434	510
Mattie Rd/Noyes Rd	N/A	N/A	N/A	N/A
North Oak Park Blvd	112	134	353	425
Price Canyon Rd	100	125	315	396
Shell Beach Rd	N/A	N/A	N/A	N/A

Source: City of Pismo Beach. 2021. Technical Background Report. (Appendix C)

As shown in Table 4.11-11, the noise contours associated with major roadways in Pismo Beach would incrementally expand during buildout of the GP/LCP Update. For example, the modeled 65 CNEL noise contour along the segment of U.S. 101 from Fourth Street to Price Street currently extends 792 feet from the highway's centerline, but it would extend to 889 feet in the year 2040 (an increase of approximately 100 feet). This would expose additional noise-sensitive land uses to increases in traffic noise. The changes to the allowable noise levels from transportation sources (Table 4.11-7) in the GP/LCP Update would generally be more restrictive, with the exception of noise levels at transient and multifamily residential uses where the allowable outdoor noise level would increase from 60 to 65 Ldn/CNEL dBA.

The GP/LCP Update Noise Element includes the following goals, policies, and actions intended to reduce exposure to traffic noise.

Goal N-1: A quiet and healthful environment with minimal noise intrusion.

- **Policy N-1.2: Noise Mitigation and Attenuation.** Mitigate the effect of noise from new commercial uses, project-generated traffic, and short-term construction on residential and other noise-sensitive land uses by applying feasible noise mitigation measures.

- **Action N-1.2d: Attenuate Project-Related Traffic Noise Impacts Near Sensitive Uses.** Proposed discretionary developments that may result in an increase in traffic on roadways near existing noise-sensitive uses above levels allowed in the General Plan, should include, as appropriate and feasible, traffic calming design, low-noise pavement surfaces, sound barriers, or vegetated berms in order to minimize motor vehicle traffic noise. Traffic calming design could include:
  - Digital speed monitors
  - Flashing crosswalk beacons
  - Reduced speed limits

- **Policy N-1.3: Existing Land Use Incompatibilities.** Help mitigate noise levels among existing incompatible land uses, as feasible, to enhance quality of life for noise impacted residents and other sensitive receptors.
  - **Action N-1.3c: Support Attenuation of Highway Noise.** The City should support efforts to reduce traffic noise levels on Highway 1 and Highway 101 along sections in proximity to concentrated residential development through prioritized roadway surface maintenance, use of noise-reducing surface treatments, traffic-safe tree or shrub plantings, window upgrades in facades of buildings facing the freeway, or, in cases of significant noise exposure, use of lower speed limits, as preferred alternatives over potential construction of sound walls. The City should advocate for Caltrans to contribute to the cost of these improvements, where feasible. Pismo Beach should also encourage enforcement of California Vehicle Code sections relating to adequate mufflers and modified exhaust systems.

Goal N-2: A pattern of land uses that protects residents and other sensitive receptors from excessive noise.

- **Policy N-2.1: Land Use Planning.** Create general plan land use and zoning patterns that prevent or buffer community residents and other sensitive receptors from incompatible land uses.
  - **Action N-2.1a: Consider Noise Compatibility in Land Use Planning.** The City shall consider the compatibility of proposed land uses and the noise environment when revising the General Plan and zoning documents and when reviewing development proposals. Noise levels for proposed land uses shall be consistent with the noise levels presented in Table N-5 (general noise exposure guidelines), Table N-6 (stationary noise source limits), and Table N-7 (transportation noise exposure limits).
  - **Action N-2.1b: Prohibit or Attenuate New Sensitive Uses in Noise-Impacted Areas.** Prohibit new development of transient lodging and multi-family residences in transportation noise impacted areas (as generally depicted by the limit of the 65 dBA CNEL contours illustrated on Figure N-4, 2040 Noise Contours) unless the project design includes effective noise-attenuation measures that (a) reduce exterior noise to 70 dB Ldn/CNEL or less in exterior activity areas; and (b) prohibit new development of single-family residential subdivisions or other noise-sensitive land uses with a maximum exterior noise exposure level of 60 dB Ldn/CNEL (Table N-7) in noise-impacted areas (as generally depicted by the limit of the 60 dBA CNEL contours illustrated on Figure N-4, 2040 Noise Contours) unless the project design includes effective noise-attenuation measures that reduce exterior noise to ~~60~~ to the conditionally acceptable dB Ldn/CNEL or less in exterior activity areas and ~~45 dB Ldn/CNEL or less~~ that are no greater than the applicable interior limit in Table N-7 in interior spaces

with windows and doors closed, by using the best available noise-reduction technology, which may include the following techniques:

- Increase the distance between noise generators and noise-sensitive uses through the use of increased building setbacks and/or the dedication of noise easements.
- Place noise-tolerant land elements of the site plan such as parking lots, maintenance facilities, and utility areas between vicinity noise generators and on-site receivers.
- Use noise-tolerant structures, such as garages or carports, to shield noise-sensitive areas.
- Orient buildings so that the noise-sensitive portions of a project, including outdoor areas, are shielded from noise sources.
- Use berms and heavy landscaping to reduce noise levels.
- Use sound-attenuating architectural design and building features, such as:
  - Courtyards
  - Oriented openings and windows away from roadways
  - Double and triple paned windows
  - Additional layers of insulation, plywood, and drywall in the exterior building shell construction
  - Mechanical ventilation where feasible

  Noise reductions associated with exterior traffic noise exposure are heavily dependent upon the configuration of site improvements with respect to the traffic noise source. Locating the primary exterior use area on the opposite side of a structure from the roadway can typically achieve a noise exposure level compliant with the 60 dBA CNEL recommended maximum exposure. With regard to building construction to achieve adequate interior noise attenuation, Pismo Beach shall enforce the State Noise Insulation Standards (California Code of Regulations, Title 24) and Chapter 35 of the Uniform Building Code. Refer also to Table N-8 (above) which identifies construction-related noise controls for residences, as a function of exterior noise level exposure from transportation sources.

- ~~**Policy**~~ **Action N-2.~~2~~1c: Highway Noise.** Minimize vehicular and noise exposure for residents and occupants of noise-sensitive uses by planning land uses compatible with transportation corridors, and applying noise attenuation designs and construction standards.

Implementation of the above goals, policies, and actions would require attenuation of traffic noise generated by projects near sensitive uses (e.g., traffic calming, sound barriers, vegetated berms), and siting and design of new land uses to prevent exposure to excessive noise. In addition, pursuant to Policy 4.1.98 in the Circulation Element, the City would continue to designate truck routes as Price Canyon Road, State Route 1, and U.S. 101, providing clear signage from regional gateways to the City. Maintenance of truck routes would reduce the exposure of residences on local streets to traffic noise. Therefore, buildout of the GP/LCP Update would avoid generation of excessive traffic noise. This impact would be less than significant.

Mitigation Measures

No mitigation would be required.

Threshold 1:	Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Impact N-3 NEW DEVELOPMENT FACILITATED BY THE GP/LCP UPDATE WOULD INTRODUCE OPERATIONAL NOISE SOURCES ASSOCIATED WITH RESIDENTIAL AND NON-RESIDENTIAL LAND USES. THE CONTINUED REGULATION OF ON-SITE NOISE, CONSISTENT WITH THE PISMO BEACH MUNICIPAL CODE, WOULD MINIMIZE DISTURBANCE TO ADJOINING USES. THEREFORE, ON-SITE OPERATIONAL NOISE WOULD HAVE A LESS THAN SIGNIFICANT IMPACT.

Full buildout of the GP/LCP Update would involve substantial construction activity through the year 2040, adding an estimated 1,111 housing units and 783,268 square feet of non-residential building area in Pismo Beach. This new development would introduce on-site activities that generate operational noise. Typical noise sources at new development would include parking lot activity, rooftop-mounted HVAC equipment, truck deliveries, and trash hauling. To protect new noise-sensitive land uses from excessive exposure to stationary noise, the GP/LCP Update would maintain existing standards shown in Table 4.11-6: new development of noise-sensitive land uses would only be allowed where its location and design ensure attainment of daytime and nighttime standards. Existing noise limits in the Pismo Beach Municipal Code for stationary equipment, as shown in Table 4.11-8, also would continue to apply to new development. In addition, new development would be required to comply with the land use compatibility guidelines shown in Table 4.11-6. The changes to the land use compatibility guidelines in the GP/LCP Update would generally be more restrictive, with the exception of noise levels at transient and multifamily residential uses where the allowable outdoor noise level would increase from 60 to 65 Ldn/CNEL dBA.

The following goals, policies, and actions in the GP/LCP Update Noise Element would ensure continued application of local standards for on-site noise.

Goal N-1: A quiet and healthful environment with minimal noise intrusion.

- **Policy N-1.1: Noise Generation Standards.** Minimize the impact of noise generators by applying clear and appropriate standards during permit review and subsequent monitoring.
  - **Action N-1.1a: Enforce Stationary Noise Source Levels.** Enforce maximum and average noise level limits on permitted stationary sources based upon their impact on the property line of the nearest noise-sensitive receptor as outlined in Table N-6 [see Table 4.11-6 of this EIR].
- **Policy N-1.2: Noise Mitigation and Attenuation.** Mitigate the effect of noise from new commercial uses, project-generated traffic, and short-term construction on residential and other noise-sensitive land uses by applying feasible noise mitigation measures.
  - **Action N-1.2a: Attenuate Project-Related Stationary Source Noise Impacts.** After the applicable environmental review is finished, the City shall work with project applicants to attenuate stationary source noise impacts. Projects shall be designed to avoid long-term noise impacts or reduce those impacts using the following methods, or similar methods, as appropriate to meet the applicable noise levels presented in Table N-6 [see Table 4.11-6 of this EIR]:
    - Create a distance buffer between stationary mechanical equipment and noise-sensitive receivers by placing parking lots, storm drain facilities, and landscaping between major stationary equipment and adjacent receivers.

- Provide sound barriers or enclosures for equipment with significant sound-generation
- Where possible, place on-site buildings between major noise-generating equipment and the location of the closest adjacent noise-sensitive land use.
- Where possible, locate/orient/direct/face/position noise-generating use in such a way that minimizes noise for noise-sensitive receivers.
- Use facility perimeter sound barriers (i.e., solid walls) or landscaped berms to reduce noise levels at immediately adjacent noise-sensitive uses.

- **Action N-1.2b: Require Noise Studies for Proposed Commercial Developments (CEQA).** When a proposed commercial development has the potential to generate noise levels that exceed the standards presented in Table N-6 [Table 4.11-6], a noise study and acceptable noise attenuation techniques to assure compliance with Table N-6 shall be required. For such commercial projects, the environmental review process required by CEQA shall be employed to identify the required analysis and determine appropriate mitigation. For the purpose of completing CEQA review, future noise levels shall be predicted for a period of at least 10 years from the beginning of environmental document review process. Adherence to mitigation required to address significant noise impacts (as identified in the CEQA review document) shall be ensured via their incorporation in a required Mitigation Monitoring and Reporting Program (MMRP), to be adopted concurrent with approval of permits for the project. Adherence to mitigation described above shall also be ensured through conditions of approval. New single-family residences are to be exempt from noise studies, but shall require a buyer beware notice that acknowledges the residence may experience noise higher than City standards.
- **Action N-1.2c: Noise Study Requirements.** When a commercial project has the potential to generate noise levels in excess of Plan standards, a noise study and acceptable plans to assure compliance with the standards shall be required. The noise study shall measure or model the following, as appropriate: CNEL, Leq, and Lmax levels at property lines and, if feasible, receptor locations. Noise studies shall be prepared by qualified individuals using calibrated equipment under currently accepted professional standards and include an analysis of the characteristics of the project in relation to noise levels, all feasible mitigations, and projected noise impacts. Noise studies shall:
  - Be the responsibility of the applicant, but accepted by the Planning Department.
  - Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions.
  - Estimate existing and projected (10 years) noise levels in terms of CNEL standards in Table N-6 or Table N-7 [see Table 4.11-6 and Table 4.11-7 of this EIR], and compare predicted noise levels against such standards.
  - Recommend appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element and Noise Ordinance.
  - Predict noise exposure at the property line after the prescribed mitigation measures have been implemented (quantify the noise reduction achieved by the mitigations). If the project does not comply with the adopted standards of the Noise Element and Noise Ordinance, the analysis must provide acoustical information for a statement of overriding considerations for the project.

- **Policy N-1.3 - Existing Land Use Incompatibilities.** Help mitigate noise levels among existing incompatible land uses, as feasible, to enhance quality of life for noise impacted residents and other sensitive receptors.
  - **Action N-1.3a: Mitigate Stationary Source Noise Impacts on Existing Residential and Other Sensitive Uses as Feasible.** Upon receiving noise complaints, City Planning staff shall investigate the noise source associated with the complaint to determine if a violation of ordinance-specified noise limits is occurring. Such investigation may include the direct measurement of sound levels using a sound-level meter, or requiring the operator of the sound source to retain an acoustical professional to complete such measurements and analysis. Where sound levels exceed noise limits for stationary sound sources (i.e., Table N-6 [Table 4.11-6]) the operator shall be required to install controls or alter operations in order to achieve compliance with the noise limits. Where sound levels investigated as the result of a complaint are in compliance, City Planning staff or the retained acoustical consultant may provide recommendations for reducing sound level annoyance in exterior or interior areas of the property for which the complaint has been submitted. The recommendations may be followed on a voluntary basis, but cannot be used to compel the noise generator into reducing sound levels to less than those required in Table N-6.
  - **Action N-1.3b: Noise Complaint Investigation.** When a noise complaint is submitted, City Planning staff shall investigate the noise source associated with the complaint to determine if a violation of noise ordinance limits is occurring. If the noise level from the offending source is clearly audible over the background noise levels at the property line of the complainant, an investigation would assume to be warranted. Such investigation may include the direct measurement of sound levels by City staff using a sound-level meter or requiring the operator of the sound source to retain an acoustical professional to complete such measurements and analysis. The investigation shall include:
    - Completion of sound level measurements using a sound-level meter meeting American National Standards Institute (ANSI) Type 1 or Type 2 specifications.
    - A measurement location at the property line of the receiving property located closest to the noise source associated with the complaint.
    - Measurements for an appropriate duration to assess compliance with the applicable standard (for Leq based standard, the measurement shall be no less than one hour, while the noise source is operating; for the CNEL standard, the sound measurement shall be not less than 24 hours in duration). Periodic measurements for temporary events or non-standard operating circumstances may be warranted to ensure compliance.
    - Reporting that includes Leq and Lmax values, as well as calculated CNEL levels (where appropriate) associated with the noise measurements, and comparison of these noise levels with the Noise Element Policy and Noise Ordinance Standards.
    - Recommendations for the operator of the noise source to achieve compliance (if a violation is occurring), or guidance for the receiving property to reduce noise exposure (if the noise is within allowable limits). The City can provide good neighbor policies to the noise generating properties, however, if the noise is within allowable limits, these suggestions shall not be enforceable.

Implementation of the above goals, policies, and actions in the GP/LCP Update would provide for compliance with and enforcement of the City's noise standards for stationary noise sources. The continued regulation of on-site noise, consistent with the Municipal Code, would minimize disturbance to new and existing noise-sensitive land uses. Therefore, on-site operational noise at new development facilitated by the GP/LCP Update would have a less than significant impact.

Mitigation Measures

No mitigation would be required.

Threshold 2:	Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

IMPACT N-4 CONSTRUCTION OF INDIVIDUAL PROJECTS FACILITATED BY THE GP/LCP UPDATE WOULD TEMPORARILY GENERATE GROUNDBORNE VIBRATION. ESTIMATED VIBRATION LEVELS WOULD NOT EXCEED APPLICABLE CALTRANS CRITERIA FOR HUMAN ANNOYANCE AND STRUCTURE DAMAGE, AND THE PISMO BEACH MUNICIPAL CODE'S TIMING RESTRICTIONS ON CONSTRUCTION ACTIVITY WOULD LIMIT VIBRATION DISTURBANCE. THEREFORE, THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Construction of individual projects facilitated by the GP/LCP Update would intermittently generate vibration on and adjacent to construction sites. Typical construction equipment that produces vibration includes vibratory rollers for paving, caisson drills, bulldozers, loaded trucks, and jackhammers. This analysis assumes that construction activity would not involve the use of vibration-generating pile drivers, as discussed in Impact N-1. Table 4.11-12 shows estimated maximum vibration levels from potential construction equipment at noise-sensitive receivers located 25, 50, 100, and 200 feet from the source equipment.

Table 4.11-12 Vibration Levels for Construction Equipment at Noise-Sensitive Receivers

	Estimated PPV (in/sec) at Nearest Sensitive Receivers			
Equipment	**25 Feet**	**50 Feet**	**100 Feet**	**200 Feet**
Caisson Drill	0.089	0.042	0.019	0.009
Vibratory Roller	0.210	0.098	0.046	0.021
Large Bulldozer	0.089	0.042	0.019	0.009
Loaded Trucks	0.076	0.035	0.017	0.008
Small Bulldozer	0.003	0.001	<0.001	<0.001

Sources: FTA 2018

The vibration sources shown in Table 4.11-12 may move back and forth near a property line for a few hours at a time but do not generate intermittent vibration from a single location for an extended period of time. Therefore, this analysis defines them as "transient" sources under the Caltrans vibration criteria. Based on Table 4.11-12, vibration levels from vibratory rollers used in paving activity could reach 0.210 PPV at a distance of 25 feet from the source and 0.098 PPV at 50 feet. This would not exceed Caltrans' criterion of 0.25 PPV for distinctly perceptible vibration from transient source (see Table 4.11-3). Transient vibration-generating equipment also would not result in vibration levels exceeding Caltrans' criterion of 0.5 PPV for damage to historic and older buildings (see Table 4.11-4).

Compliance with Section 9.24.050 of the Municipal Code would prohibit construction activity between 7 p.m. and 7 a.m. on weekdays and anytime on weekends and holidays if it creates a noise disturbance across a residential or commercial real property line. This requirement for new development would protect residents from exposure to vibration during normal sleeping hours. Because estimated vibration intensities would not exceed applicable criteria for human annoyance and structure damage, and City requirements would limit the timing of vibration exposure, the impact related to vibration would be less than significant.

Mitigation Measures

No mitigation would be required.

Threshold 3:	For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Impact N-5 PISMO BEACH IS LOCATED OUTSIDE OF NOISE CONTOURS ASSOCIATED WITH THE NEAREST AIRPORTS. THEREFORE, THE IMPACT FROM EXPOSURE TO AIRCRAFT NOISE IN THE CITY WOULD BE LESS THAN SIGNIFICANT.

As discussed in Section 4.8, *Hazards and Hazardous Materials*, the nearest public airports to the City are the San Luis Obispo County Regional Airport located approximately 5 miles due northwest, and the Oceano County Airport, located approximately 2 miles to the south. The City is located outside of the mapped noise contours associated with aircraft departures and landings at these airports (ALUC 2005, 2007). The mapped 60 dB noise contour for the San Luis Obispo County Regional Airport extends no further than 1,000 feet from the runways in the direction of Pismo Beach; this 60 dB contour is therefore located more than 4.5 miles from Pismo Beach. High-altitude overflights for aircraft using the San Luis Obispo County Regional Airport occur over Pismo Beach, but do not substantially contribute to the ambient noise environment in the City. In addition, the 65 dB noise contour for Oceano County Airport extends no closer to Pismo Beach than approximately Farroll Road in Grover Beach (approximately one mile south of Pismo Beach City limits). Therefore, development facilitated by the GP/LCP Update would have a less than significant impact from exposure to aircraft noise.

Mitigation Measures

No mitigation would be required.

4.11.4 Cumulative Impacts

Cumulative development near Pismo Beach would generate noise and vibration. However, noise and vibration are localized and rapidly attenuate in an urban environment. Therefore, this subsection assumes defines the area of analysis for cumulative noise impacts as Pismo Beach and immediately surrounding lands in unincorporated San Luis Obispo County and the cities of Grover Beach and Arroyo Grande. Although construction of cumulative projects outside Pismo Beach would generate temporary, localized noise and vibration, construction would typically not occur at the same time and sufficiently close to projects within the city to result in a greater cumulative impact. Therefore, the GP/LCP Update would not considerably contribute to significant cumulative impacts related to construction noise and vibration.

Cumulative development also would add sources of on-site operational noise in and near Pismo Beach. It is expected that new residential, commercial, and other development would involve parking lot activity, the operation of HVAC equipment, and loading and trash hauling trucks. As discussed in Impact N-3, implementation of goals, policies, and actions in the GP/LCP Update would provide for compliance with and enforcement of the City's noise standards for stationary noise sources. Similarly, cumulative development outside City limits would be subject to corresponding local regulations of San Luis Obispo County and the cities Grover Beach and Arroyo Grande to protect sensitive receivers from exposure to excessive noise levels. Therefore, on-site operational noise generated by development under the GP/LCP Update would not considerably contribute to a significant cumulative impact.

Cumulative development in and near Pismo Beach would generate vehicle trips that increase traffic noise levels. The predicted noise contours for the year 2040, as shown in Figure 4.11-4, account for regional growth in traffic volumes. They are based on an annual growth rate identified in SLOCOG's 2019 Regional Transportation Plan. Therefore, the traffic noise analysis in Impact N-2 accounts for traffic noise generated by cumulative growth. As discussed in Impact N-2, implementation of GP/LCP Update policies for transportation-related noise would reduce noise and avoid generation of excessive noise from the local highways and City streets, which would minimize the exposure of sensitive receivers to traffic noise. Therefore, the overall contribution of the GP/LCP Update to cumulative traffic noise would not be cumulatively considerable.

4.12 Population and Housing

This section evaluates the potential population growth and potential displacement of housing impacts associated with implementation of the General Plan/Local Coastal Plan (GP/LCP) Update. Population and housing data are available on a city, county, regional, and state level. This Environmental Impact Report (EIR) uses data collected and provided at the City level in comparison to County and State trends.

4.12.1 Setting

a. Population

As shown in Table 4.12-1, the City of Pismo Beach had an estimated 2019 population of 8,237 (California Department of Finance [DOF] 2020). Table 4.12-1 also shows population growth in the unincorporated County. Between 2010 and 2019, the City's population grew at a higher rate than the County and grew at a slightly greater rate than the State. The City's 2019 population represents approximately 0.03 percent of the County's 2019 population.

Table 4.12-1 Population Growth in the City, County, and State

Year	Pismo Beach	San Luis Obispo County	California
2010	7,655	269,637	37,253,956
Existing (2019)[1]	8,237	278,355	39,695,376
Percent Change from 2010 to 2019	7.6%	3.2%	6.5%

[1] The existing conditions used for GP/LCP Update buildout projections was based on the 2019 data from the San Luis Obispo County Assessor's Office. Therefore, 2019 was used as the existing conditions year in the analysis for population and housing.
Source: DOF 2020

b. Housing

A household is defined as a group of people who occupy a housing unit (U.S. Census Bureau 2020). A household differs from a dwelling unit because the number of dwelling units includes both occupied and vacant dwelling units. Typically, not all of the population in a given area lives in households. A portion of the population lives in group quarters, such as board and care facilities, while others are homeless.

Housing Units

Table 4.12-2 shows the growth in number of housing units in the City and the State between 2010 and 2019. As shown in Table 4.12-2, between 2010 and 2019, 247 units were added to the City's housing inventory resulting in overall growth of 4.4 percent during this period. Between 2010 and 2019, the County and State grew at a higher rate of 4.6 percent and 4.1 percent, respectively.

Table 4.12-2 Housing Inventory

	Pismo Beach		San Luis Obispo County		California	
	2010	2019	2010	2019	2010	2019
Total Housing Units	5,585	5,832	117,315	122,810	13,670,304	14,235,201
Occupied	3,834	4,215	102,016	108,062	12,568,167	13,188,852
Vacancy Rate	31.4%	27.7%	13.0%	12.0%	8.1%	7.4%
Growth from 2010 to 2019	4.4%		4.6%		4.1%	

Source: DOF 2020

In 2019, approximately 3,413 of the housing units in the City were single-family detached homes, approximately 618 units were attached single-family homes, approximately 1,041 units were multi-family units (buildings of at least two units), and approximately 760 units were mobile homes.

Household Size

Small households (one to two persons per household [pph]) traditionally occupy units with zero to two bedrooms; family households (three to four pph) normally occupy units with three to four bedrooms. Large households (five or more pph) typically occupy units with four or more bedrooms. The number of units in relation to the household size may reflect preference and economics. Many small households obtain larger units and some large households live in small units, for economic reasons. Table 4.12-3 compares the size of households in the City, County, and State in 2010 and 2019.

Table 4.12-3 Household Size in the City, County, and State

	Pismo Beach		San Luis Obispo County		California	
Year	2010	2019	2010	2019	2010	2019
Household Size (pph)	1.99	1.95	2.48	2.43	2.90	2.95
Growth from 2010 to 2019	-2.0%		-2.0%		1.7%	

Source: DOF 2020

As shown in Table 4.12-3, the average household size in Pismo Beach decreased from 1.99 pph in 2010 to 1.95 pph in 2019 (a decrease of approximately 2 percent). Over the same period, household size in the County decreased from 2.48 to 2.43 pph (a decrease of approximately 2 percent) and household size in the State increased from 2.90 to 2.95 pph (an increase of approximately 2 percent). Between 2010 and 2019, the City maintained a lower average household size in comparison to the County and State average household sizes.

4.12.2 Regulatory Setting

a. State Regulations

State Housing Element Statutes

State housing element statutes (Government Code Sections 65580-65589.9) mandate that local governments adequately plan to meet the existing and projected housing needs of all economic segments of the community. The law recognizes that in order for the private market to adequately address housing needs and demand, local governments must adopt land use plans and regulatory systems that provide opportunities for, and do not unduly constrain, housing development. As a result, State housing policy rests largely upon the effective implementation of local general plans and in particular, housing elements. Additionally, Government Code §65588 dictates that housing elements must be updated at least once every eight years.

b. Regional Regulations

Regional Housing Needs Assessment

California's Housing Element law requires that each county and city develop local housing programs to meet their "fair share" of existing and future housing growth needs for all income groups, as determined by the DOF. The San Luis Obispo Council of Governments (SLOCOG) is tasked with distributing the total State-projected housing need for the San Luis Obispo Region among SLOCOG's seven cities and the County's unincorporated communities by four income categories (extremely low and very low, low, moderate, and above moderate). This fair share allocation is referred to as the Regional Housing Needs Assessment (RHNA) process. This RHNA allocation represents the minimum number of housing units by income level each community is required to plan for through a combination of: 1) zoning "adequate sites" at suitable densities that foster affordability; and 2) housing programs to support retention, rehabilitation, and production of lower income units with a reasonable degree of entitlement certainty. Pismo Beach's allocation from the SLOCOG Regional Housing Needs Plan (RHNP), covering 2014 through 2019 and distributed among the four income categories, is shown in Table 4.12-4.

Table 4.12-4 Regional Housing Needs Assessment 2014-2019

Income Group	RHNA Allocation (units)	% of Total
Very Low	113	25%
Low	71	15.5%
Moderate	82	18.0%
Above Moderate	193	41.9%
Total	459	100.0%

Source: SLOCOG 2019

San Luis Obispo Council of Governments

As discussed in Section 4.10, *Land Use and Planning*, the City of Pismo Beach is located within the SLOCOG planning area. SLOCOG functions as the Metropolitan Planning Organization (MPO) for San Luis Obispo County and the towns and cities therein, and is responsible for preparing and implementing the region's RHNA and the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). The RTP/SCS is a long-term blueprint of the region's transportation system, requires updates ever four years, and plans for a 20-year or more timeframe. The plan identifies and analyzes transportation needs of the metropolitan region and creates a framework for project priorities. SLOCOG adopted an updated RTP/SCS on June 5, 2019. SLOCOG projections for the planning area consider regional, state, and national economic trends and planning policies.

c. Local Regulations

City of Pismo Beach Housing Element

The Housing Element is one of the seven State-mandated elements of the General Plan (Government Code Sections 65300 through 65303.4). The Housing Element serves as a tool to identify and provide for the housing needs of the community. It identifies recent demographic and employment trends that may affect existing and future housing demand and supply. California law requires the Housing Element to establish policies and programs that will support the provision of an adequate housing supply for citizens of all income levels. The Housing Element is the only element that requires review by the State. The element addresses the City's ability to meet the regional housing needs as determined by the State of California.

Pismo Beach adopted its current (6th cycle) Housing Element in 2020, covering the period 2020-2028. The 6th cycle Housing Element was submitted to the California Department of Housing and Community Development (HCD) for review and comment, and the City received certification of the Housing Element from HCD on November 17, 2020. The updated Housing Element includes a detailed analysis of housing needs, resources, and constraints; and a review of the current Housing Element goals, policies, and programs, which were used to develop new policies and implementation programs. Housing Element Goal 1 through Goal 5 are intended to preserve affordable units and prevent displacement in Pismo Beach as follows:

- **Goal H-1:** Identify sites with appropriate zoning and services to facilitate and encourage the development of a variety of alternative housing types for all income levels.
- **Goal H-2:** Assist in the development of adequate housing to meet the needs of lower-income and moderate-income households.
- **Goal H-3:** Address and, where appropriate and legally permissible, remove governmental constraints to the maintenance, improvement, and development of housing for people of all income levels and needs.
- **Goal H-4:** Conserve and improve the conditions of the existing affordable housing stock, which may include addressing ways to mitigate the loss of dwelling units demolished by public or private action.
- **Goal H-5:** Promote housing opportunities for all persons regardless of race, religion, gender, marital status, ancestry, national origin, color, familial status, or disability.

In addition, Housing Element policies intended to preserve affordable units and prevent displacement in Pismo Beach as follows.

- **Policy H-1:** Provide a range of residential densities in the General Plan and Zoning Codes that permit a variety of housing types, including single-family homes, condominiums, rental apartments, mobile homes, and manufactured housing.
- **Policy H-2:** Promote efficient land use patterns and encourage more intense development near services.
- **Policy H-4:** Maintain an inventory of sites suitable for housing to accommodate the City's share of regional housing needs.
- **Policy H-5:** Seek appropriate private, local, state, and federal funding to implement housing programs for extremely low-, very low, low-, and moderate-income households.
- **Policy H-6:** Maintain and expand relationships with nonprofit housing agencies with the goal of providing more affordable housing
- **Policy H-8:** Offer incentives to developers (profit and nonprofit) for affordable housing, such as modified parking standards to minimize the cost of parking
- **Policy H-9:** Consider programs to provide workforce housing in Pismo Beach, particularly for those in the service industry.
- **Policy H-10:** Utilize state and federal funds to assist in creating affordable housing and rehabilitating unsound housing structures
- **Policy H-11:** Promote smaller rental units and a variety of housing types, such as courtyard housing, studios, and live/work units.
- **Policy H-12:** Promote the continued maintenance of existing mobile home parks.
- **Policy H-13:** Accommodate and promote the development of housing for those with special needs, such as shelters for the homeless; transitional housing; housing for seniors, extremely low-income households, large families, and female headed households; and housing for persons with physical, developmental, or mental disabilities.

The 6th cycle Housing Element is up-to-date and in compliance with current State law, and does not require updates or additional review as part of the GP/LCP Update.

4.12.3 Impact Analysis

a. Methodology

Population and housing trends in the City were evaluated by reviewing the most current data available from the U.S. Census Bureau, DOF, the current Pismo Beach Housing Element, and SLOCOG RHNA Plan. Impacts related to population are generally social or economic in nature. Under the California Environmental Quality Act (CEQA), a social or economic change generally is not considered a significant effect on the environment unless the changes are directly linked to a physical change.

b. Significance Thresholds

The following thresholds are based on Appendix G to the CEQA Guidelines. For purposes of this EIR, impacts related to population and housing are considered significant if implementation of the GP/LCP Update would:

1. Induce substantial population growth either directly or indirectly.
2. Displace substantial numbers of people or housing, necessitating the construction of replacement housing elsewhere.

For purposes of this analysis, "substantial" population growth is defined as growth exceeding SLOCOG population forecasts for the City of Pismo Beach. "Substantial" displacement would occur if allowed land uses would displace more residences than would be accommodated through growth accommodated by the project.

c. Project Impacts and Mitigation Measures

Threshold 1:	Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Impact PH-1 THE GP/LCP UPDATE WOULD NOT RESULT IN GROWTH IN THE CITY THAT IS SUBSTANTIALLY GREATER THAN PROJECTED IN THE SLOCOG REGIONAL GROWTH FORECAST. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

The GP/LCP Update would designate land uses and define the type of development that can occur throughout the City through the planning horizon year of 2040. Table 4.12-5 presents the 2019 and projected 2040 population and housing estimates for the City based on the San Luis Obispo Council of Governments (SLOCOG) 2050 Regional Growth Forecast for San Luis Obispo County and the proposed GP/LCP Update.

Table 4.12-5 Population and Housing Estimates

City of Pismo Beach	Existing (2019)[a]	General Plan and LCP Update 2040 Projections[b]	Change 2019 to 2040	Percent Change	SLOCOG Regional Growth Forecast 2040 Projections[c]	SLOCOG Projected Change 2020 to 2040[d]	SLOCOG Projected Percent Change
Population (# of residents)	8,237	10,216	1,979	24%	10,874	2,070	24%
Housing (# of units)	5,832	6,943	1,111	19%	7,125	1,079	18%

Sources/Notes:

a. DOF 2020. The existing conditions used for GP/LCP Update buildout projections was based on the 2019 data from the San Luis Obispo County Assessor's Office. Therefore, 2019 was used as the existing conditions year in the analysis for population and housing.

b. DOF 2020 + Draft Pismo Beach GP/LCP Update

c. SLOCOG 2017. The GP/LCP Update buildout projections were based on a maximum buildout scenario. Therefore, the SLOCOG "high scenario" for population growth was used in this analysis.

d. SLOCOG 2017. SLOCOG growth projections are based on five-year increments. Therefore, 2020 instead of 2019 information was used to calculate the projected change from existing conditions.

As shown in Table 4.12-5, the GP/LCP Update projections anticipate that the City will grow by approximately 1,979 new residents and 1,111 new housing units while SLOCOG projects that the City will grow by approximately 2,070 new residents and 1,079 occupied housing units. Both the City and SLOCOG population projections are equivalent to an average annual population growth rate of approximately 1 percent through the year 2040. The GP/LCP Update projections anticipate overall growth in housing units by approximately 19 percent by 2040 and SLOCOG projections similarly anticipate overall growth in occupied housing units by approximately 18 percent by 2040. Overall, the anticipated population growth in the City through 2040 under the GP/LCP Update is similar to the SLOCOG population growth projections for the City.

The land use plan and policies in the GP/LCP Update focus on working within the existing framework of the City, with limited vacant land, to incorporating Smart Growth tools and incentivizing sustainable urban development, while providing for sufficient services that support anticipated population growth within existing developed areas. Opportunities to accommodate population growth through GP/LCP Update implementation include accommodating greater density in areas such as the Downtown Core planning area and along the Highway 101 corridor in the Shell Beach planning area.

The following goal and policies in the GP/LCP Update Land Use and Community Design Element would ensure that growth in the City is managed and occurs in a manner consistent with community values and resources available.

Goal LU-7: A community where growth is concentrated in corridors and neighborhood centers where adaptive land reuse will contribute to a high quality of life for the entire community.

- **Policy LU-7.1: Growth Areas.** Prioritize growth in areas that complement adjacent neighborhoods, consider market and policy demand for housing and commercial needs, and revitalize economically obsolete uses.
- **Policy LU-7.2: Adaptive Reuse.** Support and incentivize adaptive reuse of buildings and sites to utilize existing infrastructure while enhancing the character of the community.

Implementation of these GP/LCP Update policies would minimize potential adverse effects associated with substantial population growth facilitated by the GP/LCP Update by accommodating growth in complementary areas of the City and limiting growth to a level supported by available resources.

One of the fundamental purposes of the GP/LCP Update is to direct future development in such a way as to minimize the impacts of growth by emphasizing the intensification and reuse of already developed areas, thus minimizing pressure to develop near coastal resources in the City. Development in accordance with the GP/LCP Update would not indirectly induce growth in the City by building roads or other infrastructure in new areas that would facilitate development. Therefore, this impact would be less than significant.

Mitigation Measures

Mitigation measures are not required.

Threshold 2:	Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Impact PH-2 IMPLEMENTATION OF THE GP/LCP UPDATE WOULD NOT DISPLACE SUBSTANTIAL NUMBERS OF EXISTING HOUSING OR PEOPLE, NECESSITATING THE CONSTRUCTION OF REPLACEMENT HOUSING ELSEWHERE. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

As shown in Table 4.12-5, the GP/LCP Update would enable development in Pismo Beach through the year 2040 that could add up to 1,111 residential units to the City beyond the existing 2019 housing stock. The maximum possible number of residential units is determined by the maximum densities allowed for each land use designation and the amount of land area within that designation. However, the maximum number of units is unlikely to be reached because every residential parcel in Pismo Beach would need to be developed to its maximum potential to reach the maximum number of units.

Most of Pismo Beach is built out and existing buildings are generally in good condition. Therefore, consistent with GP/LCP Update Land Use and Community Design Element Policy LU-7.2 to "Support and incentivize adaptive reuse of buildings and sites to utilize existing infrastructure while enhancing the character of the community," development and redevelopment under the GP/LCP Update would occur primarily occur in the Downtown Core area and along Highway 101 in the Shell Beach planning area. Focusing development in these areas would maximize the use of vacant and underutilized parcels and minimize displacement of existing housing and people that could otherwise result in development pressure on open space areas or steep slopes and environmentally constrained sites. Additionally, directing new growth in these areas would utilize existing transportation, utility infrastructure, and community and commercial uses.

In addition to Goal LU-7 and Policies LU-7.1 and LU-7.2 listed under Impact PH-1, the following goals, policies, and actions of the Land Use and Community Design Element of the GP/LCP Update would minimize the potential impacts associated with displacement of people and/or housing in the City:

Goal LU-1: A community with a variety of well-regulated land uses that support the diverse needs of both ~~visitors~~ residents and ~~residents~~ visitors.

- **Policy LU-1.1: Variety of Residential Uses.** The City shall include land designations to accommodate all income groups and a wide variety of densities and housing types.
  - **Action LU-1.1a Range of Housing Types.** In order to provide a variety of housing choices for all income groups, the City shall modify the zoning code to ensure the available zoning is consistent with the adopted Housing Element, and create residential areas with a wide variety of densities and housing types.
  - **Action LU-1.1c Density Bonus.** The City shall comply with density bonus requirements required by State law, while protecting coastal resources.
  - **Action LU-1.1d Protection of Existing Mobile Home Park.** The City shall retain the ordinance to protect the existing mobile home park in the Pismo Creek/Pismo Marsh planning area in order to retain its lower cost housing.

With incorporation of these goals and policies, the GP/LCP Update would result in a net increase in housing availability in the City and would provide housing to accommodate future growth.

The City's Housing Element serves as a tool to identify and provide for the housing needs of the community. It identifies recent demographic and employment trends that may affect existing and future housing demand and supply. California law requires the Housing Element to establish policies and programs that support the provision of an adequate housing supply for citizens of all income levels. The Housing Element addresses the City's ability to meet the regional housing needs as determined by the State of California. As the Housing Element is up-to-date and in compliance with State law, it does not require updates or additional review as part of the GP/LCP Update, but may amended in the future. Nevertheless, any development facilitated by the GP/LCP Update would be required to be consistent with applicable policies in the Housing Element.

The GP/LCP Update would result in the rezone of one residential parcel to a public/semipublic use. Such a change in zoning would result in the demolition of existing housing and a reduction of population by two. This would only occur when there is a new use proposed for the site and it is anticipated there would be sufficient available replacement housing available for the displaced residents. Displacement of additional existing residential units could also occur during redevelopment under the GP/LCP Update. If any such temporary displacement did occur, the 1,111 new residential units that could be added as a result of the GP/LCP Update, including a proportion of these as affordable housing in compliance with the City's existing Housing Element and proposed Land Use and Community Design Element policies, would accommodate displaced residences.

It is not known when or where displacement or construction of housing from redevelopment in the City would occur. Therefore, it cannot be determined what project-specific environmental impacts would result from the construction and operation of replacement housing. As potential residential development or redevelopment projects are identified, additional project specific environmental analysis, as necessary, would be completed at that time to evaluate project-specific impacts to displacement of existing residences. Because the GP/LCP Update and General Plan Housing Element include goals and policies to increase overall housing in the city, and there are no current plans for displacement of substantial numbers of housing, impacts related to displacement of existing residences from the GP/LCP Update would be less than significant.

Mitigation Measures

No mitigation measures are required.

4.12.4 Cumulative Impacts

Growth facilitated by the GP/LCP Update would occur within the bounds of the City and would be consistent with the regional projections for the City. In addition, the GP/LCP Update would result in an overall increase of housing. Therefore, the GP/LCP Update would not contribute to cumulative impacts related to displacement in the greater cumulative impact analysis area (San Luis Obispo County), and would not result in significant cumulative population growth impacts beyond the City and the incremental population impacts of the proposed GP/LCP Update would not be cumulatively considerable.

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4.13 Public Services and Recreation

This section assesses potential impacts to public services including fire and police protection, public schools, libraries, and parks and recreation, from the proposed General Plan/Local Coastal Plan (GP/LCP) Update. Impacts to water, wastewater, and solid waste services are discussed in Section 4.14, Utilities. Impacts to wildfire are discussed in Section 4.8, Hazards and Hazardous Materials.

4.13.1 Setting

a. Fire Protection

Fire protection, first response emergency medical services, ocean fire and rescue, and technical rescue services in Pismo Beach are provided by the City of Pismo Beach Fire Department (PBFD) in a cooperative agreement with CAL Fire. The PBFD provides a wide range of programs, which include fire suppression, emergency medical services, training disaster preparedness, fire prevention, weed abatement, cliff and ocean rescue, and hazardous materials response. In addition, the fire department runs a seasonal lifeguard program from May through September.

Personnel, Facilities, and Equipment

Fire protection services in the City of Pismo Beach (City) are provided through a cooperative fire protection agreement between the City and the California Department of Forestry and Fire Protection (CalFire). Two fire stations are maintained within the City: Pismo Beach Fire Station 63 and Shell Beach Fire Station 64. In 2023, the City Council approved a contract to design and build a new fire station on Bello Street

Pismo Beach Fire Station 64, located at 990 Bello Street is fully staffed year-round. The City is also served by Shell Beach Fire Station 63, located at 2555 Shell Beach Road. The Shell Beach Fire Station is fully staffed during the fire season and is partially staffed by two professional firefighters during the winter months (CalFire SLO 2021a, 2021b).

PBFD operates as a combination full-time and paid call (volunteer) system. Fire personnel for the City of Pismo Beach include a Battalion Chief, six Fire Captains, six Fire Apparatus Engineers, and an Administrative Assistant (City of Pismo Beach 2021). In addition, PBFD employs 25 seasonal United States Lifeguard Association Certified Lifeguards. The part time positions are limited to less than 1,000 hours per year. In 2019, Fire Station 64 responded to 1,794 calls for service and Fire Station 63 responded to 641 calls for service. PBFD strives to maintain a minimum four minute response time for fire and emergency medical services and a five-minute response time for all other emergency service calls (City of Pismo Beach 2014).

Aid Agreements

PBFD participates in both mutual aid and automatic aid agreements with neighboring communities. These reciprocal agreements give the PBFD authority to rapidly deploy resources to areas outside jurisdictional boundaries when the need arises. PBFD Firefighters and paramedics respond cooperatively with the U.S. Coast Guard to provide emergency services for incidents occurring offshore.

Wildland Fire Hazards

Wildland fire hazards are discussed in more detail in Section 4.7, Hazards and Hazardous Materials.

Climate Change and Future Fire Potential

Climate change and future fire potential are discussed in Section 4.8, Hazards and Hazardous Materials.

b. Police Protection

The Pismo Beach Police Department (PBPD) provides police protection services within the City. PBPD has two divisions: the Operations Division which includes code enforcement, equipment/fleet management, investigations, patrol operations, special operations, and training programs; and the Support Services Division which includes business and support operations, public safety communications, police finances, police records, and property and evidence. PBPD also runs or participates in a variety of community-based programs, including a citizen volunteer program, and the My Cop program, which assigns the same officer to specific areas of the City.

Personnel, Facilities, and Equipment

The PBPD headquarters are located at 1000 Bello Street. In 2023, the City Council approved a contract to design and build a new fire station on Bello Street. The PBPD received 23,447 calls for service and 5,152 emergency calls in 2019 (City of Pismo Beach 2019). PBPD officers serve a variety of roles including patrol, S.W.A.T., K9, D.A.R.E., investigations, communications, or records technicians. PBPD patrol services respond to calls for assistance and reports of criminal activity, act as a deterrent to crime, enforce state and local laws, identify community needs, provide support and assistance to the community and responds to emergencies (City of Pismo Beach 2019). The City strives to maintain a response time of five minutes to emergency situations (City of Pismo Beach 2014).

c. Schools

The Lucia Mar Unified School District (LMUSD) provides elementary school (Kindergarten through 12th Grade) public education services to Pismo Beach and one adult education program. There are 19 schools in LMUSD, two of which are City: Shell Beach Elementary School and Judkins Middle School. High School aged children (grades 9-12) attend Arroyo Grande High School, which is in the City of Arroyo Grande. LMUSD does not anticipate constructing a high school in Pismo Beach in the foreseeable future. Students residing north of Spyglass Park and west of United States Highway 101, including along Solano Road and Spyglass Drive, are served by the San Luis Obispo Unified School District (SLOUSD).

Enrollment

Table 4.13-1 identifies the enrollments and staffing for the 2019-2020 school year for the schools in the City. Table 4.13-2 shows enrollment trends for these two schools.

Table 4.13-1 2019-2020 Enrollment for LMUSD Schools in Pismo Beach

School Name	Grades	Enrollment	Teachers
Shell Beach Elementary	TK-6	400	17.5
Judkins Middle	6-8	481	24.3

Sources: National Center for Education Statistics 2021a, 2021b

Table 4.13-2 Enrollment Trends for SLCUSD Schools in Pismo Beach

School Name	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	% Change 2014-2015 to 2018-2019
Shell Beach Elementary	433	423	423	430	400	-7.6%
Judkins Elementary	427	447	480	489	481	12.6%

Source: California Department of Education 2021

Based on the data presented in Table 4.11-1, the student to teacher ratio was approximately 19.8 to 1 at Judkins Middle and approximately 22.9 to 1 at Shell Beach Elementary during the 2019-2020 school year. As shown in Table 4.11-2, enrollment at Shell Beach Elementary School decreased but enrollment at Judkins Middle School increased between the 2014-2015 and 2018-2019 school years.

Facilities Master Plan

During the 2013-14 school year, LMUSD updated its Facilities Master Plan. This process included updating educational specifications, conducting a needs assessment, and developing a vision for potential facility plans throughout LMUSD. The Facilities Master Plan provides macro-level information about the buildings, grounds, existing conditions, and enrollment within LMUSD and uses this information to determine the most optimal facilities for teaching and learning for each of the schools in LMUSD.

According to the facility data and assessment for Shell Beach Elementary School in the LMUSD Facilities Master Plan, Shell Beach Elementary School facilities total 46,243 square feet and require additional classrooms, workspaces, and storage areas. As of 2019, Shell Beach Elementary School is undergoing phased improvements to the parking area, classrooms, workspaces, and outdoor play areas (Shell Beach Elementary School 2019). Approved, pending, or in-process projects for Shell Beach Elementary School include improvements to a Multi-purpose room, parking, learning commons, and the replacement of portables (LMUSD 2021). According to the LMUSD 2014 Facilities Master Plan, Shell Beach Elementary School had available school capacity for 486 students.

According to the facility data and assessment for Judkins Elementary School in the LMUSD Facilities Master Plan, Judkins Middle School facilities total 22,159 square feet, and require an additional 26,447 square feet to meet LMUSD's standard elementary program model (LMUSD 2014). As of 2019, Judkins Middle School approved, pending, or in-process projects include the remodel of classrooms, windows, office areas, replacement of six portables, and roofing. Future projects for Judkins Middle include sewer improvements (LMUSD 2021). According to the LMUSD 2014 Facilities Master Plan, Judkins Middle School had available capacity for 586 students.

d. Public Libraries

Library services in the City are provided by the San Luis Obispo City-County Library system at the Shell Beach Library. This small neighborhood library, located at 230 Leeward Ave, is part of the San Luis Obispo City-County Libraries network of information centers serving six of the seven incorporated cities and all of the unincorporated communities in the County. Shell Beach Library offers circulation of books, magazines, newspapers, government publications, and other special publications, in addition to providing free internet access on library computers and via Wi-Fi (County of San Luis Obispo 2021). More extensive library services are provided to Pismo Beach residents at the South County Regional Library, located in Arroyo Grande, approximately five miles southeast of Pismo Beach. The main library of the San Luis Obispo City-County Library system is located in the City of San Luis Obispo and provides a bookmobile and other outreach services as well as a larger collection and more extensive reference resources than are available at the South County branch.

e. Parks, Recreation, and Open Space

Open Space/Recreation areas within the City are comprised of the 17-mile strip of coast and approximately 60 acres of active recreational parkland within a total of 11 parks. In addition, the City contains numerous linear parks, open space areas, coastal trails, and beaches. The City active recreational areas are supplemented through joint-use agreements with the Pismo Beach sports complex and recreational facilities at schools. Parks within the City provide play fields, tennis courts, and space for a number of activities such as picnics, youth programs, and other outdoor recreational activities.

Community-Based Open Space

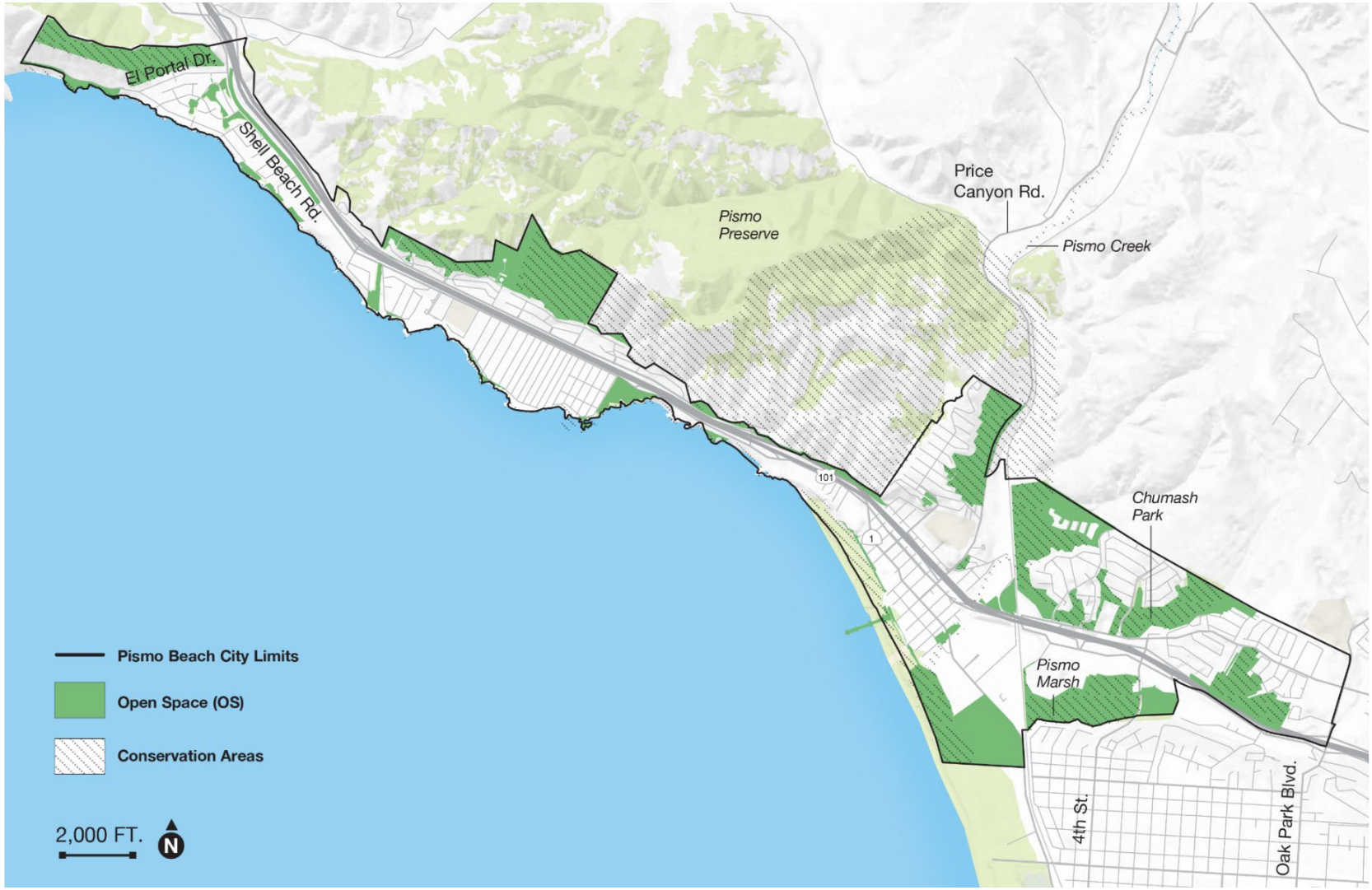
Community-based open space in Pismo Beach is designated for developed parks located in neighborhoods and commercial areas. Community-based open space is provided in approximately 11 parks in the City and includes playgrounds, picnic areas, outdoor shade shelters, playing fields and courts, and other man-made structures.

Under the California Quimby Act, cities can require land or in-lieu fees in order to achieve a minimum of three acres per 1,000 residents, with the possibility of increasing the requirement to a maximum of five acres per 1,000 residents if the City already provides more than three acres per 1,000 residents. The City owns and operates approximately 60 acres of accessible open space and parkland, with the City's current population of 8,237 residents, the City of Pismo Beach exceeds this requirement.

Resource-Based Open Space

Resource-based open space in Pismo Beach is primarily managed to protect and preserve natural resources while providing scenic and passive uses for residents and visitors. These are generally unimproved areas that preserve open space, such as environmentally sensitive habitat areas, coastlines, and wetlands. Open space areas and conservation area locations are shown in Figure 4.13-1.

Figure 4.13-1 Open Space and Conservation Areas



Source: City of Pismo Beach. ~~2021~~ 2023. Conservation and Open Space Element.
Note: For the purposes of this map, this figure does not include the submerged lands offshore that are within the Pismo Beach City Limits. See Figure LU-1 of the General Plan/Local Coastal Plan Land Use Element (Pismo Beach LAFCO-approved City Border) for the full Pismo Beach City Limits.

Many of the bluff top open areas in Pismo Beach include pedestrian and bicycle paths, benches, barbeques, and are part of the California Coastal Trail. Resource-based open space areas can be City-owned, State-owned, or privately owned lands. The Pismo Preserve is an approximately 900-acre open space area located on the eastern portion of the Freeway Foothills, to the north of Highway 101. The area is managed by the Land Conservancy of San Luis Obispo County. The area includes 11 miles of trails for hiking, mountain biking, and horseback riding. Pismo Marsh is an approximately 54-acre wetland located in the southeastern portion of the City. The area is managed by the California Department of Fish and Wildlife and does not currently offer interpretive, educational, or passive recreational access to the marsh.

4.13.2 Regulatory Setting

a. Fire Protection

Disaster Mitigation Act (2000-Present)

Section 104 of the Disaster Mitigation Act of 2000 (Public Law 106-390) requires a state mitigation plan as a condition of disaster assistance. There are two different levels of state disaster plans: "Standard" and "Enhanced." States that develop an approved Enhanced State Plan can increase the amount of funding available through the Hazard Mitigation Grant Program. The Act has also established new requirements for local mitigation plans.

National Fire Plan (NFP) 2000

The National Fire Plan was developed under Executive Order 11246 in August 2000, following a landmark wildland fire season. Its intent is to actively respond to severe wildland fires and their impacts to communities while ensuring sufficient firefighting capacity for the future. The plan addresses firefighting, rehabilitation, hazardous fuels reduction, community assistance, and accountability.

California Fire Plan

The Strategic California Fire Plan is the State's road map for reducing the risk of wildfire. The plan was updated in 2020, and directs each CAL FIRE Unit to prepare a locally specific Fire Management Plan. In compliance with the California Fire Plan, individual CAL FIRE units are required to develop Fire Management Plans for their areas of responsibility. These documents assess the fire situation within each of CAL FIRE's 21 units and six contract counties. The plans include stakeholder contributions and priorities, and identify strategic areas for pre-fire planning and fuel treatment as defined by the people who live and work with the local fire problem. The plans are required to be updated annually.

California State Multi-Hazard Mitigation Plan, draft (updated 2013)

The purpose of the State Multi-Hazard Mitigation Plan (SHMP) is to significantly reduce deaths, injuries, and other losses attributed to natural and human-caused hazards in California. The SHMP provides guidance for hazard mitigation activities emphasizing partnerships among local, state, and federal agencies as well as the private sector. The California Office of Emergency Services (OES) prepares the State of California Multi-Hazard Mitigation Plan (SHMP). The SHMP identifies hazard risks, and includes a vulnerability analysis and a hazard mitigation strategy. The SHMP is Federally required under the Disaster Mitigation Act of 2000 in order for the State to receive federal funding.

The Disaster Mitigation Act of 2000 requires a State mitigation plan as a condition of disaster assistance.

Wildland-Urban Interface Building Standards

Wildland urban interface building standards are discussed in Section 4.8, Hazards and Hazardous Materials.

California Fire and Building Code (2019)

The 2019 Fire and Building Code establishes the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety, and general welfare for the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. The provisions of this code apply to the construction, alteration, movement enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such building structures throughout the State of California.

Government Code 65302.5: General Plan Fire Safety Element Review

This statute requires the State Board of Forestry and Fire Protection to provide recommendations to a local jurisdiction's General Plan fire safety element at the time that the General Plan is amended. While not a direct and binding fire prevention requirement for individuals, General Plans that adopt the Board's recommendations will include goals and policies that provide for contemporary fire prevention standards for the jurisdiction.

San Luis Obispo County and San Luis Obispo County Flood Control and Water Conservation District Local Hazard Mitigation Plan

The San Luis Obispo County and San Luis Obispo County Flood Control and Water Conservation District Local Hazard Mitigation Plan (LHMP) identifies measures that the County will take to lower the hazard risk to property and life. Wildfire hazard mitigation features prominently in the plan due to the relatively rural nature of the County and its high fire risk, as identified by CAL FIRE.

City of Pismo Beach Local Hazard Mitigation Plan (2007)

The City of Pismo Beach Local Hazard Mitigation Plan identifies hazards specific to the City not included in the County LHMP. The City LHMP assesses risks posed by natural and human-caused hazards and develops a mitigation strategy for reducing the City's risks.

CAL FIRE/San Luis Obispo County Fire Community Wildfire Protection Plan

The CAL FIRE/San Luis Obispo County Fire Community Wildfire Protection Plan (CWPP) is discussed in Section 4.8, Hazards and Hazardous Materials.

County of San Luis Obispo Emergency Operations Plan

The San Luis Obispo County Emergency Operations Plan (EOP) addresses the planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies in or affecting San Luis Obispo County (County of San Luis Obispo 2016). A key intent of the County's EOP is to explain how overall emergency management is

coordinated countywide, to address concerns related to continuity of government for the County of San Luis Obispo, and related emergency management issues. The EOP is also intended to serve as a policy and planning reference. The EOP also identifies roles for departments within the County of San Luis Obispo and other local governments and encourages these agencies to develop and implement supporting emergency plans, standard operating procedures (SOPs) or emergency response checklists based on the provisions of the EOP.

b. Police Protection

California Commission on Peace Officer Standards and Training (POST)

The California Commission on Peace Officer Standards and Training (POST) advocates for, exchanges information with sets selection and training standards for, and works with law enforcement and other public and private entities. POST was established by the Legislature in 1959 to identify common needs that are shared by representatives of law enforcement.

c. Schools

California Code of Regulations

The California Code of Regulations, Title 5 Education Code, governs all aspects of education within the State.

California State Assembly Bill 2926 (AB 2926) – School Facilities Act of 1986 – was enacted by the State of California in 1986 and added to the California Government Code (Section 65995). It authorizes school districts to collect development fees, based on demonstrated need, and generate revenue for school districts for capital acquisitions and improvements. It also established that the maximum fees which may be collected under this and any other school fee authorization are $1.50 per square foot ($1.50/ft2) for residential development and $0.25/ft2 for commercial and industrial development.

AB 2926 was expanded and revised in 1987 through the passage of AB 1600, which added Section 66000 et seq. of the Government code. Under this statute, payment of statutory fees by developers serves as total mitigation under CEQA to satisfy the impact of development on school facilities. However, subsequent legislative actions have alternatively expanded and contracted the limits placed on school fees by AB 2926.

California Senate Bill 50 (SB 50)

As part of the further refinement of the legislation enacted under AB 2926, the passage of SB 50 in 1998 defined the Needs Analysis process in government Code Sections 65995.5-65998. Under the provisions of SB 50, school districts may collect fees to offset the costs associated with increasing school capacity as a result of development. The fees (Level One fees) are addressed based upon the proposed square footage of residential, commercial/industrial, and/or parking structure uses. Level Two fees require the developer to provide one-half of the costs of accommodating students in new schools, while the state would provide the other half. Level Three fees require the developer to pay the full cost of accommodating the students in new schools and would be implemented at the time the funds available from Proposition 1A (approved in 1998) are expended. School districts must demonstrate to the State their long-term facilities' needs and costs based on long-term population growth in order to quality for this source of funding. However, voter approval of Proposition 55 in

2004 precludes the imposition of the Level Three fees for the foreseeable future. Therefore, once qualified, districts may impose only Level Two fees, as calculated according to SB 50 (Greene 1998).

d. Parks and Recreation

Quimby Act

The Quimby Act was established by the California legislature in 1965 to provide parks for growing communities in California. The Act authorizes cities to adopt ordinances addressing park land and/or fees for residential subdivisions for the purpose of providing and preserving open space and recreational facilities and improvements. The Act requires the provision of a minimum of three acres of park area per 1,000 persons residing within a subdivision. The Act also specifies acceptable uses and expenditures of such funds.

State Public Park Preservation Act

This primary instrument for protecting and preserving parkland is the State Public Park Preservation Act. Under the Public Resource code, cities and counties may not acquire any real property that is in use as a public park for any non-park use unless compensation or land, or both, are provided to replace the parkland acquired. This provides no net loss of parkland and facilities.

State Street and Highway Code

The State Street and Highway Code assists in providing equestrian and hiking trails within the right-of-way of county roads, streets, and highways.

General Plan Parks, Recreation, ~~&~~ and Access Element

The Parks, Recreation, ~~&~~ and Access Element is an optional element of the General Plan which also includes an Access Component as required by the Coastal Act. The Parks, Recreation ~~&~~ and Access Element was last updated in December 2013 and is not included in the GP/LCP Update. The purpose of Access Component is to implement the state Coastal Act shoreline access polities to ensure the public's right to gain access to the shoreline. The goals and policies considered in this element guide the City in providing parks, open space and trails, and in developing recreational facilities.

4.13.3 Impact Analysis

a. Methodology and Significance Thresholds

According to Appendix G to the State CEQA Guidelines, impacts related to public services from the proposed project would be significant if it would:

1. Result in substantial adverse physical impacts associated with the need for or provision of new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other objectives for:
   - Fire Protection;
   - Police Protection;
   - Schools;
   - Parks; and
   - Other Public Facilities.

Impacts related to recreation from the proposed project would be significant if it would:

2. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.
3. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

b. Project Impacts and Mitigation Measures

Threshold 1a:	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, or the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?
Threshold 1b:	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, or the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?
Threshold 1c:	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered schools, or the need for new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?
Threshold 1e:	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered public facilities, or the need for new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

Impact PUB-1 DEVELOPMENT FACILITATED BY THE GP/LCP UPDATE WOULD RESULT IN AN INCREASE IN THE CITY'S POPULATION. THIS WOULD INCREASE DEMAND FOR FIRE, POLICE, SCHOOL, AND OTHER CITY SERVICES AND POTENTIALLY CREATE THE NEED FOR NEW POLICE, FIRE, SCHOOL, OR OTHER SERVICE FACILITIES. HOWEVER, ~~COMPLIANCE WITH POLICIES IN THE GP/LCP UPDATE,~~ PAYMENT OF CITY REQUIRED PUBLIC FACILITIES IMPACT FEES, AND MANAGEMENT OF FUTURE GROWTH WOULD AVOID ADVERSE ENVIRONMENTAL EFFECTS ASSOCIATED WITH THE PROVISION OF NEW OR PHYSICALLY ALTERED FIRE, POLICE, SCHOOL, OR OTHER PUBLIC FACILITIES. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Development facilitated by the proposed GP/LCP Update would result in an increase to the City's population, which would result in an incremental increase in demand for fire and police protection, schools, and other public services such as library services, potentially creating the need for new or expanded facilities supporting these public services.

The additional development and increased population in Pismo Beach resulting from the GP/LCP Update, would increase the demand for fire services. As future buildout occurs under the GP/LCP Update, the City would evaluate operations and deployment of fire services to efficiently use resources. New development would be required to comply with all applicable federal, State, and local regulations governing the provision of fire protection services, including adequate fire access,

fire flows, and number of hydrants. This includes consistency with the current California Fire Code, which contains project-specific requirements such as construction standards in new structures and remodels, road widths and configurations designed to accommodate the passage of fire trucks and engines, and requirements for sprinkler systems and minimum fire flow rates for water mains. The PBFD would review building and facility plans through the City's development review and building permit processes. PBFD personnel would also inspect new and remodeled buildings and facilities to ensure that the structures would meet State and local fire codes and standards.

The additional development and increased population in Pismo Beach resulting from the GP/LCP Update would also increase the demand for police protection services. The demand for police services in Pismo Beach is determined not only by the needs of the resident population, but by the exceptional circumstances created by the presence of a large fluctuating visitor population. This transient population consists of both overnight visitors residing in the hotels, motels, and recreational facilities within the City, adjacent cities, and county areas. Day visitors attending special events also contribute to the City's service population.

Given the high demand for fire and police services in the City, fire and police staffing needs in Pismo Beach are likely to increase which could require the construction of new facilities. In 2023, the City Council approved a contract to design and build a new fire station and police station on Bello Street to accommodate anticipated increased demand for emergency services. The ~~location and~~ potential impacts of these new ~~or expanded~~ facilities are unknown at this time and separate environmental review would be required. An evaluation of the physical effects of such facilities would be speculative at this time. The GP/LCP Update would facilitate development in areas of Pismo Beach that are currently developed. Construction of the new emergency service facilities~~, if required,~~ would ~~likely~~ occur on previously disturbed or developed areas. Furthermore, the City has identified the requirements for additional personnel and equipment as functions of the capital improvement planning program. New development is required to pay Capital Facilities fees and contribute their fair share to the cost of funding City fire and police services.

~~The GP/LCP Update Facilities Element includes the following goals and policies that would ensure adequate fire and police protection is provided in Pismo Beach.~~

~~**Goal F-1: Emergency Services. Continue to provide excellent emergency services to the community.**~~

- ~~**Policy F-1.1: Quality of Service.** Provide courteous, responsive, and efficient police and fire services.~~
- ~~**Policy F-1.2: Water Pressure.** Ensure that sufficient water service and pressure is available through the City for use in firefighting.~~
- ~~**Policy F-1.3: Increasing fire hazards.** Encourage Cal Fire and the surrounding communities to continue to work together on a regional effort to explore and combat the trends of increasing fire hazards associated with drought and increasing temperatures and continue to develop new fire hazard mitigation strategies.~~
- ~~**Policy F-1.4: Emergency Preparedness.** Work with Cal Fire, the Pismo Beach Police Department, residents, business owners, and property owners to ensure that sufficient emergency plans and resources are established and well known by all stakeholders.~~
- ~~**Policy F-1.5**: **Fire and emergency services.** Continue to work with Cal Fire to ensure continued excellent fire and emergency services.~~

- ~~**Policy F-1.6: Police Services.** Work with all available resources to ensure continued excellent and cost-effective police services in Pismo Beach~~.

As shown in Table 4.13-3, development facilitated by the GP/LCP Update would result in an increase of approximately 78 K-12 age students. The generation rate used for this analysis is considered conservative, as it assumes all school-age children would attend public schools and does not account for private schools or homeschooling. These additional students would increase enrollment in schools in Pismo Beach, potentially requiring the construction of new or expanded existing school facilities. However, according to the LMUSD 2014 Facilities Master Plan Shell Beach Elementary School had available school capacity for 486 students and Judkins Middle School had available capacity for 586 students. Therefore, the 78 additional students would not exceed the capacity of the schools in the City. Therefore, the GP/LCP Update would not be expected to directly result in the need for new or expanded schools, the construction of which could result in adverse impacts to the environment.

Table 4.13-3 Projection of Students from New Residential Development

Grade Level	Projected Number of New Units	Student Yield Rates	Projected Students
K-12	1,111	0.7	78

Note: Student yield rates comprise the student generation rate for Unified school districts of 0.7 per single family residence set by the State of California Office of Public School Construction.

Source: California Department of General Services 2008

Nevertheless, all future development associated with the GP/LCP Update would be required to pay school impact feet which, pursuant to Section 65995(3)(h) of the California Government Code (SB 50, chaptered August 27,1998), are "deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization." Payment of school impact fees would reduce impacts to less than significant.

The additional increase in population in Pismo Beach would also result in increased demand for public services such as libraries. The City of Pismo Beach does not provide library services to City residents. Library services are provided by the San Luis Obispo City-County library system, which maintains a neighborhood library in Shell Beach. Extensive library services are provided to Pismo Beach residents at the South County Regional Library, located in Arroyo Grande. The additional population in Pismo Beach could increase demand for library services. Property taxes fund the County libraries, which development facilitated by the GP/LCP Update would be required to pay. Given the existing demand for library services in the County, County library staffing needs are likely to increase which could require the construction of new facilities. The location and potential impacts of new or expanded facilities are unknown at this time and separate environmental review would be required. An evaluation of the physical effects of such facilities would be speculative at this time. The GP/LCP Update would facilitate development in areas of Pismo Beach that are currently developed. Therefore, construction of new library facilities, if required, would likely occur on previously disturbed or developed areas. Furthermore, property taxes paid by new developments would reduce impacts to less than significant.

~~Compliance with the goals and policies in the GP/LCP Update and p~~ Payment of City-required public facilities and school developer fees~~,~~ would offset the increased demand of developments on public services and facilities. New public service facilities that would be constructed in the City would require project-specific environmental analysis and implementation of any necessary project-

specific mitigation prior to being considered for approval. Therefore, this impact would be less than significant.

Mitigation Measures

No mitigation would be required.

Threshold 1d:	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered parks, or the need for new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?
Threshold 2:	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
Threshold 3:	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Impact PUB-2 DEVELOPMENT ASSOCIATED WITH THE GP/LCP UPDATE WOULD ADD POPULATION TO THE CITY THAT WOULD INCREASE USE OF PARKS AND RECREATION FACILITIES. HOWEVER, PARK FACILITIES HAVE ADEQUATE CAPACITY AND WITH COMPLIANCE WITH THE GP/LCP UPDATE POLICIES IMPACTS RELATED TO CONSTRUCTION OF PARK FACILITIES WOULD BE LESS THAN SIGNIFICANT.

Development facilitated by the proposed GP/LCP Update would result in an increase to the City's population which would result in an incremental increase in demand on existing public parks or other recreational facilities. The City currently owns and operates approximately 60 acres of accessible open space and parkland, providing an existing park service ratio of approximately 7 acres per 1,000 residents for the existing population of 8,237. Although there are over 3,000 acres of State- and privately-owned parks and beaches in and around the City that provide additional recreational opportunities to City residents and visitors, State- and privately-owned facilities are not typically relied upon as City recreational facilities that count toward the applicable Quimby Act parkland standard of three acres per 1,000 residents. The GP/LCP Update would not expand the City-owned public parks and recreational areas. Therefore, based on the 2040 projected population of 10,216 the park service ratio would be reduced to approximately 6 acres per 1,000 people under buildout conditions.

The Community Vision section of the GP/LCP Update establishes a list of goals for the City to provide a comprehensive vision for Pismo Beach in the future and identify the community's key priorities. The community values include a goal for enhancing the tourist-based economy and maintaining the City's small beach town character. The GP/LCP Update Conservation and Open Space Element includes the following goals and policies that would facilitate development in a manner that provides for the parks and recreational service needs while achieving the vision for the community.

Goal COS-3: A community that provides and protects a variety of conservation areas such as the ocean and beaches, bluffs, dunes, foothills, marshes, creeks, and wetlands that act as suitable coastal and inland habitat~~,~~ ~~M~~ migratory corridors, and ecologically valuable topography.

- **Policy COS-3.7: Pismo Creek.** Pismo Creek shall be retained in its natural state and protected from significant alterations.

- ~~**Policy**~~ **Action COS-3.8a: Price Canyon.** Enhance the visual, recreational, and biological quality of Price Canyon.

- **Policy COS-3.9: Pismo ~~Creek Marsh~~ Lake Protection.** Pismo ~~Marsh~~ Lake shall be retained in its natural state and protected from significant alteration.
- **Policy COS-3.10: Foothills.** The coastal and upland foothills of Pismo Beach, located in the Freeway Foothills, Pismo Oaks, and Pismo Heights planning areas, shall be conserved and enhanced to provide valuable recreational and habitat resources.

In addition, the existing Parks, Recreation ~~&~~ and Access Element (which is not part of the GP/LCP Update), includes the following policies for replacement and/or provision of parks associated with future development within the City:

- **Policy PR-6 Retention of All Existing Parks and Dedicated Open Space.** Any proposed loss of parks or dedicated open space areas shall be replaced at a minimum with the equivalent quality of acreage or facilities lost.
- **Policy PR-9 Private Sector Open Space, Parks and Recreation**. The City shall recognize the contribution of the private sector to parks and recreation and encourage cooperative continuation and expansion of such contributions. All new planned developments shall be required to provide either public and/or private parks and recreation facilities. When possible said areas shall connect with adjoining park and recreation areas, which are existing or planned. All such development shall either be dedicated in fee to the public or have a dedicated open space easement placed upon the property to preclude future development.

Additionally, development under buildout of the GP/LCP Update would be required to pay impact fees pursuant to PBMC Section 15.10.050, for park and recreation improvements at the time of building permit applications which would pay for the capital costs of new or expanded park and recreational facilities. Implementation of these GP/LCP Update goals and policies, in addition to payment of required park impact fees pursuant to PBMC Section 15.10.050, would ensure that growth in the City would not result in adverse environmental effects associated with the physical deterioration of public parks and recreational facilities. The City of Pismo Beach currently exceeds the parkland ratio of 3 acres per 1,000 persons established by the Quimby Act, and would continue to exceed this ratio with buildout of the GP/LCP Update. Therefore, the GP/LCP Update would not contribute to the need for new or expanded park or recreational facilities. This impact would be less than significant.

Mitigation Measures

No mitigation is required.

4.13.4 Cumulative Impacts

The scope for potential cumulative impacts to public services and recreation includes all projects within the same service area. The analysis in this section examines the potential impacts to public services and parks and recreational facilities in Pismo Beach as a result of all potential buildout in the service areas for these resources. Therefore, the analysis of impacts to these services and associated facilities is cumulative in nature.

A cumulative impact to fire services would occur if growth in the service area requires physical expansion of facilities such as construction of new fire facilities that would result in adverse physical impacts. Fire protection services are maintained and expanded through property taxes and

collection of fees that grow incrementally as development occurs within a service area. Growth projections in the GP/LCP Update would be within SLOCOG projections. Furthermore, the GP/LCP Update would include goals and policies to provide funding and reduce the demand for new or expanded fire protection facilities. However, it is likely that new or expanded fire protection facilities would be required to serve cumulative development in the County. As described under Impact PUB-1 above, the GP/LCP Update would generate additional demand for fire protection services. While development facilitated by the GP/LCP Update would generate additional demand, the payment of fair share impact fees during the building permit process for all development under the GP/LCP Update would ensure fire departments are adequately funded to serve new developments. Development facilitated by the GP/LCP Update would have an incremental contribution to cumulative impacts associated with fire protection services but the contribution would not be cumulatively considerable.

Cumulative impacts to police protection services would occur if growth within the service area requires the construction of a new or the expansion of an existing police station that would result in significant adverse physical impacts. Development facilitated by the GP/LCP Update would result in the need for additional police officers to be added to the PBPD. The increase in staffing required to maintain service rations to serve cumulative development may require modifications or expansion of existing police facilities to accommodate the increased staff. The need for additional officers would be distributed throughout the service area. Additionally, development facilitated by the GP/LCP Update would be required to pay a fair share of impact fees during the building permit process to fund the provision of public services, including police protection services. Therefore, development facilitated by the GP/LCP Update would not have a cumulatively considerable contribution to a significant cumulative impact related to police protection services.

Cumulative impacts to school facilities would occur if growth within a school district would result in significant adverse physical impacts with the provisions for, or the need for, new or physically altered school facilities. The GP/LCP Update anticipated the addition of approximately 1,111 new housing units in the City, which would generate an additional estimated 78 new students in the LMUSD and would incrementally increase demand for school facilities. As described under Impact PUB-1, schools within the City of Pismo Beach would be able to accommodate new and incoming students from new development in the City. Cumulative development, including development facilitated by the GP/LCP Update, would be required to pay school impact fees at the time building permits are issued. These fees are used by the local school district to maintain existing facilities and expand capacity to accommodate increased enrollment resulting from cumulative development within the LMUSD service boundaries. Because the LMUSD has adequate capacity to serve cumulative development, cumulative impacts would be less than significant, and the GP/LCP Update would not have a cumulatively considerable contribution to a significant cumulative impact regarding school services.

Cumulative impacts to libraries would occur If growth within the library system would require the construction of new or the expansion of an existing library that would result in adverse physical impacts. Library services are maintained and expanded through collection of property taxes from developments within the service area. Growth projections within the GP/LCP Update would be within the SLOCOG growth projections. Growth facilitated by the GP/LCP Update would increase the demand for new libraries. However, cumulative projects are expected to utilize existing library facilities. Collection of property taxes from all new developments would ensure that County libraries are adequately funded to serve new development. Therefore, because new, unplanned, or expanded facilities would not be required, cumulative impacts would be less than significant, and

the GP/LCP Update would not have a cumulatively considerable contribution to a significant cumulative impact regarding library services.

Cumulative impacts to parks and recreational facilities would occur if development, and related population growth, within the City increases the use of existing facilities such that substantial physical deterioration of those facilities would occur, or if new facilities would need to be constructed or existing facilities expanded that would have an adverse effect on the environment. Development facilitated by the GP/LCP Update, which would result in additional population growth, would be required to comply with the Quimby Act, which may require parkland dedication or an in-lieu fee and to provide on-site space and recreational amenities. Development facilitated by the GP/LCP Update would result in an increase in the use of existing recreational facilities, but the payment of parkland fees would ensure cumulative projects are served by adequate park and recreational facilities. Therefore, cumulative impacts related to new or expanded park and recreation facilities, or the physical deterioration of existing park and recreation facilities, would be less than significant, and the GP/LCP Update would not have a cumulatively considerable contribution to a significant cumulative impact to park and recreation facilities.

The GP/LCP Update would result in less than significant impacts to fire, police, school, parks and recreational facilities, and other public services and facilities. Furthermore, growth anticipated under the GP/LCP Update would be within SLOCOG projections. Therefore, although the GP/LCP Update would have an incremental contribution to cumulative impacts associated with public services and recreation, the contribution would not be cumulatively considerable. Cumulative impacts would be less than significant.

4.14 Transportation

This section summarizes Pismo Beach's existing local and regional circulation system in order to evaluate the potential environmental effects of the proposed General Plan/Local Coastal Plan (GP/LCP) Update related to transportation and traffic. This section specifically includes an analysis of the GP/LCP Update's consistency with applicable local, regional and state land use plans, policies, and regulations and discusses the potential for the implementation of the GP/LCP Update to increase local and regional vehicle miles traveled (VMT), increase transportation hazards, or interfere with emergency access. Transportation data in this section is based on the City's updated Circulation Element (2021), as well as the Transportation Impact Analysis (TIA) (GHD Inc. 2021; Appendix G) and the City of Pismo Beach Citywide Transportation Model and Circulation Study Final Report (Hatch Mott McDonald 2016; Appendix H).

4.14.1 Setting

a. Existing Roadway Network

Pismo Beach is located on the southern coast of San Luis Obispo County and is included as part of the "Five Cities" region, along with Arroyo Grande, Grover Beach, Shell Beach and Oceano. United States 101 (U.S. 101), an important route for state-wide travel, traverses through the center of Pismo Beach and provides direct access to the adjacent cities of Arroyo Grande and Grover Beach, along with access to San Luis Obispo to the north and Santa Maria to the south. U.S. 101 provides nine full or partial access interchanges within the Pismo Beach city limits. Eight roadways provide access across U.S. 101 within the city. Pismo Beach's roadways generally follow a cardinal grid system within downtown and the Shell Beach areas, which are parallel and perpendicular to U.S. 101. Other major routes through Pismo Beach that provide regional access include State Road (SR) 1 (Dolliver Street/Pacific Coast Highway), Price Canyon Road, Noyes Road, and SR 227. Pismo Beach also maintains a variety of arterial and collector roadways that provide local circulation routes.

The functional street classification system in the Pismo Beach is based on a hierarchy of street types organized by the service each provides. A route's design is determined by its functional street classification and its projected traffic levels. The goal is to achieve safe and convenient movement at the development intensity planned, consistent with the General Plan's Land Use and Community Design Element.

Roadways in Pismo Beach are classified as follows:

- **Freeways.** Freeways are intended to provide high-speed intra- and inter-regional mobility. Access to freeways is usually restricted to arterial roads through interchanges that are spaced at least one mile apart. US 101 is the only freeway in the City of Pismo Beach with multiple full or partial interchanges.
- **Arterials.** Arterials are intended to connect areas of major activity within the urban and suburban area. They also work to distribute traffic between freeways and collector streets. Arterials usually have limited direct access to adjacent land uses.
- **Collectors.** Collectors are intended to function as connector routes between local and arterial streets. They provide access to residential, commercial, and industrial areas, and typically provide direct access to adjacent properties.

- **Local Streets.** Local streets are intended to provide direct access to adjacent properties and allow for the localized movement of daily traffic. They are characterized by lower traffic volumes and low speed limits (25-30 miles per hour [mph]). Bike lanes are not required on local streets, but it is assumed that these roads are bike-friendly and may be informally considered a Class III Bike Route.

b. Pedestrian and Bicycle Facilities

The city provides a comprehensive network of pedestrian and bicycle paths that support commuter and recreational walking and biking. Pedestrian and bicycle facilities in Pismo Beach are described below.

Pedestrian Facilities

Existing pedestrian facilities in the city consist of sidewalks, shared use paths, curb ramps, and marked crosswalks. Most streets in Downton Pismo Beach have sidewalks on both sides of the street but there are streets in Shell Beach, Pismo Heights, along portions of Mattie Road, and within private mobile home parks, parks and gated communities where sidewalks are not provided or are only intermittently available. Curb ramps throughout the city provide wheelchair and stroller access to sidewalks at the corner of intersections. Truncated domes on sidewalks near most intersections alert visually impaired pedestrians as they approach a street crossing.

The city maintains two types of crosswalks. Controlled crosswalks are located at intersections with stop signs or traffic signals, requiring drivers to stop at pedestrian crossings. At uncontrolled crosswalks, drivers are legally required to yield to pedestrians, but drivers are not required to stop if a pedestrian is not present. The city also maintains several types of crosswalk enhancements in order to improve safety for pedestrians. For example, marked crosswalks provide specific striping that delineate a street crossing for pedestrians. Existing pedestrian facilities in Pismo Beach are shown in Figure 4.14-1.

Bicycle Facilities

The five types of bikeways identified by the California Department of Transportation (Caltrans) in the Highway Design Manual are identified below (Caltrans 2020).

- **Shared Roadway (No Bikeway Designation).** A majority of bicycle travel throughout California occurs on streets and highways without specific bikeway designations. This trend may continue to be true in the future as well.
- **Class I Bikeway (Multi-Use/Bike Path).** A Class I bikeway is a multi-use facility that provides travel on a paved right-of-way completely separated from a street or highway. They usually either provide a recreational opportunity or serve as a direct high-speed commute route. Cross flow by motor vehicles is minimized to avoid conflict with bicycles and pedestrians.
- **Class II Bikeway (Bike Lane).** A Class II bikeway provides a striped and stenciled lane for one-way travel on a street or highway and is intended to delineate the right of way, creating more predictable movements from both bicyclists and motorists. These bike lanes are usually established along streets in corridors where there is significant bicycle demand in order to improve conditions for bicyclists.
- **Class III Bikeway (Bike Route).** A Class III bikeway is a shared use facility (normally with motor vehicles) which serve to either provide continuity to other bicycle facilities or designate preferred routes through high demand corridors.

- **Class IV Bikeway (Cycle Tracks or Separated Bikeway).** A Class IV bikeway is intended for the exclusive use by bicycles and features a separation between the bikeway and the through vehicular traffic.

Pismo Beach recognizes each of these five bikeways in addition to "Bicycle Boulevards," which are streets with specific conditions created to enhance bicycle safety and optimize travel for bicycles rather than vehicles. Bicycle boulevards use traffic calming strategies such as diverters with bicycle cut-outs that allow cyclists to continue to the next block but discourage through traffic by vehicles.

Bicycle facilities in Pismo Beach can also be generally classified in one of two ways: 1) as bikeways or specific facilities provided for bicycle travel, and 2) as support facilities for use by bicyclists while travelling or once they have reached their destination. Support facilities in Pismo Beach include pedestrian and bicycle bridges and overpasses, short and long-term bicycle parking and gear storage, showers and changing stations, wayfinding signage, benches, water fountains, and restrooms. Existing bicycle facilities in Pismo Beach are shown in Figure 4.14-2.

c. Public Transit

The San Luis Obispo Regional Transit Authority (RTA) is a joint powers authority providing fixed-route regional service throughout San Luis Obispo County. RTA operates four transit routes through Pismo Beach, described below.

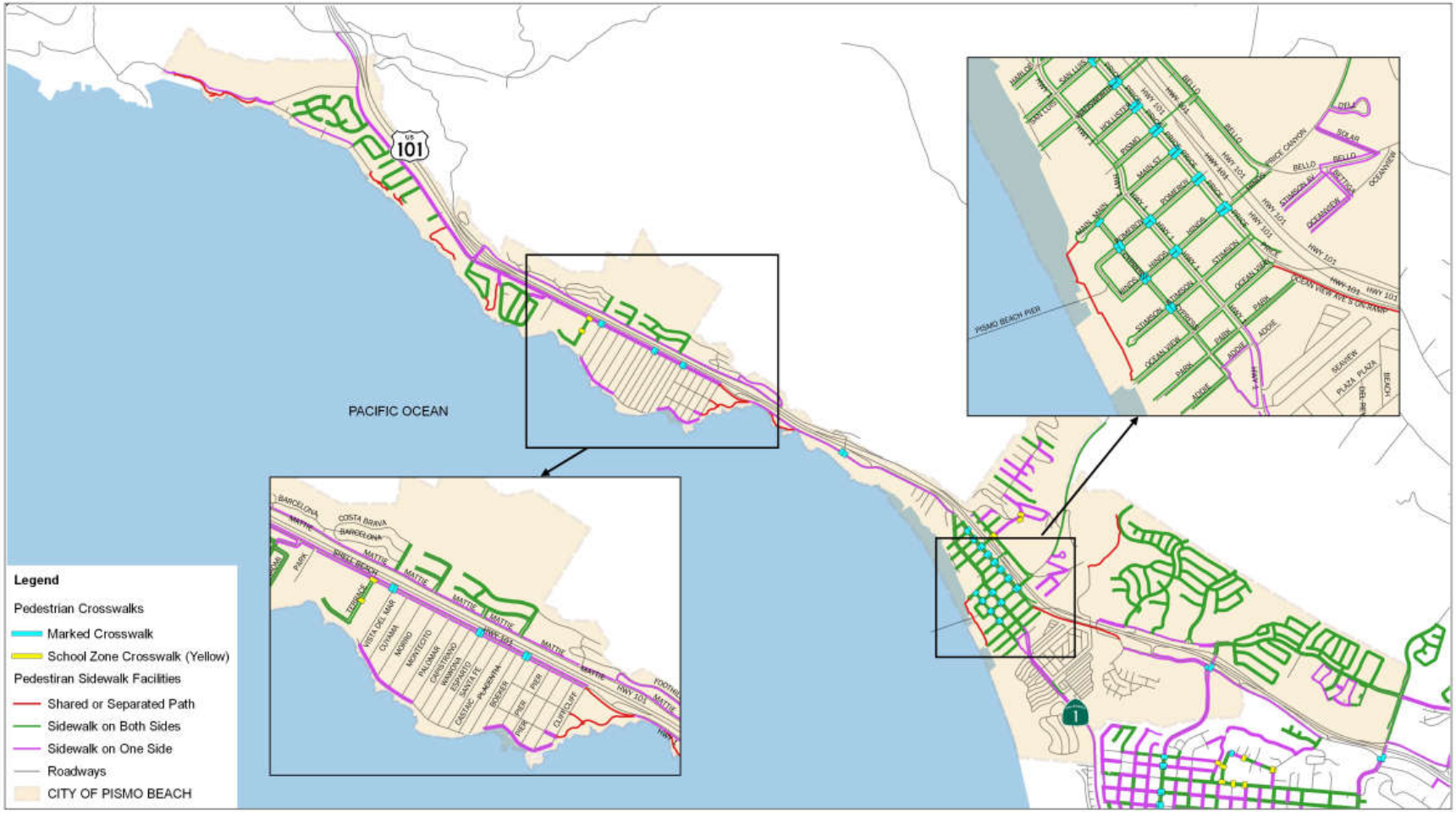
Regional Transit

RTA's Route 10 is a regional route that runs between San Luis Obispo and Santa Maria, operating hourly on weekdays and every three hours on Saturday (RTA 2017). Route 10 takes 3 trips in each direction on Sunday. The only stop along this route in Pismo Beach is at the Pismo Beach Premium Outlets. However, the remaining routes provide local service within Pismo Beach and to the surrounding communities. Routes 21 and 24 travel in opposite directions on overlapping portions of their routes (RTA 2020). Route 21 travels clockwise while Route 24 travels counterclockwise. Route 21 provides service to Shell Beach, downtown Pismo Beach, the Pismo Beach Premium Outlets, downtown Grover Beach, and eastern Arroyo Grande. Route 21 follows a similar route but does not serve Shell Beach and instead serves downtown Arroyo Grande. Both Route 21 and Route 24 operate hourly between 6:30 AM and 6:30 PM.

Local Transit

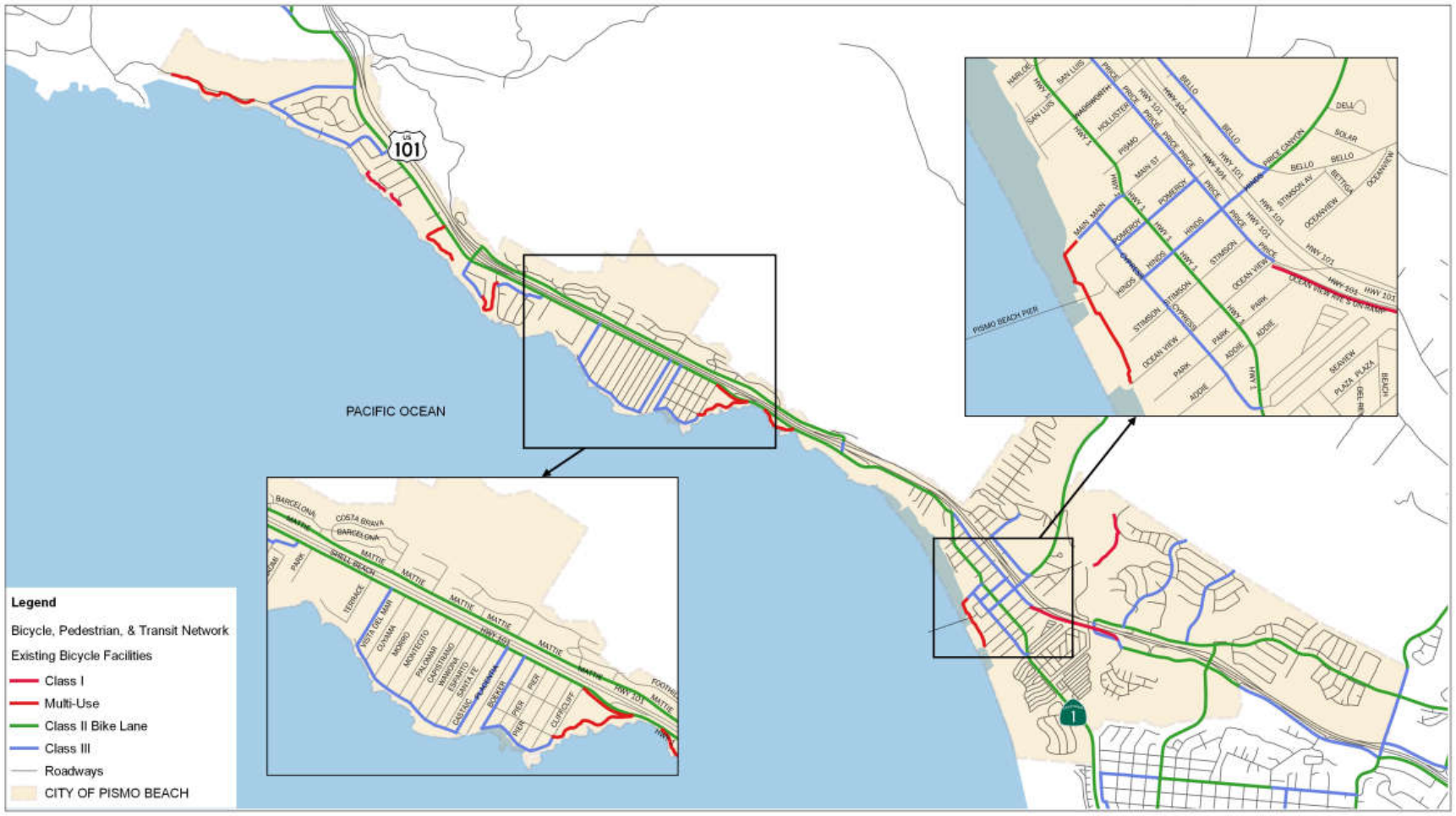
RTA operates a local bus in Pismo Beach, called the Avila to Pismo Trolley, that is designed to resemble a trolley car. The Avila to Pismo Trolley only operates between March and October and provides extended service in the peak summer months between June and September (RTA 2021). During standard months, the trolley operates hourly between 10:00 AM and 4:00 PM on Saturday and Sunday only. During extended service in the summer months, the trolley operates between 10:00 AM and 6:00 PM Thursday through Sunday. The trolley ultimately runs on a loop between Avila Beach and Pismo Beach and makes many local stops within greater Avila Beach, Shell Beach, and downtown Pismo Beach.

Figure 4.14-1 Existing Pedestrian Facilities



Source: City of Pismo Beach, Circulation Element (~~2021~~ 2023)
Note: For the purposes of this map, this figure does not include the submerged lands offshore that are within the Pismo Beach City Limits. See Figure LU-1 of the General Plan/Local Coastal Plan Land Use Element (Pismo Beach LAFCO-approved City Border) for the full Pismo Beach City Limits.

Figure 4.14-2 Existing Bicycle Facilities



Source: City of Pismo Beach, Circulation Element (~~2021~~ 2023)
Note: For the purposes of this map, this figure does not include the submerged lands offshore that are within the Pismo Beach City Limits. See Figure LU-1 of the General Plan/Local Coastal Plan Land Use Element (Pismo Beach LAFCO-approved City Border) for the full Pismo Beach City Limits.

Rail Service

A single railroad track, owned by the Union Pacific Railroad, extends through Pismo Beach between San Luis Obispo and Grover Beach. The nearest roadway crossing of the railroad in the vicinity of Pismo Beach is located south at Grand Avenue in Grover Beach, and the nearest rail station is located adjacent to the Grand Avenue crossing. The train is serviced four times a day by the Pacific Surfliner, operated by Amtrak, on its route between San Luis Obispo and San Diego. Additional buses serve this station three times a day, connecting to other train stations along the Pacific Surfliner route. Twice-daily round trip buses from the station service passengers to the Central Valley and Southern California.

d. Travel Characteristics

Travel Modes and Distance Travelled

U.S. Census Bureau data for mode of travel to and from places of employment provide general travel characteristics and patterns of Pismo Beach residents. As shown in Table 4.14-1, Pismo Beach residents have a lower rate of carpooling, walking to work, biking to work, and taking other modes of transportation to work such as taxicabs or motorcycles compared to the countywide average. However, Pismo Beach residents have a lower rate of driving alone and a higher rate of utilizing public transit when travelling to work compared to the countywide average, and residents have a substantially higher rate of working from home compared to the countywide, statewide, and national averages.

In comparison to state and countywide trends, the mean travel time of Pismo Beach residents to work in 2019's 5-Year Estimates was approximately 22.3 minutes, with San Luis Obispo County and state commute travel times averaging approximately 21.7 and 29.8 minutes, respectively (U.S. Census Bureau 2019).

Table 4.14-1 Travel Mode Comparison for Work Trips

	Percentage of Work Trips						
Jurisdiction	Drive Alone	Carpool	Transit	Walk	Bicycle	Work at Home	Other
Pismo Beach	72.1%	6.6%	3.7%	2.6%	0.6%	14.1%	0.3%
San Luis Obispo County	73.0%	10.8%	1.3%	4.6%	2.0%	7.4%	0.9%
California	73.7%	10.1%	5.1%	2.6%	1.0%	5.9%	1.6%
United States	76.3%	9.0%	5.0%	2.7%	0.5%	5.2%	1.3%

Notes: Data is provided for 2019 for working age residents. Working age is considered 16 years old.
Source: U.S. Census Bureau 2019 American Community Survey (ACS) 5-Year Estimates

Existing Traffic Volumes and Capacity

Pursuant to Senate Bill (SB) 743, vehicle miles traveled (VMT) has replaced automobile delay, historically measured as level of service (LOS), as the appropriate metric for evaluating environmental transportation impacts under the California Environmental Quality Act (CEQA). VMT measures the amount of travel on roadways by all types of motorized vehicles carrying passengers or cargo. Each mile traveled is counted as one vehicle mile regardless of the number of people in the vehicle. VMT is typically expressed as VMT per day. The baseline (2019) VMT generated by the City,

representing the existing regional land uses and transportation network, is 11,226,484 (Appendix G).

Traffic Safety

The California Office of Traffic Safety (OTS) compares collision rates for cities throughout the state. There are 75 cities in the state that are in the same category as Pismo Beach with populations between 2,501 and 10,000. In 2018, the most recent year for which collision rate data is published, Pismo Beach was ranked 16th in its category for fatal and injury collisions, indicating that 15 similar-sized cities had higher collision rates and 59 had lower collision rates. The highest concentration of collisions in Pismo Beach occurs within the city's downtown core, with the most common contributing factor being visibility for vehicles turning from side streets and intersections controlled by two-way stops (OTS 2018).

4.14.2 Regulatory Setting

a. Federal

The U.S. Department of Transportation (USDOT) provides a number of grant programs, primarily for the construction and upgrading of major highways and transit facilities. Many of these grants are administered by the state and regional governments. Use of federal grant funding also invokes the National Environmental Protection Act (NEPA) in some cases.

b. State

Caltrans Authority over the State Highway System

Caltrans is responsible for the planning, design, construction and maintenance of all interstate freeways and state routes. It builds, maintains, and operates the State Highway System in California with a goal to facilitate the safe and efficient use of the state transportation system for all users. Caltrans sets standards in its 2020 Transportation Impact Study Guide that focus on the VMT metric. This document is often used by local governments to uniformly review transportation analysis and assess the operational standards of Caltrans-maintained facilities. The document is intended to be a reference and informational document that aligns with the standards and thresholds established in the State's Office of Planning and Research's (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA.* The 2020 document acts as a replacement for the 2002 *Guide for the Preparation of Traffic Impact Studies* but is only intended to be used with local land use projects and plans, not to be used for transportation projects on the State Highway System.

Caltrans has completed an *Active Transportation Plan* (2021), which identifies bicycle and pedestrian needs on, across, and parallel to the State Highway System throughout California's Central Coast. The Active Transportation Plan also includes a prioritized list of Location Based Needs to identify high priority needs areas for new projects. In addition, Caltrans recently completed the *US 101 Santa Maria to San Luis Obispo Multimodal Corridor Plan*, which is a comprehensive multimodal corridor plan and concept of operations addressing regional and interregional safety, congestion, accessibility, goods movement, economic development, land use efficiency, public health, air quality, and greenhouse gas emissions for U.S. 101 from State Route (SR) 135 in Santa Maria to SR 58 near Santa Margarita, an overall corridor of about 37 miles which runs through the City of Pismo Beach. The US 101 Santa Maria to San Luis Obispo Multimodal Corridor Plan provides a range of proposed concepts, evaluates and prioritizes improvements within the study limits, and sets a

framework for implementing short- and long-term capital improvements supporting the Road Repair and Accountability Act of 2017 (SB 1) goals and priorities. Finally, in December 2021, Caltrans published the *Director's Policy on Complete Streets*. The Director's Policy establishes Caltrans' organizational priority to encourage and maximize walking, biking, transit, and passenger rail as a strategy to meet state climate, health, equity, and environmental goals and to foster socially and economically vibrant, thriving, and resilient communities. The Director's Policy focuses on maximizing the use of design flexibility to provide context-sensitive solutions and networks for travelers of all ages and abilities.

Statewide Transportation Improvement Plan

The Statewide Transportation Improvement Plan (STIP) is a capital improvement program that plans transportation projects related to state facilities in California for the next five years. The program is updated every two years with new construction projects as more funding is provided. The California Transportation Commission approves the fund estimate and then Caltrans and regional planning agencies submit plans for transportation improvement projects. If the projects are programmed in the STIP, then relevant agencies can begin the implementation process.

Senate Bill 743

SB 743, which was signed into law in 2013, tasked the OPR with establishing new criteria for determining the significance of transportation impacts under CEQA. SB 743 requires the new criteria to "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." It also states that alternative measures of transportation impacts may include "vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated." SB 743 changes the way that public agencies evaluate the transportation impacts of projects under CEQA by recognizing that roadway congestion, while an inconvenience to drivers, is not itself an environmental impact (see Pub. Resource Code, § 21099, subd. [b][2]). In addition to new exemptions for projects that are consistent with specific plans, the draft SB 743 guidelines replace congestion-based metrics, such as auto delay and level of service, with VMT as the basis for determining significant impacts, unless the guidelines provide specific exceptions.

Statewide implementation of SB 743 is now required. Therefore, this PEIR relies on VMT to evaluate transportation impacts.

California's Complete Streets Act

The Complete Streets Act was signed into law as Assembly Bill (AB) 1358 in 2008. It requires that cities and other public agencies incorporate "complete street" policies and principles into their General Plans and Updates within the Circulation Elements, so that the plan addresses the needs of all users, including bicyclists and pedestrians. Caltrans specifically adopted Deputy Directive 64, which addresses the needs of people of all ages and abilities concerning transportation planning. It also recognizes that transportation improvement projects are opportunities to improve safety, access, and mobility for motorists, bicyclists, pedestrians, and transit users. The Complete Streets Implementation Action Plan provides an overview of the program (Caltrans 2010).

The current Pismo Beach General Plan was adopted in 1993, prior to the Complete Streets Act. However, Pismo Beach adopted a Complete Street Master Plan in 2013. Of the improvements identified in the Complete Street Master Plan, the City completed the Shell Beach Streetscape Project in early 2021. The Shell Beach Streetscape Project included installation of a separated

bicycle and pedestrian path along Shell Beach Road from Cliff Avenue to Terrace Avenue. Additionally, a stated goal of the GP/LCP Update is to plan for and provide pedestrian and bicycle facilities to encourage and meet the walking and bicycling needs of the city. The City also outlines a number of specific Complete Street policies in the Circulation Element of the GP/LCP update.

c. Regional

San Luis Obispo Council of Governments, Regional Transportation Plan

The San Luis Obispo Council of Governments (SLOCOG) is required by state and federal law to prepare, update, and adopt a Regional Transportation Plan (RTP) every four years. The most recent update to the RTP was completed by SLOCOG in 2019. The 2019 RTP addresses all modes of travel and identifies and prioritizes expenditures from anticipated funding for all modes of transportation including highways, streets and roads, transit, rail, bicycle, and pedestrian, as well as transportation demand management strategies. All transportation projects that use state and federal funds, or that could significantly affect transportation within the San Luis Obispo County, must be included in the RTP. The 2019 RTP identifies active transportation projects, non-highway system projects, highway system projects, and a park and ride project, including two lots in Pismo Beach. The 2019 RTP includes the following goals (SLOCOG 2019):

- Preserve the transportation system.
- Improve intermodal mobility and accessibility for all people.
- Support a vibrant economy.
- Improve public safety and security.
- Foster livable, healthy communities and promote social equity.
- Practice environmental stewardship.
- Practice financial stewardship.

SLOCOG has begun developing its updated RTP for the year 2023. This document is expected to provide a vision for future growth and development of the San Lois Obispo region through the year 2045. Although the full RTP has not been provided to the public, the SLOCOG Board published its visions and goals for the Plan in February of 2021. The SLOCOG has adopted the following goals for its 2023 RTP Update (SLOCOG 2021):

- Maintain and improve the effectiveness of the existing transportation system.
- Improve intermodal mobility and accessibility for all people.
- Support a vibrant, resilient economy.
- Improve public safety and security.
- Foster livable and healthy communities and promote equity.
- Protect and enhance the environment.
- Practice financial stewardship.

d. Local

2010 Pismo Beach Bicycle and Pedestrian Master Plan

The Pismo Beach *Bicycle and Pedestrian Master Plan,* adopted in 2010 and updated in 2015, describes existing conditions and identifies goals, policies, implementation actions, and priorities for the development of bicycling and walking facilities in Pismo Beach. The specific policies within the Master Plan are based on the overall goal of making Pismo Beach a city where both residents and visitors can safely walk, bicycle, or reach the beach with:

- A well-defined network of Class I, II, and III bike facilities including sufficient end of-trip facilities.
- A complete network of sidewalks and pedestrian walkways including frequent beach access points.
- Access to information about bicycling and walking safely in the City.

The 2010 Pismo Beach *Bicycle and Pedestrian Master Plan* also lists a variety of new facilities and maintenance/upgrade projects planned for the city, along with essential education and outreach events.

2013 Pismo Beach Complete Street Master Plan

The *Complete Street Master Plan* provides design concepts, goals, and an overall framework to improve the city for bicyclists and pedestrians. The plan area extends approximately 5 miles through the city, from its northern boundary to Grover Beach, including Shell Beach Road, Price Street, and Dolliver Street (Highway 1/ Pacific Coast Highway). The plan intends to propose enhancements that promote safety, connectivity, and convenient walking and cycling for both residents and visitors in Pismo Beach.

4.14.3 Impact Analysis

a. Methodology

VMT estimates were evaluated with the Pismo Beach Travel Demand Model, which was built based upon the 2014 SLOCOG Regional Travel Demand Model. The proposed GP/LCP Update's planning horizon is 2040, while the travel demand model's planning horizon is 2035. Although the two planning horizons are described with different future years, both represent buildout conditions and therefore are used congruently.

For the VMT analysis, a model scenario was created by modifying the Pismo Beach Travel Demand Model forecasted land use data in order to include the full buildout development associated with the proposed GP/LCP Update (Appendix G). The VMT analysis consists of two parts: evaluating the change in total VMT and evaluating the change in VMT efficiency metrics. The change in total VMT (county-wide) was evaluated for the proposed GP/LCP Update against both the existing condition and buildout of the current General Plan Buildout condition. To fully capture the existing conditions, the Pismo Beach Travel Demand Model year ("2010 Base Year") was adjusted to match the CEQA baseline year of 2019. This methodology is consistent with the OPR *Technical Advisory on Evaluating Transportation Impacts in CEQA* and the *CEQA Guidelines*.

b. Significance Thresholds

The following criteria are based on Appendix G of the *CEQA Guidelines*. Impacts would be significant if implementation of the GP/LCP Update would do any of the following:

1. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities;
2. Conflict or be inconsistent with *CEQA Guidelines* Section 15064.3, subdivision (b), Criteria for Analyzing Transportation Impacts;
3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); and/or
4. Result in inadequate emergency access.

Pismo Beach has not adopted significance thresholds for evaluating potential VMT impacts or associated impact/mitigation policies. In the absence of a locally-adopted threshold, this analysis utilizes the OPR recommendations published in the *Technical Advisory for Evaluating Transportation Impacts in CEQA* (OPR 2018). The Technical Advisory recommends analyzing VMT outcomes of land use plans across the full area over which the plan may substantively affect travel patterns, including beyond the boundary of the plan or jurisdiction's geography. The Technical Advisory recommends that general plans may have a significant impact on transportation if the total regional VMT increases, or if proposed new residential, office, or retail land uses would in aggregate exceed a threshold of 15 percent lower per capita or per employee VMT than existing development. The Technical Advisory includes evidence connecting this level of reduction to the state's emissions goals.

c. Project Impacts and Mitigation Measures

Threshold 1:	Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Impact T-1 IMPLEMENTATION OF THE GP/LCP UPDATE WOULD INCREASE VEHICLE TRAFFIC VOLUMES WHICH HAS THE POTENTIAL TO INTERFERE WITH PEDESTRIAN AND BICYCLE TRAVEL ON OR ALONG ROADWAYS. HOWEVER, THE GP/LCP UPDATE INCLUDES GOALS AND POLICIES TO IMPROVE SAFETY, ACCESS, AND PERFORMANCE OF TRANSIT, VEHICULAR, BICYCLE, AND PEDESTRIAN TRANSPORTATION MODES, CONSISTENT WITH THE SLOCOG 2019 RTP, PISMO BEACH BICYCLE AND PEDESTRIAN MASTER PLAN, AND PISMO BEACH COMPLETE STREET MASTER PLAN. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Several regionally- and locally-adopted land use plans, policies, and regulations apply to development under the GP/LCP Update. These include the SLOCOG 2019 RTP for San Luis Obispo County, the Pismo Beach 2010 *Bicycle and Pedestrian Master Plan*, and the Pismo Beach 2013 *Complete Street Master Plan.*

The SLOCOG 2019 RTP is a long-range land use and transportation plan for the San Luis Obispo region. The 2019 RTP includes nine goals, with respective objectives and policies to meet these goals, which are expected to result in significant benefits to the region not only with respect to transportation and mobility, but also economic activity, safety, and social equity. As discussed under Impact LUP-2 in Section 4.10, Land Use and Planning, the proposed GP/LCP Update would not conflict or be inconsistent with the SLOCOG 2019 RTP for San Luis Obispo County. However, the

determination of GP/LCP Update consistency is within the discretion of the Pismo Beach City Council. Overall, the GP/LCP Update is consistent with the SLOCOG 2019 RTP.

The GP/LCP Update includes several goals and policies to ensure acceptable access and performance for all modes of travel. These goals and policies would enhance the City's alternative transportation modes while continuing to accommodate automobile travel. The Pismo Beach 2010 *Bicycle and Pedestrian Master Plan* is intended to amplify policies in the City's General Plan and Local Coastal Plan that address bicycle and pedestrian opportunities by providing the implementation tools for many GP/LCP directives. Section 4 of the *Bicycle and Pedestrian Master Plan* includes policies that describe actions Pismo Beach can take to ensure safety and accessibility for pedestrians and bicyclists. The GP/LCP Update Circulation Element includes specific goals and policies that implement of *Bicycle and Pedestrian Master Plan* policies and actions. Table 4.14-2 includes applicable *Bicycle and Pedestrian Master Plan* policies and describes the GP/LCP Update's consistency with each.

Table 4.14-2 GP/LCP Update Consistency with Bicycle and Pedestrian Master Plan

2010 Bicycle and Pedestrian Master Plan	GP/LCP Update Consistency
Policy BP-11: Encourages techniques to create a pleasant walking and biking experience including concern for views, paving materials, landscape, street furniture and pedestrian scale lighting	**Consistent.** Policy CIR-4.1.55 targets street trees for shade and comfort and ensures that planting plans for street trees take into consideration shade and comfort for pedestrians and bicyclists and traffic calming benefits. Policy CIR-4.1.68 focuses on pedestrian circulation and requires sidewalks be required for all new developments in residential and commercial areas with techniques that create a pleasant walking experience including concern for views, paving materials, landscape, street furniture, and pedestrian scaled lighting
Policy BP-12: Requires all new sidewalk areas to be designed to accommodate the handicapped.	**Consistent.** Policy CIR-4.1.68 requires all new sidewalk areas to be designed to accommodate the handicapped, compliant with the ADA.
Policy BP-30: Encourages the Lucia Mar School District to provide bike and pedestrian safety programs at schools within City limits.	**Consistent.** Policy CIR-4.1.64 addresses bicycle safety and aims to increase the safety of those traveling by bicycle by specifically working with the Lucia Mar Unified School District to promote classes on bicycle safety in schools.

Source: Pismo Beach 2010 Bicycle and Pedestrian Master Plan

As the proposed GP/LCP Update includes goals and policies designed to implement the policies, actions, and improvement projects in the *Bicycle and Pedestrian Master Plan*, the proposed GP/LCP Update would be consistent with the goals and policies of the City's *Bicycle and Pedestrian Master Plan*.

The 2013 *Complete Streets Master Plan* describes specific plans and projects that would enhance bicycle and pedestrian safety and connectivity in Pismo Beach. The *Complete Streets Master Plan* also provides a more general overview of concepts and goals to help guide future project planning. For example, Section 5 of the *Complete Streets Master Plan* describes components that should be considered during project planning in order to result in a Complete Street with improved pedestrian, bicycle, and transit safety and improved vehicle circulation. The GP/LCP Update Circulation Element includes Policy 4.1.15, which focuses on Complete Streets and requires future projects be evaluated to ensure that the safety, comfort, and convenience of pedestrians, bicyclists and transit users are considered. As the proposed GP/LCP Update Circulation Element includes goals and policies that

mirror the vision of *the Complete Street Master Plan*, the proposed GP/LCP Update would be consistent with the goals and policies of the City's *Complete Street Master Plan*.

The proposed GP/LCP Update would not conflict or be inconsistent with the SLOCOG 2019 RTP, the Pismo Beach 2010 *Bicycle and Pedestrian Master Plan*, or the Pismo Beach 2013 *Complete Street Master Plan*. As a result, the GP/LCP Update would result in a less than significant impact regarding conflicts or inconsistencies with programs, plans, ordinances, or policies addressing the circulation system.

Mitigation Measures

No mitigation measures are required.

Threshold 2:	Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Impact T-2 THE GP/LCP UPDATE ANTICIPATES GROWTH THAT WOULD RESULT IN AN OVERALL INCREASE IN VEHICLE MILES TRAVELED (VMT) IN THE REGION. THE GP/LCP UPDATE CIRCULATION ELEMENT INCLUDES GOALS AND POLICIES THAT WOULD ESTABLISH LOCAL SCREENING THRESHOLDS FOR STREAMLINING VMT ANALYSIS. HOWEVER, FUTURE DEVELOPMENT IN PISMO BEACH WOULD RESULT IN AN OVERALL INCREASE IN REGIONAL VMT AS WELL AS RESIDENTIAL VMT PER CAPITA. NO FEASIBLE MITIGATION IS AVAILABLE THAT WOULD FULLY ADDRESS THE ANTICIPATED INCREASE IN VMT. AS A RESULT, THIS IMPACT WOULD BE SIGNIFICANT AND UNAVOIDABLE.

The TIA (Appendix G) conducted for the proposed GP/LCP Update includes an analysis of the regional transportation system operation under Existing (2019), current General Plan buildout (2040), and proposed GP/LCP Update buildout (2040) conditions. Table 4.14-3 shows the estimated 2019 baseline VMT in the region and the projected 2040 VMT for buildout of the current GP and proposed GP/LCP Update.

Table 4.14-3 Total Regional VMT Results Summary

Model Scenario	VMT
Existing (2019)[1]	11,226,484
Buildout - Current General Plan (2040)	13,311,157
Buildout - GP/LCP Update (2040)	13,476,666

[1] The "Existing (2019)" scenario refers to the 2010 Pismo Beach Travel Demand Model year, which was adjusted to account for the CEQA baseline year of 2019 in order to fully represent the existing regional land uses and transportation network.

Source: Appendix G

As shown in Table 4.14-3, the proposed GP/LCP Update is projected to increase regional VMT under 2040 buildout conditions, resulting in an increase of approximately 2.3 million VMT from the existing condition, and an increase of approximately 166,000 over buildout of the current GP/LCP. This regional VMT increase would fail to meet the threshold identified in OPR's *Technical Advisory on Evaluating Transportation Impacts,* which states a project may have a significant impact on transportation if it results in an increase in regional VMT.

For informational purposes Table 4.14-4 shows the residential VMT per capita model results comparing the existing 2040 GP forecast and the proposed 2040 GP/LCP Update forecast and

Table 4.14-5 shows the non-residential/work VMT per employee model results comparing the existing 2040 GP forecast and the proposed 2040 GP/LCP Update forecast.

Table 4.14-4 Regional Residential VMT Results Per Capita Summary

Pismo Model	Residential Trips	Average Trip Distance	Residential VMT[1]	Population	Residential VMT per Capita[2]
Existing (2019)[3]	717,564	10.34	7,420,936	255,085	29.09
Existing 2040 GP[4]	861,337	10.08	8,684,684	282,559	30.74
Proposed 2040 GPU[4]	860,802	10.10	8,694,346	283,671	30.65
Difference from 2019	143,237	-2.34%	1,274,410	28,586	5.35%
Difference from Existing 2040 GP	(535)	0.17%	9,662	1,112	-0.28%

[1] "Residential VMT" is derived by multiplying trips by distance.

[2] "Residential VMT per capita" is derived by dividing residential VMT by population.

[3] The "Existing (2019)" scenario refers to the 2010 Pismo Beach Travel Demand Model year, which was adjusted to account for the CEQA baseline year of 2019 in order to fully represent the existing regional land uses and transportation network.

[4] The "2040 Year" refers to the Pismo Beach Travel Demand Model buildout year. The proposed GP/LCP Update's planning horizon is 2040, while the travel demand model's planning horizon is 2035. Although the two planning horizons are described with different future years, both represent buildout conditions and therefore can be used congruently.

Source: Appendix G

Table 4.14-5 Regional Non-Residential/Work VMT Results Per Employee Summary

Pismo Model	Work Trips	Average Trip Distance	Work VMT[1]	Employment	Work VMT per Employee[2]
Existing (2019)[3]	177,372	11.54	2,046,641	92,732	22.07
Existing 2040 GP[4]	197,741	11.43	2,206,727	113,867	19.85
Proposed 2040 GPU[4]	199,498	11.50	2,293,885	112,982	20.30
Difference from 2019	22,126	-0.35%	247,244	20,250	-8.01%
Difference from Existing 2040 GP	1,757	0.57%	33,158	(885)	2.26%

[1] "Work VMT" is derived by multiplying trips by distance.

[2] "Work VMT per employee" is derived by dividing work VMT by employment.

[3] The "Existing (2019)" scenario refers to the 2010 Pismo Beach Travel Demand Model year, which was adjusted to account for the CEQA baseline year of 2019 in order to fully represent the existing regional land uses and transportation network.

[4] The "2040 Year" refers to the Pismo Beach Travel Demand Model buildout year. The proposed GP/LCP Update's planning horizon is 2040, while the travel demand model's planning horizon is 2035. Although the two planning horizons are described with different future years, both represent buildout conditions and therefore can be used congruently.

Source: Appendix G

As shown in Table 4.14-4, the residential VMT per capita from the proposed GP/LCP Update of is estimated to increase by 5.35 percent from the existing condition, but would decrease 0.28 percent in comparison to the existing General Plan's regional residential VMT per capita. As shown in Table 4.14-5, the non-residential VMT per employee from the proposed GP/LCP Update is estimated to decrease 8.01 percent from the existing condition, but would increase 1.88 percent in comparison to than the existing General Plan's regional non-residential VMT per employee. The proposed GP/LCP Update would not achieve the 15 percent reduction in per capita or per employee

VMT identified as an appropriate VMT threshold in OPR's *Technical Advisory on Evaluating Transportation Impacts in CEQA*.

The proposed GP/LCP Update provides a framework to guide future development toward land uses that support walking, biking, and transit ridership. The following goals and policies are included in the GP/LCP Update Circulation Element, and are intended to reduce local VMT and improve access to bicycle and pedestrian, park and ride, and transit options in Pismo Beach:

Goal CIR-1 Provide a circulation system that supports safe and efficient travel for all modes of transportation.

Goal CIR-2 Plan and provide pedestrian and bicycle facilities to encourage and meet the walking and bicycling needs of the city.

Goal CIR-~~1~~3 Promote the use of public transit and seasonal shuttle services

- **Policy CIR-4.1.5: Vehicle Miles of Travel.** Maintain and reduce average regional vehicle miles of travel in accordance with State Senate Bill 743 and California Office of Planning & Research Technical Guidance.
  a) New development that is projected to exceed average regional vehicle miles of travel shall be required to implement mitigations or modify the proposed project to the maximum extent feasible.
     a. Assess OPR Technical Guidance Thresholds of Significance and develop local City thresholds of significance if unacceptable.
  b) Develop screening thresholds to streamline VMT Analysis including metrics such as:
     a. Screening Threshold for Small Projects
     b. Map-Based Screening for Residential & Office Projects
     c. Screening Thresholds for Projects near High Quality Transit
     d. Screening Thresholds for Affordable Housing
- **Policy CIR-4.1.7: Neighborhood Context.** Support safe, complete and well-connected neighborhoods for street, bicycle, and pedestrian access. Connections should balance circulation needs within the neighborhood context.
- **Policy CIR-4.1.15: Complete Streets.** When constructing or modifying transportation facilities, strive to provide for the movement of vehicles, commercial trucks, alternative and low energy vehicles, transit, bicyclists and pedestrians appropriate for the road classification and adjacent land use.
  a) Evaluate projects to ensure that the safety, comfort, and convenience of pedestrians, bicyclists and transit users are given equal level of consideration to motor vehicle operators.
  b) Consider ways to increase and improve travel choices when reviewing development or transportation infrastructure projects.
  c) Consider roundabouts or other innovative designs as alternatives to stop signs and traffic signals when studying intersection configuration options.
  d) Require sidewalks on all streets where possible. Where feasible, separate sidewalks from streets on arterials and collectors with landscaping including a tree canopy to create shade.
  e) Improve the existing street network to minimize travel times and improve mobility for transit, bicycle, and walking trips between new projects and surrounding land uses to reduce vehicle trips.

- **Policy CIR-4.1.26: Traffic Calming.** Traffic calming techniques may be employed to mitigate the traffic effects of new development on minor and major collector streets. The City shall adopt and maintain Traffic Calming Handbook adopted 10/19/21 for application and design of traffic calming measures.
- **Policy CIR-4.1.27: Update and Adopt Transportation Impact Analysis (TIA) Guidelines.** Update and adopt Transportation Impact Analysis guidelines consistent with State Assembly Bill 743 and maintain a local LOS assessment methodology for the evaluation of potential transportation impacts and local policy inconsistency resulting from new development.
- **Policy CIR-4.1.48: Promote Walking and Biking.** Promote walking and bicycle riding for transportation, recreation, commuting, and improvement of public and environmental health. Make downtown more functional and enjoyable for bicyclists and pedestrians. Pedestrian walkways and bicycle paths shall receive at least the same emphasis and attention in future planning as facilities designed for the automobile.
- **Policy CIR-4.1.51: Existing Facilities.** Maintain and improve existing multimodal circulation and transportation systems and facilities, to maximize alternatives to new street and highway construction. Complete a network of bicycle lanes and paths, sidewalks and pedestrian paths within existing developed parts of the City and extend the system to serve new growth areas.
- **Policy CIR-4.1.58: Bikeways Encouraged.** Bikeways shall be encouraged within the City and adjoining jurisdictions as a complement to Pismo Beach's visitor and recreation emphasis, to reduce automobile trips and for the convenience of visitors and residents. The City's bikeway plan will be coordinated with the San Luis Obispo Area Coordinating Council and Regional Transportation Agency, and the County of San Luis Obispo Regional Transportation Plan.
- **Policy CIR-4.1.62: Bicycle Use by City Employees.** Establish a program to encourage bicycle use among City employees.
- **Policy CIR-4.1.70: Pedestrians Connections to Employment Destinations.** Encourage the development of a network of continuous walkways within new commercial, town center, public, and industrial uses to improve workers' ability to walk safely around, to, and from their workplaces. Where possible, route pedestrians to grade separated crossings across US 101.
- **Policy CIR-4.1.75: Promote Safe, Efficient, and Convenient Public Transportation.** Promote the use of public transportation for daily trips, including to schools and workplaces, as well as other purposes.
- **Policy CIR-4.1.76: Work with Multiple Agencies and Jurisdictions.** Continue to cooperate with other agencies and jurisdictions to promote local and regional public transit, including SLORTA and SCT serving Pismo Beach.
- **Policy CIR-4.1.79: Comprehensive Transit Services.** The City shall support the availability of transit service as a means to reduce automobile congestion~~.~~, to provide transportation for those who have no other form of transportation, as a means to reduce air pollution, and as a service to visitors. Such support should include, but not be limited to, SCT, Greyhound bus service, vanpools, shuttle bus systems, dial-a-ride services, and cab services.
- **Policy CIR-4.1.80: Vanpools and Ride Sharing.** The City shall encourage and support vanpools and ride sharing. A special program should be developed in cooperation with the visitor industry to encourage vanpools and ride sharing for hotel and related workers. Appropriate locations shall be designated for ride share parking lots.

- **Policy CIR-4.1.87: Transit Usability.** Work with SLORTA to situate transit stops at locations that are convenient for transit users and promote increased transit ridership through the provision of shelters, benches, bike racks on buses, ADA compliance, and other amenities.
- **Policy CIR-4.1.88: Transit Services Marketing.** Encourage ridership on public transit systems through marketing and promotional efforts. Provide information to residents and employees on transit services available for local and regional trips.

While the proposed GP/LCP Update transportation-related policies are intended to reduce local VMT by improving access to bicycle, pedestrian, park and ride, and transit options in Pismo Beach, the potential VMT reduction that may result from implementation of the proposed GP/LCP Update policies is not quantifiable in the context of the Pismo Beach Travel Demand Model/2014 SLOCOG Regional Travel Demand Model.

Potential future VMT impacts from individual development projects in Pismo Beach would be evaluated based on either OPR recommendations or local VMT thresholds established by the City. Consistent with GP/LCP Update Circulation Element Policy 4.1.5, future development that is projected to exceed the average regional VMT would be required to implement VMT-reducing mitigations or modify the proposed development to reduce VMT to the maximum extent feasible. While the potential impacts of individual future development projects in Pismo Beach are speculative, the overall potential impacts of the increase in VMT in the Pismo Beach and in San Luis Obispo County identified for the GP/LCP Update would be significant.

Mitigation Measures

Future development generated by the GP/LCP Update in Pismo Beach would result in increased long-term VMT, even with implementation of GP/LCP Update goals and policies intended to reduce VMT and promote alternative transportation modes. The potential VMT reduction that may result from implementation of the proposed GP/LCP Update policies is not quantifiable in the context of the Pismo Beach Travel Demand Model/2014 SLOCOG Regional Travel Demand Model, and therefore is speculative. No feasible mitigation beyond the policies already included in the GP/LCP Update Circulation Element is available that would fully address the anticipated increase in VMT resulting from the GP/LCP Update.

Significance After Mitigation

No feasible mitigation is available that would fully address the anticipated increase in VMT. Therefore, impacts associated with increased VMT generated in Pismo Beach under GP/LCP Update buildout conditions would remain significant and unavoidable.

Threshold 3:	Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?

Impact T-3 THE GP/LCP UPDATE IS A PROGRAM-LEVEL PLAN THAT DOES NOT IMPLEMENT SPECIFIC DESIGN FEATURES. FUTURE ROADWAY IMPROVEMENTS AND SITE ACCESS MEASURES WOULD BE DESIGNED AND REVIEWED IN ACCORDANCE WITH FEDERAL, STATE, AND CITY STANDARDS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

The GP/LCP Update would not implement specific design features or specifications for new project-level development, roadways, or other transportation facilities. The proposed GP/LCP Land Use and

Community Design Element does not change to the City's roadway network and would not increase hazards due to geometric design features. Pismo Beach maintains standards for public improvements and private facilities (e.g., internal circulation, ingress/egress) that guide the construction of transportation facilities to minimize design hazards for all users of the transportation system. Land use proposals that would add traffic to streets not designed to current standards are evaluated through the project-level environmental review process. Mitigation measures for proposed projects would be identified as needed, but individual improvement projects are generally conditioned to construct or provide funding for physical improvements that would eliminate or minimize hazards.

In addition to goals and policies described in Impact T-2, above, which would reduce VMT by improving access to bicycle sharing, park and ride, and transit options, the GP/LCP Update Circulation Element establishes the following goals and policies that are intended to result in roadway designs that safely accommodate all users:

Goal CIR-1 Provide a circulation system that supports safe and efficient travel for all modes of transportation.

- **Policy CIR-4.1.1: Safe and efficient roadway system.** Promote a safe and efficient roadway system for the movement of people and goods. This is achieved through a well-designed local roadway system that serves the City's primary need for mobility and includes a hierarchy of roadways to meet that need.
- **Policy CIR-4.1.15: Complete Streets.** When constructing or modifying transportation facilities, strive to provide for the movement of vehicles, commercial trucks, alternative and low energy vehicles, transit, bicyclists and pedestrians appropriate for the road classification and adjacent land use.
  a) Evaluate projects to ensure that the safety, comfort, and convenience of pedestrians, bicyclists and transit users are given equal level of consideration to motor vehicle operators.
  b) Consider ways to increase and improve travel choices when reviewing development or transportation infrastructure projects.
  c) Consider roundabouts or other innovative designs as alternatives to stop signs and traffic signals when studying intersection configuration options.
  d) Require sidewalks on all streets where possible. Where feasible, separate sidewalks from streets on arterials and collectors with landscaping including a tree canopy to create shade.
  e) Improve the existing street network to minimize travel times and improve mobility for transit, bicycle, and walking trips between new projects and surrounding land uses to reduce vehicle trips.
- **Policy CIR-4.1.16: Neighborhood Context.** Plan for safe, complete, well-connected neighborhood streets.
  a) Modify the existing street network, where possible, to enable direct physical connections within and between neighborhoods, neighborhood-commercial areas, and commercial-commercial areas, including connections accessible only by pedestrians and bicycles on existing cul-de-sac streets.
  b) Provide direct connection from residential areas to neighborhood parks and open space.
  c) Where feasible, provide pedestrian crosswalks on all intersection approaches.
  d) Implement projects identified in the City's ADA Transition Plan.

e) Maintain and update the Bicycle and Pedestrian Master Plan and work to fund and complete the planned bikeway and pedestrian system. The Plan indicates which streets in addition to arterials and collectors will install sidewalks and what other pedestrian facilities and amenities (such as 'resting spots') are needed to complete the pedestrian network. Sidewalk widths and shade coverage should also be addressed in the context of the adjacent land use, vehicle volumes, and vehicle speeds. The Plan also indicates proposed on- and off-street bikeways, pedestrian trails, and bike parking facilities within the City.

f) Maintain and complete implementation of the Safe Routes to School Plan. This effort should complement the ADA Transition Plan, and the Bicycle and Pedestrian Master Plan.

- **Policy CIR-4.1.17: Following Adopted City Standards.** Build arterials, collectors and local streets in accordance with adopted City standards. Improve existing facilities to conform to classification standards where possible. The cross-sections designated under this section will normally be required. Specific plan or special (alternative) section streets may also be adopted deviating from these standards. Wherever such alternative cross-section configurations are used, each will be so designed as to create an orderly transition from one to the next. Each alternative cross-section must further the goal of providing safe and efficient circulation, as well as an aesthetically pleasing urban form. Where streets are to be constructed by developers, the City shall not permit installation of less than a full street section. Exceptions to the standards may be allowed by the City Engineer where mitigation is infeasible or would conflict with other community values such as those listed below:

  a) Impacts on general safety, particularly pedestrian, bicycle, and transit safety;

  b) The right-of-way needs and the physical impacts on surrounding private or public properties;

  c) The visual aesthetics of the required improvement and its impact on community identity and character;

  d) Environmental impacts including air quality and noise impacts; and

  e) Impacts on quality of life as perceived by residents.

- **Policy CIR-4.1.29: Traffic and Accident Monitoring & Reduction.** Implement and update the City's Local Roadway Safety plan/program to help maintain satisfactory roadway performance at intersections and along roadway segments. This may include the following:

  a) Collect and analyze traffic volume data on a regular basis, and monitor current intersection and roadway segment LOS on a regular basis. This information may be used to update and refine the City's travel forecasting model to improve estimates of future conditions.

  b) Consider ways to shift travel demand away from the peak period using Transportation Demand Management (TDM) strategies, especially in situations where peak traffic problems result from a few major generators (e.g. large retail developments on highway corridor, the Pismo Beach Pier). Strategies to consider include:

     i. Encouraging employer-sponsored incentives for transit, bike, or carpool use;

     ii. Providing shuttle service to major events and destinations;

     iii. Promoting shopping or entertainment events that are at off-peak hours;

     iv. Coordinating centralized TDM programs that serve multiple tenants at large shopping or office centers; and,

v. Perform periodic evaluations of the City's (and Caltrans) traffic control system, with emphasis on traffic signal timing, phasing, and coordination to optimize flow along collector and arterial corridors.

vi. Utilize alternative parking strategies as a means of managing transportation demand.

vii. Manage, and when possible, reduce summertime visitor traffic impacts.

viii. Support programs that reduce the interregional use of single-occupant vehicles and increase the use of alternative forms of transportation such as walking, riding buses and bicycles, bike share, and using car pools.

ix. Support and develop education programs directed at promoting types of transportation other than single-occupant vehicle.

- **Policy CIR- 4.1.34: Medians.** Medians shall be installed along arterials, as deemed necessary by the City engineer.
- **Policy CIR-4.1.36: Coordinate Standards.** Continue to coordinate the City's design standards for regional roadways with the standards of adjacent and overlapping agencies to provide smooth transitions for roadway users between jurisdictional boundaries.
- **Policy CIR-4.1.50: Develop a Safe and Efficient Non-Motorized Circulation System.** Provide safe and direct pedestrian routes and bikeways between places.
- **Policy CIR-4.1.64: Bicycle Safety.** Assess and address bicycle safety thru implementation of the City's Local Roadway Safety Plan. Increase the safety of those traveling by bicycle by:
  a) Ensuring that bikeways are delineated and signed according to Caltrans or City standards, and that lighting is provided where needed;
  b) Providing bicycle paths and lanes on bridges and overpasses;
  c) Ensuring that all new and improved streets have bicycle-safe drainage grates and are free of hazards such as uneven pavement or gravel;
  d) Providing adequate signage and markings warning vehicular traffic of the existence of merging or crossing bicycle traffic where bike routes and paths make transitions into or across roadways; and
  e) Work with the Lucia Mar Unified School District to promote classes on bicycle safety in schools.
- **Policy CIR-4.1.68: Pedestrian Circulation.** Sidewalks shall be required for all new developments in residential and commercial areas. Generally, the sidewalk shall be located so that a landscape strip or trees are located between the sidewalk and the vehicular travelled way. Techniques shall be encouraged to create a pleasant walking experience including concern for views, paving materials, landscape, street furniture, and pedestrian scaled lighting. The City encourages the use of flashing beacons or lighted crosswalk systems, especially in highly trafficked areas. All new sidewalk areas shall be designed to accommodate the handicapped, compliant with the ADA. Also, the City shall install (or cause to be installed) sidewalks or footpaths along all collector or arterial streets that connect with commercial centers, public gathering areas and schools.
- **Policy CIR-4.1.99: Truck Route Design.** Ensure that truck routes are designed according to California Legal and where appropriate STAA standards for intersections and turning movements.

Development and infrastructure projects in Pismo Beach would be required to comply with the GP/LCP Update, Pismo Beach Municipal Code, and other applicable federal, state, and local regulations. Compliance with applicable regulations, as well as the identified goals and policies regarding infrastructure safety, would ensure that potential impacts associated with transportation hazards or incompatible uses would remain less than significant.

Mitigation Measures

No mitigation measures are required

Threshold 4:	Would the project result in inadequate emergency access?

Impact T-4 THE PROPOSED GP/LCP UPDATE INCLUDES A PROGRAM-LEVEL CIRCULATION ELEMENT UPDATE THAT IDENTIFIES CIRCULATION IMPROVEMENTS AND POLICIES TO SUPPORT EMERGENCY ACCESS THROUGHOUT THE CITY. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

The GP/LCP Update would not implement specific design features or building specifications for new project-level development or other transportation facilities. The proposed GP/LCP Land Use and Community Design Element would not affect overall emergency access. The GP/LCP Land Use and Community Design Element includes the following action intended to maintain and improve emergency access throughout Pismo Beach.

- **Action LU-3.1a: Zoning Ordinance Modifications.** To allow for creative site planning, the ~~City~~ Planning Commission shall allow modifications to the Zoning Ordinance so long as modifications are consistent with the GP/LCP goals and policies. Minimum access standards for emergency vehicles shall be maintained at all times. Specific criteria and findings shall be developed for when these modifications would be permitted.

In addition, the GP/LCP Update Circulation Element includes the following goals and policies intended to maintain and improve emergency access throughout Pismo Beach.

Goal CIR-1 Provide a circulation system that supports safe and efficient travel for all modes of transportation.

- **Policy CIR-4.1.1: Safe and efficient roadway system.** Promote a safe and efficient roadway system for the movement of people and goods. This is achieved through a well-designed local roadway system that serves the City's primary need for mobility and includes a hierarchy of roadways to meet that need.
- **Policy CIR-4.1.13: Emerging Transportation Technology.** Promote efforts for emerging technological transportation advancements, including connected and autonomous vehicles, emergency vehicle pre-emption, sharing technology, electric vehicle technology, electric bikes and scooters, downtown parking occupancy monitoring and innovative transit options.
- **Policy CIR-4.1.15: Complete Streets.** When constructing or modifying transportation facilities, strive to provide for the movement of vehicles, commercial trucks, alternative and low energy vehicles, transit, bicyclists and pedestrians appropriate for the road classification and adjacent land use.
  a) Evaluate projects to ensure that the safety, comfort, and convenience of pedestrians, bicyclists and transit users are given equal level of consideration to motor vehicle operators.
  b) Consider ways to increase and improve travel choices when reviewing development or transportation infrastructure projects.

c) Consider roundabouts or other innovative designs as alternatives to stop signs and traffic signals when studying intersection configuration options.

d) Require sidewalks on all streets where possible. Where feasible, separate sidewalks from streets on arterials and collectors with landscaping including a tree canopy to create shade.

e) Improve the existing street network to minimize travel times and improve mobility for transit, bicycle, and walking trips between new projects and surrounding land uses to reduce vehicle trips.

- **Policy CIR-4.1.16: Neighborhood Context.** Plan for safe, complete, well-connected neighborhood streets.
  a) Modify the existing street network, where possible, to enable direct physical connections within and between neighborhoods, neighborhood-commercial areas, and commercial-commercial areas.
  b) Provide direct connection from residential areas to neighborhood parks and open space.
  c) Where feasible, provide pedestrian crosswalks on all intersection approaches.
  d) Implement projects identified in the City's ADA Transition Plan.
  e) Maintain and update the Bicycle and Pedestrian Master Plan and work to fund and complete the planned bikeway and pedestrian system. The Plan indicates which streets in addition to arterials and collectors will install sidewalks and what other pedestrian facilities and amenities (such as 'resting spots') are needed to complete the pedestrian network. Sidewalk widths and shade coverage should also be addressed in the context of the adjacent land use, vehicle volumes, and vehicle speeds. The Plan also indicates proposed on- and off-street bikeways, pedestrian trails, and bike parking facilities within the City.
  f) Maintain and complete implementation of the Safe Routes to School Plan. This effort should complement the ADA Transition Plan, and the Bicycle and Pedestrian Master Plan.

- **Policy CIR-4.1.103: Railroad Crossing Safety.** Continue the ongoing comprehensive program to improve the condition and safety of existing railroad crossings. Special consideration must be given to improving east-west cross-town emergency access, potentially with a grade-separated crossing.

The GP/LCP Update Safety Element includes the following goal and policy which are also intended to maintain and improve emergency access throughout Pismo Beach.

Goal S-1 A well prepared and educated community that can quickly and effectively respond to and recover from a hazardous event.

- **Policy S-1.2: Emergency Disaster Response Programs.** Regularly update plans and agreements with other agencies to respond to changing hazard risks.

~~Finally, the GP/LCP Update Facilities Element includes the following goal and policy intended to maintain and improve emergency access throughout Pismo Beach.~~

~~**Goal F-1: Emergency Services: Continue to provide excellent emergency services to the community.**~~

- ~~**Policy F-1.5: Fire and emergency services.** Continue to work with Cal Fire to ensure continued excellent fire and emergency services~~

The GP/LCP Update would accommodate future traffic associated with anticipated growth in Pismo Beach. However, the GP/LCP Update includes goals and policies that describe procedures for reviewing project-level emergency access needs, including compliance with applicable state and city requirements. The identified goals and policies regarding the minimization of impacts related to emergency access would ensure that potential impacts related to emergency response would remain less than significant.

Mitigation Measures

No mitigation measures are required.

4.14.4 Cumulative Impacts

The analysis in this section examines impacts of the GP/LCP Update on transportation and circulation throughout the cumulative impact analysis area, which consists of San Luis Obispo County, and is cumulative in nature. The traffic data for the existing condition, the current General Plan buildout conditions, and the proposed GP/LCP Update buildout conditions, which were used for this analysis, reflect cumulative development as part of the overall buildout conditions of the region in the future.

The goals, policies, programs and regulations in the 2019 RTP apply to surrounding communities in the same manner as they apply to Pismo Beach, thereby avoiding potential for cumulative considerable conflict between the transportation planning for the City and these communities. Therefore, the potential cumulative impacts resulting from the implementation of the proposed GP/LCP Update related to conflict with programs, plans, and ordinances or policies addressing the circulation system would be less than significant.

The cumulative traffic impacts of the GP/LCP Update were determined by a comparison of the existing conditions (2019) scenario and the proposed GP/LCP Update Conditions scenario. As shown in Table 4.14-3, Table 4.14-4, and Table 4.14-5, the cumulative growth evaluated under GP/LCP Update Conditions would result in an increase in the total regional VMT, daily VMT per capita, and daily VMT per employee. As discussed in Impact T-2, the individual potential impacts of future development in Pismo Beach are speculative; however, the cumulative impact of the increase in VMT in Pismo Beach and in San Luis Obispo County identified for the GP/LCP Update would be potentially significant. Future development in Pismo Beach would result in increased long-term VMT, even with implementation of identified goals and policies that would incrementally reduce VMT. Future individual development projects in Pismo Beach would require focused, project-level environmental review, and would require project-specific mitigation to reduce VMT where potential environmental impacts are identified. Implementation of the goals and policies in the GP/LCP Update would contribute to reducing VMT in Pismo Beach, but no additional feasible mitigation is available that would fully address the anticipated increase in VMT resulting from the GP/LCP Update. Therefore, cumulative transportation impacts from new VMT in the region would remain significant and unavoidable.

Some types of transportation impacts are related to site- and project-specific characteristics and conditions and would not be significantly affected by other development outside of the City. As discussed in Impacts T-3 and T-4, there are existing federal, State, and local regulations that govern potential transportation hazards and emergency access associated with development and infrastructure projects. Regulations and oversight, as outlined in the impact analysis above, would effectively reduce the potential for individual projects to create a transportation hazards or

emergency access impact within the City as well as in San Luis Obispo County. Thus, cumulative impacts related to the transportation hazards and emergency access would be less than significant.

4.15 Utilities/System Services

This section evaluates potential effects on utilities related to adoption and implementation of the General Plan/Local Coastal Plan (LCP) Update by identifying existing and planned service availability and anticipated demands and determining whether any necessary facility upgrades would result in adverse environmental effects. For purposes of this Environmental Impact Report (EIR), utilities include: a) water supply; b) wastewater; c) solid waste, d) stormwater facilities, e) electric power, f) natural gas, and g) telecommunications. Potential impacts related to stormwater runoff are further evaluated and discussed in Section 4.9, Hydrology and Water Quality.

4.15.1 Setting

a. Water Supply

The City of Pismo Beach (City) is the primary water provider for residents and businesses in the City.

Pismo Beach Municipal Water System

The City manages the potable water systems within a service area that generally corresponds with the City limits. The City's current water distribution system includes eight distribution zones, ten storage reservoirs, four Lopez Pipeline turnouts, and over 50 miles of distribution mains (City of Pismo Beach 2016). In 2018, residents and visitors of Pismo Beach used approximately 1,647 acre feet (AF) of water (City of Pismo Beach 2019).

Water Sources and Supply

The City serves as the primary water provider for residents and businesses in the City (City of Pismo Beach 2016).The City obtains water from a combination of three sources: the California State Water Project, Lopez Lake, and local groundwater. The City of Pismo Beach currently does not transfer or exchange water with its neighboring water suppliers.

State Water Project

The State Water Project (SWP), operated by the California Department of Water Resources (DWR), provides treated surface water to the region from Northern California through the Coastal Branch of the California aqueduct, which spans from the Sacramento-San Joaquin Delta to the San Joaquin Valley and Southern California (Water Education Foundation 2021). The Coastal Branch of the California aqueduct is a divergence of the main aqueduct which delivers water to Kern, Santa Barbara, and San Luis Obispo Counties (Water Education Foundation 2021). The San Luis Obispo County Flood Control and Water Conservation District (District) is a primary contractor of the SWP, and serves as the entity through which the City receives its SWP allocation of water. The Central Coast Water Authority (CCWA) treats water from the SWP at the Polonio Pass Water Treatment Plant which is located approximately 90 miles from the downstream terminus of the Coastal Branch, northeast of the City of Shandon. Water from the SWP for San Luis Obispo County is then distributed directly to contracted retailers, such as the City. The City's current contractual water delivery allocation is 1,240 AF. However, 100 AF is subcontracted to the Central Coast Development Company and 40 AF is subcontracted to Pismo 98, LLC, which leaves the City a usable water allocation of 1,100 AFY (City of Pismo Beach 2015).

In addition to its SWP water allocation, the City holds 1,240 AFY of additional allocation with the District, usually referred to as a "drought buffer." Drought buffer water is SWP water that has no pipeline capacity for delivery and is stored in the San Luis Reservoir for future use. Drought buffer water is only distributed to increase water delivery to contracted retailers when SWP allocations are affected by drought (City of Pismo Beach 2015).

Lopez Project

The Lopez Project consists of Lopez Lake, Lopez Dam, and a 3 mile 20-inch diameter buried steel transmission line for conveyance of raw water to the Lopez Terminal Reservoir and the Lopez Water Treatment Plant. The Lopez Project was established to operate the Lopez water supply system, and is a wholesale supplier of water (County of San Luis Obispo 2019). The contractors of the Lopez Project include the communities of Oceano, Grover Beach, Pismo Beach, Arroyo Grande, and CSA 12 however, the Lopez Project is managed by the District.

The Lopez Lake is a reservoir located in the Arroyo Grande Creek watershed, approximately 8 miles northeast of the City of Pismo Beach. Lopez Lake has a total capacity of 51,990 AF and a storage capacity of 49,200 AF. Storage at the end of 2015 was 13,847 AF, or 28 percent, of total storage capacity. Out of the 4,530 AFY of water entitlements, the Lopez Project currently provides a contractual supply of up to 892 AFY to the City. However, water releases from Lopez Lake were limited in 2015 in compliance with the Low Reservoir Response Plan (LRRP), a plan created by the District which describes a set of actions to be implemented when the amount of water in storage within the Lopez Reservoir drops below 20,000 AF. The purpose of the LRRP is to limit downstream releases and municipal diversions from Lopez Lake during periods of low reservoir storage to preserve water within the reservoir for a minimum of 3 to 4 years under continuing drought conditions (County of San Luis Obispo 2014). The enactment of Stage 2 of the LRRP resulted in a 10 percent decrease in municipal and downstream releases in 2015 which would affect water supply in the City during the fourth year of a multiple dry years period (City of Pismo Beach 2015).

Groundwater

The southern portion of the City overlies the Santa Maria Groundwater Basin. There is no groundwater basin underlying the remainder of the City. There are two boundaries currently in use for this groundwater basin: one defined by the DWR and one defined by the Superior Court of California for use in basin adjudication. As defined by DWR, the Santa Maria Groundwater Basin encompasses approximately 184,000 acres in the coastal portion of northern Santa Barbara and southern San Luis Obispo counties. The Santa Maria Groundwater Basin is bounded by the San Luis and Santa Lucia Ranges to the north, the San Rafael Mountains in the east, and Solomon Hills and the San Antonio Creek Valley Groundwater Basin in the south, and the Pacific Ocean in the west (City of Pismo Beach 2015). The Santa Maria Groundwater Basin consists of the following three sub-basins: Pismo Creek Valley (1,220 acres), Arroyo Grande Valley (3,860 acres), and Nipomo Valley (6,230 acres). Figure 4.8-3 in Section 4.9, *Hydrology and Water Quality*, shows the City limits and the underlying groundwater basin.

Beginning in the late 1990s, groundwater pumping rights in the Santa Maria Groundwater Basin were contested in court. The physical solution set forth in the Superior Court of California's 2005 Stipulation and 2008 final order ("Adjudication Judgment") established requirements and goals for the management of the entire Santa Maria Groundwater Basin. The Court defined three separate basin management areas: the Northern Cities Management Area (NCMA), the Nipomo Mesa Management Area, and the Santa Maria Valley Management Area. The City is located in the NCMA,

which consists of the northwest portion of the Santa Maria Groundwater Basin, bounded on the north by Highway 101, on the east by Mesa View Road, on the west by the Pacific Ocean, and on the south by the Nipomo Mesa Management Area, within the Cities of Grover Beach and Oceano (County of San Luis Obispo 2021a).

The Adjudication Judgment established a groundwater safe yield of 9,500 AFY for the NCMA portion of the Santa Maria Groundwater Basin. It provides allotments of 5,300 AFY for agricultural irrigation, 4,000 AFY for urban use, and 200 AFY for subsurface outflow to the ocean (NCMA Technical Group 2019).

In the NCMA, water supply aquifers are within alluvial deposits of the Paso Robles Formation, the Careaga Formation, and the Pismo Formation. Recharge to the NCMA comes primarily from:

- Seepage from Arroyo Grande Creek, including releases from Lopez Lake;
- Deep percolation of precipitation, including stormwater infiltration basins;
- Subsurface inflow from the Nipomo Mesa with underflow from Pismo Creek, Meadow Creek, Arroyo Grande Creek, and Los Berros Creek alluvium; and
- Residential and agricultural return flows (SLO County FCWCD 2014).

Water availability in the NCMA is constrained by water rights and water quality issues. The NCMA manages groundwater extraction in their portion of the basin to protect long-term sustainable use and to prevent seawater intrusion. Historically, elevated freshwater levels along the coastline and natural outflow to the ocean have prevented seawater from intruding into the groundwater basin. However, groundwater elevations along the coastline have dropped due to changing climatic conditions, including more frequent periods of extended drought resulting in reduced inflow into the groundwater basin and increased demands on groundwater supplies resulting in a higher rate of groundwater extraction. These lower levels reduce the flow of freshwater out toward the ocean, which reduces the effectiveness of groundwater as a barrier to seawater and has increased seawater intrusion over the last decade.

For the NCMA portion of the Santa Maria Groundwater Basin, the safe yield from groundwater sources was determined to be 9,500 AFY. The 9,500 AFY safe yield provides groundwater allotments for agricultural irrigation in the NCMA area of 5,300 AFY, outflow to the ocean of 200 AFY, and urban use of 4,000 AFY. Of the 4,000 AFY allotment for urban use, the City receives 700 AFY (City of Grover Beach 2019).

Central Coast Blue

The City is currently working jointly with the cities of Arroyo Grande and Grover Beach, and community of Oceano to develop Central Coast Blue. Central Coast Blue is a local recycled water sustainability project that will create a new, high quality, and reliable water supply. A new recycled water facility would be constructed in Grover Beach to create a high-quality water source to supplement local supplies. The recycled water facility would treat flows from the Pismo Beach Wastewater Treatment Plant (WWTP) and the South San Luis Obispo County Sanitation District WWTP. This project would allow sufficient water supplies even in times of water shortage or drought.

Central Coast Blue would also include upgrades to the processes at the existing WWTPs. These upgrades include process upgrades collectively known as Advanced Treatment and include Microfiltration/Ultrafiltration, Reverse Osmosis, and Ultraviolet disinfection with Advanced Oxidation.

In addition to the process upgrades, the Central Coast Blue facility would require injection wells located outside the City to recharge the groundwater basin with purified water and a piping network to carry the purified water from the advanced treatment process to the injection wells.

As of the date of this EIR, the Groundwater Basin Evaluation is currently underway. The project is expected to be completed in 2023.

Future Water Supply and Demand

The City's Urban Water Management Plan (UWMP) outlines projected water supply under dry-year drought conditions. Over the last decade the City of Pismo Beach has adequately provided water throughout the City. The City's water supply is projected to increase from actual use in 2015 to projected available supply in 2035. The City's current UWMP projects water supply and demand through the year 2035 however, the City is currently undergoing an update to the 2015 UWMP which would extend projections to the year 2040 (City of Pismo Beach 2020). Projected available supply is expected to remain constant from 2025 through 2035. The City is working on numerous projects to reduce its reliance on imported water through bolstering the groundwater basin and increasing the reliability of local groundwater sources and offsetting SWP deliveries. Surface water supply from the SWP is expected to decrease based on DWR reliability projections. The City is expected to have an available supply in excess of projected demand through 2035. Table 4.15-1 shows actual water supply and demand for the City in 2015 and projected water supply and demand for the City through 2035.

Table 4.15-1 Water Supply and Demand – Actual (2015) and Projected

	Actual	Projected Supply/Demand			
Supply/Demand Condition	**2015**	**2020***	**2025***	**2030***	**2035***
Supply Totals	2,832	3,477	3,494	3,512	3,530
Demand Totals	1,736	1,888	1,939	1,990	2,044
Supply and Demand Difference	**1,096**	**1,589**	**1,556**	**1,521**	**1,486**

Units in acre-feet per year (AFY)

*Includes 645-698 AFY of recycled water supply

Source: City of Pismo Beach 2016

b. Wastewater Collection and Treatment

The City's wastewater disposal system is comprised of the Pismo Beach WWTP adjacent to Pismo Creek and the ocean outfall near Oceano, which is operated jointly with the South San Luis Obispo County Sanitation District (City of Pismo Beach 2020). The Pismo Beach WWTP is owned and operated by the City and is permitted to discharge disinfected secondary treated wastewater to the Pacific Ocean.

The Pismo Beach WWTP currently treats and discharges an average of 0.9 million gallons per day (mgd) and is permitted to discharge up to 1.9 mgd to the Pacific Ocean via the existing SSLOCSD ocean outfall under its existing Waste Discharge Requirements (WDR) Order No. R3-2015-0016 as of February 2016 (City of Pismo Beach 2015). However, certain deficiencies exist in the collection system within Pismo Beach. Old sewer lines are continuously being replaced and lift equipment upgraded as part of the City's Capital Improvement Plan.

Recycled Water

Central Coast Blue would assist with the treatment of wastewater and capture of water for recharge of the Santa Maria Groundwater Basin and potable water. As described above in *Central Coast Blue*, the project is expected to complete construction and be operational in 2023.

c. Solid Waste

The City contracts with South County Sanitary Services to provide residential and commercial waste collection services in the City. South County Sanitary Services is a subsidiary of Waste Connections Incorporated, which serves the entire San Luis Obispo Integrated Waste Management Authority (IWMA) jurisdictional area, which includes the cities of Pismo Beach, Arroyo Grande, Atascadero, El Paso de Robles, Grover Beach, Morro Bay, and San Luis Obispo. South Coast Sanitary Services provides collection service for household trash, recyclable materials, and clean green waste, such as untreated wood and cut grass.

South County Sanitary Services deposits waste collected in Pismo Beach at the Cold Canyon Landfill, one of three landfills in the IWMA jurisdictional area. Cold Canyon Landfill is located an estimated 5 miles east of Downtown Pismo Beach. Solid waste transported to the landfill is either sorted and recycled or deposited into the landfill. The estimated permitted landfill capacity of the Cold Canyon Landfill is just over 23 million cubic yards and is estimated to have a remaining capacity of approximately 13,000,000 tons (California Department of Resources Recycling and Recovery 2021). The California Department of Resources Recycling and Recovery (CalRecycle) reports per capita disposal rates, measures in pounds per person (both residential population and employed population) to establish compliance with Assembly Bill 939, which requires cities and counties to prepare integrated waste management plans and to divert 50 percent of solid waste from landfills. Disposal rates are in the San Luis Obispo IWMA are not separated by jurisdiction. In 2019, the County of San Luis Obispo disposed of 288,432 tons of solid waste dispersed between the three landfills in the IWMA jurisdictional area (CalRecycle 2019).

d. Stormwater Facilities

Stormwater within the City that does not infiltrate into the ground becomes surface runoff, which either flows into surface waterways or is channeled into the City's storm drains. The City's storm drain system is designed to route stormwater runoff from impervious surfaces including roofs, parking lots, roads, sidewalks, and other hardened surfaces to the Pismo Creek and the Pacific Ocean. The system is comprised of storm drains, cross gutters, and surface swales that are located on City roads, parking lots, freeways, and highways (City of Pismo Beach 2021b). The City of Pismo Beach Engineering and Planning staff are responsible for the maintenance, repair, mapping, and evaluation of drainage systems within the City. Discharges from the City's storm drain system into the ocean and bay are permitted under the State Water Resources Control Board's National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s), Order No. 2013-001-DWQ NPDES No. CAS000004 (City of Pismo Beach 2021c).

The Central Coast Storm Water Program regulates stormwater discharges from municipalities, construction, and industrial activities. The Central Coast Stormwater Program regulates stormwater discharge from municipalities, including the City, as part of the Phase II Small Municipal Separate Storm Sewer System (MS4) General Permit. The Central Coast Water Program requires the implementation of Post-Construction Stormwater Management Requirements to reduce

stormwater discharge for all development projects that would create and/or replace impervious surfaces greater than or equal to 2,500 sf (Central Coast Regional Water Quality Control Board 2021).

Pacific Gas & Electric

Pacific Gas and Electric (PG&E) is responsible for providing electric power supply to the City. PG&E is one of the nation's largest electric and gas utility companies, and it maintains 106,681 circuit miles of electric distribution lines and 18,466 circuit miles of interconnected transmission lines (PG&E 2021). In 2018, PG&E's power mix, including all PG&E-owned generation plus the company's power purchases, consisted of 39 percent renewable resources (wind, geothermal, biomass, solar, and small hydro), 34 percent nuclear generation, 15 percent natural gas and other fuels, and 13 percent large hydroelectric facilities (PG&E 2019). According to PG&E's 2020 Integrated Resource Plan, PG&E anticipates meeting a 2030 energy load demand of 28,907 gigawatt-hours (PG&E 2020).

Southern California Gas

The City is in the natural gas service area of Southern California Gas Company (SoCalGas), which spans central and southern California (CEC 2018a). SoCalGas' service area is equipped with over 102,000 miles of gas transmission, distribution, and service pipelines (SoCalGas 2013). Natural gas supplied by SoCalGas is sourced from gas fields in several sedimentary basins in the western U.S. and Canada including supply basins located in New Mexico (San Juan Basin), West Texas (Permian Basin), Rocky Mountains, western Canada, and local California supplies (California Gas and Electric Utilities 2020). In 2018, SoCalGas customers consumed a total of approximately 8.8 million U.S. therms of natural gas, including residential and non-residential use, electricity generation, and wholesale purchases. Residential users accounted for approximately 27 percent of SoCal Gas' natural gas consumption. From 2020 to 2035, SoCalGas expects residential use and core, non-residential use (including core commercial, industrial, and natural gas vehicles) to decline at an average annual rate of about 1 percent. The expected decline in residential use is primarily driven by aggressive energy efficiency goals and associated programs.

Telecommunications

Telecommunication services are provided to the City through third-party providers such as AT&T, Charter Spectrum, Dish Network, Frontier Communications, and Allconnect. Infrastructure capable of supporting telecommunications is currently present in the City.

4.15.2 Regulatory Setting

a. Federal Regulations

Clean Water Act

The federal Clean Water Act, enacted by Congress in 1972 and amended several times since, is the primary federal law regulating water quality in the United States and forms the basis for several State and local laws throughout the country. The Act established the basic structure for regulating discharges of pollutants into the waters of the United States. The Clean Water Act gave the U.S. Environmental Protection Agency the authority to implement federal pollution control programs, such as setting water quality standards for contaminants in surface water, establishing wastewater and effluent discharge limits for various industry contaminants in surface water, establishing

wastewater and effluent discharge limits for various industry categories, and imposing requirements for controlling nonpoint-source pollution. At the federal level, the Clean Water Act is administered by the U.S. Environmental Protection Agency and U.S. Army Corps of Engineers. At the state and regional levels in California, the act is administered and enforced by the State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCB).

Title 40 of the Code of Federal Regulations

Title 40 of the Code of Federal Regulations (CFR), Part 258 (Resource Conservation and Recovery Act, Subtitle D), contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the Federal landfill criteria.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act, enacted by Congress in 2007, is designed to improve vehicle fuel economy and help reduce the United States' dependence on foreign oil. It expands the production of renewable fuels, reducing dependence on oil and confronting climate change. Specifically, it does the following:

- Increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard that requires fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Reduces United States demand for oil by setting a national fuel economy standard of 35 miles per gallon by 2020, an increase in fuel economy standards of 40 percent as compared to 2007 levels.

The Energy Independence and Security Act of 2007 also set energy efficiency standards for lighting (specifically light bulbs) and appliances. Development would also be required to install photosensors and energy-efficient lighting fixtures consistent with the requirements of 42 United States Code Section 17001 et seq.

Energy Policy and Conservation Act

Enacted in 1975, the Energy Policy and Conservation Act established fuel economy standards for new light-duty vehicles sold in the United States. The law placed responsibility on the National Highway Traffic and Safety Administration (NHTSA) for establishing and regularly updating vehicle standards. The United States Environmental Protection Agency (U.S. EPA) is responsible for administering the Corporate Average Fuel Economy program, which determines vehicle manufacturers' compliance with existing fuel economy standards. In 2012, the U.S. EPA and National Highway Traffic and Safety Administration established final passenger car and light truck Corporate Average Fuel Economy standards for model years 2017 to 2021, which will require a combined average fleet-wide fuel economy of 40.3 to 41.0 miles per gallon in model year 2021 (United States Department of Transportation 2014).

Energy Star Program

Energy Star is a voluntary labeling program introduced by U.S. EPA to identify and promote energy-efficient products to reduce greenhouse gas (GHG) emissions. The program applies to major household appliances, lighting, computers, and building components such as windows, doors, roofs, and heating and cooling systems. Under this program, appliances that meet specifications for maximum energy use established under the program are certified to display the Energy Star label. In

1996, the U.S. EPA joined with the Energy Department to expand the program, which now also includes certifying commercial and industrial buildings as well as homes (U.S. EPA 2021).

b. State Regulations

Water Supply

Drinking water quality in the City is regulated by the California Department of Public Health (CDPH), the SWRCB, and the Central Coast RWQCB. The California Code of Regulations, Title 22 (State Drinking Water Standards) is the primary body of State legislation providing water system standards, including those for water supply, storage capacity, and water quality. Other applicable regulations and policies include the Porter-Cologne Water Quality Control Act, the Safe Drinking Water Act, and the SWRCB Non-degradation Policy.

California Department of Water Resources

The California Department of Water Resources (DWR) is responsible for preparing and updating the California Water Plan, which is a policy document that guides the development and management of State water resources. The plan is updated every five years to reflect changes in resources and urban, agricultural, and environmental water demands. The California Water Plan suggests ways of managing demand and augmenting supply to balance water supply with demand.

CALGreen Compliance

CALGreen is California's first green building code and first in the nation state-mandated green building code. It is formally known as the California Green Building Standards Code, Title 24, Part 11, of the California Code of Regulations. CALGreen also specifies requirements for applications regulated by the California Building Standards Commission (BSC), California Energy Commission (CEC), Division of the State Architect (DSA), Department of Public Health (CDPH), Office of Statewide Health Planning and Development (OSHPD), and DWR. The purpose of CALGreen is to improve public health, safety, and general welfare through enhanced design and construction of buildings using concepts which reduce negative impacts and promote those principles which have a positive environmental impact and encourage sustainable construction practices including water efficiency and conservation, and environmental quality.

Urban Water Management Planning Act

The Urban Water Management Planning Act of 1983 amended California Water Code to require all urban water suppliers in California to prepare and adopt an UWMP and update it every five years. This requirement applies to all suppliers providing water to more than 3,000 customers or supplying more than 3,000 AFY of water.

Sustainable Groundwater Management Act

In September 2014, Governor Browned signed legislation requiring that California's critical groundwater resources be sustainably managed by local agencies. The Sustainable Groundwater Management Act gives local agencies the power to sustainably manage groundwater and requires groundwater sustainability plans to be developed for medium- and high-priority groundwater basins. The project site overlies the Santa Maria Groundwater Basin, for which no groundwater sustainability agency has been established. Although the DWR designated Santa Maria Basin as a high priority basin, the SGMA provides exceptions for adjudicated basins, such as the Santa Maria

Basin, and would not apply to the adjudicated areas of the Santa Maria Basin, such as the NCMA (County of San Luis Obispo 2021b).

Water Conservation Act of 2009 (SB X7-7)

Due to reductions of water available from the San Joaquin Delta, the Legislature drafted the Water Conservation Act of 2009 (SB X7-7) to protect statewide water sources. The legislation called for a 20 percent reduction in water use in California by the year 2020. The legislation amended the Water Code to call for 2020 and 2015 water use targets in the 2010 UWMPs, updates or revisions to these targets in the 2015 UWMPs, and allows DWR to enforce compliance to the new water use standards. Beginning in 2016, failure to comply with interim and final targets will make the City ineligible for grants and loans from the State. In addition to an overall statewide 20 percent water use reduction, the objective of SB X7-7 is to reduce water use within each hydrologic region in accordance with the agricultural and urban water needs of each region. Currently, DWR recognizes 10 separate hydrologic regions. Each hydrologic region has been established for planning purposes and corresponds to the State's major drainage areas. The City of Pismo Beach is located in the Central Coast Hydrologic Region, which includes all of Santa Cruz, Monterey, San Luis Obispo, and Santa Barbara Counties, most of San Benito County, and parts of San Mateo County, Santa Clara County, and Ventura Counties (California DWR 2003).

Model Water Efficient Landscape Ordinance (Assembly Bill 1881)

The updated Model Water Efficient Landscape Ordinance required cities and counties to adopt landscape water conservation ordinances by January 31, 2010 or to adopt a different ordinance that is at least as effective in conserving water as the updated Model Water Efficient Landscape Ordinance (WELO). The City adopted Water Efficient Landscape Standards and Requirements listed as Chapter 15.48 of the PBMC. This ordinance brings the City into compliance with California Assembly Bill 1881.

Executive Order B-29-15 required the State to revise the Model WELO to increase water efficiency standards for new and retrofitted landscapes through more efficient irrigation systems, greywater usage, on-site stormwater capture, and by limiting the portion of landscapes that can be covered in turf. It also requires reporting on the implementation and enforcement of local ordinances, with required reports due by December 31, 2015 (DWR 2017).

Senate Bills 610 and 221, Water Supply Assessment and Verification

Senate Bills (SB) 610 and 221 amended the California Water Code to require detailed analysis of water supply availability for certain types of development projects. The primary purpose of SB 610 is to improve the link between the information on water supply availability and certain land use decisions made by cities and counties. Both statutes require detailed information regarding water availability to be provided to city and county decision-makers prior to approval of specified large (greater than 500 dwelling units or 500,000 square feet of commercial space) development projects. Both statutes also require this detailed information to be included in the administrative record that serves as the evidentiary basis for an approval action by the city or county on such projects. Under SB 610 water assessments must be furnished to local governments for inclusion in any environmental documentation for certain projects as defined in Water Code 10912 subject to the California Environmental Quality Act (CEQA). Under SB 221 approval by a city or county of certain residential subdivisions requires an affirmative written verification of sufficient water supply.

Wastewater

California Code of Regulations Title 22

The California Department of Public Health sets specific requirements for treated effluent reuse, or recycled water, through Title 22 of the California Code of Regulations. These requirements are primarily set to protect public health. The California Code of Regulations Title 22, Division 4, Chapter 3, Sections 60301 through 60355 regulate recycled wastewater. Title 22 contains effluent requirements for four levels of wastewater treatment, from un-disinfected secondary recycled water to disinfected tertiary recycled water. Higher levels of treatment have higher effluent standards, allowing for a greater number of uses under Title 22, including irrigation of freeway landscaping, pasture for milk animals, parks and playgrounds, and vineyards and orchards for disinfected tertiary recycled water.

National Pollutant Discharge Elimination System (NPDES)

In California, the NPDES program is administered by the SWRCB through the RWQCBs and requires municipalities to obtain permits that outline programs and activities to control wastewater and stormwater pollution. Discharges from the City of Pismo Beach's storm drain system are permitted under the NPDES General Permit for Storm Water Discharges From Small Municipal Separate Storm Sewer Systems (MS4s), Permit No. R3-2008-0065 (Small MS4 Permit). A discussion of the NPDES permit and other regulations and policies applicable to stormwater management and stormwater discharges is provided in Section 4.9, Hydrology and Water Quality.

Solid Waste

Assembly Bill 341

The purpose of Assembly Bill (AB) 341 is to reduce GHG emissions by diverting commercial solid waste to recycling efforts and to expand the opportunity for additional recycling services and recycling manufacturing facilities in California. In addition to Mandatory Commercial Recycling, AB 341 sets a statewide goal for 75 percent disposal reduction by the year 2020.

Assembly Bill 939

AB 939 (Public Resources Code 41780) requires cities and counties to prepare integrated waste management plans and to divert 50 percent of solid waste from landfills beginning in calendar year 2000 and each year thereafter. AB 939 also requires cities and counties to prepare source reduction and recycling elements as part of the integrated waste management plans. These elements are designed to develop recycling services to achieve diversion goals, stimulate local recycling in manufacturing, and stimulate the purchase of recycled products.

Assembly Bill 1826

AB 1826 requires businesses that generate a specified amount of organic waste per week to arrange for recycling services for that waste, and for jurisdictions to implement a recycling program to divert organic waste from businesses subject to the law, as well as report to CalRecycle on their progress in implementing an organic waste recycling program. As of January 1, 2017, businesses that generate four cubic yards or more of organic waste per week shall arrange for organic waste recycling services.

Assembly Bill 1016

SB 1016 requires that the 50 percent solid waste diversion requirement established by AB 939 be expressed in pounds per person per day. SB 1016 changed the CalRecycle review process for each municipality's integrated waste management plan. After an initial determination of diversion requirements in 2006 and establishing diversion rates for subsequent calendar years, the Board reviews a jurisdiction's diversion rate compliance in accordance with a specified schedule. Beginning January 1, 2018, the Board will be required to review a jurisdiction's source reduction and recycling element and hazardous waste element once every two years.

Energy

Energy Action Plan

In 2003, the CEC and California Public Utilities Commission set forth their energy policy vision in the Energy Action Plan. The CEC adopted an update to the Energy Action Plan in February 2008 (EAP II) that supplements the earlier Energy Action Plan and examines the state's ongoing actions in the context of global climate change. The nine major action areas in the Energy Action Plan include energy efficiency, demand response, renewable energy, electricity adequacy/reliability/ infrastructure, electricity market structure, natural gas supply/demand/infrastructure, transportation fuels supply/demand/infrastructure, research/development/demonstration, and climate change (California Public Utilities Commission 2008).

Senate Bill *350*

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires a doubling of the energy efficiency savings in electricity and natural gas for retail customers through energy efficiency and conservation by December 31, 2030.

California Renewable Portfolio Standard and Senate Bill 100

Approved by former Governor Brown on September 10, 2018, SB 100 accelerates the state's Renewable Portfolio Standard program, which was last updated by SB 350 in 2015. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

California Energy Efficiency Action Plan

The CEC is responsible for preparing the California Energy Efficiency Action Plan, which covers issues, opportunities, and savings estimates related to energy efficiency in California's building, industrial, and agricultural sectors. The 2019 California Energy Efficiency Action Plan focuses on three goals:

1. Doubling energy efficiency savings by 2030 (SB 350)
2. Removing and reducing barriers to energy efficiency in low-income and disadvantaged communities
3. Reducing GHG emissions from the building sector

The plan offers several recommendations to advance these goals, including expanding funding sources for energy efficiency programs beyond ratepayer portfolios, improving energy efficiency data, integrating energy efficiency into long-term utility planning, enhancing the energy efficiency workforce, improving demand flexibility, and expanding building decarbonization (CEC 2019).

California Building Energy Efficiency Standards – California Code of Regulations, Title 24, Part 6

California Code of Regulations, Title 24, Part 6, is California's Energy Efficiency Standards for Residential and Non-residential Buildings. The 2019 Building Energy Efficiency Standards (California Energy Code), adopted on May 9, 2018, became effective on January 1, 2020. The 2019 Standards move toward cutting nonrenewable energy use in new homes by more than 50 percent and require installation of solar photovoltaic systems for single-family homes and multi-family buildings of three stories and less. The 2019 Standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; 4) and nonresidential lighting requirements (CEC 2018). Section 15.04.010 of the Pismo Beach Municipal Code incorporates the 2019 edition of the California Energy Code by reference (City of Pismo Beach 2020).

California Green Building Standards Code – California Code of Regulations Title 24, Part 11

The California Green Building Standards Code, referred to as CALGreen, was added to Title 24 as Part 11, first in 2009 as a voluntary code, which then became mandatory effective January 1, 2011 (as part of the 2010 CBC). The 2019 CALGreen institutes mandatory minimum environmental performance standards for all ground-up new construction of non-residential and residential structures. It also includes voluntary tiers (I and II) with stricter environmental performance standards for these same categories of residential and non-residential buildings. Local jurisdictions must enforce the minimum mandatory CALGreen standards and may adopt additional amendments for stricter requirements.

The 2019 mandatory standards require:

- Inspections of energy systems to ensure optimal working efficiency;
- Dedicated circuitry to facilitate installation of electric vehicle charging stations in newly constructed attached garages for single-family, duplex dwellings, and nonresidential developments; and
- Designation of at least ten percent of parking spaces for multi-family residential developments and six percent for nonresidential developments as electric vehicle charging spaces capable of supporting future electric vehicle supply equipment

The Tier I and Tier II voluntary standards require stricter energy efficiency requirements and cool/solar reflective roofs. Section 15.04.010 of the Pismo Beach Municipal Code incorporates the 2019 CALGreen by reference (City of Pismo Beach 2020).

c. Local Regulations

City of Pismo Beach Urban Water Management Plan 2015

The City's Urban Water Management Plan (UWMP) (2015) serves as a foundational document and source of information for Water Supply Assessments (SB 610) and Written Verifications of Water Supply (SB 221). The UWMP ensures the City as a water provider has adequate water supplies available or planned infrastructure improvements to meet future demand in the face of diminishing water resources.

Water demand projections described in the UWMP account for anticipated future water demands in Pismo Beach, and changes in land uses including but not limited to densification and associated increases in water usage. The City is currently undergoing an update to the 2015 UWMP (City of Pismo Beach 2020).

Pismo Beach Water Shortage Contingency Plan

The City promotes water conservation through the City's Water Shortage Contingency Plan (WSCP) which is found in Pismo Beach's Urban Water Management Plan in Section 7 The Pismo Beach Water Shortage Contingency Plan features the following policies that affect the municipal water supply.

Stages of Action

STAGE – 1 NORMAL WATER SUPPLY CONDITIONS

The activities performed by the City during this stage include: Outdoor water use for washing vehicles, boats, paved surfaces, buildings and other similar uses shall be attended and have hand-controlled water devices, typically including spring loaded shutoff nozzles; outdoor irrigation resulting in excessive runoff is prohibited; outdoor irrigation resulting in excessive gutter runoff is prohibited; water is supplied to customers at restaurants upon request only.

STAGE -2 MODERATELY RESTRICTED WATER SUPPLY CONDITIONS

Includes actions taken in stage 1 and: any use that results in excessive gutter runoff is prohibited; water may be used for washing vehicles, boats and buildings with hand controlled watering devices, no water shall be used for cleaning driveways, patios, parking lots, sidewalks, streets, or other such uses except as found necessary by the City to protect the public health or safety; outdoor irrigation is restricted between 10:00 am and 4:00 pm and is only to be performed on designated days; irrigation of private and public landscaping, turf areas and gardens is permitted at even numbered addresses only on Mondays and Thursdays and at odd-numbered addresses only on Tuesdays and Fridays, water will be supplied to customers at restaurants only upon request and use of potable water for compaction or dust control purposes in construction activities is prohibited.

STAGE -3 SEVERELY RESTRICTED WATER SUPPLY CONDITIONS

Use of water which results in excessive gutter runoff is prohibited, no water shall be used for cleaning driveways, patios, parking lots, sidewalks, streets or other such use except where necessary to protect the public health and safety; washing cars by use of a hose is prohibited, outdoor irrigation is prohibited between the hours of ten a.m. and four p.m., Irrigation of private and public landscaping, turf areas and gardens is permitted at even numbered addresses only on Mondays and

Thursdays and at odd-numbered addresses only on Tuesdays and Fridays, restaurants shall serve drinking water only in response to a specific request by a customer, emptying and refilling swimming pools and commercial spas is prohibited except to prevent structural damage and/or to provide for the public health and safety, use of potable water for compaction or dust control purposes in construction activities is prohibited.

STAGE -4 CRITICAL WATER SUPPLY CONDITIONS

In addition to the conditions specified for Stage III, the City Council may impose any water rationing requirement as it deems appropriate to protect public health, safety, welfare, comfort, and convenience.

4.15.3 Impact Analysis

a. Methodology and Significance Thresholds

Implementation of the GP/LCP Update could have a significant effect on water supplies, wastewater, solid waste, stormwater conveyance, electric power, natural gas, or telecommunication facilities if demand associated with projected growth would result in any of the following conditions, as listed in Appendix G of the CEQA Guidelines:

1. Require or result in the construction of new water facilities or expansion of existing facilities, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects
2. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years
3. Result in a determination that the wastewater treatment provider does not have adequate capacity to serve projected demand in addition to existing commitments
4. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals
5. Fail to comply with federal, state, and local statutes and regulations related to solid waste

Threshold 1:	Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?
Threshold 2:	Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Impact U-1 DEVELOPMENT FACILITATED BY THE GP/LCP UPDATE WOULD INCREASE THE DEMAND FOR WATER SUPPLY AND WATER INFRASTRUCTURE. HOWEVER, THE CITY OF PISMO BEACH PROJECTS THAT CITY WATER SUPPLY IS SUFFICIENT TO MEET THE PROJECTED WATER DEMAND UNDER BUILDOUT ASSOCIATED WITH THE GP/LCP UPDATE. THIS IMPACT WOULD BE LESS THAT SIGNIFICANT.

The following impact analysis is based on the City of Pismo Beach's 2015 UWMP, which outlines the availability of water supplies for the City through 2035. The City is currently undergoing an update to the 2015 UWMP (City of Pismo Beach 2020). As of the date of this EIR, the City is under a "Normal

Water Supply" condition and is currently implementing Water Conservation tactics which would aid in the reduction of water demand through the GP/LCP Update horizon year 2040 (City of Pismo Beach 2021d).

Implementation of the proposed GP/LCP Update may result in changes to the City's economy, demographics, and environment, resulting in increased strain on the City's water supply. As shown in Table 2-4 and discussed in Section 2, Project Description, Pismo Beach's population is estimated to be approximately 10,216 people in the year 2040 as a result of development facilitated by the GP/LCP Update. This represents an increase of 1,979 people (approximately 24 percent) from the estimated 2019 population of 8,237. Additionally, nonresidential square footage is estimated to increase by approximately 783,268 square feet under the GP/LCP Update. These increases to population and nonresidential uses would result in an incremental increase in the City's water demand.

The UWMP provides estimates for water supply and demand for a period of 20 years from 2015 through 2035. Table 4.15-1, above, shows the water supply reliability in the City through a comparison of total projected water demand with the expected water supply in five year increments over the 20 years. The UWMP is based on the San Luis Obispo Council of Governments (SLOCOG) 2040 Population, Housing and Employment Forecast medium growth population projections through 2040. The projections in Tables 4.14-1 and 4.14-2 account for the water demand associated with the SLOCOG medium growth projected population of 8,605 people in 2035.

As shown previously in Table 4.15-1, the City's projected water supply would meet projected demand through 2035 under normal conditions. Table 4.15-2 shows the City's projected water supply compared to projected demand under multiple-dry-year conditions.

Table 4.15-2 Water Supply and Demand Comparison – Multiple Dry Years

		2020	2035
First Year	Supply totals	2,799	2,799
	Demand totals	1,888	2,044
	Difference	**910**	**755**
Second Year	Supply totals	2,799	2,799
	Demand totals	1,888	2,044
	Difference	**910**	**755**
Third Year	Supply totals	2,709	2,709
	Demand totals	1,888	2,044
	Difference	**821**	**666**

Note: Units in AFY

Source: City of Pismo Beach 2016

The water projections in the UWMP are based on SLOCOG population projections that forecast a population that is approximately 16% less than the projected population under buildout of the GP/LCP Update (8,605 versus 10,216 people). Assuming an 16% percent increased demand in the third-year of the multiple-dry year scenario (the year with the lowest available supply), total demand in 2035 would be 2,371 acre-feet, which would still be under the projected supply of 2,709 acre-feet. Therefore, the City of Pismo Beach would have sufficient water supply to accommodate

the demand of development and the population increase facilitated by the GP/LCP Update through 2035 under multiple-dry year conditions.

As discussed previously, the 2020 update to the UWMP is underway and would take into account SLOCOG's current 2050 Population, Housing and Employment Forecast. The City uses the UWMP to ensure sufficient water supplies are available to the City. In addition, water demand will continue to be reduced through water conservation tactics imposed by the City on new development.

Additionally, as described above, the City, in collaboration with surrounding cities, is in the process of constructing a new recycled water facility, Central Coast Blue, which would treat a portion of wastewater from the City and would serve as an additional water supply. This project will provide additional water supplies even in times of water shortage or drought.

The GP/LCP Update identifies a series of major strategies to ensure a sustainable water supply to support economic development, land use changes, and development in the City through 2040 (the planning horizon). Specifically, the GP/LCP Update ~~Facilities Element and~~ Land Use and Community Design Element contains the following goals and policies, which are consistent with the purpose of the UWMP to encourage the sustainable use and management of water supplies and infrastructure in the City.

~~Facilities Element~~

~~**Goal F-4: Water supply. Ensure a sustainable, clean, long-term water supply**~~

- ~~**Policy F-4.2: Water supply.** Provide a clean, reliable Citywide water supply sufficient to serve existing and planned development~~
- ~~**Policy F-4.3: Water infrastructure.** Maintain existing water infrastructure to protect the supply, quality, and delivery of potable water.~~
- ~~**Policy F-4.4: Water infrastructure for new development**. Require development projects to pay for their share of new water infrastructure or improvements necessitated by that project.~~
- ~~**Policy F-4.5: Citywide water conservation and efficiency.** Encourage and promote community water conservation and efficiency efforts.~~
- ~~**Policy F-4.6: Priority infrastructure improvements.** Prioritize water infrastructure improvements in areas with failing, insufficient, or end of useful life infrastructure~~.

Land Use and Community Design Element

- **Policy LU-5.3: Sustainable Community Strategies.** Ensure land uses decisions and community strategies are designed to reduce energy and water consumption, waste and noise generation, air quality impacts; and support multimodal transport for a sustainable Pismo Beach.
  - **Action LU-5.3a: Sustainable Infrastructure.** The City shall:
    1. Promote infrastructure expansion where it will be more efficient and effective and does not promote growth inducement or result in adverse impacts to coastal resources. *See Goal LU-7 for policies and actions related to growth management.*
    2. Focus infrastructure improvements in designated growth areas and contiguous to existing development.

- **Policy LU-6.2: Maintenance of Infrastructure.** Continue to regulate new and existing development and infrastructure so as not to overburden the City's infrastructure.
  - **Action LU-6.2a: Infrastructure for New Development.** To balance the residential and commercial long-term needs, require new development to pay the full cost of additional infrastructure (sewer, water etc.) needed to support the new development either directly or through development impact fees.
  - **Action LU-6.2b: Annual Reporting.** Require the Department of Public Works to prepare an annual or biannual report for the City's water, wastewater, and stormwater infrastructure capacity.
  - **Action LU-6.2f: Infrastructure Improvements.** The City shall give preference to infrastructure improvements that support or enhance desired land uses and projects and ensure that those improvements are consistent with Coastal Act and GP/LCP policies.

Based on the water supply projections presented in the UWMP, the City's water supply would be sufficient to meet the projected demand of the development envisioned in the GP/LCP Update. In addition, project-specific WSAs would be required to be prepared by proponents of any future large-scale (greater than 500 dwelling units or 500,000 square feet of commercial space) development project in the City, in accordance with SB 610, to ensure adequate water supply is available to serve such projects.

Existing user fees fund the operations and maintenance of the City's water system. However, expansion to the existing water system may be needed to service new development, which is funded by connection and development fees. Impacts from any required expansion of existing infrastructure required by new development in the City would be further analyzed under separate CEQA review when determinations are made on the type, scope, and location of the infrastructure improvements.

In summary, compliance with applicable GP/LCP Update ~~Facilities Element goals and~~ policies to encourage the sustainable use and management of water supplies in the City, completion of the Central Coast Blue project, and continued compliance with water conservation measures would ensure that impacts associated with water demand would be less than significant.

Mitigation Measures

No mitigation would be required.

Threshold 1:	Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunication facilities, the construction of which could cause significant environmental effects?
Threshold 3:	Would the project result in a determination that by the wastewater treatment provider which serves or may serve the project that it has does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Impact U-2 DEVELOPMENT FACILITATED BY THE GP/LCP UPDATE WOULD INCREASE DEMAND FOR WASTEWATER COLLECTION AND TREATMENT. HOWEVER, REPLACEMENT OF OLD SEWER LINES AND LIFT EQUIPMENT UNDER THE CITY'S CAPITAL IMPROVEMENT PLANT AND IMPLEMENTATION OF THE GOALS AND POLICIES OF THE GP/LCP UPDATE TO ENSURE SUFFICIENT WASTEWATER TREATMENT CAPACITY WOULD GENERALLY OCCUR IN PREVIOUSLY DISTURBED OR DEVELOPED AREAS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

The projected growth envisioned in the GP/LCP Update would require an increase in wastewater capacity to meet the collection and treatment demand from new development. As discussed in Section 2, *Project Description*, the population of the City was estimated to be 8,239 in 2019. The increase of 1,979 residents proposed under the GP/LCP Update equates to a 24 percent increase above the existing population. The City's WWTP has a design capacity of 1.9 mgd with a peak flow up to 6 mgd. The Pismo Beach WWTP currently treats and discharges an average of 0.9 mgd and is permitted to discharge up to 1.9 mgd to the Pacific Ocean via the existing SSLOCSD ocean outfall under its existing Waste Discharge Requirements (WDR) Order No. R3-2015-0016 as of February 2016 (City of Pismo Beach 2015). Because approximately 53% of the WWTP capacity currently remains, the expected population growth of approximately 24% envisioned in the GP/LCP Update would not exceed the Pismo Beach WWTP capacity. Existing flows as well as future additional wastewater flows in the City as a result of population growth under the GP/LCP Update would be met by the exiting capacity of the Pismo Beach WWTP.

The sewer collection system within the City has deficiencies that limit the amount of wastewater that can be conveyed through the City. However, the City's Capital Improvement Plan has ongoing plans for the replacement and upgrade of old sewer lines and lift equipment. User fees fund general maintenance and the correction of deficiencies in the existing system. New development within the City as part of the GP/LCP Update would be required to pay impact fees for system expansion that would accommodate the increased growth of the City envisioned as part of the GP/LCP Update. Impact fees on new development would ensure that the wastewater collection system within the City receives necessary upgrades to accommodate the additional population. Development under the Capital Improvement Plan and facilitated by the GP/LCP Update would occur in developed areas of the City where these facilities exist and relocation, if applicable, would generally occur in previously disturbed or developed areas.

In addition, the following policies in the GP/LCP Update ~~Facilities Element and~~ Land Use and Community Design Element, ~~as well as policies 4.4 and 4.6, as described in Impact U-1 above~~, would ensure proper management of wastewater systems and infrastructure for new development and redevelopment in the City.

~~Facilities Element~~

~~**Goal F-3: Sewer. Sewer management and facility operations that allow for adequate disposal within the community.**~~

- ~~**Policy F-3.1: Sewer System Maintenance.** Ensure all sewers are operational and in good working order.~~
- ~~**Policy F-3.2: Sewer Infrastructure for New Development.** Require development projects to pay for their fair share of new sewer infrastructure or improvements necessitated by that development.~~

Land Use and Community Design Element

- **Policy LU-5.3: Sustainable Community Strategies.** Ensure land uses decisions and community strategies are designed to reduce energy and water consumption, waste and noise generation, air quality impacts; and support multimodal transport for a sustainable Pismo Beach.
  - **Action LU-5.3a: Sustainable Infrastructure.** The City shall:
    1. Promote infrastructure expansion where it will be more efficient and effective and does not promote growth inducement or result in adverse impacts to coastal resources. *See Goal LU-7 for policies and actions related to growth management.*
    2. Focus infrastructure improvements in designated growth areas and contiguous to existing development.
- **Policy LU-6.2: Maintenance of Infrastructure.** Continue to regulate new and existing development and infrastructure so as not to overburden the City's infrastructure.
  - **Action LU-6.2a: Infrastructure for New Development.** To balance the residential and commercial long-term needs, require new development to pay the full cost of additional infrastructure (sewer, water etc.) needed to support the new development either directly or through development impact fees.
  - **Action LU-6.2b: Annual Reporting.** Require the Department of Public Works to prepare an annual or biannual report for the City's water, wastewater, and stormwater infrastructure capacity.
  - **Action LU-6.2f: Infrastructure Improvements.** The City shall give preference to infrastructure improvements that support or enhance desired land uses and projects and ensure that those improvements are consistent with Coastal Act and GP/LCP policies.

On-going upgrades to the sewer system within the City under the Capital Improvement Plan and GP/LCP Update to ensure adequate wastewater systems and infrastructure would be available to meet future demands would generally occur in previously disturbed or developed areas. Therefore, impacts from physical disturbance for new or expanded wastewater systems and infrastructure would be less than significant.

Mitigation Measures

No mitigation would be required.

Threshold 1:	Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Impact U-3 DEVELOPMENT FACILITATED BY THE GP/LCP UPDATE WOULD INCREASE THE DEMAND FOR ELECTRIC POWER, NATURAL GAS, TELECOMMUNICATIONS, AND STORMWATER FACILITIES. HOWEVER, DEVELOPMENT FACILITATED BY THE GP/LCP UPDATE WOULD OCCUR IN DEVELOPED AREAS OF THE CITY WHERE THESE FACILITIES EXIST AND RELOCATION, IF APPLICABLE, WOULD GENERALLY OCCUR IN PREVIOUSLY DISTURBED OR DEVELOPED AREAS. THIS IMPACT WOULD BE LESS THAT SIGNIFICANT.

Development facilitated by the GP/LCP Update would create additional demand for electricity, natural gas, and telecommunication facilities. Development under the 2040 GP/LCP Update would comply with existing energy efficiency regulations, and GP/LCP policies and actions would encourage new development to take advantage of voluntary energy efficiency programs. As described in Section 4.5, Energy, development facilitated by the GP/LCP Update would not result in inefficient or wasteful use of energy. Development facilitated by the GP/LCP Update would occur within the already developed and urbanized areas of the City where electric, natural gas, and telecommunications infrastructure are present. Therefore, the GP/LCP would not require expansion or relocation of electric power, natural gas, or telecommunication facilities such that significant environmental effects would result. However, individual projects developed under the GP/LCP Update would require new connections to the existing infrastructure, the impacts of which would be further analyzed under separate CEQA review as part of each individual project.

Additionally, the Land Use and Community Design Element of the GP/LCP contains the following policies and actions that would minimize the potential for utility infrastructure to result in environmental impacts:

- **Policy LU-5.3: Sustainable Community Strategies.** Ensure land uses decisions and community strategies are designed to reduce energy and water consumption, waste and noise generation, air quality impacts; and support multimodal transport for a sustainable Pismo Beach.
  - **Action LU-5.3a: Sustainable Infrastructure.** The City shall:
    1. Promote infrastructure expansion where it will be more efficient and effective and does not promote growth inducement or result in adverse impacts to coastal resources. *See Goal LU-7 for policies and actions related to growth management.*
    2. Focus infrastructure improvements in designated growth areas and contiguous to existing development.
  - **Action LU-5.3b: Sustainable Design Incentive Program.** Consider the feasibility of providing incentives for new and renovated projects that incorporate sustainable design features such as the construction of new buildings that reduce energy demand though natural features, such as green roofs and walls or energy efficiency above and beyond the current building code. Inform applicants of the benefits and incentives for green building practices and pursuit of LEED certification.

- **Policy LU-6.2: Maintenance of Infrastructure.** Continue to regulate new and existing development and infrastructure so as not to overburden the City's infrastructure.
  - **Action LU-6.2a: Infrastructure for New Development.** To balance the residential and commercial long-term needs, require new development to pay the full cost of additional infrastructure (sewer, water etc.) needed to support the new development either directly or through development impact fees.
  - **Action LU-6.2b: Annual Reporting.** Require the Department of Public Works to prepare an annual or biannual report for the City's water, wastewater, and stormwater infrastructure capacity.
  - **Action LU-6.2c: Regional Infrastructure Capacity.** Coordinate with regional utility services when assessing Pismo Beach's growth capacity and zoning.
  - **Action LU-6.2f: Infrastructure Improvements.** The City shall give preference to infrastructure improvements that support or enhance desired land uses and projects and ensure that those improvements are consistent with Coastal Act and GP/LCP policies.

As described in Impact HWQ-2 in Section 4.9, *Hydrology and Water Quality*, development facilitated by the 2040 General Plan would create new impervious surfaces, which would result in increased stormwater runoff to the City's municipal storm drain system. Because the GP/LCP Update is focused on infill development, the conversion of open space and permeable surfaces to impervious surfaces would be minimized. Additionally, the amount of new impervious surfaces would be reduced through implementation of Best Management Practices, including Low Impact Development (LID) approaches, aimed at reducing stormwater runoff to ensure downstream storm drain capacity is not exceeded.

The Open Space and Conservation Element of the GP/LCP contains the following actions that would minimize the potential for utility infrastructure to result in environmental impacts:

- **Action COS-1.6d: Low Impact Development Strategies.** New development and redevelopment shall give precedence to the use of a Low Impact Development (LID) approach to stormwater management, which integrates site design strategies (e.g., minimizing the building footprint, preserving vegetation, and protecting natural drainage features) with small-scale, distributed Best Management Practices (BMPs) (e.g., permeable pavement surfaces, rain barrels and cisterns, and bioretention techniques) to replicate the site's natural hydrologic balance through infiltration, evapotranspiration, harvesting, detention, or retention of stormwater close to the source, to the maximum extent appropriate and feasible.
- **Action COS-1.6g: Infiltration.** Modify the Stormwater regulations in the Municipal Code maintain or enhance on-site infiltration of runoff, where appropriate and feasible. If on-site infiltration of runoff may potentially result in adverse impacts, including, but not limited to, geologic instability, flooding, or pollution of coastal waters, the development shall substitute alternative BMPs (e.g., flow-through planter box, green roof, or cistern) that do not involve on-site infiltration in order to minimize changes in the runoff flow regime to the extent appropriate and feasible. Alternative BMPs shall also be used where infiltration BMPs are not adequate to treat a specific pollutant of concern attributed to the development, or where infiltration practices would conflict with regulations protecting groundwater.
- **Action COS-1.6h: Impervious Surfaces.** New development shall be planned, sited and designed to minimize the installation of impervious surfaces, where feasible, especially impervious areas directly connected to the municipal storm drain system, in order to

minimize increases in stormwater or dry weather runoff. Redevelopment projects shall, where feasible, increase the area of pervious surfaces.

- **Action COS-1.6i:** Priority Development Projects. Require a Water Quality Management Plan for Priority Development Projects, (PDPs) as defined in the NPDES MS4 Permit, that includes permanent post-construction treatment control BMPs to address pollutants of concern specific to the PDP's land use and impairments of surface waters to which the project drains. PDPs will also require post-construction runoff control BMPs to minimize adverse changes in the PDP's runoff flow regime. The Water Quality Management Plan will provide for the operation and maintenance of the permanent treatment control and runoff control BMPs and shall be implemented for the life of the development.
- **Action COS-1.8b: Runoff Plan Requirements.** Runoff management shall be addressed early in the development's planning and design stages. As part of CDP approval, the City shall require that the runoff plans include stormwater pollution control and runoff control measures or systems, and a maintenance program, as necessary, for both the construction-phase and post-development runoff plans. The post-development maintenance program shall be for the life of the development. The level of detail provided to address the plan's requirements shall be commensurate with the type and scale of the development, and with the potential for adverse water quality and hydrology impacts to coastal waters.

Because development would occur within urbanized areas of the City, and Best Management Practices would be incorporated, the construction or expansion of existing storm drain facilities would not likely be required as a result of implementation of the GP/LCP Update. However, storm drain improvements or connections to existing storm drains required for each individual project developed under the GP/LCP Update would be further analyzed under separate CEQA review as part of each individual project. With implementation of the GP/LCP policies, impacts related to electric power, natural gas, telecommunication, and storm drain facilities would be less than significant.

Mitigation Measures

No mitigation would be required.

Threshold 4:	Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?
Threshold 5:	Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Impact U-4 DEVELOPMENT FACILITATED BY THE GP/LCP UPDATE WOULD INCREASE WASTE SENT TO AREA LANDFILLS. HOWEVER, COLD CANYON LANDFILL WOULD HAVE CAPACITY TO SERVE THE DEVELOPMENT ENVISIONED IN THE GP/LCP UPDATE. GOALS AND POLICIES IN GP/LCP UPDATE WOULD INCREASE THE AMOUNT OF WASTE THAT IS DIVERTED FROM THE LANDFILL AND ENCOURAGE REUSE AND RECYCLING. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

The City of Pismo Beach uses Cold Canyon Landfill for solid waste disposal. As of 2021, Cold Canyon Landfill has an estimated 130,000,000-ton remaining capacity for the region. Disposal rates of solid waste in the San Luis Obispo IWMA are not separated by jurisdiction and are measured in pounds per person. According to CalRecycle, between 2010 and 2014, annual disposal rates in the IWMA ranged from an estimated 4.3 to 4.9 pounds per person. As shown in Table 2-6 in Section 2, *Project*

Description, the estimated population of City would increase by approximately 1,979 through 2040, and result in a population of 10,216.

Based on an average daily residential waste generation of 4.6 pounds per person and the 2019 population of 8,237, existing solid waste generation in the City is approximately 37,890 pounds (approximately 19 tons) per day. Based on an average daily residential waste generation of 4.6 pounds per person and projected population of 10,216, the estimated daily solid waste generation in the City in 2040 would be approximately 46,994 pounds (approximately 23.5 tons) per day, or an increase of 9,104 pounds (approximately 4.5 tons) per day. Cold Canyon Landfill has a maximum daily throughput of 1,650 tons per day. Therefore, the projected increase in solid waste generation in the City would increase disposal at the Cold Canyon Landfill by approximately 0.28 percent. With a remaining capacity of 13 million cubic yards, the Cold Canyon Landfill would have sufficient capacity to accommodate this increase in solid waste generation.

Development facilitated by the GP/LCP Update would be required to be constructed ~~.~~ in compliance with the statewide goal for 75 percent disposal reduction by the year 2020 set by AB 341. ~~, Goal 2 of the GP/LCP Update Facilities Element establishes a City goal of becoming a near zero waste community. Implementation of this goal would help achieve statewide goals for solid waste reduction, including those established by AB 341. In addition to Goal F-2, the GP/LCP Update Facilities Element includes the following policies related to solid waste reduction:~~

~~**Goal F-2: Near zero waste. A highly efficient community that produces very little solid waste.**~~

- ~~**Policy F-2.1: Provide waste and recycling services.** In collaboration with City's partners, provide solid waste, recycling, and green waste services to the community at a commensurate service rate.~~
- ~~**Policy F-2.2: Zero waste government operations.** Strive for zero waste government operations, modeling best practices in solid waste management and recycling for the rest of the community.~~
- ~~**Policy F-2.3: Waste reduction.** Seek to continually reduce Pismo Beach's rate of waste disposal per capita, and to increase the diversion rate of recycling and green waste.~~
- ~~**Policy F-2.4: Recycled building material.** Encourage the use of recycled building and infrastructure materials in new public and private development.~~
- ~~**Policy F-2.5: Paper waste reduction.** Reduce paper waste and encourage the use of recycled paper in City operations.~~
- ~~**Policy F-2.6: Community coordination.** Work with the Chamber of Commerce and other groups to encourage recycling by visitors as well as solid waste best practices to minimize trash entering the ocean and other sensitive ecological areas~~.

The projected increase in solid waste generation as a result of development facilitated by the GP/LCP Update would not exceed the capacity of Cold Canyon Landfill, or result in a substantial reduction in the current remaining capacity for the region. ~~Additionally, the GP/LCP Update contains goals and policies to reduce and divert waste consistent with state goals for solid waste reduction~~. Therefore, this impact would be less than significant.

Mitigation Measures

No mitigation would be required.

4.15.4 Cumulative Impacts

Cumulative development and redevelopment in the City would incrementally contribute to increased demand on wastewater treatment and conveyance facilities, and as planned cumulative development occurs throughout San Luis Obispo County, the amount of physical disturbance for new or expanded facilities would increase. Increased disturbance throughout the region for new or expanded wastewater facilities would potentially result in a cumulative environmental impact. On-going upgrades to the sewer system within the City of Pismo Beach under the Capital Improvement Plan ~~and GP/LCP Update~~ would ensure adequate wastewater systems and infrastructure are available for future development within the City. These improvements would generally occur in previously disturbed or developed areas. Therefore, the project would not result in a considerable contribution to cumulative impacts from physical disturbance for new or expanded wastewater systems and infrastructure.

Cumulative development and redevelopment in the City would incrementally contribute to increased demand on existing water supply, and as planned cumulative development occurs throughout San Luis Obispo County, the amount of physical disturbance for new or expanded facilities would increase. The GP/LCP Update include goals and policies that would minimize increased water demand associated with new development, promote water conservation, and require new developments to incorporate water-efficient design features. With adherences to these GP/LCP Update goals and policies, the project would not result in a considerable contribution to cumulative water supply impacts.

Cumulative development and redevelopment in the City would incrementally contribute to increased demand of electrical power, natural gas, telecommunication, and storm drain facilities and, as planned cumulative development occurs throughout San Luis Obispo County, the amount of physical disturbance for new or expanded facilities would increase. However, all parcels within the City have available existing infrastructure for electrical power, natural gas, telecommunication, and storm drain connections. Therefore, development under the GP/LCP Update would not result in a considerable contribution to cumulative impacts for the provision of electrical power, natural gas, telecommunication, and storm drain facilities.

Solid waste collected in the City is deposited at the Cold Canyon Landfill, one of three landfills in the IWMA jurisdictional area. The IWMA includes San Luis Obispo County, the Cities of Arroyo Grande, Atascadero, Grover Beach, Morro Bay, Paso Robles, Pismo Beach, and San Luis Obispo, as well as numerous community service districts. Therefore, the cumulative impact area for solid waste includes all of these areas, which all contribute to the landfills in the IWMA jurisdictional area. The population increase from planned cumulative development and redevelopment throughout San Luis Obispo County would incrementally increase waste disposal and decrease capacity at landfills in the County. This would result in a potential cumulative impact on waste disposal services and facilities in the region. However, development under the GP/LCP Update would result in an increase of waste disposal at Cold Canyon Landfill by approximately 0.28 percent, which would not substantially increase daily or annual waste disposal, or result in exceedance of capacity at the Cold Canyon Landfill. Therefore, the project would not result in a considerable contribution to cumulative impacts to waste disposal services and facilities in the region.

4.16 Less Than Significant Environmental Effects

Section 15128 of the *CEQA Guidelines* requires an EIR briefly describe any possible effects that were determined not to be significant. The environmental factors discussed below are in response to the checklist questions listed in Appendix G of the *CEQA Guidelines* that were not discussed in the impact sections of the EIR.

4.16.1 Agricultural and Forestry Resources

Thresholds of Significance

Pursuant to the *CEQA Guidelines*, Appendix G checklist, potentially significant impacts would occur if the General Plan/Local Coastal Plan (GP/LCP) Update would result in any of the following:

1. Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
2. Conflict with existing zoning for agricultural use, or a Williamson Act contract;
3. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220[g]), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104[g]);
4. Result in the loss of forest land or conversion of forest land to non-forest use; and/or
5. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

Assessment of Impacts

Nearly all of the land in the City of Pismo Beach (City) is considered Urban and Built-Up Land. The City does not contain Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance. Therefore, the project would not convert or conflict with existing zoning for agricultural resources in the City.

As described in Section 4.3, Biological Resources, the City has a wide diversity of tree (hardwood and coniferous forests, oak woodlands), shrub (chaparrals, coastal scrubs), and herbaceous (grasslands) terrestrial habitat types. These habitat types do not meet the definition of forest land as defined in Public Resources Code Section 12220(g), or timberland, as defined by Public Resources Code Section 4526. Furthermore, the City does not contain any lands zoned for forest land or timberland production. Therefore, the project would not conflict with existing zoning for, or cause rezoning of, forest land, timber land or conversion of forest land to non-forest use. No impacts related to agricultural or forestry resources would occur as a result of the GP/LCP Update.

4.16.2 Mineral Resources

Thresholds of Significance

Pursuant to the State *CEQA Guidelines*, Appendix G checklist, potentially significant impacts would occur if the proposed GP/LCP Update would result in any of the following:

1. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State; and/or
2. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

Assessment of Impacts

The landscape of San Luis Obispo County contains a variety of mineral resources. Mining of copper and coal has occurred in the county since the mid-1800s, and chromite, manganese, and mercury were mined in the early 1900s. In recent years, the principal developed mineral resources of San Luis Obispo County have been gypsum, clay, natural gas, petroleum, mercury, construction stone, sand, and gravel. Of these, sand and gravel remain principal mineral resources to this day.

However, the City has no active mineral operations within their jurisdiction, nor does it have any land classified as a grade II machine-readable zone (MRZ-2) for containing concrete-grade aggregate within their jurisdiction. No oil fields lie within Pismo Beach, nor are there any active offshore drilling operations. Therefore, the project would have no impact from the loss of availability of mineral resources.

5 Other CEQA Required Discussions

This section discusses other issues for which the California Environmental Quality Act (CEQA) requires analysis in addition to the specific issue areas discussed in Section 4, *Environmental Impact Analysis*. These additional issues include the project's potential to induce growth and create significant and irreversible impacts on the environment.

5.1 Growth Inducement

CEQA Guidelines Section 15126.2(d) requires that EIRs discuss the potential for projects to induce population or economic growth, either directly or indirectly. CEQA also requires a discussion of ways in which a project may remove obstacles to growth.

5.1.1 Population and Economic Growth

As discussed in Section 2, *Project Description*, buildout of the GP/LCP Update could accommodate an estimated 1,111 new dwelling units and 1,979 new residents in the City beyond 2019 existing conditions. Additionally, Table 4.12-5 within Section 4.12, *Population and Housing,* indicates the anticipated population and housing growth in the City through 2040 under the General GP/LCP Update is similar to the SLOCOG population and housing growth projections for the City. Furthermore, the land use plan and policies in the GP/LCP Update focus on development in underutilized sites within City boundaries, with limited vacant land, to support growth in areas already well-served by existing public facilities and services.

The GP/LCP Update would result in an increase of approximately 783,268 square feet of nonresidential development that would generate approximately 545 permanent employment opportunities in the City. Additionally, the GP/LCP Update would generate temporary employment opportunities during construction of future residential and nonresidential projects. As construction workers would be expected to be drawn from the existing regional work force, construction of future development projects would not be considered growth-inducing.

As discussed in Section 2, *Project Description*, the City contains 288 vacant or underutilized parcels, with the rest of the City occupied by development or open space. With a lack of substantial developable area, any economic expansion induced by the GP/LCP Update is not anticipated to result in direct physical environmental effects beyond those described throughout Section 4, *Environmental Impact Analysis*, or as a result of development expected to occur under the GP/LCP Update. Moreover, the environmental effects associated with future development in or around Pismo Beach as a result of the GP/LCP Update would be fully addressed as part of the CEQA environmental review for individual development projects as they are considered by City decision-makers.

5.1.2 Removal of Obstacles to Growth

The GP/LCP Update project area includes all area within City limits, which is an urbanized area that is served by existing infrastructure. As discussed in Section 4.15, *Utilities and Service Systems*, and Section 4.9, *Hydrology and Water Quality*, existing and planned infrastructure in Pismo Beach would be adequate to serve development under the GP/LCP Update. The GP/LCP Update encourages mixed-use development, particularly in the Downtown Core of the City, which currently consists of

resort commercial, commercial, public/semi-public, open space, high-density residential, and low-density residential uses. Thus, despite this anticipated land use change in the Downtown Core, the GP/LCP Update would generally preserve the existing pattern of land uses in the City. By focusing development within already urbanized areas, implementation of the GP/LCP Update would reduce growth pressure in undeveloped areas along the periphery of the City. This constrained growth pressure would reduce the potential for impacts relating to issues such as biological resources, regional traffic, and air quality as compared to development on lands beyond urban limits.

The GP/LCP Update does not include development within the City's Sphere of Influence (SOI). Pismo Beach's SOI includes approximately 1,100 acres in Price Canyon, 182 acres west of Oak Park Boulevard, and a small area along Mattie Road used for parking and restroom facilities (See Figure 2-3 in Section 2, *Project Description*, to view proposed SOI). The City's SOI defines the area to which the City intends to provide municipal services and allow development of some urban land uses at a future date. Within the SOI areas, future uses may be developed subject to annexation to the City of Pismo Beach, in compliance with procedures identified by the San Luis Obispo County Local Agency Formation Commission (LAFCO). However, future land use designations within the SOI are not specifically defined or included within the buildout assumptions of the GP/LCP Update. Because the GP/LCP Update does not include any future development, utilities, or transportation improvement in the SOI, the GP/LCP Update would not result in the removal of an obstacle to growth.

5.2 Irreversible Environmental Effects

When an EIR evaluates a project that would amend public plans, ordinances, or policies, the *CEQA Guidelines* require a discussion of significant irreversible environmental changes. CEQA also requires decision-makers to balance the benefits of a proposed project against its unavoidable environmental risks in determining whether to approve a project. This section addresses nonrenewable resources, the commitment of future generations to the proposed uses, and irreversible impacts associated with the development that would be facilitated by implementation of the GP/LCP Update.

Construction activity associated with planned development that would be accommodated under the GP/LCP Update would require the use of building materials and energy, some of which are nonrenewable resources. Consumption of these resources would occur with any development in the region and are not unique to Pismo Beach or the GP/LCP Update.

Growth facilitated by the GP/LCP Update would require an irreversible commitment of law enforcement, fire protection, water supply, wastewater treatment, and solid waste disposal services. As discussed in Sections 4.13, *Public Services and Recreation*, and 4.15, *Utilities and Service Systems*, potential impacts to public services and utilities would be less than significant following implementation of policies included in the GP/LCP Update.

The anticipated increase in vehicle trips associated with buildout of the GP/LCP Update would incrementally contribute to local traffic, air quality emissions, and greenhouse gas emissions. As described in Section 4.14, *Transportation*, projected future development within the City would increase regional Vehicle Miles Traveled (VMT). Consistent with GP/LCP Update Circulation Element Policy 4.1.5, future development that is projected to exceed the average regional VMT would be required to implement VMT-reducing mitigations or modify the proposed development to reduce VMT to the maximum extent feasible. While the potential impacts of individual future development projects in the City are speculative, the overall potential impacts of the increase in VMT in the City and County identified for the GP/LCP Update would be significant and unavoidable. Impacts related

to air quality were determined to be less than significant with mitigation, except for the impacts related to consistency of the GP/LCP Update with the Clean Air Plan. As discussed in Section 4.2, *Air Quality*, of this EIR, the additional population growth associated with buildout of the GP/LCP would be inconsistent with assumptions on which the Clean Air Plan is based, and this impact would be significant and unavoidable.

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6 Alternatives

As required by Section 15126.6 of the *CEQA Guidelines*, this EIR examines a range of reasonable alternatives to the proposed City of Pismo Beach General Plan/Local Coastal Plan (GP/LCP) Update that could feasibly achieve similar objectives but would avoid or substantially lessen significant adverse impacts associated with the GP/LCP Update.

The GP/LCP Update vision and guiding principles, and thus the project objectives, are contained in the Land Use and Community Design Element and are described in Section 2.4.1, *Objectives of the GP/LCP Update*. The GP/LCP Update sets the guiding planning and land use principles for the City. The following vision has been reconfirmed for Pismo Beach that serves to guide the GP/LCP Update:

- Provide a safe place
- Maintain the City's small beach town character
- Manage growth effectively
- Enhance a vibrant tourist-based economy, while becoming a world-renowned tourist destination

The GP/LCP Land Use and Community Design Element has been drafted to implement the community vision through its goals, policies, and actions, which are built around the following GP/LCP Update guiding principles:

- Preserve the historic ambiance of Pismo Beach
- Support the visitor population while enhancing the quality of life for all residents
- Manage growth effectively
- Preserve and protect natural resources

Another objective of the GP/LCP Update is to ensure that the City's land use plan meets the fair share housing needs allocation established in the San Luis Obispo Council of Governments (SLOCOG) Regional Housing Needs Plan (RHNP).

6.1 Alternatives Development and Screening Process

The analysis of alternatives for the GP/LCP Update focuses on land use scenarios that incorporate different assumptions regarding the combinations of future land uses in the City. Alternatives provided are intended to reduce or avoid significant and unavoidable impacts where the potential for impact reduction is feasible. As discussed in Section 4, *Environmental Impact Analysis*, the GP/LCP Update would have significant and unavoidable impacts related to air quality plan consistency (Impact AQ-1), increased vehicle miles traveled (VMT) (Impact T-2), and cumulative air quality and transportation impacts.

6.1.1 Alternatives Considered but Rejected

Alternatives considered included alternate locations and a focused GP/LCP Update that would include fewer updated General Plan Elements. Several of the potential alternatives considered have been rejected on the basis that they are practically infeasible or would fail to accomplish the basic project objectives.

An alternate location is not feasible because the GP/LCP Update is a plan guiding the growth and development of areas that are located specifically within the jurisdiction of Pismo Beach. However, within Pismo Beach, the alternatives below consider different patterns of land use and infrastructure to accommodate forecasted future growth and regional housing needs, as well as development within the Sphere of Influence (SOI).

A focused update to the GP/LCP that would not include changes to the Circulation Element was also considered as an alternative. However, the City determined that changes anticipated to the Land Use and Community Design Element and resulting buildout scenario would also require a comprehensive update that included updates to the Circulation Element. Therefore, focused update to the GP/LCP was rejected from further consideration.

6.1.2 GP/LCP Update Alternatives

Included in this analysis are four alternatives, including the CEQA-required "no project" alternative, that involve changes to the GP/LCP Update that may reduce the project-related environmental impacts identified in this EIR. Alternatives have been developed to provide a reasonable range of options to consider that would help decision makers and the public understand the general implications of revising or eliminating certain components of the proposed GP/LCP Update.

The following alternatives are evaluated in this EIR:

- Alternative 1: No Project/Continue using 1992 General Plan and Local Coastal Plan
- Alternative 2: Reduced Residential Buildout
- Alternative 3: Reduced Commercial Floor Area Ratio
- Alternative 4: Proposed General Plan and Local Coastal Plan Update with Expanded Sphere of Influence Development

Table 6-1 describes the buildout characteristics of the GP/LCP Update in comparison to each alternative considered. Detailed descriptions of the alternatives are included in the impact analysis for each alternative. Each alternative is analyzed to determine whether environmental impacts would be similar to, less than, or greater than those of the preferred scenario in the GP/LCP Update in Sections 6.2.1 through 6.2.3. As required by CEQA, this section also includes a discussion of the "environmentally superior alternative" among those studied.

Table 6-1 Comparison of Project Alternatives' Buildout Characteristics

Feature	Project	Alternative [1] (No Project)	Alternative 2 (50% Reduced Residential)	Alternative 3 (Reduced Commercial FAR)	Alternative 4 (Expanded Development in SOI)
City Limit (acres)	1,167	1,167	1,167	1,167	1,167
Sphere of Influence (acres)	1,282	1,282	1,282	1,282	1,282
Project/Alternative Planning Area (acres)	1,167 (City Limit only)	1,167 (City Limit only)	1,167 (City Limit only)	1,167 (City Limit only)	1,295 (City Limit + 10% of SOI)
2040 Total Dwelling Units	7,025	6,390	6,470	7,025	8,825
2040 Population	10,216	9,040	9,227	10,216	13,422
2040 Total Non-Residential Floor Area [1] (square feet)	12,014,768	12,194,420	12,014,768	11,859,936	12,014,768

[1]Non-residential = Retail, Service, Office, which is comprised of Commercial, Industrial, and Public/Semi Public Uses

FAR = Floor Area Ratio

SOI = Sphere of Influence

6.2 Alternatives Analysis

6.2.1 Alternative 1: No Project/Continue Using 1992 General Plan and Local Coastal Plan

6.2.1.1 Description

Section 15126.6(e) of *the CEQA Guidelines* requires a "no project" alternative be evaluated in an EIR to allow decision makers to compare the impacts of approving a proposed project with the impacts of not approving that project. *CEQA Guidelines* Section 15126.6(e)(3) describes the two general types of no project alternative: (1) when the project is the revision of an existing land use or regulatory plan, policy, or ongoing operation, the no project alternative would be the continuation of that plan; and (2) when the project is not a land use/regulatory plan, such as a specific development on an identifiable property, the no project alternative is the circumstance under which that project is not processed (i.e., no development occurs). Alternative 1 represents the former type of no project alternative and assumes the continued implementation of the existing 1992 GP/LCP.

This alternative is comprised of a land use pattern that reflects the land use identified in the existing 1992 GP/LCP, most recently updated in 2018 (Land Use and Circulation Elements). Under this alternative, the proposed GP/LCP Update would not be adopted and the existing GP/LCP, including the land use map and all of the GP/LCP goals and policies, would remain in place through the horizon year of 2040. Thus, any new development in Pismo Beach would occur consistent with the existing land use designations and the allowed uses within each designation. Similarly, any new infrastructure would occur as envisioned in the existing 1992 General Plan. Development under this

alternative is anticipated to be generally similar in much of the City but would not include mixed-use development in the downtown area, a focus on affordable housing and other updates to comply with current State law, lower-cost visitor-serving accommodations, and updates to address sea level rise and resiliency. Buildout of the existing 1992 GP/LCP was estimated as part of the 2018 Circulation Element Update, and was found to provide for the growth of 476 new residential units and 690 jobs as compared to an estimated 1,111 new residential units and 545 jobs under the proposed GP/LCP Update. As a result, overall residential development and anticipated population growth would be reduced under the No Project Alternative compared to the GP/LCP Update, whereas overall non-residential (commercial, mixed use, and public/semi-public) development and anticipated jobs growth would be increased under the No Project Alternative compared to the GP/LCP Update (refer to Table 6-1).

6.2.1.2 Impact Analysis

Aesthetics

Implementation of Alternative 1 would reduce residential development by approximately 9 percent compared to the GP/LCP Update. Conversely, implementation of Alternative 1 would increase non-residential development by approximately 1.5 percent compared to the GP/LCP Update. Therefore, Alternative 1 would involve less overall residential development and anticipated population growth than would occur under the GP/LCP Update but would result in increased non-residential development and anticipated jobs growth. Growth envisioned in the GP/LCP Update encourages mixed uses in the downtown area and focuses on affordability. The GP/LCP Update would also facilitate development for housing and mixed uses on existing vacant and underutilized parcels. Alternative 1 would continue the currently planned development pattern throughout Pismo Beach. For example, Alternative 1 would not provide a focus on conserving the existing housing stock and character or improving the commercial and pedestrian environment of Shell Beach to enhance the beach community, nor would it support a vibrant Downtown area that acts as a destination for all by providing motel and hotel uses, as well as supporting uses such as commercial, mixed-use, high-density residential, and recreation. Thus, under Alternative 1, visibility from and of scenic vistas, the city's visual character, and light and glare conditions would not be changed to the extent anticipated under the GP/LCP Update. In addition, Alternative 1 would not create substantial changes to the existing pattern of development for the Shell Beach and Downtown Core area as would the GP/LCP Update, impacting fewer aesthetic resources, and reducing the potential change in visual character. Overall, impacts to aesthetic resources would be reduced under Alternative 1. Aesthetic impacts would remain less than significant, similar to the GP/LCP Update.

Air Quality

Implementation of Alternative 1 would reduce residential development by approximately 9 percent and increase non-residential development by approximately 1.5 percent compared to the GP/LCP Update. Therefore, Alternative 1 would involve less overall development and construction-related emissions of air pollutants would be reduced under Alternative 1 as compared to the GP/LCP Update. Full buildout of the 1992 GP/LCP would accommodate 476 new housing units in Pismo Beach. This would be approximately 635 fewer housing units than would be accommodated by full implementation of the GP/LCP Update, resulting in an approximately 9 percent reduction in residential development as well as an overall reduction in population growth potential. However, full buildout of the 1992 GP/LCP would result in 962,920 square feet of additional non-residential development as compared to the GP/LCP Update, an increase of approximately 1.5 percent. Due to

the overall decrease in development under Alternative 1, construction emissions and long-term emissions would be reduced as compared to the GP/LCP Update.

The GP/LCP Update includes policies that would maintain and improve local air quality through local actions and interagency coordination; minimize adverse effects associated with criteria pollutants and toxic air contaminants (TACs); promote compact development and reduce VMT; and address potential odor conflicts between future land uses in Pismo Beach. The GP/LCP Update also includes policies that would reduce mobile source emissions by promoting mixed-use and infill development and supporting bike, pedestrian, and mass transit. As a result, the GP/LCP Update would reduce the per capita VMT within infill and urban areas of Pismo Beach compared to the 1992 GP/LCP, which does not contain these policies. However, the estimated citywide traffic growth through 2040 under implementation of the GP/LCP Update would still be increased by 20 percent as compared to the 1992 GP/LCP. Because the majority of air contaminant emissions are from mobile sources, overall air quality impacts would be reduced under Alternative 1 as compared to the GP/LCP Update due to the reduction in total VMT.

The increase in VMT under implementation of the GP/LCP Update would be consistent with the San Luis Obispo Air Pollution Control District's (SLOAPCD's) 2001 Clean Air Plan (CAP) guidance for VMT increase (20 percent) less than the rate of population growth (23 percent) and would implement applicable land use and transportation control measures contained in the 2001 CAP. However, the GP/LCP Update would add an estimated 1,875 residents to Pismo Beach by 2040, resulting in an estimated 10,216 persons, which would exceed the SLOCOG projected 2040 population of 9,901 residents. As a result, the GP/LCP Update would obstruct implementation of the applicable air quality plan and would contribute to cumulative regional air quality impacts, which is a significant and unavoidable impact that would be reduced under implementation of Alternative 1. Specifically, Alternative 1 would result in a 2040 population of 9,040 person in 2040 which would not exceed the SLOCOG projected 2040 population of 9,041 persons. Overall, air quality impacts under Alternative 1 would be reduced as compared to the GP/LCP Update due to the reduction in population growth that would ensure consistency with the 2001 CAP and lower the City's contribution to cumulative regional air quality impacts. In addition, Alternative 1 would reduce the GP/LCP Update's significant and unavoidable impacts related to inconsistency with the 2001 CAP to less than significant.

Biological Resources

Implementation of Alternative 1 would reduce residential development by approximately 9 percent compared to the GP/LCP Update. Conversely, implementation of Alternative 1 would increase non-residential development by approximately 1.5 percent compared to the GP/LCP Update. Therefore, Alternative 1 would involve less overall new development as compared to the GP/LCP Update. While the 1992 General Plan/Local Coastal Plan includes objectives and policies aimed towards reducing potential impacts to sensitive biological resources from development, several goals and policies in the proposed GP/LCP Update Land Use and Community Design Element and Conservation and Open Space Element would minimize, and often avoid, impacts from potential direct and indirect effects to special status species and sensitive habitats, reduce impacts to wetlands and riparian habitat through preservation and enhancement of such habitats, reduce impacts to stream corridors, and protect wildlife movement corridors and open space. Development under both Alternative 1 and the GP/LCP Update would be subject to the provisions of federal and State natural resources regulations and their respective permitting processes and would comply with applicable federal and state laws and regulations pertaining to reduce potential impacts to biological resources. Overall, Alternative 1 would result in reduced impacts to biological resources as

compared to the GP/LCP because overall development under this alternative is anticipated to be reduced compared to the GP/LCP Update. Impacts to biological resources under Alternative 1 would remain less than significant, similar to the GP/LCP Update.

Cultural Resources and Tribal Cultural Resources

Implementation of Alternative 1 would reduce residential development by approximately 9 percent compared to the GP/LCP Update. Conversely, implementation of Alternative 1 would increase non-residential development by approximately 1.5 percent compared to the GP/LCP Update. Therefore, Alternative 1 would involve less overall residential development and anticipated population growth than would occur under the GP/LCP Update but would result in increased non-residential development and anticipated jobs growth. While the 1992 GP/LCP includes two policies aimed toward reducing potential impacts to sensitive archaeological resources from development, the 1992 GP/LCP does not address potential impacts to historic resources. The goals, policies, and actions in the Conservation and Open Space Element of the GP/LCP Update that would protect archaeological and historic resources would not be implemented under Alternative 1. Development under both Alternative 1 and the GP/LCP Update would be required to comply with federal and State regulations as well as the City's Municipal Code, which would require identification, evaluation, and protection of historic resources throughout the City. Development under both Alternative 1 and the GP/LCP Update would also be subject to laws and regulations requiring Native American consultation, protection of human remains, and pre-historic artifacts. Overall, Alternative 1 would result in reduced impacts to tribal, archaeological and historic resources compared to the GP/LCP Update because development under this alternative is anticipated to be reduced compared to the GP/LCP Update. Impacts to cultural and tribal cultural resources would remain less than significant, similar to the GP/LCP Update.

Energy

Overall energy usage would be reduced under Alternative 1 as compared to the GP/LCP Update because less overall new development would be constructed. Full buildout of the 1992 GP/LCP would accommodate 476 new housing units in Pismo Beach. This would be approximately 635 fewer housing units than would be accommodated by full implementation of the GP/LCP Update, resulting in an approximately 9 percent reduction in residential development as well as an overall reduction in population growth potential. However, full buildout of the 1992 GP/LCP would add 962,920 square feet of non-residential development as compared to the GP/LCP Update, resulting in an increase of non-residential development by approximately 1.5 percent as well as an overall increase in jobs growth. Due to the overall reduction in development, Alternative 1 would result in a reduction in energy usage during construction and operation of new development in Pismo Beach.

The reduction in population growth potential would reduce daily operations in the regional transportation system, resulting in an overall reduction in total estimated VMT. Because daily operation of the transportation system uses energy in the form of fuel consumed by propulsion of passenger and commercial vehicles, a reduction in total estimated VMT would result in a reduction in overall energy consumption compared to the GP/LCP Update. Alternative 1 would retain the existing 1992 GP/LCP, and thus would not implement GP/LCP Update Land Use and Community Design, Conservation and Open Space, and Circulation Element goals and policies that would reduce inefficient, wasteful, and unnecessary energy consumption during construction and operation of development; encourage infill and compact mixed-use development; encourage multimodal transportation to reduce overall energy consumption and result in greater energy efficiency;

promote a reduction in VMT through support of alternative transportation; prioritize upgrades to bicycle facilities, sidewalks, and other amenities for alternative modes of transportation; and, promote greater energy efficiency in municipal and community operations and development. Overall, impacts related to energy consumption under Alternative 1 would be lower than the GP/LCP Update due to the reduction in overall development and decrease in energy consumption related to reduced VMT. Energy impacts would remain less than significant, similar to the GP/LCP Update.

Geology and Soils

Implementation of Alternative 1 would reduce residential development by approximately 9 percent compared to the GP/LCP Update. Conversely, implementation of Alternative 1 would increase non-residential development by approximately 1.5 percent compared to the GP/LCP Update. Therefore, overall development envisioned in the 1992 GP/LCP would involve a reduced amount of construction activities as compared to the GP/LCP Update. Reduced construction activities under Alternative 1 would include a reduction in stockpiling, grading, excavation, paving and other earth disturbing activities that could result in loose and disturbed soils in the Pismo Beach, decreasing the potential for erosion, loss of topsoil, and disturbance to paleontological resources. However, implementation of the GP/LCP Update would, in some cases, replace older buildings that are subject to seismic damage with newer structures built to current seismic standards that could better withstand the adverse effects of strong ground shaking. While the 1992 General Plan/Local Coastal Plan includes objectives and policies aimed towards reducing potential impacts related to geology and soils from future development, Alternative 1 would not implement the goals and policies in the GP/LCP Update Safety Element that would further reduce the potential for loss, injury, or death from seismic hazards by prohibiting development in areas of landslide risk or liquefaction without site-specific analysis, minimize risks associated with potential fault rupture, seismic shaking, and other geologic hazards in the City, nor would it implement policies from the Conservation and Open Space Element that would reduce the potential for erosion and loss of topsoil. In addition, Alternative 1 would not implement policies from the Conservation and Open Space Element related to protection of paleontological resources. However, both Alternative 1 and the GP/LCP Update would be required to comply with requirements outlined by the California Building Code and the Pismo Beach Municipal Code, and would require compliance with existing state and federal regulatory requirements to avoid and minimize geology and soil hazards associated with new development, which would reduce potential impacts. Overall, Alternative 1 would result in reduced impacts to geology and soils compared to the GP/LCP Update. Impacts related to geology and soils under this alternative would remain less than significant, similar to the GP/LCP Update.

Greenhouse Gas Emissions

The existing Pismo Beach Climate Action Plan (PBCAP) only contains targets to meet Assembly Bill (AB) 32 2020 reduction goals, and Pismo Beach has not published a qualified Greenhouse Gas (GHG) reduction plan that is consistent with Senate Bill (SB) 32 and the California Air Resources Board's (CARB's) 2017 Scoping Plan goals. Buildout under the GP/LCP Update could be inconsistent with statewide per capita emissions goals in the 2017 Scoping Plan and may exceed applicable SLOAPCD thresholds on a project-by-project basis. However, of the Conservation and Open Space Element of the GP/LCP Update includes actions which would require an update to the PBCAP to reflect the Statewide greenhouse gas emissions reduction targets established by SB 32. The updated PBCAP would contain goals, policies, project specific GHG thresholds, and programs to achieve GHG reduction targets for Pismo Beach and future development in the City consistent with SB 32 and

demonstrate a trajectory towards meeting the reduction target in Executive Order S-3-05. Therefore, impacts to greenhouse gases would be less than significant.

Alternative 1 would retain the existing 1992 GP/LCP, and thus would not implement the GP/LCP Update Land Use and Community Design and Circulation Elements goals and policies that would promote mixed-use and compact development and support bike, pedestrian, and mass transit. Additionally, Alternative 1 would not include updates to the Conservation and Open Space Element to include actions to update the PBCAP to reflect the Statewide greenhouse gas emissions reduction targets. Therefore, Alternative 1 would not include goals, policies, project specific GHG thresholds, and programs to achieve GHG reduction targets for Pismo Beach and future development in the City consistent with SB 32 and demonstrate a trajectory towards meeting the reduction target in Executive Order S-3-05. As a result, implementation of Alternative 1 would not reduce overall per capita GHG emissions in Pismo Beach to the extent of the GP/LCP Update, and would not ensure that the city's emissions reductions are on the trajectory to meet the state's long term emissions goals, which have been updated since preparation of the existing PBCAP. Similarly, Alternative 1 would be less consistent with recently-adopted State plans and regulations for reducing GHG emissions.

The total estimated citywide VMT through 2040 under Alternative 1 would be lower than the GP/LCP Update because of the lower projected residential development and population growth under this alternative. However, non-residential development and associated jobs growth would be increased under Alternative 1. Based on the buildout VMT estimates in the GP/LCP Update traffic analysis (Appendix G) and the 2040 population estimates in Table 6-1, Alternative 1 would result in less of a long-term increase in VMT in comparison to the GP/LCP Update. While the existing 1992 GP/LCP does not focus on infill development or GHG emissions to the extent of the proposed GP/LCP Update, Alternative 1 would result in fewer total and per capita mobile-source GHG emissions compared with the GP/LCP Update. Overall, impacts related to GHG emissions under Alternative 1 would be higher than the GP/LCP Update because the goals, policies, project specific GHG thresholds, and programs to achieve GHG reduction targets for Pismo Beach and future development in the City consistent with SB 32 and demonstrate a trajectory towards meeting the reduction target in Executive Order S-3-05 would not be implemented. Impacts to GHG would greater than the GP/LCP Update and would be potentially significant and unavoidable because of the inconsistency with the PBCAP, which would not be updated under this alternative.

Hazards, Hazardous Materials, and Wildfire

Full buildout of both the 1992 GP/LCP and the GP/LCP Update would facilitate an increase in development in Pismo Beach, which could involve the routine use, storage, and disposal of hazardous materials. Additional development in Pismo Beach could also increase the transport of hazardous materials along the transportation corridors within the City. Therefore, the additional development that would occur under both Alternative 1 and the GP/LCP Update could result in an increased risk of accidental release of hazardous materials on a transportation route and exposure to hazardous materials to existing development within Pismo Beach. However, development under Alternative 1 would result in a 9 percent reduction in residential development and a 1.5 percent increase in non-residential development as compared to the GP/LCP Update. Therefore, impacts related to hazards, hazardous materials, and wildfire would be reduced under Alternative 1 as compared to the GP/LCP Update. Additionally, the GP/LCP Update would increase mixed-use development in the downtown area, which could result in new residential units adjacent to existing commercial and industrial land uses. However, Alternative 1 would not implement the goals and

policies in the GP/LCP Update Safety Element developed to minimize any impacts related to the use, storage, transport, and release of hazardous materials in the City. The policies that would be implemented under the GP/LCP Update would direct the City to develop and maintain a multi-hazard emergency response plan, update plans and agreements with other agencies, and regulate use, location, storage, and transportation of hazardous materials. Both Alternative 1 and the GP/LCP Update would be required to comply with the regulations, standards, and guidelines established by the USEPA, the State of California, San Luis Obispo County, and the City of Pismo Beach related to storage, use, and disposal of hazardous materials. Under both Alternative 1 and the GC/LCP Update, compliance with all applicable federal and State laws related to the storage of hazardous materials would maximize containment (through safe handling and storage practices described above), provide for prompt and effective cleanup if an accidental release occurs, and minimize risks from routine use, transport, handling, storage, disposal, and release of hazardous materials. Overall, Alternative 1 would result in reduced potential impacts related to hazards, hazardous materials, and wildfire compared to the GP/LCP Update. Impacts related to hazards, hazardous materials, and wildfire under Alternative 1 would remain less than significant, similar to the GP/LCP Update.

Hydrology and Water Quality

Full buildout of both the 1992 GP/LCP and the GP/LCP Update would facilitate an increase in development in Pismo Beach, which could result in long-term alterations of existing drainage patterns, such as changes in ground surface permeability, and increased soil erosion due to new paving, earth-moving activities, and changes in topography that would result from excavation, cut and fill activities, and grading. However, development under Alternative 1 would result in a 9 percent reduction in residential development and a 1.5 percent increase in non-residential development as compared to the GP/LCP Update. Therefore, implementation of Alternative 1 would involve a reduced amount of construction as compared to the GP/LCP Update . As a result, impacts related to hydrology and water quality would be reduced under Alternative 1 as compared to the GP/LCP Update. However, Alternative 1 would not implement the goals and policies in the GP/LCP Update Conservation and Open Space Element, Land Use and Community Design Element, and Safety Element that would reduce the potential for water quality degradation during construction activities; reduce the potential for hydrology and water quality impacts during operation of new development or redevelopment; address bluff erosion; reduce discharge of additional stormwater runoff and associated pollutants from new development and redevelopment; provide direction for groundwater management; and, reduce the risk of pollutant release in areas of flood hazard by restricting development within the Floodplain Overlay Zone. Under both Alternative 1 and the GP/LCP Update, individual construction activities that disturb one or more acres would be subject to the requirements of the General Construction Permit, including the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that describes the erosion and sediment controls Best Management Practices (BMPs), good housekeeping BMPS, runoff water quality monitoring, BMP inspections, means of waste disposal, maintenance responsibilities, and non-storm water management controls to be implemented during construction. Alternative 1 would also require compliance with existing local, state, and federal regulatory requirements and policies, including the Pismo Beach Municipal Code, which would reduce potential impacts related to hydrology and water quality, similar to the GP/LCP Update. Overall, Alternative 1 would result in reduced potential impacts to hydrology and water quality compared to the GP/LCP Update. Impacts related to hydrology and water quality under this alternative would remain less than significant, similar to the GP/LCP Update.

Land Use and Planning

Under Alternative 1, additional development that would occur in Pismo Beach would be consistent with the existing 1992 GP/LCP. Both the proposed GP/LCP Update and Alternative 1 would provide for the orderly development of Pismo Beach, although under different development scenarios. Neither would physically divide an established community or conflict with an applicable habitat conservation plan or natural community conservation plan. As discussed in Section 4.9, *Land Use and Planning*, the GP/LCP Update would be consistent with applicable regional land use plans, policies, and regulations, such as the SLOCOG 2019 Regional Transportation Plan (RTP) and City zoning districts and standards. Alternative 1 would retain the existing 1992 GP/LCP, and thus would not include new GP/LCP Update policies, such as those in the Land Use and Community Design Element that would increase connectivity of the City's circulation network throughout the City and to the coast. Under the GP/LCP Update, connectivity would be provided through equitable access for residents, employees, and tourists to address daily needs, strategic land use planning for new development and redevelopment, reduction in conflict between land uses, and preservation and provision of lateral and vertical access points and multimodal access. Therefore, Alternative 1 would have greater impacts related to long-term land use and planning compared to the GP/LCP Update, although impacts would remain less than significant, similar to the GP/LCP Update.

Noise

Development under Alternative 1 would result in a 9 percent reduction in residential development and a 1.5 percent increase in non-residential development as compared to the GP/LCP Update. Therefore, decreased construction and associated construction noise and vibration would occur under Alternative 1 as compared to the GP/LCP Update. Additionally, infill and redevelopment facilitated by the proposed GP/LCP Update would increase noise near existing sensitive receivers and place new sensitive receivers in areas with high noise levels. Alternative 1 would involve less dense development and fewer noise sensitive receivers would be exposed to increased noise levels associated with infill and redevelopment. Therefore, Alternative 1 would have reduced noise impacts as compared to the GP/LCP Update. Noise impacts would remain less than significant, similar to the GP/LCP Update.

Population and Housing

As shown in Table 4.12-5 (Section 4.11, *Population and Housing*), the anticipated population growth in Pismo Beach through 2040 under the GP/LCP Update is consistent with the SLOCOG population growth projections for the City. Alternative 1 would accommodate less population growth than the GP/LCP Update and would also be consistent with the SLOCOG population growth projections for the City. Specifically, implementation of Alternative 1 would result in a reduction in population growth by approximately 11.5 percent as compared to the GP/LCP Update. In addition, growth in Pismo Beach under Alternative 1 would still be required to be consistent with the City of Pismo Beach Housing Element, adopted in 2020. Neither Alternative 1 nor the GP/LCP Update would displace substantial numbers of people or housing. Therefore, impacts related to population and housing would be similar to the GP/LCP Update. Population and housing impacts would remain less than significant, similar to the GP/LCP Update.

Public Services and Recreation

Alternative 1 would involve less overall residential development and associated population growth than would occur under the GP/LCP Update, but would result in an increase in non-residential development and associated jobs growth. Full buildout of Alternative 1 would result in an increase of 476 new residential units and 690 jobs, which would generate an increase in population and result in an incremental demand for public services and recreational facilities. However, the increase in demand would be less than the GP/LCP Update due to the smaller increase in population growth. Both Alternative 1 and the GP/LCP Update are subject to policies that would ensure that public services continue to be provided to the city commensurate with population growth and need. In addition, project-level development under Alternative 1 would be required to pay City-required public facilities impact fees. Both implementation of Alternative 1 and implementation of the GP/LCP Update would achieve the standard of three acres of parkland per 1,000 residents, pursuant to the Quimby Act. Overall, impacts related to public services and recreation would be reduced in comparison to the GP/LCP Update. Impacts related to public services and recreation would remain less than significant, similar to the GP/LCP Update.

Transportation

When compared to the proposed GP/LCP Update, full buildout of the 1992 GP/LCP would accommodate approximately 635 fewer housing units but would provide for an additional 145 jobs. As a result, overall residential development and anticipated population growth would be reduced under Alternative 1 compared to the GP/LCP Update, whereas overall non-residential (commercial) development and anticipated jobs growth would be increased under Alternative 1. The GP/LCP Update includes policies that would reduce per service population VMT compared to the 1992 GP/LCP by promoting mixed-use and infill development, and by supporting bike, pedestrian, and mass transit. However, the estimated citywide traffic growth through 2040 under implementation of Alternative 1 would be lower than under the GP/LCP Update because of the lower projected residential development and population growth under this Alternative. As a result, the average daily vehicle trips and VMT that would be generated from the additional residents under the GP/LCP Update would be reduced with this alternative. Due to the increase in job growth that would be facilitated by full buildout of the 1992 GP/LCP through 2040, an increase in average daily vehicle trips and VMT would be generated from the increase in employees in Pismo Beach. Nonetheless, due to the reduction in residential units and population growth as compared to the GP/LCP Update, implementation of Alternative 1 would result in reduced VMT.

Table 6-2 summarizes the regional annual VMT results under both implementation of Alternative 1 and implementation for the GP/LCP Update through the year 2040. As shown in Table 6-2, the proposed GP/LCP Update is projected to increase regional annual VMT under 2040 buildout conditions, resulting in an increase of approximately 2.25 million annual VMT from the existing condition, and an increase of approximately 165,509 over buildout of the current GP/LCP. However, full buildout of the 1992 GP/LCP is also projected to increase regional annual VMT under 2040 buildout conditions, resulting in an increase of approximately 2.1 million annual VMT from the existing condition.

Table 6-2 Total Regional Annual VMT Results Summary

Model Scenario	VMT
Existing (2019)[1]	11,226,484
Buildout - Current General Plan (2040)	13,311,157
Buildout - GP/LCP Update (2040)	13,476,666

[1] The "Existing (2019)" scenario refers to the 2010 Pismo Beach Travel Demand Model year, which was adjusted to account for the CEQA baseline year of 2019 in order to fully represent the existing regional land uses and transportation network.

Source: Appendix G

Alternative 1 would retain the existing 1992 GP/LCP, and thus would not implement GP/LCP Update Land Use and Community Design Element and Circulation Element goals, policies, and actions that would promote infill development and redevelopment and enhance the City's alternative transportation modes while continuing to accommodate automobile travel. As a result, implementation of Alternative 1 would not contribute to reducing per service population VMT in Pismo Beach to the extent of the GP/LCP Update. Overall, due to the reduced residential development and population growth potential of Alternative 1, this alternative would result in less of a long-term increase in VMT in comparison to the GP/LCP Update. However, full buildout of the 1992 GP/LCP would still increase regional VMT above the existing conditions. According to the California Office of Research and Planning, any increase in regional VMT over existing conditions is considered a significant and unavoidable impact (OPR 2018). Therefore, impacts to transportation would be reduced under Alternative 1 but would remain significant and unavoidable.

Utilities/Service Systems

As discussed in Section 4.14, *Utilities/Service Systems*, the GP/LCP Update's potential impacts related to the provision of utilities and service systems would be less than significant. Alternative 1 would result in a 9 percent reduction in residential development and a 1.5 percent increase in non-residential development as compared to the GP/LCP Update. In addition, Alternative 1 would facilitate a decrease in anticipated population growth compared to the GP/LCP Update. As a result, Alternative 1 would result in a reduced demand for water, wastewater treatment capacity, and other utilities. Overall, impacts to utilities and service systems would be reduced in comparison to the GP/LCP Update. Impacts to utilities and service systems would remain less than significant, similar to the GP/LCP Update.

6.2.2 Alternative 2: Reduced Residential Buildout

6.2.2.1 Description

Under the Reduced Residential Buildout Alternative, the maximum residential buildout that would occur within the 2040 planning horizon is assumed to be reduced by 50% for all residential land use designations (low-density, medium-density, high density, very high-density, and mobile home park). Development under Alternative 2 assumes that all goals and policies put in place by the GP/LCP Update will be in force.

A reduced residential buildout scenario would reduce overall new development in the City as well as the estimated population growth associated with increased residential buildout, resulting in a corresponding decrease in in potential environmental impacts associated with new development and growth, including the significant and unavoidable impacts to air quality and transportation

identified in Section 4, *Environmental Impact Analysis*. However, a reduced residential buildout scenario would not meet the GP/LCP Update objective to ensure the City's land use plan would meet the City's fair share housing needs allocation established in SLOCOG's RHNP (discussed in detail in Section 4.12, *Population and Housing*).

Under Alternative 2, at buildout up to approximately 556 new residential units would be constructed in the City limits (as compared to approximately 1,111 new residential units under the proposed GP/LCP Update). This would be a reduction in new residential development potential of approximately 555 units as compared to the proposed GP/LCP Update. A comparison of the development that could occur under Alternative 2 and the GP/LCP Update is provided in Table 6-1.

6.2.2.2 Impact Analysis

Aesthetics

Implementation of Alternative 2 would result in a reduction in all residential land use, causing an overall reduction in new development as well as a reduction in the estimated population growth that is associated with increased residential buildout under the GP/LCP Update. Therefore, the existing visual character of Pismo Beach would be altered less under Alternative 2 in comparison to the GP/LCP Update because the maximum residential buildout would be reduced. Additionally, because fewer residential units would be developed, fewer new sources of light and glare would be created under this alternative. Overall, Alternative 2 would have reduced impacts to aesthetics as compared to the GP/LCP Update. Aesthetic impacts would remain less than significant, similar to the GP/LCP Update.

Air Quality

Construction-related emissions of air pollutants would be less under Alternative 2 as compared to the GP/LCP Update because less new residential development would be constructed. Alternative 2 would reduce the amount of growth in population in Pismo Beach through the year 2040 by 1,176 residents compared to the GP/LCP Update due to an overall reduction in residential development by 50 percent. Therefore, the long-term operational emissions from use of natural gas for heating, cooking, and water heating would be reduced compared to the GP/LCP Update. Alternative 2 would continue to implement policies that would maintain and improve local air quality through local actions and interagency coordination; minimize adverse effects associated with criteria pollutants and TACs; promote compact development and reduce VMT; and address potential odor conflicts between future land uses in Pismo Beach. Alternative 2 would also implement policies that would reduce mobile source emissions by promoting mixed-use and infill development and supporting bike, pedestrian, and mass transit. As a result of these policies and the reduction in population growth potential, the estimated citywide traffic growth through 2040 under implementation of Alternative 2 would be lower than under the GP/LCP Update, resulting in lower total VMT. Because the majority of air quality emissions are from mobile sources, overall air quality impacts would be less under this alternative than under the GP/LCP Update due to the reduced total VMT. Additionally, Alternative 2 would be more consistent with the 2001 CAP because it would not exceed the City and SLOCOG projected 2040 population of 9,901 residents. For these reasons, overall air quality impacts for Alternative 2 would be reduced to a less than significant level due to the reduction in population growth that would ensure consistency with the 2001 CAP.

Biological Resources

Implementation of Alternative 2 would involve less overall disturbance due to the reduced residential buildout, which would cause a reduction in overall new development as well as a reduction in the estimated population growth that is associated with increased residential buildout under the GP/LCP Update. Under Alternative 2, goals and policies in the Land Use and Community Design Element and Conservation and Open Space Element would still minimize, and often avoid, impacts from potential direct and indirect effects to special status species and sensitive habitats, reduce impacts to wetlands and riparian habitat through preservation and enhancement of such habitats, reduce impacts to stream corridors, and protect wildlife movement corridors and open space, similar to the GP/LCP Update. Development under Alternative 2 would be required to comply with applicable federal and state laws and regulations to reduce potential impacts to biological resources. Overall, Alternative 2 would result in reduced impacts to biological resources compared to the GP/LCP Update due to the overall reduction in new development. Impacts to biological resources under Alternative 2 would remain less than significant, similar to the GP/LCP Update.

Cultural Resources and Tribal Cultural Resources

Implementation of Alternative 2 would result in a reduction in all residential land use, causing an overall reduction in new development as well as a reduction in the estimated population growth that is associated with increased residential buildout under the GP/LCP Update. As a result of reducing development, the ground disturbance and excavation that would be required for construction of the residential development envisioned in the GP/LCP Update would also be reduced. Under Alternative 2, the goals, policies, and actions in the Conservation and Open Space Element of the GP/LCP Update that would protect archaeological and historic resources would be implemented, and new development would be required to comply with federal and state regulations as well as the City's Municipal Code. In addition, the goals, policies, and action measures in the GP/LCP Update would continue to protect valuable tribal cultural resources during the development of future projects. Overall, Alternative 2 would result in reduced potential impacts to archaeological, historic, and tribal resources compared to the GP/LCP Update as a result of the reduction in new residential development. Impacts to cultural and tribal cultural resources would remain less than significant, similar to the GP/LCP Update.

Energy

Compared to the GP/LCP Update, buildout of Alternative 2 would result in 555 fewer residential units and approximately 989 fewer residents. As a result, Alternative 2 would result in lower direct and indirect energy consumption. In addition, GP/LCP Update policies that would continue to be implemented under Alternative 2 would prevent inefficient, wasteful, and unnecessary energy consumption during construction and operation of development; encourage infill and compact mixed-use development; encourage multimodal transportation to reduce overall energy consumption and result in greater energy efficiency; promote a reduction in VMT through support of alternative transportation; prioritize upgrades to bicycle facilities, sidewalks, and other amenities for alternative modes of transportation; and, promote greater energy efficiency in municipal and community operations and development.

The total estimated citywide traffic growth through 2040 under Alternative 2 would be lower than the GP/LCP Update due to the reduction in residential development under this alternative. Because daily operation of the regional transportation system uses energy in the form of fuel consumed by propulsion of passenger and commercial vehicles, a reduction in total estimated citywide traffic

growth would result in a reduction in overall energy consumption. Overall, the reduced potential for residential development and population growth anticipated under Alternative 2 would result in lower energy consumption than the GP/LCP Update. Energy impacts would remain less than significant, similar to the GP/LCP Update.

Geology and Soils

Implementation of Alternative 2 would result in less residential development, causing a reduction in overall new development as well as a reduction in the estimated population growth that is associated with increased residential buildout under the GP/LCP Update. A reduction in new development under Alternative 2 would decrease overall construction activities such as stockpiling, grading, excavation, paving and other earth disturbing activities would reduce the potential for disturbance to paleontological resources. Under Alternative 2, the goals and policies in the Safety Element and Conservation and Open Space Element would be implemented to minimize risks associated with potential fault rupture, seismic shaking, and other geologic hazards in the City, as well as reduce the potential of erosion and loss of topsoil, similar to the GP/LCP Update. In addition, Alternative 2 would implement policies from the Conservation and Open Space Element related to protection of paleontological resources. Development under Alternative 2 would be required to comply with existing state and federal regulatory requirements to avoid and minimize geology and soil hazards associated with new development. Overall, Alternative 2 would result in reduced potential impacts to geology and soils in comparison to the GP/LCP Update due to the reduction in overall new development. Impacts related to geology and soils would remain less than significant, similar to the GP/LCP Update.

Greenhouse Gas Emissions

Implementation of Alternative 2 would result in less residential development, causing a reduction in overall new development as well as a reduction in the estimated population growth that is associated with increased residential buildout under the GP/LCP Update. Because less new development would be constructed under Alternative 2, construction-source GHG emissions would be reduced as compared to the GP/LCP Update. Compared to the GP/LCP Update, buildout of Alternative 2 would result in 555 fewer residential units and approximately 989 fewer residents. As a result, Alternative 2 would result in lower operational GHG emissions, including those due to VMT generation as compared to the GP/LCP Update. In addition, GP/LCP Update Land Use and Community Design and Circulation Elements goals and policies that would promote mixed-use and compact development and support bike, pedestrian, and mass transit would continue to be implemented under Alternative 2. Similar to the GP/LCP Update, Alternative 2 would include updates to the Conservation and Open Space Element to include actions that require an update to the PBCAP to reflect the Statewide greenhouse gas emissions reduction targets established by SB 32. Overall, Alternative 2 would reduce GHG and climate change impacts in comparison to the GP/LCP Update. GHG impacts would remain less than significant, similar to the GP/LCP Update.

Hazards, Hazardous Materials, and Wildfire

Implementation of Alternative 2 would result in a reduction in all residential land use, causing an overall reduction in new development as well as a reduction in the estimated population growth that is associated with increased residential buildout under the GP/LCP Update. Therefore, Alternative 2 would result in less ground disturbance than the GP/LCP Update. As a result, impacts related to hazards and hazardous materials would be reduced under Alternative 2. Implementation

of both the GP/LCP Update and Alternative 2 would focus on infill development, and neither would facilitate growth in currently undeveloped areas where large tracts of vegetation cover are present nearby. Therefore, Alternative 2 would have a similar risk of wildfire as compared to the GP/LCP Update.

The goals and policies in the GP/LCP Update Safety Element that would minimize impacts related to the use, storage, transport, and release of hazardous materials in the City; direct the City to develop and maintain a multi-hazard emergency response plan; update plans and agreements with other agencies; and regulate use, location, storage, and transportation of hazardous materials would continue to be implemented under Alternative 2. Alternative 2 would require compliance with all applicable federal and State laws related to the storage of hazardous materials and would maximize containment (through safe handling and storage practices described above), provide for prompt and effective cleanup if an accidental release occurs, and minimize risks from routine use, transport, handling, storage, disposal, and release of hazardous materials. Overall, Alternative 2 would result in reduced potential impacts related to hazards and hazardous materials compared to the GP/LCP Update. Impacts related to hazards, hazardous materials, and wildfire under this alternative would remain less than significant, similar to the GP/LCP Update.

Hydrology and Water Quality

Implementation of Alternative 2 would result in a reduction in residential development, causing an overall reduction in new development as well as a reduction in the estimated population growth that is associated with increased residential buildout under the GP/LCP Update. Therefore, Alternative 2 would result in less development and less ground disturbance than the GP/LCP Update. As a result, impacts related to hydrology and water quality would be reduced under Alternative 2. The goals and policies in the GP/LCP Update Conservation and Open Space Element, Land Use and Community Design Element, and Safety Element that would reduce the potential for water quality degradation during construction activities; reduce the potential for hydrology and water quality impacts during operation of new development or redevelopment; address bluff erosion; reduce discharge of additional stormwater runoff and associated pollutants from new development and redevelopment; provide direction for groundwater management; and reduce the risk of pollutant release in areas of flood hazard by restricting development within the Floodplain Overlay Zone would continue to be implemented under Alternative 2. Alternative 2 would also require compliance with existing local, state, and federal regulatory requirements and policies, including the Pismo Beach Municipal Code, which would reduce potential impacts related to hydrology and water quality, similar to the GP/LCP Update. Overall, Alternative 2 would result in reduced potential impacts to hydrology and water quality compared to the GP/LCP Update. Impacts related to hydrology and water quality under this alternative would remain less than significant, similar to the GP/LCP Update.

Land Use and Planning

Based on the buildout capacity of the City under the GP/LCP Update, new growth would likely involve increased development density in developed areas or redevelopment of existing developed parcels. Implementation of Alternative 2 would result in a reduction in development density due to the reduction residential development as compared to the GP/LCP Update. However, Alternative 2 would still provide for orderly development in Pismo Beach, similar to the GP/LCP Update. Alternative 2 would not physically divide an established community or conflict with an applicable habitat conservation plan or natural community conservation plan. As discussed in Section 4.9, *Land*

Use and Planning, the GP/LCP Update would be consistent with applicable regional land use plans, policies, and regulations, such as the SLOCOG 2019 RTP and City zoning districts and standards. Because Alternative 2 would result in fewer residential units in Pismo Beach, it would be less consistent with the SLOCOG 2019 RTP, which promotes efforts to increase the supply and variety of housing and jobs in locations that reduce trips, travel distances, and congestion on U.S. Route 101. However, overall, land use impacts would be similar to the GP/LCP Update and would remain less than significant.

Noise

Alternative 2 would result in reduced residential development and fewer residential units than under the GP/LCP Update. Therefore, Alternative 2 would result in reduced construction-related noise and vibration impacts as compared to the GP/LCP Update. Because Alternative 2 would reduce the maximum residential buildout that would occur within the 2040 planning horizon by 50 percent for all residential land use designations, the long-term operational and traffic noise would also be reduced compared to the GP/LCP Update. Therefore, overall noise impacts under Alternative 2 would be reduced compared to impacts under the GP/LCP Update due to the reduction in residential development. Noise impacts would remain less than significant, similar to the GP/LCP Update.

Population and Housing

Implementation of Alternative 2 would result in reduced residential development, ultimately resulting in the construction of 555 fewer residential units than under the GP/LCP Update. Therefore, Alternative 2 would involve less population growth in the City than would occur under the GP/LCP Update, and Alternative 2 would be consistent with the SLOCOG population growth projections for the city. However, a reduced residential buildout scenario would not meet the GP/LCP Update objective to ensure the City's land use plan would meet the City's fair share housing needs allocation established in SLOCOG's RHNP (discussed in detail in Section 4.12, *Population and Housing*). In addition, growth in Pismo Beach under Alternative 2 would still be required to be consistent with the City of Pismo Beach Housing Element, adopted in 2020. Neither Alternative 2 nor the GP/LCP Update would displace substantial numbers of people or housing. Therefore, impacts related to population and housing would be similar to the GP/LCP Update. Impacts would remain less than significant, similar to the GP/LCP Update.

Public Services and Recreation

Alternative 2 would involve less overall development and associated growth than would occur under the GP/LCP Update. Nevertheless, full buildout of Alternative 2 would still result in an increase in Pismo Beach residents from the estimated 2019 city population, resulting in an incremental increase in demand for public services and recreational facilities, similar to buildout facilitated by the GP/LCP Update. Both implementation of Alternative 2 and implementation of the GP/LCP Update would achieve the standard of three acres to 1,000 residents, pursuant to the Quimby Act. Both Alternative 2 and the GP/LCP Update would include policies that would ensure public services continue to be provided to the city commensurate with population growth and need. In addition, project-level development under Alternative 2 would be required to pay City-required public facilities impact fees. Overall, impacts related to public services and recreation would be reduced in comparison to the GP/LCP Update due to the reduction in new development potential.

Impacts related to public services and recreation would remain less than significant, similar to the GP/LCP Update.

Transportation

When compared to the GP/LCP Update, the maximum residential buildout that would occur within the 2040 planning horizon under Alternative 2 is assumed to be reduced by 50 percent for all residential land use designations. As a result, this alternative would accommodate approximately 555 fewer residential units and 990 fewer residents compared to the GP/LCP Update. The anticipated increase in VMT associated with buildout of the proposed GP/LCP Update is attributable to the increase in Pismo Beach residents associated with new residential growth under the GP/LCP Update. The reduced residential buildout scenario under Alternative 2 would reduce overall new development in the City as well as the estimated population growth associated with increased residential buildout, resulting in a corresponding decrease in vehicle trip generation as compared to the GP/LCP update. However, because Pismo Beach is a jobs-rich environment and a regional tourism destination, the reduction in vehicle trip generation related to the reduced residential buildout scenario would exacerbate the existing jobs-housing imbalance, increasing per-capita VMT. Overall, as a result of the reduction in development under Alternative 2, project-level and cumulative transportation impacts would not be substantially reduced compared to the GP/LCP Update, and would still increase beyond the existing 2019 condition. According to the California Office of Research and Planning, any increase in regional VMT over existing conditions is considered a significant and unavoidable impact (OPR 2018). Therefore, transportation impacts under Alternative 2 would similar compared to the GP/LCP Update, and the anticipated increase in per-capita and regional VMT as compared to existing conditions would remain significant and unavoidable, similar to the GP/LCP Update.

Utilities/Service Systems

As discussed in Section 4.14, *Utilities/Service Systems*, the GP/LCP Update's potential impacts related to the provision of utilities and service systems would be less than significant. Because Alternative 2 would involve less overall development and associated growth than would occur under the GP/LCP Update, the demand for utility infrastructure and services would be reduced. Therefore, impacts would be reduced in comparison to the GP/LCP Update. Impacts to utilities and service systems would remain less than significant, similar to the GP/LCP Update.

6.2.3 Alternative 3: Reduced Commercial Floor Area Ratio

6.2.3.1 Description

Under the Reduced Commercial Floor Area Ratio (FAR) Alternative, the maximum allowable FAR for new Commercial land use designations would be reduced from 2.0 to 1.5 and new Central Commercial land use designations would be reduced from 1.25 to 1.0 to reduce commercial density. Because Pismo Beach is a jobs-rich environment and a regional tourism destination, reducing visitor-serving commercial density is expected to reduce the estimate of overall vehicle miles traveled in the regional traffic model. Approximately 85 percent of the potential new non-residential development identified in Table 2-6 of this EIR is comprised of Commercial and Central Commercial land uses (approximately 420,000 square feet of Commercial and approximately 250,000 square feet of Central Commercial), with the remaining 15% being comprised of mixed-use and

public/semi-public land uses. Development under Alternative 3 assumes that all goals and policies put in place by the GP/LCP Update will be in force.

Under Alternative 3, approximately 630,000 square feet of new non-residential development could be constructed in the City limits (as compared to approximately 780,000 square feet of new non-residential development under the proposed GP/LCP Update). This would be a reduction in new commercial development potential of approximately 150,000 square feet as compared to the proposed GP/LCP Update. A comparison of the development that could occur under Alternative 3 and the GP/LCP Update is provided in Table 6-1.

6.2.3.2 Impact Analysis

Aesthetics

Implementation of Alternative 3 would result in less commercial and visitor-serving development than under the GP/LCP Update. Therefore, the existing visual character of Pismo Beach would be altered less under Alternative 3 in comparison to the GP/LCP Update because commercial development density would be reduced. Potential impacts associated with scenic resources and visual character would also be reduced in comparison to the GP/LCP Update. Additionally, because less new commercial development would be developed under Alternative 3, fewer new sources of light and glare would be created under this alternative. Overall, Alternative 3 would have reduced impacts to aesthetic resources as compared to the GP/LCP Update. Aesthetic impacts would remain less than significant, similar to the GP/LCP Update.

Air Quality

Implementation of Alternative 3 would result in less commercial and visitor-serving development than under the GP/LCP Update. However, Alternative 3 would not reduce the amount of growth in population in Pismo Beach through the year 2040 because this alternative would not result in a reduction in residential development. Overall, construction-related emissions of air pollutants would be reduced under Alternative 3 as compared to the GP/LCP Update because the amount of non-residential development would be reduced. Similarly, implementation of Alternative 3 would result in a reduced amount of long-term operational emissions from use of natural gas for heating and water heating due to a reduction in non-residential development.

Because Pismo Beach is a jobs-rich environment and a regional tourism destination, reducing visitor-serving commercial density is expected to reduce the estimate of overall vehicle miles traveled in the regional traffic model, resulting in lower total VMT. Alternative 3 would continue to implement policies that would maintain and improve local air quality through local actions and interagency coordination; minimize adverse effects associated with criteria pollutants and TACs; promote compact development and reduce VMT; and address potential odor conflicts between future land uses in Pismo Beach. Alternative 3 would also implement policies that would reduce mobile source emissions by promoting mixed-use and infill development and supporting bike, pedestrian, and mass transit. The majority of air quality emissions are from mobile sources. Therefore, overall air quality impacts would be less under Alternative 3 than under the GP/LCP Update due to the reduced total VMT. However, Alternative 3 would not be consistent with the 2001 CAP because it would exceed the City and SLOCOG projected 2040 population of 9,901 residents, similar to the GP/LCP Update. Overall, air quality impacts for Alternative 3 would be reduced compared to the GP/LCP Update due to the overall reduction in commercial and visitor-serving development that would

reduce total VMT. However, air quality impacts would remain significant and unavoidable due to inconsistencies with the 2001 CAP, similar to the GP/LCP Update.

Biological Resources

Implementation of Alternative 3 would encourage infill development and redevelopment in vacant and underutilized parcels, but with a reduction in the commercial FAR. However, a reduction in the commercial FAR would not necessarily reduce the footprints of future development projects as compared to the commercial FAR proposed under the GP/LCP Update, because FARs take into account a building's total floor area (including the floor area of each story of a building), not just the footprint of the building. Future development in the city under Alternative 3 could involve a reduction in new commercial development by approximately 150,000 square feet as compared to the proposed GP/LCP Update. Nonetheless, because most future development in the city under both Alternative 3 and the GP/LCP Update would involve infill development or redevelopment in already urbanized areas that may have been previously disturbed, and because population growth would be similar as compared to the GP/LCP Update, Alternative 3 would result in similar impacts to biological resources compared to the GP/LCP Update. Impacts to biological resources would remain less than significant, similar to the GP/LCP Update.

Cultural Resources and Tribal Cultural Resources

Implementation of Alternative 3 would encourage infill development and redevelopment in vacant and underutilized parcels, but with a reduction in the commercial FAR. As stated above under *Biological Resources* for Alternative 3, a reduction in FAR would not necessarily reduce the footprints of future development projects as compared to the GP/LCP Update. Future development in the city under Alternative 3 could involve a reduction in new commercial development by approximately 150,000 square feet as compared to the proposed GP/LCP Update, which would result in reduced ground disturbance. Nonetheless, because most future development in the city under both Alternative 3 and the GP/LCP Update would involve infill development or redevelopment in already urbanized areas that may have been previously disturbed, and because population growth would be similar as compared to the GP/LCP Update, Alternative 3 would result in similar impacts to archaeological, historic, and tribal resources compared to the GP/LCP Update. Under Alternative 3, the goals, policies, and actions in the Conservation and Open Space Element of the GP/LCP Update that would protect archaeological and historic resources would be implemented, and new development would be required to comply with federal and state regulations as well as the City's Municipal Code. In addition, the goals, policies, and action measures in the GP/LCP Update would continue to protect valuable tribal cultural resources during the development of future projects under Alternative 3. Overall, Alternative 3 would result in similar potential impacts to archaeological historic, and tribal resources compared to the GP/LCP Update. Impacts to cultural and tribal cultural resources would remain less than significant, similar to the GP/LCP Update.

Energy

Buildout of Alternative 3 would result in in less commercial and visitor-serving development than under the GP/LCP Update, resulting in a reduction of approximately 150,000 square feet in new commercial development potential as compared to the proposed GP/LCP Update. However, implementation of Alternative 3 would not reduce the residential development potential or population growth compared to the GP/LCP Update. Overall, Alternative 3 would result in reduced

direct and indirect energy consumption as compared to the GP/LCP Update due to the reduction in non-residential development. Additionally, because Pismo Beach is a jobs-rich environment and a regional tourism destination, reducing visitor-serving commercial density is expected to reduce the estimate of overall vehicle miles traveled in the regional traffic model, resulting in a reduction in total estimated citywide traffic growth through 2040 under Alternative 3 than the GP/LCP Update. Because daily operation of the regional transportation system uses energy in the form of fuel consumed by propulsion of passenger and commercial vehicles, a reduction in total estimated citywide traffic growth would result in a reduction in overall energy consumption.

Alternative 3 would continue to implement Land Use and Community Design, Circulation, and Conservation and Open Space Element goals and policies that would prevent inefficient, wasteful, and unnecessary energy consumption during construction and operation of development; encourage infill and compact mixed-use development; encourage multimodal transportation to reduce overall energy consumption and result in greater energy efficiency; promote a reduction in VMT through support of alternative transportation; prioritize upgrades to bicycle facilities, sidewalks, and other amenities for alternative modes of transportation; and, promote greater energy efficiency in municipal and community operations and development. Overall, Alternative 3 would result in lower energy consumption than the GP/LCP Update. Energy impacts would be less than significant, similar to the GP/LCP Update.

Geology and Soils

Alternative 3 would encourage infill development and redevelopment in vacant and underutilized parcels, but with a reduction in the commercial FAR. As stated above under *Biological Resources* for Alternative 3, a reduction in FAR would not necessarily reduce footprints of future development projects as compared to the GP/LCP Update. Therefore, Alternative 3 would result in a similar amount of ground disturbance as compared to the GP/LCP Update. Similarly, because most future development in the city under both Alternative 3 and the GP/LCP Update would involve infill development or redevelopment in already urbanized areas that may have been previously disturbed, Alternative 3 would result in similar impacts related to geology and soils, including paleontological resources. The goals and policies in the GP/LCP Update Safety Element and Conservation and Open Space Element that would minimize risks associated with potential fault rupture, seismic shaking, and other geologic hazards in the City, as well as reduce the potential of erosion and loss of topsoil, would continue to be implemented under Alternative 3. In addition, Alternative 3 would implement policies from the Conservation and Open Space Element related to protection of paleontological resources. In addition, Alternative 3 would require compliance with existing state and federal regulatory requirements to avoid and minimize geology and soil hazards associated with new development, which would reduce potential impacts. Overall, impacts to geology and soils under Alternative 3 would be similar to the GP/LCP Update. Impacts to geology and soils would remain less than significant, similar to the GP/LCP Update.

Greenhouse Gas Emissions

Implementation of Alternative 3 would result in less commercial and visitor-serving development than under the GP/LCP Update. Because less new non-residential development would be constructed under Alternative 3, construction-source GHG emissions would be reduced as compared to the GP/LCP Update. Compared to the GP/LCP Update, buildout of Alternative 3 would result in a reduction in new commercial development by approximately 150,000 square feet as compared to the proposed GP/LCP Update. Pismo Beach is a jobs-rich environment and a regional

tourism destination, meaning a reduction in visitor-serving commercial density is expected to reduce the estimate of overall vehicle miles traveled in the regional traffic model. Therefore, Alternative 3 would result in lower operational GHG emissions, including those due to VMT generation, as compared to the GP/LCP Update. In addition, GP/LCP Update Land Use and Community Design, Conservation and Open Space, and Circulation Elements goals and policies that would promote mixed-use and compact development and support bike, pedestrian, and mass transit would continue to be implemented under Alternative 3. Similar to the GP/LCP Update, Alternative 3 would include updates to the Conservation and Open Space Element to include actions that require an update to the PBCAP to reflect the Statewide greenhouse gas emissions reduction targets established by SB 32. Overall, Alternative 3 would reduce GHG and climate change impacts in comparison to the GP/LCP Update. GHG impacts would remain less than significant, similar to the GP/LCP Update.

Hazards, Hazardous Materials, and Wildfire

Alternative 3 would encourage infill development and redevelopment in vacant and underutilized parcels, but with a reduction in the commercial FAR. As stated above, a reduction in FAR would not necessarily reduce footprints of future development projects as compared to the GP/LCP Update. Therefore, future development in the city under Alternative 3 would result in a similar amount of ground disturbance as compared to the GP/LCP Update. Similarly, because most future development in the city under both Alternative 3 and the GP/LCP Update would involve infill development or redevelopment in already urbanized areas that may have been previously disturbed, and because population growth would be similar as compared to the GP/LCP Update, Alternative 3 would result in similar impacts related to hazards and hazardous materials. In addition, the focus on infill development under both Alternative 3 and the GP/LCP Update would not facilitate growth in currently undeveloped areas where large tracts of vegetation cover are present nearby. Therefore, Alternative 3 would have a similar risk of wildfire as compared to the GP/LCP Update.

The goals and policies in the GP/LCP Update Safety Element that would minimize impacts related to the use, storage, transport, and release of hazardous materials in the City; direct the City to develop and maintain a multi-hazard emergency response plan; update plans and agreements with other agencies; and regulate use, location, storage, and transportation of hazardous materials would continue to be implemented under Alternative 3. Alternative 3 would also require compliance with all applicable federal and State laws related to the storage of hazardous materials and would maximize containment (through safe handling and storage practices described above), provide for prompt and effective cleanup if an accidental release occurs, and minimize risks from routine use, transport, handling, storage, disposal, and release of hazardous materials, similar to the GP/LCP Update. Overall, impacts related to hazards, hazardous materials, and wildfire would be similar under Alternative 3 as compared to the GP/LCP Update. Impacts to hazards, hazardous materials, and wildfire would remain less than significant, similar to the GP/LCP Update.

Hydrology and Water Quality

Alternative 3 would encourage infill development and redevelopment in vacant and underutilized parcels in already urbanized areas of Pismo Beach, but with a reduction in the commercial FAR. As stated above under *Biological Resources* for Alternative 3, a reduction in FAR would not necessarily reduce footprints of future development projects as compared to the GP/LCP Update. Therefore, future development in the city under Alternative 3 would result in a similar amount of ground disturbance as compared to the GP/LCP Update. Additionally, because most future development in

the city under both Alternative 3 and the GP/LCP Update would involve infill development or redevelopment in already urbanized areas that may have been previously disturbed, Alternative 3 would result in similar impacts related to hydrology and water quality. The goals and policies in the GP/LCP Update Conservation and Open Space Element, Land Use and Community Design Element, and Safety Element that would reduce the potential for water quality degradation during construction activities; reduce the potential for hydrology and water quality impacts during operation of new development or redevelopment; address bluff erosion; reduce discharge of additional stormwater runoff and associated pollutants from new development and redevelopment; provide direction for groundwater management; and, reduce the risk of pollutant release in areas of flood hazard by restricting development within the Floodplain Overlay Zone would continue to be implemented under Alternative 3. Alternative 3 would also require compliance with existing local, state, and federal regulatory requirements and policies, including the Pismo Beach Municipal Code, which would reduce potential impacts related to hydrology and water quality, similar to the GP/LCP Update. Overall, impacts related to hydrology and water quality under Alternative 3 would be similar to the GP/LCP Update. Impacts to hydrology and water quality would remain less than significant, similar to the GP/LCP Update.

Land Use and Planning

Alternative 3 would result in a reduction in commercial and visitor-serving development as a result of reducing the commercial floor area ratio. However, similar to the GP/LCP Update, Alternative 3 would provide for orderly development in Pismo Beach. Alternative 3 would not divide an established community or conflict with an applicable habitation conservation plan, similar to the GP/LCP Update. As discussed in Section 4.9, *Land Use and Planning*, the GP/LCP Update would be consistent with applicable regional land use plans, policies, and regulations, such as the SLOCOG 2019 RTP and City zoning districts and standards. Because Alternative 3 would result in the same number of new residential units and therefore would result in similar amount of population growth in Pismo Beach, this alternative would also be consistent with the SLOCOG 2019 RTP. Overall, land use impacts under Alternative 3 would be similar to the GP/LCP Update, and would remain less than significant.

Noise

Implementation of Alternative 3 would result in less commercial and visitor-serving development than under the GP/LCP Update. Therefore, Alternative 3 would result in reduced construction-related noise and vibration impacts as compared to the GP/LCP Update. Because Pismo Beach is a jobs-rich environment and a regional tourism destination, reducing visitor-serving commercial density is expected to reduce the estimate of overall vehicle miles traveled in the regional traffic model. Therefore, the long-term operational and traffic noise would be reduced compared to the GP/LCP Update. Additionally, infill and redevelopment facilitated by the proposed GP/LCP Update would increase noise near existing sensitive receivers and place new sensitive receivers in areas with high noise levels. However, Alternative 3 would result in the same number of residential dwelling units and similar associated population growth as compared to the GP/LCP Update. Therefore, Alternative 3 would result in a similar number of sensitive uses as compared to the GP/LCP Update. Overall, Alternative 3 would have reduced noise impacts compared to the GP/LCP Update. Noise impacts would remain less than significant, similar to the GP/LCP Update.

Population and Housing

Alternative 3 would involve similar population growth in the city as compared to the GP/LCP Update. As shown in Table 4.12-5 (Section 4.11, *Population and Housing*), the anticipated population growth in Pismo Beach through 2040 under the GP/LCP Update is similar to but less than the SLOCOG population growth projections for the city. Alternative 3 would also be consistent with SLOCOG growth projections for the City, with similar growth anticipated under this alternative as compared to the GP/LCP Update. In addition, growth in Pismo Beach under Alternative 3 would be required to be consistent City of Pismo Beach Housing Element, adopted in 2020. Neither Alternative 3 nor the GP/LCP Update would displace substantial numbers of people or housing. Therefore, impacts related to population and housing would be similar to the GP/LCP Update. Impacts would remain less than significant, similar to the GP/LCP Update.

Public Services and Recreation

Alternative 3 would result in reduced commercial and visitor-serving development than under the GP/LCP Update. Therefore, development under Alternative 3 would result in an incremental increase in demand on public services and recreational facilities, but to a lesser extent than development facilitated by the GP/LCP Update because Alternative 3 would result fewer square feet of new non-residential development than under the GP/ LCP Update. However, Alternative 3 would result in similar population growth as compared to the GP/LCP Update. Both Alternative 3 and the GP/LCP Update would include policies that would ensure public services continue to be provided to the city commensurate with population growth and need. In addition, project-level development under Alternative 3 would be required to pay City-required public facilities impact fees. Both implementation of Alternative 3 and implementation of the GP/LCP Update would achieve the standard of three acres of parkland per 1,000 residents, pursuant to the Quimby Act. Impacts related to public services and recreation under Alternative 3 would be similar in comparison to the GP/LCP Update, and impacts would remain less than significant.

Transportation

Alternative 3 would encourage infill development and redevelopment in vacant and underutilized parcels in already urbanized areas of Pismo Beach, but with a reduction in the commercial FAR. Overall, Alternative 3 would result in reduced commercial and visitor-serving development than under the GP/LCP Update. Because Pismo Beach is a jobs-rich environment and a regional tourism destination, reducing visitor-serving and commercial density would reduce the overall VMT in the regional traffic model.

Alternative 3 would reduce the net increase in non-residential development through the year 2040 compared to the GP/LCP Update. Therefore, under Alternative 3, citywide traffic growth through 2040 would be lower than growth anticipated under the GP/LCP Update. However, due to the anticipated growth in population through the year 2040 in Pismo Beach as compared to existing 2019 conditions, the reduction in non-residential development as compared to the GP/LCP Update would not reduce anticipated VMT below the existing 2019 condition. According to the California Office of Research and Planning, any increase in regional VMT over existing conditions is considered a significant and unavoidable impact (OPR 2018). Therefore, Alternative 3 would continue to result in significant and unavoidable project-level and cumulative impacts from the increase in VMT. Overall, as a result of the reduction in non-residential development under Alternative 3, project-level and cumulative transportation impacts would be reduced compared to the GP/LCP Update.

However, the anticipated increase in local and regional VMT would remain significant and unavoidable.

Utilities/Service Systems

As discussed in Section 4.14, *Utilities*, the GP/LCP Update's potential impacts related to the provision of utilities and service systems would be less than significant. Implementation of Alternative 3 would encourage infill development and redevelopment in vacant and underutilized parcels, but with a reduction in the commercial FAR. However, a reduction in commercial FAR would not necessarily reduce the footprints of future development projects as compared to the GP/LCP Update. Development under Alternative 3 would result in similar population growth as compared to the GP/LCP Update. However, the reduction in non-residential development would reduce the overall demand for utilities and service systems in the City. Therefore, the demand for new or expanded utility infrastructure under Alternative 3 would be reduced as compared to the utility needs of development facilitated by the GP/LCP Update. Overall, impacts related to the provision of utility infrastructure and services would be reduced in comparison to the GP/LCP Update. Impacts to utilities and service systems would remain less than significant, similar to the General Plan and LCP Update.

6.2.4 Alternative 4: Proposed General Plan and Local Coastal Plan Update with Expanded Sphere of Influence Development

6.2.4.1 Description

Under the Proposed GP/LCP Coastal Plan Update with Expanded SOI Development Alternative, the project area would include expanded development potential within the City's SOI. The SOI includes land in Price Canyon and along Oak Park Boulevard and a small area along Mattie Road. The Price Canyon area of the SOI includes four parcels totaling approximately 1,100 acres. The Los Robles del Mar area of the SOI, west of Oak Park Boulevard, includes two separate parcels. One parcel is an approximately 152-acre ownership and the second site is an approximately 30-acre private school site. Future land use designations within the SOI are not specifically defined or included within the buildout assumptions of the proposed GP/LCP Update; therefore, this alternative assumes up to 10 percent of the City's 1,282 acres of SOI area (128 acres) would be developed during the 2040 planning horizon with a mix of single- and multi-family residential land uses reflecting a mix of densities similar to existing residential development throughout the City.

Under Alternative 4 the City would annex portions of the SOI planned for urban land use development and provide municipal services. Up to 128 acres of new residential land use area in the Price Canyon and Los Robles del Mar areas of the SOI would become available for development, which may accommodate approximately 1,800 new single- and multi-family residential units. Assuming that new residential development in the SOI areas would be at a similar density to anticipated new residential development throughout the City, full buildout of Alternative 4 would result in a population increase of approximately 5,185 and a total City-wide population of up to 13,422 in 2040. This would be approximately 3,000 more residents compared to the year 2040 population under full implementation of the proposed GP/LCP Update. Overall, Alternative 4 would increase the growth in population in Pismo Beach through the year 2040 by approximately 30 percent compared to the proposed GP/LCP Update. Due to the increase in overall growth, this alternative would also increase new vehicle traffic. Development under Alternative 4 assumes that

all goals and policies put in place by the GP/LCP Update will be in force. A comparison of the development that could occur under Alternative 4 and the GP/LCP Update is provided in Table 6-1.

6.2.4.2 Impact Analysis

Aesthetics

Implementation of Alternative 4 would result in increased development as compared to the GP/LCP Update. Under this alternative, development would expand within the City's SOI in the Price Canyon and Los Robles del Mar areas, resulting in an increase in population growth in Pismo Beach by approximately 30 percent compared to the proposed GP/LCP Update. Therefore, the existing scenic resources in, and visual character of, Pismo Beach would be altered more under Alternative 4 in comparison to the GP/LCP Update because residential development density would be increased in these areas, which are primarily undeveloped. Additionally, because more new residential development would be developed, more new sources of light and glare would be created under this alternative. Overall, Alternative 4 would have increased impacts to aesthetic resources as compared to the GP/LCP Update. However, implementation of the goals, policies, and actions outlined in the GP/LCP Update Land Use and Community Design Element and Conservation and Open Space Element would continue to minimize adverse effects, and aesthetic impacts would remain less than significant.

Air Quality

Implementation of Alternative 4 would result in increased development as compared to the GP/LCP Update. Under this alternative, development would expand within the City's SOI in the Price Canyon and Los Robles del Mar areas, resulting in an increase in population growth in Pismo Beach by approximately 30 percent compared to the proposed GP/LCP Update. Full buildout of Alternative 4 would accommodate 13,422 total residents in Pismo Beach. This would be approximately 3,200 more residents than would be accommodated by full implementation of the GP/LCP Update, resulting in an increase in the long-term on-site emissions from use of natural gas for residential heating, cooking, and water heating would be increased compared to the GP/LCP Update.

Alternative 4 would continue to implement policies that would maintain and improve local air quality through local actions and interagency coordination; minimize adverse effects associated with criteria pollutants and TACs; promote compact development and reduce VMT; and address potential odor conflicts between future land uses in Pismo Beach. Alternative 4 would also implement policies that would reduce mobile source emissions by promoting mixed-use and infill development and supporting bike, pedestrian, and mass transit. However, due to the overall growth in population potential, Alternative 4 would increase citywide and regional traffic growth through 2040 as compared to the GP/LCP Update, increasing total VMT. Because the majority of air contaminant emissions are from mobile sources, overall air quality impacts would be increased under Alternative 4 compared to the GP/LCP Update due to the increase in total VMT. Additionally, Alternative 4 would not be consistent with the 2001 CAP because it would exceed the City and SLOCOG projected 2040 population of 9,901 residents, similar to the GP/LCP Update. Overall, air quality impacts for Alternative 4 would be increased compared to the GP/LCP Update due to the overall increase in new development and population growth. Impacts to air quality would remain significant and unavoidable.

Biological Resources

Implementation of Alternative 4 would result in expanded development within the City's SOI in the Price Canyon and Los Robles del Mar areas as compared to the GP/LCP Update. Under Alternative 4, goals and policies in the Land Use and Community Design Element and Conservation and Open Space Element would still minimize, and often avoid, impacts from potential direct and indirect effects to special status species and sensitive habitats, reduce impacts to wetlands and riparian habitat through preservation and enhancement of such habitats, reduce impacts to stream corridors, and protect wildlife movement corridors and open space, similar to the GP/LCP Update. Development under Alternative 4 would also be required to comply with applicable federal and state laws and regulations pertaining to reduce potential impacts to biological resources. However, Alternative 4 would result in an increase in population growth in Pismo Beach by approximately 30 percent compared to the proposed GP/LCP Update and would expand city growth in undeveloped space, such as foothills and coastal cliffs, that currently support natural resources. Vegetative communities present within the undeveloped SOI, such as grassland, introduced annual and perennial growth, western oak woodland, western riparian woodland and shrubland, and chaparral, would be impacted under this alternative. Therefore, Alternative 4 would have increased impacts to biological resources as compared to the GP/LCP Update due to expanded development that would take place within the City's SOI in the Price Canyon and Los Robles del Mar areas. Impacts to biological resources would be significant and unavoidable.

Cultural Resources and Tribal Cultural Resources

Implementation of Alternative 4 would result in expanded development within the City's SOI in the Price Canyon and Los Robles del Mar areas as compared to the GP/LCP Update. Under Alternative 4, the goals, policies, and actions in the Conservation and Open Space Element of the GP/LCP Update that would protect archaeological and historic resources and valuable tribal cultural resources would still be implemented, and new development would be required to comply with federal and state regulations as well as the City's Municipal Code. However, Alternative 4 would result in expanded City growth in currently undeveloped space that could contain previously unidentified archaeological, historic, and tribal cultural resources. Therefore, Alternative 4 could have increased impacts to cultural and tribal cultural resources as compared to the GP/LCP Update due to expanded development that would take place within the City's SOI in the Price Canyon and Los Robles del Mar areas. Impacts to cultural and tribal cultural resources would be significant and unavoidable.

Energy

Implementation of Alternative 4 would result in expanded development within the City's SOI in the Price Canyon and Los Robles del Mar areas as compared to the GP/LCP Update, resulting in additional residential development and an increase in population growth in Pismo Beach through the year 2040 by approximately 30 percent compared to the GP/LCP Update. Therefore, Alternative 4 would result in increased direct and indirect energy consumption as compared to the GP/LCP Update. Alternative 4 would increase the net growth in residential development through the year 2040 compared to the GP/LCP Update. Therefore, citywide and regional traffic growth through 2040 would also be greater than the growth anticipated under the GP/LCP Update. Because daily operation of the regional transportation system uses energy in the form of fuel consumed by propulsion of passenger and commercial vehicles, an increase in total estimated citywide traffic growth would result in an increase in overall energy consumption.

Alternative 4 would continue to implement Land Use and Community Design, Circulation, and Conservation and Open Space Element goals and policies that would prevent inefficient, wasteful, and unnecessary energy consumption during construction and operation of development; encourage infill and compact mixed-use development; encourage multimodal transportation to reduce overall energy consumption and result in greater energy efficiency; promote a reduction in VMT through support of alternative transportation; prioritize upgrades to bicycle facilities, sidewalks, and other amenities for alternative modes of transportation; and, promote greater energy efficiency in municipal and community operations and development. Overall, Alternative 4 would result in increased energy consumption compared to the GP/LCP Update due to the increase in new development. However, energy impacts would be less than significant.

Geology and Soils

Implementation of Alternative 4 would result in expanded development within the City's SOI in the Price Canyon and Los Robles del Mar areas as compared to the GP/LCP Update. Under Alternative 4, the goals and policies in the Safety Element and Conservation and Open Space Element that would minimize risks associated with potential fault rupture, seismic shaking, and other geologic hazards in the City, as well as reduce the potential of erosion and loss of topsoil, would be implemented similar to the GP/LCP Update. Development under Alternative 4 would also be required to comply with existing state and federal regulatory requirements to avoid and minimize geology and soil hazards associated with new development. However, Alternative 4 would result in an increase in development as compared to the GP/LCP Update. Therefore, Alternative 4 would result in increased ground disturbance, which would increase the potential for erosion and loss of topsoil. Additionally, an increase in ground disturbance in currently undisturbed areas could increase the potential for disturbance to paleontological resources. However, Alternative 4 would implement policies from the Conservation and Open Space Element related to protection of paleontological resources. Overall, Alternative 4 would have increased impacts to geology and soils as compared to the GP/LCP Update. Impacts to geology and soils would remain less than significant.

Greenhouse Gas Emissions

Implementation of Alternative 4 would result in expanded development within the City's SOI in the Price Canyon and Los Robles del Mar areas as compared to the GP/LCP Update, resulting in expanded City growth in currently undeveloped areas. Therefore, construction-source GHG emissions would be increased as compared to the GP/LCP Update. Compared to the GP/LCP Update, buildout of Alternative 4 would result in an increase in population growth by 30 percent. As a result, Alternative 4 would result in higher operational GHG emissions, including those due to VMT generation as compared to the GP/LCP Update. Alternative 4 would continue to implement Land Use and Community Design and Circulation Elements goals and policies that would promote mixed-use and compact development and support bike, pedestrian, and mass transit. Additionally, Alternative 4 would include updates to the Conservation and Open Space Element to include actions that require an update to the PBCAP to reflect the Statewide greenhouse gas emissions reduction targets established by SB 32. The updated PBCAP would include goals, policies, project-specific thresholds, and programs aimed at achieving GHG reduction targets and would demonstrate a clear trajectory towards meeting the reduction target in Executive Order S-3-05. Overall, Alternative 4 would increase GHG and climate change impacts in comparison to the GP/LCP Update. However, impacts to greenhouse gas emissions would remain less than significant, similar to the GP/LCP Update.

Hazards, Hazardous Materials, and Wildfire

Implementation of Alternative 4 would result in expanded development within the City's SOI in the Price Canyon and Los Robles del Mar areas as compared to the GP/LCP Update, resulting in expanded City growth in currently undeveloped areas. Therefore, potential ground disturbance, as well as impacts related to hazards and hazardous materials, under Alternative 4 would be increased as compared to the GP/LCP Update. Additionally, expanded City growth in currently undeveloped areas where large tracts of vegetation cover are present nearby would result in an increased risk of wildfire as compared to the GP/LCP Update. The goals and policies in the GP/LCP Update Safety Element that would minimize impacts related to the use, storage, transport, and release of hazardous materials in the City; direct the City to develop and maintain a multi-hazard emergency response plan; update plans and agreements with other agencies; and regulate use, location, storage, and transportation of hazardous materials would continue to be implemented under Alternative 4. Alternative 4 would also require compliance with all applicable federal and State laws related to the storage of hazardous materials and would maximize containment (through safe handling and storage practices described above), provide for prompt and effective cleanup if an accidental release occurs, and minimize risks from routine use, transport, handling, storage, disposal, and release of hazardous materials, similar to the GP/LCP Update. Overall, impacts related to hazards, hazardous materials, and wildfire under Alternative 4 would be increased. Impacts to hazards, hazardous materials, and wildfire would remain less than significant.

Hydrology and Water Quality

Implementation of Alternative 4 would result in expanded development within the City's SOI in the Price Canyon and Los Robles del Mar areas as compared to the GP/LCP Update. Alternative 4 would result in City growth in currently undeveloped space, causing an overall increase in population growth in Pismo Beach through the year 2040 by approximately 30 percent compared to the proposed GP/LCP Update. Therefore, Alternative 4 would increase the amount of construction activities for new development, which would result in more significant long-term alterations of existing drainage patterns, such as changes in ground surface permeability, and increased soil erosion due to new paving, earth-moving activities, and changes in topography that would result from excavation, cut and fill activities, and grading. As a result, impacts related to hydrology and water quality would be increased under Alternative 4. Additionally, the increased development that would result from implementation of Alternative 4 would incrementally increase the amount of impervious surface in the City and increase water use, which could reduce the potential for groundwater recharge from infiltration and decrease groundwater supplies. However, the goals and policies in the GP/LCP Update Conservation and Open Space Element, Land Use and Community Design Element, and Safety Element that would reduce the potential for water quality degradation during construction activities; reduce the potential for hydrology and water quality impacts during operation of new development or redevelopment; address bluff erosion; reduce discharge of additional stormwater runoff and associated pollutants from new development and redevelopment; provide direction for groundwater management; and, reduce the risk of pollutant release in areas of flood hazard by restricting development within the Floodplain Overlay Zone would continue to be implemented under Alternative 4. Similarly, compliance with goals and policies would ensure that new impervious surfaces and increased water use would not substantially interfere with groundwater recharge or decrease groundwater supplies. Alternative 4 would also require compliance with existing local, state, and federal regulatory requirements and policies, including the Pismo Beach Municipal Code and the Central Coast RWQCB's post construction requirements for stormwater management, which would reduce potential impacts related to hydrology and water

quality, similar to the GP/LCP Update. Overall, impacts related to hydrology and water quality under Alternative 4 would be increased as compared to the GP/LCP Update, but impacts would remain less than significant.

Land Use and Planning

Implementation of Alternative 4 would result in expanded development within the City's SOI in the Price Canyon and Los Robles del Mar areas as compared to the GP/LCP Update, resulting in expanded City growth in currently undeveloped areas. Under Alternative 4, up to 128 acres of new residential land use area in the Price Canyon and Los Robles del Mar areas of the SOI would become available for development, which could accommodate approximately 1,800 new single- and multi-family residential units. Alternative 4 would not divide an established community or conflict with an applicable habitation conservation plan. As discussed in Section 4.9, *Land Use and Planning*, the GP/LCP Update would be consistent with applicable regional land use plans, policies, and regulations, such as the SLOCOG 2019 RTP and City zoning districts and standards. Implementation of Alternative 4 would improve opportunities for businesses and citizens to easily access goods, jobs, services, and housing, which is consistent with objectives in the SLOCOG 2019 RTP. However, implementation of Alternative 4 would not be consistent with other objectives in the SLOCOG 2019 RTP including goals to reduce GHG emissions from vehicles, improve air quality in the region, or conserve and protect natural, sensitive, and agricultural resources. Therefore, , this alternative would not be consistent with the SLOCOG 2019 RTP. Future development within SOI would be annexed into the City in compliance with procedures identified by the San Luis Obispo County Local Agency Formation Commission (LAFCO). Therefore, Alternative 4 would be consistent with the applicable LAFCO policies, which would be confirmed through the LAFCO review process. Overall, land use impacts would be increased as compared to the GP/LCP Update. Impacts would remain less than significant.

Noise

Implementation of Alternative 4 would result in expanded development within the City's SOI in the Price Canyon and Los Robles del Mar areas as compared to the GP/LCP Update. Alternative 4 would result in expanded City growth in currently undeveloped space, causing an overall increase in population growth in Pismo Beach through the year 2040 by approximately 30 percent compared to the proposed GP/LCP Update. Therefore, Alternative 4 would result in increased construction-related noise and vibration impacts in undeveloped areas that would not be developed under the GP/LCP Update. Due to the increase in overall growth, this alternative would also increase new vehicle traffic. Therefore, the long-term operational and traffic noise would also be increased compared to the GP/LCP Update. Additionally, expanded development within currently undeveloped space in the City's SOI would create new sensitive receivers that would otherwise not be developed under the GP/LCP Update. However, compliance with existing municipal code standards and with the goals, policies, and actions that would continue to be implemented under Alternative 4 would ensure construction activity associated with new development would limit noise disturbance at noise-sensitive receivers in the City. Similarly, compliance with the municipal code standards and compliance with the updated goals, policies, and actions would reduce overall traffic noise, continue to regulate on-site noise, minimize disturbance to adjoining uses, and limit vibration disturbance. Overall, Alternative 4 would have increased noise impacts compared to the GP/LCP Update. Noise impacts would remain less than significant.

Population and Housing

Implementation of Alternative 4 would result in expanded development within the City's SOI in the Price Canyon and Los Robles del Mar areas as compared to the GP/LCP Update, resulting in an overall increase in population growth in Pismo Beach through the year 2040 by approximately 30 percent compared to the proposed GP/LCP Update. As shown in Table 4.12-5 (Section 4.11, *Population and Housing*), the anticipated population growth in Pismo Beach through 2040 under the GP/LCP Update is similar to but less than the SLOCOG population growth projections for the city. Alternative 4 would increase the growth anticipated under the GP/LCP Update by 30 percent, resulting in an increase in population by approximately 3,200 compared to the GP/LCP Update. Overall, this alternative would exceed the SLOCOG population growth projects for the City by 2,548 residents. Therefore, Alternative 4 would induce substantial unplanned population growth in the City's SOI and would be inconsistent with SLOCOG growth projections for the city. Growth in Pismo Beach under Alternative 4 would be required to be consistent City of Pismo Beach Housing Element, which would require the City to update the Housing Element to be consistent with the planned growth envisioned under this alternative. Neither Alternative 4 nor the GP/LCP Update would displace substantial numbers of people or housing. Overall, impacts related to population and housing under Alternative 4 would be increased as compared to the GP/LCP Update due to the resulting population increase that would exceed SLOCOG population growth forecasts. Impacts would be significant and unavoidable.

Public Services and Recreation

Implementation of Alternative 4 would result in expanded development within the City's SOI in the Price Canyon and Los Robles del Mar areas as compared to the GP/LCP Update, resulting in an overall increase in population growth in Pismo Beach through the year 2040 by approximately 30 percent compared to the proposed GP/LCP Update. Therefore, development under Alternative 4 would result in an incremental increase in demand on public services and recreational facilities to a greater extent than development facilitated by the GP/LCP Update. Both Alternative 4 and the GP/LCP Update would include policies that would ensure public services continue to be provided to the city commensurate with population growth and need. As part of the annexation process, LAFCO would conduct a municipal service review to ensure that sufficient public services are available to the new development with the SOI. In addition, project-level development under Alternative 4 would be required to pay City-required public facilities impact fees. Similar to the GP/LCP Update, Act, new development would have to pay Quimby fees or include park facilities in order for the City to maintain the standard of three acres to 1,000 residents, pursuant to the Quimby Act. Overall, impacts related to public services and recreation under Alternative 4 would be increased in comparison to the GP/LCP Update due to the increase in new development. Impacts would remain less than significant.

Transportation

Implementation of Alternative 4 would result in expanded development within the City's SOI in the Price Canyon and Los Robles del Mar areas as compared to the GP/LCP Update, resulting in an overall increase in population growth in Pismo Beach through the year 2040 by approximately 30 percent compared to the proposed GP/LCP Update. Additionally, Alternative 4 may accommodate approximately 1,800 new single- and multi-family residential units in Pismo Beach. Assuming that new residential development in the SOI areas would be at a similar density to anticipated new residential development throughout the City, full buildout of Alternative 4 would result in a

population increase 3,200 residents compared to the year 2040 population under full implementation of the proposed GP/LCP Update. Therefore, under Alternative 4, the anticipated increase in citywide and regional traffic through 2040 would be greater than the increase in citywide and regional traffic anticipated under the GP/LCP Update. Additionally, Alternative 4 would continue to result in significant and unavoidable project-level and cumulative impacts from new VMT. Overall, as a result of the increase in residential development and population growth under Alternative 4, project-level and cumulative transportation impacts would be increased compared to the GP/LCP Update. Transportation impacts would remain significant and unavoidable.

Utilities/Service Systems

As discussed in Section 4.14, *Utilities/Service Systems,* the GP/LCP Update's potential impacts related to the provision of utilities and service systems would be less than significant. Because Alternative 4 would result in expanded development within the City's SOI in the Price Canyon and Los Robles del Mar areas, population growth in Pismo Beach would increase by approximately 30 percent through the year 2040 as compared to the proposed GP/LCP Update. Alternative 4 would also result in expanded city growth in currently undeveloped space, creating a demand for infrastructure and utility service in new locations. Therefore, the demand for new or expanded utility infrastructure under Alternative 4 would be greater than the utility needs of development facilitated by the GP/LCP Update. However, Alternative 4 would continue to implement a series of major strategies to ensure a sustainable water supply that would support economic development, land use changes, and development in the City through 2040. Specifically, the existing Facilities Element and proposed Land Use and Community Design Element would contain goals and policies that are consistent with the purpose of the City's Urban Water Management Plan to encourage the sustainable use and management of water supplies and infrastructure in the City. As part of the annexation process, LAFCO would conduct a municipal service review to ensure that sufficient municipal services are available to the new development within the SOI. Additionally, impact fees on new development would ensure that the wastewater collection system within the City receives necessary upgrades to accommodate the additional population. However, the potential demand for new utility infrastructure resulting from the overall increase in new development under Alternative 4 could result in new physical disturbance and increased environmental impacts. As a result, impacts related to the provision of utility infrastructure and services would be increased, and could be potentially significant.

6.3 Environmentally Superior Alternative

Section 15126.6(e)(2) of the CEQA Guidelines requires that an analysis of project alternatives identify an environmentally superior alternative among the alternatives evaluated in the EIR. In general, the environmentally superior alternative as defined by CEQA should minimize adverse impacts to the project site and its surrounding environment. In some cases, an alternative will avoid one or more impacts identified for a project but introduce other new significant impacts. Therefore, selection of the environmentally superior alternative requires an overall assessment of the changes in the number and type of significant impacts.

This section evaluates the impact conclusions for the GP/LCP Update and the four alternatives under consideration. It then identifies the environmentally superior alternative for each issue area. In accordance with the CEQA Guidelines Section 15126.6, if the No Project Alternative is identified as the Environmentally Superior Alternative, the EIR shall also identify an environmentally superior

alternative from among the other alternatives. Table 6-3 summarizes the environmental advantages and disadvantages associated with the proposed project and the analyzed alternatives.

In conducting the alternatives analysis, consideration must be given as to how, and to what extent, an alternative can meet the project's basic objectives. As discussed in Section 2.0, *Project Description,* the primary objective of the GP/LCP Update is to function as a policy document to guide land use decisions within the City through the year 2040.

The No Project Alternative (Alternative 1) would continue implementation of the existing 1992 GP/LCP, which would accommodate less residential development and associated population growth than the GP/LCP Update but would result in an increase in non-residential development and associated jobs growth as compared to the GP/LCP Update. Although Alternative 1 would entail continued growth as dictated by the existing 1992 General Plan, this alternative would not implement new policy language included in the GP/LCP Update, such as policies intended to provide guidance for future development and reduce long-term community impacts associated with growth. Alternative 1 would eliminate significant and unavoidable impacts to air quality because it would result in less population growth and associated new vehicle traffic and would therefore be more consistent with the assumptions in the 2001 Clean Air Plan. Alternative 1 would also reduce project-level and cumulative impacts associated with increased VMT, but transportation impacts would remain significant and unavoidable. Finally, Alternative 1 would result in increased impacts to greenhouse gases and land use and planning. Impacts related to land use would remain less than significant; however, impacts related to greenhouse gases may be potentially significant due to inconsistency with the PBCAP.

Alternative 2, Proposed GP/LCP Update with Reduced Residential Buildout, would perform similar to or better than the GP/LCP Update for all environmental resource areas. This alternative would result in a 50 percent reduction in overall residential land use designations in Pismo Beach, resulting in a reduction in overall population growth through 2040. As a result of this reduction in future development and growth, Alternative 2 would result in reduced impacts to issue areas including aesthetic resources, air quality, biological resources, cultural resources, GHG emissions, geology, energy, hazards, hydrology, noise, public services, and utilities. Alternative 2 would reduce project-level and cumulative impacts to air quality to a less than significant level due to the overall reduction in residential development that would result in consistency with the 2001 CAP and a reduction in total VMT. However, Alternative 2 would still result in local and regional VMT growth. Therefore, project-level and cumulative transportation impacts under Alternative 2 would remain significant and unavoidable.

Alternative 3, the Reduced Commercial Floor Area Ratio Alternative, would also perform similar or better to the GP/LCP Update for all environmental resource areas. This alternative would result in less new commercial and visitor-serving development due to the reduction in commercial FAR. However, Alternative 3 would not result in a reduction in residential development or potential population growth. Overall, Alternative 3 would result in reduced impacts to issue areas including aesthetic resources, GHG emissions, noise, and energy. However, because population growth under Alternative 3 would be similar to the population growth under implementation of the GP/LCP Update, Alternative 3 would not eliminate the project-level and cumulative significant and unavoidable impacts associated with air quality and transportation.

Table 6-3 Impact Comparison of Alternatives

Issue	Proposed Project Impact Classification	Alternative 1: No Project/Continue Using 1992 GP/LCP	Alternative 2: Reduced Residential Buildout	Alternative 3: Reduced Commercial Floor Area Ratio	Alternative 4: Proposed GP/LCP Update with Expanded SOI Development
Major Topics (EIR identifies significant and unavoidable impacts)					
Air Quality (Inconsistency with 2001 CAP and Cumulative)	Significant and Unavoidable	Less (Less than Significant)	Less (Less than Significant)	Less (Significant and Unavoidable)	Greater (Significant and Unavoidable)
Transportation (Increased VMT and Cumulative)	Significant and Unavoidable	Less (Significant and Unavoidable)	Similar (Significant and Unavoidable)	Less (Significant and Unavoidable)	Greater (Significant and Unavoidable)
Other Environmental Topics (EIR identifies impacts that are less than significant with or without mitigation)					
Aesthetics	Less than Significant	Less	Less	Less	Greater (Less than Significant)
Biological Resources	Less than Significant	Less	Less	Similar	Greater (Significant and Unavoidable)
Cultural/Tribal Resources	Less than Significant	Less	Less	Similar	Greater (Significant and Unavoidable)
Energy	Less than Significant	Less	Less	Less	Greater (Less than Significant)
Geology and Soils	Less than Significant	Less	Less	Similar	Greater (Less than Significant)
Greenhouse Gas Emissions	Less than Significant	Greater (Significant and Unavoidable)	Less	Less	Greater (Less than Significant)
Hazards, Hazardous Materials, and Wildfire	Less than Significant	Less	Less	Similar	Greater (Less than Significant)
Hydrology and Water Quality	Less than Significant	Less	Less	Similar	Greater (Less than Significant)
Land Use and Planning	Less than Significant	Greater (Less than Significant)	Similar	Similar	Greater (Less than Significant)

Issue	Proposed Project Impact Classification	Alternative 1: No Project/Continue Using 1992 GP/LCP	Alternative 2: Reduced Residential Buildout	Alternative 3: Reduced Commercial Floor Area Ratio	Alternative 4: Proposed GP/LCP Update with Expanded SOI Development
Noise	Less than Significant	Less	Less	Less	Greater (Less than Significant)
Population and Housing	Less than Significant	Similar	Similar	Similar	Greater (Significant and Unavoidable)
Public Services and Recreation	Less than Significant	Less	Less	Similar	Greater (Less than Significant)
Utilities and Service Systems	Less than Significant	Less	Less	Less	Greater (Significant and Unavoidable)
Overall		**12 Less, 1 Similar, 2 Greater**	**12 Less, 3 Similar, 0 Greater**	**7 Less, 8 Similar, 0 Greater**	**0 Less, 0 Similar, 17 Greater**

Alternative 4, Proposed GP/LCP Update with Expanded SOI Development, would perform worse than the GP/LCP Update for all environmental resource areas. This alternative would result in an increase in overall development in currently undeveloped space within the City's SOI. Therefore, overall population growth would be greater under this alternative and would contribute to the project-level and cumulative significant and unavoidable impacts associated with air quality and transportation. Alternative 4 would result in increased impacts to greenhouse gases, which could potentially be significant with mitigation incorporated. Alternative 4 would also result in significant and unavoidable impacts to biological resources, cultural and tribal cultural resources, population and housing, and utilities and service systems.

Based on the information presented herein, Alternative 2 would be the environmentally superior alternative when considering overall environmental impacts. Alternative 2 would reduce project-level and cumulative impacts to air quality to a less than significant level but would not avoid the significant and unavoidable project-level or cumulative transportation impacts. However, reducing the overall residential development in Pismo Beach would be inconsistent with the objective of the GP/LCP Update to ensure that the City's land use plan meets the fair share housing needs allocation established in the SLOCOG RHNP. Therefore, this alternative would not meet the basic project objective to manage growth in Pismo Beach.

After Alternative 2, Alternative 3 is the next most environmentally superior alternative when considering overall environmental impacts relative to the performance metrics. However, reducing visitor-serving commercial density under this alternative would be inconsistent with Pismo Beach's community vision to enhance a vibrant tourist-based economy and guiding principle to support the visitor population. Additionally, Alternative 3 would not avoid the significant and unavoidable project-level or cumulative air quality and transportation impacts associated with the population growth and increased VMT that would be expected under this alternative.

7 Responses to Comments

The Draft Environmental Impact Report (Draft EIR) for the Pismo Beach General Plan/Local Coastal Plan Update (GP/LCP Update) was circulated for a 45-day public review period that began on February 1, 2022 and ended on March 18, 2022. In accordance with the California Environmental Quality Act (CEQA) Guidelines §15088, the City of Pismo Beach (City) reviewed the comments received on the Draft EIR, and prepared written responses to the comments received. This section includes responses to comments received during the circulation of the Draft EIR.

Each written comment that the City received is included in this Response to Comments section. Responses to these comments were prepared to address the environmental concerns raised by the commenters and to indicate where and how the Draft EIR was revised to address pertinent environmental issues.

Any changes made to the text of the Draft EIR correcting information, other than minor typographical corrections or minor working changes, are noted in the Final EIR as changes from the Draft EIR. The changes that occurred between the Draft EIR and Final EIR are shown in <u>underline</u> for text additions and ~~strikethrough~~ for text deletions in the response to comments in this section and in applicable section of the Final EIR.

The focus of the responses to comments is the disposition of environmental issues that are raised in the comments, as specified by CEQA Guidelines §15088(c). Detailed responses are not provided to comments on the merits of the proposed project. However, when a comment is not directed to an environmental issue, the response indicates that the comment has been noted and forwarded to the appropriate decision-makers for review and consideration.

7.1 Written Comments and Responses

The City received three comment letters on the Draft EIR. The commenters and the page number on which each commenter's letter appear are listed In Table 7-1.

Table 7-1 Comment Letters Received

Letter No.	and Commenter	Date Received
1	Kevin Pearce, California Department of Parks and Recreation	February 14, 2022
2	Kelsie Shroll, Santa Ynez Band of Chumash Indians	February 17, 2022
5	Jenna Schudson, California Department of Transportation	March 18, 2022

7.2 Responses to Public Comments

The comment letters and responses follow. The comment letters have been numbered sequentially and each separate issue raised by the commenter, if more than one, has been assigned a number. The responses to each comment identify first the number of the comment letter, and then the number assigned to each issue (Response 1-2, for example, indicates that the response is for the second issue raised in comment Letter 1).

Letter 1

State of California • Natural Resources Agency
Gavin Newsom, *Governor*
Oceano Dunes District • Oceano Dunes SVRA • Pismo State Beach
Armando M. Quintero, *Director*
340 James Way, Suite 270, Pismo Beach CA 93449 805.773.7170

February 14, 2022

Kevin Pearce, Chief Ranger/District Superintendent
California Department of Parks and Recreation
Oceano Dunes District
340 James Way, Suite 270
Pismo Beach, CA 93449

City of Pismo Beach
Planning Department c/o Jeff Winklepleck
760 Mattie Road
Pismo Beach, CA 93449

RE: Comments on City of Pismo Beach General Plan/Local Coastal Plan Update and Draft Environmental Impact Report

To whom it may concern,

The Department of Parks and Recreation, Oceano Dunes District (Parks) appreciates the opportunities to provide comments on the Pismo Beach General Plan/Local Coastal Plan (GP/LCP) Update and Associated Draft Program Environmental Impact Report (EIR) City of Pismo Beach General Plan/Local Coastal Program and Zoning Code Update State Clearinghouse No. 2021010158.

Parks is a state agency with the mission, *To provide for the health, inspiration, and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation*. 1-1

Parks is a landowner of Pismo State Beach, which includes a parking lot at the western terminus of Addie Street, North Beach campground, Pismo Lake, the Pismo State Beach Monarch Butterfly Grove, and approximately 8 miles of state beach, of which the City of Pismo Beach manages approximately 1.25 miles through a Lease Agreement with the state.

1. Draft EIR Section 2.4.4 General Plan Land Use Designations and Density

The state operates Pismo Lake, North Beach campground and the Pismo State Beach Monarch Butterfly Grove, units which are identified as Open Space. The state may in the future wish to improve and develop these areas to improve and enhance visitor services, to improve public access, and to improve natural resource protection measures and would like to ensure such improvements would not potentially be inconsistent with the requirements of this designation. The state recommends the City of Pismo Beach review this land use designation to ensure compatibility of the state's existing and future recreational improvements with the City's designation. 1-2

Pismo Coast Village RV Resort (PCV) and North Beach campground (NB) both operate campgrounds to support a recreational vehicle (RV) camping experience. PCV is designated as resort commercial, and NB is designated as open space. The state recommends reviewing this disparate designation for consistent application. Given the developed, recreational use of NB campground, the state recommends the City consider a Resort Commercial land use and Commercial Recreation zoning designation. 1-3

2. **Draft EIR Section 3.2.4 Natural Setting and Section 4.3.1.c. Biological Resources Setting (page 3-2)**

The state recommends removing Oceano Dunes State Vehicular Recreation Area (ODSVRA) from their environmentally sensitive habitat area designations as this area is not within city of Pismo Beach GP/LCP responsibility areas. Correspondingly, the state recommends removing reference to the ODSVRA from the Draft Conservation Open Space Element, Environmentally Sensitive Habitat Area description and page 12, and in proposed Action COS-3.2a. 1-4

3. **Draft EIR Section 4.2.3 Air Quality Impact Analysis, Table 4.2-6, Policy CIR-4.1.20 and CIR-4.1.40 (page 4.2-13)**

The state recommends the City of Pismo Beach to consult with the state on any planned improvements to state property within the GP/LCP Project area (i.e., Addie Street). Correspondingly, the state recommends this change to the Draft Circulation Element Policies CIR-4.1.20 and CIR-4.1.40.

4. **Draft EIR Section 4.2.3 Air Quality Impact Analysis, Action COS-1.1c (page 4.2-21)**

The state recommends the City of Pismo Beach to consult with the state on any planned improvements to state property within the GP/LCP Project area (i.e., Addie Street). Correspondingly, the state recommends this change to the Draft Conservation Open Space Element Action COS-1.1c. 1-5

5. **Draft EIR Section 4.3.1.d Biological Resources Setting, Special Status Species (page 4.3-12)**

The City of Pismo Beach recognizes special status species that are known or have potential to occur and list Western snowy plover (Charadrius nivosus nivosus) as one such species. The state would request the city to include Western snowy plover within their Special Status Wildlife Species, Appendix G, Table G-2 as one such species. 1-6

6. **Draft EIR Section 4.3.3 Biological Resources Impact Analysis, Policy COS-3.2 Environmentally Sensitive Habitat Area (page 4.3-22)**

The state recognizes the importance of protecting significant natural and cultural resources and will manage and/or design any state projects on state lands consistent with state rules, regulations and policies. Please see additional comments regarding Environmentally Sensitive Habitat, wetland and stream resources and buffers under Comment #11, below. 1-7

7. **Draft EIR Section 4.3.3 Biological Resources Impact Analysis (page 4.3-33)**

The state continues to pursue a final Habitat Conservation Plan (HCP) for Oceano Dunes District (Parks), including those portions of Pismo State Beach operated by the City of Pismo Beach under a Lease Agreement. Upon an approved Parks HCP, all portions of Pismo State Beach, including those portions of Pismo State Beach operated by the City of Pismo Beach under a Lease Agreement, shall comply with HCP conditions as approved. 1-8

8. Draft EIR Section 4.4 Cultural and Tribal Resources

The state requests any proposed Projects, for those portions of Pismo State Beach operated by the City of Pismo Beach under a Lease Agreement, be discussed in advance with state, in order to meet state policies, rules and regulations concerning sensitive tribal and cultural resources.

The state would also request notification of any proposed Projects on city property which have potential to impact known cultural resources with boundaries that abut and/or overlap onto state property.

1-9

9. Draft EIR Section 4.4.1.d Cultural and Tribal Resources Setting, Previously Identified Cultural Resources (page 4.4-4)

The state recommends environmental, or planning documents should not contain information about the location of Native American archaeological resources, sacred sites, or other tribal and cultural resources.

The state recommends all archaeological or other cultural resources be considered important or significant until formal evaluation for California Register of Historical Resources and/or National Register of Historic Places occurs and indicates otherwise.

1-10

10. Draft EIR Section 4.9.1.e, Hydrology/Water Quality Setting, Sea Level Rise (page 4.9-12)

The state requests any proposed Projects, for those portions of Pismo State Beach operated by the City of Pismo Beach under a Lease Agreement, be discussed in advance with state, in order to meet state policies, rules and regulations concerning sea level rise.

In addition, the state requests the City to consider the development limitations proposed pursuant to Draft Safety Element Action 2.5b-Restrictions on Development Within the 100-Year Floodplain, Action 2.5c-Shoreline Setbacks, and Action 2.5d-Floodplain Zoning Standards to ensure these proposed actions do not prevent the ability of the state to maintain and improve existing State Parks recreational and operational facilities within the City as provided for in proposed Action LU-4.2l: Maintenance of Campgrounds and RV Parks.

1-11

11. Draft EIR Section 4.10 Land Use and Planning

The state operates Pismo Lake, North Beach campground and the Pismo State Beach Monarch Butterfly Grove, units which are identified as Open Space. The state may in the future wish to improve and develop these areas to improve and enhance visitor services, to improve public access, and to improve natural resource protection measures which may conflict with this designation. The state recommends the City of Pismo Beach review this land use designation to ensure compatibility of the state's existing and future recreational improvements with the City's designation.

In addition, the state requests the City to consider the development limitations proposed pursuant to Draft Land Use Elements Action LU-8.2e: Permitted Development (in the areas zoned for public beach access or open space recreation) and associated zoning designations, and Draft Conservation Open Space Element Action COS-3.2c-ESHA Buffers, Action COS-3.2d-Existing Development Within ESHA Buffers, Action COS-3.2h-Monarch Butterfly Habitat Protection, Action COS-3.7a-Streamside Protection Zone, Action COS-3.5d-Wetland Buffers, and Action COS-3.5e-Existing Development Within Wetlands Buffers to ensure these proposed actions do not prevent the ability of the state to maintain, improve and propose new State Parks recreational facilities within the City, where located and designed to avoid and minimize impacts to sensitive coastal resources to the maximum extent feasible.

1-12

12. Draft EIR Section 4.13.1.e, Public Services and Recreation Setting, Parks, Recreation, and Open Space (page 4.13-4), and Policy COS-3.9 Pismo Creek Marsh (page 4.13-14)

The Draft EIR describes "resource-based open space" as lands "primarily managed to protect and preserve natural resources while providing scenic and passive uses for residents and visitors" and as "generally unimproved areas that preserve open space, such as environmentally sensitive habitat areas. Figure 4.13.1 indicates that Pismo Lake, NB campground and the Pismo State Beach Monarch Butterfly Grove are mapped resource-based open space. However, as noted herein, given the developed recreational use of NB campground and potential future plans to improve public access amenities for Pismo State Beach Monarch Butterfly Grove (including visitor parking and restrooms as provided for in proposed Action COS-3.2h.e, Monarch Butterfly Habitat Protection), the state recommends the City consider if the proposed resource-based open space designated for NB campground and Pismo State Monarch Beach Butterfly Grove is appropriate. 1-13

In addition, Pismo Lake (i.e. Pismo Creek Marsh) is owned and managed by the Department of Parks and Recreation and is known by the retained name of the Pismo Lake Ecological Preserve. The state may in the future wish to reclassify this unit consistent with Department of Parks and Recreation unit designation and/or improve public access to this area consistent with such designation. Correspondingly, the state recommends proposed Policy COS-3.9: Pismo Marsh Protection and its associated Actions be revised to reflect the correct ownership of the land and to ensure the Department of Parks and Recreation is consulted with regards to any proposed project design, mitigation measures and/or habitat resource protection program potentially affect the property.

13. Draft EIR Appendix C- Conservation and Open Space Fact Sheet

Pismo Creek Marsh is identified in Figure CO-1 and pg. 23/520 and is listed as owned and managed by the California Department of Fish and Wildlife. This property is owned and managed by the Department of Parks and Recreation and is known by the retained name of the Pismo Lake Ecological Preserve. The state requests the City to correct the identified ownership for this property throughout the Draft EIR and updated LCP Elements. 1-14

14. Draft EIR Appendix C- Conservation and Open Space Fact Sheet- Figure CO-2

pg. 25/520. The state operates Pismo Lake, North Beach campground and the Pismo State Beach Monarch Butterfly Grove, units which are identified as Open Space. The state may in the future wish to improve and develop these areas to improve and enhance visitor services, to improve public access, and to improve natural resource protection measures which may conflict with this designation. The state recommends the City of Pismo Beach review this land use designation to ensure compatibility of the state's existing and future recreational improvements with the City's designation. 1-15

15. Draft EIR Appendix D- Land Use Fact Sheet- Figure LU-5

pg. 47/520. The state identified that the City of Pismo Beach incorrectly identified a state-owned parking lot as being a city-owned parking lot (Addie Street).

16. Draft EIR Appendix D- Public Access and Recreation Facilities

pg. 48/520. The state identified that the City of Pismo Beach incorrectly identified, "*The City owns four parking lots within walking distance to the coast, two of which are directly adjacent to the beach.*" A state-owned parking lot is incorrectly identified as being city-owned (Addie Street). 1-16

17. Draft EIR Appendix K- *Citywide Transportation Model and Circulation Study*

pg. 416/520. The state recognizes the importance the state property identified as Addie Street parking lot, provides to the City of Pismo Beach, its citizenry and visitors by providing parking and public access. 1-17

18. Draft EIR Appendix K- *Citywide Transportation Model and Circulation Study*

pg. 511/520. Bullet 6.e.- The state requests any proposed Projects, for those portions of state property operated by the City of Pismo Beach under a Lease Agreement, be discussed in advance with state, in order to meet state policies, rules and regulations. 1-18

Letter 1

COMMENTER: Kevin Pearce, California Department of Parks and Recreation

DATE: February 14, 2022

Response 1-1

The commenter states that the Department of Parks and Recreation, Oceano Dunes District, is a landowner of Pismo State Beach. This includes a parking lot at the western terminus of Addie Street, North Beach (NB) campground, Pismo Lake, the Pismo State Beach Monarch Butterfly Grove, and approximately 8 miles of state beach, of which the City of Pismo Beach manages approximately 1.25 miles through a Lease Agreement with the state.

This comment is introductory and provides a summary of the Department of Parks and Recreation. The comment is noted for the record. The comment does not address the adequacy of the EIR and no further response is required.

Response 1-2

The commenter states that Pismo Lake, NB campground, and the Pismo State Beach Monarch Butterfly Grove are designated by the City as Open Space. The commenter notes that the State may want to improve and develop these areas in the future for visitor services, public access, and natural resource protection and would like to ensure such improvements would not be inconsistent with the requirements of the Open Space designation. The commenter recommends the City review this land use designation to ensure compatibility with the state's existing and future recreational improvements.

The City's Open Space land use designation is intended for areas with important natural resources, environmentally sensitive habitats, and scenic views to be protected and used for recreational uses where compatible with the characteristics of such areas. The Open Space designation does not preclude compatible recreational improvements.

Response 1-3

The commenter states Pismo Coast Village RV Resort (PCV) and NB campground operate campgrounds to support a recreational vehicle (RV) camping experience, and notes that PCV is designated as Resort Commercial and NB campground is designated as Open Space. Given the developed, recreational use of NB campground, the commenter recommends the City consider a Resort Commercial land use and Commercial Recreation zoning designation.

In comparison to NB campground, PCV is a more intensified camping experience, catering primarily to RVs, and contains an accessory retail/commercial use and is therefore designated as Resort Commercial. The Open Space designation on the NB campground is appropriate because NB campground does not contain utility hookups or a commercial component, and NB campground is intended for a more rustic camping experience than PCV.

Response 1-4

The commenter recommends the City remove Oceano Dunes State Vehicular Recreation Area (ODSVRA) from the environmentally sensitive habitat area (ESHA) designations because ODSVRA is not in a City General Plan/Local Coastal Plan (GP/LCP) responsibility area. Correspondingly, the

commenter recommends removing reference to the ODSVRA from the Draft Conservation and Open Space Element, Environmentally Sensitive Habitat Area description and proposed Action COS-3.2a.

While the ODSVRA is not within the City GP/LCP Update area, the ODSVRA and other surrounding uses are referenced in the GP/LCP Update and EIR to provide context to the reader and for coordinated planning for any land use changes in the immediate vicinity of surrounding/nearby uses. To clarify that ODSVRA is not located within the City limits, setting information in Sections 3.2.4 and 4.3.1.c were revised in the Final EIR as follows:

> Pismo Beach's ESHAs include portions of Pismo State Beach, Pismo Marsh, Price Canyon, Pismo Creek, Pismo Preserve, Meadow Creek, dunes habitat of the Pismo State Beach ~~the Oceano Dunes,~~ and the Monarch Butterfly Grove.

The corresponding change was made to Section 5 of the Conservation and Open Space Element.

In addition, the reference to Oceano Dunes was removed from Impact BIO-1 in Section 4.3.3.c in the Final EIR as follows:

- **Action COS-3.2a: Definition of ESHA.** Environmentally Sensitive Habitat Area (ESHA) shall be defined as any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments. An area shall be considered ESHA if it fits this Coastal Act definition, and likely includes portions of Pismo State Beach, Pismo Marsh, Price Canyon, Pismo Creek, Pismo Preserve, Meadow Creek, ~~the Oceano Dunes,~~ dunes habitat of the Pismo State Beach, and the Monarch Butterfly Grove.

The corresponding change was made to Action COS-3.2a in the Conservation and Open Space Element.

Response 1-5

The commenter recommends the City consult with the state on any planned improvements to state property within the GP/LCP Project area (i.e., Addie Street). Correspondingly, the commenter recommends this change to the Draft Circulation Element Policies CIR-4.1.20 and CIR-4.1.40, as well as Draft Conservation and Open Space Element Action COS-1.1c.

The following language has been revised in Section 5, Conservation Areas, of the Conservation and Open Space Element:

> Pismo Beach contains important conservation areas, or areas within the community that contain a large number of diverse plant and animal species. These areas include the ocean and shoreline habitats, butterfly groves, riparian and wetland habitats, and foothills. These conservation areas vary in plant and animal communities, location, ownership, ~~and~~ use and jurisdictional requirements. The City will make best efforts to consult with applicable agencies including the State Parks Department on any planned improvements ~~to state property~~ within the General Plan / Local Coastal Program project area, including those portions of Pismo State Beach, operated by the City under a lease agreement. In addition, many of these conservation areas are designated as environmentally sensitive habitat area (ESHA) and some of the areas, such as Pismo Marsh and Pismo Creek, are wetlands.

No changes to the EIR are required in response to this comment.

Response 1-6

The commenter requests that the City include Western snowy plover in the Special Status Wildlife Species, Appendix G, Table G-2 of the EIR.

Appendix G of the Draft EIR has been designated as Appendix D within the Final EIR. The western snowy plover (*Charadrius nivosus nivosus)* has been added to Table D-2, *Special Status Wildlife Species Documented in or with the Potential to Occur in Pismo Beach*, in Appendix D of the EIR as follows:

Scientific Name	Common Name	FESA/CESA Status	Other CDFW & Local Status
Birds			
Charadrius nivosus nivosus	western snowy plover	FT/–	SSC

The analysis in Section 4.3, *Biological Resources*, considered potential impacts to sensitive bird species, including shorebirds. The addition of western snowy plover to Table D-2 in Appendix D of the EIR does not change the analysis or conclusions in Section 4.3, *Biological Resources*, of the EIR.

Response 1-7

The commenter describes the importance of protecting significant natural and cultural resources and will manage and/or design any state projects on state lands consistent with state rules, regulations, and policies. The commenter refers to additional comments regarding Environmentally Sensitive Habitat, wetland and stream resources, and buffers in Comment #11 of their letter.

This comment is noted. The response to Comment #11 of the letter is addressed in Response 1-12 below.

Response 1-8

The commenter notes that the State is continuing to pursue a final Habitat Conservation Plan (HCP) for the Oceano Dunes District, including portions of Pismo State Beach operated by the City under a Lease Agreement. The commenter states that once the HCP is approved, all portions of Pismo State Beach must comply with HCP conditions.

The City will comply with all applicable conditions for Pismo State Beach required by the HCP for the property.

Response 1-9

The commenter requests any proposed projects on the portions of Pismo State Beach operated by the City under a Lease Agreement be discussed in advance with the state to meet state policies, rules, and regulations for sensitive tribal and cultural resources. The commenter also requests notification of any proposed projects on City property that have potential to impact known cultural resources with boundaries that abut and/or overlap with state property.

The City will consult with the Department of Parks and Recreation on any planned improvements to state property within the City and will follow all applicable laws regarding cultural resources notifications.

Response 1-10

The commenter recommends that environmental and planning documents do not contain information about the location of Native American archaeological resources, sacred sites, or other tribal and cultural resources. The commenter recommends all archaeological or other cultural resources be considered important or significant until formal evaluation for California Register of Historical Resources and/or National Register of Historic Places occurs and indicates otherwise.

It is the City's practice not to disclose information regarding the specific location of archeological, tribal, cultural, or paleontological resources. As stated in the discussion of project impacts in Section 4.4, *Cultural and Tribal Cultural Resources*, in the EIR, the goals, policies, and actions included in the proposed Conservation and Open Space Element are intended to preserve and protect cultural and historic resources. Additionally, future development under the GP/LCP Update would be subject on a project-by-project basis to the provisions of all applicable federal and state historic resource regulations, as well as the City's Municipal Code Section 17.24.020, which sets property development and use standards related to archaeological and historical resources. Development facilitated by the GP/LCP Update would be required to comply with GP/LCP actions, federal and state regulations, and the City's Municipal Code which would require identification, evaluation, and protection of cultural and historic resources throughout the city. More specifically, Action COS-4.1a in the proposed Conservation and Open Space Element requires, as part of the CEQA review process, that a professional, qualified historian conduct a literature search and/or survey for any project that entails demolition or modification of an existing structure that may be of historical value in relation to the City's cultural heritage. Sites of statewide or national significance shall be nominated for inclusion in the Registry of California Historic Landmarks or National Historic Landmark Program.

Response 1-11

The commenter requests any proposed projects on the portions of Pismo State Beach operated by the City be discussed in advance with the state to meet state policies, rules, and regulations related to sea level rise. The commenter requests that the City consider the development limitations proposed under Safety Element Actions S-2.5b, S-2.5c, and S-2.5d to ensure the proposed actions do not prevent the ability of the state to maintain and improve existing State Parks recreational and operational facilities within the City as provided for in proposed Action LU-4.2l: Maintenance of Campgrounds and RV Parks.

Safety Element Action S-1.2c: Coordination with Stakeholder Agencies, requires the City to consult with regional, state (including Department of Parks and Recreation), and federal agencies on the effects of climate change on local hazards, including sea level rise.

Response 1-12

The commenter provides the same comment addressed in Response 1-2. The commenter also requests that the City consider the development limitations proposed under Land Use Element Action LU-8.2e and Conservation and Open Space Element Actions COS-3.2c, COS- 3.2d, COS-3.2h, COS-3.7a, COS-3.5d, and COS-3.5e to ensure the proposed actions do not prevent the ability of the state to maintain, improve, and propose new State Parks recreational facilities within the City.

Refer to Response 1-2. The City's Open Space designation is appropriate for areas such as Pismo Lake, Monarch Butterfly Grove, and NB campground, and does not preclude improvements for public recreational uses while preserving and minimizing impacts to these areas. Land Use Element

Action LU 8.2e Permitted Development has been renumbered as Action LU 8.2d Permitted Development. Action LU 8.2d contains flexible language, stating development *shall be limited to* specific recreational orientated improvements. However, policies and actions contained within the Conservation and Open Space Element, including Actions COS-3.2c, COS- 3.2d, COS-3.2h, COS-3.7a, COS-3.5d, and COS-3.5e, are driven by regional, state, and federal legislation including, but not limited to, the Clean Water Act, Endangered Species Act, Porter – Cologne Water Quality Act, California Coastal Act. As a result, no change is warranted to the policies and actions in the Land Use and Conservation and Open Space Elements.

Response 1-13

The commenter notes that Figure 4.13.1 of the EIR indicates that Pismo Lake, NB campground and the Pismo State Beach Monarch Butterfly Grove are mapped Resource-Based Open Space. The commenter recommends that the City consider the appropriateness of the Resource-Based Open Space designation given the developed recreational use of NB campground and potential future plans to improve public access amenities for Pismo State Beach Monarch Butterfly Grove.

The commenter notes that Pismo Lake (i.e. Pismo Creek Marsh) is owned and managed by the Department of Parks and Recreation and is known by the retained name of the Pismo Lake Ecological Preserve. The commenter notes that the state may want to reclassify the preserve consistent with the Department of Parks and Recreation unit designation and/or improve public access to the area in the future. The commenter recommends Conservation and Open Space Element Policy COS-3.9 and its associated Actions be revised to reflect the correct ownership of the land and to ensure the Department of Parks and Recreation is consulted with regards to any proposed project design, mitigation measures, and/or habitat resource protection program that would affect the property.

Refer to Response 1-2 regarding land use designations for the NB campground and the Pismo State Beach Monarch Butterfly Grove. As suggested by the commenter, Actions COS-3.9a, COS-3.9h, and 3.9i under Policy COS-3.9 have been revised in the Conservation and Open Space Element to include coordination with the Department of Parks and Recreation. The revised text now reads as follows:

> **Action COS-3.9a: Protection Program.** The City shall develop a resource protection and passive recreational program for Pismo Marsh in coordination with the California Department of Fish and Wildlife, Department of Parks and Recreation, and City of Grover Beach.
>
> **Action COS-3.9h: Department of Parks and Recreation and Department of Fish and Wildlife.** The City shall consult with the Department of Parks and Recreation and California Department of Fish and Wildlife with regards to project design and mitigation measures when a private development could potentially affect the marsh.
>
> **Action COS-3.9i: Visual and Interpretive Access.** The unique ecological system of Pismo Lake needs to be made available to the community as a whole. Since protection of the habitat is the primary concern of the Department of Parks and Recreation and California Department of Fish and ~~Game~~ Wildlife, physical access to the preserve has generally been prohibited by the state. Therefore, it is essential to make the marsh available visually. Private developments adjacent to the marsh shall use it as a key visual and open space feature of the development. Pedestrian spaces shall be oriented to the marsh and view corridors to the marsh provided. Additionally, the Department of Parks and Recreation and California Department of Fish and Wildlife, in cooperation with Pismo Beach and Grover Beach, shall be encouraged to develop the potential of Pismo Lake as an educational and recreational resource.

Actions COS-3.9a, COS-3.9h, and COS-3.9i are not cited in the Draft EIR. No other changes to the EIR are required in response to this comment.

Response 1-14

The commenter notes that Pismo Creek Marsh is identified in the Conservation and Open Space Fact Sheet (Appendix C of the EIR) as owned and managed by the California Department of Fish and Wildlife. The property is owned and managed by the Department of Parks and Recreation and is known by the retained name of the Pismo Lake Ecological Preserve.

The ownership by the Department of Parks and Recreation for Pismo Creek Marsh has been updated as follows in Section 5.3, Riparian and Wetland Habitat, of the Conservation and Open Space Element of the GP/LCP Update:

> The marsh is 54 acres and is under the ownership of the California Department of Parks and Recreation. ~~and management of the California Department of Fish and Wildlife~~.

The Draft EIR does not specify the owner of Pismo Creek Marsh. Note that Appendix C of the Draft EIR has been removed from the Final EIR because it is outdated as a result of the changes made to the GP/LCP Update between the Draft and Final EIR. The ownership of Pismo Creek Marsh is not discussed within the Draft EIR and has no bearing on the analysis provided within the EIR. The revision to the GP/LCP Update and deletion of Appendix C (Conservation and Open Space Element Fact Sheet) of the Draft EIR does not affect the findings or conclusions of the EIR. No additional changes to the EIR are required in response to this comment.

Response 1-15

The commenter provides the same comment addressed in Response 1-2. Refer to Response 1-2.

Response 1-16

The commenter notes that the state-owned parking lot (Addie Street) is incorrectly identified in Appendix D (Land Use Fact Sheet) of the Draft EIR as City-owned and, thus, the number of City-owned lots is incorrect.

Appendix D of the Draft EIR has been removed from the Final EIR because it is outdated as a result of the changes made to the GP/LCP Update between the Draft and Final EIR. Parking lot ownership is not discussed within the Draft EIR or the Land Use Element of the GP/LCP Update and has no bearing on the analysis provided within the EIR. The deletion of Appendix D (Land Use Fact Sheet) of the Draft EIR does not affect the findings or conclusions of the EIR. No additional changes to the EIR are required in response to this comment.

Response 1-17

The commenter recognizes the importance of the state-owned Addie Street parking lot in providing the City, it citizenry, and visitors parking and public access.

This comment is noted for the record. The comment does not address the adequacy of the EIR and no further response is required.

Response 1-18

The commenter requests any proposed projects on state property and operated by the City be discussed in advance with the state in order to meet state policies, rules and regulations.

Refer to Responses 1-5, 1-9, and 1-11.

Letter 2

Santa Ynez Band of Chumash Indians
Tribal Elders' Council
P.O. Box 517 ◆ Santa Ynez ◆ CA ◆ 93460
Phone: (805)688-7997 ◆ Fax: (805)688-9578 ◆ Email: elders@santaynezchuhmash.org

February 17, 2022

City Of Pismo Beach Planning Division
Atten: Brian Schwartz, Contract Planner – City of Pismo Beach GP/LCP DEIR
760 Mattie Road,
Pismo Beach, CA 93449

Att.: Brian Schwartz, Contract Planner – City o Pismo Beach GP/LCP DEIR

Re: City of Pismo Beach General Plan Local Coastal Plan

Dear Mr. Schwartz:

Thank you for contacting the Tribal Elders' Council for the Santa Ynez Band of Chumash Indians.

At this time, the Elders' Council requests no further consultation on this project; however, we understand that as part of NHPA Section 106, we must be notified of the project. 2-1

Thank you for remembering that at one time our ancestors walked this sacred land.

Sincerely Yours,

Kelsi A. Shroll

Kelsie Shroll
Administrative Assistant | Elders' Council and Culture Department
Santa Ynez Band of Chumash Indians | Tribal Hall
(805) 688-7997 ext. 7516
kshroll@santaynezchumash.org

Letter 2

COMMENTER: Kelsie Shroll, Santa Ynez Band of Chumash Indians

DATE: February 17, 2022

Response 2-1

The commenter acknowledges notification of the project and requests no further consultation on this project.

This comment is noted for the record. The comment does not address the adequacy of the EIR and no further response is required.

DEPARTMENT OF TRANSPORTATION
CALTRANS DISTRICT 5
50 HIGUERA STREET
SAN LUIS OBISPO, CA 93401-5415
PHONE (805) 549-3101
FAX (805) 549-3329
TTY 711
www.dot.ca.gov/dist05/

Making Conservation a California Way of Life.

March 18, 2022

SCH# 2021010158

Brian Schwartz, Contract Planner
City of Pismo Beach, Planning Division
760 Mattie Road
Pismo Beach, CA 93449

COMMENTS FOR THE DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR) FOR THE PISMO BEACH GENERAL PLAN / LOCAL COASTAL PLAN (GP/LCP) UPDATE

Dear Mr. Schwartz:

The California Department of Transportation (Caltrans) appreciates the opportunity to review the DEIR for the Pismo Beach General Plan / Local Coastal Plan (GP/LCP) Update. At this time, we offer the following comments in response to the DEIR:

Caltrans supports development that is consistent with State and Federal planning priorities intended to promote equity, strengthen the economy, protect the environment, and promote public health and safety. We accomplish this by working with local agencies to achieve a shared vision of how the transportation system can and should accommodate interregional and local travel and development. Projects that support smart growth principles which include improvements to pedestrian, bicycle, and transit infrastructure (or other key Transportation Demand Management strategies (TDM)) are supported by Caltrans and are consistent with our mission, vision, and goals. Caltrans believes that continued coordination with your agency is imperative to achieve overall network connectivity. 3-1

Employing Vehicle Miles Traveled (VMT) as the metric of transportation impact Statewide will help to promote Green House Gas (GHG) emission reductions consistent with SB 375 and can be achieved through influencing on-the-ground development. Implementation of this change will rely, in part, on local land use decisions to reduce GHG emissions associated with the transportation sector, both at the project-level, and in long-term plans (including general plans, climate action plans, specific plans, and transportation plans) and supporting Sustainable Community Strategies (SCS) developed under SB 375. 3-2

It is noted that the DEIR found cumulative growth under the GP/ LCP Update will result in a potentially significant increase in VMT. Future individual development projects will conduct focused, project-level environmental review and undertake project-specific

mitigation to reduce VMT where appropriate. We look forward to reviewing those project-level documents and providing comment on relevant mitigation options. 3-2

Considering the impacts to pedestrians, bicyclists, travelers with disabilities, and transit users, as well as countermeasures and trade-offs resulting from mitigating VMT increases is important. Access for pedestrians and bicyclists to transit facilities must be maintained and where possible improved. Caltrans encourages the use of TDM strategies that increases the efficiency of the transportation system by providing options for users other than driving alone, or by shifting travel away from peak periods to help lower VMT. 3-3

The DEIR acknowledges the expected increase in VMT from the GP/ LCP Update has the potential to impact pedestrian and bicycle travel. The GP/ LCP Update seeks to address those impacts with goals and policies to improve safety, access, and performance of a multimodal system.

Caltrans District 5 has recently completed its Active Transportation Plan. The plan identifies bicycle and pedestrian needs on, across, and parallel to the State Highway System (SHS) throughout California's Central Coast. Partnership with transportation stakeholders and the public are critical to supporting a safe transportation network and promoting healthy communities. We encourage communication between our agencies regarding future pedestrian and bicycle facilities. The main deliverable of the plan is the prioritized list of Location Based Needs (LBN's)(available at https://www.catplan.org/district-5). This prioritized list can be utilized to identify high priority needs areas for new projects. 3-4

In addition to the Caltrans District 5 Active Transportation Plan we recommend including in the transportation chapter's regulatory setting discussion the following documents: US 101 Santa Maria to San Luis Obispo Multimodal Corridor Plan (2021) and the 2021 Director's Policy on Complete Streets (DP-37).

Caltrans requests to be included in any future public noticing regarding this project to allow us to prepare for and participate in the public process.

We look forward to coordinating with the City on future projects. If you have any questions, or need further clarification on items discussed above, please contact me at (805) 835-6432 or Jenna.Schudson@dot.ca.gov. 3-5

Sincerely,

JENNA SCHUDSON
Development Review Coordinator
Caltrans District 5, LDR South Branch

Letter 3

COMMENTER: Jenna Schudson, California Department of Transportation (Caltrans)

DATE: March 18, 2022

Response 3-1

The commenter states that Caltrans supports projects that improve pedestrian, bicycle, and transit infrastructure and that continued coordination with the City is imperative to achieving overall network connectivity.

Caltrans' support of projects that improve pedestrian, bicycle, and transit infrastructure is noted for the record. The City will continue coordination with Caltrans as appropriate for projects affecting the transportation network in and through the City.

Response 3-2

The commenter notes the relationship between transportation planning, including using vehicle miles traveled (VMT) as a metric for evaluating impacts, and greenhouse gas emissions reductions. The commenter notes the EIR finding that future development in the city would result in increased long-term VMT and future individual development projects in the city would require focused, project-level environmental review and, as applicable, project-specific mitigation to reduce VMT. The commenter states that they look forward to reviewing project-level documents and providing comment on relevant mitigation options.

Caltrans' request to review future project-level environmental documents within the City is noted. The City will continue coordination with Caltrans as appropriate for projects affecting the transportation network in and through the City.

Response 3-3

The commenter encourages the use of Transportation Demand Management (TDM) strategies that increase the efficiency of the transportation system. The commenter notes potential impacts from the GP/LCP Update to pedestrian and bicycle travel and recognizes goals and policies in the GP/LCP Update to improve safety, access, and performance of the City's multimodal system.

This comment is noted for the record. Refer to the Goals and supporting Guiding and Implementing Policies in the Circulation Element of the GP/LCP Update, which reflect the City's vision for a comprehensive circulation system that is safe and efficient for pedestrians, bicycles, trucks, automobiles, and public transportation. The comment does not address the adequacy of the EIR and no further response is required.

Response 3-4

The commenter notes that Caltrans District 5 recently completed its Active Transportation Plan. The commenter recommends reference to this plan as well as the *US 101 Santa Maria to San Luis Obispo Multimodal Corridor Plan* (2021) and 2021 *Director's Policy on Complete Streets* (DP-37) in the EIR. Section 4.14.2, *Regulatory Setting*, in Section 4.14, *Transportation*, has been revised in response to this comment as follows:

Caltrans Authority over the State Highway System

Caltrans is responsible for the planning, design, construction and maintenance of all interstate freeways and state routes. It builds, maintains, and operates the State Highway System in California with a goal to facilitate the safe and efficient use of the state transportation system for all users. Caltrans sets standards in its 2020 Transportation Impact Study Guide that focus on the VMT metric. This document is often used by local governments to uniformly review transportation analysis and assess the operational standards of Caltrans-maintained facilities. The document is intended to be a reference and informational document that aligns with the standards and thresholds established in the State's Office of Planning and Research's (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA.* The 2020 document acts as a replacement for the 2002 *Guide for the Preparation of Traffic Impact Studies* but is only intended to be used with local land use projects and plans, not to be used for transportation projects on the State Highway System.

Caltrans has completed an *Active Transportation Plan* (2021), which identifies bicycle and pedestrian needs on, across, and parallel to the State Highway System throughout California's Central Coast. The Active Transportation Plan also includes a prioritized list of Location Based Needs to identify high priority needs areas for new projects. In addition, Caltrans recently completed the *US 101 Santa Maria to San Luis Obispo Multimodal Corridor Plan*, which is a comprehensive multimodal corridor plan and concept of operations addressing regional and interregional safety, congestion, accessibility, goods movement, economic development, land use efficiency, public health, air quality, and greenhouse gas emissions for U.S. 101 from State Route (SR) 135 in Santa Maria to SR 58 near Santa Margarita, an overall corridor of about 37 miles which runs through the City of Pismo Beach. The US 101 Santa Maria to San Luis Obispo Multimodal Corridor Plan provides a range of proposed concepts, evaluates and prioritizes improvements within the study limits, and sets a framework for implementing short- and long-term capital improvements supporting the Road Repair and Accountability Act of 2017 (SB 1) goals and priorities. Finally, in December 2021, Caltrans published the *Director's Policy on Complete Streets*. The Director's Policy establishes Caltrans' organizational priority to encourage and maximize walking, biking, transit, and passenger rail as a strategy to meet state climate, health, equity, and environmental goals and to foster socially and economically vibrant, thriving, and resilient communities. The Director's Policy focuses on maximizing the use of design flexibility to provide context-sensitive solutions and networks for travelers of all ages and abilities.

Response 3-5

The commenter requests to be included in any future public noticing regarding the project to allow for their preparation and participation in the public process.

This request is noted. The City will continue to provide notice to and consult with Caltrans on the project, as appropriate.

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8.2 List of Preparers

This EIR was prepared by the City of Pismo Beach, with the assistance of Rincon Consultants, Inc. Consultant staff involved in the preparation of the EIR are listed below.

RINCON CONSULTANTS, INC.

Richard Daulton, Principal
Nicole West, Project Manager
Chris Bersbach, Supervising Environmental Planner
Aaron Riojas, Environmental Planner
Elizabeth Wilson, Environmental Planner
Jorge Mendieta, Archeologist
Kari Zajac, Senior Planner
Katherine Green, Environmental Planner
Leslie Trejo, Environmental Planner
Mattie Magers, Environmental Planner
Taylor Freeman, Environmental Planner
Annette Tran, GIS Specialist
Allysen Valencia, GIS Specialist
Tracy Popiel, GIS Specialist

Appendix A

Notice of Preparation and Comment Letters

City of Pismo Beach
Community Development Department
760 Mattie Road
Pismo Beach, California 93449
T: (805) 773-4657

www.pismobeach.org

Notice of Preparation

TO: Responsible Agencies & Interested Parties

SUBJECT: **NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT**

NOTICE IS HEREBY GIVEN that the City of Pismo Beach will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for the project identified below. We need to know you views as to the scope and content of the environmental information that is germane to your agency's statutory responsibilities in connection with the proposed project. The City is issuing this Notice of Preparation to notify public agencies and the public to request input regarding the scope and content of the Draft EIR for this project.

The public review and comment period for this Notice of Preparation begins Friday, January 15, 2021 and ends Monday, February 15, 2021 at 5:00 p.m. A detailed project description with a project location map is available online at http://www.pismobeach.org/905/DOCUMENTS. No Initial Study is attached because the lead agency has already determined that an EIR is clearly required for the project and is therefore not required to prepare an Initial Study per CEQA Guidelines Section 15063(a).

Written comments may be submitted to City of Pismo Beach, Attn: Jeff Winklepleck, 760 Mattie Road, Pismo Beach, California 93449. In addition, because the project is of regional and areawide significance, a scoping meeting will be held by the City of Pismo Beach on Thursday, January 28, 2021 at 5:30 p.m. via video conference. This videoconference will be held in accordance with the provisions of Executive Order N-29-20, which authorizes local legislative bodies to hold public meetings via teleconferencing and to make public meetings accessible telephonically or otherwise electronically to all members of the public seeking to observe and to address the local legislative body during the period in which state or local public health officials have imposed or recommended social distancing measures. Executive Order N-29-20 (extended by Executive Order N-80-20) also waives all requirements in the Brown Act requiring the physical presence of personnel of the legislative body or of the public as a condition of participation in or quorum for a public meeting during the period in which state or local public health officials have imposed or recommended social distancing measures. To access the video conference, visit https://dudek.zoom.us/j/96637299844?pwd=bVQyR0g5bWduRHIHOWdyRGVEbENFQT09 or use the call-in number 669-900-6833 and enter the meeting ID 966-3729-9844# on Thursday, January 28, 2021 at 5:30 p.m.

Project Title: Pismo Beach General Plan/Local Coastal Plan (GP/LCP) Update

State Clearinghouse #: *Pending*

Project Location:

The project focuses on the land area of the City of Pismo Beach, which is located on the Central Coast of California, midway between San Francisco and Los Angeles. Pismo Beach lies within the San Luis Bay Planning Area of the San Luis Obispo County General Plan. Pismo Beach has a total area of 13.5 square miles, the majority of which is located in the Coastal Zone. 9.9 square miles of the City is water and the remaining 3.6 square miles is land area. Pismo Beach is one of seven incorporated cities within San Luis Obispo County. Pismo Beach is bordered by the beach and ocean on the southwest and hills to the northeast. The Cities of Grover Beach and Arroyo Grande are south and east of Pismo Beach and the unincorporated community of Avila Beach is just north of Pismo Beach.

Project Sponsor: City of Pismo Beach, Planning Division
760 Mattie Road, Pismo Beach, CA 93449

Brief Project Description:

The project is an update to the City of Pismo Beach GP/LCP, which includes updates to the Land Use, Safety, Conservation and Open Space, Noise, Facilities, and Parks, Recreation, and Access Elements of the City's GP/LCP. The GP/LCP Update does not include updates to the Circulation, Design, Growth Management, Housing Elements. The GP/LCP Update is an update of the City's 1992 GP/LCP and presents the community's vision for Pismo Beach through the GP/LCP horizon (year 2040). The GP/LCP Update was developed through an extensive public outreach and involvement process, including careful analysis by advisory committees, City staff, elected officials, and the community. Each element of the plan addresses different aspects of the community and identifies measurable actions to guide residents, decision-makers, businesses, and City staff toward achieving the community vision. Goals established in the GP/LCP Update are intended to maintain the City's small beach town character, manage growth effectively, provide a safe community, and enhance the City's tourist-based economy. The GP/LCP Update establishes overarching City policies and priorities that describe how the community intends to use and manage its physical, social, and economic resources. The GP/LCP Land Use Element guides the future development of Pismo Beach by establishing the allowable distribution, location, and extent of development across the city for residential, commercial, open space, public and semi-public facilities, and other uses. The LCP consists of two parts as required by the Coastal Act: a Land Use Plan, which was last updated in 1993, and the Implementation Plan, which was last updated in 1983, with several amendments to both documents occurring since. The Implementation Plan provides the zoning regulations that implement the LUP goals, policies and actions and serves as the City's Coastal Zoning Ordinance. Potential environmental effects include, but are not necessarily limited to, impacts related to air quality, biological resources, cultural and tribal cultural resources, energy, greenhouse gas emissions, hazards and hazardous materials, hydrology/water quality, land use, noise, and transportation.

Consulting firm retained to prepare draft EIR:
Firm Name: Rincon Consultants, Inc.
Address: 1530 Monterey Street, Suite D, San Luis Obispo, California 93401
Contact: Christopher Bersbach, Senior Environmental Planner

Date: January 15, 2021 **Signature:**



Jeff Winklepleck

Title: Senior Management Analyst, City of Pismo Beach
Phone: (805) 773-4658

SLO COUNTY apcd | Air Pollution Control District
San Luis Obispo County

Via Email

February 11, 2021

Jeff Winklepleck
City of Pismo Beach
Community Development Department
760 Mattie Road
Pismo Beach, California 93449

SUBJECT: Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the Pismo Beach General Plan/Local Coastal Plan (GP/LCP) update

To Jeff Winklepleck:

Thank you for including the San Luis Obispo County Air Pollution Control District (APCD) in the environmental review process. We have completed our review of the Pismo Beach GP/LCP update NOP/DEIR referral.

The City of Pismo Beach GP/LCP will include updates to the Land Use, Safety, Conservation and Open Space, Noise, Facilities, and Parks, Recreation, and Access Elements of the City's GP/LCP. The GP/LCP Update does not include updates to the Circulation, Design, Growth Management, Housing Elements. The GP/LCP Update is an update of the City's 1992 GP/LCP and presents the community's vision for Pismo Beach through the GP/LCP horizon (year 2040). Each element of the updated plan will address different aspects of the community and identifies measurable actions to guide residents, decision-makers, businesses, and City staff toward achieving the community vision. Goals established in the GP/LCP Update are intended to maintain the City's small beach town character, manage growth effectively, provide a safe community, and enhance the City's tourist-based economy. The GP/LCP Update establishes overarching City policies and priorities that describe how the community intends to use and manage its physical, social, and economic resources. The GP/LCP Land Use Element guides the future development of Pismo Beach by establishing the allowable distribution, location, and extent of development across the city for residential, commercial, open space, public and semi-public facilities, and other uses.

The following APCD comments are pertinent to this plan update.

The DEIR should include a description of existing air quality and emissions in the impact area, including the attainment status of the APCD relative to State and Federal air quality standards and any existing regulatory restrictions to development.

The most appropriate standard for assessing the significance of potential air quality impacts for General Plan and Local Coastal Plan update EIRs is the preparation of a

consistency analysis. This analysis should evaluate the proposed update against the land use and transportation goals, policies, and population projections contained in the APCD Clean Air Plan, the San Luis Obispo Council of Government's Regional Transportation Plan, and local Climate Action Plans. The rationale for requiring the preparation of a consistency analysis is to ensure that the attainment projections developed by the APCD and state requirements are met and maintained. Failure to comply with these plans could result in long term air quality impacts.

The APCD's CEQA Air Quality Handbook and recently refreshed Land Use & CEQA webpage provides guidance for preparing the consistency analysis. In addition, the APCD also recently issued CEQA greenhouse gas guidance which, although has a project level focus, also cites legal cases, some of which may have general plan relevance. Another reference that should be insightful to updating several GP/LUC elements in ways that minimize air quality impacts is APCD's July 6, 2020 comments for the San Luis Obispo Countywide Regional Housing Compact (attached).

The DEIR should include a range of alternatives that could effectively minimize air quality impacts. A consistency analysis should be performed for each of the proposed alternatives identified, as described above. A qualitative analysis of the air quality impacts should be generated for each of the proposed alternatives. Examples include but are not limited to:

- Flexible zoning to promote mixed use and design standards that protect mixed use.
- Increase the amount of neighborhood scale mixed use.
- Additional density beyond proposed zoning allowances.
- Design standards that require narrow streets and minimum front setbacks on structures.

Limiting the size of each arterial through the development. This reduces the need for noise barriers such as cinder block walls along roadways, decreases roadway widths, and slows the speed of traffic, creating an atmosphere that encourages active transportation.

Finally, development adjacent to high-volume roadways and railroads where mobile sources produce diesel particulate matter can present health risks to sensitive receptors. Diesel particulate matter has been classified by the California Air Resource Board's (CARB) as a toxic air contaminant and a carcinogen. Because of this, the APCD does not support sensitive receptor development near Highway 101 and railroads. Non-sensitive uses and developments such as commercial, parking lots and offices in which occupants are exposed to the health risk for a shorter duration—are better suited to be nearest to Highway 101 and railroads. Health risk decreases with decreased rate of exposure to the toxic source.

Should development occur near Highway 101 and railroads, the APCD recommends the following:

- Orient the sensitive receptor as far back as possible from the toxic source, which will directly reduce cancer risk;
- Incorporate strategies stated in Table 1 from the California Air Resource Board's technical advisory document Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways;
- Note: Implementing strategies such as air filtration systems, sound walls, and vegetation barriers have not been proven to be as effective as moving a sensitive receptor farther from the toxic source; and
- Disclose potential health risks to future sensitive receptors for informational purposes.

Further, residential units sited near pollution sources are generally lower in market value, indicating it is possible residential homes would become affordable to lower-income populations. Low-income community members often face existing health disparities, so siting housing near air pollution sources which has a possibility to become affordable may need further consideration (See Page 57 of the CARB's 2017 Scoping Plan update).

Thank you for the opportunity to comment on this plan update. The APCD looks forward to reviewing the Draft EIR for the GP/LUC update when it is complete and please contact me at 805-781-5912 if there are APCD questions during the DEIR development.

Sincerely,

for

GARY ARCEMONT
Air Quality Specialist

GJA/lmg

Cc: Christopher Bersbach, Agent

COPY
Attachment

SLO COUNTY apcd | Air Pollution Control District
San Luis Obispo County

Via Email

July 6, 2020

Carolyn K. Berg
San Luis Obispo County
1055 Monterey Street
San Luis Obispo, CA 93408
cberg@co.slo.ca.us

SUBJECT: APCD Comments Regarding the San Luis Obispo Countywide Regional Housing Compact

Dear Ms. Berg:

The San Luis Obispo County Air Pollution Control District (APCD) reviewed the Draft San Luis Obispo Countywide Regional Housing Compact (Regional Compact). The APCD would like to commend the County of San Luis Obispo for leading the region to a unified vision for this compact. The Regional Compact develops an initial list of regional policies for jurisdictions to consider in their efforts to achieve their Regional Housing Needs Allocation requirements and support this effort. The APCD supports the stated regional goals in the Regional Compact to guide collaborative resolution of underlying housing and infrastructure needs.

The APCD specifically supports *Goal 3: Create Balanced Communities, Goal 4: Value Agriculture & Natural Resources and Goal 5: Support Equitable Opportunities*. These goals not only support the regional housing and infrastructure vision; but can also improve the region's air quality. Balancing jobs/housing can reduce emissions and vehicle miles traveled (VMT) by minimizing the number of trips and commute distances. Preserving agriculture and natural resources avoids the loss of sequestration potential; a long-term path for reducing greenhouse gases (GHGs) in the natural environment. It also avoids air quality impacts when agricultural land outside of Urban Reserve Lines (URLs) are converted to more intense land uses.

Goal 3 and 4 can also ensure the development of walkable and bikeable communities within the URLs. When people can walk and cycle to nearby workplaces, traffic is reduced, and physical activity is promoted which can help to create healthier communities. The APCD supports these goals, as they are consistent with the SLO APCD's Clean Air Plan and SLOCOG's Regional Transportation Plan and Sustainable Communities Strategy. Additionally, Goal 5 supports the development of housing within our jurisdictions that is available to people at all income levels. By improving housing affordability within the URLs

there is an opportunity to improve jobs/housing balance which reduces VMT and related air pollution.

The housing elements currently available for review show updates with the Regional Compact goals and policies in mind. The table below displays some examples:

City of Atascadero's proposed Program 1.C Mixed-Use Development	Continue to allow mixed residential and commercial development and promote second- and third-story residential development in the Downtown zoning districts. To increase project certainty and streamline development, the City will consider identifying appropriate, mid-block locations, outside of the downtown, for future mixed-use/residential development (in commercial zoning districts) while considering appropriate jobs/housing balance and fiscal impacts. Considering market conditions and development costs, the City will provide, when possible, developer incentives such as expedited permit processing and flexible development standards for units that are affordable to lower-income households.
City of San Luis Obispo's proposed Program (5.6) Housing Variety	This program proposes that the City evaluate ways in which to increase the number of housing units available to the missing middle by specifically exploring ways to promote housing types such as duplexes, triplexes, quadplexes, cottages, etc.
San Luis Obispo County's proposed Program B: AB 686 Affirmatively Further Fair Housing	Take actions and/or update the Fair Housing Plan to affirmatively further fair housing and ensure compliance with AB 686 to ensure that meaningful actions will be taken to combat discrimination, overcome patterns of segregation, and foster inclusive communities free from barriers that restrict access to opportunity based on protected characteristics.
City of Morro Bay's Program H-1.4	In order to create a vibrant, pedestrian- and bicycle-friendly small urban atmosphere in the downtown area and ensure optimal access to services and public transportation, the City will encourage the development of new high-density housing in and adjacent to the downtown commercial district. To facilitate this goal, the City will inventory vacant and underutilized lots in and adjacent to the downtown business district, identify sites or areas where re-zoning to high-density residential or mixed-use categories might be desirable and modify the City's zoning map as appropriate.

The APCD would like to commend the many goals, policies and programs in the Regional Compact and housing elements that minimize air quality impacts from development. However, the siting of housing units should be done in accordance with the California Air Resource Board's technical advisory document Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways to reduce diesel particulate matter impacts. Diesel particulate matter has been classified by the state as a toxic air contaminant and a carcinogen. Locating housing near some sections of rail lines may

also pose toxic risk impacts due to locomotive traffic or idling. Finally, siting lower-income housing near diesel impact sources may need further consideration because these community members often face existing health disparities (See Page 57 of the CARB's 2017 Scoping Plan update).

Local governments should also consider localized air pollution resulting from the concentration of various stationary sources, such as freight-handling facilities, manufacturing facilities or other industrial air pollution sources. When siting new housing near potential sources of pollution, layout and design considerations to reduce exposure to sensitive land uses should be incorporated. For example, policies can identify minimum setbacks and orientation strategies to be sited as far as possible from the toxic source to avoid health risks. Further, ensuring housing is located near or developed with transit services and active transportation infrastructure, offers the opportunity to minimize trip and commute distances and provide alternative transportation options to employment, schools, and services which can help reduce emissions and improve our region's air quality.

The APCD hopes the other proposed housing elements will also pursue goals and policies from the Regional Compact. Again, thank you for the opportunity to comment on this proposal. If you have any questions or comments, feel free to contact me at (805) 781-5912.

Sincerely,

JACKIE MANSOOR
Air Quality Specialist

JNM/jjh

cc: Rachel Cohen, City of San Luis Obispo
John Holder, City of Atascadero
Janet Reese, City of Grover Beach
Corey Hanh, County of San Luis Obispo
Darcy Delgado, City of Paso Robles
Andrew Perez, City of Arroyo Grande
Matt Downing, City of Pismo Beach
Nancy Hubbard, City of Morro Bay

NATIVE AMERICAN HERITAGE COMMISSION

Governor's Office of Planning & Research

Jan 22 2021

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Christina Snider
Pomo

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

January 19, 2021

Jeff Winklepleck, Senior Management Analyst
City of Pismo Beach
760 Mattie Road
Pismo Beach, CA 93449

Re: 2021010158, Pismo Beach General Plan/Local Coastal Plan (GP/LCP) Update Project, San Luis Obispo County

Dear Mr. Winklepleck:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements**. If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

a. The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or

b. A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

a. Avoidance and preservation of the resources in place, including, but not limited to:

i. Planning and construction to avoid the resources and protect the cultural and natural context.

ii. Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.

b. Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

i. Protecting the cultural character and integrity of the resource.

ii. Protecting the traditional use of the resource.

iii. Protecting the confidentiality of the resource.

c. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

d. Protecting the resource. (Pub. Resource Code §21084.3 (b)).

e. Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).

f. Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

a. The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.

b. The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.

c. The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.

b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:

a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.

b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.

a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.

b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.

c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Nancy.Gonzalez-Lopez@nahc.ca.gov.

Sincerely,



Nancy Gonzalez-Lopez
Cultural Resources Analyst

cc: State Clearinghouse

DEPARTMENT OF TRANSPORTATION
CALTRANS DISTRICT 5
50 HIGUERA STREET
SAN LUIS OBISPO, CA 93401-5415
PHONE (805) 549-3101
FAX (805) 549-3329
TTY 711
www.dot.ca.gov/dist05/

Making Conservation a California Way of Life.

February 16, 2021

SLO Various
SCH# 2021010158

Jeff Winklepleck,
Senior Management Analyst
City of Pismo Beach
760 Mattie Road
Pismo Beach, CA 93449

COMMENTS FOR THE NOTICE OF PREPARATION (NOP) FOR THE PISMO BEACH GENERAL PLAN & LOCAL COASTAL PLAN UPDATE

Dear Mr. Winklepleck:

The California Department of Transportation (Caltrans) appreciates the opportunity to review the NOP for the Pismo Beach General Plan & Local Coastal Plan Update. Caltrans offers the following comments in response to the NOP:

1. Caltrans supports local development that is consistent with State planning priorities intended to promote equity, strengthen the economy, protect the environment, and promote public health and safety. We accomplish this by working with local jurisdictions to achieve a shared vision of how the transportation system should and can accommodate interregional and local travel and development. Projects that support smart growth principles which include improvements to pedestrian, bicycle, and transit infrastructure (or other key Transportation Demand Strategies) are supported by Caltrans and are consistent with our mission, vision, and goals.
2. As a result of Senate Bill (SB) 743, effective July 2020 Caltrans replaced vehicle level of service (LOS) with vehicle miles traveled (VMT) as the primary metric for identifying transportation impacts from local development. The focus now will be on how projects are expected to influence the overall amount of automobile use instead of traffic congestion as a significant

impact. For more information, please visit: http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf.

3. Employing VMT as the metric of transportation impact Statewide will help to promote Green House Gas (GHG) emission reductions consistent with SB 375 and can be achieved through influencing on-the-ground development. Implementation of this change will rely, in part, on local land use decisions to reduce GHG emissions associated with the transportation sector, both at the project level, and in long-term plans (including general plans, climate action plans, specific plans, and transportation plans) and supporting Sustainable Community Strategies (SCS) developed under SB 375.

4. Caltrans encourages a Transportation Demand Strategies (TDM) plan that increases the efficiency of the transportation system by providing options for users other than driving alone, or by shifting travel away from peak periods to help lower VMT. Examples include: locating higher density projects near transit; incorporating Complete Streets; mix use development, and traffic calming measures to enhance walkability.

5. Climate change's impact on the State Highway System (SHS) and local roadways should be addressed given the forecasted regional increase in wildfires, precipitation, and sea level rise. The SHS is the backbone of most county-level evacuation plans and often provides the only high-capacity evacuation routes from rural communities. Further, the SHS serves as the main access routes for emergency responders, and may serve as a physical line of defense such as a firebreak or an embankment against floodwaters, etc.

Caltrans requests to be included in any future public noticing regarding this project to allow us to prepare for and participate in the public process.

We look forward to continued coordination with the City on this effort. If you have any questions, or need further clarification on items discussed above, please contact me at (805) 835-6432 or Jenna.Schudson@dot.ca.gov.

Sincerely,

Jenna Schudson
Development Review Coordinator
Caltrans District 5, LD-IGR South Branch

Appendix B

Buildout Methodology

Pismo General Plan/Local Coastal Plan: Methodology for Determining Projected Development at Full Build Out

Used to create the LU-4 Table in the Land Use Element

1. Urban Footprint Base Canvas Assumptions

Urban Footprint's Base Canvas constitutes a baseline assessment of existing land use, demographic characteristics, and other conditions in the City, providing the context for scenario planning and the foundation for analysis of alternative scenarios. The default source for parcel information in Urban Footprint is CoreLogic, which is a leading provider of real estate data in the United States.

2. Determination of Land Uses for Inclusion

This buildout compares existing on-the-ground Base Canvas development to the buildout potential of four General Plan land use categories in the City where change is anticipated, including Commercial, Central Commercial, High Density Residential, Mixed Use, and Public/Semi-Public land uses. Only vacant and underutilized parcels within these designations were selected for potential growth.

3. Creation of Future Assumptions

When generating assumptions for the four land uses, Dudek first looked at the stated requirements or maximums for residential dwelling units per acre (du/ac), floor area ratio (FAR), height, and parking where possible. For each land use, employment and density limits were determined by matching them closely to the average employment and du/ac of current developed parcels within each land use category. An example formula to calculate commercial employment density can be seen below.

$$Current\ Commercial\ Employment\ Density = \left(\frac{Total\ Commercial\ Zoned\ Jobs - Underutilized\ Commercial\ Zoned\ Jobs}{Total\ Commercial\ Zoned\ Acres - Underutilized\ Commercial\ Zoned\ Acres}\right)$$

Future assumptions for each land use were built in Urban Footprint using combinations of building components which created numbers closest to the determined employment and residential densities, and that worked to be within FAR, height, and parking requirements. Previous limitations within Urban Footprint required us to match Pismo's land use designations to prescribed building typologies in Urban Footprint, and adjusting them to match as closely as possible with Pismo's land use requirements and growth expectations.

Current standards per the Land Use Element Update and Future Assumptions used in the build out model can be seen for each of the included land uses below.

Current Land Use Density/Intensity Standards

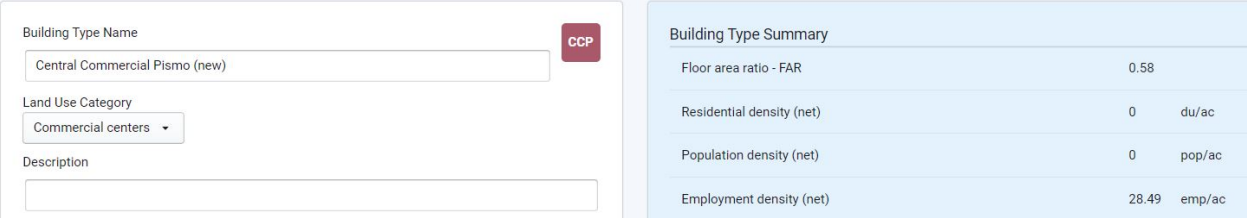
Land Use Designations	FAR or Density *Coastal Zone/Non-Coastal Zone*	Height** *Coastal Zone*	Implementing Zone(s)	Total Acreage
Low-Density Residential	1 to 8 units per ac.	25 feet	R-1, R-R	76.5
Medium-Density Residential	9 to 15 units per ac.	25 - 35 feet	R-2, R-R	247.5
High-Density Residential	16 to 30 units per ac.	25 feet	R-3, R-R	22.2
Very High-Density Residential Overlay	20 to 50 units per ac.	35 – 45 feet***	R-3	1.1
Mobile Home Park	Maximum 8 units to the acre		M-H	58.5
Commercial	Maximum FAR of 2.0	25 - 42 feet	R-4, R-R, C-R, C-1, C-2, C-M	32.5
Resort Commercial	Maximum FAR of 1.25	35 feet	RR, R-4, and CR	73.9
Central Commercial	Maximum FAR of 1.25	35 feet	R-4, R-R, MU	66.4
Mixed-Use	Residential 1.25 maximum Commercial uses: 2.0 maximum	Determined by overlay zone	C-1, C-2, MU	57.2
Industrial	Maximum FAR of 0.5	25 feet	C-M	30.2
Public/Semi Public	Maximum FAR of 2.0	25 feet	G	468.38
Open Space	N/A	15 feet*	OS-1, OS-R	32.21

* Consistency with the View Consideration Overlay Zone must be determined for applicable properties

** Coastal height limits are provided to ensure that the scenic and visual qualities of coastal areas are considered and protected consistent with Coastal Act Section 30251.

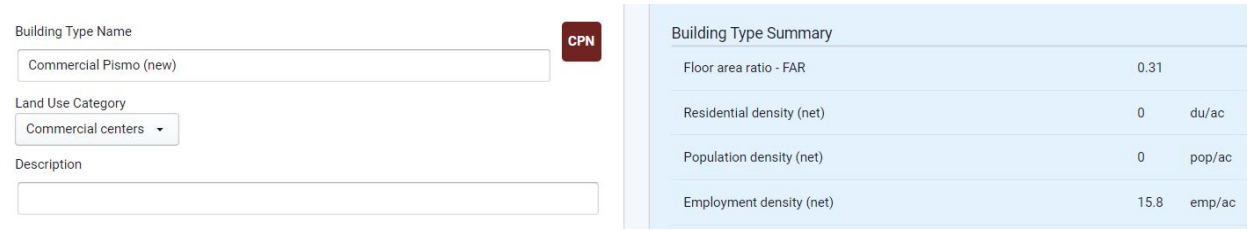
*** Buildings may be up to forty-five (45) feet in height where the Planning Commission finds that significant public views to and along the coast and other scenic areas are protected.

Central Commercial Assumptions



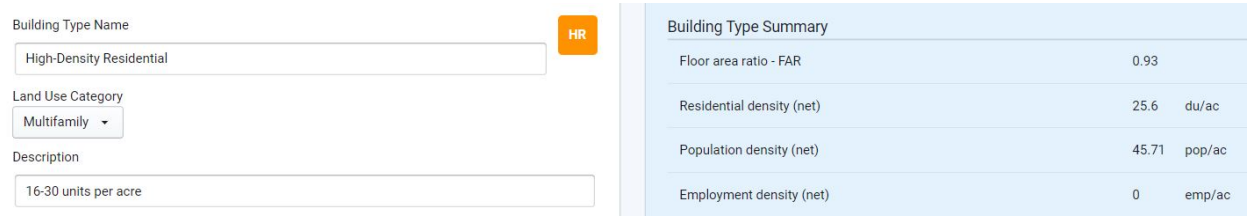
The Central Commercial land use had a maximum FAR of 1.25, and a maximum height of 35 feet. In looking at the currently built out Central Commercial sites, an FAR of 0.58 was determined to be more in line with what Pismo is likely to see built out, with an employment density of 28.49 employees per acre.

Commercial Assumptions



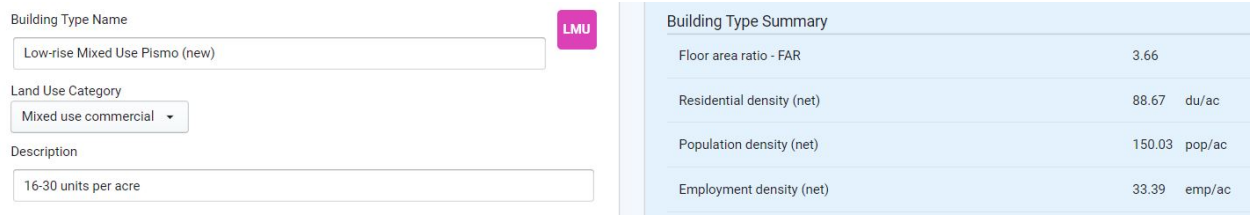
The Commercial land use had a maximum FAR of 2.0, with maximum heights between 25 and 42. Due to the parking required and often offered at commercial sites and in looking at previously built out Commercial sites, an FAR of 0.31 was determined to be more in line with what Pismo is likely to see built out, with an employment density of 15.8 employees per acre.

High-Density Residential Assumptions



The High-Density Residential land use had an allowable range of 16-30 du/ac and a maximum height of 25 feet. Within the model, 25.6 du/ac were allotted for this land use.

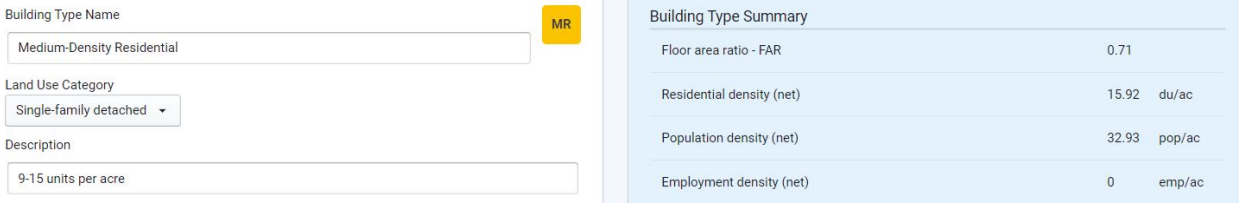
Mixed-Use Assumptions



The Mixed-Use land use had a maximum FAR of 1.25 for residential and 2.0 for commercial. Height maximums varied based on the overlay zoning. The model's FAR for mixed use is shown to be 3.66, far higher than what is allowed by these regulations. Heights were pre-set within the model and its

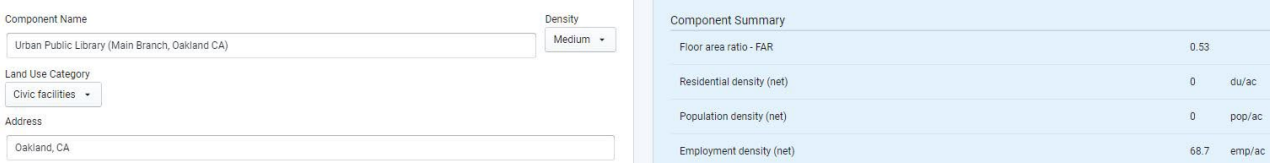
components, so to balance this in the model and create a zoning which is within the FAR requirements, vacant space was added to this mixed use zone. This is the equivalent of reducing the building height, and in turn the FAR, because by removing buildable space building volume is reduced to meet standards.

Medium-Density Residential Assumptions



The Medium-Density Residential land use had an allowed range of 9-15 dwelling units per acre, and a maximum height of 25-35 feet. The closest building type in the model to these requirements slightly overshoots these requirements, coming in at 15.92 dwelling units per acre and leading to 32.93 people per acre. Sites that this assumption applied to were only those that are currently vacant (32 sites), as those were decided to be the only parcels in this land use designation that would experience growth. The slightly increased density is offset by the reduced density in the High-Density Residential designation.

Public/Semi-Public Assumptions



The Public/Semi-Public land use has a maximum FAR or 2.0, and a maximum height of 25 feet. The closest building type in the model to these requirements is a modified public library, coming in at a 0.53 FAR and 68.7 employees per acre. Only one site was identified for build out.

4. Application of Future Assumptions

Future assumptions were applied to all underutilized and vacant parcels. For the Medium-Density Residential land use, as described above, only vacant parcels had future assumptions applied to them. The result of this was a "built out" Pismo Beach. Numbers generated and recorded include increases in population, DU, jobs, and non-residential square footage from 2020 to 2040. These increases can be seen on the table below.

Land Use	Number of Vacant or Underutilized Parcels	Potential Increase in Population	Potential Increase in Dwelling Units	Potential Increase in Jobs
Commercial	42	N/A	N/A	242
Central Commercial	26	N/A	N/A	33

Land Use	Number of Vacant or Underutilized Parcels	Potential Increase in Population	Potential Increase in Dwelling Units	Potential Increase in Jobs
High Density Residential	139	289	162	-12
Mixed Use	48	1,221	722	272
Medium Density Residential	32	471	228	0
Public/Semi-Public	1	-2	-1	10
Total	**288**	**1,979**	**1,111**	**545**

5. Comparison to SLOCOG Predictions

To compare to SLOCOG employment and dwelling unit predictions, growth per year ratios were utilized. SLOCOG's predictions are from 2015 to 2030, or a 15 year range. Dudek's predictions are from 2020 to 2040, a 20 year range. Build outs and assumptions were altered to create predictions closer to SLOCOG's predicted growth, while staying within the land use requirements.

The discrepancies between growth predictions can be seen on the table below.

Growth Comparisons		
	Increase in DU	Increase in Jobs
Dudek Growth Per Year	55.5	25.8
SLOCOG Growth Per Year	47.7	27.4

Dudek's current methodology assumes a 100% build out for the identified underutilized and vacant parcels.

Appendix C

Conservation and Open Space Fact Sheet

Conservation and Open Space

The Conservation and Open Space Element of the General Plan guides the conservation of resources important to the environment and sustained economic prosperity of Pismo Beach. How the City of Pismo Beach (City) manages its natural resources directly relates to its citizens' overall quality of life. The Conservation and Open Space Element will address the development, utilization, preservation and management of natural resources, including coastal resources, groundwater recharge areas, environmentally sensitive habitat areas, wetlands, areas with major mineral deposits, scenic resources, and historical and archaeological sites. It will also address the quality of the air and water as essential resources for the health and sustainability of the environment and those residing and visiting Pismo Beach.

Conservation Areas

The following section describes important conservation areas in Pismo Beach. Each area is related to the ocean, Pismo's foothills, or riparian corridors. These areas vary in plant and animal communities, location, ownership, and use. **Figure CO-1**, Conservation Areas, displays the location of each conservation area and Table CO-1 outlines the vegetation and wildlife for each conservation area.

Ocean

The Pacific Ocean is the most significant natural resource for Pismo Beach. It is also the most vulnerable and complex of natural resources due to the varied and intense uses to which it is subjected. The city's shoreline can be divided into four areas: the Northern Rocky Beaches, Southern Beach Community, Intertidal Zone, and Subtidal Zone.

Northern Rocky Beaches

North of Pismo State Beach is an area defined by rocky beaches and points, and sea cliffs. This area includes the Dinosaur Caves, Shell Beach, and Sunset Palisades locations. Many birds nest, feed, roost, and float in these areas, such as Black Oystercatcher, Brandt's Cormorant, Brown Pelican, Double-crested Cormorant, Pelagic Cormorant, Peregrine Falcon, Pigeon Guillemot and Western Gull. Shell Beach includes cliffs and a small sand and cobble beach. Seal haul-outs (i.e., seals that temporarily leave the water) may also occur for California Sea Lions and Harbor Seals. Marine life is abundant within the reefs and rocky area abutting the beach, and is covered in the intertidal and subtidal sections, below. North of Shell Beach are the South Palisades and Sunset Palisades areas, which continue the line of cliffs, rocky points, and reefs, with occasional sandy pocket beaches dotting the coastline.

Figure CO-1: Conservation Areas



Source: City of Pismo Beach 2014.

Table CO-1
Pismo Beach Wildlife Habitats

Conservation Area	Vegetation/Plant Communities	Wildlife
Northern Rocky Beach Areas	Black-flowered Figwort	Black Oystercatcher, Brandt's Cormorant, Brown Pelican, California Sea Lion, Double-crested Cormorant, Harbor Seal, Pelagic Cormorant, Peregrine Falcon, Pigeon Guillemot, Western Gull
Southern Beach Community	Coastal Dune Scrub, Primary Dunes, Beach Spectaclepod (ST), Blochman's Leafy Daisy, Surf Thistle (ST)	Ground Squirrel, mice, gophers, foxes, weasels, turkey vultures, owls, hawks, falcons, Sandy Beach Tiger Beatle, Western Gull, Western Snowy Plover (T)
Intertidal Zone	Reef	Black Abalone (E), Pismo Clam
Subtidal Zone	Kelp Forest, Reef	Blue Whale (E), Dali Porpoise, East Pacific Green Turtle (T), Fin Whale (E), Gray Whale, Guadalupe Fur Seal (E), Humpback Whale (E), Leatherback Sea Turtle (E), North Pacific Loggerhead Sea Turtle (E), North Pacific Pilot Whale, North Pacific Right Whale (E), Olive Ridley Sea Turtle (T), Pacific White Sided Dolphin, Sea Otter (E), Sei Whale (E), Southern Resident Killer Whale (E), and Sperm Whale (E)
Freeway Foothills	Black-flowered Figwort, Coastal Scrub, Grassland, Maritime Chaparral, Oak Woodlands, Sycamore and Willow Riparian Corridors	Ground squirrels, mice, gophers, foxes, weasels, opossum, deer, mountain lions, meadowlarks, finches, sparrows, turkey vultures, owls, hawks, falcons, South-Central California Coast Steelhead (T), California red-legged frog (E), Western Pond Turtle
Price Canyon	Sycamores, oaks, willows, nettles, poison hemlock, Mesa Horkelia	Ground squirrels, mice, gophers, foxes, weasels, opossum, deer, mountain lions, meadowlarks, finches, sparrows, turkey vultures, owls, hawks, falcons, South-Central California Coast Steelhead (T), California red-legged frog (E), Western Pond Turtle
Oak Park Heights	Black-flowered Figwort, Pockets of Grassland, Maritime Chaparral, Oak Woodland, Riparian Corridors	Ground squirrels, mice, gophers, foxes, weasels, opossum, deer, mountain lions, meadowlarks, finches, sparrows, turkey vultures, owls, hawks, falcons
Pismo Marsh	Alkali Heath Marsh, Arroyo Willow Thickets, Black-flowered Figwort, California Bulrush Marsh, Coast Live Oak Woodland, Creeping Rye Grass Turfs, Freshwater Marsh, Marsh Sandwort (E), Purple Needlegrass Grassland, Sedge Series	Allen's Hummingbird, Bewick's Wren, California Least Tern (E), Caspian Least Tern, Caspian Tern, Common Yellowthroat, Double-crested Cormorant, Nuttall's Woodpecker, Oak Titmouse, Wrentit, Western Pond Turtle
Pismo Creek	Riparian Corridors	Rainbow trout, speckled dace, prickly sculpin, threespined stickleback, brown bullhead, tidewater goby (E), starry flounder, jacksmelt, white surfperch, waterfowl, Green Sturgeon (T), South-Central California Coast Steelhead (T)
Monarch Butterfly Grove	Eucalyptus grove	Monarch butterflies

Sources: City of Pismo Beach 2014; Coastal San Luis Resource Conservation District 2010; LCSLO 2019; USFWS 2019.

Note: ST = State Threatened, T = Federally Threatened, E = Federally Endangered.

Southern Beach Community

The beach from the southern city limits to approximately three miles north is predominantly an area called Pismo State Beach which is under the ownership of the State of California, controlled by the state Department of Parks and Recreation and managed by Pismo Beach. This location is a wide, sandy beach which provides the opportunity for both passive and active recreational and educational activities.

At the southern end of the city are sand dunes that are considered part of the coastal strand community, which is composed mainly of beach and primary dunes, with some coastal dune scrub habitat mixed in. Since the plant life must adapt to constantly shifting sand conditions created by the winds, plants that are low growing and often succulent are typical of the plant community.

Northern Rocky Beaches

See Intertidal and Subtidal Zones.

Intertidal Zone

The intertidal zone is a unique area between the high tide and low tide lines. This stretch of shoreline spends multiple times each day covered and uncovered by water. Its form varies and can include hard, fine sand or a rocky tide-pool substrate. Within the boundaries of Pismo State Beach, the State Lands Commission has jurisdiction over all matters concerning the area's wildlife populations and owns the intertidal zone.

Populations of the Pismo clam live in the intertidal zone and a variety of bird species also feed in the intertidal zone. The federally endangered black abalone also has a chance of living in rocky intertidal reefs off of Pismo Beach. Recreational activities include bird watching, tide-pooling, walking, and jogging. At high tides, this zone is also popular for surf fishing. In the past this area was used intensively by clammers until the clams disappeared from the area; however, management of the area by the California State Department of Parks has allowed for clams to repopulate to a degree. Despite this, there is only a limited possibility that the clam beds will ever reach the population size they once had.

Subtidal Zone

The subtidal zone is an area between the mean-lower low tide line and the point where the ocean reaches a depth of 100 feet. Subtidal land is under the jurisdiction of the State Lands Commission. Along Pismo State Beach, this area is generally a sand or mud bottom and is relatively level. In the northern half of the city, the subtidal zone is rocky near the shore.

Portions of Pismo Beach's subtidal zone are home to kelp beds which are a supremely important habitat. The federally endangered black abalone can be found in rocky reefs in the subtidal zone. The threatened sea turtles found at times in the subtidal zone are East Pacific Green Turtles and Olive Ridley Sea Turtles. The Leatherback Sea Turtle and North Pacific Loggerhead Sea Turtle are found in the area and are endangered. The subtidal zone also includes the following endangered mammals: Blue Whale, Fin Whale, Guadalupe Fur Seal, Humpback Whale, Southern Resident Killer Whale, North Pacific Right Whale, Sea Otter, Sei Whale, and Sperm Whale (NOAA 2012). Other marine mammals found in this area are the Dali Porpoise, Gray Whale, North Pacific Pilot Whale and Pacific White Sided Dolphin.

Uses for this area currently include recreation in the form of fishing, boating, swimming, kayaking, and paddle boarding. As of right now there is no offshore drilling, which would require not only federal and state permits, but also county voter approval for onshore facilities supporting offshore drilling. This is due to Measure A, a measure adopted by San Luis Obispo County in 1986 (County of San Luis Obispo 1992).

Foothills

Foothills are a major aspect of the visual character and biological functions of Pismo Beach. They act as a backdrop for the city and a complement to the Pacific Ocean. Three major coastal foothill areas exist in Pismo Beach including the freeway foothills, Price Canyon, and the Pismo Heights area. Much of these areas include heavily grazed, open grassland, pockets of oak woodland, riparian corridors, and chaparral vegetation. Portions of steep topography in these foothills have constrained growth and shaped the soil, hazards, and species present in the area.

Freeway Foothills

Freeway foothills abut Highway 101 to the north, and are the predominant land form in northwestern Pismo Beach. The hills consist of grassland with pockets of oak woodlands and coastal scrub. Barrancas, or finger canyons, line the hills and add texture and valuable habitat to the area. This land is primarily privately owned.

Within the stretch of freeway foothills is Pismo Preserve. Pismo Preserve is 900 acres of open space located on the eastern portion of the Freeway Foothills. It's owned and managed by the Land Conservancy of San Luis Obispo County. The preserve includes multiple plant communities, including grassland, coastal scrub, maritime chaparral, oak woodlands, and sycamore and willow riparian corridors. As of September 2019, construction of a parking lot off of Mattie Road began to allow access to the preserve. Scenic views, hiking, mountain biking, and horseback riding along several miles of dirt roads and trails are anticipated. The preserve contains oak woodlands and coastal ridgelines that provide ecological value (LCSLO 2019).

These foothills offer habitat to federally threatened South-Central California Coast Steelhead, federally endangered California red-legged frog, and other species of concern such as the southwestern pond turtle.

Price Canyon

Price Canyon surrounds and drains into the northeastern portion of Pismo Creek. It is similar to the Pismo Preserve, and contains pockets of oak woodlands and sycamores, as well as willows and cottonwood and other riparian tree species among the surrounding grazing land. Much of this land is not directly within city limits, but its conservation is integral to the quality of Pismo Creek.

Oak Park Heights

The Oak Park area is located in the Southeastern portion of Pismo Beach. This area has been built out mainly for residential development, however it still includes pockets of grassland, native chaparral, oak woodlands, and riparian corridors. Some of this area drains into Pismo Marsh, giving it extra ecological importance. This area is different than the others listed here due to its developed nature. Because only pockets or corridors of biodiversity are left, it's more important to conserve them and keep connectivity between Pismo Marsh and other areas possible.

Riparian

Riparian habitat is the environment associated with lands adjacent to freshwater sources. These areas fulfill an important role in Central California, performing a variety of biological and recreational functions. Habitat can vary but is generally characterized by plant and animal communities requiring more moisture than that which is available from precipitation. Pismo Beach has three such areas of importance including the Pismo Marsh, Pismo Creek, and Pismo Beach Monarch Butterfly Grove. Each supports a different variety of species and are unique features in Pismo Beach.

Pismo Marsh

Pismo Marsh, also known as Pismo Lake Ecological Preserve, is located in the southeastern portion of the city. It is primarily a freshwater marsh, though an area of salt marsh vegetation also exists in the southwest portion of the preserve.

Pismo Creek originally fed this marsh, however Meadow Creek is now the sole freshwater water source for Pismo Marsh. The marsh is 54 acres and is under the ownership and management of the California Department of Fish and Wildlife.

The California Department of Fish and Game has estimated that as many as 59 species of birds, 24 species of mammals and four species of reptiles and amphibians may be found in the relatively undisturbed lake habitats. Therefore, it plays an important role as habitat for a wide variety of wildlife. It also provides a vital link in the Pacific Flyway used by numerous species of migratory birds. Some of the sensitive plants and plant communities found here as of 2010 include Alkali Heath Marsh, Arroyo Willow Thickets, Black-flowered Figwort, California Bulrush Marsh, Coast Live Oak Woodland, Creeping Rye Grass Turfs, Freshwater Marsh, Purple Needlegrass Grassland and Sedge Series. Allen's Hummingbird, Bewick's Wren, California Least Tern, Caspian Least Tern, Caspian Tern, Common Yellowthroat, Double-crested Cormorant, Nuttall's Woodpecker, Oak Titmouse, and Wrentit are all sensitive birds which have been found here. Western pond turtles were the only sensitive reptile or amphibian found in the marsh (Coastal San Luis Resource Conservation District 2010).

The preserve's management does not allow interpretive, educational or passive recreational access to the marsh at this time.

Pismo Creek

The previously mentioned Price Canyon foothills feed Pismo Creek, a 5.5 mile stream originating in the San Luis Valley. This creek flows westward, forming a major inland entrance to Pismo Beach. Pismo Creek is an intermittent creek, meaning the creek bed is generally dry in the summer and fall, but seasonally flows with up to 5 feet of freshwater. At low tide, a sand bar prevents the creek from draining into the ocean and creates a small, intermittent lagoon at the mouth of the creek. Pismo Creek offers habitat for various fish including the federally endangered tidewater goby and threatened South-Central California Coast Steelhead and Green Sturgeon (USFWS 2019).

Monarch Butterfly Grove

The Monarch Butterfly Grove at Meadow Creek is located in the southeastern portion of the city. The habitat consists of eucalyptus trees, which are used by over 10,000 monarchs annually as a resting point. This area is a sanctuary for butterflies in the winter, which is the most sensitive part of the monarch's life cycle. Land uses for this area include educational, scientific, and recreational use.

Open Space

Open space is a special purpose zoning district intended to protect areas with significant natural resources, environmentally sensitive habitats, and/or scenic views. These areas include: hillsides, waterways, coastal and hillside view corridors, public beaches, and parks. Land use on open space is meant to be less intense, and often includes recreation and limited residential uses. Additionally, open space lands are not intended to be intensively developed with buildings or other structures, however there are some permits which can be obtained for these structures. **Figure CO-2** displays all open space designated land uses, as well as an overlay showing the aforementioned conservation areas. It should be noted that not all open space areas are conservation areas, as some are used for recreation, education, public assembly, or more.

Figure CO-2: Pismo Beach Open Space



Sources: City of Pismo Beach 2014; Coastal San Luis Resource Conservation District 2010; LCSLO 2019; USFWS 2019.

Other Natural Resources

The following outlines other important natural resources that are important to conserve and which are currently protected from development.

Geology and Minerals

The City has no active mineral operations within their jurisdiction, nor does it have any land classified as a grade II machine-readable zone (MRZ-2) for containing concrete-grade aggregate within their jurisdiction.

No oil fields lie within the city, nor are there any active offshore drilling operations.

Soils

Class I soil is considered to have slight limitations for agricultural use, while Class II soil has moderate limitations for agricultural uses which could include a reduction of plant choices or a need for moderate conservation practices. Approximately 18 acres of prime, class I soil exists within the city, however this area is currently used for recreation as it covers Pismo Beach Golf Course and North Beach Campground (County of San Luis Obispo n.d.). Approximately 33 acres of class II soil is contained within the city, which is used primarily for residential or commercial purposes. All soils below class II have severe limitations for agricultural uses and will not be discussed (USDA n.d.).

Cultural / Tribal Resources

The coast of Pismo Beach is home to archaeological sites that are a result of thousands of years of settlement and are a fragile resource of the city. These sites are declared culturally and historically important and should be conserved. The Chumash are a Native American people who originally inhabited areas of Southern California including the land where Pismo Beach currently exists. Archaeological evidence suggests the Chumash people lived in this area and near the Santa Barbara channel for thousands of years. Chumash tribal sites and related archaeological sites are designated as natural and historical resources and have psychological function associated with the core of Pismo Beach's identity and existence, and many are preserved as open space.

The Coastal Act was updated in 2004 to require intergovernmental consultation with Native American tribes. The new provisions require cities and counties to contact, and consult with, California Native American tribes prior to amending or adopting a general plan or specific plan, or designating land as open space.

Environmental Quality

The following section describes the quality of air and water in Pismo Beach, which are essential natural resources for sustaining the health and quality of life for residents and visitors. Environmental quality is regulated by various state and federal agencies and must meet certain standards to comply with the law. Light pollution is also addressed, as preserving dark sky at night is important for sustaining the life and health of wildlife.

Air Quality

The clean air and pleasant climate of Pismo Beach are an important asset of the city that attracts residents and visitors alike. Rising population and increased tourism have caused some degradation of the air quality of the region, most notably through the increase in the number of vehicles in the city, subsequent increase in vehicle miles traveled (VMT) in recent years, and particulate matter emissions from the Oceano Dunes to the south due to high winds blowing sand and dust into the air.

National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) are clean air standards established to protect the public from high levels of air pollutants. The San Luis Obispo County Air Pollution Control District (APCD) is a regional agency that works to preserve air quality through implementing regulations and programs to assist the county in reaching attainment for those NAAQS and CAAQS. San Luis Obispo County suffers from high levels of particulate matter (PM_{10}) several times a year and has received the nonattainment designation for current ozone standards. Table CO-2 details the County's NAAQS and CAAQS attainment status based on pollutants defined by the California Air Resources Board. If pollutants are in nonattainment, implementation plans are put in place to outline actionable steps for the county to work towards attainment. The general plan should be consistent with these implementation plans.

Table CO-2
San Luis Obispo County Air Quality Attainm

Pollutant	Federal Designation	California Designation
Ozone (O_3)	Non-Attainment Eastern SLO County - Attainment Western SLO County	**Non-Attainment**
Respirable Particulate Matter (PM_{10})	Unclassified / Attainment	**Non-Attainment**
Fine Particulate Matter ($PM_{2.5}$)	Unclassified / Attainment	**Attainment**
Carbon Monoxide (CO)	Unclassified	**Attainment**
Nitrogen Dioxide (NO_2)	Unclassified	**Attainment**
Sulfur Dioxide (SO_2)	Unclassified	**Attainment**
Lead	No Attainment Information	**Attainment**
Visibility Reducing Particles	No Federal Standards	**Attainment**
Sulfates	No Federal Standards	**Attainment**
Hydrogen Sulfide	No Federal Standards	**Attainment**
Vinyl Chloride	No Federal Standards	No Attainment Information

Source: APCD 2019.

Note: Attainment = meets the standards; Attainment (Maintenance) = achieve the standards after a nonattainment designation; Nonattainment = does not meet the standards; Unclassified or Unclassifiable = insufficient data to classify; Unclassifiable/Attainment = meets the standard or is expected to be meet the standard despite a lack of monitoring data.

Water Quality and Supply

The Pacific Ocean is among the city's most significant natural resources and is valued for its aesthetic beauty and provision of open space. It is protected against development that would significantly alter its quality as a natural resource, and the

quality of the surrounding landscape and natural features. Pismo Marsh and Meadow Creek are among Pismo Beach's most significant inland freshwater resources, and as such have been protected by the City against significant alteration.

The primary threat to the city's water quality is intrusion of seawater into groundwater aquifers, which has been mitigated by maintaining a net outflow of groundwater into the ocean and reducing groundwater pumping to maintain levels above mean sea level. The City has met all federal and state standards for drinking water in 2018 and abides by their own certified Local Coastal Program (LCP) that aids in maintaining high standards for resource protection of water and coastal assets. The County of San Luis Obispo routinely monitors the water supply for chlorite and chlorate presence, both by-products of the water treatment process. The City maintains best practices by alternating disinfectants used in water treatment and monitoring chemical levels that can potentially degrade the quality of water or pose a risk to residents.

Nonpoint Source Pollution

Nonpoint source (NPS) pollution is the most significant cause of water pollution in the nation in both coastal and inland regions. NPS pollution is pollution from many sources, diffused over space and time. Common occurrences of NPS are excessive use of fertilizer; pesticide runoff from upstream agricultural areas; and oil, grease, and other toxic chemicals running off from energy generation sites or industrial production zones. This type of water pollution likely affects Pismo Beach through runoff from agricultural installations and through excess soil and dust entering water from grading and construction.

The City complies with the U.S. Environmental Protection Agency and State Water Resources Board approved Total Maximum Daily Load (TMDL) to monitor and maintain water quality for use and particulate material. The TMDL identifies maximum levels of given pollutants that are acceptable per volume in a water body, designates responsible parties for managing and controlling pollutant levels, establishes quantitative measurements of water quality, and sets forth implementation to achieve acceptable levels of pollutant loading. Table CO-3 identifies the potential pollutant sources for each land use.

Table CO-3
Nonpoint Pollution Sources

Land Use	Possible Nonpoint Pollutant Sources
Residential / Planned Residential	Driveway and sidewalk cleaning Vehicle and equipment maintenance/washing Landscape maintenance and washing Swimming pool and spa discharges Illicit connections Sump dewatering Painting
Commercial / Resort Commercial	Building maintenance (power washing) Dumping and spills Outdoor fluid storage Parking lot maintenance (power washing) Wash down of greasy equipment and grease traps Illicit connections Sump dewatering

Table CO-3 Cont.
Nonpoint Pollution Sources

Land Use	Possible Nonpoint Pollutant Sources
Industrial	Building maintenance (power washing) Dumping and spills Equipment washing Illicit connections Sump dewatering Outdoor fluid storage
Public/semi-public	Building maintenance (power washing) Dumping and spills Landscaping and grounds care (irrigation) Outdoor fluid storage Parking lot maintenance (power washing) Road maintenance Spill prevention and response Vehicle fueling, maintenance, repair, and washing Illicit connections
Mobile Home Parks	Vehicle accidents Mobile car wash and auto detailers, painters, power washers, pet washers, and food vendors New developments and redevelopment Homeless encampments Operations and maintenance

Point Source Pollution

Point source pollution is any singular, identifiable source that discharges pollutants. In Pismo Beach, sewage systems present the most significant production of point source pollution.

Light Pollution

The presence of bright lights at night has been proven to disrupt the normal foraging and breeding behaviors of seabirds. These birds can also experience "light entrapment", a state where they continually circle around light sources and become confused or disoriented, and as a result are "trapped" near the light source until the next dawn.

Plankton and fish are also adversely affected by bright artificial light sources, as they tend to be attracted to water that is typically better lit by artificial lighting. This behavior has been observed by predators, who recognize and use the artificial light to aid in hunting.

The main sources of light pollution in Pismo Beach are streetlights and exterior lighting for the downtown area, as well as lighting bordering scenic Highway 101.

Correlation with Coastal Act

The Pismo General Plan and Local Coastal Plan (GP/LCP) are a joint-document which means that they must correlate with the Coastal Act. The following section includes topics or aspects of topics which are unique to the Coastal Act, such as Environmentally Sensitive Habitat Areas (ESHA), wetlands, marine resources, and water quality.

Environmentally Sensitive Habitat Areas

ESHA is defined in the Coastal Act as "any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments" (Section 30107.5). ESHA designations are often based on the presence of rare, sensitive, or especially valuable species or habitats. In making ESHA determinations, the California Coastal Commission asks if either of the following conditions are met:

1) There are rare species of habitat in the subject area; or

2) There are especially valuable species or habitat in the area, which is determined based on:

   a) whether any species or habitat that is present has a special nature, or

   b) whether any species or habitat that is present has a special role in the ecosystem.

When the California Coastal Commission (CCC) finds that either of these two conditions is met, it assesses whether the habitat or species is easily disturbed or degraded by human activity and development. If they are, the CCC determines that area to be ESHA. To identify sensitive species and habitats, the following resources should be considered:

- the list of rare, threatened or endangered species prepared under the California or Federal Endangered Species Act
- the list of "fully protected species" or "species of special concern" by the California Department of Fish and Wildlife (CDFW)
- the list of "1b" species prepared by the California Native Plant Society
- the CDFW List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database

Generally, Environmentally Sensitive Habitat Areas (ESHA) include many types of woodlands, riparian areas, coastal plains and prairies. Pismo Beach's ESHA includes Pismo State Beach, Pismo Marsh, Price Canyon, Pismo Creek, Pismo Preserve, Meadow Creek, the Oceano Dunes, and the Monarch Butterfly Grove. Habitat which supports endangered species in the area would likely qualify as ESHA. An important component of the combined GP/LCP will be to have ESHA areas delineated and mapped and policies in place to ensure their future protection pursuant to Coastal Act requirements. The Coastal Act restricts development within ESHA to only resource-dependent uses, and requires that ESHA be protected against significant disruption of habitat values (Section 30240). The Coastal Act also requires areas adjacent to ESHA to be sited and designed to prevent degradation of ESHA and to be compatible with the continuance of those habitat areas. This is typically established through ESHA buffers, among other policies.

Wetlands

Wetland is defined in the Coastal Act as "lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens"(Section 30121). California Public Resources Code defines wetlands as "land where the water table is at,

near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include those types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent and drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentrations of salts or other substances in the substrate"(CCCR Section 13577[b]). Based on these definitions, wetlands under the Coastal Act may only display one of the wetland parameters typically used to define wetland areas, unlike the U.S. Army Corps of Engineers, which uses a three parameter definition under its federal authorities. In addition, the Coastal Act definition of wetland does not distinguish between wetlands according to their quality; poorly functioning, or degraded wetlands are afforded the same protection under the Coastal Act.

Wetlands within Pismo Beach include Pismo Marsh and Pismo Creek.

Marine and Coastal Resources

In addition to being Pismo Beach's most significant conservation area, the ocean is Pismo Beach's largest and most valuable marine and coastal resource. It provides ecological, recreational, economic, and aesthetic value, among others. The community's lineal physical form and related circulation patterns reflect the residents' strong desire to be as close as possible to the water. Historically, the community's economic basis was the ocean, and today Pismo Beach still heavily depends on the ocean for tourism. It is protected from development and must remain a natural and recreation asset for the city. The kelp beds and any other coastal habitats are also important marine resources that preserve biodiversity and the overall health of the coastal region. Coastal access points and surf breaks make the beach more accessible and attractive as a scenic and recreational resource of the city, and as such are also important coastal resources.

Other marine and coastal resources, some of which are described above, include:

- The municipal pier
- Beachfront facilities and amenities (parks, trails, open spaces, restrooms, sports facilities, community centers, parking lots)
- Groundwater resources
- Environmentally sensitive habitat areas and wetlands
- Scenic and visual resources, including scenic viewpoints and rock outcroppings
- Beach wrack, or washed up mounds of seaweed and organic material, which provides nutrients and ecosystem stability. Grooming of beaches for aesthetic purposes, including removal of beach wrack, can degrade the shore habitat and negatively affect coastal birds that nest in or near the coastal zone.

Water Quality

The Coastal Act requires the protection and enhancement of marine and coastal water resources, including water quality. Protection of coastal water resources requires not only minimizing pollutants in runoff, but also minimizing alterations in a site's natural hydrologic balance, including the runoff flow regime. The City's LCP is a key mechanism for achieving a high standard for coastal water resource protection and provides an important planning and regulatory framework for enhancing coastal NPS pollution control and minimizing changes in watershed hydrology.

Climate Change

It's important to note that Pismo Beach's natural resources may be impacted by climate change. In addition to changes in temperature and rainfall, increases in sea level is anticipated to alter the physical characteristics of wildlife habitat and plant/vegetation communities—inundating beaches, converting dry beach to intertidal or subtidal areas, and relocating the intertidal areas of wetlands to a more inland or upland location. The species that depend on these habitat areas may either be lost or relocate with the habitat. Other potential climate change concerns with regards to sensitive coastal

habitats include: 1) increased erosion of habitats due to sea level rise, 2) loss of wetland habitat due to sea level rise, 3) increased competition from non-native species as native species become more vulnerable, 4) increased fires and 5) loss and fragmentation of migration corridors. Each of these concerns will be important policy considerations for the GP/LCP.

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Appendix D

Land Use Fact Sheet

Land Use

The Land Use Element will guide the future development of Pismo Beach by establishing the allowable distribution, location, and extent of development across the city for residential, commercial, open space, public and semi-public facilities, and other uses. In addition to policies that apply to the entire city, the Land Use Element also contains specific goals and policies for individual neighborhood planning areas. The Land Use Element gives an overall framework for addressing community values and expectations into specific strategies for managing growth and enhancing quality of life. The Land Use Element will address topics unique to Pismo Beach such as coastal resources, planned residential developments, overnight accommodations, and cultural sites, and will align well with other general plan elements.

Planning Context

Pismo Beach is a small, central coast city and one of seven incorporated cities within San Luis Obispo County (County). The county is frequently divided into four general sub-regions: North Coast, Northeast County, South County, and Central San Luis Obispo. South County includes the incorporated cities of Pismo Beach, Grover City, and Arroyo Grande and the unincorporated communities of Avila Beach, Oceano, and Nipomo. Pismo Beach lies within the San Luis Bay Planning Area of the San Luis Obispo County General Plan, and has a total area of 13.5 square miles. Pismo Beach is bordered by the beach and ocean on the southwest and hills to the northeast. The cities of Grove Beach and Arroyo Grande are south and east of Pismo Beach and the unincorporated community of Avila Beach is just north of Pismo Beach.

The city's geologic setting contains coastal bluffs, coves, rolling hills, sand dunes, beaches, Pismo Creek, and Pismo Marsh. Pismo Beach has a general gradient that slopes south and west towards the Pacific Ocean and Pismo Creek. These unique geologic and coastal features host a variety of plant and wildlife species. The scenic Highway 101 runs through the city, with the majority of land uses southwest of Highway 101. Northeast of Highway 101 is generally residential uses and open space. This portion of the city abuts the Pismo Preserve to the north and east. The Pismo Preserve, managed by the Land Conservancy of San Luis Obispo County is within the County's jurisdiction and contains trails that offer panoramic views of the Pacific Ocean, Pismo Beach, and incorporated coastal communities. Southwest of Highway 101 provides a diverse mix of land uses that complement and utilize the city's coastal resources. As shown in the photos below, Pismo Beach offers a place where residents of all demographics can enjoy the city's visual, cultural, recreational, and natural resources.

Planning Areas

The City of Pismo Beach (City) is organized into neighborhood planning areas, each with its own name and unique characteristics. All of these planning areas are largely built-out, with only small (<1 acre) parcels remaining for new development. Therefore, demolition, reuse, and repurposing of existing buildings is more common than new construction on vacant land. The first General Plan in 1992 contained 18 planning areas and the City has since been working on consolidating these into 10 planning areas described briefly below. Figure LU-1 presents a map of these neighborhood planning areas and the current approximate development within each planning area is provided in Table LU-1.

Sunset Palisades/ Ontario Ridge/ South Palisades

This planning areas combines three planned residential uses and open space. The northern portion, identified as Ontario Ridge, includes relatively large single-family residential lots along Bluff Drive. South of the Ontario Ridge neighborhood is Sunset Palisades, which is also comprised of low-density single family residential and open space. South Palisades, south of Sunset Palisades is comprised of low-density single family residential and open space/recreational uses west of Shell Beach Road.

North Spyglass/ Spyglass
This planning area is comprised of resort commercial uses. North Spyglass, located north of Spyglass Drive, consists of three large parcels with three hotel/motels. South of Spyglass Drive is the Spyglass community, which is characterized by low- and high-density residential and commercial uses, with open space at the southwestern-most tip.

St. Andrews/ Spindrift
St. Andrews Tract is comprised of predominantly low-density residential, with open space along the northern border and high-density residential and the Pismo Beach Fire Department Station 63 on the northern end of Coburn Lane. South of the St. Andrews Tract area is Spindrift, a planned residential community consisting of multifamily housing uses in the larger southern parcel and single-family residential and open space/recreational uses to the north, west, and east.

Terrace Avenue/ Shell Beach/ Dinosaur Caves
The Terrace Avenue area is home to Shell Beach Elementary School and a mix of low, medium, and high-density residential uses. South of the Terrace Avenue area is Shell Beach, which is predominantly low-density residential, with high-density residential bordering the eastern side of the low-density residential, and commercial uses bordering the west side of Shell Beach Road. Just south of Cliff Avenue is Dinosaur Caves Park which offers walking trails, a playground, and ocean views on an 11-acre park. The Dinosaur Caves planning area extends south covering a resort commercial parcel, currently the Inn at the Cove.

Motel District
South of the Dinosaur Caves planning area is the Motel District, which is comprised of resort commercial uses with some medium residential uses along Franklin Drive, Wilmar Avenue, and Harbor View Avenue.

Commercial Core
This planning area has a variety of land uses, including resort commercial, commercial, public/semi-public, open space, and low-density residential uses. This planning area acts as Pismo Beach's downtown that provides uses like shops, restaurants, cafes, art studios, and the Pismo Beach Pier. The Pismo Beach Pier offers stunning ocean and sunset views, as well as a space for fishing and walking. The Commercial Core creates a public space for residents and visitors to eat, shop, and recreate in a small beach-town environment.

Pismo Creek/ Pismo Marsh
The Pismo Creek planning area is separated from the Commercial Core planning area by Pismo Creek. This planning area is comprised of mobile home park, commercial, open space, and industrial uses. Along Pismo Creek, this planning area is currently used as commercial recreational areas in the form of recreational vehicle (RV) parks and mobile homes. The relatively large parcel in the center of the Pismo Creek planning area is a mobile home park. The Pismo Marsh planning area is comprised of open space in the form of Pismo Marsh, open space, and walking trails, as well as mobile home park, campground, industrial, commercial, and resort commercial uses. The commercial area is the home of the Pismo Beach Premium Outlets which provides a range of retail for residents and visitors. The industrial uses in these planning areas are non-polluting uses such as a trailer storage.

Oak Park Heights
The Oak Park Heights planning area contains low- and medium-density residential with open space areas surrounding the residential. Additionally, there are commercial areas at the southern boundary of Pismo Beach and along Highway 101. The commercial uses along the southern city boundary are strip malls, and the commercial uses along Highway 101 are office parks and hotels.

Pismo Heights

The Pismo Heights planning area is comprised of low-density residential with some medium-density residential in the southern portion and high density residential along Highway 101. Open space is located east of the low-density residential and public/semi-public uses are located in the southeastern portion of the Pismo Heights area. The public/semi-public uses currently include Judkins Middle School, the Pismo Beach Police Department, and churches.

Freeway Foothills

The Freeway Foothills planning area is located east of Highway 101, and consists of low- and medium-density planned residential neighborhoods. The Freeway Foothills are considered an asset to the City and provide scenic panoramic views along Highway 101.

Figure LU-1 Planning Area Boundaries



Source: City of Pismo Beach 2019.

Table LU-1
Existing Development by Neighborhood Planning Area (2019)

Planning Area	Residential (units)			Visitor Serving (rooms)	Retail, Service, Office (1,000 square feet)			Open Space (acres)
	Single Family	Mobile Home	Multi-Family	Resort Commercial	Commercial	Industrial	Public/Semi Public	Open Space
Sunset Palisades/ The Bluffs/ South Palisades	478	0	0	0	253.5	0.0	0.8	97.0
North Spyglass/ Spyglass	108	0	71	298	500.9	0.0	1.1	7.3
St. Andrews/ Spindrift	228	0	25	0	51.0	0.0	8.8	9.1
Shell Beach/ Dinosaur Caves	910	0	44	24	321.5	0.0	9.7	13.6
Motel	79	0	0	572	2028.6	0.0	0.0	25.2
Downtown Core	512	0	279	596	1,672.7	0.0	16.4	150.1
Pismo Creek/ Pismo Marsh	417	515	141	370	2,491.2	142.9	21.7	211.9
Oak Park Heights	1,189	0	0	120	1,968.9	1,172.6	207.8	113.4
Pismo Heights	656	0	46	0	0.0	0.0	49.2	3.4
Freeway Foothills/ Mattie Road	404	0	0	0	306.6	0.0	5.6	177.9
Total:	**4,981**	**515**	**418**	**1,980**	**9,594.9**	**1,315.5**	**321.1**	**808.9**

Source: City of Pismo Beach 2019; San Luis Obispo County Assessor's Office 2019.

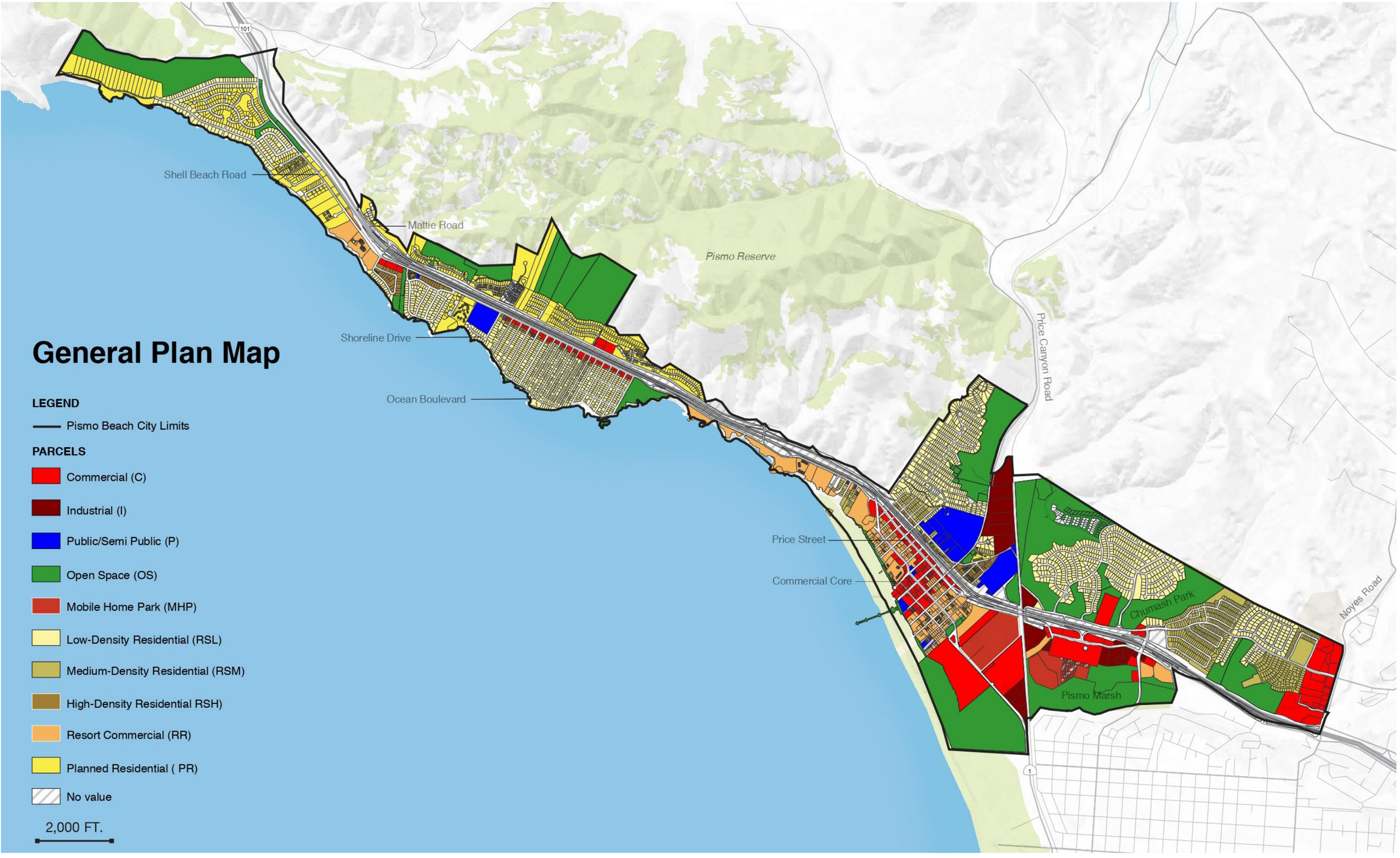
General Plan Land Uses

The City's General Plan land uses are shown in Figure LU-2. The existing General Plan designates 10 land uses in the city: commercial, industrial, public/semi-public, open space, mobile home park, low-density residential, medium-density residential, high-density residential, resort commercial, and planned residential. As shown in Figure LU-2, low-density residential covers the majority of land area in the city, the commercial and resort commercial uses are more concentrated towards downtown Pismo Beach, and open space is generally located around the residential uses and along the city limits. Table LU-2 lists total acreage for each land use, including the percentage of total land area per land use designation.

Table LU-2
Land Use Designations and Acreage

Land Uses Designation	Acreage	Percentage of Total Land Area
Commercial	126.38	7.1%
Resort Commercial	73.94	4.2%
Industrial	30.2	1.7%
Public/Semi-Public	99.8	5.6%
Open Space	736.41	41.3%
Mobile Home Park	58.51	3.3%
Single-Family Residential	566.12	31.8%
Multi-Family Residential	22.21	1.3%
Vacant/Other	68.19	3.8%
Total	**1,781.76**	**100%**

Figure LU-2 General Plan Land Use Map

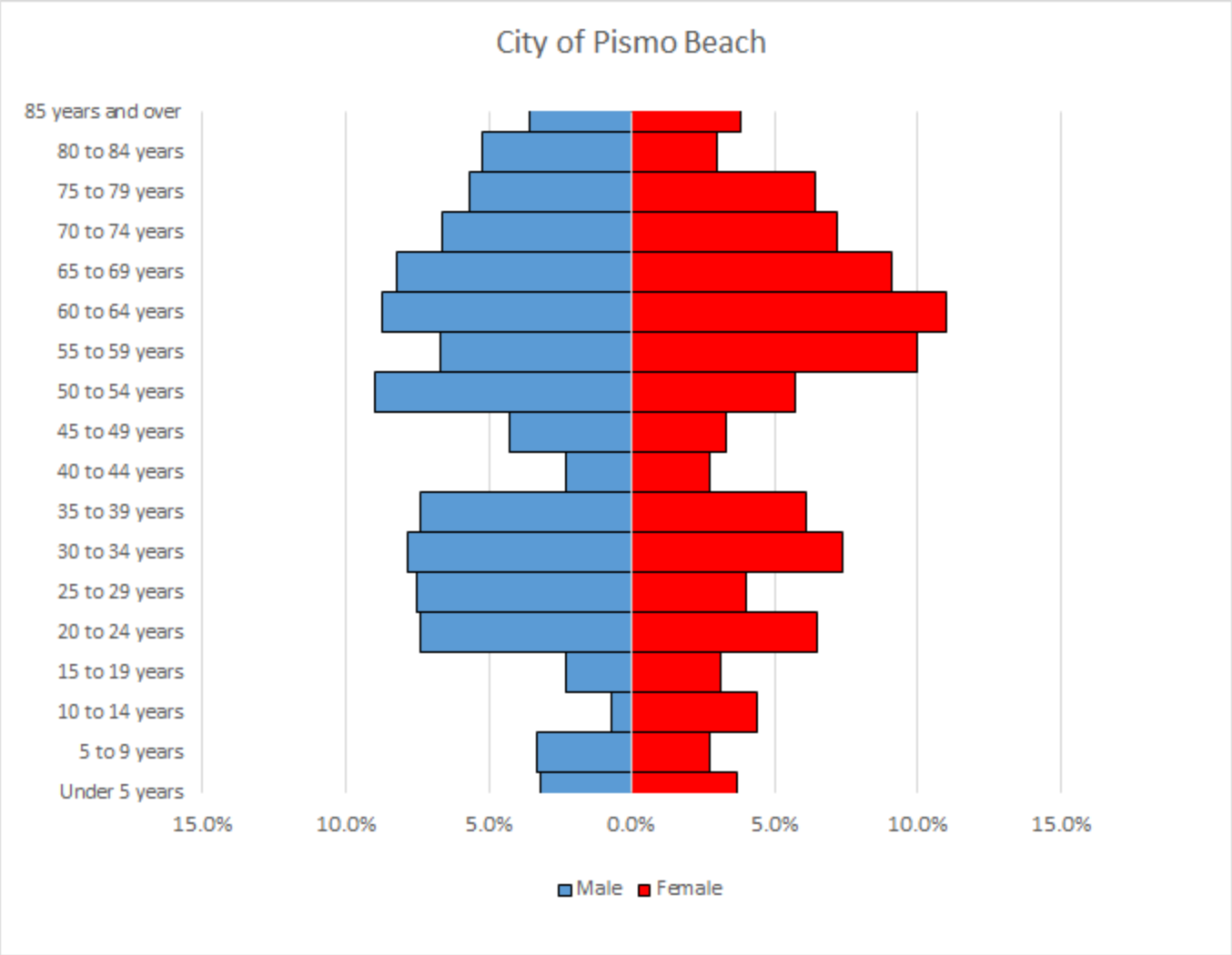


Demographics

Pismo Beach had an estimated population of 8,213 as of July 2018, and is comprised of approximately 90% White, 8% Hispanic or Latino, and 2% Asian (U.S. Census Bureau 2010). Pismo Beach has a relatively low persons per household of 1.97, compared to 2.96 for California and 2.51 for the County. The low person per household means more people are living alone in Pismo Beach. The median age is 54, meaning a high proportion of the population is over 50, and nearly a third of the population (29%) is over 65, compared to 20% for both the state and the County. Conversely, Pismo Beach's population under 18 years old is approximately 11%, compared to 23% for the state and 18% for the County (U.S. Census Bureau 2018). Figure LU-3 illustrates the age and gender breakdown of Pismo Beach at the time of the 2010 Census. The relatively heightened number of single-person households and people over 65 helps guide the City's land use decisions.

The median household income in Pismo Beach is $77,316, with 8.4% of the population in poverty (i.e., family income is less than the federal poverty threshold). Pismo Beach has a highly educated population, with approximately 96% of the Pismo Beach population graduated from high school, compared to 83% for the state and 91% for the County; and 45% of the population graduated with a bachelor's degree or higher, compared to 33% for the state and 34% for the County.

Figure LU-3 City of Pismo Beach Population (2017)



Source: U.S. Census Bureau 2017.

Growth Management

Growth is limited in Pismo Beach due to both physical and economic factors. Pismo Beach is bordered by the Pacific Ocean to the southwest, the unincorporated town of Avila Beach to the northwest, the City of Grover Beach to the southeast, and the unincorporated open space to the northeast of the city. These factors lead to little area for future annexation outward. Pismo Beach's SOI is a defined area that identifies the probable future physical boundary and service area of the city.[1] The SOI is strategically established to encourage orderly growth and development which are essential to the social, fiscal, and economic well-being of the City. The Pismo Beach SOI includes everything within the city limits in addition to two large areas to the northeast of the city boundary. As shown in Figure LU-4, Sphere of Influence, the SOI includes a large portion of land southeast of Price Canyon Road and a portion of land northwest of North Old Park Boulevard/Old Oak Park Road. These additional areas included in the SOI are predominantly open space with a couple water storage facilities and a few scattered single-family residences. The SOI creates a geographic boundary to which the city will not extend past, thus limiting the outward growth of the city.

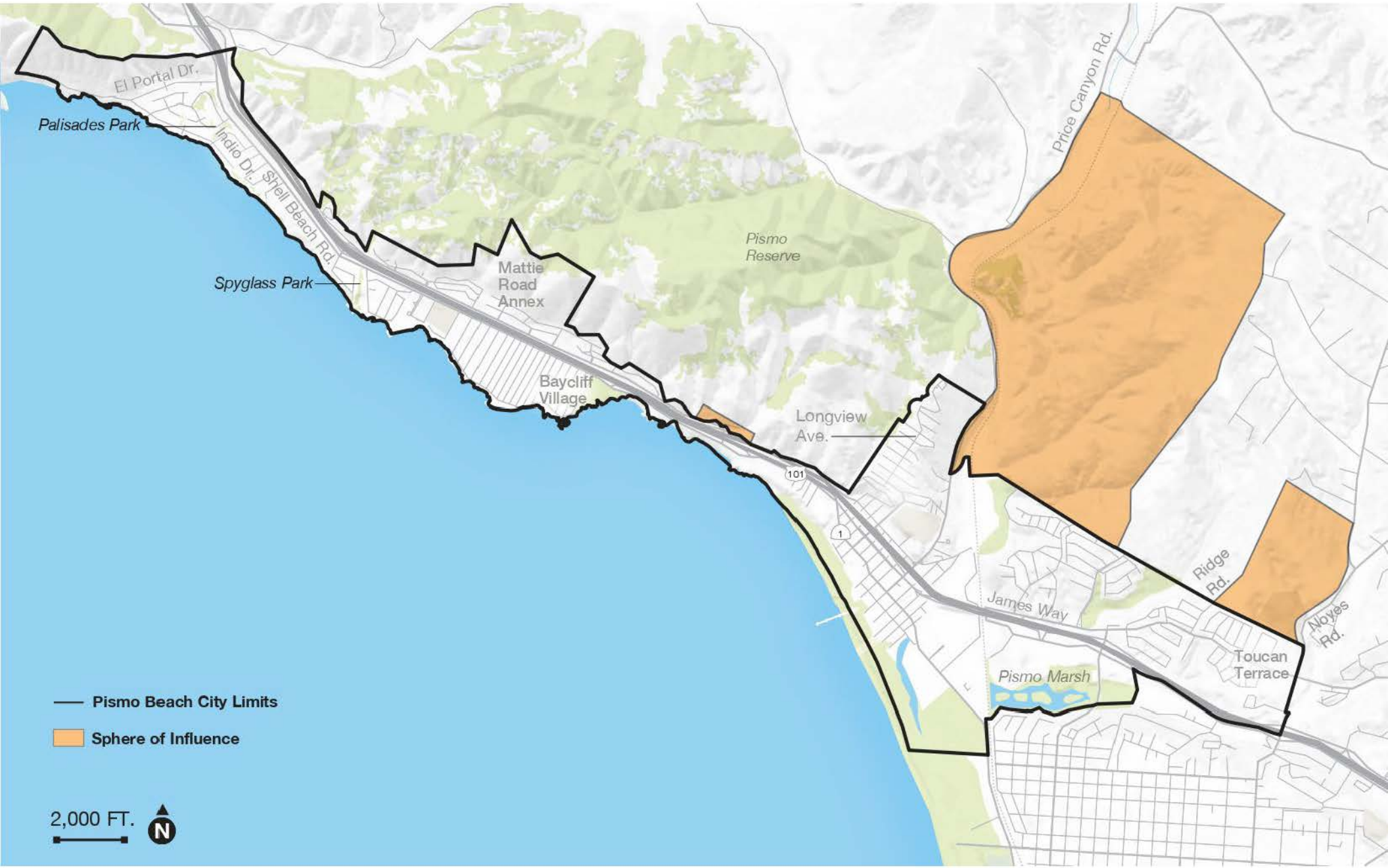
With a large portion of the population over or nearing retirement age, the workforce in Pismo Beach is relatively low, limiting the demand for outward growth. Additionally, Pismo Beach's tourism industry, which is a large contributor to the economy, is oriented towards the coast, which keeps the commercial uses west of Highway 101 stable. However, there are still ways in which Pismo Beach can continue to expand, grow, and flourish. Upward growth, by means of higher-density uses, is a tool in which the city can strategically grow. For example, placing high-density residential and office uses in areas that are in proximity to transit provide an increase in housing and job opportunities without an extreme increase in vehicle trips. In addition, increasing housing density helps meet the City's Housing Element goals, the Regional Housing Needs Allocation (RHNA) goals, and state housing goals, as well as coastal access, circulation, and conservation goals.

Infrastructure

Infrastructure capacity, such as water and sewer, can be a limit to growth as well. Water is currently obtained from the State Water Project, Lopez Reservoir, and groundwater suppliers, and recycled water from the Pismo Beach Wastewater Treatment Plant. The City's 2015 Urban Water Management Plan shows the City has a future available water supply of 4,253 acre feet a year (AFY) and their water demand in 2035 is 2,213 AFY. Drought is likely to decrease the water supply in dry years, however, a goal of the 2015 Urban Water Management Plan Contingency Plan is to reduce water use by 10%-15% (City of Pismo Beach 2015). Sewage treatment is performed at the Pismo Beach Wastewater Treatment Plant, which was upgraded and expanded in 2006 to accommodate a build-out population of 9,414 people (City of Pismo Beach 2019a). The Cold Canyon Landfill (CCL) facility is the nearest site for solid waste disposal with an average daily capacity of 1,200 tons. CCL is expected to reach capacity in 2027 and accepts an average of 180,000 tons of waste per year. CCL is actively pursuing expansion plans to increase the site to 209 acres according to the Draft Environmental Impact Report (EIR) for the expansion project. The CCL Expansion Draft EIR indicates that with the expansion of CCL the site would potentially accommodate regional waste disposal needs until the year 2040.

[1] A SOI is generally considered a 20-year, long-range planning tool. The San Luis Obispo Local Agency Formation Commission (LAFCO) currently has released a Public Review Draft Sphere of Influence Update Municipal Service Review for the City of Pismo Beach on June 20, 2019.

Figure LU-4 Sphere of Influence



Source: San Luis Obispo Local Agency Formation Commission 2019

Public Services and Facilities

Pismo Beach relies on city-managed services and facilities to provide and support its residents' education, health and safety. The City's Public Facilities and Services Element correlates facility and service needs with projected population and visitor growth and the annexation of areas in the sphere of influence. In addition, the City's Parks, Recreation and Access Element establish goals to provide a wide range of recreational opportunities for all ages. The Shell Beach Library, Pismo Beach City Hall, Pismo Beach Parks and Recreation Department, Pismo Beach Fire Department (PBFD), and Pismo Beach Police Department (PBPD) are some of the public buildings and services within city limits. Figure LU-5, Public Services and Facilities, displays the locations of public buildings and services throughout the city.

Fire Protection

The PBFD and the San Luis Obispo County Fire Department/California Department of Forestry and Fire Protection (CAL FIRE) PBPD Station 63 are responsible for providing fire prevention and protection services in Pismo Beach. Station 63 serves north Pismo Beach through cooperative fire protection between CAL FIRE and the City. The PBFD is located at 760 Mattie Road and, in a cooperative fire protection agreement with CAL FIRE, employs full-time staff including a Battalion Chief, three fire captains, three fire apparatus engineers, and an administrative assistant.

Police Services

The PBPD provides public safety services for Pismo Beach, with its service area bordered by the Cities of Arroyo Grande and Grover Beach to the south and the community of Avila Beach to the north. The PBPD is located at 1000 Bello Street in Pismo Beach and consists of 34 full-time employees, 23 of which are sworn police personnel (PBPD 2018).

Schools

Public schools and educational facilities are mandated by the State Department of Education and administered by the San Luis Obispo County Board of Education and the San Luis Obispo County Office of Education. Two unified school districts provide service to the residents of Pismo Beach. The San Luis Coastal Unified School District provides service to northern Pismo Beach, while the Lucia Mar Unified School District provides services to southern Pismo Beach.

As previously noted under Demographics, Pismo Beach highly values their education, with relatively high percentages of high school and college graduates. Education facilities within the city limits of Pismo Beach include Happy Time Co-Op Preschool, Judkins Middle School, New Life Pre-School, and Shell Beach Elementary School. Figure LU-5 depicts the locations of these facilities. To be classified as a Critically Overcrowded School, a school must have a pupil density greater than 115 pupils per acre for grades kindergarten to six and 90 pupils per acre for grades seven to twelve. None of the schools listed on the state's Critically Overcrowded School list are located within Pismo Beach city limits.

Libraries

The City of Pismo Beach does not provide library services to city residents. This service is provided by the San Luis Obispo City-County Library system, which presently maintains a small neighborhood library in the Shell Beach area. More extensive services are provided Pismo Beach residents at the South County Regional Library, located in Arroyo Grande, approximately 5 miles from Pismo Beach.

Parks

Pismo Beach has 13 City parks, beach volleyball courts, and a 5.5-acre sports complex. The California Department of Parks and Recreation manages the recreational facilities within Pismo State Beach. The Price Historical Park is the only National Historic Landmark in Pismo Beach. The City also owns the Chapman Estate in the community of Shell Beach. As a result of the City taking ownership of the property in 2013, the City adopted the Chapman Estate Strategic Plan to guide the maintenance and programing of the Chapman Estate, which may include pursuing historical designation.

Solid and Liquid Disposal Facilities

The southeastern portion of Pismo Beach contains the Pismo Beach Wastewater Treatment Plant. This is a plant which treats wastewater to potable levels and injects the resulting water into the groundwater. Disposal of landfill waste, compost, and recycling is done outside of city limits. Landfill waste is disposed of at the Cold Canyon Landfill, north of Pismo Beach.

Figure LU-5 Public Services and Facilities



Relationship to the Local Coastal Program

The City of Pismo Beach General Plan and Local Coastal Plan is a combined document that meets both the state General Plan requirements and state Coastal Act requirements. The City's current LCP includes both a Land Use Plan, which was last updated in 1993, and the Implementation Plan (Coastal Zoning Ordinance), which was last updated in 1983, with several amendments to both documents occurring since. The Land Use Plan is integrated into applicable elements of the General Plan and must meet all of the requirements of the California Coastal Act (Coastal Act) as determined by the California Coastal Commission (CCC). The Coastal Act guides the development and protection of coastal resources in the City's Coastal Zone and prioritizes public access as well as coastal-dependent commercial, agricultural, and industrial uses. The Coastal Act also includes protection for open space along the coast and preservation of marine and upland habitats and sensitive coastal biodiversity. These sections of the Coastal Act related to habitat and open space land uses, as well as cultural resources, are described in the Conservation and Open Space Background Report.

Public Access and Recreation Facilities

The arrangement of land uses plays a role in the placement of public access and recreation facilities. For example, a beach access point would be underutilized in an industrial area but highly-utilized in a residential neighborhood or downtown area. Pismo Beach provides a variety of recreational facilities in the coastal zone, such as parks, beaches, and the City pier. There are 22 beach access points in the City of Pismo Beach, the highest concentration of which are in the downtown area. The City owns four parking lots within walking distance to the coast, two of which are directly adjacent to the beach. Additionally, there are 10 City-owned parks and one California state campground with direct access to the beach (Moffat and Nichol 2019). Each of these facilities are further described in the Parks, Recreation, and Access Element.

Overnight Accommodations

Pismo Beach has a range of overnight accommodations including hotels, motels, state campground and privately-owned RV sites, and short-term vacation rentals. These uses are important for sustaining the tourist industry of Pismo Beach while also supporting visitor access to coastal resources. Overnight accommodations are either allowable uses or conditional uses in the resort commercial, commercial, and industrial land use designations. An inventory of these uses as of 2019 is presented in Table LU-3. In addition, the locations of these accommodations is depicted in Figure LU-6, Overnight Accommodations.

Table LU-3
Overnight Accommodations[1]

Accommodation	Number of Units	Price Range (per night)[2]
Campground and RV parks)	515	$35-55
Hotel and motel	1,980	$66 – 391
Short-term vacation rentals	Approx. 340[3]	$65 – 1,114

[1] Source: City of Pismo Beach 2019b

[2] The prices shown for campground and RV parks and hotel and motel categories reflect the least expensive options available for that date, as some hotels and motels surveyed have multiple price levels.

[3] A search of STR websites with no dates of stay entered produced 334 available STRs.

Energy and Industrial Development

Energy and industrial development uses are allowable in the industrial land use designation. There are currently no industrial land use designations west of Highway 101, as industrial uses are discouraged on highly valuable waterfront property. Private electrical and natural gas utility companies provide service to customers in Central and Southern California, including the City of Pismo Beach. The City of Pismo Beach Draft Climate Action Plan (CAP) included an inventory of community-wide

greenhouse gas (GHG) emissions. According to the CAP, commercial/industrial energy use contribute 17% of Pismo Beach GHG emissions. Industrial uses within Pismo Beach are all considered light industrial uses, such as utility facilities, RV storage, big box retail, and gas stations. The majority of industrial uses are located in a central sliver of the city limits, east of Highway 101, east of Price Canyon Road, and west of the railroad track. These industrial uses include the Pismo Beach Wastewater Treatment Plant (PBWTR) and a Pacific Gas and Electric (PG&E) facility. The PG&E facility is not within the coastal zone, however the PBWTR is within the coastal zone. Development standards will be applied to any existing or future coastal dependent energy or industrial facilities, such as offshore wind turbines, fishing, and shipping facilities.

Agriculture

Pismo Beach does not contain any lands classified as important farmland (CDOC 2019). There are no commercial-scale agriculture uses in the city; however, Pismo Beach is surrounded by agricultural uses including grape, broccoli, and strawberry production (City of Pismo Beach 2014).

Figure LU-6 Overnight Accommodations (placeholder)

Relationship to the Housing Element

The Housing Element of the Pismo Beach General Plan is currently under development. The housing element outlines how the City will accommodate Pismo Beach's regional housing needs assessment (RHNA) as determined by the California Department of Housing (HCD) and Community Development and the San Luis Obispo Council of Governments (SLOCOG). Table LU-4 outlines the number of housing elements Pismo Beach and the County must accommodate in each of the income brackets determined by HCD.

Table LU-4
Total Required Housing Accommodations by Income Bracket

Jurisdiction	Income Category	Percent	Housing Unit Need
San Luis Obispo County	Very-Low	24.6%	2,660
	Low	15.5%	1,675
	Moderate	18%	1,940
	Above-Moderate	41.9%	4,535
	Total	100%	10,810
Pismo Beach	Very-Low	24.6%	113
	Low	15.5%	71
	Moderate	18.0%	82
	Above Moderate	41.9%	193
	Total	100%	459

Source: City of Pismo Beach 2019c.
Notes: Very low income: 30% to 50% of Area Median Income (AMI); Lower income: 50% to 80% of AMI, the term may also be used to mean 0% to 80% of AMI; Moderate income: 80% to 120% of AMI.

Relationship to the Circulation Element

Considering transportation planning is required for updating the Land Use Element according to Government Code §65302(b). The Pismo Beach Circulation Element[2] was updated in 2018 and includes goals and policies which reference land use or should be considered moving forward with the Land Use Element. The following goals guide the Circulation Element:

1. Provide a circulation system that supports safe and efficient travel for all modes of transportation.
2. Plan and provide pedestrian and bicycle facilities to encourage and meet the walking and bicycling needs of the city.
3. Promote the use of public transit and seasonal shuttle services.
4. Provide connectivity and guidance for safe rail and truck movement of people and goods.

The Land Use Section should further these goals through land use decisions and policies.

The 2018 Circulation Element also contains more specific guiding policies (GPs) that relate to land use. It addresses coordination of activities with various agencies in GPs 1.7, 1.10, and 3.2. GP 1.11 cites land use as an action recommended to reduce vehicle miles traveled. GP 2.5 specifies that land use policies be implemented to enable shopping, recreating, commuting, and personal business activities without driving. GP's 1.16, 1.17, and 2.12 address consideration for the land use context when providing complete streets, neighborhood streets, and bikeways, respectively. When referencing new development, GP 3.15 promotes transit-oriented developments, GP 3.16 supports SB 375[3] and GP 4.6 continues industrial expansion in the southeastern industrial area of Pismo Beach.

[2] The updated Circulation Element was approved by the CCC in 2018 with suggested modifications related to the extension of Mattie Road, which were later accepted by the City.

[3] SB 375 builds on the existing framework of regional planning to tie together the regional allocation of housing needs and regional transportation planning in an effort to reduce GHG emissions from motor vehicle trips. SB 375 directs the Air Resources Board to set regional targets for the reduction of greenhouse gas emissions. Aligning these regional plans is intended to help California achieve GHG reduction goals for cars and light trucks under AB 32, the state's landmark climate change legislation.

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Appendix E

Noise Element Technical Background Report

CITY OF PISMO BEACH

GENERAL PLAN NOISE ELEMENT UPDATE 2020

TECHNICAL BACKGROUND REPORT

1 Acoustics Principles

1.1 Sound and Environmental Noise

Acoustics is the science of sound. Sound can be described as the energy of a vibrating object transmitted by pressure waves through a medium (e.g., air) to human (or animal) ear. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound and is expressed as cycles per second, or hertz (Hz). As an example of this phenomenon, a person speaking creates energy through vibration of the vocal chords, pressure waves caused from this vibration are carried through the air to a nearby listener's ear, where they are detected as the sound of a human voice.

The speed of sound in air is approximately 770 miles per hour, or 1,130 feet/second. Knowing the speed and frequency of a sound, one may calculate its wavelength, the physical distance in air from one compression of the atmosphere to the next. An understanding of wavelength is useful in evaluating the effectiveness of physical sound control devices such as mufflers or barriers, which depend upon either absorbing or blocking sound waves to reduce sound levels.

Noise is defined as loud, unexpected, or annoying sound. The fundamental acoustics model consists of a noise source, receptor, and the propagation path between the two. The loudness of the noise source, obstructions, or atmospheric factors affecting the propagation path, determine the perceived sound level and noise characteristics at the receptor. Acoustics deal primarily with the propagation and control of sound. A typical noise environment consists of ambient noise that is the sum of many distant and indistinguishable noise sources. Superimposed on this ambient noise is the sound from individual local sources. These sources can vary from an occasional aircraft or train passing by to continuous noise from traffic on a major highway. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a large range of numbers. To avoid this, the decibel (dB) scale was devised. The dB scale uses the hearing threshold of 20 micropascals (µPa) as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The dB scale allows a million-fold increase in pressure to be expressed as 120 dB; another useful aspect of the decibel scale is that changes in levels (dB) are uniform throughout the scale, which corresponds closely to human perception of relative loudness.

1.2 Noise Descriptors

The dB scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that the effect of noise on people is largely dependent on the total acoustical energy content of the noise, as well as the time of day when the noise occurs. The equivalent noise level (L_{eq}) is the average noise level averaged over the measurement period, while the day-night noise level (L_{dn}) and Community Equivalent Noise Level (CNEL) are measures of energy average during a 24-hour period, with dB weighted sound levels from 7:00 PM to 7:00 AM Most commonly, environmental sounds are described in terms of L_{eq} that has the same acoustical energy as the summation of all the time-varying events.

1.3 Metrics Used in Noise Assessment

A-Weighted Decibel Scale

The A weighted decibel (dBA) sound level scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be used. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends on the distance between the receptor and the noise source.

The perceived loudness of sounds is dependent on many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable and can be approximated by dBA values. There is a strong correlation between dBA and the way the human ear perceives sound. For this reason, the dBA has become the standard tool of environmental noise assessment. All noise levels reported in this document are in terms of dBA, but are expressed as dB, unless otherwise noted.

Addition of Decibels

The dB scale is logarithmic, not linear, and therefore sound levels cannot be added or subtracted through ordinary arithmetic. Two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic dB is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound and twice as loud as a 60-dBA sound (Caltrans 2013). When two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dBA higher than one source under the same conditions. Under the dB scale, three sources of equal loudness together would produce an increase of approximately 5 dBA. (Caltrans 2013)

Sound Propagation and Attenuation

Sound spreads (propagates uniformly outward in a spherical pattern, and the sound level decreases (attenuates) at a rate of approximately 6 dB for each doubling of distance from a stationary or point source. Sound from a line source, such as a highway, propagates outward in a cylindrical pattern. Sound levels attenuate at a rate of approximately 3 dB for each doubling of distance from a line source, such as a roadway, depending on ground surface characteristics (Caltrans 2013). No excess attenuation is assumed for hard surfaces like a parking lot or a body of water. Soft surfaces, such as soft dirt or grass, can absorb sound, so an excess ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. Thus, soft-site attenuation from a point source is at a rate of 7.5 dB for each doubling of distance, while soft-site attenuation from a line source is 4.5 dB per each doubling of distance (Caltrans 2013).

Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA (Cowan 1994). The way older homes in California were constructed generally provides a

reduction of exterior-to-interior noise levels of about 20 to 25 dBA with closed windows. The exterior-to-interior reduction of newer residential units is generally 30 dBA or more (HUD 2009).

1.4 Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. When community noise interferes with human activities or contributes to stress, public annoyance with the noise source increases, and the acceptability of the environment for people decreases. This decrease in acceptability and the threat to public well-being is the basis for land use planning policies directed towards the prevention of exposure to excessive community noise levels. Hearing loss can occur at the highest noise intensity levels.

Noise environments and consequences of human activities are usually well represented by median noise levels during the day or night or over a 24-hour period. Environmental noise levels are generally considered low when the CNEL is below 60 dBA, moderate in the 60 to 70 dBA range, and high above 70 dBA. Examples of low daytime levels are isolated, natural settings with noise levels as low as 20 dBA and quiet, suburban, residential streets with noise levels around 40 dBA (Cowan 1994). Interior noise levels above 45 dBA at night can disrupt sleep. Examples of moderate-level noise environments are urban residential or semi-commercial areas (typically 55 to 60 dBA) and commercial locations (typically 60 dBA). People may consider louder environments adverse, but most will accept the higher levels associated with noisier urban residential or residential-commercial areas (60 to 75 dBA) or dense urban or industrial areas (65 to 80 dBA). Regarding increases in dBA, the following relationships should be noted (Caltrans 2013).

- Except in carefully controlled laboratory experiments, a 1-dBA change cannot be perceived by humans.
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference.
- A minimum 5-dBA change is required before any noticeable change in community response would be expected. A 5-dBA increase is typically considered substantial.
- A 10-dBA change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

Health Effects of Noise on People

Hearing Loss. While physical damage to the ear from an intense noise impulse is rare, a degradation of auditory acuity can occur even within a community noise environment. Hearing loss occurs mainly due to chronic exposure to excessive noise but may be due to a single event such as an explosion. Natural hearing loss associated with aging may also be accelerated from chronic exposure to loud noise. The Occupational Safety and Health Administration has a noise exposure standard that is set at the noise threshold where hearing loss may occur from long-term exposures. The maximum allowable level is 90 dBA averaged over 8 hours. If the noise is above 90 dBA, the allowable exposure time is correspondingly shorter.

Annoyance. Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn} as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be disagreement about the relative annoyance of these different sources. A noise level of about 55 dBA L_{dn} is the threshold at which a substantial percentage of people begin to report annoyance (FICON 1992).

2 Community Noise Survey

2.1 Description of Major Noise Sources in the Community

2.1.1 Transportation Noise Sources

Aviation

The nearest public airports to the study area are the San Luis Obispo County Regional Airport located approximately 5 miles due northwest, and the Oceano County Airport located approximately 2 miles to the south. According to the Airport Land Use Plan (ALUP 2005) the mapped 60 dB noise contour for the San Luis Obispo County Regional Airport extends no further than 1,000 feet from the runways in the direction of Pismo Beach; this 60 dB contour is therefore located more than 4.5 miles from Pismo Beach. According to the ALUP for Ocean County Airport (ALUP 2007), the 65 dB noise contour for Oceano Airport extends no closer to Pismo Beach than approximately Farroll Road in Grover Beach (approximately one mile south of the Pismo Beach City limits). High-altitude overflights for aircraft using the San Luis Obispo County Airport occur over the study area, but do not contribute to the ambient noise environment within the study area. Consequently the Pismo Beach noise environment is not affected by aircraft operations associated with airport facilities in the region.

Roadways

Highways are a major noise source in many jurisdictions, and they are the primary means of circulation throughout Pismo Beach. Pismo Beach is primarily subject to noise impacts from US Highway 101 and State Route 1. US Highway 101 roughly bisects Pismo Beach in the southern and central portions of the City, and is aligned along the east side of urban development in the northern portion of the City. The relatively central alignment of US Highway 101 means that traffic noise from this facility affects much of the area within the City. State Route 1 is a separate two-lane at grade highway only within the southern section of the City, joining with US Highway 101 in the vicinity of Pismo Preserve. State Route 1 generally bisects the western urban areas of the City between US Highway 101 and the beach. With more limited traffic and only two travel lanes, noise from Route 1 is not as extensive as that from US Highway 101. One short-term noise measurement and manual traffic counts were conducted for each of these highways to characterize existing noise levels.

Major arterial roadways in Pismo Beach also contribute traffic noise to the ambient noise environment. While traffic speeds are lower on these facilities than on highways, setback distances from travel lanes to adjacent uses tend to be less, and therefore noise from arterial roadways can result in unacceptably high noise levels at adjacent noise-sensitive land uses. Dudek completed a short-term noise measurement and manual traffic counts

for Ocean Boulevard, North 4th Street, Mattie Road, North Oak Boulevard, Price Canyon Road, and Shell Beach Road, to characterize existing traffic noise levels along these roadways.

Railroads

The Union Pacific Railroad (UPRR) owns rail lines that traverse Pismo Beach, carrying UPRR freight trains and Amtrak passenger trains. The UPRR line extends from the Bello Street industrial area at the City's northern boundary, due south to the vicinity of Pismo State Beach before continuing on to Grover Beach.

Although train noise is intermittent, it is a significant source of noise due to its magnitude and associated vibration effects. Train noise is comprised of the sounds of the locomotive engine, wheel-on-rail noise, and train whistles near at-grade roadway crossings. For train horns to be an effective warning device for motorists, they must provide a sound level capable of initiating a response from the driver as the train approaches the crossing. Dudek completed a 24-hour continuous sound level measurement adjacent to the UPRR alignment in order to characterize community noise levels associated with train operations.

2.1.2 Industrial - Commercial Noise Sources

Industrial Sources

Noise from industrial businesses and large stationary sources varies but can result in substantially elevated noise levels and impacts on adjacent noise-sensitive land uses. Industrial operations often involve the use of mechanical equipment, generators, and vehicles that contribute to noise levels at industrial sites, particularly if operations occur outdoors. Pismo Beach has one area designated for industrial uses; the area is situated east of Price Canyon Road, generally north of Bello Street, and along the west side of the UPRR alignment (described above). Currently this area serves as storage and staging for Pacific Gas and Electric. Dudek conducted a 24-hour measurement near the closest residences west of this industrial area to characterize community noise levels from industrial operations.

Commercial Sources

Most of the commercial businesses in Pismo Beach are aligned along Price Street, Shell Beach Road, 5 Cities Drive, and Hinds Avenue/Price Canyon Road. The Pismo Beach Premium Outlets represents the largest commercial use, by size and in relation to traffic generation. As a major commercial land use and stationary noise source, Dudek completed a 24-hour measurement near the closest residences south of Pismo Beach Premium Outlets area to characterize community noise levels from major commercial retail operations.

2.2 Existing Noise Levels

2.2.1 Sound Level Measurement Program

Existing noise conditions present in the City of Pismo Beach were inventoried by Dudek in October 2019. Two types of sound-level measurements were taken: short-term (varying from 5 to 30 minutes) measurements were performed along highways and major local roadways to characterize noise levels associated with transportation facilities and for calibration of the transportation noise model; and, 24-hour measurements were performed

adjacent to the railroad, in the vicinity of the Price Canyon Road industrial area, and adjacent to the Pismo Beach Premium outlets. Noise measurement location points are illustrated in Exhibit 1 (at the back of this report).

Sound-level measurements were performed using two different integrating sound-level meters: A Rion Model NL-32 (American National Standards Institute [ANSI] Type I), and three SoftdB Piccolo II Model (ANSI Type II). ANSI Type I and Type II sound-level meters both have sufficient accuracy to be used for environmental noise evaluation. The sound-level meters were calibrated before and after each series of measurements using a Rion Model NC-74 calibrator.

SHORT-TERM MEASUREMENTS

Roadway Sound Level Measurements

Since roadway traffic is often a primary contributor to the noise environment in any community, short-term noise measurements were conducted adjacent to selected existing roadways within Pismo Beach. These measurements are useful in characterizing ambient noise levels along roadways, as well as providing sound data and manual traffic counts used to calibrate the transportation noise model. A total of 10 short-term noise measurements were conducted. The results of short-term roadway traffic noise measurements are presented in Table 1. Field data for each short-term sound level measurement are provided in Attachment 1 (Short-term Noise Measurements Field Data Sheets), including measured sound levels, manual traffic count results, distance from the roadway edge to the measurement point, vehicle speed on the roadway, and measurement point identification.

Table 1
Roadway Noise Level Measurements (Existing) (dBA)

ST #	Date Measured	Measurement Time Period	L_{eq}	L_{max}	L_{min}	Roadway
1	10/22/19	11:35 - 11:50	55	62	50	**Seacliff Drive** (between Paddock & Baker)
2		12:30 - 12:45	54	61	49	**Ocean Blvd.** (between Palisade & Seaview)
3		14:05 - 14:20	43	46	41	**Dugan Road.** (between Christine & Elaine)
4		9:40 - 9:45	72	76	69	**US Highway 101** (at southbound 5 Cities Drive ramps)
5		13:00 - 13:10	69	83	51	**State Route 1** (between Park & Addie)
6		10:10 - 10:20	73	82	49	**North 4th Street** (south of 5 Cities Drive)
7		10:50 - 11:20	66	80	62	**Mattie Road** (between Foothill and Bayfront)
8		13:50 – 14:00	67	79	45	**North Oak Park Blvd.** (south of Dell Ct.)
9		13:20 - 13:30	71	86	48	**Price Canyon Road.** (south of Meadowlark)
10		12:00 - 12:15	66	83	55	**Shell Beach Road.** (south of Ebb Tide Lane)

Traffic noise measurements (short-term) were collected using the Rion NL-32 ANSI Type I Meter. The meter was placed on a tri-pod at approximately five feet above the ground, in accordance with the ANSI standard for environmental noise measurements. The sound level meter was oriented toward the adjacent street, and a windscreen was employed. The distance from the edge of the pavement to the sound level meter was noted in the field data sheet for each measurement location. The number of cars, medium trucks, and heavy trucks

passing the measurement point during the measurement period were tallied, along with identification of the posted speed limit for the roadway. The duration was noted for each measurement, and sound levels including L_{eq}. L_{max}, L_{min}, and other percentile statistics were recorded on the data sheet for each measurement location (Refer to Attachment 1). The measurement identifications (ST#) in Table 1 correspond to locations illustrated in Exhibit 1 for these short-term measurements.

As presented in Table 1, recorded traffic noise levels range from a high of 73 dBA L_{eq} to a low of 43 dBA L_{eq}. The highest traffic noise levels are associated with US Highway 101, North 4th Street, and Price Canyon Road, with each of these roadways carrying a large number of vehicles at higher speeds. Dugan Road (LT3) had the lowest recorded noise level, and there were also no vehicles that passed the measurement point during the measurement. There were also no vehicles that passed the measurement point on Seacliff Drive (LT1) during the measurement, but background surf noise was dominant at this measurement point along the sea cliff, resulting in a moderate recorded noise level of 55 dBA L_{eq}.

LONG-TERM MEASUREMENTS

Dudek completed a total of three long-term (24-hour) measurements to characterize environmental noise associated with industrial, commercial, and railroad operations. Long term measurement locations (LT#) are indicated on Exhibit 1 (at the end of this report). Measurements were conducted using three SoftdB Piccolo II Model (ANSI Type II) sound level meters. The measurements were unattended, but locked cases were employed to prevent tampering of the meters. The Piccolo meters were calibrated before and after the 24-hour measurements to verify accuracy.

The Piccolo meters were configured to record data each hour (using a one-hour averaging period) across the entire 24-hour measurement. Sound level metrics including L_{eq}. L_{max}, L_{min}, and other percentile statistics were recorded for each hourly period. Data logs for each long term measurement location are included in Attachment 3. Based on the recorded hourly averages at each long-term measurement location, the CNEL was calculated at these monitoring locations; a CNEL worksheet for each location is also provided in Attachment 3.

Table 2 summarizes the minimum (L_{min}) and maximum (L_{max}) sound levels recorded for each monitor location during the 24-hour measurement, as well as the calculated 24-hour weighted average noise level (CNEL). The sound monitor location description and source being measured are also provided in Table 2 for each monitor location. More detail about each monitoring location is provided below Table 2.

Table 2
Ambient Sound Level Measurements (dBA)

Site	Location	Noise Sources	Dates	CNEL	L_{max}	L_{min}
LT1	Closest residences west of Price Canyon Industrial Area	Price Canyon Industrial Area	10/22/19 – 10/23/19	56	82.5	37.1
LT2	Adjacent to UPRR alignment, vicinity of Park View Avenue	UPRR train operations	10/22/19 – 10/23/19	66	94.9	43
LT3	Near closest residences, southwest corner of Pismo Premium Outlets	Pismo Premium Outlets	10/22/19 – 10/23/19	64	92.7	43.1

Industrial Noise Sources (LT1)

The only area designated for industrial uses within Pismo Beach is located along the west side of the UPRR alignment, north of Bello Street, and east of Price Canyon Road. To characterize industrial noise levels, a 24-hour measurement was conducted along Dell Court, between two widely-spaced residences closest to the western boundary of the industrial area (LT1 on Exhibit 1). The measurement location is approximately 300 feet from the western boundary of the industrial area. A 56 dBA CNEL at this location was determined from hourly average noise levels. Using this CNEL value and separation distance from the industrial area, the distance to the 70, 65 and 60 CNEL contours was calculated. This calculation was based upon outdoor attenuation rates of 6 dBA per doubling of distance for a point source. This calculation ignores topography, the presence of structures or walls, and the presence of vegetation, and is therefore very conservative (i.e., the presence of topography between the industrial uses and receivers would partially or fully block the propagation of sound, reducing the distance from the industrial noise source to the calculated noise contour boundary). The distance to the 70, 65, and 60 dBA CNEL contour associated with the industrial area operations is reported in Table C (Attachment 2).

Railroad Noise Sources (LT2)

To characterize community noise levels from rail (train) operations, a 24-hour measurement was conducted along the UPRR tracks, in the vicinity of Park View Avenue (LT2 on Exhibit 1). The measurement location is approximately 40 feet from the center of the tracks. A 66 dBA CNEL at this location was determined from hourly average noise levels. Using this CNEL value and separation distance from the industrial area, the distance to the 70, 65 and 60 CNEL contours was calculated. This calculation was based upon outdoor attenuation rates of 3 dBA per doubling of distance for a line source. This calculation is a conservative worst-case distance, ignoring topography, the presence of structures or walls, and the presence of vegetation. The distance to the 70, 65, and 60 dBA CNEL contour associated with UPRR operations is reported in Table C (Attachment 2).

Commercial Noise Sources (LT3)

The Pismo Beach Premium Outlets represents the largest commercial use, by size and in relation to traffic generation. To characterize noise levels associated with major commercial operations, a 24-hour measurement was conducted at the southwest corner of the Pismo Premium Outlets, near the closest adjacent residences (LT3 on Exhibit 1). The measurement location is approximately 55 feet from the southern boundary of the Pismo Premium Outlets site. A 64 dBA CNEL at this location was determined from hourly average noise levels. Using this CNEL value and separation distance from the commercial retail operations, the distance to the 70, 65 and 60 CNEL contours was calculated. This calculation was based upon outdoor attenuation rates of 6 dBA per doubling of distance for a point source. This calculation is a conservative worst-case distance, ignoring topography, the presence of structures or walls, and the presence of vegetation. The distance to the 70, 65, and 60 dBA CNEL contour associated with UPRR operations is reported in Table C (Attachment 2).

2.2.2 Traffic Noise Modeling (Existing Conditions)

The traffic noise levels presented in Table 1 are the average noise level (L_{eq}) over the period of the measurement. In order to determine the CNEL associated with current traffic volumes, traffic modeling is performed. The existing CNEL was calculated for each of the roadways represented by the short-term measurement locations, except for ST1 and ST3. The roadway segments adjacent to ST1 and ST3 had no traffic occurring during the measurement, and no published traffic data exists for these roads (Seacliff Drive and Dugan Road). As such, ST1 and ST3 are representative of ambient noise levels in residential areas removed from major transportation noise

sources. Adjacent to the ocean, residences can expect a background level of approximately 55 dBA L_{eq}.hourly; in areas removed from both the ocean and US Highway 101, residential neighborhood noise levels are as low as 43 dBA L_{eq}.hourly.

Traffic counts, vehicle speeds, roadway configuration, and noise levels recorded during the short-term measurement at ST2 and at ST4 through ST10 were used to set up and calibrate the TNM 2.5 Traffic Noise Model (FHWA 2004) in order to model existing traffic noise (CNEL) along the roadway segments adjacent to these measurement points. In accordance with FHWA guidelines for TNM 2.5, the counted vehicles at each measurement point were normalized to a one-hour volume (for example if the measurement period was for thirty minutes, the counted number of vehicles was doubled to account for vehicles passing the measurement point during a 60-minute period). The normalized traffic volume, vehicle composition ratios, vehicle speeds, and lane configurations recorded during the noise measurement at each location were used to calibrate the model and verify the input used in the noise model. The modeled L_{eq} for short-term measurement locations are within one dB of the measured noise levels. This result generally confirms the assumptions used in the noise model.

The calibrated noise model was then run using "existing" average daily trip (ADT) for each of the selected highway and roadway segments. The existing scenario input ADT data for the model runs in presented in Attachment 2 (Table A - Traffic Count Data and Future Traffic Volume Forecast Summary), including the identification of sources for the "existing" scenario ADT data. The calculated existing CNEL for each selected highway and roadway segment is also presented in Attachment 2 (Table B - Traffic Noise Levels and Noise Contour Boundary Distances). The TNM 2.5 model runs used a uniform distance of 50 feet from the centerline of US Highway 101, and 25 feet from the center-line of all other roadways. The CNEL values at this uniform distance are reported in Table B.

The modeled CNEL at a given distance of 50 feet (US Highway 101) or 25 feet (all other roadways) from the roadway was then used to calculate the distance from the roadway center-line to the boundary of the 70, 65, and 60 dBA CNEL contours. This calculation was based upon outdoor attenuation rates of 3 dBA per doubling of distance for a line source. This calculation ignores topography, the presence of structures or walls, and the presence of vegetation, and is therefore very conservative (i.e., the presence of buildings along a roadway would partially or fully block the propagation of sound, reducing the distance from the roadway to the calculated noise contour boundary). The distance to the 70, 65, and 60 dBA CNEL contour is also reported in Table B.

2.3 Predicted Future Noise Levels

Roadway transportation represents the most important and pervasive noise source for a compact community such as Pismo Beach. Therefore, the prediction of future community noise levels in Pismo Beach rests heavily on modeling of traffic noise associated with ADT forecasts pertaining to major local roadways and highways. For freeways and highways, Dudek used the Citywide Transportation Model and Circulation Study, Final Report (Pismo Beach 2016) ADT to the year 2035 for each of the selected highway segments. In order to extend the forecast to Year 2040, Dudek applied the annual growth rate indicated in the 2019 Regional Transportation Plan (SLOCOG 2019). The RTP identifies an annual growth rate of 0.053%, which Dudek applied to the 2035 ADT values in the Circulation Study, to increment the predicted ADT values to the Year 2040. For local street segment volumes, Dudek used 2040 forecasted peak intersection volume data for local streets in the Pismo Beach Circulation Element Update, Final Report (GHD September 2021)

The calibrated noise model was then run using the calculated Year 2040 ADT data (described above) for each of the selected highway and roadway segments. The Year 2040 scenario input ADT data for the model runs in presented in Attachment 2 (Table A - Traffic Count Data and Future Traffic Volume Forecast Summary). Notes in the table identify the sources for the forecasted ADT data in the table. The calculated Year 2040 CNEL for each selected highway and roadway segment is also presented in Attachment 2 (Table B - Traffic Noise Levels and Noise Contour Boundary Distances). The TNM 2.5 model runs used a uniform distance of 50 feet from the centerline of US Highway 101, and 25 feet from the center-line of all other roadways. The modeled Year 2040 CNEL values at this uniform distance are reported in Table B.

The modeled Year 2040 CNEL at a given distance of 50 feet (US Highway 101) or 25 feet (all other roadways) from the roadway was then used to calculate the distance from the roadway center-line to the boundary of the 70, 65, and 60 dBA CNEL contours. This calculation was based upon outdoor attenuation rates of 3 dBA per doubling of distance for a line source. This calculation is a conservative worst-case distance, ignoring topography, the presence of structures or walls, and the presence of vegetation. The distance to the 70, 65, and 60 dBA CNEL contour is also reported in Table B.

3 References Cited

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City of Pismo Beach. 2016 . *City of Pismo Beach Citywide Transportation Model and Circulation Study, Final Report*, August 23, 2016.

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HUD, *Noise Guidebook*, 2009. Available at: https://www.hudexchange.info/resource/313/hud-noise-guidebook/

San Luis Obispo Council of Governments (SLOCOG). 2019. Regional Transportation Plan



SOURCE: NAIP 2016; San Luis Obispo County 2019

DUDEK 0 1,200 2,400 Feet

EXHIBIT 1

Noise Measurement Locations

Pismo Beach Noise Element Update ▯ Background Technical Report

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ATTACHMENT 1

FIELD DATA SHEETS - SHORT TERM MEASUREMENTS

DUDEK

FIELD NOISE MEASUREMENT DATA

PROJECT: Pismo Beach NEU — PROJECT #: 11924
SITE ID: ST-1 Memory Park
SITE ADDRESS — OBSERVER(S): JVL
START DATE: 10/22 — END DATE: 10/22
START TIME: 11:35 — END TIME: 11:50

METEOROLOGICAL CONDITIONS

TEMP: 72 F — HUMIDITY: 38 % R.H. — WIND: (CALM) LIGHT MODERATE
WINDSPD: 0 MPH — DIR. N NE S SE S SW W NW — VARIABLE STEADY GUSTY
SKY: (SUNNY) (CLEAR) OVRCAST PRTLY CLDY FOG RAIN

ACOUSTIC MEASUREMENTS

MEAS. INSTRUMENT: RION NL-32 — TYPE (1) 2 — SERIAL # 01030561
CALIBRATOR: RION NC-74 — SERIAL # 34678576
CALIBRATION CHECK — PRE-MEASUREMENT: 94 dBA SPL — POST-MEASUREMENT: 94 dBA SPL — WINDSCRN: X

SETTINGS: (A-WTD) (SLOW) FAST (FRONTAL) RANDOM ANSI OTHER:

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
1	11:35	11:50	55.2	61.6	50.1	52.3	54.3	57.4	

COMMENTS
MEMORY PARK - ADJACENT TO CLIFF STREET
TYPICAL DAYTIME FOR RESIDENTIAL NEIGHBORHOOD

SOURCE INFO AND TRAFFIC COUNTS

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL OTHER: BACKGROUND
ROADWAY TYPE: — DIST. TO RDWY C/L OR EOP:
TRAFFIC COUNT DURATION: ___ MIN — SPEED ___ — ___ MIN — SPEED

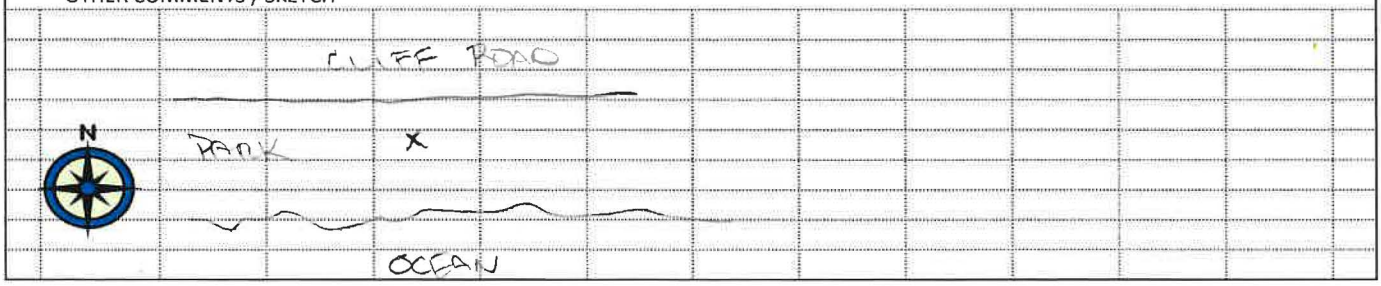
COUNT 1 (OR RDWY 1) DIRECTION	NB/EB	SB/WB	NB/EB	SB/WB	IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE ___	COUNT 2 (OR RDWY 2) NB/EB	SB/WB	NB/EB	SB/WB
AUTOS									
MED TRKS									
HVY TRKS									
BUSES									
MOTRCLS									

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY:

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS BIRDS DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE
OTHER: OCEAN SURF

DESCRIPTION / SKETCH

TERRAIN HARD SOFT (MIXED) FLAT OTHER:
PHOTOS #8 > #9
OTHER COMMENTS / SKETCH



DUDEK

FIELD NOISE MEASUREMENT DATA

PROJECT: PISMO BEACH NEU | PROJECT #: 11924
SITE ID: ST-2
SITE ADDRESS: OCEAN BLVD. | OBSERVER(S): JVL
START DATE: 10/22 | END DATE: 10/22
START TIME: 12:30 | END TIME: 12:45

METEOROLOGICAL CONDITIONS

TEMP: 74 F | HUMIDITY: 35 % R.H. | WIND: CALM (LIGHT) MODERATE
WINDSPD: 2 MPH | DIR. N (NE) S SE S SW W NW | VARIABLE STEADY GUSTY
SKY: (SUNNY) (CLEAR) | OVRCAST PRTLY CLDY FOG RAIN

ACOUSTIC MEASUREMENTS

MEAS. INSTRUMENT: RION NL-32 | TYPE 1 (2) | SERIAL # 01030561
CALIBRATOR: RION NC-74 | SERIAL # 34678576
CALIBRATION CHECK | PRE-MEASUREMENT: 94 dBA SPL | POST-MEASUREMENT: 94 dBA SPL | WINDSCRN: X

SETTINGS: (A-WTD) (SLOW) FAST | FRONTAL (RANDOM) ANSI | OTHER:

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
1	12:30	12:45	53.6	60.9	49.3	51.3	52.6	55.6	

COMMENTS: BACKGROUND FOR RESIDENTIAL NEIGHBORHOOD AT BEACH. LITTLE TRAFFIC ON OCEAN BLVD DURING MEASURE.

SOURCE INFO AND TRAFFIC COUNTS

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL OTHER: SURF STREAM/SEA WAVES
ROADWAY TYPE: COLLECTOR | DIST. TO RDWY C/L OR EOP: 10'

TRAFFIC COUNT DURATION: ___ MIN | SPEED: 25

COUNT 1 (OR RDWY 1)	DIRECTION	NB/EB	SB/WB	NB/EB SPEED	SB/WB SPEED
	AUTOS	5			
	MED TRKS	0			
	HVY TRKS	0			
	BUSES	0			
	MOTRCLS	0			

IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE ___

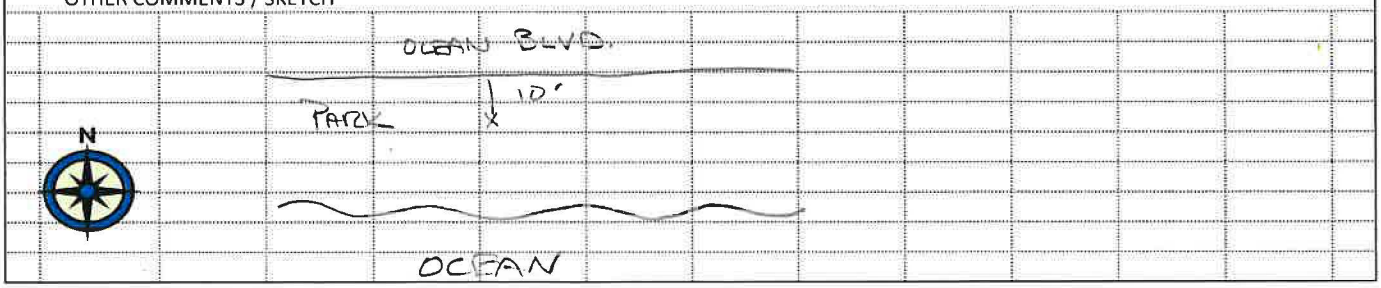
COUNT 2 (OR RDWY 2)	NB/EB	SB/WB	NB/EB SPEED	SB/WB SPEED

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY: 25

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS BIRDS DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE
OTHER: OCEAN SURF

DESCRIPTION / SKETCH

TERRAIN: (HARD) SOFT MIXED FLAT OTHER:
PHOTOS: #13 & #14
OTHER COMMENTS / SKETCH



DUDEK

FIELD NOISE MEASUREMENT DATA

PROJECT	PISMO BEACH NEU	**PROJECT #**	11924
SITE ID	ST-3		
SITE ADDRESS	DUGAN RD @ FLAWE WAY	**OBSERVER(S)**	TVL
START DATE	10/22/19	**END DATE**	10/22/19
START TIME	2:05	**END TIME**	2:20

METEOROLOGICAL CONDITIONS

TEMP	74 F	**HUMIDITY**	32 % R.H.	**WIND**	CALM	(LIGHT)	MODERATE
WINDSPD	3 MPH	**DIR.**	N (NE) S SE S SW W NW		VARIABLE	(STEADY)	GUSTY
SKY	(SUNNY) (CLEAR)	OVRCAST	PRTLY CLDY	FOG	RAIN		

ACOUSTIC MEASUREMENTS

MEAS. INSTRUMENT	RION NL-32	TYPE (1) 2	SERIAL # 01030561
CALIBRATOR	Rion NC-74		SERIAL # 34678576
CALIBRATION CHECK	PRE-MEASUREMENT 94.0 dBA SPL	POST-MEASUREMENT 94.0 dBA SPL	WINDSCRN x

SETTINGS A-WTD SLOW FAST FRONTAL RANDOM ANSI OTHER:

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
1	2:05	2:20	42.7	45.9	41.1	41.7	42.3	44.1	

COMMENTS

SOURCE INFO AND TRAFFIC COUNTS

PRIMARY NOISE SOURCE TRAFFIC AIRCRAFT RAIL INDUSTRIAL OTHER: BACKGROUND

ROADWAY TYPE: DIST. TO RDWY C/L OR (EOP) 8'

TRAFFIC COUNT DURATION: ___ MIN SPEED ___ ___ MIN SPEED

COUNT 1 (OR RDWY 1) DIRECTION	NB/EB	SB/WB	NB/EB	SB/WB	IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE ___	COUNT 2 (OR RDWY 2) NB/EB	SB/WB	NB/EB	SB/WB
AUTOS									
MED TRKS									
HVY TRKS									
BUSES									
MOTRCLS									

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE

POSTED SPEED LIMIT SIGNS SAY:

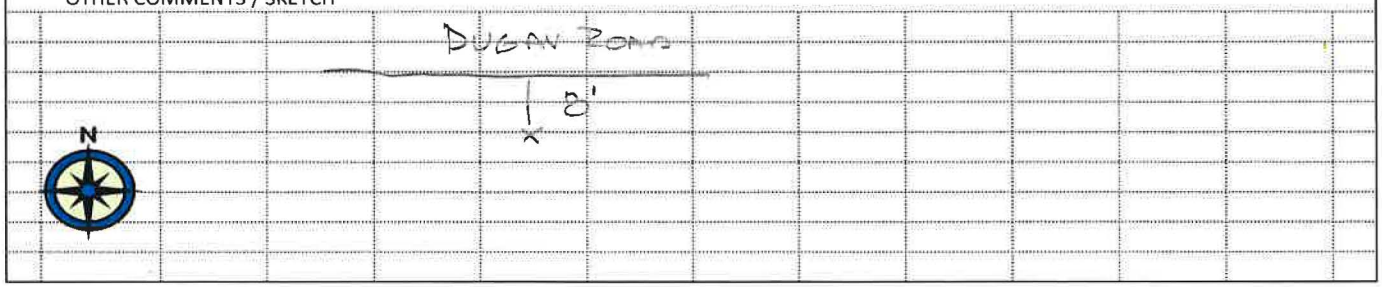
OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS BIRDS DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE
OTHER: DISTANT US101, TRAIN HORN

DESCRIPTION / SKETCH

TERRAIN (HARD) SOFT MIXED (FLAT) OTHER:

PHOTOS #19, #20

OTHER COMMENTS / SKETCH



DUDEK

FIELD NOISE MEASUREMENT DATA

PROJECT: PISMO BEACH NEU — PROJECT #: 11974
SITE ID: ST-4
SITE ADDRESS: FIVE CITIES DRIVE McDONALDS — OBSERVER(S): JVL
START DATE: 10/22 — END DATE: 10/22
START TIME: — END TIME:

METEOROLOGICAL CONDITIONS

TEMP: 72 F — HUMIDITY: 36 % R.H. — WIND: (CALM) LIGHT MODERATE
WINDSPD: 0 MPH — DIR. N NE S SE S SW W NW — VARIABLE STEADY GUSTY
SKY: (SUNNY) (CLEAR) OVRCAST PRTLY CLDY FOG RAIN

ACOUSTIC MEASUREMENTS

MEAS. INSTRUMENT: RION NL-32 — TYPE (1) 2 — SERIAL # 01030561
CALIBRATOR: RION NC-74 — SERIAL # 34678576
CALIBRATION CHECK — PRE-MEASUREMENT: 94 dBA SPL — POST-MEASUREMENT: 94 dBA SPL — WINDSCRN: X

SETTINGS: (A-WTD) (SLOW) FAST (FREQUENCY) RANDOM ANSI OTHER:

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
1	9:40	9:45	72.4	75.8	63.7	69.3	72.1	74.4	

COMMENTS: 10-15' ABOVE ELEVATION OF U.S. 101

SOURCE INFO AND TRAFFIC COUNTS

PRIMARY NOISE SOURCE: (TRAFFIC) AIRCRAFT RAIL INDUSTRIAL OTHER:
ROADWAY TYPE: US 101 — DIST. TO RDWY C/L OR (EOP): 125'

TRAFFIC COUNT DURATION: ___ MIN — SPEED

COUNT 1 (OR RDWY 1) DIRECTION	NB/EB	SB/WB	NB/EB SPEED	SB/WB SPEED
AUTOS	316			
MED TRKS	4			
HVY TRKS	14			
BUSES	1			
MOTRCLS	2			

IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE: X

TRAFFIC COUNT DURATION: ___ MIN — SPEED

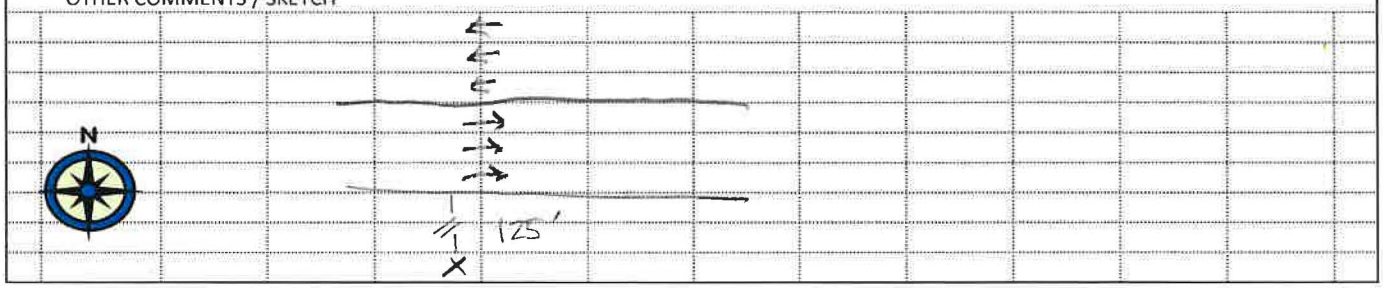
COUNT 2 (OR RDWY 2)	NB/EB	SB/WB	NB/EB SPEED	SB/WB SPEED

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY: 65

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS BIRDS DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE
OTHER:

DESCRIPTION / SKETCH

TERRAIN: HARD SOFT (MIXED) FLAT OTHER:
PHOTOS: #1 & #2
OTHER COMMENTS / SKETCH



DUDEK

FIELD NOISE MEASUREMENT DATA

PROJECT: HSMD BEACH NEU — PROJECT #: 11924
SITE ID: ST-5
SITE ADDRESS: US 1 — OBSERVER(S): JVL
START DATE: 10/22 — END DATE: 10/22
START TIME: 1:00 — END TIME:

METEOROLOGICAL CONDITIONS

TEMP: 74 F — HUMIDITY: 32 % R.H. — WIND: CALM (LIGHT) MODERATE
WINDSPD: 3 MPH — DIR. N (NE) S SE S SW W NW — VARIABLE STEADY GUSTY
SKY: SUNNY CLEAR OVRCAST PRTLY CLDY FOG RAIN

ACOUSTIC MEASUREMENTS

MEAS. INSTRUMENT: Rion NL-32 — TYPE (1) 2 — SERIAL # 01030561
CALIBRATOR: Rion NC-74 — SERIAL # 34678576
CALIBRATION CHECK — PRE-MEASUREMENT: 94.0 dBA SPL — POST-MEASUREMENT: 94.0 dBA SPL — WINDSCRN: X

SETTINGS: (A-WTD) (SLOW) FAST (FRONTAL) RANDOM ANSI OTHER:

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
1	1:00	1:10	69.3	83.0	51.3	58.7	67.2	72.2	

COMMENTS

SOURCE INFO AND TRAFFIC COUNTS

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL OTHER:
ROADWAY TYPE: — DIST. TO RDWY C/L OR EOP:
TRAFFIC COUNT DURATION: ___ MIN — SPEED

COUNT 1 (OR RDWY 1) DIRECTION	NB/EB	SB/WB	NB/EB SPEED	SB/WB SPEED
AUTOS	129			
MED TRKS	3			
HVY TRKS	3			
BUSES	0			
MOTRCLS	2			

IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE: X

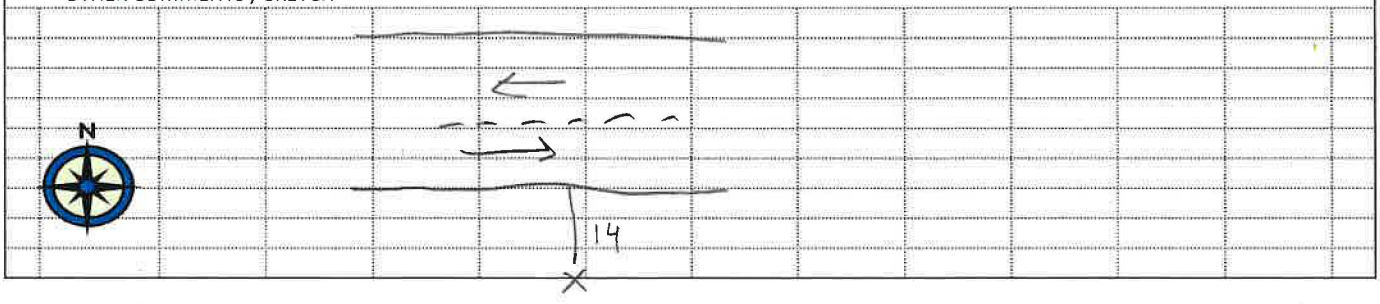
COUNT 2 (OR RDWY 2)	___ MIN NB/EB	SB/WB	SPEED NB/EB	SB/WB

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY: 45

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS BIRDS DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE
OTHER:

DESCRIPTION / SKETCH

TERRAIN: HARD SOFT MIXED FLAT OTHER:
PHOTOS: # 15 & #16
OTHER COMMENTS / SKETCH



FIELD NOISE MEASUREMENT DATA

DUDEK

PROJECT: PISMO BEACH NEU | PROJECT #: 11924
SITE ID: ST-6
SITE ADDRESS: 11TH STREET | OBSERVER(S): JVL
START DATE: 10/22 | END DATE: 10/22
START TIME: | END TIME:

METEOROLOGICAL CONDITIONS

TEMP: 72 F | HUMIDITY: 36 % R.H. | WIND: (CALM) LIGHT MODERATE
WINDSPD: 0 MPH | DIR. N NE S SE S SW W NW | VARIABLE STEADY GUSTY
SKY: (SUNNY) (CLEAR) OVRCAST PRTLY CLDY FOG RAIN

ACOUSTIC MEASUREMENTS

MEAS. INSTRUMENT: RION NL-32 | TYPE (1) 2 | SERIAL # 01030561
CALIBRATOR: RION NC-74 | SERIAL # 34678576
CALIBRATION CHECK: PRE-MEASUREMENT 94 dBA SPL | POST-MEASUREMENT 94 dBA SPL | WINDSCRN X

SETTINGS: (A-WTD) (SLOW) FAST (FRONTAL) RANDOM ANSI OTHER:

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
	10:10	10:20	72.8	81.5	49.5	59.9	70.2	76.7	

COMMENTS:

SOURCE INFO AND TRAFFIC COUNTS

PRIMARY NOISE SOURCE: (TRAFFIC) AIRCRAFT RAIL INDUSTRIAL OTHER:
ROADWAY TYPE: ARTERIAL | DIST. TO RDWY C/L OR (EOP): 10' EDGE OF LANE

TRAFFIC COUNT DURATION: ___ MIN SPEED ___ | ___ MIN SPEED

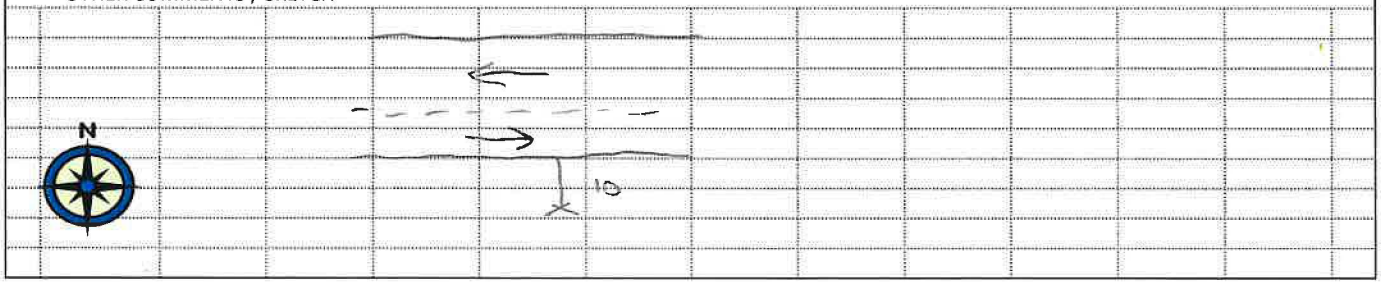
	DIRECTION	NB/EB	SB/WB	NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB
COUNT 1 (OR RDWY 1)	AUTOS	128				IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE X				
	MED TRKS	1								
	HVY TRKS	3								
	BUSES	1								
	MOTRCLS	0								
COUNT 2 (OR RDWY 2)										

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY: 45

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS BIRDS DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE
OTHER:

DESCRIPTION / SKETCH

TERRAIN: (HARD) SOFT MIXED FLAT OTHER:
PHOTOS: #3 & #4
OTHER COMMENTS / SKETCH



DUDEK

FIELD NOISE MEASUREMENT DATA

PROJECT: PISMO BEACH NEU | PROJECT #: 11924
SITE ID: ST-7
SITE ADDRESS: MATTIE ROAD | OBSERVER(S): JVL
START DATE: 10/22 | END DATE: 10/22
START TIME: 10:50 | END TIME: 11:20

METEOROLOGICAL CONDITIONS

TEMP: 72 F | HUMIDITY: 36 % R.H. | WIND: CALM (LIGHT) MODERATE
WINDSPD: 3 MPH | DIR. N (NE) S SE S SW W NW | VARIABLE (STEADY) GUSTY
SKY: (SUNNY) (CLEAR) OVRCAST PRTLY CLDY FOG RAIN

ACOUSTIC MEASUREMENTS

MEAS. INSTRUMENT: RION NL-32 | TYPE (1) 2 | SERIAL # 01030561
CALIBRATOR: RION NC-74 | SERIAL # 34678576
CALIBRATION CHECK | PRE-MEASUREMENT: 94 dBA SPL | POST-MEASUREMENT: 94 dBA SPL | WINDSCRN: X

SETTINGS: (A-WTD) (SLOW) FAST (FRONTAL) RANDOM ANSI OTHER:

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
	10:50	11:20	65.7	79.8	57.1	62.0	64.5	67.3	

COMMENTS

SOURCE INFO AND TRAFFIC COUNTS

PRIMARY NOISE SOURCE: (TRAFFIC) AIRCRAFT RAIL INDUSTRIAL OTHER:
ROADWAY TYPE: | DIST. TO RDWY C/L OR (EOP): 9'
TRAFFIC COUNT DURATION: ___ MIN SPEED ___ ___ MIN SPEED

COUNT 1 (OR RDWY 1) DIRECTION	NB/EB	SB/WB	NB/EB	SB/WB
AUTOS	38			
MED TRKS	0			
HVY TRKS	0			
BUSES	0			
MOTRCLS	1			

IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE: X

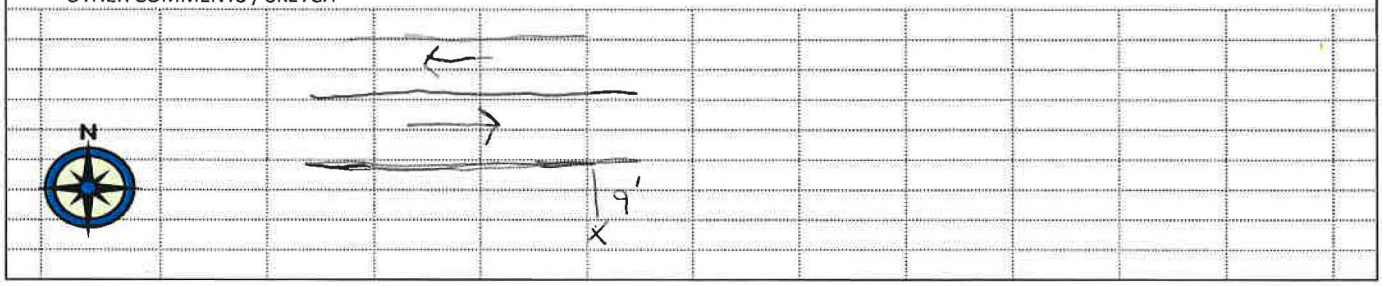
COUNT 2 (OR RDWY 2)	NB/EB	SB/WB	NB/EB	SB/WB

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY: 35

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS BIRDS DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE
OTHER: US 101 BACKGROUND

DESCRIPTION / SKETCH

TERRAIN (HARD) SOFT MIXED FLAT OTHER:
PHOTOS: #5 & #6 & #7
OTHER COMMENTS / SKETCH



DUDEK

FIELD NOISE MEASUREMENT DATA

PROJECT: PISMO BEACH NEU | PROJECT #: 11924
SITE ID: ST-8
SITE ADDRESS: N. OAK PARK BLVD | OBSERVER(S): JVL
START DATE: 10/22/19 | END DATE: 10/22/19
START TIME: 1:50 | END TIME:

METEOROLOGICAL CONDITIONS

TEMP _____ F | HUMIDITY _____ % R.H. | WIND: CALM / LIGHT / MODERATE
WINDSPD _____ MPH | DIR. N NE S SE S SW W NW | VARIABLE / STEADY / GUSTY
SKY: SUNNY / CLEAR / OVRCAST / PRTLY CLDY / FOG / RAIN

ACOUSTIC MEASUREMENTS

MEAS. INSTRUMENT: RION NL-32 | TYPE (1) 2 | SERIAL # 01030561
CALIBRATOR: RION NC-74 | SERIAL # 34678576
CALIBRATION CHECK | PRE-MEASUREMENT 94.0 dBA SPL | POST-MEASUREMENT 94.0 dBA SPL | WINDSCRN X

SETTINGS: A-WTD / SLOW / FAST / FRONTAL / RANDOM / ANSI / OTHER: _____

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
	1:50	2:00	67.3	79.1	45.1	49.6	63.3	71.3	

COMMENTS

SOURCE INFO AND TRAFFIC COUNTS

PRIMARY NOISE SOURCE: TRAFFIC / AIRCRAFT / RAIL / INDUSTRIAL / OTHER: _____
ROADWAY TYPE: | DIST. TO RDWY C/L OR EOP: 10'
TRAFFIC COUNT DURATION: ___ MIN | SPEED 40 | ___ MIN | SPEED

COUNT 1 (OR RDWY 1)	DIRECTION	NB/EB	SB/WB	NB/EB	SB/WB
	AUTOS	82			
	MED TRKS	3			
	HVY TRKS	0			
	BUSES	1			
	MOTRCLS	0			

IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE ___

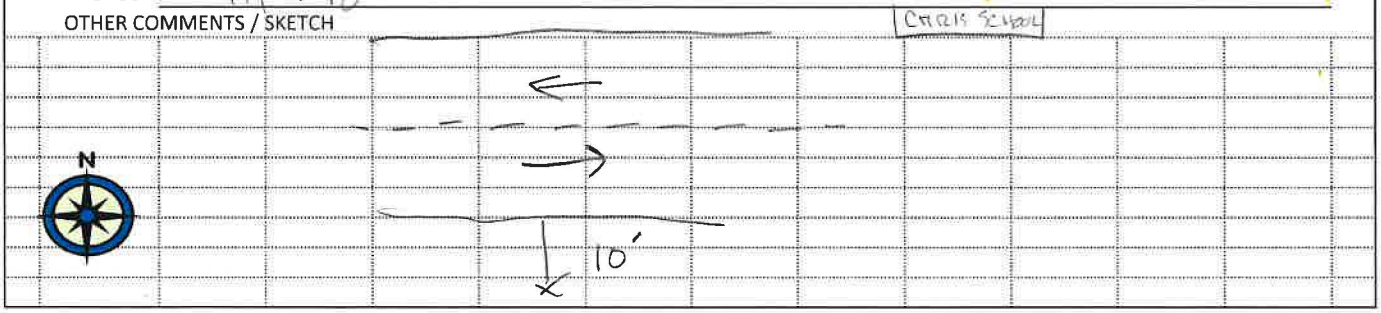
COUNT 2 (OR RDWY 2)	NB/EB	SB/WB	NB/EB	SB/WB

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY: 40

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT / RUSTLING LEAVES / DIST. BARKING DOGS / BIRDS / DIST. INDUSTRIAL
DIST. KIDS PLAYING / DIST. CONVRSTNS / YELLING / DIST. TRAFFIC (LIST RDWYS BELOW) / DISTD GARDENERS/LANDSCAPING NOISE
OTHER: _____

DESCRIPTION / SKETCH

TERRAIN: HARD / SOFT / MIXED / FLAT / OTHER: _____
PHOTOS #17, #18
OTHER COMMENTS / SKETCH



DUDEK

FIELD NOISE MEASUREMENT DATA

PROJECT: PISMO BEACH NEU — PROJECT #: 11924
SITE ID: ST-9
SITE ADDRESS: PRICE CANYON ROAD @ DELL CT — OBSERVER(S): JVL
START DATE: 10/22/19 — END DATE: 10/22/19
START TIME: 1:20 — END TIME: 1:30

METEOROLOGICAL CONDITIONS

TEMP: 74 F — HUMIDITY: 34 % R.H. — WIND: (CALM) LIGHT MODERATE
WINDSPD: 0 MPH — DIR. N NE S SE S SW W NW — VARIABLE STEADY GUSTY
SKY: (SUNNY) (CLEAR) OVRCAST PRTLY CLDY FOG RAIN

ACOUSTIC MEASUREMENTS

MEAS. INSTRUMENT: RION NL-32 — TYPE (1) 2 — SERIAL # 01030561
CALIBRATOR: RION NC-74 — SERIAL # 34678576
CALIBRATION CHECK — PRE-MEASUREMENT: 94 dBA SPL — POST-MEASUREMENT: 94 dBA SPL — WINDSCRN: X

SETTINGS: A-WTD SLOW FAST FRONTAL RANDOM ANSI OTHER:

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
1	1:20	1:30	71.0	86.5	48.3	53.5	64.9	74.2	

COMMENTS

SOURCE INFO AND TRAFFIC COUNTS

PRIMARY NOISE SOURCE: TRAFFIC AIRCRAFT RAIL INDUSTRIAL OTHER:
ROADWAY TYPE: — DIST. TO RDWY C/L OR (EOP): 12 ft.
TRAFFIC COUNT DURATION: ___ MIN — SPEED: 45 ___ MIN — SPEED

	DIRECTION	COUNT 1 (OR RDWY 1) NB/EB	COUNT 1 (OR RDWY 1) SB/WB	COUNT 1 NB/EB SPEED	COUNT 1 SB/WB SPEED	COUNT 2 (OR RDWY 2) NB/EB	COUNT 2 (OR RDWY 2) SB/WB	COUNT 2 NB/EB SPEED	COUNT 2 SB/WB SPEED
	AUTOS	81							
	MED TRKS	4							
	HVY TRKS	7							
	BUSES	0							
	MOTRCLS	0							

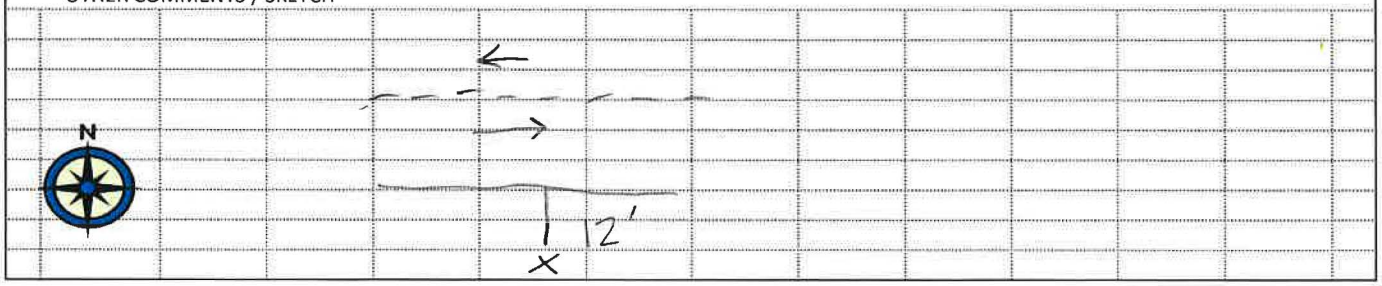
IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE ___

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY: 45

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS BIRDS DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE
OTHER: BACKGROUND LEAF BLOWER

DESCRIPTION / SKETCH

TERRAIN (HARD) SOFT MIXED (FLAT) OTHER:
PHOTOS #15, #16
OTHER COMMENTS / SKETCH



FIELD NOISE MEASUREMENT DATA

DUDEK

PROJECT: PISMO BEACH NED | PROJECT #: 11924
SITE ID: ST-10
SITE ADDRESS: SHELL BEACH ROAD | OBSERVER(S):
START DATE: 10/22 | END DATE: 10/22
START TIME: NOON | END TIME: 12:15

METEOROLOGICAL CONDITIONS

TEMP: 76 F | HUMIDITY: 34 % R.H. | WIND: CALM (LIGHT) MODERATE
WINDSPD: 3 MPH | DIR. N (NE) S SE S SW W NW | VARIABLE STEADY GUSTY
SKY: (SUNNY) (CLEAR) OVRCAST PRTLY CLDY FOG RAIN

ACOUSTIC MEASUREMENTS

MEAS. INSTRUMENT: RION NL-32 | TYPE (1) 2 | SERIAL # 00305161
CALIBRATOR: RION NC-74 | SERIAL # 34678576O
CALIBRATION CHECK: PRE-MEASUREMENT 94 dBA SPL | POST-MEASUREMENT 94 dBA SPL | WINDSCRN X

SETTINGS: A-WTD SLOW FAST FRONTAL RANDOM ANSI OTHER:

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
	12:00	12:15	66.1	83.3	54.9	58.7	62.1	69.3	

COMMENTS: BACKGROUND US101 NOISE MICROPHONE ORIENTED TOWARD SHELL BEACH ROAD, AWAY FROM US101

SOURCE INFO AND TRAFFIC COUNTS

PRIMARY NOISE SOURCE: (TRAFFIC) AIRCRAFT RAIL INDUSTRIAL OTHER: US 101 BACKGROUND
ROADWAY TYPE: ARTERIAL | DIST. TO RDWY C/L OR (EOP): 7 FT-

TRAFFIC COUNT DURATION: ___ MIN | SPEED

COUNT 1 (OR RDWY 1) DIRECTION	NB/EB	SB/WB	NB/EB	SB/WB
AUTOS		71		
MED TRKS		2		
HVY TRKS		1		
BUSES		0		
MOTRCLS		0		

IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE ___

TRAFFIC COUNT DURATION: ___ MIN | SPEED

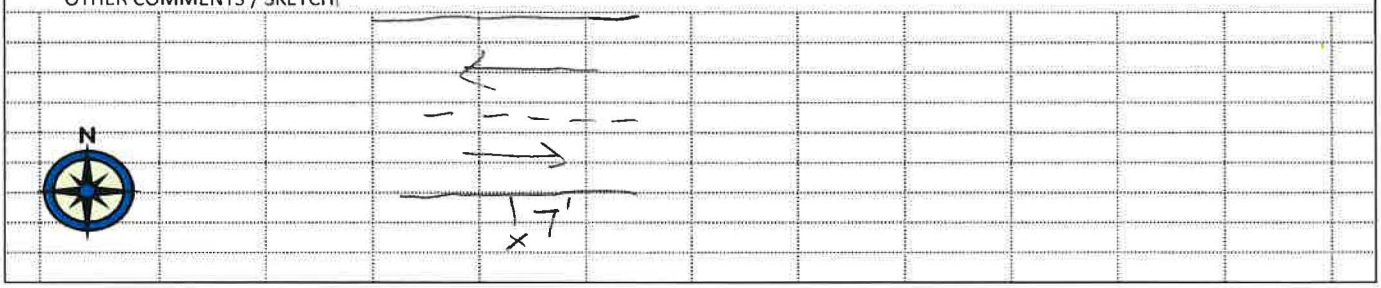
COUNT 2 (OR RDWY 2)	NB/EB	SB/WB	NB/EB	SB/WB

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY: 35

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS BIRDS DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE
OTHER:

DESCRIPTION / SKETCH

TERRAIN: (HARD) SOFT MIXED FLAT OTHER:
PHOTOS: #10 & 11 & 12
OTHER COMMENTS / SKETCH



ATTACHMENT 2

TRAFFIC NOISE MODELING DATA AND RESULTS

TABLE A - Traffic Count Data and Future Traffic Volume Forecast Summary

Site	Road	Minutes	Autos	MT/Bus	HT	Total A+MT+HT	% Auto	% MT	% HT	Hourly Trips	Speed (mph)	EOP Distance	# of Lanes	L_{eq}	Existing ADT City Streets [3]	Existing ADT Highway [5]	2040 ADT Highway [5]	2040 ADT City Streets [6]
ST-1	Seacliff Drive [1]	15	0	0	0	0	N/A	N/A	N/A	0	25	8	2	55.2	-	-	-	-
ST-2	Ocean Boulevard	15	5	0	0	5	100%	0%	0%	20	25	10	2	53.6	200 [4]	-	-	221 [7]
ST-3	Dugan Road (at Elawe Way) [1]	15	0	0	0	0	N/A	N/A	N/A	0	25	8	2	42.7	-	-	-	-
ST-4	US Highway 101 (adjacent to 5 Cities Drive)	5	318	5	14	337	94%	1%	4%	4044	65	125	4	72.4	-	69600	77652	-
ST-5	US 1	10	131	3	3	137	96%	2%	2%	822	45	14	2	69.3	-	7900	8814	-
ST-6	4th Street	10	128	2	3	133	96%	2%	2%	798	45	10	2	72.8	15480	-	-	18150
ST-7	Mattie Road	30	39	0	0	39	100%	0%	0%	78	35	9	2	65.7	1210	-	-	1300
ST-8	N. Oak Park Boulevard	10	82	4	0	86	95%	5%	0%	516	40	10	2	67.3	16090 [5]	-	-	19283 [5]
ST-9	Price Canyon Road (at Dell Court)	10	81	4	7	92	88%	4%	8%	552	45	12	2	71	11210	-	-	14100
ST-10	Shell Beach Road	15	71	2	1	74	96%	3%	1%	296	35	7	2	66.1	1970	-	-	2800
2018 Circulation Element Update IS/MND Data	US 101: Price St (North) to Mattie Road	-	-	-	-	-	-	-	-	-	65	50	4	-	-	64670	72152	-
	US 101: North of Avila Beach Drive [2]	-	-	-	-	-	-	-	-	-	65	50	4	-	-	62020	69195	-
	US 101: South of Oak Park Blvd. [2]	-	-	-	-	-	-	-	-	-	65	50	4	-	-	62230	69429	-
	US 101: Price St (South) to Prce St (North)	-	-	-	-	-	-	-	-	-	65	50	4	-	-	62840	70110	-
	US 101: Mattie Road to Spyglass Drive	-	-	-	-	-	-	-	-	-	65	50	4	-	-	63550	70902	-
	US 101: Spyglass Drive to Avila Beach Drive	-	-	-	-	-	-	-	-	-	65	50	4	-	-	64860	72364	-
	US 101: Oak Park Blvd to Fourth St	-	-	-	-	-	-	-	-	-	65	50	4	-	-	71070	79292	-
	US 101: Fourth St to Price St	-	-	-	-	-	-	-	-	-	65	50	4	-	-	78600	87693	-

Table Notes:

1 Measurement collected to characterize residential neghborhood sound levels distant from major traffic sources, no traffic occurred on adjacent street during measurement.
2 This segment of US 101 is adjacent to, but outside, Pismo Beach City limits.
3 Existing Local Street Roadway Volume calculated from peak intersection volumes, Pismo Beach Circulation Element Update, September 2021.
4 ADT for local roadway not included in 2021 study; based upon manual traffic count during short-term sound measurement.
5 ADT for US 101 segments, US 1 segment, Oak Park Blvd from 2018 Pismo Beach General Plan Circulation Element Update IS/MND.
6 Year 2040 ADT calculated from peak intersection volumes, Pismo Beach Circulation Element Update, September 2021.
7 Year 2040 volume based upon 2019 manual traffic count, with 2019 RTP annual growth rates (0.5%) applied to predict increase from 2019 to 2040.

Octoober 2021

TABLE A - Traffic Count Data and Future Traffic Volume Forecast Summary

TABLE B -TRAFFIC NOISE LEVELS AND NOISE CONTOUR BOUNDARY DISTANCES

October 2021

Project Number: **11924**
Project Name: **Pismo Beach NEU**

DUDEK

Noise Model Assumptions and Background Data

Model Description: FHWA Highway Noise Prediction Model (FHWA-RD-77-108) with California Vehicle Noise (CALVENO) Emission Levels.
Traffic Data Source: 2018 Circulation Element Update MND, San Luis Obispo County RTP 2019, 2021 Circulation Element Update
Community Noise Descriptor: CNEL

24 Hour Traffic Distrbution Assumptions	Day	Evening	Night
Total ADT Volumes	77.70%	12.70%	9.60%
Medium Trucks	87.43%	5.05%	7.52%
Heavy Trucks	89.10%	2.64%	8.06%

CNEL Contour Notes:
" - " countour is located within the roadway right-of-way
Distance is from the centerline of the roadway segment to the receptor location.

Analysis Condition / **Highway Segment**	Lanes	Median Width	ADT Volume	Design Speed (mph)	Vehicle Mix: Medium Trucks	Vehicle Mix: Heavy Trucks	**CNEL at 50 Feet**	Distance from Centerline of Roadway to Contour: 70 CNEL	65 CNEL	60 CNEL
US Highway 101										
Price Street to Mattie Road, Existing	4	25	64,670	65	5%	6%	75.5	177	561	1774
Price Street to Mattie Road, 2040	4	25	72,152	65	5%	6%	76.0	199	629	1991
US Highway 101										
North of Avlia Beach Drive, Existing	4	25	62,020	65	5%	6%	75.6	182	574	1815
North of Avlia Beach Drive, 2040	4	25	69,195	65	5%	6%	76.1	204	644	2037
US Highway 101										
South of Oak Park Blvd, Existing	4	25	62,230	65	5%	6%	75.6	182	574	1815
South of Oak Park Blvd, 2040	4	25	69,429	65	5%	6%	76.1	204	644	2037
US Highway 101										
Price Street (south) to Price Street (north), Existing	4	25	62,840	65	5%	6%	75.6	182	574	1815
Price Street (south) to Price Street (north), 2040	4	25	70,110	65	5%	6%	76.1	204	644	2037
US Highway 101										
Mattie Road to Spyglass Drive, Existing	4	25	63,550	65	5%	6%	75.7	186	587	1858
Mattie Road to Spyglass Drive, 2040	4	25	70,902	65	5%	6%	76.2	208	659	2084
US Highway 101										
Spyglass Drive to Avila Beach Drive, Existing	4	25	64,860	65	5%	6%	75.8	190	601	1901
Spyglass Drive to Avila Beach Drive, 2040	4	25	72,364	65	5%	6%	76.3	213	674	2133
US Highway 101										
Oak Park Blvd. to Fourth Street, Existing	4	25	71,070	65	5%	6%	76.6	229	723	2285
Oak Park Blvd. to Fourth Street, 2040	4	25	79,292	65	5%	6%	77.1	256	811	2564
US Highway 101										
Fourth Street to Price Street, Existing	4	25	78,600	65	5%	6%	77.0	251	792	2506
Fourth Street to Price Street, 2040	4	25	87,693	65	5%	6%	77.5	281	889	2812

Analysis Condition / Roadway Segment	Lanes	Median Width	ADT Volume	Design Speed (mph)	Vehicle Mix: Medium Trucks	Vehicle Mix: Heavy Trucks	CNEL at 25 Feet	Distance from Centerline of Roadway to Contour: 70 CNEL	65 CNEL	60 CNEL
Ocean Boulevard										
Between Palisade Ave and Seaview Ave, Existing	2	0	200	25	1%	1%	48.1	-	-	-
Between Palisade Ave and Seaview Ave, 2040	2	0	221	25	1%	1%	48.5	-	-	-
North 4th Street										
South of 5 Cities Drive, Existing	2	0	15,480	45	2%	2%	72.4	43	137	434
South of 5 Cities Drive, 2040	2	0	18,150	45	2%	2%	73.1	51	161	510
Mattie Road										
Between Foothill Road and Baycliff Drive, Existing	2	0	1,210	35	1%	1%	59.0	-	-	-
Between Foothill Road and Baycliff Drive, 2040	2	0	1,300	35	1%	1%	59.4	-	-	-
North Oak Park Blvd.										
South of Meadowlark Drive, Existing	2	0	16,090	40	2%	1%	71.5	35	112	353
South of Meadowlark Drive, 2040	2	0	19,283	40	2%	1%	72.3	42	134	425
Price Canyon Road										
South of Dell Court, Existing	2	0	11,210	45	2%	4%	71.0	31	100	315
South of Dell Court, 2040	2	0	14,100	45	2%	4%	72.0	40	125	396
Shell Beach Road										
Between Solano Road and Ebb Tide Lane, Existing	2	0	1,970	35	3%	1%	61.2	-	-	-
Between Solano Road and Ebb Tide Lane, 2040	2	0	2,800	35	3%	1%	62.7	-	-	-
Cabrillo Highhway (US-1)										
Between Addie Street and Park Avenue, Existing	2	0	7,900	45	2%	2%	69.5	25	70	223
Between Addie Street and Park Avenue, 2040	2	0	8,814	45	2%	2%	70.0	25	79	250

TABLE C: NON-TRAFFIC NOISE LEVELS AND NOISE CONTOUR BOUNDARY DISTANCES

Project Number: **11924**
Project Name: **Noise Element Update**

DUDEK

Noise Source	CNEL (dBA)	Distance from Noise Source	Distance to Contour Boundary (feet) 70 CNEL	65 CNEL	60 CNEL
UPRR Rail Line (Distance reference is center of tracks)	66.3	40	17	54	171
Industrial Area (Distance Reference is from boundary of Industrial Area)	56.1	300	61	108	191
Retail Center (Distance Reference is from boundary of Retail Center)	63.7	55	27	47	84

ATTACHMENT 3

LONG-TERM MEASUREMENTS AND CALCULATIONS

Number	Start Date	Start Time	End Time	SPL Time Weight	Freq Weight	LAeq	LAmax	LAmin	LApeak	L1%	L5%	L10%	L50%	L90%
1	10/22/2019	9:00:00 AM	10:00:00 AM	Slow	dBA	49.7	72.5	42.3	86.8	55.5	53.2	52	48.2	45
2	10/22/2019	10:00:00 AM	11:00:00 AM	Slow	dBA	46.3	57.9	38.7	74.7	53.4	50.4	49.1	44.8	41.9
3	10/22/2019	11:00:00 AM	12:00:00 PM	Slow	dBA	49.3	66.2	38.1	87.4	61	56.4	48.9	43.6	41.3
4	10/22/2019	12:00:00 PM	1:00:00 PM	Slow	dBA	50	67.2	43	86.6	61.4	53.2	49.5	47.1	45.7
5	10/22/2019	1:00:00 PM	2:00:00 PM	Slow	dBA	57.1	80.8	44.3	100.4	68.4	61.9	58.7	51.7	46.4
6	10/22/2019	2:00:00 PM	3:00:00 PM	Slow	dBA	49.5	75.5	44.6	86.6	54.5	50.4	49.5	47.9	46.2
7	10/22/2019	3:00:00 PM	4:00:00 PM	Slow	dBA	51.3	78.1	44.5	93.4	57.3	53	51.7	49.4	46.8
8	10/22/2019	4:00:00 PM	5:00:00 PM	Slow	dBA	50.9	63.9	44.9	89.9	58.3	53.3	52.1	50.2	48
9	10/22/2019	5:00:00 PM	6:00:00 PM	Slow	dBA	50.4	63.4	41.6	84.5	58	55.6	53.3	48.9	45
10	10/22/2019	6:00:00 PM	7:00:00 PM	Slow	dBA	54.2	65.4	48.8	84	58.2	56.9	56.1	53.7	51.2
11	10/22/2019	7:00:00 PM	8:00:00 PM	Slow	dBA	52.5	59.5	47.4	75	57.2	56.1	55.2	51.2	49.3
12	10/22/2019	8:00:00 PM	9:00:00 PM	Slow	dBA	49.7	56.9	45.9	76	53.6	52	51.3	49.4	47.7
13	10/22/2019	9:00:00 PM	10:00:00 PM	Slow	dBA	55.2	82.5	45.7	96.1	57.3	53.6	52.5	49.8	48.3
14	10/22/2019	10:00:00 PM	11:00:00 PM	Slow	dBA	49	61.5	43.1	80.9	54.6	52.1	51.1	48.2	46.1
15	10/22/2019	11:00:00 PM	12:00:00 AM	Slow	dBA	47.8	58.3	42.2	74	53.5	51.3	50.2	46.8	44.4
16	10/23/2019	12:00:00 AM	1:00:00 AM	Slow	dBA	44.7	53.6	40	70.3	49.3	47	46.3	44.3	42.2
17	10/23/2019	1:00:00 AM	2:00:00 AM	Slow	dBA	44.2	53.3	37.9	66.9	49.4	47.6	46.5	43.3	41.2
18	10/23/2019	2:00:00 AM	3:00:00 AM	Slow	dBA	46.1	60.6	39.1	75.3	52.5	49.8	48.3	45	42.2
19	10/23/2019	3:00:00 AM	4:00:00 AM	Slow	dBA	47.6	60.2	37.2	74.5	55.1	52.4	50.8	45.8	41.7
20	10/23/2019	4:00:00 AM	5:00:00 AM	Slow	dBA	48.1	71.8	37.1	86.8	54.5	51.6	50.3	45.7	42
21	10/23/2019	5:00:00 AM	6:00:00 AM	Slow	dBA	50.5	61.3	41.2	73.8	57.3	55.3	53.9	48.7	45.2
22	10/23/2019	6:00:00 AM	7:00:00 AM	Slow	dBA	51.4	72.3	42.6	96.1	57.6	55.2	53.9	50	47
23	10/23/2019	7:00:00 AM	8:00:00 AM	Slow	dBA	51	66.8	43	82.7	60.7	53.7	52.6	49.3	46.4
24	10/23/2019	8:00:00 AM	9:00:00 AM	Slow	dBA	49	60.5	42.4	83.3	54.6	51.9	51	48.2	46.2
25	10/23/2019	9:00:00 AM	9:04:13 AM	Slow	dBA	64.4	79.5	44.8	110.6	76.6	71.4	67.5	51.7	46.4

Number	Start Date	Start Time	End Time	SPL Time Weight	Freq Weight	LAeq	LAmax	LAmin	LApeak	L1%	L5%	L10%	L50%	L90%
1	10/22/2019	9:00:00 AM	10:00:00 AM	Slow	dBA	62.5	90.1	44.7	118.1	71.2	64.6	63	58	49.2
2	10/22/2019	10:00:00 AM	11:00:00 AM	Slow	dBA	58.7	72.3	43.9	85.8	65.9	63.2	61.9	57.2	49.4
3	10/22/2019	11:00:00 AM	12:00:00 PM	Slow	dBA	60.7	73.4	54.1	91.8	67.6	63.9	62.8	59.8	56.7
4	10/22/2019	12:00:00 PM	1:00:00 PM	Slow	dBA	60.9	71.5	52	88.3	67.8	64.4	63.1	60	56.5
5	10/22/2019	1:00:00 PM	2:00:00 PM	Slow	dBA	60.3	74.8	51.9	87.8	67.2	64.2	62.9	59.1	54.7
6	10/22/2019	2:00:00 PM	3:00:00 PM	Slow	dBA	64.8	88.7	51.3	107.3	69.2	65.3	64.2	60.7	55.7
7	10/22/2019	3:00:00 PM	4:00:00 PM	Slow	dBA	72.3	94.9	51.1	114.1	79.2	68.3	66.5	61.6	56.1
8	10/22/2019	4:00:00 PM	5:00:00 PM	Slow	dBA	67.2	93.3	50.4	112.8	68.4	64.2	63.1	59.5	54.7
9	10/22/2019	5:00:00 PM	6:00:00 PM	Slow	dBA	61.6	79.8	50.2	99.9	68.8	64.9	63.9	60.4	55.9
10	10/22/2019	6:00:00 PM	7:00:00 PM	Slow	dBA	62.4	80.1	54.6	105.7	68.4	65.4	64.6	61.3	57.6
11	10/22/2019	7:00:00 PM	8:00:00 PM	Slow	dBA	60.5	69.1	53.7	82.4	65.7	64	63.3	59.7	56.2
12	10/22/2019	8:00:00 PM	9:00:00 PM	Slow	dBA	60.8	82.3	51.6	99.9	67.7	63.6	62.8	58.8	54.6
13	10/22/2019	9:00:00 PM	10:00:00 PM	Slow	dBA	63.2	84.6	51.9	101.3	74.1	64.6	63.1	58	54.4
14	10/22/2019	10:00:00 PM	11:00:00 PM	Slow	dBA	59	71.3	50.7	87.3	65.8	63.6	62.2	57.3	53.8
15	10/22/2019	11:00:00 PM	12:00:00 AM	Slow	dBA	55.9	67.1	43.8	82.1	64.2	61.5	59.8	52.9	46.7
16	10/23/2019	12:00:00 AM	1:00:00 AM	Slow	dBA	54.1	69.2	44.9	81.5	63.8	60.3	57.8	50.2	47.3
17	10/23/2019	1:00:00 AM	2:00:00 AM	Slow	dBA	52.4	65.9	43	79.2	62.1	56.6	54.3	50.6	46.8
18	10/23/2019	2:00:00 AM	3:00:00 AM	Slow	dBA	51.8	66.7	43	89.3	61.5	57.8	53.6	48.9	45
19	10/23/2019	3:00:00 AM	4:00:00 AM	Slow	dBA	56.2	66.2	49.5	79.9	63.3	60	58.8	54.9	52.1
20	10/23/2019	4:00:00 AM	5:00:00 AM	Slow	dBA	55.8	67.1	47.7	80.3	64.3	60.5	58.6	54	51.2
21	10/23/2019	5:00:00 AM	6:00:00 AM	Slow	dBA	58.1	71.4	46.8	88.8	65.6	63.1	61.9	55.3	50.6
22	10/23/2019	6:00:00 AM	7:00:00 AM	Slow	dBA	61.7	75.1	49.2	90.5	68.9	66.4	65.3	60	52.7
23	10/23/2019	7:00:00 AM	8:00:00 AM	Slow	dBA	67.9	93.1	50.2	110.1	69.8	67.8	67.1	63.3	56.2
24	10/23/2019	8:00:00 AM	9:00:00 AM	Slow	dBA	61.9	70.9	47.6	92	67.1	65.7	64.9	61.2	53.7
25	10/23/2019	9:00:00 AM	9:12:30 AM	Slow	dBA	61.5	74.6	47.6	104.9	69	66	64.7	59.8	52.3

Number	Start Date	Start Time	End Time	SPL Time Weight	Freq Weight	LAeq	LAmax	LAmin	LApeak	L1%	L5%	L10%	L50%	L90%
1	10/22/2019	9:00:00 AM	10:00:00 AM	Slow	dBA	62.2	92.7	50.7	125.8	70.1	61.5	59	56.4	53.3
2	10/22/2019	10:00:00 AM	11:00:00 AM	Slow	dBA	53.1	64.4	49.4	82.8	57.4	55.6	54.7	52.6	51.2
3	10/22/2019	11:00:00 AM	12:00:00 PM	Slow	dBA	58.4	67.3	49.4	80.7	63.6	62.3	61.4	57.7	52.5
4	10/22/2019	12:00:00 PM	1:00:00 PM	Slow	dBA	55.6	72.9	49.2	93	63.5	60.6	58.4	53	51.1
5	10/22/2019	1:00:00 PM	2:00:00 PM	Slow	dBA	62.6	89.7	50.9	107.8	72.8	62.9	59.1	54.6	52.7
6	10/22/2019	2:00:00 PM	3:00:00 PM	Slow	dBA	57.3	70.3	52.7	85.9	62	59.2	58.5	56.8	55.1
7	10/22/2019	3:00:00 PM	4:00:00 PM	Slow	dBA	56	75.1	50.6	88.2	61.7	58.2	57.1	55.1	53.5
8	10/22/2019	4:00:00 PM	5:00:00 PM	Slow	dBA	54.6	67.9	50	84.1	59.4	57	56.3	54.1	51.8
9	10/22/2019	5:00:00 PM	6:00:00 PM	Slow	dBA	55.6	71.2	49.6	91.6	60.1	57.7	56.9	55.1	53.2
10	10/22/2019	6:00:00 PM	7:00:00 PM	Slow	dBA	56	63.7	51	79.7	60.2	59	58.1	55.4	53.1
11	10/22/2019	7:00:00 PM	8:00:00 PM	Slow	dBA	57.3	64.7	52.1	81.1	61.4	59.8	59	56.8	55
12	10/22/2019	8:00:00 PM	9:00:00 PM	Slow	dBA	55	61.4	51.3	75.2	58.5	57.5	56.8	54.5	52.8
13	10/22/2019	9:00:00 PM	10:00:00 PM	Slow	dBA	56.6	79.7	50.2	90.9	61.9	59.4	58.1	55.3	53.4
14	10/22/2019	10:00:00 PM	11:00:00 PM	Slow	dBA	56.1	63.4	49.6	79.7	61	59.1	58.2	55.5	53.1
15	10/22/2019	11:00:00 PM	12:00:00 AM	Slow	dBA	53.9	62.9	45.8	76.8	58.9	57.1	56.4	53.1	49.9
16	10/23/2019	12:00:00 AM	1:00:00 AM	Slow	dBA	55.3	69.2	43.6	82.2	63.1	59.5	58	53.6	48.6
17	10/23/2019	1:00:00 AM	2:00:00 AM	Slow	dBA	54.6	65.9	43.1	80	61.8	59.5	58.1	52.8	47.8
18	10/23/2019	2:00:00 AM	3:00:00 AM	Slow	dBA	54.1	63.7	43.1	82.5	61.4	59	57.5	52.3	47.1
19	10/23/2019	3:00:00 AM	4:00:00 AM	Slow	dBA	55.8	69	43	80.1	63.9	61	59.2	53.5	47.2
20	10/23/2019	4:00:00 AM	5:00:00 AM	Slow	dBA	56.8	71.2	45.8	88	62.3	60.7	59.6	55.8	52
21	10/23/2019	5:00:00 AM	6:00:00 AM	Slow	dBA	60	79.1	51.1	99.1	65.7	63.5	62.1	59.1	56.3
22	10/23/2019	6:00:00 AM	7:00:00 AM	Slow	dBA	59.5	72.3	53.6	91.5	64.1	62.1	61.4	58.9	56.1
23	10/23/2019	7:00:00 AM	8:00:00 AM	Slow	dBA	61.3	68.6	53.8	87.1	66	64.9	64.2	60.4	56.6
24	10/23/2019	8:00:00 AM	9:00:00 AM	Slow	dBA	58.6	79.9	50.2	102	67.3	61	59.9	56.8	54
25	10/23/2019	9:00:00 AM	9:21:03 AM	Slow	dBA	59.6	79.2	52.1	103.7	70.7	61.8	59.6	56.5	54.4

Leq	Time	Adjustment					
44.7	Midnight	10	54.7	54.7			
44.2	1	10	54.2	54.2			
46.1	2	10	56.1	56.1			
47.6	3	10	57.6	57.6			
48.1	4	10	58.1	58.1			
50.5	5	10	60.5	60.5			
51.4	6	10	61.4	61.4			
51	7am		51	51			
49	8		49	49			
49.7	9		49.7	49.7			
46.3	10		46.3	46.3			
49.3	11		49.3	49.3			
50	noon		50	50			
57.1	1		57.1	57.1			
49.5	2		49.5	49.5			
51.3	3		51.3	51.3			
50.9	4		50.9	50.9			
50.4	5		50.4	50.4			
54.2	6		54.2	54.2			
52.5	7	5	57.5	52.5			
49.7	8	5	54.7	49.7			
55.2	9	5	60.2	55.2			
49	10	10	59	59			
47.8	11	10	57.8	57.8			
			56.1	55.5			
			CNEL	LDN			

Train CNEL

Leq	Time	Adjustment					
54.1	Midnight	10	64.1	64.1			
52.4	1	10	62.4	62.4			
51.8	2	10	61.8	61.8			
56.2	3	10	66.2	66.2			
55.8	4	10	65.8	65.8			
58.1	5	10	68.1	68.1			
61.7	6	10	71.7	71.7			
67.9	7am		67.9	67.9			
61.9	8		61.9	61.9			
62.5	9		62.5	62.5			
58.7	10		58.7	58.7			
60.7	11		60.7	60.7			
60.9	noon		60.9	60.9			
60.3	1		60.3	60.3			
64.8	2		64.8	64.8			
72.3	3		72.3	72.3			
67.2	4		67.2	67.2			
61.6	5		61.6	61.6			
62.4	6		62.4	62.4			
60.5	7	5	65.5	60.5			
60.8	8	5	65.8	60.8			
63.2	9	5	68.2	63.2			
59	10	10	69	69			
55.9	11	10	65.9	65.9			
			66.3	65.9			
			CNEL	LDN			

Retail Center CNEL

Leq	Time	Adjustment					
55.3	Midnight	10	65.3	65.3			
54.6	1	10	64.6	64.6			
54.1	2	10	64.1	64.1			
55.8	3	10	65.8	65.8			
56.8	4	10	66.8	66.8			
60	5	10	70	70			
59.5	6	10	69.5	69.5			
61.3	7am		61.3	61.3			
58.6	8		58.6	58.6			
62.2	9		62.2	62.2			
53.1	10		53.1	53.1			
58.4	11		58.4	58.4			
55.6	noon		55.6	55.6			
62.6	1		62.6	62.6			
57.3	2		57.3	57.3			
56	3		56	56			
54.6	4		54.6	54.6			
55.6	5		55.6	55.6			
56	6		56	56			
57.3	7	5	62.3	57.3			
55	8	5	60	55			
56.6	9	5	61.6	56.6			
56.1	10	10	66.1	66.1			
53.9	11	10	63.9	63.9			
			63.7	63.4			
			CNEL	LDN			

Appendix F

Safety Fact Sheet

Safety

The Safety Element includes goals, policies, and actions to guide development towards locations and patterns that reduce risk and increase resilience to hazard events. Like many California coastal communities, Pismo Beach is most susceptible to hazards involving earthquakes, flooding, landslides, and wildfires. As a result of climate change and sea level rise, Pismo Beach is forecasted to experience more severe fire and flooding and worsening air pollution, coastal erosion, and extreme heat. Pismo Beach is also susceptible to, but unlikely to experience, radiation and tsunami hazards. Each of these hazards are explored in more detail below, as are the community's strengths and challenges in responding to hazards, including emergency response facilities and vulnerable populations.

Climate Related Hazards

The intensity of climate change is, in part, determined by current carbon dioxide emission levels and the global community's ability to reduce emissions in the future. A range of forecasts were used to determine potential impacts in Pismo Beach, and are generally categorized as a low emissions scenario where emissions begin to drop in 2040, and a high emissions scenario where emissions continue to rise until 2100.

Air Pollution

Air pollution will increase as a result of climate change with added ozone production, increased wildfire frequency and intensity, and higher allergens.

Ozone

Ground level ozone is an air pollutant and is involved in the creation of smog. Ozone is created through a photochemical reaction involving sunlight and other pollutants. The most pertinent contributor to ozone in Pismo Beach is car and truck exhaust. Increased extreme heat events are projected to increase ground-level ozone (CDC 2018).

Allergens

With warmer seasonal air temperatures due to climate change, flowering time can lengthen and result in more pollen released into the air. This has the potential to increase allergic reactions and asthma attacks (CDC 2014). As these events occur more frequently, people are likely to miss school and work more often, and visit the hospital in extreme cases.

Smoke

Due to increased frequency of drought and overall temperatures, the frequency and intensity of wildfires are expected to increase in the region (NOAA 2018). Smoke from wildfires contains various pollutants and when wildfires burn, these pollutants can cause short- and long-term heart and lung diseases (EPA 2017).

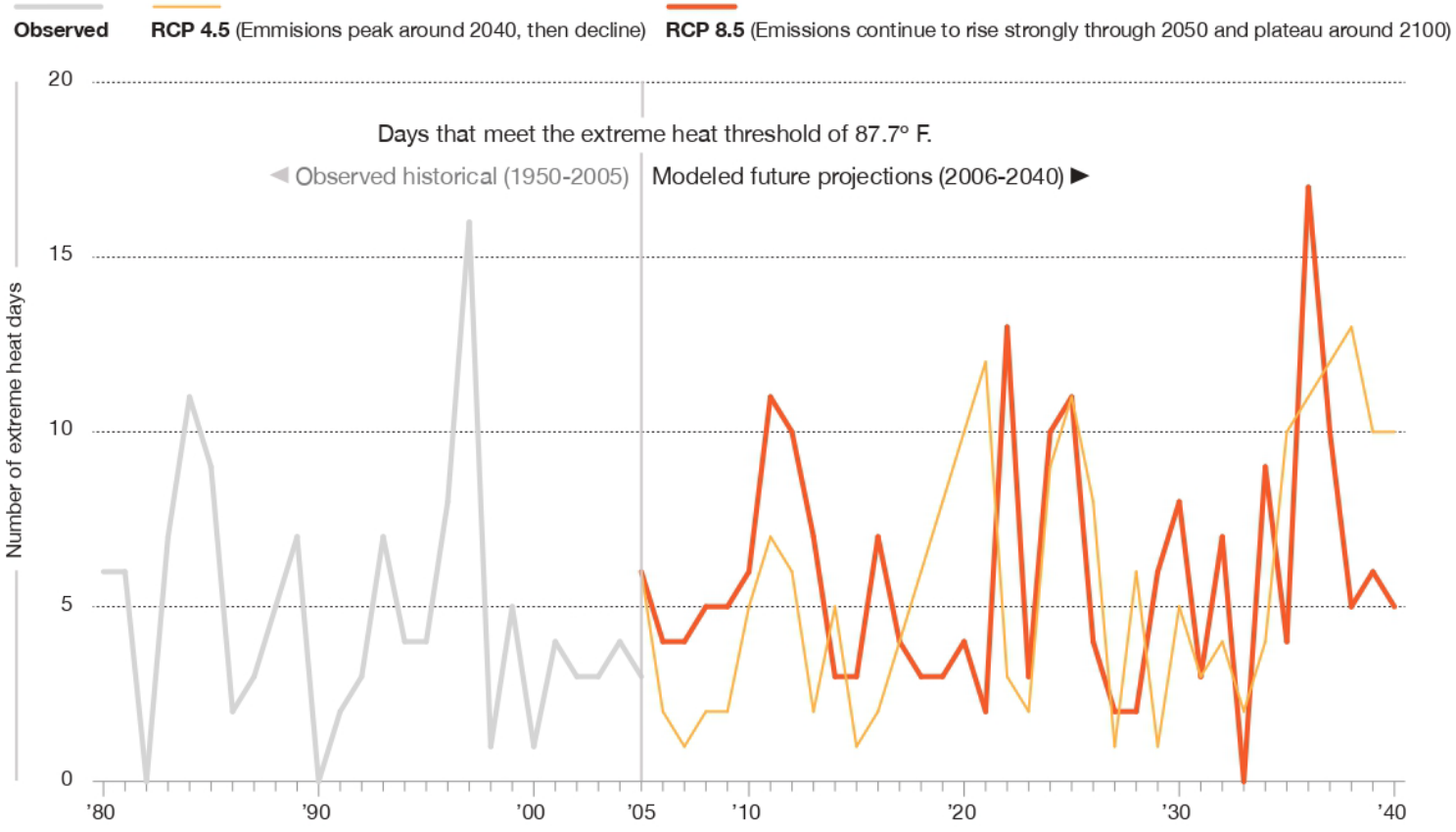
Coastal Erosion

Slope and bluff erosion and instability has historically been a common hazard in Pismo Beach, and is expected to increase as a result of sea level rise. Approximately five miles of the northwestern coastline of the City consists of cliffs and bluffs, which range from 10 to 100 feet tall. There is a high risk for erosion across nearly all of Pismo Beach's coastline (Herberger 2009). Erosion has claimed public and private investments in the past and continues to threaten these abutting properties today. In 1991, the City completed a bluff erosion study for public oceanfront property; however, information pertaining to privately owned coastline is not available except on a site-to-site basis.

Extreme Heat

Extreme heat days in Pismo Beach are considered days which reach or exceed 87.9°F. Pismo Beach is projected to experience five extreme heat days per year under both the low emission and high emission scenarios. This is one more day per year than historical averages for the area from 1961-1990. Figure S-1 displays the projected average number of extreme heat days over time.

Figure S-1 Historic and Projected Extreme Heat Days in Pismo Beach

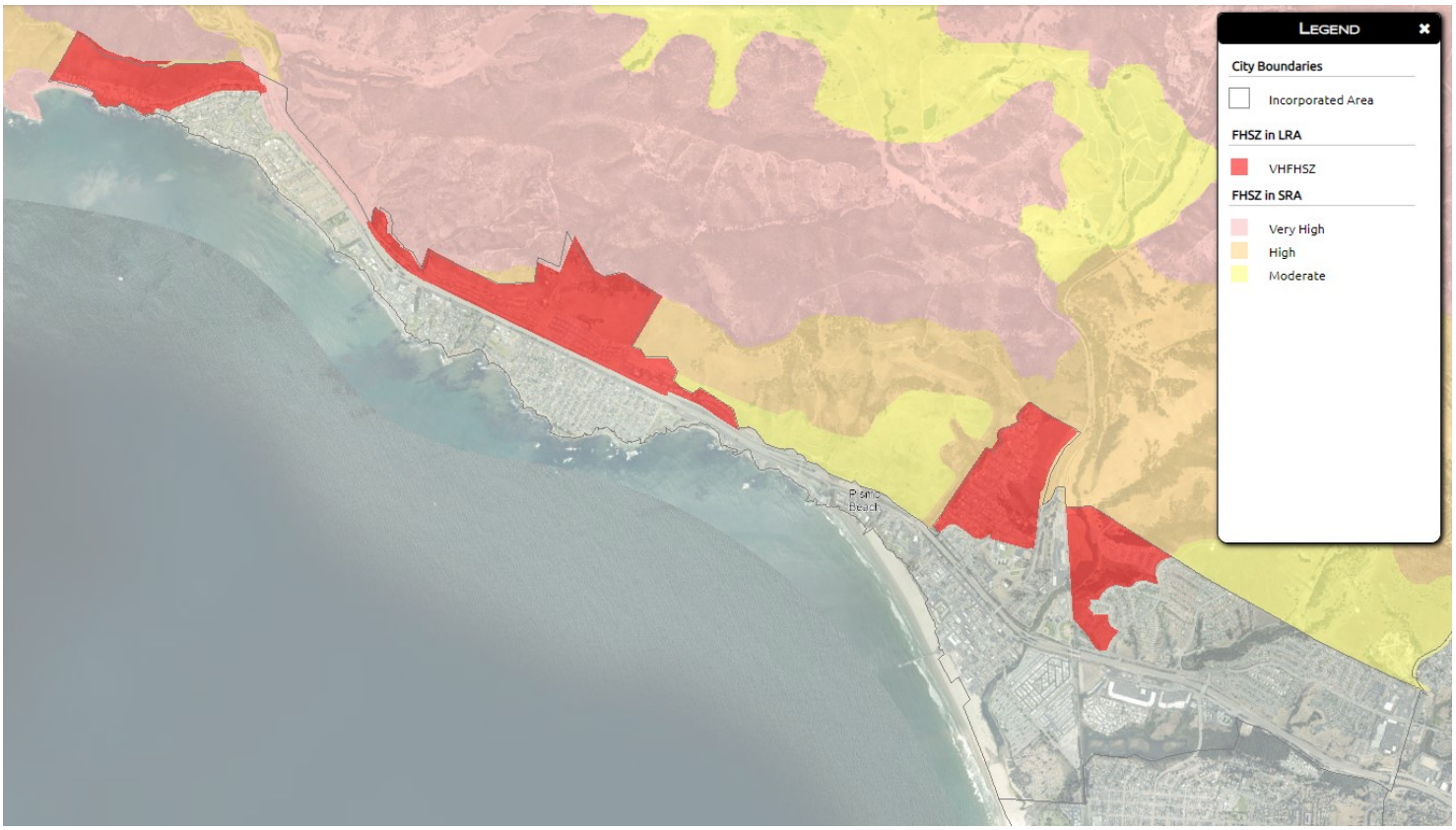


Source: CEC 2019

Fire

Pismo Beach is bordered to the north and west with open space. These open spaces are more at risk of burning, and much of the native vegetation present has evolved to rely on fire to reproduce. CALFire Fire Hazard Severity Zone Maps are presented in Figure S-2, and illustrate that there are significant fire hazards surrounding Pismo and along the northern and western portions of the city. Generally, the risk of fire increases in the late summer and early autumn during dry periods, especially after wet winters allowing fuel to grow. In the low emissions scenario for emissions, on average 51.7 hectares of land in Pismo Beach will burn annually. This is 11 more hectares burned annually than the annual mean from 1961-1990. In the high emissions scenario, 24.1 more hectares of land in Pismo Beach will burn annually than the average from 1961-1990. Approximately 24% of the City is located in a Very High Fire Hazard Severity Zone. The San Luis Obispo County Fire Department is responsible for fire protection in Pismo Beach. There are two fire stations in Pismo Beach which are located at 760 Mattie Road and 2555 Shell Beach Road.

Figure S-2 Fire Hazard Severity Zones



Source: CAL FIRE 2021

Flooding

Pismo Beach runs along a portion of the Central California coastline. The northwestern portion of Pismo Beach coastline consists of steep bluffs, while the southern shoreline is characterized by wide, sandy beaches. The small Meadow Creek and larger Pismo Creek meet to form a lagoon behind the beach in the southern portion of Pismo Beach. The northern, bluff portion of the City is referred to as the Bluffs and the southern area abutting Meadow Creek and Pismo Creek is referred to as the low-lying area. Downtown Pismo Beach is located between the Bluffs and the low-lying areas. The downtown area is currently exposed to coastal erosion, wave runup, and flooding during extreme events, although a sea wall offers some protection. The low-lying area is most prone to coastal and riverine flooding. Flood potential could increase significantly in this area due to sea level rise, if left unmitigated. A more detailed Sea Level Rise Vulnerability Assessment for the City of Pismo Beach was completed by Moffatt & Nichol in 2019.

Non-Climate Related Hazards

Pismo Beach also experiences non-climate related hazards. Similar to climate-related hazards, some small hazards occur regularly, while others are not likely to occur between 2020 and 2040 if at all.

Seismic Hazards

Pismo Beach is susceptible to seismic hazards due to multiple potentially capable faults (San Luis Obispo County Planning and Building Department 2016). Seismic hazards, including active and potentially active faults, are viewable on Figure S-3.

Liquefaction can occur due to earthquakes, and makes a normally stiff and solid soil act like a liquid. There is only one area of high liquefaction risk, on the beach west of North Beach Campground and at the mouth of Pismo Creek. Areas of moderate liquefaction risk can be found in the southernmost coastal area of Pismo Beach as well as along Pismo Creek (San Luis Obispo County Planning and Building Department 2016).

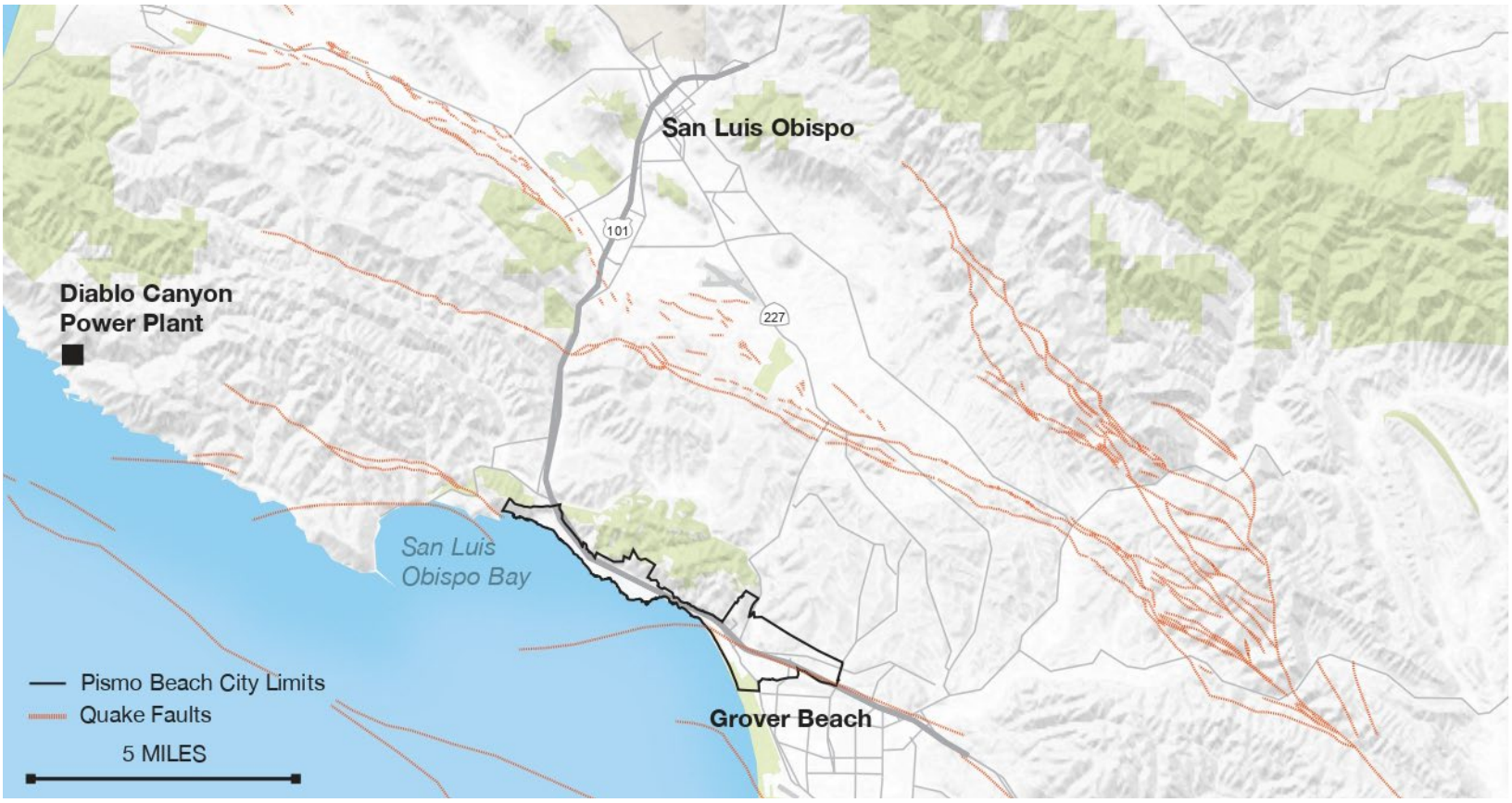
It's important to identify peakload water supply when discussing seismic risks because large seismic events have the potential to destroy or incapacitate normal water supply. The existing water supply comes from multiple sources, including Lopez Reservoir, the State Water Project, and groundwater wells. If a local earthquake occurs, local water piping would be at risk, and water from Lopez Lake, the groundwater wells, and recycled water could become temporarily out of service. Earthquakes farther away could impact the State Water Project. In the event of a loss of water sources, the City has an emergency connection with the City of Arroyo Grande and has the opportunity to purchase water allocations from the District or SWP subcontractors (Water Systems Consulting Inc. 2016).

Landslides

Landsliding was observed in 1998 along the sea bluffs as a result of sea wave erosion, surface water erosion, and urban irrigation. More recently, landslides were observed in the Pismo Beach foothills after the 2003 San Simeon earthquake. Much of the Pismo Foothills abutting the city to the north and east are considered a high landslide risk (SLO County Planning and Building Department 2016). While much of this does not include developed portions of Pismo Beach, these areas are uphill from developed areas and could impact them in the event of a landslide due to high precipitation or earthquake.

Soils have the ability to damage houses by being especially expansive or corrosive. There are three soil types present within Pismo Beach city limits. The primary soil type are mollisols, with entisols and alfisols covering a smaller portion of land in eastern Pismo Beach (NRCS 1994). None of these soils are considered expansive. Additionally, their acidity is low and they have a lower corrosive tendency.

Figure S-3 Faults Near Pismo Beach



Source: CDC 2019

Radiation

Pismo Beach is located approximately 8 miles southwest from the Pacific Gas and Electric's Diablo Canyon Nuclear Power Plant. Radioactive waste from the plant is stored on site and the plant is permitted to run until 2025, when the plant's permits will expire and not be renewed (PG&E 2019). Energy production operations then will be shut down indefinitely, with storage continuing on site until further notice (City of Pismo Beach 2007). An earthquake or tsunami could potentially release the nuclear waste stored on site and expose Pismo Beach to radiation.

Tsunamis

A tsunami is a large wave generally caused by an earthquake which can cause substantial damage to coastal communities such as Pismo Beach. Previous studies within San Luis Obispo County have determined a 100-year tsunami to be 9.5 feet above sea level; however, this could increase if the tsunami occurred during a storm event. Land in Pismo Beach below elevations for 100- and 500- year tsunami events (24 and 39 feet respectively) are most at risk. In general, developments within Pismo Beach are protected from tsunami hazards by high bluffs, dune systems, and wide beaches. The portion of Shell Beach and southern Pismo Beach that are within the Tsunami Inundation Area is presented on Figure S-4.

Figure S-4 Tsunami Inundation



Source: CEMA 2009

Community Vulnerabilities

Pismo Beach is considered a relatively healthy and affluent community compared to California as a whole. CalEnviroScreen, a mapping tool provided by the Office of Environmental Health Hazard Assessment, is a common tool used to measure the cumulative impact of social vulnerabilities (such as poverty or English language proficiency) and pollution burden (such as air quality and proximity to hazardous waste sites). Pismo Beach scores between 5%–10% on CalEnviroScreen, far below the 75% threshold to consider a community disadvantaged (OEHHA 2018). Additionally, both City census tracts are in the top 25% for living conditions according to the Healthy Places Index (CDPH 2018). Despite these rankings specific people and populations in Pismo Beach may be vulnerable to specific hazards. Children, pregnant women, older adults, and those with certain preexisting conditions are considered a "sensitive population" due to their physiological susceptibility. Additionally, people with fewer economic resources, limited mobility, lack of access to transportation, lower English language proficiency and education, and uncertain citizenship can be considered vulnerable because they have fewer resources to adapt, evacuate, or access information. In Pismo Beach the most notable vulnerable population is older adults. As of 2017, 33.3% of Pismo Beach's population was over the age of 65 (U.S. Census Bureau 2019). Older adults experience more extreme health events per year, as they experience heat stroke and other heat related illnesses at lower temperatures than the general population. Additionally, older adults may be less mobile, or less able to evacuate, in the case of a fire or tsunami evacuation notice.

Facilities and Assets

Certain assets in a community are more important or necessary while hazards are impacting a community as they are important in responding and recovering in a disaster. The San Luis Obispo County Emergency Organization oversees response to emergencies. They coordinate evacuations, evacuation routes, and emergency facilities. Facilities which can be activated in case of an emergency include eight schools and three district buildings, two police stations, and two fire stations. These facilities are presented on Figure S-5. The City also has planned evacuation routes, which are fluid in nature and are based on the specific hazard type and location; however, they generally include major roads and highways. In Pismo Beach this would include, most notably, Highway 101, Oak Park Boulevard, and Price Canyon Road. Pismo Beach has 14.2 miles of state and federal highways, as well as 18 bridges.

Other essential assets in Pismo Beach include:

- Public Facilities
    - one wastewater treatment facility
    - 14 lift stations
    - one water treatment plant
    - two wells
    - ten reservoirs
    - five water-pressure booster stations (Water Systems Consulting Inc. 2016)
- Residential Zones
    - 791 acres of residentially zoned land

Figure S-5 Emergency Facility Locations



Source: City of Pismo Beach

Correlation with Coastal Act

In addition to General Plan requirements, the Safety Element will implement provisions of the Coastal Act regarding minimizing hazard potential in the Coastal Zone. The Coastal Act requires new development to reduce risks to life and property and avoid substantial changes to natural landforms. The Coastal Act also requires that safety and stability be assured for the life of a development. The response to coastal hazards in the Safety Element will provide for solutions that have the least impact on coastal resources, as required by the Coastal Act. Development of the Safety Element is in accordance with the CCC's 2017 LCP Update Guide, the adopted 2018 Sea Level Rise Policy Guidance Document, and the draft 2018 Coastal Adaptation Planning Document: Residential Development. The information and guidance in the Safety Element is also incorporated into the City's Local Hazard Mitigation Plan, which outlines the City's mitigation planning measures to reduce vulnerability to natural and human-caused hazards.

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Appendix G

Special Status Species Tables

Table G-1 Special Status Plant Species Documented in or with the Potential to Occur in Pismo Beach

Scientific Name	Common Name	FESA/CESA Status	CRPR
Agrostis hooveri	Hoover's bent grass	–/–	1B.2
Arctostaphylos cruzensis	Arroyo de la Cruz manzanita	–/–	1B.2
Arctostaphylos luciana	Santa Lucia manzanita	–/–	1B.2
Arctostaphylos morroensis	Morro manzanita	FT/–	1B.1
Arctostaphylos osoensis	Oso manzanita	–/–	1B.2
Arctostaphylos pechoensis	Pecho manzanita	–/–	1B.2
Arctostaphylos pilosula	Santa Margarita manzanita	–/–	1B.2
Arctostaphylos rudis	sand mesa manzanita	–/–	1B.2
Arctostaphylos tomentosa ssp. *daciticola*	dacite manzanita	–/–	1B.1
Arenaria paludicola	marsh sandwort	FE/SE	1B.1
Astragalus didymocarpus var. *milesianus*	Miles' milk-vetch	–/–	1B.2
Atriplex coulteri	Coulter's saltbush	–/–	1B.2
Bryoria spiralifera	twisted horsehair lichen	–/–	1B.1
Calochortus obispoensis	San Luis mariposa lily	–/–	1B.2
Calochortus simulans	La Panza mariposa lily	–/–	1B.3
Calycadenia villosa	dwarf calycadenia	–/–	1B.1
Camissoniopsis hardhamiae	Hardham's evening-primrose	–/–	1B.2
Carex obispoensis	San Luis Obispo sedge	–/–	1B.2
Castilleja densiflora var. *obispoensis*	San Luis Obispo owl's-clover	–/–	1B.2
Ceanothus impressus var. *nipomensis*	Nimpomo Mesa ceanothus	–/–	1B.1
Ceanothus thyrsiflorus var. *obispoensis*	San Luis Obispo ceanothus	–/–	1B.1
Centromadia parryi ssp. *congdonii*	Congdon's tarplant	–/–	1B.1
Chenopodium littoreum	coastal goosefoot	–/–	1B.2
Chlorogalum pomeridianum var. *minus*	dwarf soaproot	–/–	1B.2
Chloropyron maritimum ssp. *maritimum*	salt marsh bird's-beak	FE/SE	1B.2
Chorizanthe aphanantha	Irish Hills spineflower	–/–	1B.1
Chorizanthe breweri	Brewer's spineflower	–/–	1B.3
Chorizanthe rectispina	straight-awned spineflower	–/–	1B.3
Cirsium fontinale var. *obispoense*	San Luis Obispo fountain thistle	FE/SE	1B.2
Cirsium occidentale var. *lucianum*	Cuesta Ridge thistle	–/–	1B.2
Cirsium rhothophilum	Surf thistle	–/ST	1B.2
Cirsium scariosum var. *loncholepis*	La Graciosa thistle	FE/ST	1B.1
Cladium californicum	California sawgrass	–/–	2B.2
Cladonia firma	popcorn lichen	–/–	2B.1
Clarkia speciosa ssp. *immaculata*	Pismo clarkia	FE/SR	1B.1
Delphinium parryi ssp. *blochmaniae*	dune larkspur	–/–	1B.2
Delphinium parryi ssp. *eastwoodiae*	Eastwood's larkspur	–/–	1B.2
Delphinium umbraculorum	umbrella larkspur	–/–	1B.3

Scientific Name	Common Name	FESA/CESA Status	CRPR
Dithyrea maritima	beach spectaclepod	–/ST	1B.1
Dudleya abramsii ssp. *bettinae*	Betty's dudleya	–/–	1B.2
Dudleya abramsii ssp. *murina*	mouse-gray dudleya	–/–	1B.3
Dudleya blochmaniae ssp. *blochmaniae*	Blochman's dudleya	–/–	1B.1
Erigeron blochmaniae	Blochman's leafy daisy	–/–	1B.2
Eriodictyon altissimum	Indian Knob mountainbalm	FE/SE	1B.1
Eryngium aristulatum var. *hooveri*	Hoover's button-celery	–/–	1B.1
Extriplex joaquinana	San Joaquin spearscale	–/–	1B.2
Fritillaria ojaiensis	Ojai fritillary	–/–	1B.2
Fritillaria viridea	San Benito fritillary	–/–	1B.2
Horkelia cuneata var. *puberula*	mesa horkelia	–/–	1B.1
Horkelia cuneata var. *sericea*	Kellogg's horkelia	–/–	1B.1
Lasthenia californica ssp. *macrantha*	perennial goldfields	–/–	1B.2
Lasthenia glabrata ssp. *coulteri*	Coulter's goldfields	–/–	1B.1
Layia jonesii	Jones' layia	–/–	1B.2
Lupinus ludovicianus	San Luis Obispo County lupine	–/–	1B.2
Lupinus nipomensis	Nipomo Mesa lupine	FE/SE	1B.1
Malacothamnus gracilis	slender bush-mallow	–/–	1B.1
Monardella palmeri	Palmer's monardella	–/–	1B.2
Monardella sinuata ssp. *sinuata*	southern curly-leaved monardella	–/–	1B.2
Monardella undulata ssp. *undulata*	San Luis Obispo monardella	–/–	1B.2
Monolopia gracilens	woodland woolythreads	–/–	1B.2
Muhlenbergia utilis	aparejo grass	–/–	2B.2
Nasturtium gambelii	Gambel's water cress	FE/ST	1B.1
Nemacaulis denudata var. *denudata*	coast woolly-heads	–/–	1B.2
Plagiobothrys uncinatus	hooked popcornflower	–/–	1B.2
Poa diaboli	Diablo Canyon blue grass	–/–	1B.2
Sanicula maritima	adobe sanicle	–/SR	1B.1
Scrophularia atrata	black-flowered figwort	–/–	1B.2
Senecio aphanactis	chaparral ragwort	–/–	2B.2
Sidalcea hickmanii ssp. *anomala*	Cuesta Pass checkerbloom	–/SR	1B.2
Streptanthus albidus ssp. *peramoenus*	most beautiful jewelflower	–/–	1B.2
Suaeda californica	California seablite	FE/–	1B.1
Sulcaria isidiifera	splitting yarn lichen	–/–	1B.1
Symphyotrichum defoliatum	San Bernardino aster	–/–	1B.2
Trifolium hydrophilum	saline clover	–/–	1B.2
Tropidocarpum capparideum	caper-fruited tropidocarpum	–/–	1B.2

FT: Federally threatened FE: Federally endangered SE: State endangered ST: State threatened SR: State rare
CRPR: California Rare Plant Rank

Table G-2 Special Status Wildlife Species Documented in or with the Potential to Occur in Pismo Beach

Scientific Name	Common Name	FESA/CESA Status	Other CDFW & Local Status
Invertebrates			
Bombus crotchii	*Crotch bumble bee*	–/SCE	–
Bombus occidentalis	*western bumble bee*	–/SCE	–
Branchinecta lynchi	Vernal pool fairy shrimp	FT/–	–
Danaus plexippus	monarch butterfly	–/–	Locally Important
Helminthoglypta walkeriana	Morro shoulderband (=banded dune) snail	FE/–	–
Fish			
Eucyclogobius newberryi	tidewater goby	FE/–	SSC
Oncorhynchus mykiss irideus pop. 9	steelhead - south-central California coast DPS	FT/–	–
Amphibians			
Batrachoseps minor	lesser slender salamander	–/–	SSC
Rana boylii	foothill yellow-legged frog	–/SE	SSC
Rana draytonii	California red-legged frog	FT/–	SSC
Taricha torosa	Coast Range newt	–/–	SSC
Reptiles			
Anniella pulchra	silvery legless lizard	–/–	SSC
Emys marmorata [Actinemys pallida]	western pond turtle	–/–	SSC
Thamnophis hammondii	two-striped garter snake	–/–	SSC
Birds			
Accipiter cooperii	Cooper's hawk	–/–	WL
Accipiter striatus	sharp-shinned hawk	–/–	WL
Agelaius tricolor	tricolored blackbird	–/ST	SSC
Athene cunicularia	burrowing owl	–/–	SSC
Buteo regalis	ferruginous hawk	–/–	WL
Charadrius nivosus nivosus	western snowy plover	FT/–	SSC
Coccyzus americanus occidentalis	western yellow-billed cuckoo	FT/SE	–
Elanus leucurus	white-tailed kite	–/–	FP
Eremophila aplestris actia	California horned lark	–/–	WL
Falco columbarius	merlin	–/–	WL
Falco mexicanus	prairie falcon	–/–	WL
Lanius ludovicianus	Loggerhead shrike	–/–	SSC
Laterallus jamaicensis coturniculus	California black rail	–/ST	FP
Progne subis	purple martin	–/–	SSC
Rallus obsoletus obsoletus	California Ridgway's rail	FE/SE	FP
Sterna antillarum browni	California least tern	FE/–	FP

Scientific Name	Common Name	FESA/CESA Status	Other CDFW & Local Status
Mammals			
Antrozous pallidus	pallid bat	–/–	SSC
Corynorhinus townsendii	Townsend's big-eared bat	–/–	SSC
Dipodomys heermanni morroensis	Morro Bay kangaroo rat	FE/SE	FP
Eumetopias jubatus	Steller sea-lion	DL/–	–
Eumops perotis californicus	western mastiff bat	–/–	SSC
Neotoma lepida intermedia	San Diego desert woodrat	–/–	SSC
Nyctinomops macrotis	big free-tailed bat	–/–	SSC
Taxidea taxus	American badger	–/–	SSC

FT: Federally threatened
FE: Federally endangered
SE: State endangered
ST: State threatened
SR: State rare
SCE: State candidate endangered
FP: Fully Protected
SSC: Species of Special Concern
DL: Delisted
WL: Watch List

Appendix H

Energy Calculations

City of Pismo Beach General Plan/LCP Update

Last Updated: 12/3/21

Populate one of the following tables (Leave the other blank):

Annual VMT		OR	Daily Vehicle Trips	
Annual VMT:	13,422,120		Daily Vehicle Trips:	
			Average Trip Distance:	

Fleet Class	Fleet Mix
Light Duty Auto (LDA)	0.537981
Light Duty Truck 1 (LDT1)	0.060917
Light Duty Truck 2 (LDT2)	0.197944
Medium Duty Vehicle (MDV)	0.129503
Light Heavy Duty 1 (LHD1)	0.022130
Light Heavy Duty 2 (LHD2)	0.006150
Medium Heavy Duty (MHD)	0.007595
Heavy Heavy Duty (HHD)	0.005434
Other Bus (OBUS)	0.000841
Urban Bus (UBUS)	0.000325
Motorcycle (MCY)	0.027432
School Bus (SBUS)	0.000740
Motorhome (MH)	0.003008

Fuel Economy (MPG) [1]	
Passenger Vehicles	24.1
Light-Med Duty Trucks	17.6
Heavy Trucks/Other	7.5
Motorcycles	44

Fleet Mix

Vehicle Type	Percent	Fuel Type	Annual VMT: VMT	Vehicle Trips: VMT	Fuel Consumption (Gallons)
Passenger Vehicles	*53.80%*	*Gasoline*	7,220,846	0.00	299,620
Light-Medium Duty Trucks	*38.84%*	*Gasoline*	5,212,668	0.00	296,174
Heavy Trucks/Other	*4.62%*	*Diesel*	620,411	0.00	82,721
Motorcycle	*2.74%*	*Gasoline*	368,196	0.00	8,368

Total Gasoline Consumption (gallons)	**604,163**
Total Diesel Consumption (gallons)	**82,721**

Sources:

[1] United States Department of Transportation, Bureau of Transportation Statistics. 2021. National Transportation Statistics. Available at: https://www.bts.gov/topics/national-transportation-statistics.

	Natural Gas			Electricity		
	kBTU/year	Therms/year	Per SP	kWh/year	2019 Title 24 %	2019 Title 24 %
Total new energy consumption	**1.80E+07**	**1.94E+05**	**80.2**	**1.61E+07**	**(efficiency)**	**(PV)**
Apartments Low Rise	2.25E+06	2.42E+04		9.26E+05	7%	53%
Apartments Mid Rise	1.36E+00	1.46E-02		2.79E+06	7%	53%
Apartments Mid Rise	6.05E+06	6.51E+04		6.26E+05	7%	53%
Government (Civic Center)	1.03E+05	1.10E+03		1.09E+05	30%	0%
Office Park	8.80E+06	9.47E+04		7.91E+06	30%	0%
Strip Mall	2.53E+05	2.72E+03		1.12E+06	30%	0%
Strip Mall	5.80E+05	6.24E+03		2.58E+06	30%	0%
					https://www.energy.ca.gov/sites/defau	
2019 Pismo Beach Population	8,237	Population			"Single-family homes built with the 201	
		Population				
Pismo Beach New Population	1,875	Population			"Homes built under the 2019 standards	
2040 Pismo Beach Population	10,112	Population			"Nonresidential buildings will use about	
2019 SLO County Population	277,259	Population				
				kWh/year	**Per SP**	
2019 Employment	4,919	employees		**1.37E+08**	**56,514.4**	
New non-residential development (S	783,268	square feet		1.36E+06		
Median sf/employee for Other Reta	585	sf/employee		1.54E+06		
New employees	545	employees		-4.71E+04		
2040 Pismo Beach Employment	5,464	employees		5.22E+06		
2019 SLO County Employment	118,150	employees		4.43E+06		
				2.60E+06		
Existing Service Pop	13,156	service population		-2.82E+04		
New Service Pop	2,420	service population		1.16E+08		
2040 Buildout Service Pop	15,576	service population		8.27E+05		
2019 SLO County Service Pop	395,409	service population		4.47E+06		
2040 Annual VMT from CalEEMod	13,467,463					
2040 Daily VMT	36,897					
VMT Per Capita	19.6784847					
VMT Per SP	3.64884878					

rev kWh/year	Per SP
1.01E+07	**4,172.6**
4.05E+05	
1.22E+06	
2.74E+05	
7.62E+04	
5.53E+06	
7.85E+05	
1.80E+06	

ılt/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf

.9 standards will use about 7 percent less energy due to energy efficiency measures versus those built under the 2016 standards."

; will use about 53 percent less energy than those under the 2016 standards."

t 30 percent less energy due mainly to lighting upgrades."

Table 4.5-1 2019 Annual Gasoline and Diesel Consumption

	San Luis Obispo County (gallons)
Gasoline	138,000,000
Diesel	22,000,000
Total	160,000,000

Table 4.5-2 2019 Electricity Consumption

	San Luis Obispo County (MWh)
Electricity	1,715,000

Table 4.5-3 2019 Natural Gas Consumption

	San Luis Obispo County (US therms)
Natural Gas	90,000,000

Table 4.5-4 Projected 2040 Annual Natural Gas and Electricity Consumption in Pismo Beach

	Per Service Population Consumption
Natural Gas	**U.S. Therms**
2019 (SLO County Existing)	227.6
2040 (Pismo Beach New Development)	80.2
Electricity	**kWh**
2019 (SLO County Existing)	4,337.3
2040 (Pismo Beach New Development)	4,172.6

Based on VMT developed in CalEEMod

Table 4.5-5 Direct Transportation Energy Use in Pismo Beach

	Service Population
Existing	13,156
2040 (New Development)	2,420

County Per Service Population Consumption (gallons)	County Per Service Population Consumption (MMBtu)	2040 Pismo fuel consumption (gallons)	2040 Per SP Consumption (gallons)	2040 Per SP Consumption (MMBtu)
349.0	38.3	604,163	249.7	27.4
55.6	7.1	82,721	34.2	3.8
404.6	45.4	686,884	283.8	31.2

County Per Service Population Consumption (kWh)	County Per Service Population Consumption (MMBtu)
4337.3	14.8

County Per Service Population Consumption (U.S. Therms)	County Per Capita Consumption (MMBtu)
227.6	21.2

Direct Energy Consumption (Daily Per Service Population MMBtu)
21.2
7.5
14.8
14.2

Based on VMT analysis in 2021Traffic Study

Table 4.5-5

Daily VMT	Per Service Population Btu/ VMT Factor	Direct Energy Consumption (Daily Per Service Population MMBtu)
20,757	2,187.6	45.4
36,897	844.5	31.2

(Existing)
2040 (New Development Only)
2040 (Buildout + New Development)

	2.25%
2016	45.4
2017	44.4
2018	43.4
2019	42.4
2020	41.5
2021	40.5
2022	39.6
2023	38.7
2024	37.8
2025	37.0
2026	36.2
2027	35.4
2028	34.6
2029	33.8
2030	33.0
2031	32.3
2032	31.5
2033	30.8
2034	30.1
2035	29.5
2036	28.8
2037	28.2
2038	27.5
2039	26.9
2040	26.3

Direct Transportation Energy Use in Pismo Beach

Service Population	Daily VMT	Per Service Population Btu/ VMT Factor	Direct Energy Consumption (Daily Per Service Population MMBtu)
13,156	30,757	1,476.3	45.4
2,420	6,015	5,180.6	31.2
15,576	36,897	844.5	31.2

	2.25%
2016	45.4
2017	44.4
2018	43.4
2019	42.4
2020	41.5
2021	40.5
2022	39.6
2023	38.7
2024	37.8
2025	37.0
2026	36.2
2027	35.4
2028	34.6
2029	33.8
2030	33.0
2031	32.3
2032	31.5
2033	30.8
2034	30.1
2035	29.5
2036	28.8
2037	28.2
2038	27.5
2039	26.9
2040	26.3

Local Area Unemployment Statistics
Original Data Value

Series Id: LAUMT064202000000005
Not Seasonally Adjusted
Area: San Luis Obispo-Paso Robles-Arroyo Grande, CA
Area Type: Metropolitan areas
State/Region/Division: California

Years: 2018 to 2018

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
2018	134146	136866	136480	136874	137858	136921	135458	132641	135376	137487	137399

Bureae of Labor Statistics, 2020, accessed April 28, 2020

Dec		
134736	Average	136020

Appendix I

Greenhouse Gas Modeling

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Pismo Beach GP/LCP PEIR - GHG

San Luis Obispo County APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government (Civic Center)	6.34	1000sqft	0.15	6,340.00	-2
Office Park	420.93	1000sqft	9.66	420,930.00	0
Apartments Low Rise	228.00	Dwelling Unit	14.25	228,000.00	471
Apartments Mid Rise	162.00	Dwelling Unit	4.26	162,000.00	185
Apartments Mid Rise	722.00	Dwelling Unit	19.00	722,000.00	1221
Strip Mall	248.00	1000sqft	5.69	248,000.00	0
Strip Mall	108.00	1000sqft	2.48	108,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.2	**Precipitation Freq (Days)**	44
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Data given by applicant

Construction Phase - Similar Buildout schedule as other City General Plan Update for 2040.

Grading -

Architectural Coating - SLOAPCD Rule 433

Vehicle Trips - Adjusted trip length and trip generation rates

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Area Coating - SLOAPCD Rule 433

Mobile Land Use Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaCoating	Area_EF_Nonresidential_Interior	250	150
tblAreaCoating	Area_EF_Residential_Exterior	250	100
tblAreaCoating	Area_EF_Residential_Interior	250	100
tblConstructionPhase	NumDays	75.00	330.00
tblConstructionPhase	NumDays	1,110.00	4,650.00
tblConstructionPhase	NumDays	70.00	300.00
tblConstructionPhase	NumDays	110.00	465.00
tblConstructionPhase	NumDays	75.00	330.00
tblConstructionPhase	NumDays	40.00	180.00
tblLandUse	Population	0.00	-2.00
tblLandUse	Population	652.00	471.00
tblLandUse	Population	463.00	185.00
tblLandUse	Population	2,065.00	1,221.00
tblVehicleTrips	CC_TL	5.00	10.73
tblVehicleTrips	CC_TL	5.00	9.60
tblVehicleTrips	CC_TL	5.00	18.00
tblVehicleTrips	CNW_TL	5.00	12.48
tblVehicleTrips	CNW_TL	5.00	6.60
tblVehicleTrips	CNW_TL	5.00	18.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	CW_TL	13.00	12.87
tblVehicleTrips	CW_TL	13.00	24.95
tblVehicleTrips	CW_TL	13.00	46.79
tblVehicleTrips	HO_TL	5.00	9.01
tblVehicleTrips	HO_TL	5.00	9.01
tblVehicleTrips	HS_TL	5.00	9.01
tblVehicleTrips	HS_TL	5.00	9.01
tblVehicleTrips	HW_TL	13.00	23.42
tblVehicleTrips	HW_TL	13.00	23.42
tblVehicleTrips	ST_TR	8.14	0.98
tblVehicleTrips	ST_TR	4.91	0.59
tblVehicleTrips	ST_TR	1.64	0.20
tblVehicleTrips	ST_TR	42.04	5.07
tblVehicleTrips	SU_TR	6.28	0.76
tblVehicleTrips	SU_TR	4.09	0.49
tblVehicleTrips	SU_TR	0.76	0.09
tblVehicleTrips	SU_TR	20.43	2.46
tblVehicleTrips	WD_TR	7.32	0.88
tblVehicleTrips	WD_TR	5.44	0.70
tblVehicleTrips	WD_TR	33.98	4.10
tblVehicleTrips	WD_TR	11.07	1.33
tblVehicleTrips	WD_TR	44.32	5.40

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0531	0.5195	0.3635	6.6000e-004	2.3800e-003	0.0256	0.0280	6.3000e-004	0.0238	0.0244	0.0000	58.0478	58.0478	0.0159	6.0000e-005	58.4624
2022	1.1886	11.0056	9.0932	0.0202	3.5221	0.4923	4.0145	1.4158	0.4553	1.8711	0.0000	1,796.7255	1,796.7255	0.4162	0.0299	1,816.0366
2023	1.1258	8.0825	9.9399	0.0277	3.0095	0.2938	3.3032	0.9087	0.2725	1.1812	0.0000	2,527.3558	2,527.3558	0.3434	0.0976	2,565.0297
2024	0.6786	3.7142	6.2428	0.0197	2.2807	0.1087	2.3894	0.5116	0.1019	0.6136	0.0000	1,830.4869	1,830.4869	0.1276	0.0947	1,861.8951
2025	0.6030	3.1611	5.6774	0.0185	1.4670	0.0820	1.5490	0.3933	0.0771	0.4704	0.0000	1,731.3751	1,731.3751	0.1052	0.0913	1,761.2131
2026	0.5825	3.1094	5.4903	0.0181	1.4670	0.0815	1.5485	0.3933	0.0767	0.4700	0.0000	1,701.2542	1,701.2542	0.1034	0.0886	1,730.2371
2027	0.5633	3.0629	5.3292	0.0177	1.4670	0.0810	1.5481	0.3933	0.0762	0.4695	0.0000	1,672.0371	1,672.0371	0.1018	0.0860	1,700.2149
2028	0.5425	3.0116	5.1743	0.0173	1.4614	0.0802	1.5417	0.3918	0.0755	0.4672	0.0000	1,638.8703	1,638.8703	0.1000	0.0834	1,666.2184
2029	0.5263	2.9854	5.0754	0.0170	1.4671	0.0800	1.5471	0.3933	0.0753	0.4686	0.0000	1,619.8691	1,619.8691	0.0992	0.0815	1,646.6435
2030	0.5012	2.3630	4.9845	0.0173	1.4671	0.0301	1.4972	0.3933	0.0295	0.4228	0.0000	1,637.7256	1,637.7256	0.0408	0.0796	1,662.4759
2031	0.4836	2.3359	4.8960	0.0170	1.4671	0.0297	1.4968	0.3933	0.0291	0.4224	0.0000	1,617.3690	1,617.3690	0.0398	0.0780	1,641.5949
2032	0.4689	2.3214	4.8380	0.0168	1.4727	0.0295	1.5022	0.3948	0.0289	0.4237	0.0000	1,605.3215	1,605.3215	0.0391	0.0768	1,629.1814
2033	0.4513	2.2844	4.7368	0.0165	1.4615	0.0289	1.4904	0.3918	0.0284	0.4202	0.0000	1,576.9521	1,576.9521	0.0381	0.0750	1,600.2400
2034	0.4390	2.2677	4.6808	0.0163	1.4615	0.0286	1.4901	0.3918	0.0281	0.4199	0.0000	1,562.4857	1,562.4857	0.0374	0.0739	1,585.4314
2035	0.4173	2.1605	4.6448	0.0162	1.4671	0.0209	1.4881	0.3933	0.0204	0.4137	0.0000	1,555.7172	1,555.7172	0.0360	0.0732	1,578.4285
2036	0.4189	2.1687	4.6626	0.0162	1.4727	0.0210	1.4938	0.3948	0.0205	0.4153	0.0000	1,561.6778	1,561.6778	0.0362	0.0735	1,584.4761
2037	0.4173	2.1605	4.6448	0.0162	1.4671	0.0209	1.4881	0.3933	0.0204	0.4137	0.0000	1,555.7172	1,555.7172	0.0360	0.0732	1,578.4285
2038	0.4173	2.1605	4.6448	0.0162	1.4671	0.0209	1.4881	0.3933	0.0204	0.4137	0.0000	1,555.7172	1,555.7172	0.0360	0.0732	1,578.4285
2039	0.4157	2.1522	4.6270	0.0161	1.4615	0.0209	1.4824	0.3918	0.0204	0.4122	0.0000	1,549.7566	1,549.7566	0.0359	0.0729	1,572.3809

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2040	2.1535	1.3633	3.5119	0.0106	0.8574	0.0170	0.8743	0.2297	0.0167	0.2464	0.0000	1,007.1490	1,007.1490	0.0239	0.0386	1,019.2487
2041	0.1613	0.5044	2.3189	5.0100e-003	0.2791	0.0138	0.2929	0.0742	0.0138	0.0879	0.0000	457.4352	457.4352	0.0116	3.5000e-003	458.7693
2042	3.8200e-003	8.5400e-003	0.0457	1.4000e-004	0.0192	1.1000e-004	0.0193	5.1000e-003	1.0000e-004	5.2100e-003	0.0000	14.1162	14.1162	2.2000e-004	2.4000e-004	14.1934
Maximum	**2.1535**	**11.0056**	**9.9399**	**0.0277**	**3.5221**	**0.4923**	**4.0145**	**1.4158**	**0.4553**	**1.8711**	**0.0000**	**2,527.3558**	**2,527.3558**	**0.4162**	**0.0976**	**2,565.0297**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.0531	0.5195	0.3635	6.6000e-004	2.3800e-003	0.0256	0.0280	6.3000e-004	0.0238	0.0244	0.0000	58.0477	58.0477	0.0159	6.0000e-005	58.4624
2022	1.1886	11.0056	9.0932	0.0202	3.5221	0.4923	4.0145	1.4158	0.4553	1.8711	0.0000	1,796.7239	1,796.7239	0.4162	0.0299	1,816.0350
2023	1.1258	8.0825	9.9399	0.0277	3.0095	0.2938	3.3032	0.9087	0.2725	1.1812	0.0000	2,527.3546	2,527.3546	0.3434	0.0976	2,565.0285
2024	0.6786	3.7142	6.2428	0.0197	2.2807	0.1087	2.3894	0.5116	0.1019	0.6136	0.0000	1,830.4865	1,830.4865	0.1276	0.0947	1,861.8946
2025	0.6029	3.1611	5.6774	0.0185	1.4670	0.0820	1.5490	0.3933	0.0771	0.4704	0.0000	1,731.3747	1,731.3747	0.1052	0.0913	1,761.2127
2026	0.5825	3.1094	5.4903	0.0181	1.4670	0.0815	1.5485	0.3933	0.0767	0.4700	0.0000	1,701.2538	1,701.2538	0.1034	0.0886	1,730.2367
2027	0.5633	3.0629	5.3292	0.0177	1.4670	0.0810	1.5481	0.3933	0.0762	0.4695	0.0000	1,672.0367	1,672.0367	0.1018	0.0860	1,700.2146
2028	0.5425	3.0116	5.1743	0.0173	1.4614	0.0802	1.5417	0.3918	0.0755	0.4672	0.0000	1,638.8700	1,638.8700	0.1000	0.0834	1,666.2180

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2029	0.5263	2.9854	5.0754	0.0170	1.4671	0.0800	1.5471	0.3933	0.0753	0.4686	0.0000	1,619.8688	1,619.8688	0.0992	0.0815	1,646.6432
2030	0.5012	2.3630	4.9845	0.0173	1.4671	0.0301	1.4972	0.3933	0.0295	0.4228	0.0000	1,637.7252	1,637.7252	0.0408	0.0796	1,662.4755
2031	0.4836	2.3359	4.8960	0.0170	1.4671	0.0297	1.4968	0.3933	0.0291	0.4224	0.0000	1,617.3686	1,617.3686	0.0398	0.0780	1,641.5945
2032	0.4689	2.3214	4.8380	0.0168	1.4727	0.0295	1.5022	0.3948	0.0289	0.4237	0.0000	1,605.3211	1,605.3211	0.0391	0.0768	1,629.1810
2033	0.4513	2.2844	4.7368	0.0165	1.4615	0.0289	1.4904	0.3918	0.0284	0.4202	0.0000	1,576.9517	1,576.9517	0.0381	0.0750	1,600.2396
2034	0.4390	2.2677	4.6808	0.0163	1.4615	0.0286	1.4901	0.3918	0.0281	0.4199	0.0000	1,562.4853	1,562.4853	0.0374	0.0739	1,585.4310
2035	0.4173	2.1605	4.6448	0.0162	1.4671	0.0209	1.4881	0.3933	0.0204	0.4137	0.0000	1,555.7168	1,555.7168	0.0360	0.0732	1,578.4281
2036	0.4189	2.1687	4.6626	0.0162	1.4727	0.0210	1.4938	0.3948	0.0205	0.4153	0.0000	1,561.6774	1,561.6774	0.0362	0.0735	1,584.4757
2037	0.4173	2.1605	4.6448	0.0162	1.4671	0.0209	1.4881	0.3933	0.0204	0.4137	0.0000	1,555.7168	1,555.7168	0.0360	0.0732	1,578.4281
2038	0.4173	2.1605	4.6448	0.0162	1.4671	0.0209	1.4881	0.3933	0.0204	0.4137	0.0000	1,555.7168	1,555.7168	0.0360	0.0732	1,578.4281
2039	0.4157	2.1522	4.6270	0.0161	1.4615	0.0209	1.4824	0.3918	0.0204	0.4122	0.0000	1,549.7562	1,549.7562	0.0359	0.0729	1,572.3805
2040	2.1535	1.3633	3.5119	0.0106	0.8574	0.0170	0.8743	0.2297	0.0167	0.2464	0.0000	1,007.1486	1,007.1486	0.0239	0.0386	1,019.2483
2041	0.1613	0.5044	2.3189	5.0100e-003	0.2791	0.0138	0.2929	0.0742	0.0138	0.0879	0.0000	457.4348	457.4348	0.0116	3.5000e-003	458.7690
2042	3.8200e-003	8.5400e-003	0.0457	1.4000e-004	0.0192	1.1000e-004	0.0193	5.1000e-003	1.0000e-004	5.2100e-003	0.0000	14.1162	14.1162	2.2000e-004	2.4000e-004	14.1934
Maximum	**2.1535**	**11.0056**	**9.9399**	**0.0277**	**3.5221**	**0.4923**	**4.0145**	**1.4158**	**0.4553**	**1.8711**	**0.0000**	**2,527.3546**	**2,527.3546**	**0.4162**	**0.0976**	**2,565.0285**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	11-17-2021	2-16-2022	1.0355	1.0355
2	2-17-2022	5-16-2022	2.3928	2.3928
3	5-17-2022	8-16-2022	3.5283	3.5283
4	8-17-2022	11-16-2022	4.0777	4.0777
5	11-17-2022	2-16-2023	3.0019	3.0019
6	2-17-2023	5-16-2023	2.2276	2.2276
7	5-17-2023	8-16-2023	2.2871	2.2871
8	8-17-2023	11-16-2023	2.3035	2.3035
9	11-17-2023	2-16-2024	2.0358	2.0358
10	2-17-2024	5-16-2024	0.9784	0.9784
11	5-17-2024	8-16-2024	0.9853	0.9853
12	8-17-2024	11-16-2024	1.0008	1.0008
13	11-17-2024	2-16-2025	0.9870	0.9870
14	2-17-2025	5-16-2025	0.9138	0.9138
15	5-17-2025	8-16-2025	0.9306	0.9306
16	8-17-2025	11-16-2025	0.9454	0.9454
17	11-17-2025	2-16-2026	0.9502	0.9502
18	2-17-2026	5-16-2026	0.8965	0.8965
19	5-17-2026	8-16-2026	0.9132	0.9132
20	8-17-2026	11-16-2026	0.9275	0.9275
21	11-17-2026	2-16-2027	0.9325	0.9325
22	2-17-2027	5-16-2027	0.8807	0.8807
23	5-17-2027	8-16-2027	0.8974	0.8974
24	8-17-2027	11-16-2027	0.9111	0.9111
25	11-17-2027	2-16-2028	0.9166	0.9166
26	2-17-2028	5-16-2028	0.8765	0.8765
27	5-17-2028	8-16-2028	0.8833	0.8833
28	8-17-2028	11-16-2028	0.8965	0.8965

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

29	**11-17-2028**	**2-16-2029**	0.9019	0.9019
30	**2-17-2029**	**5-16-2029**	0.8531	0.8531
31	**5-17-2029**	**8-16-2029**	0.8697	0.8697
32	**8-17-2029**	**11-16-2029**	0.8825	0.8825
33	**11-17-2029**	**2-16-2030**	0.8113	0.8113
34	**2-17-2030**	**5-16-2030**	0.6954	0.6954
35	**5-17-2030**	**8-16-2030**	0.7071	0.7071
36	**8-17-2030**	**11-16-2030**	0.7195	0.7195
37	**11-17-2030**	**2-16-2031**	0.7255	0.7255
38	**2-17-2031**	**5-16-2031**	0.6846	0.6846
39	**5-17-2031**	**8-16-2031**	0.6963	0.6963
40	**8-17-2031**	**11-16-2031**	0.7083	0.7083
41	**11-17-2031**	**2-16-2032**	0.7145	0.7145
42	**2-17-2032**	**5-16-2032**	0.6826	0.6826
43	**5-17-2032**	**8-16-2032**	0.6866	0.6866
44	**8-17-2032**	**11-16-2032**	0.6982	0.6982
45	**11-17-2032**	**2-16-2033**	0.7050	0.7050
46	**2-17-2033**	**5-16-2033**	0.6667	0.6667
47	**5-17-2033**	**8-16-2033**	0.6785	0.6785
48	**8-17-2033**	**11-16-2033**	0.6898	0.6898
49	**11-17-2033**	**2-16-2034**	0.6968	0.6968
50	**2-17-2034**	**5-16-2034**	0.6596	0.6596
51	**5-17-2034**	**8-16-2034**	0.6713	0.6713
52	**8-17-2034**	**11-16-2034**	0.6825	0.6825
53	**11-17-2034**	**2-16-2035**	0.6751	0.6751
54	**2-17-2035**	**5-16-2035**	0.6257	0.6257
55	**5-17-2035**	**8-16-2035**	0.6364	0.6364
56	**8-17-2035**	**11-16-2035**	0.6474	0.6474
57	**11-17-2035**	**2-16-2036**	0.6578	0.6578

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58	**2-17-2036**	**5-16-2036**	0.6328	0.6328
59	**5-17-2036**	**8-16-2036**	0.6364	0.6364
60	**8-17-2036**	**11-16-2036**	0.6474	0.6474
61	**11-17-2036**	**2-16-2037**	0.6578	0.6578
62	**2-17-2037**	**5-16-2037**	0.6257	0.6257
63	**5-17-2037**	**8-16-2037**	0.6364	0.6364
64	**8-17-2037**	**11-16-2037**	0.6474	0.6474
65	**11-17-2037**	**2-16-2038**	0.6578	0.6578
66	**2-17-2038**	**5-16-2038**	0.6257	0.6257
67	**5-17-2038**	**8-16-2038**	0.6364	0.6364
68	**8-17-2038**	**11-16-2038**	0.6474	0.6474
69	**11-17-2038**	**2-16-2039**	0.6578	0.6578
70	**2-17-2039**	**5-16-2039**	0.6257	0.6257
71	**5-17-2039**	**8-16-2039**	0.6364	0.6364
72	**8-17-2039**	**11-16-2039**	0.6474	0.6474
73	**11-17-2039**	**2-16-2040**	0.6391	0.6391
74	**2-17-2040**	**5-16-2040**	0.5978	0.5978
75	**5-17-2040**	**8-16-2040**	0.4556	0.4556
76	**8-17-2040**	**11-16-2040**	0.8376	0.8376
77	**11-17-2040**	**2-16-2041**	1.4067	1.4067
78	**2-17-2041**	**5-16-2041**	0.1910	0.1910
79	**5-17-2041**	**8-16-2041**	0.1964	0.1964
80	**8-17-2041**	**11-16-2041**	0.1555	0.1555
81	**11-17-2041**	**2-16-2042**	0.0344	0.0344
		Highest	4.0777	4.0777

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	9.0943	0.1741	15.0840	8.0000e-004		0.0840	0.0840		0.0840	0.0840	0.0000	24.7522	24.7522	0.0236	0.0000	25.3423
Energy	0.1046	0.9224	0.5904	5.7000e-003		0.0723	0.0723		0.0723	0.0723	0.0000	2,520.6964	2,520.6964	0.2602	0.0481	2,541.5375
Mobile	1.3370	1.5521	14.8323	0.0339	5.0175	0.0178	5.0352	1.3382	0.0166	1.3548	0.0000	3,423.2443	3,423.2443	0.1625	0.1342	3,467.2826
Waste						0.0000	0.0000		0.0000	0.0000	266.5109	0.0000	266.5109	15.7503	0.0000	660.2695
Water						0.0000	0.0000		0.0000	0.0000	55.4858	122.6841	178.1699	5.7188	0.1370	361.9562
Total	**10.5359**	**2.6486**	**30.5066**	**0.0404**	**5.0175**	**0.1740**	**5.1915**	**1.3382**	**0.1729**	**1.5110**	**321.9967**	**6,091.3770**	**6,413.3737**	**21.9154**	**0.3192**	**7,056.3880**

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	9.0943	0.1741	15.0840	8.0000e-004		0.0840	0.0840		0.0840	0.0840	0.0000	24.7522	24.7522	0.0236	0.0000	25.3423
Energy	0.1046	0.9224	0.5904	5.7000e-003		0.0723	0.0723		0.0723	0.0723	0.0000	2,520.6964	2,520.6964	0.2602	0.0481	2,541.5375
Mobile	1.3370	1.5521	14.8323	0.0339	5.0175	0.0178	5.0352	1.3382	0.0166	1.3548	0.0000	3,423.2443	3,423.2443	0.1625	0.1342	3,467.2826
Waste						0.0000	0.0000		0.0000	0.0000	266.5109	0.0000	266.5109	15.7503	0.0000	660.2695
Water						0.0000	0.0000		0.0000	0.0000	44.3887	105.1721	149.5607	4.5762	0.1097	296.6592
Total	**10.5359**	**2.6486**	**30.5066**	**0.0404**	**5.0175**	**0.1740**	**5.1915**	**1.3382**	**0.1729**	**1.5110**	**310.8995**	**6,073.8649**	**6,384.7645**	**20.7727**	**0.2920**	**6,991.0911**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.45**	**0.29**	**0.45**	**5.21**	**8.54**	**0.93**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	11/17/2021	1/10/2023	5	300	
2	Site Preparation	Site Preparation	2/23/2022	11/1/2022	5	180	
3	Grading	Grading	4/20/2022	1/30/2024	5	465	

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4	Building Construction	Building Construction	9/21/2022	7/17/2040	5	4650	
5	Paving	Paving	7/18/2040	10/22/2041	5	330	
6	Architectural Coating	Architectural Coating	10/23/2040	1/27/2042	5	330	

Acres of Grading (Site Preparation Phase): 270

Acres of Grading (Grading Phase): 1395

Acres of Paving: 0

Residential Indoor: 2,251,800; Residential Outdoor: 750,600; Non-Residential Indoor: 1,174,905; Non-Residential Outdoor: 391,635; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,051.00	247.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	210.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0522	0.5188	0.3558	6.4000e-004		0.0256	0.0256		0.0238	0.0238	0.0000	56.1013	56.1013	0.0158	0.0000	56.4961
Total	**0.0522**	**0.5188**	**0.3558**	**6.4000e-004**		**0.0256**	**0.0256**		**0.0238**	**0.0238**	**0.0000**	**56.1013**	**56.1013**	**0.0158**	**0.0000**	**56.4961**

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3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-004	7.4000e-004	7.7100e-003	2.0000e-005	2.3800e-003	1.0000e-005	2.4000e-003	6.3000e-004	1.0000e-005	6.5000e-004	0.0000	1.9465	1.9465	6.0000e-005	6.0000e-005	1.9664
Total	**9.0000e-004**	**7.4000e-004**	**7.7100e-003**	**2.0000e-005**	**2.3800e-003**	**1.0000e-005**	**2.4000e-003**	**6.3000e-004**	**1.0000e-005**	**6.5000e-004**	**0.0000**	**1.9465**	**1.9465**	**6.0000e-005**	**6.0000e-005**	**1.9664**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0522	0.5188	0.3558	6.4000e-004		0.0256	0.0256		0.0238	0.0238	0.0000	56.1012	56.1012	0.0158	0.0000	56.4960
Total	**0.0522**	**0.5188**	**0.3558**	**6.4000e-004**		**0.0256**	**0.0256**		**0.0238**	**0.0238**	**0.0000**	**56.1012**	**56.1012**	**0.0158**	**0.0000**	**56.4960**

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3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-004	7.4000e-004	7.7100e-003	2.0000e-005	2.3800e-003	1.0000e-005	2.4000e-003	6.3000e-004	1.0000e-005	6.5000e-004	0.0000	1.9465	1.9465	6.0000e-005	6.0000e-005	1.9664
Total	**9.0000e-004**	**7.4000e-004**	**7.7100e-003**	**2.0000e-005**	**2.3800e-003**	**1.0000e-005**	**2.4000e-003**	**6.3000e-004**	**1.0000e-005**	**6.5000e-004**	**0.0000**	**1.9465**	**1.9465**	**6.0000e-005**	**6.0000e-005**	**1.9664**

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3431	3.3435	2.6772	5.0500e-003		0.1615	0.1615		0.1502	0.1502	0.0000	441.8730	441.8730	0.1241	0.0000	444.9759
Total	**0.3431**	**3.3435**	**2.6772**	**5.0500e-003**		**0.1615**	**0.1615**		**0.1502**	**0.1502**	**0.0000**	**441.8730**	**441.8730**	**0.1241**	**0.0000**	**444.9759**

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3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6300e-003	5.1100e-003	0.0559	1.6000e-004	0.0188	1.0000e-004	0.0189	4.9900e-003	9.0000e-005	5.0800e-003	0.0000	14.9526	14.9526	4.4000e-004	4.5000e-004	15.0970
Total	**6.6300e-003**	**5.1100e-003**	**0.0559**	**1.6000e-004**	**0.0188**	**1.0000e-004**	**0.0189**	**4.9900e-003**	**9.0000e-005**	**5.0800e-003**	**0.0000**	**14.9526**	**14.9526**	**4.4000e-004**	**4.5000e-004**	**15.0970**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3431	3.3435	2.6772	5.0500e-003		0.1615	0.1615		0.1502	0.1502	0.0000	441.8724	441.8724	0.1241	0.0000	444.9754
Total	**0.3431**	**3.3435**	**2.6772**	**5.0500e-003**		**0.1615**	**0.1615**		**0.1502**	**0.1502**	**0.0000**	**441.8724**	**441.8724**	**0.1241**	**0.0000**	**444.9754**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6300e-003	5.1100e-003	0.0559	1.6000e-004	0.0188	1.0000e-004	0.0189	4.9900e-003	9.0000e-005	5.0800e-003	0.0000	14.9526	14.9526	4.4000e-004	4.5000e-004	15.0970
Total	**6.6300e-003**	**5.1100e-003**	**0.0559**	**1.6000e-004**	**0.0188**	**1.0000e-004**	**0.0189**	**4.9900e-003**	**9.0000e-005**	**5.0800e-003**	**0.0000**	**14.9526**	**14.9526**	**4.4000e-004**	**4.5000e-004**	**15.0970**

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.9400e-003	0.0752	0.0688	1.4000e-004		3.4900e-003	3.4900e-003		3.2500e-003	3.2500e-003	0.0000	11.8972	11.8972	3.3300e-003	0.0000	11.9805
Total	**7.9400e-003**	**0.0752**	**0.0688**	**1.4000e-004**		**3.4900e-003**	**3.4900e-003**		**3.2500e-003**	**3.2500e-003**	**0.0000**	**11.8972**	**11.8972**	**3.3300e-003**	**0.0000**	**11.9805**

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3.2 Demolition - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.2000e-004	1.3900e-003	0.0000	5.1000e-004	0.0000	5.1000e-004	1.3000e-004	0.0000	1.4000e-004	0.0000	0.3927	0.3927	1.0000e-005	1.0000e-005	0.3963
Total	**1.7000e-004**	**1.2000e-004**	**1.3900e-003**	**0.0000**	**5.1000e-004**	**0.0000**	**5.1000e-004**	**1.3000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.3927**	**0.3927**	**1.0000e-005**	**1.0000e-005**	**0.3963**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.9400e-003	0.0752	0.0688	1.4000e-004		3.4900e-003	3.4900e-003		3.2500e-003	3.2500e-003	0.0000	11.8972	11.8972	3.3300e-003	0.0000	11.9805
Total	**7.9400e-003**	**0.0752**	**0.0688**	**1.4000e-004**		**3.4900e-003**	**3.4900e-003**		**3.2500e-003**	**3.2500e-003**	**0.0000**	**11.8972**	**11.8972**	**3.3300e-003**	**0.0000**	**11.9805**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.2000e-004	1.3900e-003	0.0000	5.1000e-004	0.0000	5.1000e-004	1.3000e-004	0.0000	1.4000e-004	0.0000	0.3927	0.3927	1.0000e-005	1.0000e-005	0.3963
Total	**1.7000e-004**	**1.2000e-004**	**1.3900e-003**	**0.0000**	**5.1000e-004**	**0.0000**	**5.1000e-004**	**1.3000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.3927**	**0.3927**	**1.0000e-005**	**1.0000e-005**	**0.3963**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.7691	0.0000	1.7691	0.9092	0.0000	0.9092	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2853	2.9775	1.7728	3.4200e-003		0.1451	0.1451		0.1335	0.1335	0.0000	300.9545	300.9545	0.0973	0.0000	303.3879
Total	**0.2853**	**2.9775**	**1.7728**	**3.4200e-003**	**1.7691**	**0.1451**	**1.9143**	**0.9092**	**0.1335**	**1.0427**	**0.0000**	**300.9545**	**300.9545**	**0.0973**	**0.0000**	**303.3879**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5100e-003	4.2500e-003	0.0464	1.3000e-004	0.0156	8.0000e-005	0.0157	4.1400e-003	7.0000e-005	4.2200e-003	0.0000	12.4222	12.4222	3.7000e-004	3.7000e-004	12.5421
Total	**5.5100e-003**	**4.2500e-003**	**0.0464**	**1.3000e-004**	**0.0156**	**8.0000e-005**	**0.0157**	**4.1400e-003**	**7.0000e-005**	**4.2200e-003**	**0.0000**	**12.4222**	**12.4222**	**3.7000e-004**	**3.7000e-004**	**12.5421**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.7691	0.0000	1.7691	0.9092	0.0000	0.9092	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2853	2.9775	1.7728	3.4200e-003		0.1451	0.1451		0.1335	0.1335	0.0000	300.9542	300.9542	0.0973	0.0000	303.3875
Total	**0.2853**	**2.9775**	**1.7728**	**3.4200e-003**	**1.7691**	**0.1451**	**1.9143**	**0.9092**	**0.1335**	**1.0427**	**0.0000**	**300.9542**	**300.9542**	**0.0973**	**0.0000**	**303.3875**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5100e-003	4.2500e-003	0.0464	1.3000e-004	0.0156	8.0000e-005	0.0157	4.1400e-003	7.0000e-005	4.2200e-003	0.0000	12.4222	12.4222	3.7000e-004	3.7000e-004	12.5421
Total	**5.5100e-003**	**4.2500e-003**	**0.0464**	**1.3000e-004**	**0.0156**	**8.0000e-005**	**0.0157**	**4.1400e-003**	**7.0000e-005**	**4.2200e-003**	**0.0000**	**12.4222**	**12.4222**	**3.7000e-004**	**3.7000e-004**	**12.5421**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2907	0.0000	1.2907	0.3828	0.0000	0.3828	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3317	3.5542	2.6573	5.6800e-003		0.1496	0.1496		0.1376	0.1376	0.0000	498.9916	498.9916	0.1614	0.0000	503.0262
Total	**0.3317**	**3.5542**	**2.6573**	**5.6800e-003**	**1.2907**	**0.1496**	**1.4403**	**0.3828**	**0.1376**	**0.5204**	**0.0000**	**498.9916**	**498.9916**	**0.1614**	**0.0000**	**503.0262**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.2200e-003	4.8000e-003	0.0525	1.5000e-004	0.0176	9.0000e-005	0.0177	4.6800e-003	8.0000e-005	4.7700e-003	0.0000	14.0324	14.0324	4.2000e-004	4.2000e-004	14.1680
Total	**6.2200e-003**	**4.8000e-003**	**0.0525**	**1.5000e-004**	**0.0176**	**9.0000e-005**	**0.0177**	**4.6800e-003**	**8.0000e-005**	**4.7700e-003**	**0.0000**	**14.0324**	**14.0324**	**4.2000e-004**	**4.2000e-004**	**14.1680**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.2907	0.0000	1.2907	0.3828	0.0000	0.3828	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3317	3.5542	2.6573	5.6800e-003		0.1496	0.1496		0.1376	0.1376	0.0000	498.9910	498.9910	0.1614	0.0000	503.0256
Total	**0.3317**	**3.5542**	**2.6573**	**5.6800e-003**	**1.2907**	**0.1496**	**1.4403**	**0.3828**	**0.1376**	**0.5204**	**0.0000**	**498.9910**	**498.9910**	**0.1614**	**0.0000**	**503.0256**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.2200e-003	4.8000e-003	0.0525	1.5000e-004	0.0176	9.0000e-005	0.0177	4.6800e-003	8.0000e-005	4.7700e-003	0.0000	14.0324	14.0324	4.2000e-004	4.2000e-004	14.1680
Total	**6.2200e-003**	**4.8000e-003**	**0.0525**	**1.5000e-004**	**0.0176**	**9.0000e-005**	**0.0177**	**4.6800e-003**	**8.0000e-005**	**4.7700e-003**	**0.0000**	**14.0324**	**14.0324**	**4.2000e-004**	**4.2000e-004**	**14.1680**

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.5226	0.0000	1.5226	0.5102	0.0000	0.5102	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4318	4.4870	3.6467	8.0700e-003		0.1852	0.1852		0.1704	0.1704	0.0000	708.9577	708.9577	0.2293	0.0000	714.6900
Total	**0.4318**	**4.4870**	**3.6467**	**8.0700e-003**	**1.5226**	**0.1852**	**1.7078**	**0.5102**	**0.1704**	**0.6806**	**0.0000**	**708.9577**	**708.9577**	**0.2293**	**0.0000**	**714.6900**

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3.4 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.2900e-003	6.0300e-003	0.0688	2.1000e-004	0.0250	1.2000e-004	0.0252	6.6500e-003	1.1000e-004	6.7700e-003	0.0000	19.4491	19.4491	5.4000e-004	5.5000e-004	19.6269
Total	**8.2900e-003**	**6.0300e-003**	**0.0688**	**2.1000e-004**	**0.0250**	**1.2000e-004**	**0.0252**	**6.6500e-003**	**1.1000e-004**	**6.7700e-003**	**0.0000**	**19.4491**	**19.4491**	**5.4000e-004**	**5.5000e-004**	**19.6269**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.5226	0.0000	1.5226	0.5102	0.0000	0.5102	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4318	4.4870	3.6467	8.0700e-003		0.1852	0.1852		0.1704	0.1704	0.0000	708.9569	708.9569	0.2293	0.0000	714.6891
Total	**0.4318**	**4.4870**	**3.6467**	**8.0700e-003**	**1.5226**	**0.1852**	**1.7078**	**0.5102**	**0.1704**	**0.6806**	**0.0000**	**708.9569**	**708.9569**	**0.2293**	**0.0000**	**714.6891**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.2900e-003	6.0300e-003	0.0688	2.1000e-004	0.0250	1.2000e-004	0.0252	6.6500e-003	1.1000e-004	6.7700e-003	0.0000	19.4491	19.4491	5.4000e-004	5.5000e-004	19.6269
Total	**8.2900e-003**	**6.0300e-003**	**0.0688**	**2.1000e-004**	**0.0250**	**1.2000e-004**	**0.0252**	**6.6500e-003**	**1.1000e-004**	**6.7700e-003**	**0.0000**	**19.4491**	**19.4491**	**5.4000e-004**	**5.5000e-004**	**19.6269**

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.8059	0.0000	0.8059	0.1163	0.0000	0.1163	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0354	0.3562	0.3050	6.8000e-004		0.0147	0.0147		0.0135	0.0135	0.0000	59.9715	59.9715	0.0194	0.0000	60.4564
Total	**0.0354**	**0.3562**	**0.3050**	**6.8000e-004**	**0.8059**	**0.0147**	**0.8206**	**0.1163**	**0.0135**	**0.1298**	**0.0000**	**59.9715**	**59.9715**	**0.0194**	**0.0000**	**60.4564**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6000e-004	4.6000e-004	5.4200e-003	2.0000e-005	2.1200e-003	1.0000e-005	2.1300e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.6068	1.6068	4.0000e-005	4.0000e-005	1.6207
Total	**6.6000e-004**	**4.6000e-004**	**5.4200e-003**	**2.0000e-005**	**2.1200e-003**	**1.0000e-005**	**2.1300e-003**	**5.6000e-004**	**1.0000e-005**	**5.7000e-004**	**0.0000**	**1.6068**	**1.6068**	**4.0000e-005**	**4.0000e-005**	**1.6207**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.8059	0.0000	0.8059	0.1163	0.0000	0.1163	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0354	0.3562	0.3050	6.8000e-004		0.0147	0.0147		0.0135	0.0135	0.0000	59.9714	59.9714	0.0194	0.0000	60.4563
Total	**0.0354**	**0.3562**	**0.3050**	**6.8000e-004**	**0.8059**	**0.0147**	**0.8206**	**0.1163**	**0.0135**	**0.1298**	**0.0000**	**59.9714**	**59.9714**	**0.0194**	**0.0000**	**60.4563**

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3.4 Grading - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.6000e-004	4.6000e-004	5.4200e-003	2.0000e-005	2.1200e-003	1.0000e-005	2.1300e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.6068	1.6068	4.0000e-005	4.0000e-005	1.6207
Total	**6.6000e-004**	**4.6000e-004**	**5.4200e-003**	**2.0000e-005**	**2.1200e-003**	**1.0000e-005**	**2.1300e-003**	**5.6000e-004**	**1.0000e-005**	**5.7000e-004**	**0.0000**	**1.6068**	**1.6068**	**4.0000e-005**	**4.0000e-005**	**1.6207**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0623	0.5700	0.5973	9.8000e-004		0.0295	0.0295		0.0278	0.0278	0.0000	84.5797	84.5797	0.0203	0.0000	85.0863
Total	**0.0623**	**0.5700**	**0.5973**	**9.8000e-004**		**0.0295**	**0.0295**		**0.0278**	**0.0278**	**0.0000**	**84.5797**	**84.5797**	**0.0203**	**0.0000**	**85.0863**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0174	0.4457	0.1343	1.3900e-003	0.0410	4.3300e-003	0.0453	0.0118	4.1400e-003	0.0160	0.0000	134.7639	134.7639	3.1200e-003	0.0199	140.7567
Worker	0.1304	0.1006	1.0995	3.1900e-003	0.3693	1.9200e-003	0.3712	0.0982	1.7700e-003	0.0999	0.0000	294.1557	294.1557	8.7500e-003	8.8000e-003	296.9966
Total	**0.1479**	**0.5463**	**1.2338**	**4.5800e-003**	**0.4103**	**6.2500e-003**	**0.4165**	**0.1100**	**5.9100e-003**	**0.1159**	**0.0000**	**428.9196**	**428.9196**	**0.0119**	**0.0287**	**437.7533**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0623	0.5700	0.5973	9.8000e-004		0.0295	0.0295		0.0278	0.0278	0.0000	84.5796	84.5796	0.0203	0.0000	85.0862
Total	**0.0623**	**0.5700**	**0.5973**	**9.8000e-004**		**0.0295**	**0.0295**		**0.0278**	**0.0278**	**0.0000**	**84.5796**	**84.5796**	**0.0203**	**0.0000**	**85.0862**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0174	0.4457	0.1343	1.3900e-003	0.0410	4.3300e-003	0.0453	0.0118	4.1400e-003	0.0160	0.0000	134.7639	134.7639	3.1200e-003	0.0199	140.7567
Worker	0.1304	0.1006	1.0995	3.1900e-003	0.3693	1.9200e-003	0.3712	0.0982	1.7700e-003	0.0999	0.0000	294.1557	294.1557	8.7500e-003	8.8000e-003	296.9966
Total	**0.1479**	**0.5463**	**1.2338**	**4.5800e-003**	**0.4103**	**6.2500e-003**	**0.4165**	**0.1100**	**5.9100e-003**	**0.1159**	**0.0000**	**428.9196**	**428.9196**	**0.0119**	**0.0287**	**437.7533**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856	0.0000	301.3462	301.3462	0.0717	0.0000	303.1383
Total	**0.2045**	**1.8700**	**2.1117**	**3.5000e-003**		**0.0910**	**0.0910**		**0.0856**	**0.0856**	**0.0000**	**301.3462**	**301.3462**	**0.0717**	**0.0000**	**303.1383**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0376	1.3269	0.4257	4.7700e-003	0.1460	7.5200e-003	0.1535	0.0422	7.2000e-003	0.0494	0.0000	463.2648	463.2648	0.0103	0.0681	483.8052
Worker	0.4355	0.3171	3.6169	0.0110	1.3154	6.4800e-003	1.3218	0.3496	5.9700e-003	0.3555	0.0000	1,022.0481	1,022.0481	0.0282	0.0290	1,031.3924
Total	**0.4732**	**1.6441**	**4.0426**	**0.0158**	**1.4614**	**0.0140**	**1.4754**	**0.3918**	**0.0132**	**0.4049**	**0.0000**	**1,485.3130**	**1,485.3130**	**0.0385**	**0.0971**	**1,515.1977**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2045	1.8700	2.1117	3.5000e-003		0.0910	0.0910		0.0856	0.0856	0.0000	301.3458	301.3458	0.0717	0.0000	303.1380
Total	**0.2045**	**1.8700**	**2.1117**	**3.5000e-003**		**0.0910**	**0.0910**		**0.0856**	**0.0856**	**0.0000**	**301.3458**	**301.3458**	**0.0717**	**0.0000**	**303.1380**

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3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0376	1.3269	0.4257	4.7700e-003	0.1460	7.5200e-003	0.1535	0.0422	7.2000e-003	0.0494	0.0000	463.2648	463.2648	0.0103	0.0681	483.8052
Worker	0.4355	0.3171	3.6169	0.0110	1.3154	6.4800e-003	1.3218	0.3496	5.9700e-003	0.3555	0.0000	1,022.0481	1,022.0481	0.0282	0.0290	1,031.3924
Total	**0.4732**	**1.6441**	**4.0426**	**0.0158**	**1.4614**	**0.0140**	**1.4754**	**0.3918**	**0.0132**	**0.4049**	**0.0000**	**1,485.3130**	**1,485.3130**	**0.0385**	**0.0971**	**1,515.1977**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756	0.0000	303.7223	303.7223	0.0718	0.0000	305.5179
Total	**0.1928**	**1.7611**	**2.1179**	**3.5300e-003**		**0.0803**	**0.0803**		**0.0756**	**0.0756**	**0.0000**	**303.7223**	**303.7223**	**0.0718**	**0.0000**	**305.5179**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0366	1.3117	0.4208	4.7200e-003	0.1471	7.4500e-003	0.1546	0.0425	7.1300e-003	0.0497	0.0000	459.6446	459.6446	0.0105	0.0675	480.0212
Worker	0.4132	0.2848	3.3938	0.0107	1.3255	6.2000e-003	1.3317	0.3523	5.7200e-003	0.3580	0.0000	1,005.5418	1,005.5418	0.0259	0.0272	1,014.2789
Total	**0.4498**	**1.5965**	**3.8145**	**0.0155**	**1.4726**	**0.0137**	**1.4863**	**0.3948**	**0.0129**	**0.4076**	**0.0000**	**1,465.1864**	**1,465.1864**	**0.0363**	**0.0947**	**1,494.3001**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756	0.0000	303.7220	303.7220	0.0718	0.0000	305.5175
Total	**0.1928**	**1.7611**	**2.1179**	**3.5300e-003**		**0.0803**	**0.0803**		**0.0756**	**0.0756**	**0.0000**	**303.7220**	**303.7220**	**0.0718**	**0.0000**	**305.5175**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0366	1.3117	0.4208	4.7200e-003	0.1471	7.4500e-003	0.1546	0.0425	7.1300e-003	0.0497	0.0000	459.6446	459.6446	0.0105	0.0675	480.0212
Worker	0.4132	0.2848	3.3938	0.0107	1.3255	6.2000e-003	1.3317	0.3523	5.7200e-003	0.3580	0.0000	1,005.5418	1,005.5418	0.0259	0.0272	1,014.2789
Total	**0.4498**	**1.5965**	**3.8145**	**0.0155**	**1.4726**	**0.0137**	**1.4863**	**0.3948**	**0.0129**	**0.4076**	**0.0000**	**1,465.1864**	**1,465.1864**	**0.0363**	**0.0947**	**1,494.3001**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0353	1.2790	0.4128	4.6200e-003	0.1466	7.2500e-003	0.1538	0.0424	6.9300e-003	0.0493	0.0000	449.9612	449.9612	0.0106	0.0660	469.9017
Worker	0.3892	0.2548	3.1656	0.0104	1.3204	5.9000e-003	1.3263	0.3509	5.4400e-003	0.3563	0.0000	978.7590	978.7590	0.0235	0.0253	986.8778
Total	**0.4245**	**1.5338**	**3.5784**	**0.0150**	**1.4670**	**0.0132**	**1.4802**	**0.3933**	**0.0124**	**0.4056**	**0.0000**	**1,428.7202**	**1,428.7202**	**0.0341**	**0.0913**	**1,456.7796**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0353	1.2790	0.4128	4.6200e-003	0.1466	7.2500e-003	0.1538	0.0424	6.9300e-003	0.0493	0.0000	449.9612	449.9612	0.0106	0.0660	469.9017
Worker	0.3892	0.2548	3.1656	0.0104	1.3204	5.9000e-003	1.3263	0.3509	5.4400e-003	0.3563	0.0000	978.7590	978.7590	0.0235	0.0253	986.8778
Total	**0.4245**	**1.5338**	**3.5784**	**0.0150**	**1.4670**	**0.0132**	**1.4802**	**0.3933**	**0.0124**	**0.4056**	**0.0000**	**1,428.7202**	**1,428.7202**	**0.0341**	**0.0913**	**1,456.7796**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0342	1.2513	0.4079	4.5300e-003	0.1466	7.0600e-003	0.1537	0.0424	6.7500e-003	0.0491	0.0000	441.8965	441.8965	0.0108	0.0648	461.4732
Worker	0.3698	0.2309	2.9833	0.0100	1.3204	5.6200e-003	1.3260	0.3509	5.1800e-003	0.3561	0.0000	956.7028	956.7028	0.0215	0.0238	964.3303
Total	**0.4040**	**1.4822**	**3.3912**	**0.0146**	**1.4670**	**0.0127**	**1.4797**	**0.3933**	**0.0119**	**0.4052**	**0.0000**	**1,398.5993**	**1,398.5993**	**0.0322**	**0.0886**	**1,425.8036**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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3.5 Building Construction - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0342	1.2513	0.4079	4.5300e-003	0.1466	7.0600e-003	0.1537	0.0424	6.7500e-003	0.0491	0.0000	441.8965	441.8965	0.0108	0.0648	461.4732
Worker	0.3698	0.2309	2.9833	0.0100	1.3204	5.6200e-003	1.3260	0.3509	5.1800e-003	0.3561	0.0000	956.7028	956.7028	0.0215	0.0238	964.3303
Total	**0.4040**	**1.4822**	**3.3912**	**0.0146**	**1.4670**	**0.0127**	**1.4797**	**0.3933**	**0.0119**	**0.4052**	**0.0000**	**1,398.5993**	**1,398.5993**	**0.0322**	**0.0886**	**1,425.8036**

3.5 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0333	1.2251	0.4040	4.4400e-003	0.1466	6.8700e-003	0.1535	0.0424	6.5700e-003	0.0490	0.0000	433.1952	433.1952	0.0109	0.0635	452.3850
Worker	0.3515	0.2106	2.8262	9.7500e-003	1.3204	5.3000e-003	1.3257	0.3509	4.8800e-003	0.3558	0.0000	936.1870	936.1870	0.0197	0.0225	943.3964
Total	**0.3848**	**1.4357**	**3.2302**	**0.0142**	**1.4670**	**0.0122**	**1.4792**	**0.3933**	**0.0115**	**0.4047**	**0.0000**	**1,369.3822**	**1,369.3822**	**0.0306**	**0.0860**	**1,395.7814**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0333	1.2251	0.4040	4.4400e-003	0.1466	6.8700e-003	0.1535	0.0424	6.5700e-003	0.0490	0.0000	433.1952	433.1952	0.0109	0.0635	452.3850
Worker	0.3515	0.2106	2.8262	9.7500e-003	1.3204	5.3000e-003	1.3257	0.3509	4.8800e-003	0.3558	0.0000	936.1870	936.1870	0.0197	0.0225	943.3964
Total	**0.3848**	**1.4357**	**3.2302**	**0.0142**	**1.4670**	**0.0122**	**1.4792**	**0.3933**	**0.0115**	**0.4047**	**0.0000**	**1,369.3822**	**1,369.3822**	**0.0306**	**0.0860**	**1,395.7814**

3.5 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645	0.0000	301.4953	301.4953	0.0709	0.0000	303.2671
Total	**0.1778**	**1.6211**	**2.0910**	**3.5000e-003**		**0.0686**	**0.0686**		**0.0645**	**0.0645**	**0.0000**	**301.4953**	**301.4953**	**0.0709**	**0.0000**	**303.2671**

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3.5 Building Construction - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0323	1.1978	0.3996	4.3400e-003	0.1461	6.6800e-003	0.1528	0.0422	6.3900e-003	0.0486	0.0000	423.2607	423.2607	0.0110	0.0620	442.0082
Worker	0.3324	0.1928	2.6837	9.4500e-003	1.3154	4.9500e-003	1.3203	0.3496	4.5600e-003	0.3541	0.0000	914.1144	914.1144	0.0181	0.0214	920.9431
Total	**0.3647**	**1.3906**	**3.0833**	**0.0138**	**1.4614**	**0.0116**	**1.4731**	**0.3918**	**0.0110**	**0.4027**	**0.0000**	**1,337.3751**	**1,337.3751**	**0.0292**	**0.0834**	**1,362.9513**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645	0.0000	301.4949	301.4949	0.0709	0.0000	303.2667
Total	**0.1778**	**1.6211**	**2.0910**	**3.5000e-003**		**0.0686**	**0.0686**		**0.0645**	**0.0645**	**0.0000**	**301.4949**	**301.4949**	**0.0709**	**0.0000**	**303.2667**

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3.5 Building Construction - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0323	1.1978	0.3996	4.3400e-003	0.1461	6.6800e-003	0.1528	0.0422	6.3900e-003	0.0486	0.0000	423.2607	423.2607	0.0110	0.0620	442.0082
Worker	0.3324	0.1928	2.6837	9.4500e-003	1.3154	4.9500e-003	1.3203	0.3496	4.5600e-003	0.3541	0.0000	914.1144	914.1144	0.0181	0.0214	920.9431
Total	**0.3647**	**1.3906**	**3.0833**	**0.0138**	**1.4614**	**0.0116**	**1.4731**	**0.3918**	**0.0110**	**0.4027**	**0.0000**	**1,337.3751**	**1,337.3751**	**0.0292**	**0.0834**	**1,362.9513**

3.5 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2029

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0317	1.1792	0.3984	4.2600e-003	0.1467	6.5300e-003	0.1532	0.0424	6.2500e-003	0.0486	0.0000	416.4572	416.4572	0.0112	0.0610	434.9014
Worker	0.3162	0.1789	2.5779	9.2500e-003	1.3204	4.6600e-003	1.3251	0.3509	4.2900e-003	0.3552	0.0000	900.7571	900.7571	0.0169	0.0206	907.3086
Total	**0.3479**	**1.3581**	**2.9763**	**0.0135**	**1.4671**	**0.0112**	**1.4783**	**0.3933**	**0.0105**	**0.4038**	**0.0000**	**1,317.2143**	**1,317.2143**	**0.0281**	**0.0815**	**1,342.2100**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

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3.5 Building Construction - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0317	1.1792	0.3984	4.2600e-003	0.1467	6.5300e-003	0.1532	0.0424	6.2500e-003	0.0486	0.0000	416.4572	416.4572	0.0112	0.0610	434.9014
Worker	0.3162	0.1789	2.5779	9.2500e-003	1.3204	4.6600e-003	1.3251	0.3509	4.2900e-003	0.3552	0.0000	900.7571	900.7571	0.0169	0.0206	907.3086
Total	**0.3479**	**1.3581**	**2.9763**	**0.0135**	**1.4671**	**0.0112**	**1.4783**	**0.3933**	**0.0105**	**0.4038**	**0.0000**	**1,317.2143**	**1,317.2143**	**0.0281**	**0.0815**	**1,342.2100**

3.5 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0336	343.0336	0.0138	0.0000	343.3777
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0336**	**343.0336**	**0.0138**	**0.0000**	**343.3777**

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3.5 Building Construction - 2030

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0310	1.1611	0.3969	4.1900e-003	0.1467	6.3900e-003	0.1531	0.0424	6.1200e-003	0.0485	0.0000	408.9874	408.9874	0.0114	0.0598	427.1019
Worker	0.2994	0.1664	2.4791	9.0300e-003	1.3204	4.3700e-003	1.3248	0.3509	4.0200e-003	0.3549	0.0000	885.7047	885.7047	0.0156	0.0198	891.9963
Total	**0.3304**	**1.3275**	**2.8760**	**0.0132**	**1.4671**	**0.0108**	**1.4778**	**0.3933**	**0.0101**	**0.4034**	**0.0000**	**1,294.6920**	**1,294.6920**	**0.0270**	**0.0796**	**1,319.0982**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0332	343.0332	0.0138	0.0000	343.3773
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0332**	**343.0332**	**0.0138**	**0.0000**	**343.3773**

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3.5 Building Construction - 2030

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0310	1.1611	0.3969	4.1900e-003	0.1467	6.3900e-003	0.1531	0.0424	6.1200e-003	0.0485	0.0000	408.9874	408.9874	0.0114	0.0598	427.1019
Worker	0.2994	0.1664	2.4791	9.0300e-003	1.3204	4.3700e-003	1.3248	0.3509	4.0200e-003	0.3549	0.0000	885.7047	885.7047	0.0156	0.0198	891.9963
Total	**0.3304**	**1.3275**	**2.8760**	**0.0132**	**1.4671**	**0.0108**	**1.4778**	**0.3933**	**0.0101**	**0.4034**	**0.0000**	**1,294.6920**	**1,294.6920**	**0.0270**	**0.0796**	**1,319.0982**

3.5 Building Construction - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0336	343.0336	0.0138	0.0000	343.3777
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0336**	**343.0336**	**0.0138**	**0.0000**	**343.3777**

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3.5 Building Construction - 2031

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0305	1.1451	0.3965	4.1100e-003	0.1467	6.2700e-003	0.1529	0.0424	6.0000e-003	0.0484	0.0000	402.1808	402.1808	0.0115	0.0588	419.9965
Worker	0.2823	0.1553	2.3911	8.8400e-003	1.3204	4.1000e-003	1.3245	0.3509	3.7700e-003	0.3547	0.0000	872.1546	872.1546	0.0146	0.0191	878.2207
Total	**0.3128**	**1.3004**	**2.7875**	**0.0130**	**1.4671**	**0.0104**	**1.4775**	**0.3933**	**9.7700e-003**	**0.4031**	**0.0000**	**1,274.3354**	**1,274.3354**	**0.0261**	**0.0780**	**1,298.2172**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193	0.0000	343.0332	343.0332	0.0138	0.0000	343.3773
Total	**0.1708**	**1.0355**	**2.1085**	**4.0400e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**343.0332**	**343.0332**	**0.0138**	**0.0000**	**343.3773**

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3.5 Building Construction - 2031

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0305	1.1451	0.3965	4.1100e-003	0.1467	6.2700e-003	0.1529	0.0424	6.0000e-003	0.0484	0.0000	402.1808	402.1808	0.0115	0.0588	419.9965
Worker	0.2823	0.1553	2.3911	8.8400e-003	1.3204	4.1000e-003	1.3245	0.3509	3.7700e-003	0.3547	0.0000	872.1546	872.1546	0.0146	0.0191	878.2207
Total	**0.3128**	**1.3004**	**2.7875**	**0.0130**	**1.4671**	**0.0104**	**1.4775**	**0.3933**	**9.7700e-003**	**0.4031**	**0.0000**	**1,274.3354**	**1,274.3354**	**0.0261**	**0.0780**	**1,298.2172**

3.5 Building Construction - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1715	1.0394	2.1166	4.0600e-003		0.0194	0.0194		0.0194	0.0194	0.0000	344.3479	344.3479	0.0138	0.0000	344.6933
Total	**0.1715**	**1.0394**	**2.1166**	**4.0600e-003**		**0.0194**	**0.0194**		**0.0194**	**0.0194**	**0.0000**	**344.3479**	**344.3479**	**0.0138**	**0.0000**	**344.6933**

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3.5 Building Construction - 2032

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0301	1.1355	0.3984	4.0600e-003	0.1472	6.1900e-003	0.1534	0.0426	5.9200e-003	0.0485	0.0000	397.5717	397.5717	0.0117	0.0581	415.1886
Worker	0.2673	0.1465	2.3230	8.7000e-003	1.3255	3.8600e-003	1.3293	0.3523	3.5500e-003	0.3558	0.0000	863.4018	863.4018	0.0136	0.0187	869.2995
Total	**0.2974**	**1.2820**	**2.7215**	**0.0128**	**1.4727**	**0.0101**	**1.4828**	**0.3948**	**9.4700e-003**	**0.4043**	**0.0000**	**1,260.9735**	**1,260.9735**	**0.0253**	**0.0768**	**1,284.4881**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1715	1.0394	2.1166	4.0600e-003		0.0194	0.0194		0.0194	0.0194	0.0000	344.3475	344.3475	0.0138	0.0000	344.6929
Total	**0.1715**	**1.0394**	**2.1166**	**4.0600e-003**		**0.0194**	**0.0194**		**0.0194**	**0.0194**	**0.0000**	**344.3475**	**344.3475**	**0.0138**	**0.0000**	**344.6929**

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3.5 Building Construction - 2032

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0301	1.1355	0.3984	4.0600e-003	0.1472	6.1900e-003	0.1534	0.0426	5.9200e-003	0.0485	0.0000	397.5717	397.5717	0.0117	0.0581	415.1886
Worker	0.2673	0.1465	2.3230	8.7000e-003	1.3255	3.8600e-003	1.3293	0.3523	3.5500e-003	0.3558	0.0000	863.4018	863.4018	0.0136	0.0187	869.2995
Total	**0.2974**	**1.2820**	**2.7215**	**0.0128**	**1.4727**	**0.0101**	**1.4828**	**0.3948**	**9.4700e-003**	**0.4043**	**0.0000**	**1,260.9735**	**1,260.9735**	**0.0253**	**0.0768**	**1,284.4881**

3.5 Building Construction - 2033

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7193	341.7193	0.0137	0.0000	342.0621
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7193**	**341.7193**	**0.0137**	**0.0000**	**342.0621**

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3.5 Building Construction - 2033

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0296	1.1150	0.3964	3.9800e-003	0.1461	6.0600e-003	0.1522	0.0422	5.7900e-003	0.0480	0.0000	389.0707	389.0707	0.0117	0.0569	406.3191
Worker	0.2516	0.1379	2.2401	8.4800e-003	1.3154	3.6100e-003	1.3190	0.3496	3.3200e-003	0.3529	0.0000	846.1621	846.1621	0.0127	0.0181	851.8589
Total	**0.2811**	**1.2529**	**2.6364**	**0.0125**	**1.4615**	**9.6700e-003**	**1.4711**	**0.3918**	**9.1100e-003**	**0.4009**	**0.0000**	**1,235.2328**	**1,235.2328**	**0.0244**	**0.0750**	**1,258.1780**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7189	341.7189	0.0137	0.0000	342.0617
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7189**	**341.7189**	**0.0137**	**0.0000**	**342.0617**

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3.5 Building Construction - 2033

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0296	1.1150	0.3964	3.9800e-003	0.1461	6.0600e-003	0.1522	0.0422	5.7900e-003	0.0480	0.0000	389.0707	389.0707	0.0117	0.0569	406.3191
Worker	0.2516	0.1379	2.2401	8.4800e-003	1.3154	3.6100e-003	1.3190	0.3496	3.3200e-003	0.3529	0.0000	846.1621	846.1621	0.0127	0.0181	851.8589
Total	**0.2811**	**1.2529**	**2.6364**	**0.0125**	**1.4615**	**9.6700e-003**	**1.4711**	**0.3918**	**9.1100e-003**	**0.4009**	**0.0000**	**1,235.2328**	**1,235.2328**	**0.0244**	**0.0750**	**1,258.1780**

3.5 Building Construction - 2034

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7193	341.7193	0.0137	0.0000	342.0621
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7193**	**341.7193**	**0.0137**	**0.0000**	**342.0621**

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3.5 Building Construction - 2034

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0293	1.1044	0.3976	3.9200e-003	0.1461	5.9700e-003	0.1521	0.0422	5.7100e-003	0.0480	0.0000	384.0597	384.0597	0.0118	0.0562	401.0944
Worker	0.2395	0.1318	2.1827	8.3400e-003	1.3154	3.4000e-003	1.3188	0.3496	3.1300e-003	0.3527	0.0000	836.7068	836.7068	0.0119	0.0177	842.2750
Total	**0.2688**	**1.2362**	**2.5804**	**0.0123**	**1.4615**	**9.3700e-003**	**1.4709**	**0.3918**	**8.8400e-003**	**0.4007**	**0.0000**	**1,220.7664**	**1,220.7664**	**0.0237**	**0.0739**	**1,243.3694**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193	0.0000	341.7189	341.7189	0.0137	0.0000	342.0617
Total	**0.1702**	**1.0315**	**2.1004**	**4.0200e-003**		**0.0193**	**0.0193**		**0.0193**	**0.0193**	**0.0000**	**341.7189**	**341.7189**	**0.0137**	**0.0000**	**342.0617**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2034

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0293	1.1044	0.3976	3.9200e-003	0.1461	5.9700e-003	0.1521	0.0422	5.7100e-003	0.0480	0.0000	384.0597	384.0597	0.0118	0.0562	401.0944
Worker	0.2395	0.1318	2.1827	8.3400e-003	1.3154	3.4000e-003	1.3188	0.3496	3.1300e-003	0.3527	0.0000	836.7068	836.7068	0.0119	0.0177	842.2750
Total	**0.2688**	**1.2362**	**2.5804**	**0.0123**	**1.4615**	**9.3700e-003**	**1.4709**	**0.3918**	**8.8400e-003**	**0.4007**	**0.0000**	**1,220.7664**	**1,220.7664**	**0.0237**	**0.0739**	**1,243.3694**

3.5 Building Construction - 2035

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0336	343.0336	0.0128	0.0000	343.3530
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0336**	**343.0336**	**0.0128**	**0.0000**	**343.3530**

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3.5 Building Construction - 2035

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0291	1.0985	0.4003	3.8900e-003	0.1467	5.9200e-003	0.1526	0.0424	5.6600e-003	0.0481	0.0000	381.0270	381.0270	0.0119	0.0557	397.9358
Worker	0.2294	0.1274	2.1411	8.2500e-003	1.3204	3.2200e-003	1.3236	0.3509	2.9600e-003	0.3539	0.0000	831.6566	831.6566	0.0113	0.0175	837.1397
Total	**0.2585**	**1.2259**	**2.5414**	**0.0121**	**1.4671**	**9.1400e-003**	**1.4763**	**0.3933**	**8.6200e-003**	**0.4019**	**0.0000**	**1,212.6835**	**1,212.6835**	**0.0232**	**0.0732**	**1,235.0755**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0332	343.0332	0.0128	0.0000	343.3526
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0332**	**343.0332**	**0.0128**	**0.0000**	**343.3526**

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3.5 Building Construction - 2035

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0291	1.0985	0.4003	3.8900e-003	0.1467	5.9200e-003	0.1526	0.0424	5.6600e-003	0.0481	0.0000	381.0270	381.0270	0.0119	0.0557	397.9358
Worker	0.2294	0.1274	2.1411	8.2500e-003	1.3204	3.2200e-003	1.3236	0.3509	2.9600e-003	0.3539	0.0000	831.6566	831.6566	0.0113	0.0175	837.1397
Total	**0.2585**	**1.2259**	**2.5414**	**0.0121**	**1.4671**	**9.1400e-003**	**1.4763**	**0.3933**	**8.6200e-003**	**0.4019**	**0.0000**	**1,212.6835**	**1,212.6835**	**0.0232**	**0.0732**	**1,235.0755**

3.5 Building Construction - 2036

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1594	0.9381	2.1114	4.0600e-003		0.0118	0.0118		0.0118	0.0118	0.0000	344.3479	344.3479	0.0128	0.0000	344.6686
Total	**0.1594**	**0.9381**	**2.1114**	**4.0600e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**344.3479**	**344.3479**	**0.0128**	**0.0000**	**344.6686**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2036

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0292	1.1028	0.4019	3.9000e-003	0.1473	5.9400e-003	0.1532	0.0426	5.6800e-003	0.0483	0.0000	382.4869	382.4869	0.0120	0.0560	399.4604
Worker	0.2303	0.1279	2.1493	8.2800e-003	1.3255	3.2300e-003	1.3287	0.3523	2.9800e-003	0.3552	0.0000	834.8430	834.8430	0.0114	0.0175	840.3471
Total	**0.2595**	**1.2306**	**2.5512**	**0.0122**	**1.4727**	**9.1700e-003**	**1.4819**	**0.3948**	**8.6600e-003**	**0.4035**	**0.0000**	**1,217.3298**	**1,217.3298**	**0.0233**	**0.0735**	**1,239.8076**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1594	0.9381	2.1114	4.0600e-003		0.0118	0.0118		0.0118	0.0118	0.0000	344.3475	344.3475	0.0128	0.0000	344.6682
Total	**0.1594**	**0.9381**	**2.1114**	**4.0600e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**344.3475**	**344.3475**	**0.0128**	**0.0000**	**344.6682**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2036

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0292	1.1028	0.4019	3.9000e-003	0.1473	5.9400e-003	0.1532	0.0426	5.6800e-003	0.0483	0.0000	382.4869	382.4869	0.0120	0.0560	399.4604
Worker	0.2303	0.1279	2.1493	8.2800e-003	1.3255	3.2300e-003	1.3287	0.3523	2.9800e-003	0.3552	0.0000	834.8430	834.8430	0.0114	0.0175	840.3471
Total	**0.2595**	**1.2306**	**2.5512**	**0.0122**	**1.4727**	**9.1700e-003**	**1.4819**	**0.3948**	**8.6600e-003**	**0.4035**	**0.0000**	**1,217.3298**	**1,217.3298**	**0.0233**	**0.0735**	**1,239.8076**

3.5 Building Construction - 2037

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0336	343.0336	0.0128	0.0000	343.3530
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0336**	**343.0336**	**0.0128**	**0.0000**	**343.3530**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2037

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0291	1.0985	0.4003	3.8900e-003	0.1467	5.9200e-003	0.1526	0.0424	5.6600e-003	0.0481	0.0000	381.0270	381.0270	0.0119	0.0557	397.9358
Worker	0.2294	0.1274	2.1411	8.2500e-003	1.3204	3.2200e-003	1.3236	0.3509	2.9600e-003	0.3539	0.0000	831.6566	831.6566	0.0113	0.0175	837.1397
Total	**0.2585**	**1.2259**	**2.5414**	**0.0121**	**1.4671**	**9.1400e-003**	**1.4763**	**0.3933**	**8.6200e-003**	**0.4019**	**0.0000**	**1,212.6835**	**1,212.6835**	**0.0232**	**0.0732**	**1,235.0755**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0332	343.0332	0.0128	0.0000	343.3526
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0332**	**343.0332**	**0.0128**	**0.0000**	**343.3526**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2037

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0291	1.0985	0.4003	3.8900e-003	0.1467	5.9200e-003	0.1526	0.0424	5.6600e-003	0.0481	0.0000	381.0270	381.0270	0.0119	0.0557	397.9358
Worker	0.2294	0.1274	2.1411	8.2500e-003	1.3204	3.2200e-003	1.3236	0.3509	2.9600e-003	0.3539	0.0000	831.6566	831.6566	0.0113	0.0175	837.1397
Total	**0.2585**	**1.2259**	**2.5414**	**0.0121**	**1.4671**	**9.1400e-003**	**1.4763**	**0.3933**	**8.6200e-003**	**0.4019**	**0.0000**	**1,212.6835**	**1,212.6835**	**0.0232**	**0.0732**	**1,235.0755**

3.5 Building Construction - 2038

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0336	343.0336	0.0128	0.0000	343.3530
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0336**	**343.0336**	**0.0128**	**0.0000**	**343.3530**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2038

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0291	1.0985	0.4003	3.8900e-003	0.1467	5.9200e-003	0.1526	0.0424	5.6600e-003	0.0481	0.0000	381.0270	381.0270	0.0119	0.0557	397.9358
Worker	0.2294	0.1274	2.1411	8.2500e-003	1.3204	3.2200e-003	1.3236	0.3509	2.9600e-003	0.3539	0.0000	831.6566	831.6566	0.0113	0.0175	837.1397
Total	**0.2585**	**1.2259**	**2.5414**	**0.0121**	**1.4671**	**9.1400e-003**	**1.4763**	**0.3933**	**8.6200e-003**	**0.4019**	**0.0000**	**1,212.6835**	**1,212.6835**	**0.0232**	**0.0732**	**1,235.0755**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118	0.0000	343.0332	343.0332	0.0128	0.0000	343.3526
Total	**0.1588**	**0.9346**	**2.1034**	**4.0400e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**343.0332**	**343.0332**	**0.0128**	**0.0000**	**343.3526**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2038

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0291	1.0985	0.4003	3.8900e-003	0.1467	5.9200e-003	0.1526	0.0424	5.6600e-003	0.0481	0.0000	381.0270	381.0270	0.0119	0.0557	397.9358
Worker	0.2294	0.1274	2.1411	8.2500e-003	1.3204	3.2200e-003	1.3236	0.3509	2.9600e-003	0.3539	0.0000	831.6566	831.6566	0.0113	0.0175	837.1397
Total	**0.2585**	**1.2259**	**2.5414**	**0.0121**	**1.4671**	**9.1400e-003**	**1.4763**	**0.3933**	**8.6200e-003**	**0.4019**	**0.0000**	**1,212.6835**	**1,212.6835**	**0.0232**	**0.0732**	**1,235.0755**

3.5 Building Construction - 2039

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1582	0.9310	2.0953	4.0200e-003		0.0118	0.0118		0.0118	0.0118	0.0000	341.7193	341.7193	0.0127	0.0000	342.0375
Total	**0.1582**	**0.9310**	**2.0953**	**4.0200e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**341.7193**	**341.7193**	**0.0127**	**0.0000**	**342.0375**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2039

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0290	1.0943	0.3988	3.8800e-003	0.1461	5.8900e-003	0.1520	0.0423	5.6400e-003	0.0479	0.0000	379.5671	379.5671	0.0119	0.0555	396.4111
Worker	0.2285	0.1269	2.1329	8.2200e-003	1.3154	3.2100e-003	1.3186	0.3496	2.9500e-003	0.3525	0.0000	828.4701	828.4701	0.0113	0.0174	833.9323
Total	**0.2575**	**1.2212**	**2.5317**	**0.0121**	**1.4615**	**9.1000e-003**	**1.4706**	**0.3918**	**8.5900e-003**	**0.4004**	**0.0000**	**1,208.0373**	**1,208.0373**	**0.0232**	**0.0729**	**1,230.3434**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1582	0.9310	2.0953	4.0200e-003		0.0118	0.0118		0.0118	0.0118	0.0000	341.7189	341.7189	0.0127	0.0000	342.0371
Total	**0.1582**	**0.9310**	**2.0953**	**4.0200e-003**		**0.0118**	**0.0118**		**0.0118**	**0.0118**	**0.0000**	**341.7189**	**341.7189**	**0.0127**	**0.0000**	**342.0371**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2039

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0290	1.0943	0.3988	3.8800e-003	0.1461	5.8900e-003	0.1520	0.0423	5.6400e-003	0.0479	0.0000	379.5671	379.5671	0.0119	0.0555	396.4111
Worker	0.2285	0.1269	2.1329	8.2200e-003	1.3154	3.2100e-003	1.3186	0.3496	2.9500e-003	0.3525	0.0000	828.4701	828.4701	0.0113	0.0174	833.9323
Total	**0.2575**	**1.2212**	**2.5317**	**0.0121**	**1.4615**	**9.1000e-003**	**1.4706**	**0.3918**	**8.5900e-003**	**0.4004**	**0.0000**	**1,208.0373**	**1,208.0373**	**0.0232**	**0.0729**	**1,230.3434**

3.5 Building Construction - 2040

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0850	0.4892	1.1444	2.2000e-003		5.2300e-003	5.2300e-003		5.2300e-003	5.2300e-003	0.0000	186.6314	186.6314	6.7100e-003	0.0000	186.7990
Total	**0.0850**	**0.4892**	**1.1444**	**2.2000e-003**		**5.2300e-003**	**5.2300e-003**		**5.2300e-003**	**5.2300e-003**	**0.0000**	**186.6314**	**186.6314**	**6.7100e-003**	**0.0000**	**186.7990**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2040

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0156	0.5721	0.2219	2.0100e-003	0.0798	3.1100e-003	0.0829	0.0231	2.9700e-003	0.0261	0.0000	197.4724	197.4724	6.8300e-003	0.0288	206.2378
Worker	0.1021	0.0612	1.0715	4.2700e-003	0.7184	1.3800e-003	0.7198	0.1909	1.2700e-003	0.1922	0.0000	437.2753	437.2753	4.8700e-003	9.0200e-003	440.0845
Total	**0.1177**	**0.6333**	**1.2933**	**6.2800e-003**	**0.7982**	**4.4900e-003**	**0.8027**	**0.2140**	**4.2400e-003**	**0.2182**	**0.0000**	**634.7477**	**634.7477**	**0.0117**	**0.0379**	**646.3223**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0850	0.4892	1.1444	2.2000e-003		5.2300e-003	5.2300e-003		5.2300e-003	5.2300e-003	0.0000	186.6311	186.6311	6.7100e-003	0.0000	186.7988
Total	**0.0850**	**0.4892**	**1.1444**	**2.2000e-003**		**5.2300e-003**	**5.2300e-003**		**5.2300e-003**	**5.2300e-003**	**0.0000**	**186.6311**	**186.6311**	**6.7100e-003**	**0.0000**	**186.7988**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2040

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0156	0.5721	0.2219	2.0100e-003	0.0798	3.1100e-003	0.0829	0.0231	2.9700e-003	0.0261	0.0000	197.4724	197.4724	6.8300e-003	0.0288	206.2378
Worker	0.1021	0.0612	1.0715	4.2700e-003	0.7184	1.3800e-003	0.7198	0.1909	1.2700e-003	0.1922	0.0000	437.2753	437.2753	4.8700e-003	9.0200e-003	440.0845
Total	**0.1177**	**0.6333**	**1.2933**	**6.2800e-003**	**0.7982**	**4.4900e-003**	**0.8027**	**0.2140**	**4.2400e-003**	**0.2182**	**0.0000**	**634.7477**	**634.7477**	**0.0117**	**0.0379**	**646.3223**

3.6 Paving - 2040

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0602	0.2176	0.9412	1.6700e-003		6.9300e-003	6.9300e-003		6.9300e-003	6.9300e-003	0.0000	143.3921	143.3921	4.8200e-003	0.0000	143.5126
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0602**	**0.2176**	**0.9412**	**1.6700e-003**		**6.9300e-003**	**6.9300e-003**		**6.9300e-003**	**6.9300e-003**	**0.0000**	**143.3921**	**143.3921**	**4.8200e-003**	**0.0000**	**143.5126**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2040

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2200e-003	7.3000e-004	0.0128	5.0000e-005	8.5900e-003	2.0000e-005	8.6100e-003	2.2800e-003	2.0000e-005	2.3000e-003	0.0000	5.2300	5.2300	6.0000e-005	1.1000e-004	5.2636
Total	**1.2200e-003**	**7.3000e-004**	**0.0128**	**5.0000e-005**	**8.5900e-003**	**2.0000e-005**	**8.6100e-003**	**2.2800e-003**	**2.0000e-005**	**2.3000e-003**	**0.0000**	**5.2300**	**5.2300**	**6.0000e-005**	**1.1000e-004**	**5.2636**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0602	0.2176	0.9412	1.6700e-003		6.9300e-003	6.9300e-003		6.9300e-003	6.9300e-003	0.0000	143.3919	143.3919	4.8200e-003	0.0000	143.5124
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0602**	**0.2176**	**0.9412**	**1.6700e-003**		**6.9300e-003**	**6.9300e-003**		**6.9300e-003**	**6.9300e-003**	**0.0000**	**143.3919**	**143.3919**	**4.8200e-003**	**0.0000**	**143.5124**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2040

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2200e-003	7.3000e-004	0.0128	5.0000e-005	8.5900e-003	2.0000e-005	8.6100e-003	2.2800e-003	2.0000e-005	2.3000e-003	0.0000	5.2300	5.2300	6.0000e-005	1.1000e-004	5.2636
Total	**1.2200e-003**	**7.3000e-004**	**0.0128**	**5.0000e-005**	**8.5900e-003**	**2.0000e-005**	**8.6100e-003**	**2.2800e-003**	**2.0000e-005**	**2.3000e-003**	**0.0000**	**5.2300**	**5.2300**	**6.0000e-005**	**1.1000e-004**	**5.2636**

3.6 Paving - 2041

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1067	0.3858	1.6688	2.9600e-003		0.0123	0.0123		0.0123	0.0123	0.0000	254.2499	254.2499	8.5500e-003	0.0000	254.4635
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1067**	**0.3858**	**1.6688**	**2.9600e-003**		**0.0123**	**0.0123**		**0.0123**	**0.0123**	**0.0000**	**254.2499**	**254.2499**	**8.5500e-003**	**0.0000**	**254.4635**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2041

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1700e-003	1.3000e-003	0.0227	9.0000e-005	0.0152	3.0000e-005	0.0153	4.0500e-003	3.0000e-005	4.0800e-003	0.0000	9.2734	9.2734	1.0000e-004	1.9000e-004	9.3330
Total	**2.1700e-003**	**1.3000e-003**	**0.0227**	**9.0000e-005**	**0.0152**	**3.0000e-005**	**0.0153**	**4.0500e-003**	**3.0000e-005**	**4.0800e-003**	**0.0000**	**9.2734**	**9.2734**	**1.0000e-004**	**1.9000e-004**	**9.3330**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1067	0.3858	1.6688	2.9600e-003		0.0123	0.0123		0.0123	0.0123	0.0000	254.2496	254.2496	8.5500e-003	0.0000	254.4632
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1067**	**0.3858**	**1.6688**	**2.9600e-003**		**0.0123**	**0.0123**		**0.0123**	**0.0123**	**0.0000**	**254.2496**	**254.2496**	**8.5500e-003**	**0.0000**	**254.4632**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2041

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1700e-003	1.3000e-003	0.0227	9.0000e-005	0.0152	3.0000e-005	0.0153	4.0500e-003	3.0000e-005	4.0800e-003	0.0000	9.2734	9.2734	1.0000e-004	1.9000e-004	9.3330
Total	**2.1700e-003**	**1.3000e-003**	**0.0227**	**9.0000e-005**	**0.0152**	**3.0000e-005**	**0.0153**	**4.0500e-003**	**3.0000e-005**	**4.0800e-003**	**0.0000**	**9.2734**	**9.2734**	**1.0000e-004**	**1.9000e-004**	**9.3330**

3.7 Architectural Coating - 2040

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.8794					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8700e-003	0.0182	0.0448	7.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	6.3831	6.3831	2.2000e-004	0.0000	6.3888
Total	**1.8822**	**0.0182**	**0.0448**	**7.0000e-005**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**	**0.0000**	**6.3831**	**6.3831**	**2.2000e-004**	**0.0000**	**6.3888**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2040

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.1800e-003	4.3000e-003	0.0754	3.0000e-004	0.0505	1.0000e-004	0.0506	0.0134	9.0000e-005	0.0135	0.0000	30.7647	30.7647	3.4000e-004	6.3000e-004	30.9624
Total	**7.1800e-003**	**4.3000e-003**	**0.0754**	**3.0000e-004**	**0.0505**	**1.0000e-004**	**0.0506**	**0.0134**	**9.0000e-005**	**0.0135**	**0.0000**	**30.7647**	**30.7647**	**3.4000e-004**	**6.3000e-004**	**30.9624**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.8794					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8700e-003	0.0182	0.0448	7.0000e-005		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	6.3831	6.3831	2.2000e-004	0.0000	6.3887
Total	**1.8822**	**0.0182**	**0.0448**	**7.0000e-005**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**	**0.0000**	**6.3831**	**6.3831**	**2.2000e-004**	**0.0000**	**6.3887**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2040

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.1800e-003	4.3000e-003	0.0754	3.0000e-004	0.0505	1.0000e-004	0.0506	0.0134	9.0000e-005	0.0135	0.0000	30.7647	30.7647	3.4000e-004	6.3000e-004	30.9624
Total	**7.1800e-003**	**4.3000e-003**	**0.0754**	**3.0000e-004**	**0.0505**	**1.0000e-004**	**0.0506**	**0.0134**	**9.0000e-005**	**0.0135**	**0.0000**	**30.7647**	**30.7647**	**3.4000e-004**	**6.3000e-004**	**30.9624**

3.7 Architectural Coating - 2041

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0150	0.0949	0.2339	3.9000e-004		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004	0.0000	33.3200	33.3200	1.1700e-003	0.0000	33.3493
Total	**0.0150**	**0.0949**	**0.2339**	**3.9000e-004**		**9.7000e-004**	**9.7000e-004**		**9.7000e-004**	**9.7000e-004**	**0.0000**	**33.3200**	**33.3200**	**1.1700e-003**	**0.0000**	**33.3493**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2041

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0375	0.0225	0.3935	1.5700e-003	0.2638	5.1000e-004	0.2643	0.0701	4.7000e-004	0.0706	0.0000	160.5919	160.5919	1.7900e-003	3.3100e-003	161.6236
Total	**0.0375**	**0.0225**	**0.3935**	**1.5700e-003**	**0.2638**	**5.1000e-004**	**0.2643**	**0.0701**	**4.7000e-004**	**0.0706**	**0.0000**	**160.5919**	**160.5919**	**1.7900e-003**	**3.3100e-003**	**161.6236**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0150	0.0949	0.2339	3.9000e-004		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004	0.0000	33.3199	33.3199	1.1700e-003	0.0000	33.3492
Total	**0.0150**	**0.0949**	**0.2339**	**3.9000e-004**		**9.7000e-004**	**9.7000e-004**		**9.7000e-004**	**9.7000e-004**	**0.0000**	**33.3199**	**33.3199**	**1.1700e-003**	**0.0000**	**33.3492**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2041

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0375	0.0225	0.3935	1.5700e-003	0.2638	5.1000e-004	0.2643	0.0701	4.7000e-004	0.0706	0.0000	160.5919	160.5919	1.7900e-003	3.3100e-003	161.6236
Total	**0.0375**	**0.0225**	**0.3935**	**1.5700e-003**	**0.2638**	**5.1000e-004**	**0.2643**	**0.0701**	**4.7000e-004**	**0.0706**	**0.0000**	**160.5919**	**160.5919**	**1.7900e-003**	**3.3100e-003**	**161.6236**

3.7 Architectural Coating - 2042

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.0900e-003	6.9100e-003	0.0170	3.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	2.4256	2.4256	9.0000e-005	0.0000	2.4277
Total	**1.0900e-003**	**6.9100e-003**	**0.0170**	**3.0000e-005**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**2.4256**	**2.4256**	**9.0000e-005**	**0.0000**	**2.4277**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2042

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7300e-003	1.6400e-003	0.0287	1.1000e-004	0.0192	4.0000e-005	0.0192	5.1000e-003	3.0000e-005	5.1400e-003	0.0000	11.6906	11.6906	1.3000e-004	2.4000e-004	11.7657
Total	**2.7300e-003**	**1.6400e-003**	**0.0287**	**1.1000e-004**	**0.0192**	**4.0000e-005**	**0.0192**	**5.1000e-003**	**3.0000e-005**	**5.1400e-003**	**0.0000**	**11.6906**	**11.6906**	**1.3000e-004**	**2.4000e-004**	**11.7657**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.0900e-003	6.9100e-003	0.0170	3.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	2.4256	2.4256	9.0000e-005	0.0000	2.4277
Total	**1.0900e-003**	**6.9100e-003**	**0.0170**	**3.0000e-005**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**2.4256**	**2.4256**	**9.0000e-005**	**0.0000**	**2.4277**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2042

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7300e-003	1.6400e-003	0.0287	1.1000e-004	0.0192	4.0000e-005	0.0192	5.1000e-003	3.0000e-005	5.1400e-003	0.0000	11.6906	11.6906	1.3000e-004	2.4000e-004	11.7657
Total	**2.7300e-003**	**1.6400e-003**	**0.0287**	**1.1000e-004**	**0.0192**	**4.0000e-005**	**0.0192**	**5.1000e-003**	**3.0000e-005**	**5.1400e-003**	**0.0000**	**11.6906**	**11.6906**	**1.3000e-004**	**2.4000e-004**	**11.7657**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.3370	1.5521	14.8323	0.0339	5.0175	0.0178	5.0352	1.3382	0.0166	1.3548	0.0000	3,423.2443	3,423.2443	0.1625	0.1342	3,467.2826
Unmitigated	1.3370	1.5521	14.8323	0.0339	5.0175	0.0178	5.0352	1.3382	0.0166	1.3548	0.0000	3,423.2443	3,423.2443	0.1625	0.1342	3,467.2826

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	200.64	223.44	173.28	915,611	915,611
Apartments Mid Rise	113.40	95.58	79.38	485,275	485,275
Apartments Mid Rise	505.40	425.98	353.78	2,162,770	2,162,770
Government (Civic Center)	25.99	0.00	0.00	49,223	49,223
Office Park	559.84	84.19	37.88	1,836,518	1,836,518
Strip Mall	1,339.20	1,257.36	610.08	5,585,619	5,585,619
Strip Mall	583.20	547.56	265.68	2,432,447	2,432,447
Total	3,327.67	2,634.11	1,520.08	13,467,463	13,467,463

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	23.42	9.01	9.01	35.80	21.00	43.20	86	11	3
Apartments Mid Rise	23.42	9.01	9.01	35.80	21.00	43.20	86	11	3
Apartments Mid Rise	23.42	9.01	9.01	35.80	21.00	43.20	86	11	3
Government (Civic Center)	12.87	10.73	12.48	75.00	20.00	5.00	50	34	16
Office Park	24.95	9.60	6.60	33.00	48.00	19.00	82	15	3

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	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Strip Mall	46.79	18.00	18.00	16.60	64.40	19.00	45	40	15
Strip Mall	46.79	18.00	18.00	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.537981	0.060917	0.197944	0.129503	0.022130	0.006150	0.007595	0.005434	0.000841	0.000325	0.027432	0.000740	0.003008
Apartments Mid Rise	0.537981	0.060917	0.197944	0.129503	0.022130	0.006150	0.007595	0.005434	0.000841	0.000325	0.027432	0.000740	0.003008
Government (Civic Center)	0.537981	0.060917	0.197944	0.129503	0.022130	0.006150	0.007595	0.005434	0.000841	0.000325	0.027432	0.000740	0.003008
Office Park	0.537981	0.060917	0.197944	0.129503	0.022130	0.006150	0.007595	0.005434	0.000841	0.000325	0.027432	0.000740	0.003008
Strip Mall	0.537981	0.060917	0.197944	0.129503	0.022130	0.006150	0.007595	0.005434	0.000841	0.000325	0.027432	0.000740	0.003008

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,485.6170	1,485.6170	0.2403	0.0291	1,500.3071
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,485.6170	1,485.6170	0.2403	0.0291	1,500.3071
NaturalGas Mitigated	0.1046	0.9224	0.5904	5.7000e-003		0.0723	0.0723		0.0723	0.0723	0.0000	1,035.0794	1,035.0794	0.0198	0.0190	1,041.2304
NaturalGas Unmitigated	0.1046	0.9224	0.5904	5.7000e-003		0.0723	0.0723		0.0723	0.0723	0.0000	1,035.0794	1,035.0794	0.0198	0.0190	1,041.2304

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	2.24986e+006	0.0121	0.1037	0.0441	6.6000e-004		8.3800e-003	8.3800e-003		8.3800e-003	8.3800e-003	0.0000	120.0609	120.0609	2.3000e-003	2.2000e-003	120.7744
Apartments Mid Rise	1.35783e+006	7.3200e-003	0.0626	0.0266	4.0000e-004		5.0600e-003	5.0600e-003		5.0600e-003	5.0600e-003	0.0000	72.4591	72.4591	1.3900e-003	1.3300e-003	72.8897
Apartments Mid Rise	6.05157e+006	0.0326	0.2789	0.1187	1.7800e-003		0.0226	0.0226		0.0226	0.0226	0.0000	322.9350	322.9350	6.1900e-003	5.9200e-003	324.8540
Government (Civic Center)	102708	5.5000e-004	5.0300e-003	4.2300e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	5.4809	5.4809	1.1000e-004	1.0000e-004	5.5135
Office Park	8.80165e+006	0.0475	0.4315	0.3624	2.5900e-003		0.0328	0.0328		0.0328	0.0328	0.0000	469.6894	469.6894	9.0000e-003	8.6100e-003	472.4805
Strip Mall	252720	1.3600e-003	0.0124	0.0104	7.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	13.4861	13.4861	2.6000e-004	2.5000e-004	13.5662
Strip Mall	580320	3.1300e-003	0.0285	0.0239	1.7000e-004		2.1600e-003	2.1600e-003		2.1600e-003	2.1600e-003	0.0000	30.9681	30.9681	5.9000e-004	5.7000e-004	31.1521
Total		**0.1046**	**0.9224**	**0.5904**	**5.7000e-003**		**0.0723**	**0.0723**		**0.0723**	**0.0723**	**0.0000**	**1,035.0794**	**1,035.0794**	**0.0198**	**0.0190**	**1,041.2304**

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5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	2.24986e+006	0.0121	0.1037	0.0441	6.6000e-004		8.3800e-003	8.3800e-003		8.3800e-003	8.3800e-003	0.0000	120.0609	120.0609	2.3000e-003	2.2000e-003	120.7744
Apartments Mid Rise	1.35783e+006	7.3200e-003	0.0626	0.0266	4.0000e-004		5.0600e-003	5.0600e-003		5.0600e-003	5.0600e-003	0.0000	72.4591	72.4591	1.3900e-003	1.3300e-003	72.8897
Apartments Mid Rise	6.05157e+006	0.0326	0.2789	0.1187	1.7800e-003		0.0226	0.0226		0.0226	0.0226	0.0000	322.9350	322.9350	6.1900e-003	5.9200e-003	324.8540
Government (Civic Center)	102708	5.5000e-004	5.0300e-003	4.2300e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	5.4809	5.4809	1.1000e-004	1.0000e-004	5.5135
Office Park	8.80165e+006	0.0475	0.4315	0.3624	2.5900e-003		0.0328	0.0328		0.0328	0.0328	0.0000	469.6894	469.6894	9.0000e-003	8.6100e-003	472.4805
Strip Mall	252720	1.3600e-003	0.0124	0.0104	7.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	13.4861	13.4861	2.6000e-004	2.5000e-004	13.5662
Strip Mall	580320	3.1300e-003	0.0285	0.0239	1.7000e-004		2.1600e-003	2.1600e-003		2.1600e-003	2.1600e-003	0.0000	30.9681	30.9681	5.9000e-004	5.7000e-004	31.1521
Total		**0.1046**	**0.9224**	**0.5904**	**5.7000e-003**		**0.0723**	**0.0723**		**0.0723**	**0.0723**	**0.0000**	**1,035.0794**	**1,035.0794**	**0.0198**	**0.0190**	**1,041.2304**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	925910	85.6687	0.0139	1.6800e-003	86.5158
Apartments Mid Rise	2.79156e+006	258.2859	0.0418	5.0600e-003	260.8399
Apartments Mid Rise	626362	57.9533	9.3800e-003	1.1400e-003	58.5264
Government (Civic Center)	108858	10.0719	1.6300e-003	2.0000e-004	10.1715
Office Park	7.90507e+006	731.4065	0.1183	0.0143	738.6388
Strip Mall	1.12212e+006	103.8228	0.0168	2.0400e-003	104.8494
Strip Mall	2.57672e+006	238.4079	0.0386	4.6800e-003	240.7653
Total		**1,485.6170**	**0.2404**	**0.0291**	**1,500.3071**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	925910	85.6687	0.0139	1.6800e-003	86.5158
Apartments Mid Rise	2.79156e+006	258.2859	0.0418	5.0600e-003	260.8399
Apartments Mid Rise	626362	57.9533	9.3800e-003	1.1400e-003	58.5264
Government (Civic Center)	108858	10.0719	1.6300e-003	2.0000e-004	10.1715
Office Park	7.90507e+006	731.4065	0.1183	0.0143	738.6388
Strip Mall	1.12212e+006	103.8228	0.0168	2.0400e-003	104.8494
Strip Mall	2.57672e+006	238.4079	0.0386	4.6800e-003	240.7653
Total		**1,485.6170**	**0.2404**	**0.0291**	**1,500.3071**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	9.0943	0.1741	15.0840	8.0000e-004		0.0840	0.0840		0.0840	0.0840	0.0000	24.7522	24.7522	0.0236	0.0000	25.3423
Unmitigated	9.0943	0.1741	15.0840	8.0000e-004		0.0840	0.0840		0.0840	0.0840	0.0000	24.7522	24.7522	0.0236	0.0000	25.3423

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.2404					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	7.4020					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.4520	0.1741	15.0840	8.0000e-004		0.0840	0.0840		0.0840	0.0840	0.0000	24.7522	24.7522	0.0236	0.0000	25.3423
Total	**9.0943**	**0.1741**	**15.0840**	**8.0000e-004**		**0.0840**	**0.0840**		**0.0840**	**0.0840**	**0.0000**	**24.7522**	**24.7522**	**0.0236**	**0.0000**	**25.3423**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.2404					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	7.4020					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.4520	0.1741	15.0840	8.0000e-004		0.0840	0.0840		0.0840	0.0840	0.0000	24.7522	24.7522	0.0236	0.0000	25.3423
Total	**9.0943**	**0.1741**	**15.0840**	**8.0000e-004**		**0.0840**	**0.0840**		**0.0840**	**0.0840**	**0.0000**	**24.7522**	**24.7522**	**0.0236**	**0.0000**	**25.3423**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Water Efficient Irrigation System

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	149.5607	4.5762	0.1097	296.6592
Unmitigated	178.1699	5.7188	0.1370	361.9562

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	14.8551 / 9.36518	15.1828	0.4858	0.0116	30.7937
Apartments Mid Rise	57.5962 / 36.3106	58.8665	1.8833	0.0451	119.3929
Government (Civic Center)	1.2595 / 0.771953	1.2801	0.0412	9.9000e-004	2.6036
Office Park	74.8135 / 45.8534	76.0388	2.4463	0.0586	154.6543
Strip Mall	26.3698 / 16.1621	26.8017	0.8622	0.0207	54.5117
Total		**178.1699**	**5.7188**	**0.1370**	**361.9562**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	11.8841 / 9.36518	12.7528	0.3887	9.3200e-003	25.2475
Apartments Mid Rise	46.0769 / 36.3106	49.4449	1.5071	0.0361	97.8893
Government (Civic Center)	1.0076 / 0.771953	1.0741	0.0330	7.9000e-004	2.1334
Office Park	59.8508 / 45.8534	63.8008	1.9575	0.0469	126.7226
Strip Mall	21.0959 / 16.1621	22.4881	0.6900	0.0165	44.6664
Total		**149.5607**	**4.5762**	**0.1097**	**296.6592**

8.0 Waste Detail

8.1 Mitigation Measures Waste

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	266.5109	15.7503	0.0000	660.2695
Unmitigated	266.5109	15.7503	0.0000	660.2695

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	104.88	21.2897	1.2582	0.0000	52.7443
Apartments Mid Rise	406.64	82.5443	4.8782	0.0000	204.4999
Government (Civic Center)	36.14	7.3361	0.4336	0.0000	18.1749
Office Park	391.46	79.4628	4.6961	0.0000	196.8658
Strip Mall	373.8	75.8780	4.4843	0.0000	187.9846
Total		**266.5109**	**15.7503**	**0.0000**	**660.2695**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	104.88	21.2897	1.2582	0.0000	52.7443
Apartments Mid Rise	406.64	82.5443	4.8782	0.0000	204.4999
Government (Civic Center)	36.14	7.3361	0.4336	0.0000	18.1749
Office Park	391.46	79.4628	4.6961	0.0000	196.8658
Strip Mall	373.8	75.8780	4.4843	0.0000	187.9846
Total		**266.5109**	**15.7503**	**0.0000**	**660.2695**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Pismo Beach GP/LCP PEIR - GHG

San Luis Obispo County APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government (Civic Center)	6.34	1000sqft	0.15	6,340.00	-2
Office Park	420.93	1000sqft	9.66	420,930.00	0
Apartments Low Rise	228.00	Dwelling Unit	14.25	228,000.00	471
Apartments Mid Rise	162.00	Dwelling Unit	4.26	162,000.00	185
Apartments Mid Rise	722.00	Dwelling Unit	19.00	722,000.00	1221
Strip Mall	248.00	1000sqft	5.69	248,000.00	0
Strip Mall	108.00	1000sqft	2.48	108,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.2	**Precipitation Freq (Days)**	44
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Data given by applicant

Construction Phase - Similar Buildout schedule as other City General Plan Update for 2040.

Grading -

Architectural Coating - SLOAPCD Rule 433

Vehicle Trips - Adjusted trip length and trip generation rates

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Area Coating - SLOAPCD Rule 433

Mobile Land Use Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaCoating	Area_EF_Nonresidential_Interior	250	150
tblAreaCoating	Area_EF_Residential_Exterior	250	100
tblAreaCoating	Area_EF_Residential_Interior	250	100
tblConstructionPhase	NumDays	75.00	330.00
tblConstructionPhase	NumDays	1,110.00	4,650.00
tblConstructionPhase	NumDays	70.00	300.00
tblConstructionPhase	NumDays	110.00	465.00
tblConstructionPhase	NumDays	75.00	330.00
tblConstructionPhase	NumDays	40.00	180.00
tblLandUse	Population	0.00	-2.00
tblLandUse	Population	652.00	471.00
tblLandUse	Population	463.00	185.00
tblLandUse	Population	2,065.00	1,221.00
tblVehicleTrips	CC_TL	5.00	10.73
tblVehicleTrips	CC_TL	5.00	9.60
tblVehicleTrips	CC_TL	5.00	18.00
tblVehicleTrips	CNW_TL	5.00	12.48
tblVehicleTrips	CNW_TL	5.00	6.60
tblVehicleTrips	CNW_TL	5.00	18.00

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tblVehicleTrips	CW_TL	13.00	12.87
tblVehicleTrips	CW_TL	13.00	24.95
tblVehicleTrips	CW_TL	13.00	46.79
tblVehicleTrips	HO_TL	5.00	9.01
tblVehicleTrips	HO_TL	5.00	9.01
tblVehicleTrips	HS_TL	5.00	9.01
tblVehicleTrips	HS_TL	5.00	9.01
tblVehicleTrips	HW_TL	13.00	23.42
tblVehicleTrips	HW_TL	13.00	23.42
tblVehicleTrips	ST_TR	8.14	0.98
tblVehicleTrips	ST_TR	4.91	0.59
tblVehicleTrips	ST_TR	1.64	0.20
tblVehicleTrips	ST_TR	42.04	5.07
tblVehicleTrips	SU_TR	6.28	0.76
tblVehicleTrips	SU_TR	4.09	0.49
tblVehicleTrips	SU_TR	0.76	0.09
tblVehicleTrips	SU_TR	20.43	2.46
tblVehicleTrips	WD_TR	7.32	0.88
tblVehicleTrips	WD_TR	5.44	0.70
tblVehicleTrips	WD_TR	33.98	4.10
tblVehicleTrips	WD_TR	11.07	1.33
tblVehicleTrips	WD_TR	44.32	5.40

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.2192	31.4808	22.0481	0.0402	0.1483	1.5521	1.7004	0.0393	1.4418	1.4812	0.0000	3,882.7242	3,882.7242	1.0589	3.8400e-003	3,910.3396
2022	15.3450	127.7166	121.9441	0.2989	40.9224	5.4727	46.3951	16.9814	5.0682	22.0496	0.0000	29,738.5790	29,738.5790	5.1598	0.8592	30,123.6076
2023	10.8880	82.5518	96.7599	0.2552	21.0876	3.2309	24.3185	6.8318	2.9996	9.8314	0.0000	25,518.6719	25,518.6719	3.9244	0.8132	25,859.1266
2024	8.1550	57.5246	74.1911	0.2117	20.9394	2.0537	22.9931	6.7926	1.9042	8.6968	0.0000	21,364.4043	21,364.4043	2.8471	0.7844	21,669.3313
2025	4.5922	23.7307	44.1049	0.1446	11.5382	0.6282	12.1665	3.0864	0.5910	3.6774	0.0000	14,920.0264	14,920.0264	0.8788	0.7562	15,167.3335
2026	4.4340	23.3598	42.6116	0.1414	11.5384	0.6246	12.1629	3.0865	0.5875	3.6740	0.0000	14,658.3055	14,658.3055	0.8639	0.7341	14,898.6675
2027	4.2867	23.0248	41.3300	0.1384	11.5385	0.6207	12.1592	3.0865	0.5839	3.6704	0.0000	14,404.8920	14,404.8920	0.8510	0.7132	14,638.6888
2028	4.1434	22.7386	40.2559	0.1356	11.5386	0.6170	12.1555	3.0865	0.5804	3.6669	0.0000	14,172.1058	14,172.1058	0.8401	0.6942	14,399.9810
2029	4.0037	22.4648	39.3145	0.1330	11.5387	0.6133	12.1519	3.0866	0.5769	3.6635	0.0000	13,953.1316	13,953.1316	0.8306	0.6763	14,175.4434
2030	3.8121	17.7093	38.5906	0.1347	11.5388	0.2305	11.7693	3.0866	0.2257	3.3123	0.0000	14,099.3853	14,099.3853	0.3373	0.6608	14,304.7452
2031	3.6775	17.5136	37.8900	0.1326	11.5388	0.2275	11.7664	3.0866	0.2230	3.3096	0.0000	13,923.3835	13,923.3835	0.3296	0.6470	14,124.4403
2032	3.5515	17.3445	37.2848	0.1307	11.5389	0.2248	11.7637	3.0867	0.2204	3.3071	0.0000	13,766.3089	13,766.3089	0.3228	0.6350	13,963.6126
2033	3.4444	17.2046	36.7752	0.1291	11.5390	0.2224	11.7614	3.0867	0.2182	3.3048	0.0000	13,626.5334	13,626.5334	0.3168	0.6247	13,820.6175
2034	3.3496	17.0824	36.3308	0.1276	11.5390	0.2202	11.7592	3.0867	0.2161	3.3028	0.0000	13,501.1000	13,501.1000	0.3118	0.6156	13,692.3532
2035	3.1705	16.1997	35.9066	0.1263	11.5391	0.1604	11.6995	3.0867	0.1564	3.2432	0.0000	13,390.7625	13,390.7625	0.2988	0.6078	13,579.3485
2036	3.1705	16.1997	35.9066	0.1263	11.5391	0.1604	11.6995	3.0867	0.1564	3.2432	0.0000	13,390.7625	13,390.7625	0.2988	0.6078	13,579.3485
2037	3.1705	16.1997	35.9066	0.1263	11.5391	0.1604	11.6995	3.0867	0.1564	3.2432	0.0000	13,390.7625	13,390.7625	0.2988	0.6078	13,579.3485
2038	3.1705	16.1997	35.9066	0.1263	11.5391	0.1604	11.6995	3.0867	0.1564	3.2432	0.0000	13,390.7625	13,390.7625	0.2988	0.6078	13,579.3485
2039	3.1705	16.1997	35.9066	0.1263	11.5391	0.1604	11.6995	3.0867	0.1564	3.2432	0.0000	13,390.7625	13,390.7625	0.2988	0.6078	13,579.3485

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2040	76.6009	15.4735	34.6162	0.1216	11.5393	0.1369	11.6762	3.0868	0.1334	3.2202	0.0000	12,994.0878	12,994.0878	0.2816	0.5778	13,173.3103
2041	1.4267	4.5502	20.9138	0.0444	2.2244	0.1280	2.3524	0.5900	0.1277	0.7177	0.0000	4,443.8098	4,443.8098	0.1144	0.0280	4,455.0120
2042	0.3954	0.8825	4.8758	0.0154	2.0761	0.0113	2.0874	0.5506	0.0110	0.5616	0.0000	1,686.9033	1,686.9033	0.0241	0.0261	1,695.2920
Maximum	**76.6009**	**127.7166**	**121.9441**	**0.2989**	**40.9224**	**5.4727**	**46.3951**	**16.9814**	**5.0682**	**22.0496**	**0.0000**	**29,738.5790**	**29,738.5790**	**5.1598**	**0.8592**	**30,123.6076**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.2192	31.4808	22.0481	0.0402	0.1483	1.5521	1.7004	0.0393	1.4418	1.4812	0.0000	3,882.7242	3,882.7242	1.0589	3.8400e-003	3,910.3396
2022	15.3450	127.7166	121.9441	0.2989	40.9224	5.4727	46.3951	16.9814	5.0682	22.0496	0.0000	29,738.5790	29,738.5790	5.1598	0.8592	30,123.6076
2023	10.8880	82.5518	96.7599	0.2552	21.0876	3.2309	24.3185	6.8318	2.9996	9.8314	0.0000	25,518.6719	25,518.6719	3.9244	0.8132	25,859.1266
2024	8.1550	57.5246	74.1911	0.2117	20.9394	2.0537	22.9931	6.7926	1.9042	8.6968	0.0000	21,364.4043	21,364.4043	2.8471	0.7844	21,669.3313
2025	4.5922	23.7307	44.1049	0.1446	11.5382	0.6282	12.1665	3.0864	0.5910	3.6774	0.0000	14,920.0264	14,920.0264	0.8788	0.7562	15,167.3335
2026	4.4340	23.3598	42.6116	0.1414	11.5384	0.6246	12.1629	3.0865	0.5875	3.6740	0.0000	14,658.3055	14,658.3055	0.8639	0.7341	14,898.6675
2027	4.2867	23.0248	41.3300	0.1384	11.5385	0.6207	12.1592	3.0865	0.5839	3.6704	0.0000	14,404.8920	14,404.8920	0.8510	0.7132	14,638.6888
2028	4.1434	22.7386	40.2559	0.1356	11.5386	0.6170	12.1555	3.0865	0.5804	3.6669	0.0000	14,172.1058	14,172.1058	0.8401	0.6942	14,399.9810

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2029	4.0037	22.4648	39.3145	0.1330	11.5387	0.6133	12.1519	3.0866	0.5769	3.6635	0.0000	13,953.1316	13,953.1316	0.8306	0.6763	14,175.4434
2030	3.8121	17.7093	38.5906	0.1347	11.5388	0.2305	11.7693	3.0866	0.2257	3.3123	0.0000	14,099.3853	14,099.3853	0.3373	0.6608	14,304.7452
2031	3.6775	17.5136	37.8900	0.1326	11.5388	0.2275	11.7664	3.0866	0.2230	3.3096	0.0000	13,923.3835	13,923.3835	0.3296	0.6470	14,124.4403
2032	3.5515	17.3445	37.2848	0.1307	11.5389	0.2248	11.7637	3.0867	0.2204	3.3071	0.0000	13,766.3089	13,766.3089	0.3228	0.6350	13,963.6126
2033	3.4444	17.2046	36.7752	0.1291	11.5390	0.2224	11.7614	3.0867	0.2182	3.3048	0.0000	13,626.5334	13,626.5334	0.3168	0.6247	13,820.6175
2034	3.3496	17.0824	36.3308	0.1276	11.5390	0.2202	11.7592	3.0867	0.2161	3.3028	0.0000	13,501.1000	13,501.1000	0.3118	0.6156	13,692.3532
2035	3.1705	16.1997	35.9066	0.1263	11.5391	0.1604	11.6995	3.0867	0.1564	3.2432	0.0000	13,390.7625	13,390.7625	0.2988	0.6078	13,579.3485
2036	3.1705	16.1997	35.9066	0.1263	11.5391	0.1604	11.6995	3.0867	0.1564	3.2432	0.0000	13,390.7625	13,390.7625	0.2988	0.6078	13,579.3485
2037	3.1705	16.1997	35.9066	0.1263	11.5391	0.1604	11.6995	3.0867	0.1564	3.2432	0.0000	13,390.7625	13,390.7625	0.2988	0.6078	13,579.3485
2038	3.1705	16.1997	35.9066	0.1263	11.5391	0.1604	11.6995	3.0867	0.1564	3.2432	0.0000	13,390.7625	13,390.7625	0.2988	0.6078	13,579.3485
2039	3.1705	16.1997	35.9066	0.1263	11.5391	0.1604	11.6995	3.0867	0.1564	3.2432	0.0000	13,390.7625	13,390.7625	0.2988	0.6078	13,579.3485
2040	76.6009	15.4735	34.6162	0.1216	11.5393	0.1369	11.6762	3.0868	0.1334	3.2202	0.0000	12,994.0878	12,994.0878	0.2816	0.5778	13,173.3103
2041	1.4267	4.5502	20.9138	0.0444	2.2244	0.1280	2.3524	0.5900	0.1277	0.7177	0.0000	4,443.8097	4,443.8097	0.1144	0.0280	4,455.0120
2042	0.3954	0.8825	4.8758	0.0154	2.0761	0.0113	2.0874	0.5506	0.0110	0.5616	0.0000	1,686.9033	1,686.9033	0.0241	0.0261	1,695.2920
Maximum	**76.6009**	**127.7166**	**121.9441**	**0.2989**	**40.9224**	**5.4727**	**46.3951**	**16.9814**	**5.0682**	**22.0496**	**0.0000**	**29,738.5790**	**29,738.5790**	**5.1598**	**0.8592**	**30,123.6076**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	50.0945	1.0550	91.4179	4.8500e-003		0.5090	0.5090		0.5090	0.5090	0.0000	165.3616	165.3616	0.1577	0.0000	169.3035
Energy	0.5731	5.0543	3.2348	0.0313		0.3960	0.3960		0.3960	0.3960		6,251.9438	6,251.9438	0.1198	0.1146	6,289.0959
Mobile	8.5040	8.9562	90.1899	0.2162	31.8757	0.1100	31.9857	8.4836	0.1031	8.5866		24,048.4979	24,048.4979	1.0724	0.8777	24,336.8545
Total	**59.1715**	**15.0655**	**184.8425**	**0.2523**	**31.8757**	**1.0150**	**32.8907**	**8.4836**	**1.0081**	**9.4916**	**0.0000**	**30,465.8032**	**30,465.8032**	**1.3499**	**0.9923**	**30,795.2539**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	50.0945	1.0550	91.4179	4.8500e-003		0.5090	0.5090		0.5090	0.5090	0.0000	165.3616	165.3616	0.1577	0.0000	169.3035
Energy	0.5731	5.0543	3.2348	0.0313		0.3960	0.3960		0.3960	0.3960		6,251.9438	6,251.9438	0.1198	0.1146	6,289.0959
Mobile	8.5040	8.9562	90.1899	0.2162	31.8757	0.1100	31.9857	8.4836	0.1031	8.5866		24,048.4979	24,048.4979	1.0724	0.8777	24,336.8545
Total	**59.1715**	**15.0655**	**184.8425**	**0.2523**	**31.8757**	**1.0150**	**32.8907**	**8.4836**	**1.0081**	**9.4916**	**0.0000**	**30,465.8032**	**30,465.8032**	**1.3499**	**0.9923**	**30,795.2539**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	11/17/2021	1/10/2023	5	300	
2	Site Preparation	Site Preparation	2/23/2022	11/1/2022	5	180	
3	Grading	Grading	4/20/2022	1/30/2024	5	465	
4	Building Construction	Building Construction	9/21/2022	7/17/2040	5	4650	
5	Paving	Paving	7/18/2040	10/22/2041	5	330	
6	Architectural Coating	Architectural Coating	10/23/2040	1/27/2042	5	330	

Acres of Grading (Site Preparation Phase): 270

Acres of Grading (Grading Phase): 1395

Acres of Paving: 0

Residential Indoor: 2,251,800; Residential Outdoor: 750,600; Non-Residential Indoor: 1,174,905; Non-Residential Outdoor: 391,635; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,051.00	247.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	210.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**		**1.5513**	**1.5513**		**1.4411**	**1.4411**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0541	0.0401	0.4831	1.3300e-003	0.1483	7.9000e-004	0.1491	0.0393	7.3000e-004	0.0401		134.7792	134.7792	3.9800e-003	3.8400e-003	136.0222
Total	**0.0541**	**0.0401**	**0.4831**	**1.3300e-003**	**0.1483**	**7.9000e-004**	**0.1491**	**0.0393**	**7.3000e-004**	**0.0401**		**134.7792**	**134.7792**	**3.9800e-003**	**3.8400e-003**	**136.0222**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**		**1.5513**	**1.5513**		**1.4411**	**1.4411**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0541	0.0401	0.4831	1.3300e-003	0.1483	7.9000e-004	0.1491	0.0393	7.3000e-004	0.0401		134.7792	134.7792	3.9800e-003	3.8400e-003	136.0222
Total	**0.0541**	**0.0401**	**0.4831**	**1.3300e-003**	**0.1483**	**7.9000e-004**	**0.1491**	**0.0393**	**7.3000e-004**	**0.0401**		**134.7792**	**134.7792**	**3.9800e-003**	**3.8400e-003**	**136.0222**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**		**1.2427**	**1.2427**		**1.1553**	**1.1553**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0506	0.0354	0.4435	1.2900e-003	0.1483	7.5000e-004	0.1490	0.0393	6.9000e-004	0.0400		131.3977	131.3977	3.5900e-003	3.5400e-003	132.5417
Total	**0.0506**	**0.0354**	**0.4435**	**1.2900e-003**	**0.1483**	**7.5000e-004**	**0.1490**	**0.0393**	**6.9000e-004**	**0.0400**		**131.3977**	**131.3977**	**3.5900e-003**	**3.5400e-003**	**132.5417**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**		**1.2427**	**1.2427**		**1.1553**	**1.1553**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0506	0.0354	0.4435	1.2900e-003	0.1483	7.5000e-004	0.1490	0.0393	6.9000e-004	0.0400		131.3977	131.3977	3.5900e-003	3.5400e-003	132.5417
Total	**0.0506**	**0.0354**	**0.4435**	**1.2900e-003**	**0.1483**	**7.5000e-004**	**0.1490**	**0.0393**	**6.9000e-004**	**0.0400**		**131.3977**	**131.3977**	**3.5900e-003**	**3.5400e-003**	**132.5417**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280		3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**		**0.9975**	**0.9975**		**0.9280**	**0.9280**		**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0474	0.0314	0.4090	1.2500e-003	0.1483	7.1000e-004	0.1490	0.0393	6.6000e-004	0.0400		128.1704	128.1704	3.2500e-003	3.2700e-003	129.2270
Total	**0.0474**	**0.0314**	**0.4090**	**1.2500e-003**	**0.1483**	**7.1000e-004**	**0.1490**	**0.0393**	**6.6000e-004**	**0.0400**		**128.1704**	**128.1704**	**3.2500e-003**	**3.2700e-003**	**129.2270**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280	0.0000	3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**		**0.9975**	**0.9975**		**0.9280**	**0.9280**	**0.0000**	**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0474	0.0314	0.4090	1.2500e-003	0.1483	7.1000e-004	0.1490	0.0393	6.6000e-004	0.0400		128.1704	128.1704	3.2500e-003	3.2700e-003	129.2270
Total	**0.0474**	**0.0314**	**0.4090**	**1.2500e-003**	**0.1483**	**7.1000e-004**	**0.1490**	**0.0393**	**6.6000e-004**	**0.0400**		**128.1704**	**128.1704**	**3.2500e-003**	**3.2700e-003**	**129.2270**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0607	0.0425	0.5322	1.5500e-003	0.1780	9.0000e-004	0.1789	0.0472	8.3000e-004	0.0480		157.6773	157.6773	4.3100e-003	4.2400e-003	159.0500
Total	**0.0607**	**0.0425**	**0.5322**	**1.5500e-003**	**0.1780**	**9.0000e-004**	**0.1789**	**0.0472**	**8.3000e-004**	**0.0480**		**157.6773**	**157.6773**	**4.3100e-003**	**4.2400e-003**	**159.0500**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0607	0.0425	0.5322	1.5500e-003	0.1780	9.0000e-004	0.1789	0.0472	8.3000e-004	0.0480		157.6773	157.6773	4.3100e-003	4.2400e-003	159.0500
Total	**0.0607**	**0.0425**	**0.5322**	**1.5500e-003**	**0.1780**	**9.0000e-004**	**0.1789**	**0.0472**	**8.3000e-004**	**0.0480**		**157.6773**	**157.6773**	**4.3100e-003**	**4.2400e-003**	**159.0500**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**9.2036**	**1.6349**	**10.8385**	**3.6538**	**1.5041**	**5.1579**		**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0675	0.0472	0.5913	1.7200e-003	0.1977	1.0000e-003	0.1987	0.0524	9.2000e-004	0.0534		175.1970	175.1970	4.7900e-003	4.7200e-003	176.7223
Total	**0.0675**	**0.0472**	**0.5913**	**1.7200e-003**	**0.1977**	**1.0000e-003**	**0.1987**	**0.0524**	**9.2000e-004**	**0.0534**		**175.1970**	**175.1970**	**4.7900e-003**	**4.7200e-003**	**176.7223**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**9.2036**	**1.6349**	**10.8385**	**3.6538**	**1.5041**	**5.1579**	**0.0000**	**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0675	0.0472	0.5913	1.7200e-003	0.1977	1.0000e-003	0.1987	0.0524	9.2000e-004	0.0534		175.1970	175.1970	4.7900e-003	4.7200e-003	176.7223
Total	**0.0675**	**0.0472**	**0.5913**	**1.7200e-003**	**0.1977**	**1.0000e-003**	**0.1987**	**0.0524**	**9.2000e-004**	**0.0534**		**175.1970**	**175.1970**	**4.7900e-003**	**4.7200e-003**	**176.7223**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0632	0.0418	0.5453	1.6700e-003	0.1977	9.5000e-004	0.1987	0.0524	8.7000e-004	0.0533		170.8939	170.8939	4.3300e-003	4.3600e-003	172.3027
Total	**0.0632**	**0.0418**	**0.5453**	**1.6700e-003**	**0.1977**	**9.5000e-004**	**0.1987**	**0.0524**	**8.7000e-004**	**0.0533**		**170.8939**	**170.8939**	**4.3300e-003**	**4.3600e-003**	**172.3027**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0632	0.0418	0.5453	1.6700e-003	0.1977	9.5000e-004	0.1987	0.0524	8.7000e-004	0.0533		170.8939	170.8939	4.3300e-003	4.3600e-003	172.3027
Total	**0.0632**	**0.0418**	**0.5453**	**1.6700e-003**	**0.1977**	**9.5000e-004**	**0.1987**	**0.0524**	**8.7000e-004**	**0.0533**		**170.8939**	**170.8939**	**4.3300e-003**	**4.3600e-003**	**172.3027**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286		6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**9.2036**	**1.3354**	**10.5390**	**3.6538**	**1.2286**	**4.8823**		**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0594	0.0373	0.5071	1.6200e-003	0.1977	9.0000e-004	0.1986	0.0524	8.3000e-004	0.0533		166.8356	166.8356	3.9300e-003	4.0600e-003	168.1428
Total	**0.0594**	**0.0373**	**0.5071**	**1.6200e-003**	**0.1977**	**9.0000e-004**	**0.1986**	**0.0524**	**8.3000e-004**	**0.0533**		**166.8356**	**166.8356**	**3.9300e-003**	**4.0600e-003**	**168.1428**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286	0.0000	6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**9.2036**	**1.3354**	**10.5390**	**3.6538**	**1.2286**	**4.8823**	**0.0000**	**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0594	0.0373	0.5071	1.6200e-003	0.1977	9.0000e-004	0.1986	0.0524	8.3000e-004	0.0533		166.8356	166.8356	3.9300e-003	4.0600e-003	168.1428
Total	**0.0594**	**0.0373**	**0.5071**	**1.6200e-003**	**0.1977**	**9.0000e-004**	**0.1986**	**0.0524**	**8.3000e-004**	**0.0533**		**166.8356**	**166.8356**	**3.9300e-003**	**4.0600e-003**	**168.1428**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.4798	11.8485	3.6080	0.0380	1.1475	0.1184	1.2658	0.3305	0.1132	0.4438		4,069.1201	4,069.1201	0.0945	0.5988	4,249.9340
Worker	3.5460	2.4809	31.0724	0.0905	10.3903	0.0526	10.4429	2.7557	0.0485	2.8042		9,206.5998	9,206.5998	0.2519	0.2478	9,286.7541
Total	**4.0259**	**14.3295**	**34.6804**	**0.1285**	**11.5378**	**0.1709**	**11.7087**	**3.0863**	**0.1617**	**3.2479**		**13,275.7199**	**13,275.7199**	**0.3464**	**0.8467**	**13,536.6881**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.4798	11.8485	3.6080	0.0380	1.1475	0.1184	1.2658	0.3305	0.1132	0.4438		4,069.1201	4,069.1201	0.0945	0.5988	4,249.9340
Worker	3.5460	2.4809	31.0724	0.0905	10.3903	0.0526	10.4429	2.7557	0.0485	2.8042		9,206.5998	9,206.5998	0.2519	0.2478	9,286.7541
Total	**4.0259**	**14.3295**	**34.6804**	**0.1285**	**11.5378**	**0.1709**	**11.7087**	**3.0863**	**0.1617**	**3.2479**		**13,275.7199**	**13,275.7199**	**0.3464**	**0.8467**	**13,536.6881**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2933	9.8965	3.2111	0.0366	1.1476	0.0577	1.2054	0.3306	0.0552	0.3858		3,925.4610	3,925.4610	0.0876	0.5763	4,099.3846
Worker	3.3205	2.1972	28.6560	0.0877	10.3903	0.0498	10.4401	2.7557	0.0459	2.8016		8,980.4749	8,980.4749	0.2278	0.2293	9,054.5045
Total	**3.6138**	**12.0937**	**31.8671**	**0.1244**	**11.5380**	**0.1075**	**11.6455**	**3.0863**	**0.1011**	**3.1874**		**12,905.9359**	**12,905.9359**	**0.3154**	**0.8056**	**13,153.8890**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2933	9.8965	3.2111	0.0366	1.1476	0.0577	1.2054	0.3306	0.0552	0.3858		3,925.4610	3,925.4610	0.0876	0.5763	4,099.3846
Worker	3.3205	2.1972	28.6560	0.0877	10.3903	0.0498	10.4401	2.7557	0.0459	2.8016		8,980.4749	8,980.4749	0.2278	0.2293	9,054.5045
Total	**3.6138**	**12.0937**	**31.8671**	**0.1244**	**11.5380**	**0.1075**	**11.6455**	**3.0863**	**0.1011**	**3.1874**		**12,905.9359**	**12,905.9359**	**0.3154**	**0.8056**	**13,153.8890**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2834	9.7082	3.1492	0.0360	1.1478	0.0567	1.2045	0.3306	0.0543	0.3849		3,864.9119	3,864.9119	0.0885	0.5672	4,036.1357
Worker	3.1225	1.9583	26.6453	0.0850	10.3903	0.0474	10.4377	2.7557	0.0436	2.7994		8,767.2092	8,767.2092	0.2066	0.2132	8,835.9046
Total	**3.4059**	**11.6666**	**29.7945**	**0.1210**	**11.5381**	**0.1041**	**11.6422**	**3.0864**	**0.0979**	**3.1843**		**12,632.1212**	**12,632.1212**	**0.2952**	**0.7803**	**12,872.0403**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2834	9.7082	3.1492	0.0360	1.1478	0.0567	1.2045	0.3306	0.0543	0.3849		3,864.9119	3,864.9119	0.0885	0.5672	4,036.1357
Worker	3.1225	1.9583	26.6453	0.0850	10.3903	0.0474	10.4377	2.7557	0.0436	2.7994		8,767.2092	8,767.2092	0.2066	0.2132	8,835.9046
Total	**3.4059**	**11.6666**	**29.7945**	**0.1210**	**11.5381**	**0.1041**	**11.6422**	**3.0864**	**0.0979**	**3.1843**		**12,632.1212**	**12,632.1212**	**0.2952**	**0.7803**	**12,872.0403**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2746	9.5018	3.1010	0.0354	1.1479	0.0554	1.2033	0.3307	0.0530	0.3837		3,797.8574	3,797.8574	0.0899	0.5569	3,966.0601
Worker	2.9502	1.7593	24.9192	0.0822	10.3903	0.0452	10.4356	2.7557	0.0417	2.7974		8,565.6947	8,565.6947	0.1879	0.1993	8,629.7754
Total	**3.2248**	**11.2611**	**28.0202**	**0.1176**	**11.5382**	**0.1007**	**11.6389**	**3.0864**	**0.0947**	**3.1811**		**12,363.5521**	**12,363.5521**	**0.2778**	**0.7562**	**12,595.8355**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2746	9.5018	3.1010	0.0354	1.1479	0.0554	1.2033	0.3307	0.0530	0.3837		3,797.8574	3,797.8574	0.0899	0.5569	3,966.0601
Worker	2.9502	1.7593	24.9192	0.0822	10.3903	0.0452	10.4356	2.7557	0.0417	2.7974		8,565.6947	8,565.6947	0.1879	0.1993	8,629.7754
Total	**3.2248**	**11.2611**	**28.0202**	**0.1176**	**11.5382**	**0.1007**	**11.6389**	**3.0864**	**0.0947**	**3.1811**		**12,363.5521**	**12,363.5521**	**0.2778**	**0.7562**	**12,595.8355**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2666	9.2956	3.0646	0.0347	1.1480	0.0540	1.2020	0.3307	0.0516	0.3823		3,729.6735	3,729.6735	0.0912	0.5465	3,894.8084
Worker	2.8000	1.5945	23.4624	0.0797	10.3903	0.0431	10.4334	2.7557	0.0397	2.7954		8,372.1576	8,372.1576	0.1717	0.1876	8,432.3611
Total	**3.0666**	**10.8901**	**26.5270**	**0.1144**	**11.5384**	**0.0970**	**11.6354**	**3.0865**	**0.0913**	**3.1777**		**12,101.8312**	**12,101.8312**	**0.2630**	**0.7341**	**12,327.1694**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2666	9.2956	3.0646	0.0347	1.1480	0.0540	1.2020	0.3307	0.0516	0.3823		3,729.6735	3,729.6735	0.0912	0.5465	3,894.8084
Worker	2.8000	1.5945	23.4624	0.0797	10.3903	0.0431	10.4334	2.7557	0.0397	2.7954		8,372.1576	8,372.1576	0.1717	0.1876	8,432.3611
Total	**3.0666**	**10.8901**	**26.5270**	**0.1144**	**11.5384**	**0.0970**	**11.6354**	**3.0865**	**0.0913**	**3.1777**		**12,101.8312**	**12,101.8312**	**0.2630**	**0.7341**	**12,327.1694**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2596	9.1007	3.0352	0.0340	1.1481	0.0526	1.2007	0.3308	0.0503	0.3810		3,656.1263	3,656.1263	0.0924	0.5354	3,817.9969
Worker	2.6596	1.4545	22.2101	0.0774	10.3903	0.0406	10.4309	2.7557	0.0374	2.7931		8,192.2914	8,192.2914	0.1576	0.1777	8,249.1939
Total	**2.9193**	**10.5552**	**25.2453**	**0.1114**	**11.5385**	**0.0932**	**11.6316**	**3.0865**	**0.0877**	**3.1742**		**11,848.4177**	**11,848.4177**	**0.2500**	**0.7132**	**12,067.1907**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2596	9.1007	3.0352	0.0340	1.1481	0.0526	1.2007	0.3308	0.0503	0.3810		3,656.1263	3,656.1263	0.0924	0.5354	3,817.9969
Worker	2.6596	1.4545	22.2101	0.0774	10.3903	0.0406	10.4309	2.7557	0.0374	2.7931		8,192.2914	8,192.2914	0.1576	0.1777	8,249.1939
Total	**2.9193**	**10.5552**	**25.2453**	**0.1114**	**11.5385**	**0.0932**	**11.6316**	**3.0865**	**0.0877**	**3.1742**		**11,848.4177**	**11,848.4177**	**0.2500**	**0.7132**	**12,067.1907**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2533	8.9323	3.0135	0.0333	1.1483	0.0513	1.1995	0.3308	0.0491	0.3799		3,585.9278	3,585.9278	0.0938	0.5248	3,744.6749
Worker	2.5227	1.3367	21.1578	0.0753	10.3903	0.0381	10.4284	2.7557	0.0351	2.7908		8,029.7037	8,029.7037	0.1453	0.1694	8,083.8080
Total	**2.7760**	**10.2689**	**24.1712**	**0.1086**	**11.5386**	**0.0894**	**11.6280**	**3.0865**	**0.0842**	**3.1707**		**11,615.6315**	**11,615.6315**	**0.2392**	**0.6942**	**11,828.4829**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2533	8.9323	3.0135	0.0333	1.1483	0.0513	1.1995	0.3308	0.0491	0.3799		3,585.9278	3,585.9278	0.0938	0.5248	3,744.6749
Worker	2.5227	1.3367	21.1578	0.0753	10.3903	0.0381	10.4284	2.7557	0.0351	2.7908		8,029.7037	8,029.7037	0.1453	0.1694	8,083.8080
Total	**2.7760**	**10.2689**	**24.1712**	**0.1086**	**11.5386**	**0.0894**	**11.6280**	**3.0865**	**0.0842**	**3.1707**		**11,615.6315**	**11,615.6315**	**0.2392**	**0.6942**	**11,828.4829**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2472	8.7591	2.9936	0.0327	1.1484	0.0500	1.1983	0.3309	0.0478	0.3786		3,514.6815	3,514.6815	0.0952	0.5141	3,670.2609
Worker	2.3891	1.2361	20.2362	0.0734	10.3903	0.0357	10.4261	2.7557	0.0329	2.7886		7,881.9757	7,881.9757	0.1344	0.1622	7,933.6844
Total	**2.6363**	**9.9951**	**23.2299**	**0.1060**	**11.5387**	**0.0857**	**11.6244**	**3.0866**	**0.0807**	**3.1673**		**11,396.6572**	**11,396.6572**	**0.2296**	**0.6763**	**11,603.9453**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2472	8.7591	2.9936	0.0327	1.1484	0.0500	1.1983	0.3309	0.0478	0.3786		3,514.6815	3,514.6815	0.0952	0.5141	3,670.2609
Worker	2.3891	1.2361	20.2362	0.0734	10.3903	0.0357	10.4261	2.7557	0.0329	2.7886		7,881.9757	7,881.9757	0.1344	0.1622	7,933.6844
Total	**2.6363**	**9.9951**	**23.2299**	**0.1060**	**11.5387**	**0.0857**	**11.6244**	**3.0866**	**0.0807**	**3.1673**		**11,396.6572**	**11,396.6572**	**0.2296**	**0.6763**	**11,603.9453**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2424	8.6249	2.9824	0.0320	1.1484	0.0489	1.1973	0.3309	0.0468	0.3777		3,451.5684	3,451.5684	0.0963	0.5047	3,604.3653
Worker	2.2606	1.1498	19.4512	0.0717	10.3903	0.0335	10.4238	2.7557	0.0308	2.7865		7,750.2702	7,750.2702	0.1247	0.1562	7,799.9270
Total	**2.5029**	**9.7746**	**22.4336**	**0.1037**	**11.5388**	**0.0824**	**11.6211**	**3.0866**	**0.0776**	**3.1642**		**11,201.8386**	**11,201.8386**	**0.2210**	**0.6608**	**11,404.2923**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2424	8.6249	2.9824	0.0320	1.1484	0.0489	1.1973	0.3309	0.0468	0.3777		3,451.5684	3,451.5684	0.0963	0.5047	3,604.3653
Worker	2.2606	1.1498	19.4512	0.0717	10.3903	0.0335	10.4238	2.7557	0.0308	2.7865		7,750.2702	7,750.2702	0.1247	0.1562	7,799.9270
Total	**2.5029**	**9.7746**	**22.4336**	**0.1037**	**11.5388**	**0.0824**	**11.6211**	**3.0866**	**0.0776**	**3.1642**		**11,201.8386**	**11,201.8386**	**0.2210**	**0.6608**	**11,404.2923**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2384	8.5053	2.9796	0.0315	1.1485	0.0480	1.1965	0.3309	0.0459	0.3768		3,394.0537	3,394.0537	0.0975	0.4961	3,544.3274
Worker	2.1300	1.0737	18.7534	0.0701	10.3903	0.0314	10.4217	2.7557	0.0289	2.7846		7,631.7831	7,631.7831	0.1159	0.1509	7,679.6601
Total	**2.3684**	**9.5790**	**21.7330**	**0.1016**	**11.5388**	**0.0794**	**11.6182**	**3.0866**	**0.0748**	**3.1614**		**11,025.8367**	**11,025.8367**	**0.2134**	**0.6470**	**11,223.9875**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2031

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2384	8.5053	2.9796	0.0315	1.1485	0.0480	1.1965	0.3309	0.0459	0.3768		3,394.0537	3,394.0537	0.0975	0.4961	3,544.3274
Worker	2.1300	1.0737	18.7534	0.0701	10.3903	0.0314	10.4217	2.7557	0.0289	2.7846		7,631.7831	7,631.7831	0.1159	0.1509	7,679.6601
Total	**2.3684**	**9.5790**	**21.7330**	**0.1016**	**11.5388**	**0.0794**	**11.6182**	**3.0866**	**0.0748**	**3.1614**		**11,025.8367**	**11,025.8367**	**0.2134**	**0.6470**	**11,223.9875**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2351	8.4009	2.9829	0.0310	1.1486	0.0472	1.1958	0.3309	0.0451	0.3761		3,342.2800	3,342.2800	0.0985	0.4885	3,490.3078
Worker	2.0073	1.0089	18.1449	0.0688	10.3903	0.0295	10.4198	2.7557	0.0271	2.7829		7,526.4821	7,526.4821	0.1081	0.1465	7,572.8519
Total	**2.2424**	**9.4099**	**21.1278**	**0.0998**	**11.5389**	**0.0767**	**11.6156**	**3.0867**	**0.0723**	**3.1589**		**10,868.7621**	**10,868.7621**	**0.2065**	**0.6350**	**11,063.1598**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2032

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2351	8.4009	2.9829	0.0310	1.1486	0.0472	1.1958	0.3309	0.0451	0.3761		3,342.2800	3,342.2800	0.0985	0.4885	3,490.3078
Worker	2.0073	1.0089	18.1449	0.0688	10.3903	0.0295	10.4198	2.7557	0.0271	2.7829		7,526.4821	7,526.4821	0.1081	0.1465	7,572.8519
Total	**2.2424**	**9.4099**	**21.1278**	**0.0998**	**11.5389**	**0.0767**	**11.6156**	**3.0867**	**0.0723**	**3.1589**		**10,868.7621**	**10,868.7621**	**0.2065**	**0.6350**	**11,063.1598**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2033

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2327	8.3128	2.9907	0.0306	1.1487	0.0465	1.1952	0.3310	0.0445	0.3754		3,295.9103	3,295.9103	0.0993	0.4818	3,441.9540
Worker	1.9025	0.9571	17.6276	0.0675	10.3903	0.0278	10.4181	2.7557	0.0255	2.7813		7,433.0764	7,433.0764	0.1013	0.1430	7,478.2106
Total	**2.1352**	**9.2700**	**20.6182**	**0.0981**	**11.5390**	**0.0743**	**11.6132**	**3.0867**	**0.0700**	**3.1567**		**10,728.9867**	**10,728.9867**	**0.2006**	**0.6247**	**10,920.1646**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2033

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2327	8.3128	2.9907	0.0306	1.1487	0.0465	1.1952	0.3310	0.0445	0.3754		3,295.9103	3,295.9103	0.0993	0.4818	3,441.9540
Worker	1.9025	0.9571	17.6276	0.0675	10.3903	0.0278	10.4181	2.7557	0.0255	2.7813		7,433.0764	7,433.0764	0.1013	0.1430	7,478.2106
Total	**2.1352**	**9.2700**	**20.6182**	**0.0981**	**11.5390**	**0.0743**	**11.6132**	**3.0867**	**0.0700**	**3.1567**		**10,728.9867**	**10,728.9867**	**0.2006**	**0.6247**	**10,920.1646**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2034

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2307	8.2327	3.0002	0.0301	1.1487	0.0459	1.1946	0.3310	0.0439	0.3749		3,253.3979	3,253.3979	0.1003	0.4756	3,397.6301
Worker	1.8097	0.9150	17.1737	0.0665	10.3903	0.0262	10.4165	2.7557	0.0241	2.7798		7,350.1554	7,350.1554	0.0952	0.1401	7,394.2703
Total	**2.0404**	**9.1477**	**20.1739**	**0.0966**	**11.5390**	**0.0720**	**11.6111**	**3.0867**	**0.0680**	**3.1547**		**10,603.5533**	**10,603.5533**	**0.1955**	**0.6156**	**10,791.9004**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2034

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2307	8.2327	3.0002	0.0301	1.1487	0.0459	1.1946	0.3310	0.0439	0.3749		3,253.3979	3,253.3979	0.1003	0.4756	3,397.6301
Worker	1.8097	0.9150	17.1737	0.0665	10.3903	0.0262	10.4165	2.7557	0.0241	2.7798		7,350.1554	7,350.1554	0.0952	0.1401	7,394.2703
Total	**2.0404**	**9.1477**	**20.1739**	**0.0966**	**11.5390**	**0.0720**	**11.6111**	**3.0867**	**0.0680**	**3.1547**		**10,603.5533**	**10,603.5533**	**0.1955**	**0.6156**	**10,791.9004**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2035

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2287	8.1575	3.0091	0.0298	1.1488	0.0453	1.1940	0.3310	0.0433	0.3743		3,215.2843	3,215.2843	0.1011	0.4701	3,357.8997
Worker	1.7249	0.8809	16.7797	0.0655	10.3903	0.0247	10.4150	2.7557	0.0227	2.7784		7,277.9314	7,277.9314	0.0898	0.1377	7,321.2040
Total	**1.9536**	**9.0383**	**19.7888**	**0.0953**	**11.5391**	**0.0700**	**11.6091**	**3.0867**	**0.0660**	**3.1527**		**10,493.2157**	**10,493.2157**	**0.1909**	**0.6078**	**10,679.1038**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2035

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2287	8.1575	3.0091	0.0298	1.1488	0.0453	1.1940	0.3310	0.0433	0.3743		3,215.2843	3,215.2843	0.1011	0.4701	3,357.8997
Worker	1.7249	0.8809	16.7797	0.0655	10.3903	0.0247	10.4150	2.7557	0.0227	2.7784		7,277.9314	7,277.9314	0.0898	0.1377	7,321.2040
Total	**1.9536**	**9.0383**	**19.7888**	**0.0953**	**11.5391**	**0.0700**	**11.6091**	**3.0867**	**0.0660**	**3.1527**		**10,493.2157**	**10,493.2157**	**0.1909**	**0.6078**	**10,679.1038**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2036

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2287	8.1575	3.0091	0.0298	1.1488	0.0453	1.1940	0.3310	0.0433	0.3743		3,215.2843	3,215.2843	0.1011	0.4701	3,357.8997
Worker	1.7249	0.8809	16.7797	0.0655	10.3903	0.0247	10.4150	2.7557	0.0227	2.7784		7,277.9314	7,277.9314	0.0898	0.1377	7,321.2040
Total	**1.9536**	**9.0383**	**19.7888**	**0.0953**	**11.5391**	**0.0700**	**11.6091**	**3.0867**	**0.0660**	**3.1527**		**10,493.2157**	**10,493.2157**	**0.1909**	**0.6078**	**10,679.1038**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2036

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2287	8.1575	3.0091	0.0298	1.1488	0.0453	1.1940	0.3310	0.0433	0.3743		3,215.2843	3,215.2843	0.1011	0.4701	3,357.8997
Worker	1.7249	0.8809	16.7797	0.0655	10.3903	0.0247	10.4150	2.7557	0.0227	2.7784		7,277.9314	7,277.9314	0.0898	0.1377	7,321.2040
Total	**1.9536**	**9.0383**	**19.7888**	**0.0953**	**11.5391**	**0.0700**	**11.6091**	**3.0867**	**0.0660**	**3.1527**		**10,493.2157**	**10,493.2157**	**0.1909**	**0.6078**	**10,679.1038**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2037

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2287	8.1575	3.0091	0.0298	1.1488	0.0453	1.1940	0.3310	0.0433	0.3743		3,215.2843	3,215.2843	0.1011	0.4701	3,357.8997
Worker	1.7249	0.8809	16.7797	0.0655	10.3903	0.0247	10.4150	2.7557	0.0227	2.7784		7,277.9314	7,277.9314	0.0898	0.1377	7,321.2040
Total	**1.9536**	**9.0383**	**19.7888**	**0.0953**	**11.5391**	**0.0700**	**11.6091**	**3.0867**	**0.0660**	**3.1527**		**10,493.2157**	**10,493.2157**	**0.1909**	**0.6078**	**10,679.1038**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2037

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2287	8.1575	3.0091	0.0298	1.1488	0.0453	1.1940	0.3310	0.0433	0.3743		3,215.2843	3,215.2843	0.1011	0.4701	3,357.8997
Worker	1.7249	0.8809	16.7797	0.0655	10.3903	0.0247	10.4150	2.7557	0.0227	2.7784		7,277.9314	7,277.9314	0.0898	0.1377	7,321.2040
Total	**1.9536**	**9.0383**	**19.7888**	**0.0953**	**11.5391**	**0.0700**	**11.6091**	**3.0867**	**0.0660**	**3.1527**		**10,493.2157**	**10,493.2157**	**0.1909**	**0.6078**	**10,679.1038**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2038

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2287	8.1575	3.0091	0.0298	1.1488	0.0453	1.1940	0.3310	0.0433	0.3743		3,215.2843	3,215.2843	0.1011	0.4701	3,357.8997
Worker	1.7249	0.8809	16.7797	0.0655	10.3903	0.0247	10.4150	2.7557	0.0227	2.7784		7,277.9314	7,277.9314	0.0898	0.1377	7,321.2040
Total	**1.9536**	**9.0383**	**19.7888**	**0.0953**	**11.5391**	**0.0700**	**11.6091**	**3.0867**	**0.0660**	**3.1527**		**10,493.2157**	**10,493.2157**	**0.1909**	**0.6078**	**10,679.1038**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2038

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2287	8.1575	3.0091	0.0298	1.1488	0.0453	1.1940	0.3310	0.0433	0.3743		3,215.2843	3,215.2843	0.1011	0.4701	3,357.8997
Worker	1.7249	0.8809	16.7797	0.0655	10.3903	0.0247	10.4150	2.7557	0.0227	2.7784		7,277.9314	7,277.9314	0.0898	0.1377	7,321.2040
Total	**1.9536**	**9.0383**	**19.7888**	**0.0953**	**11.5391**	**0.0700**	**11.6091**	**3.0867**	**0.0660**	**3.1527**		**10,493.2157**	**10,493.2157**	**0.1909**	**0.6078**	**10,679.1038**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2039

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2287	8.1575	3.0091	0.0298	1.1488	0.0453	1.1940	0.3310	0.0433	0.3743		3,215.2843	3,215.2843	0.1011	0.4701	3,357.8997
Worker	1.7249	0.8809	16.7797	0.0655	10.3903	0.0247	10.4150	2.7557	0.0227	2.7784		7,277.9314	7,277.9314	0.0898	0.1377	7,321.2040
Total	**1.9536**	**9.0383**	**19.7888**	**0.0953**	**11.5391**	**0.0700**	**11.6091**	**3.0867**	**0.0660**	**3.1527**		**10,493.2157**	**10,493.2157**	**0.1909**	**0.6078**	**10,679.1038**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2039

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2287	8.1575	3.0091	0.0298	1.1488	0.0453	1.1940	0.3310	0.0433	0.3743		3,215.2843	3,215.2843	0.1011	0.4701	3,357.8997
Worker	1.7249	0.8809	16.7797	0.0655	10.3903	0.0247	10.4150	2.7557	0.0227	2.7784		7,277.9314	7,277.9314	0.0898	0.1377	7,321.2040
Total	**1.9536**	**9.0383**	**19.7888**	**0.0953**	**11.5391**	**0.0700**	**11.6091**	**3.0867**	**0.0660**	**3.1527**		**10,493.2157**	**10,493.2157**	**0.1909**	**0.6078**	**10,679.1038**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2040

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1970	6.8903	16.1185	0.0310		0.0737	0.0737		0.0737	0.0737		2,897.5471	2,897.5471	0.1041		2,900.1503
Total	**1.1970**	**6.8903**	**16.1185**	**0.0310**		**0.0737**	**0.0737**		**0.0737**	**0.0737**		**2,897.5471**	**2,897.5471**	**0.1041**		**2,900.1503**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2255	7.8052	3.0654	0.0283	1.1490	0.0437	1.1926	0.3311	0.0418	0.3728		3,062.5717	3,062.5717	0.1064	0.4470	3,198.4470
Worker	1.4039	0.7780	15.4324	0.0624	10.3903	0.0195	10.4098	2.7557	0.0179	2.7737		7,033.9690	7,033.9690	0.0710	0.1308	7,074.7130
Total	**1.6295**	**8.5832**	**18.4978**	**0.0907**	**11.5393**	**0.0632**	**11.6025**	**3.0868**	**0.0597**	**3.1465**		**10,096.5407**	**10,096.5407**	**0.1775**	**0.5778**	**10,273.1600**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2040

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1970	6.8903	16.1185	0.0310		0.0737	0.0737		0.0737	0.0737	0.0000	2,897.5471	2,897.5471	0.1041		2,900.1503
Total	**1.1970**	**6.8903**	**16.1185**	**0.0310**		**0.0737**	**0.0737**		**0.0737**	**0.0737**	**0.0000**	**2,897.5471**	**2,897.5471**	**0.1041**		**2,900.1503**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2255	7.8052	3.0654	0.0283	1.1490	0.0437	1.1926	0.3311	0.0418	0.3728		3,062.5717	3,062.5717	0.1064	0.4470	3,198.4470
Worker	1.4039	0.7780	15.4324	0.0624	10.3903	0.0195	10.4098	2.7557	0.0179	2.7737		7,033.9690	7,033.9690	0.0710	0.1308	7,074.7130
Total	**1.6295**	**8.5832**	**18.4978**	**0.0907**	**11.5393**	**0.0632**	**11.6025**	**3.0868**	**0.0597**	**3.1465**		**10,096.5407**	**10,096.5407**	**0.1775**	**0.5778**	**10,273.1600**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2040

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0112	3.6566	15.8177	0.0281		0.1164	0.1164		0.1164	0.1164		2,656.5168	2,656.5168	0.0893		2,658.7489
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0112**	**3.6566**	**15.8177**	**0.0281**		**0.1164**	**0.1164**		**0.1164**	**0.1164**		**2,656.5168**	**2,656.5168**	**0.0893**		**2,658.7489**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0200	0.0111	0.2203	8.9000e-004	0.1483	2.8000e-004	0.1486	0.0393	2.6000e-004	0.0396		100.3897	100.3897	1.0100e-003	1.8700e-003	100.9712
Total	**0.0200**	**0.0111**	**0.2203**	**8.9000e-004**	**0.1483**	**2.8000e-004**	**0.1486**	**0.0393**	**2.6000e-004**	**0.0396**		**100.3897**	**100.3897**	**1.0100e-003**	**1.8700e-003**	**100.9712**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2040

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0112	3.6566	15.8177	0.0281		0.1164	0.1164		0.1164	0.1164	0.0000	2,656.5168	2,656.5168	0.0893		2,658.7489
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0112**	**3.6566**	**15.8177**	**0.0281**		**0.1164**	**0.1164**		**0.1164**	**0.1164**	**0.0000**	**2,656.5168**	**2,656.5168**	**0.0893**		**2,658.7489**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0200	0.0111	0.2203	8.9000e-004	0.1483	2.8000e-004	0.1486	0.0393	2.6000e-004	0.0396		100.3897	100.3897	1.0100e-003	1.8700e-003	100.9712
Total	**0.0200**	**0.0111**	**0.2203**	**8.9000e-004**	**0.1483**	**2.8000e-004**	**0.1486**	**0.0393**	**2.6000e-004**	**0.0396**		**100.3897**	**100.3897**	**1.0100e-003**	**1.8700e-003**	**100.9712**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2041

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0112	3.6566	15.8177	0.0281		0.1164	0.1164		0.1164	0.1164		2,656.5168	2,656.5168	0.0893		2,658.7489
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0112**	**3.6566**	**15.8177**	**0.0281**		**0.1164**	**0.1164**		**0.1164**	**0.1164**		**2,656.5168**	**2,656.5168**	**0.0893**		**2,658.7489**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0200	0.0111	0.2203	8.9000e-004	0.1483	2.8000e-004	0.1486	0.0393	2.6000e-004	0.0396		100.3897	100.3897	1.0100e-003	1.8700e-003	100.9712
Total	**0.0200**	**0.0111**	**0.2203**	**8.9000e-004**	**0.1483**	**2.8000e-004**	**0.1486**	**0.0393**	**2.6000e-004**	**0.0396**		**100.3897**	**100.3897**	**1.0100e-003**	**1.8700e-003**	**100.9712**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2041

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0112	3.6566	15.8177	0.0281		0.1164	0.1164		0.1164	0.1164	0.0000	2,656.5168	2,656.5168	0.0893		2,658.7489
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0112**	**3.6566**	**15.8177**	**0.0281**		**0.1164**	**0.1164**		**0.1164**	**0.1164**	**0.0000**	**2,656.5168**	**2,656.5168**	**0.0893**		**2,658.7489**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0200	0.0111	0.2203	8.9000e-004	0.1483	2.8000e-004	0.1486	0.0393	2.6000e-004	0.0396		100.3897	100.3897	1.0100e-003	1.8700e-003	100.9712
Total	**0.0200**	**0.0111**	**0.2203**	**8.9000e-004**	**0.1483**	**2.8000e-004**	**0.1486**	**0.0393**	**2.6000e-004**	**0.0396**		**100.3897**	**100.3897**	**1.0100e-003**	**1.8700e-003**	**100.9712**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2040

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	75.1742					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1149	0.7270	1.7923	2.9700e-003		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003		281.4481	281.4481	9.9000e-003		281.6957
Total	**75.2891**	**0.7270**	**1.7923**	**2.9700e-003**		**7.4300e-003**	**7.4300e-003**		**7.4300e-003**	**7.4300e-003**		**281.4481**	**281.4481**	**9.9000e-003**		**281.6957**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2805	0.1555	3.0835	0.0125	2.0761	3.8900e-003	2.0800	0.5506	3.5800e-003	0.5542		1,405.4553	1,405.4553	0.0142	0.0261	1,413.5963
Total	**0.2805**	**0.1555**	**3.0835**	**0.0125**	**2.0761**	**3.8900e-003**	**2.0800**	**0.5506**	**3.5800e-003**	**0.5542**		**1,405.4553**	**1,405.4553**	**0.0142**	**0.0261**	**1,413.5963**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2040

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	75.1742					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1149	0.7270	1.7923	2.9700e-003		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003	0.0000	281.4481	281.4481	9.9000e-003		281.6957
Total	**75.2891**	**0.7270**	**1.7923**	**2.9700e-003**		**7.4300e-003**	**7.4300e-003**		**7.4300e-003**	**7.4300e-003**	**0.0000**	**281.4481**	**281.4481**	**9.9000e-003**		**281.6957**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2805	0.1555	3.0835	0.0125	2.0761	3.8900e-003	2.0800	0.5506	3.5800e-003	0.5542		1,405.4553	1,405.4553	0.0142	0.0261	1,413.5963
Total	**0.2805**	**0.1555**	**3.0835**	**0.0125**	**2.0761**	**3.8900e-003**	**2.0800**	**0.5506**	**3.5800e-003**	**0.5542**		**1,405.4553**	**1,405.4553**	**0.0142**	**0.0261**	**1,413.5963**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2041

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1149	0.7270	1.7923	2.9700e-003		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003		281.4481	281.4481	9.9000e-003		281.6957
Total	**0.1149**	**0.7270**	**1.7923**	**2.9700e-003**		**7.4300e-003**	**7.4300e-003**		**7.4300e-003**	**7.4300e-003**		**281.4481**	**281.4481**	**9.9000e-003**		**281.6957**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2805	0.1555	3.0835	0.0125	2.0761	3.8900e-003	2.0800	0.5506	3.5800e-003	0.5542		1,405.4553	1,405.4553	0.0142	0.0261	1,413.5963
Total	**0.2805**	**0.1555**	**3.0835**	**0.0125**	**2.0761**	**3.8900e-003**	**2.0800**	**0.5506**	**3.5800e-003**	**0.5542**		**1,405.4553**	**1,405.4553**	**0.0142**	**0.0261**	**1,413.5963**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2041

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1149	0.7270	1.7923	2.9700e-003		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003	0.0000	281.4481	281.4481	9.9000e-003		281.6957
Total	**0.1149**	**0.7270**	**1.7923**	**2.9700e-003**		**7.4300e-003**	**7.4300e-003**		**7.4300e-003**	**7.4300e-003**	**0.0000**	**281.4481**	**281.4481**	**9.9000e-003**		**281.6957**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2805	0.1555	3.0835	0.0125	2.0761	3.8900e-003	2.0800	0.5506	3.5800e-003	0.5542		1,405.4553	1,405.4553	0.0142	0.0261	1,413.5963
Total	**0.2805**	**0.1555**	**3.0835**	**0.0125**	**2.0761**	**3.8900e-003**	**2.0800**	**0.5506**	**3.5800e-003**	**0.5542**		**1,405.4553**	**1,405.4553**	**0.0142**	**0.0261**	**1,413.5963**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2042

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1149	0.7270	1.7923	2.9700e-003		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003		281.4481	281.4481	9.9000e-003		281.6957
Total	**0.1149**	**0.7270**	**1.7923**	**2.9700e-003**		**7.4300e-003**	**7.4300e-003**		**7.4300e-003**	**7.4300e-003**		**281.4481**	**281.4481**	**9.9000e-003**		**281.6957**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2805	0.1555	3.0835	0.0125	2.0761	3.8900e-003	2.0800	0.5506	3.5800e-003	0.5542		1,405.4553	1,405.4553	0.0142	0.0261	1,413.5963
Total	**0.2805**	**0.1555**	**3.0835**	**0.0125**	**2.0761**	**3.8900e-003**	**2.0800**	**0.5506**	**3.5800e-003**	**0.5542**		**1,405.4553**	**1,405.4553**	**0.0142**	**0.0261**	**1,413.5963**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2042

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1149	0.7270	1.7923	2.9700e-003		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003	0.0000	281.4481	281.4481	9.9000e-003		281.6957
Total	**0.1149**	**0.7270**	**1.7923**	**2.9700e-003**		**7.4300e-003**	**7.4300e-003**		**7.4300e-003**	**7.4300e-003**	**0.0000**	**281.4481**	**281.4481**	**9.9000e-003**		**281.6957**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2805	0.1555	3.0835	0.0125	2.0761	3.8900e-003	2.0800	0.5506	3.5800e-003	0.5542		1,405.4553	1,405.4553	0.0142	0.0261	1,413.5963
Total	**0.2805**	**0.1555**	**3.0835**	**0.0125**	**2.0761**	**3.8900e-003**	**2.0800**	**0.5506**	**3.5800e-003**	**0.5542**		**1,405.4553**	**1,405.4553**	**0.0142**	**0.0261**	**1,413.5963**

4.0 Operational Detail - Mobile

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	8.5040	8.9562	90.1899	0.2162	31.8757	0.1100	31.9857	8.4836	0.1031	8.5866		24,048.4979	24,048.4979	1.0724	0.8777	24,336.8545
Unmitigated	8.5040	8.9562	90.1899	0.2162	31.8757	0.1100	31.9857	8.4836	0.1031	8.5866		24,048.4979	24,048.4979	1.0724	0.8777	24,336.8545

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	200.64	223.44	173.28	915,611	915,611
Apartments Mid Rise	113.40	95.58	79.38	485,275	485,275
Apartments Mid Rise	505.40	425.98	353.78	2,162,770	2,162,770
Government (Civic Center)	25.99	0.00	0.00	49,223	49,223
Office Park	559.84	84.19	37.88	1,836,518	1,836,518
Strip Mall	1,339.20	1,257.36	610.08	5,585,619	5,585,619
Strip Mall	583.20	547.56	265.68	2,432,447	2,432,447
Total	3,327.67	2,634.11	1,520.08	13,467,463	13,467,463

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	23.42	9.01	9.01	35.80	21.00	43.20	86	11	3
Apartments Mid Rise	23.42	9.01	9.01	35.80	21.00	43.20	86	11	3

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	23.42	9.01	9.01	35.80	21.00	43.20	86	11	3
Government (Civic Center)	12.87	10.73	12.48	75.00	20.00	5.00	50	34	16
Office Park	24.95	9.60	6.60	33.00	48.00	19.00	82	15	3
Strip Mall	46.79	18.00	18.00	16.60	64.40	19.00	45	40	15
Strip Mall	46.79	18.00	18.00	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.537981	0.060917	0.197944	0.129503	0.022130	0.006150	0.007595	0.005434	0.000841	0.000325	0.027432	0.000740	0.003008
Apartments Mid Rise	0.537981	0.060917	0.197944	0.129503	0.022130	0.006150	0.007595	0.005434	0.000841	0.000325	0.027432	0.000740	0.003008
Government (Civic Center)	0.537981	0.060917	0.197944	0.129503	0.022130	0.006150	0.007595	0.005434	0.000841	0.000325	0.027432	0.000740	0.003008
Office Park	0.537981	0.060917	0.197944	0.129503	0.022130	0.006150	0.007595	0.005434	0.000841	0.000325	0.027432	0.000740	0.003008
Strip Mall	0.537981	0.060917	0.197944	0.129503	0.022130	0.006150	0.007595	0.005434	0.000841	0.000325	0.027432	0.000740	0.003008

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.5731	5.0543	3.2348	0.0313		0.3960	0.3960		0.3960	0.3960		6,251.9438	6,251.9438	0.1198	0.1146	6,289.0959
NaturalGas Unmitigated	0.5731	5.0543	3.2348	0.0313		0.3960	0.3960		0.3960	0.3960		6,251.9438	6,251.9438	0.1198	0.1146	6,289.0959

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	6163.99	0.0665	0.5681	0.2417	3.6300e-003		0.0459	0.0459		0.0459	0.0459		725.1752	725.1752	0.0139	0.0133	729.4846
Apartments Mid Rise	16579.7	0.1788	1.5279	0.6502	9.7500e-003		0.1235	0.1235		0.1235	0.1235		1,950.5473	1,950.5473	0.0374	0.0358	1,962.1384
Apartments Mid Rise	3720.09	0.0401	0.3428	0.1459	2.1900e-003		0.0277	0.0277		0.0277	0.0277		437.6574	437.6574	8.3900e-003	8.0200e-003	440.2582
Government (Civic Center)	281.392	3.0300e-003	0.0276	0.0232	1.7000e-004		2.1000e-003	2.1000e-003		2.1000e-003	2.1000e-003		33.1049	33.1049	6.3000e-004	6.1000e-004	33.3016
Office Park	24114.1	0.2601	2.3641	1.9859	0.0142		0.1797	0.1797		0.1797	0.1797		2,836.9529	2,836.9529	0.0544	0.0520	2,853.8115
Strip Mall	1589.92	0.0172	0.1559	0.1309	9.4000e-004		0.0119	0.0119		0.0119	0.0119		187.0492	187.0492	3.5900e-003	3.4300e-003	188.1607
Strip Mall	692.384	7.4700e-003	0.0679	0.0570	4.1000e-004		5.1600e-003	5.1600e-003		5.1600e-003	5.1600e-003		81.4569	81.4569	1.5600e-003	1.4900e-003	81.9410
Total		**0.5731**	**5.0543**	**3.2348**	**0.0313**		**0.3960**	**0.3960**		**0.3960**	**0.3960**		**6,251.9438**	**6,251.9438**	**0.1198**	**0.1146**	**6,289.0959**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	6.16399	0.0665	0.5681	0.2417	3.6300e-003		0.0459	0.0459		0.0459	0.0459		725.1752	725.1752	0.0139	0.0133	729.4846
Apartments Mid Rise	16.5797	0.1788	1.5279	0.6502	9.7500e-003		0.1235	0.1235		0.1235	0.1235		1,950.5473	1,950.5473	0.0374	0.0358	1,962.1384
Apartments Mid Rise	3.72009	0.0401	0.3428	0.1459	2.1900e-003		0.0277	0.0277		0.0277	0.0277		437.6574	437.6574	8.3900e-003	8.0200e-003	440.2582
Government (Civic Center)	0.281392	3.0300e-003	0.0276	0.0232	1.7000e-004		2.1000e-003	2.1000e-003		2.1000e-003	2.1000e-003		33.1049	33.1049	6.3000e-004	6.1000e-004	33.3016
Office Park	24.1141	0.2601	2.3641	1.9859	0.0142		0.1797	0.1797		0.1797	0.1797		2,836.9529	2,836.9529	0.0544	0.0520	2,853.8115
Strip Mall	0.692384	7.4700e-003	0.0679	0.0570	4.1000e-004		5.1600e-003	5.1600e-003		5.1600e-003	5.1600e-003		81.4569	81.4569	1.5600e-003	1.4900e-003	81.9410
Strip Mall	1.58992	0.0172	0.1559	0.1309	9.4000e-004		0.0119	0.0119		0.0119	0.0119		187.0492	187.0492	3.5900e-003	3.4300e-003	188.1607
Total		**0.5731**	**5.0543**	**3.2348**	**0.0313**		**0.3960**	**0.3960**		**0.3960**	**0.3960**		**6,251.9438**	**6,251.9438**	**0.1198**	**0.1146**	**6,289.0959**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	50.0945	1.0550	91.4179	4.8500e-003		0.5090	0.5090		0.5090	0.5090	0.0000	165.3616	165.3616	0.1577	0.0000	169.3035
Unmitigated	50.0945	1.0550	91.4179	4.8500e-003		0.5090	0.5090		0.5090	0.5090	0.0000	165.3616	165.3616	0.1577	0.0000	169.3035

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.7966					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	40.5588					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.7391	1.0550	91.4179	4.8500e-003		0.5090	0.5090		0.5090	0.5090		165.3616	165.3616	0.1577		169.3035
Total	**50.0945**	**1.0550**	**91.4179**	**4.8500e-003**		**0.5090**	**0.5090**		**0.5090**	**0.5090**	**0.0000**	**165.3616**	**165.3616**	**0.1577**	**0.0000**	**169.3035**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.7966					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	40.5588					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.7391	1.0550	91.4179	4.8500e-003		0.5090	0.5090		0.5090	0.5090		165.3616	165.3616	0.1577		169.3035
Total	**50.0945**	**1.0550**	**91.4179**	**4.8500e-003**		**0.5090**	**0.5090**		**0.5090**	**0.5090**	**0.0000**	**165.3616**	**165.3616**	**0.1577**	**0.0000**	**169.3035**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Water Efficient Irrigation System

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Pismo Beach GP/LCP PEIR - GHG

San Luis Obispo County APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Government (Civic Center)	6.34	1000sqft	0.15	6,340.00	-2
Office Park	420.93	1000sqft	9.66	420,930.00	0
Apartments Low Rise	228.00	Dwelling Unit	14.25	228,000.00	471
Apartments Mid Rise	162.00	Dwelling Unit	4.26	162,000.00	185
Apartments Mid Rise	722.00	Dwelling Unit	19.00	722,000.00	1221
Strip Mall	248.00	1000sqft	5.69	248,000.00	0
Strip Mall	108.00	1000sqft	2.48	108,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.2	**Precipitation Freq (Days)**	44
Climate Zone	4			**Operational Year**	2040
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Data given by applicant

Construction Phase - Similar Buildout schedule as other City General Plan Update for 2040.

Grading -

Architectural Coating - SLOAPCD Rule 433

Vehicle Trips - Adjusted trip length and trip generation rates

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Area Coating - SLOAPCD Rule 433

Mobile Land Use Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	150.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	150.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	100.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	150
tblAreaCoating	Area_EF_Nonresidential_Interior	250	150
tblAreaCoating	Area_EF_Residential_Exterior	250	100
tblAreaCoating	Area_EF_Residential_Interior	250	100
tblConstructionPhase	NumDays	75.00	330.00
tblConstructionPhase	NumDays	1,110.00	4,650.00
tblConstructionPhase	NumDays	70.00	300.00
tblConstructionPhase	NumDays	110.00	465.00
tblConstructionPhase	NumDays	75.00	330.00
tblConstructionPhase	NumDays	40.00	180.00
tblLandUse	Population	0.00	-2.00
tblLandUse	Population	652.00	471.00
tblLandUse	Population	463.00	185.00
tblLandUse	Population	2,065.00	1,221.00
tblVehicleTrips	CC_TL	5.00	10.73
tblVehicleTrips	CC_TL	5.00	9.60
tblVehicleTrips	CC_TL	5.00	18.00
tblVehicleTrips	CNW_TL	5.00	12.48
tblVehicleTrips	CNW_TL	5.00	6.60
tblVehicleTrips	CNW_TL	5.00	18.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	CW_TL	13.00	12.87
tblVehicleTrips	CW_TL	13.00	24.95
tblVehicleTrips	CW_TL	13.00	46.79
tblVehicleTrips	HO_TL	5.00	9.01
tblVehicleTrips	HO_TL	5.00	9.01
tblVehicleTrips	HS_TL	5.00	9.01
tblVehicleTrips	HS_TL	5.00	9.01
tblVehicleTrips	HW_TL	13.00	23.42
tblVehicleTrips	HW_TL	13.00	23.42
tblVehicleTrips	ST_TR	8.14	0.98
tblVehicleTrips	ST_TR	4.91	0.59
tblVehicleTrips	ST_TR	1.64	0.20
tblVehicleTrips	ST_TR	42.04	5.07
tblVehicleTrips	SU_TR	6.28	0.76
tblVehicleTrips	SU_TR	4.09	0.49
tblVehicleTrips	SU_TR	0.76	0.09
tblVehicleTrips	SU_TR	20.43	2.46
tblVehicleTrips	WD_TR	7.32	0.88
tblVehicleTrips	WD_TR	5.44	0.70
tblVehicleTrips	WD_TR	33.98	4.10
tblVehicleTrips	WD_TR	11.07	1.33
tblVehicleTrips	WD_TR	44.32	5.40

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.2245	31.4862	22.0345	0.0401	0.1483	1.5521	1.7004	0.0393	1.4418	1.4812	0.0000	3,877.0463	3,877.0463	1.0592	4.1800e-003	3,904.7702
2022	15.7163	128.4125	121.2459	0.2950	40.9224	5.4732	46.3956	16.9814	5.0687	22.0501	0.0000	29,334.3221	29,334.3221	5.1794	0.8830	29,726.9458
2023	11.2382	83.1899	96.1804	0.2514	21.0876	3.2313	24.3189	6.8318	2.9999	9.8318	0.0000	25,136.4728	25,136.4728	3.9423	0.8356	25,484.0504
2024	8.4894	58.1236	73.7217	0.2081	20.9394	2.0540	22.9934	6.7926	1.9045	8.6971	0.0000	20,997.8226	20,997.8226	2.8635	0.8050	21,309.3066
2025	4.9100	24.2955	43.7243	0.1412	11.5382	0.6285	12.1668	3.0864	0.5912	3.6777	0.0000	14,569.8177	14,569.8177	0.8937	0.7752	14,823.1664
2026	4.7439	23.8997	42.2898	0.1381	11.5384	0.6249	12.1632	3.0865	0.5878	3.6743	0.0000	14,316.8951	14,316.8951	0.8778	0.7521	14,562.9614
2027	4.5877	23.5436	41.0538	0.1352	11.5385	0.6210	12.1595	3.0865	0.5842	3.6707	0.0000	14,071.4585	14,071.4585	0.8639	0.7303	14,310.6731
2028	4.4337	23.2395	40.0171	0.1325	11.5386	0.6172	12.1558	3.0865	0.5806	3.6672	0.0000	13,845.7402	13,845.7402	0.8522	0.7106	14,078.7894
2029	4.2829	22.9499	39.1042	0.1300	11.5387	0.6135	12.1522	3.0866	0.5772	3.6637	0.0000	13,633.0541	13,633.0541	0.8419	0.6921	13,860.3306
2030	4.0800	18.1812	38.4056	0.1318	11.5388	0.2307	11.7695	3.0866	0.2259	3.3125	0.0000	13,784.8023	13,784.8023	0.3478	0.6760	13,994.9469
2031	3.9330	17.9742	37.7259	0.1297	11.5388	0.2277	11.7666	3.0866	0.2231	3.3098	0.0000	13,613.6729	13,613.6729	0.3395	0.6617	13,819.3582
2032	3.7948	17.7959	37.1379	0.1279	11.5389	0.2250	11.7639	3.0867	0.2206	3.3073	0.0000	13,460.8781	13,460.8781	0.3320	0.6493	13,662.6790
2033	3.6774	17.6488	36.6416	0.1263	11.5390	0.2226	11.7616	3.0867	0.2183	3.3050	0.0000	13,324.8719	13,324.8719	0.3256	0.6387	13,523.3458
2034	3.5738	17.5210	36.2081	0.1249	11.5390	0.2204	11.7594	3.0867	0.2163	3.3030	0.0000	13,202.7749	13,202.7749	0.3200	0.6294	13,398.3303
2035	3.3867	16.6338	35.7924	0.1236	11.5391	0.1606	11.6997	3.0867	0.1566	3.2433	0.0000	13,095.3338	13,095.3338	0.3066	0.6213	13,288.1499
2036	3.3867	16.6338	35.7924	0.1236	11.5391	0.1606	11.6997	3.0867	0.1566	3.2433	0.0000	13,095.3338	13,095.3338	0.3066	0.6213	13,288.1499
2037	3.3867	16.6338	35.7924	0.1236	11.5391	0.1606	11.6997	3.0867	0.1566	3.2433	0.0000	13,095.3338	13,095.3338	0.3066	0.6213	13,288.1499
2038	3.3867	16.6338	35.7924	0.1236	11.5391	0.1606	11.6997	3.0867	0.1566	3.2433	0.0000	13,095.3338	13,095.3338	0.3066	0.6213	13,288.1499
2039	3.3867	16.6338	35.7924	0.1236	11.5391	0.1606	11.6997	3.0867	0.1566	3.2433	0.0000	13,095.3338	13,095.3338	0.3066	0.6213	13,288.1499

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2040	76.6437	15.8948	34.5254	0.1191	11.5393	0.1371	11.6764	3.0868	0.1336	3.2204	0.0000	12,708.4908	12,708.4908	0.2877	0.5908	12,891.7328
2041	1.4695	4.5728	20.8693	0.0438	2.2244	0.1280	2.3524	0.5900	0.1277	0.7177	0.0000	4,380.9842	4,380.9842	0.1159	0.0304	4,392.9538
2042	0.4354	0.9036	4.8343	0.0149	2.0761	0.0113	2.0874	0.5506	0.0110	0.5616	0.0000	1,628.2662	1,628.2662	0.0255	0.0284	1,637.3709
Maximum	**76.6437**	**128.4125**	**121.2459**	**0.2950**	**40.9224**	**5.4732**	**46.3956**	**16.9814**	**5.0687**	**22.0501**	**0.0000**	**29,334.3221**	**29,334.3221**	**5.1794**	**0.8830**	**29,726.9458**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	3.2245	31.4862	22.0345	0.0401	0.1483	1.5521	1.7004	0.0393	1.4418	1.4812	0.0000	3,877.0463	3,877.0463	1.0592	4.1800e-003	3,904.7702
2022	15.7163	128.4125	121.2459	0.2950	40.9224	5.4732	46.3956	16.9814	5.0687	22.0501	0.0000	29,334.3221	29,334.3221	5.1794	0.8830	29,726.9458
2023	11.2382	83.1899	96.1804	0.2514	21.0876	3.2313	24.3189	6.8318	2.9999	9.8318	0.0000	25,136.4727	25,136.4727	3.9423	0.8356	25,484.0504
2024	8.4894	58.1236	73.7217	0.2081	20.9394	2.0540	22.9934	6.7926	1.9045	8.6971	0.0000	20,997.8226	20,997.8226	2.8635	0.8050	21,309.3066
2025	4.9100	24.2955	43.7243	0.1412	11.5382	0.6285	12.1668	3.0864	0.5912	3.6777	0.0000	14,569.8177	14,569.8177	0.8937	0.7752	14,823.1664
2026	4.7439	23.8997	42.2898	0.1381	11.5384	0.6249	12.1632	3.0865	0.5878	3.6743	0.0000	14,316.8951	14,316.8951	0.8778	0.7521	14,562.9614
2027	4.5877	23.5436	41.0538	0.1352	11.5385	0.6210	12.1595	3.0865	0.5842	3.6707	0.0000	14,071.4585	14,071.4585	0.8639	0.7303	14,310.6731
2028	4.4337	23.2395	40.0171	0.1325	11.5386	0.6172	12.1558	3.0865	0.5806	3.6672	0.0000	13,845.7402	13,845.7402	0.8522	0.7106	14,078.7894

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2029	4.2829	22.9499	39.1042	0.1300	11.5387	0.6135	12.1522	3.0866	0.5772	3.6637	0.0000	13,633.0541	13,633.0541	0.8419	0.6921	13,860.3306
2030	4.0800	18.1812	38.4056	0.1318	11.5388	0.2307	11.7695	3.0866	0.2259	3.3125	0.0000	13,784.8023	13,784.8023	0.3478	0.6760	13,994.9469
2031	3.9330	17.9742	37.7259	0.1297	11.5388	0.2277	11.7666	3.0866	0.2231	3.3098	0.0000	13,613.6729	13,613.6729	0.3395	0.6617	13,819.3582
2032	3.7948	17.7959	37.1379	0.1279	11.5389	0.2250	11.7639	3.0867	0.2206	3.3073	0.0000	13,460.8781	13,460.8781	0.3320	0.6493	13,662.6790
2033	3.6774	17.6488	36.6416	0.1263	11.5390	0.2226	11.7616	3.0867	0.2183	3.3050	0.0000	13,324.8719	13,324.8719	0.3256	0.6387	13,523.3458
2034	3.5738	17.5210	36.2081	0.1249	11.5390	0.2204	11.7594	3.0867	0.2163	3.3030	0.0000	13,202.7749	13,202.7749	0.3200	0.6294	13,398.3303
2035	3.3867	16.6338	35.7924	0.1236	11.5391	0.1606	11.6997	3.0867	0.1566	3.2433	0.0000	13,095.3338	13,095.3338	0.3066	0.6213	13,288.1499
2036	3.3867	16.6338	35.7924	0.1236	11.5391	0.1606	11.6997	3.0867	0.1566	3.2433	0.0000	13,095.3338	13,095.3338	0.3066	0.6213	13,288.1499
2037	3.3867	16.6338	35.7924	0.1236	11.5391	0.1606	11.6997	3.0867	0.1566	3.2433	0.0000	13,095.3338	13,095.3338	0.3066	0.6213	13,288.1499
2038	3.3867	16.6338	35.7924	0.1236	11.5391	0.1606	11.6997	3.0867	0.1566	3.2433	0.0000	13,095.3338	13,095.3338	0.3066	0.6213	13,288.1499
2039	3.3867	16.6338	35.7924	0.1236	11.5391	0.1606	11.6997	3.0867	0.1566	3.2433	0.0000	13,095.3338	13,095.3338	0.3066	0.6213	13,288.1499
2040	76.6437	15.8948	34.5254	0.1191	11.5393	0.1371	11.6764	3.0868	0.1336	3.2204	0.0000	12,708.4908	12,708.4908	0.2877	0.5908	12,891.7328
2041	1.4695	4.5728	20.8693	0.0438	2.2244	0.1280	2.3524	0.5900	0.1277	0.7177	0.0000	4,380.9842	4,380.9842	0.1159	0.0304	4,392.9538
2042	0.4354	0.9036	4.8343	0.0149	2.0761	0.0113	2.0874	0.5506	0.0110	0.5616	0.0000	1,628.2662	1,628.2662	0.0255	0.0284	1,637.3709
Maximum	**76.6437**	**128.4125**	**121.2459**	**0.2950**	**40.9224**	**5.4732**	**46.3956**	**16.9814**	**5.0687**	**22.0501**	**0.0000**	**29,334.3221**	**29,334.3221**	**5.1794**	**0.8830**	**29,726.9458**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	50.0945	1.0550	91.4179	4.8500e-003		0.5090	0.5090		0.5090	0.5090	0.0000	165.3616	165.3616	0.1577	0.0000	169.3035
Energy	0.5731	5.0543	3.2348	0.0313		0.3960	0.3960		0.3960	0.3960		6,251.9438	6,251.9438	0.1198	0.1146	6,289.0959
Mobile	8.3769	9.6920	94.1100	0.2091	31.8757	0.1101	31.9857	8.4836	0.1031	8.5867		23,247.0508	23,247.0508	1.1306	0.9238	23,550.5942
Total	**59.0445**	**15.8012**	**188.7626**	**0.2452**	**31.8757**	**1.0151**	**32.8907**	**8.4836**	**1.0081**	**9.4917**	**0.0000**	**29,664.3561**	**29,664.3561**	**1.4081**	**1.0384**	**30,008.9936**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	50.0945	1.0550	91.4179	4.8500e-003		0.5090	0.5090		0.5090	0.5090	0.0000	165.3616	165.3616	0.1577	0.0000	169.3035
Energy	0.5731	5.0543	3.2348	0.0313		0.3960	0.3960		0.3960	0.3960		6,251.9438	6,251.9438	0.1198	0.1146	6,289.0959
Mobile	8.3769	9.6920	94.1100	0.2091	31.8757	0.1101	31.9857	8.4836	0.1031	8.5867		23,247.0508	23,247.0508	1.1306	0.9238	23,550.5942
Total	**59.0445**	**15.8012**	**188.7626**	**0.2452**	**31.8757**	**1.0151**	**32.8907**	**8.4836**	**1.0081**	**9.4917**	**0.0000**	**29,664.3561**	**29,664.3561**	**1.4081**	**1.0384**	**30,008.9936**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	11/17/2021	1/10/2023	5	300	
2	Site Preparation	Site Preparation	2/23/2022	11/1/2022	5	180	
3	Grading	Grading	4/20/2022	1/30/2024	5	465	
4	Building Construction	Building Construction	9/21/2022	7/17/2040	5	4650	
5	Paving	Paving	7/18/2040	10/22/2041	5	330	
6	Architectural Coating	Architectural Coating	10/23/2040	1/27/2042	5	330	

Acres of Grading (Site Preparation Phase): 270

Acres of Grading (Grading Phase): 1395

Acres of Paving: 0

Residential Indoor: 2,251,800; Residential Outdoor: 750,600; Non-Residential Indoor: 1,174,905; Non-Residential Outdoor: 391,635; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,051.00	247.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	210.00	0.00	0.00	13.00	5.00	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**		**1.5513**	**1.5513**		**1.4411**	**1.4411**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0594	0.0455	0.4695	1.2700e-003	0.1483	7.9000e-004	0.1491	0.0393	7.3000e-004	0.0401		129.1014	129.1014	4.2700e-003	4.1800e-003	130.4528
Total	**0.0594**	**0.0455**	**0.4695**	**1.2700e-003**	**0.1483**	**7.9000e-004**	**0.1491**	**0.0393**	**7.3000e-004**	**0.0401**		**129.1014**	**129.1014**	**4.2700e-003**	**4.1800e-003**	**130.4528**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2021

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**		**1.5513**	**1.5513**		**1.4411**	**1.4411**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0594	0.0455	0.4695	1.2700e-003	0.1483	7.9000e-004	0.1491	0.0393	7.3000e-004	0.0401		129.1014	129.1014	4.2700e-003	4.1800e-003	130.4528
Total	**0.0594**	**0.0455**	**0.4695**	**1.2700e-003**	**0.1483**	**7.9000e-004**	**0.1491**	**0.0393**	**7.3000e-004**	**0.0401**		**129.1014**	**129.1014**	**4.2700e-003**	**4.1800e-003**	**130.4528**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**		**1.2427**	**1.2427**		**1.1553**	**1.1553**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0557	0.0402	0.4320	1.2400e-003	0.1483	7.5000e-004	0.1490	0.0393	6.9000e-004	0.0400		125.8786	125.8786	3.8700e-003	3.8500e-003	127.1225
Total	**0.0557**	**0.0402**	**0.4320**	**1.2400e-003**	**0.1483**	**7.5000e-004**	**0.1490**	**0.0393**	**6.9000e-004**	**0.0400**		**125.8786**	**125.8786**	**3.8700e-003**	**3.8500e-003**	**127.1225**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**		**1.2427**	**1.2427**		**1.1553**	**1.1553**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0557	0.0402	0.4320	1.2400e-003	0.1483	7.5000e-004	0.1490	0.0393	6.9000e-004	0.0400		125.8786	125.8786	3.8700e-003	3.8500e-003	127.1225
Total	**0.0557**	**0.0402**	**0.4320**	**1.2400e-003**	**0.1483**	**7.5000e-004**	**0.1490**	**0.0393**	**6.9000e-004**	**0.0400**		**125.8786**	**125.8786**	**3.8700e-003**	**3.8500e-003**	**127.1225**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280		3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**		**0.9975**	**0.9975**		**0.9280**	**0.9280**		**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0523	0.0356	0.3993	1.2000e-003	0.1483	7.1000e-004	0.1490	0.0393	6.6000e-004	0.0400		122.8016	122.8016	3.5100e-003	3.5600e-003	123.9505
Total	**0.0523**	**0.0356**	**0.3993**	**1.2000e-003**	**0.1483**	**7.1000e-004**	**0.1490**	**0.0393**	**6.6000e-004**	**0.0400**		**122.8016**	**122.8016**	**3.5100e-003**	**3.5600e-003**	**123.9505**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280	0.0000	3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**		**0.9975**	**0.9975**		**0.9280**	**0.9280**	**0.0000**	**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0523	0.0356	0.3993	1.2000e-003	0.1483	7.1000e-004	0.1490	0.0393	6.6000e-004	0.0400		122.8016	122.8016	3.5100e-003	3.5600e-003	123.9505
Total	**0.0523**	**0.0356**	**0.3993**	**1.2000e-003**	**0.1483**	**7.1000e-004**	**0.1490**	**0.0393**	**6.6000e-004**	**0.0400**		**122.8016**	**122.8016**	**3.5100e-003**	**3.5600e-003**	**123.9505**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0668	0.0482	0.5184	1.4800e-003	0.1780	9.0000e-004	0.1789	0.0472	8.3000e-004	0.0480		151.0544	151.0544	4.6400e-003	4.6200e-003	152.5470
Total	**0.0668**	**0.0482**	**0.5184**	**1.4800e-003**	**0.1780**	**9.0000e-004**	**0.1789**	**0.0472**	**8.3000e-004**	**0.0480**		**151.0544**	**151.0544**	**4.6400e-003**	**4.6200e-003**	**152.5470**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**19.6570**	**1.6126**	**21.2696**	**10.1025**	**1.4836**	**11.5860**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0668	0.0482	0.5184	1.4800e-003	0.1780	9.0000e-004	0.1789	0.0472	8.3000e-004	0.0480		151.0544	151.0544	4.6400e-003	4.6200e-003	152.5470
Total	**0.0668**	**0.0482**	**0.5184**	**1.4800e-003**	**0.1780**	**9.0000e-004**	**0.1789**	**0.0472**	**8.3000e-004**	**0.0480**		**151.0544**	**151.0544**	**4.6400e-003**	**4.6200e-003**	**152.5470**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**9.2036**	**1.6349**	**10.8385**	**3.6538**	**1.5041**	**5.1579**		**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0743	0.0536	0.5760	1.6500e-003	0.1977	1.0000e-003	0.1987	0.0524	9.2000e-004	0.0534		167.8382	167.8382	5.1600e-003	5.1300e-003	169.4967
Total	**0.0743**	**0.0536**	**0.5760**	**1.6500e-003**	**0.1977**	**1.0000e-003**	**0.1987**	**0.0524**	**9.2000e-004**	**0.0534**		**167.8382**	**167.8382**	**5.1600e-003**	**5.1300e-003**	**169.4967**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**9.2036**	**1.6349**	**10.8385**	**3.6538**	**1.5041**	**5.1579**	**0.0000**	**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0743	0.0536	0.5760	1.6500e-003	0.1977	1.0000e-003	0.1987	0.0524	9.2000e-004	0.0534		167.8382	167.8382	5.1600e-003	5.1300e-003	169.4967
Total	**0.0743**	**0.0536**	**0.5760**	**1.6500e-003**	**0.1977**	**1.0000e-003**	**0.1987**	**0.0524**	**9.2000e-004**	**0.0534**		**167.8382**	**167.8382**	**5.1600e-003**	**5.1300e-003**	**169.4967**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0698	0.0475	0.5323	1.6000e-003	0.1977	9.5000e-004	0.1987	0.0524	8.7000e-004	0.0533		163.7354	163.7354	4.6800e-003	4.7500e-003	165.2673
Total	**0.0698**	**0.0475**	**0.5323**	**1.6000e-003**	**0.1977**	**9.5000e-004**	**0.1987**	**0.0524**	**8.7000e-004**	**0.0533**		**163.7354**	**163.7354**	**4.6800e-003**	**4.7500e-003**	**165.2673**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**9.2036**	**1.4245**	**10.6281**	**3.6538**	**1.3105**	**4.9643**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0698	0.0475	0.5323	1.6000e-003	0.1977	9.5000e-004	0.1987	0.0524	8.7000e-004	0.0533		163.7354	163.7354	4.6800e-003	4.7500e-003	165.2673
Total	**0.0698**	**0.0475**	**0.5323**	**1.6000e-003**	**0.1977**	**9.5000e-004**	**0.1987**	**0.0524**	**8.7000e-004**	**0.0533**		**163.7354**	**163.7354**	**4.6800e-003**	**4.7500e-003**	**165.2673**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286		6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**9.2036**	**1.3354**	**10.5390**	**3.6538**	**1.2286**	**4.8823**		**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0658	0.0423	0.4960	1.5500e-003	0.1977	9.0000e-004	0.1986	0.0524	8.3000e-004	0.0533		159.8641	159.8641	4.2500e-003	4.4100e-003	161.2856
Total	**0.0658**	**0.0423**	**0.4960**	**1.5500e-003**	**0.1977**	**9.0000e-004**	**0.1986**	**0.0524**	**8.3000e-004**	**0.0533**		**159.8641**	**159.8641**	**4.2500e-003**	**4.4100e-003**	**161.2856**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286	0.0000	6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**9.2036**	**1.3354**	**10.5390**	**3.6538**	**1.2286**	**4.8823**	**0.0000**	**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0658	0.0423	0.4960	1.5500e-003	0.1977	9.0000e-004	0.1986	0.0524	8.3000e-004	0.0533		159.8641	159.8641	4.2500e-003	4.4100e-003	161.2856
Total	**0.0658**	**0.0423**	**0.4960**	**1.5500e-003**	**0.1977**	**9.0000e-004**	**0.1986**	**0.0524**	**8.3000e-004**	**0.0533**		**159.8641**	**159.8641**	**4.2500e-003**	**4.4100e-003**	**161.2856**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.4764	12.1918	3.7525	0.0380	1.1475	0.1189	1.2664	0.3305	0.1137	0.4442		4,071.0674	4,071.0674	0.0940	0.5997	4,252.1219
Worker	3.9027	2.8166	30.2702	0.0867	10.3903	0.0526	10.4429	2.7557	0.0485	2.8042		8,819.8964	8,819.8964	0.2710	0.2697	8,907.0519
Total	**4.3791**	**15.0084**	**34.0227**	**0.1247**	**11.5378**	**0.1714**	**11.7093**	**3.0863**	**0.1622**	**3.2484**		**12,890.9638**	**12,890.9638**	**0.3650**	**0.8694**	**13,159.1739**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.4764	12.1918	3.7525	0.0380	1.1475	0.1189	1.2664	0.3305	0.1137	0.4442		4,071.0674	4,071.0674	0.0940	0.5997	4,252.1219
Worker	3.9027	2.8166	30.2702	0.0867	10.3903	0.0526	10.4429	2.7557	0.0485	2.8042		8,819.8964	8,819.8964	0.2710	0.2697	8,907.0519
Total	**4.3791**	**15.0084**	**34.0227**	**0.1247**	**11.5378**	**0.1714**	**11.7093**	**3.0863**	**0.1622**	**3.2484**		**12,890.9638**	**12,890.9638**	**0.3650**	**0.8694**	**13,159.1739**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2868	10.2274	3.3360	0.0367	1.1476	0.0581	1.2057	0.3306	0.0555	0.3861		3,931.9686	3,931.9686	0.0870	0.5778	4,106.3292
Worker	3.6657	2.4945	27.9743	0.0841	10.3903	0.0498	10.4401	2.7557	0.0459	2.8016		8,604.2955	8,604.2955	0.2457	0.2495	8,684.7956
Total	**3.9525**	**12.7219**	**31.3103**	**0.1208**	**11.5380**	**0.1079**	**11.6458**	**3.0863**	**0.1015**	**3.1878**		**12,536.2641**	**12,536.2641**	**0.3326**	**0.8273**	**12,791.1248**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2868	10.2274	3.3360	0.0367	1.1476	0.0581	1.2057	0.3306	0.0555	0.3861		3,931.9686	3,931.9686	0.0870	0.5778	4,106.3292
Worker	3.6657	2.4945	27.9743	0.0841	10.3903	0.0498	10.4401	2.7557	0.0459	2.8016		8,604.2955	8,604.2955	0.2457	0.2495	8,684.7956
Total	**3.9525**	**12.7219**	**31.3103**	**0.1208**	**11.5380**	**0.1079**	**11.6458**	**3.0863**	**0.1015**	**3.1878**		**12,536.2641**	**12,536.2641**	**0.3326**	**0.8273**	**12,791.1248**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2762	10.0371	3.2727	0.0361	1.1478	0.0571	1.2049	0.3306	0.0546	0.3852		3,871.6542	3,871.6542	0.0879	0.5687	4,043.3122
Worker	3.4577	2.2235	26.0634	0.0814	10.3903	0.0474	10.4377	2.7557	0.0436	2.7994		8,400.8568	8,400.8568	0.2233	0.2320	8,475.5606
Total	**3.7339**	**12.2605**	**29.3361**	**0.1175**	**11.5381**	**0.1044**	**11.6425**	**3.0864**	**0.0982**	**3.1846**		**12,272.5110**	**12,272.5110**	**0.3112**	**0.8006**	**12,518.8728**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2762	10.0371	3.2727	0.0361	1.1478	0.0571	1.2049	0.3306	0.0546	0.3852		3,871.6542	3,871.6542	0.0879	0.5687	4,043.3122
Worker	3.4577	2.2235	26.0634	0.0814	10.3903	0.0474	10.4377	2.7557	0.0436	2.7994		8,400.8568	8,400.8568	0.2233	0.2320	8,475.5606
Total	**3.7339**	**12.2605**	**29.3361**	**0.1175**	**11.5381**	**0.1044**	**11.6425**	**3.0864**	**0.0982**	**3.1846**		**12,272.5110**	**12,272.5110**	**0.3112**	**0.8006**	**12,518.8728**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2668	9.8281	3.2231	0.0355	1.1479	0.0557	1.2036	0.3307	0.0533	0.3840		3,804.7868	3,804.7868	0.0893	0.5584	3,973.4218
Worker	3.2758	1.9977	24.4165	0.0788	10.3903	0.0452	10.4356	2.7557	0.0417	2.7974		8,208.5565	8,208.5565	0.2035	0.2168	8,278.2466
Total	**3.5426**	**11.8258**	**27.6397**	**0.1142**	**11.5382**	**0.1010**	**11.6392**	**3.0864**	**0.0950**	**3.1814**		**12,013.3433**	**12,013.3433**	**0.2928**	**0.7752**	**12,251.6684**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2668	9.8281	3.2231	0.0355	1.1479	0.0557	1.2036	0.3307	0.0533	0.3840		3,804.7868	3,804.7868	0.0893	0.5584	3,973.4218
Worker	3.2758	1.9977	24.4165	0.0788	10.3903	0.0452	10.4356	2.7557	0.0417	2.7974		8,208.5565	8,208.5565	0.2035	0.2168	8,278.2466
Total	**3.5426**	**11.8258**	**27.6397**	**0.1142**	**11.5382**	**0.1010**	**11.6392**	**3.0864**	**0.0950**	**3.1814**		**12,013.3433**	**12,013.3433**	**0.2928**	**0.7752**	**12,251.6684**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2582	9.6193	3.1852	0.0348	1.1480	0.0542	1.2023	0.3307	0.0519	0.3826		3,736.7504	3,736.7504	0.0906	0.5480	3,902.3157
Worker	3.1182	1.8107	23.0199	0.0764	10.3903	0.0431	10.4334	2.7557	0.0397	2.7954		8,023.6704	8,023.6704	0.1863	0.2041	8,089.1476
Total	**3.3765**	**11.4300**	**26.2051**	**0.1112**	**11.5384**	**0.0973**	**11.6357**	**3.0865**	**0.0916**	**3.1780**		**11,760.4208**	**11,760.4208**	**0.2769**	**0.7521**	**11,991.4634**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2582	9.6193	3.1852	0.0348	1.1480	0.0542	1.2023	0.3307	0.0519	0.3826		3,736.7504	3,736.7504	0.0906	0.5480	3,902.3157
Worker	3.1182	1.8107	23.0199	0.0764	10.3903	0.0431	10.4334	2.7557	0.0397	2.7954		8,023.6704	8,023.6704	0.1863	0.2041	8,089.1476
Total	**3.3765**	**11.4300**	**26.2051**	**0.1112**	**11.5384**	**0.0973**	**11.6357**	**3.0865**	**0.0916**	**3.1780**		**11,760.4208**	**11,760.4208**	**0.2769**	**0.7521**	**11,991.4634**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2507	9.4219	3.1545	0.0341	1.1481	0.0528	1.2010	0.3308	0.0505	0.3813		3,663.3175	3,663.3175	0.0917	0.5369	3,825.6167
Worker	2.9696	1.6520	21.8146	0.0742	10.3903	0.0406	10.4309	2.7557	0.0374	2.7931		7,851.6666	7,851.6666	0.1712	0.1933	7,913.5583
Total	**3.2203**	**11.0739**	**24.9691**	**0.1083**	**11.5385**	**0.0934**	**11.6319**	**3.0865**	**0.0879**	**3.1744**		**11,514.9841**	**11,514.9841**	**0.2630**	**0.7303**	**11,739.1750**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2507	9.4219	3.1545	0.0341	1.1481	0.0528	1.2010	0.3308	0.0505	0.3813		3,663.3175	3,663.3175	0.0917	0.5369	3,825.6167
Worker	2.9696	1.6520	21.8146	0.0742	10.3903	0.0406	10.4309	2.7557	0.0374	2.7931		7,851.6666	7,851.6666	0.1712	0.1933	7,913.5583
Total	**3.2203**	**11.0739**	**24.9691**	**0.1083**	**11.5385**	**0.0934**	**11.6319**	**3.0865**	**0.0879**	**3.1744**		**11,514.9841**	**11,514.9841**	**0.2630**	**0.7303**	**11,739.1750**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2439	9.2515	3.1316	0.0334	1.1483	0.0515	1.1998	0.3308	0.0493	0.3801		3,593.1992	3,593.1992	0.0931	0.5263	3,752.3729
Worker	2.8224	1.5183	20.8009	0.0722	10.3903	0.0381	10.4284	2.7557	0.0351	2.7908		7,696.0667	7,696.0667	0.1581	0.1842	7,754.9185
Total	**3.0663**	**10.7698**	**23.9325**	**0.1056**	**11.5386**	**0.0896**	**11.6282**	**3.0865**	**0.0844**	**3.1709**		**11,289.2659**	**11,289.2659**	**0.2513**	**0.7106**	**11,507.2914**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2439	9.2515	3.1316	0.0334	1.1483	0.0515	1.1998	0.3308	0.0493	0.3801		3,593.1992	3,593.1992	0.0931	0.5263	3,752.3729
Worker	2.8224	1.5183	20.8009	0.0722	10.3903	0.0381	10.4284	2.7557	0.0351	2.7908		7,696.0667	7,696.0667	0.1581	0.1842	7,754.9185
Total	**3.0663**	**10.7698**	**23.9325**	**0.1056**	**11.5386**	**0.0896**	**11.6282**	**3.0865**	**0.0844**	**3.1709**		**11,289.2659**	**11,289.2659**	**0.2513**	**0.7106**	**11,507.2914**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2373	9.0761	3.1106	0.0327	1.1484	0.0502	1.1985	0.3309	0.0480	0.3789		3,522.0165	3,522.0165	0.0945	0.5156	3,678.0209
Worker	2.6782	1.4041	19.9090	0.0703	10.3903	0.0357	10.4261	2.7557	0.0329	2.7886		7,554.5632	7,554.5632	0.1464	0.1765	7,610.8116
Total	**2.9155**	**10.4802**	**23.0196**	**0.1031**	**11.5387**	**0.0859**	**11.6246**	**3.0866**	**0.0809**	**3.1675**		**11,076.5797**	**11,076.5797**	**0.2409**	**0.6921**	**11,288.8325**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2373	9.0761	3.1106	0.0327	1.1484	0.0502	1.1985	0.3309	0.0480	0.3789		3,522.0165	3,522.0165	0.0945	0.5156	3,678.0209
Worker	2.6782	1.4041	19.9090	0.0703	10.3903	0.0357	10.4261	2.7557	0.0329	2.7886		7,554.5632	7,554.5632	0.1464	0.1765	7,610.8116
Total	**2.9155**	**10.4802**	**23.0196**	**0.1031**	**11.5387**	**0.0859**	**11.6246**	**3.0866**	**0.0809**	**3.1675**		**11,076.5797**	**11,076.5797**	**0.2409**	**0.6921**	**11,288.8325**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2320	8.9404	3.0985	0.0321	1.1484	0.0491	1.1976	0.3309	0.0470	0.3779		3,458.9429	3,458.9429	0.0956	0.5061	3,612.1630
Worker	2.5389	1.3061	19.1501	0.0687	10.3903	0.0335	10.4238	2.7557	0.0308	2.7865		7,428.3127	7,428.3127	0.1360	0.1699	7,482.3310
Total	**2.7709**	**10.2466**	**22.2486**	**0.1008**	**11.5388**	**0.0826**	**11.6214**	**3.0866**	**0.0778**	**3.1644**		**10,887.2556**	**10,887.2556**	**0.2316**	**0.6760**	**11,094.4940**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2320	8.9404	3.0985	0.0321	1.1484	0.0491	1.1976	0.3309	0.0470	0.3779		3,458.9429	3,458.9429	0.0956	0.5061	3,612.1630
Worker	2.5389	1.3061	19.1501	0.0687	10.3903	0.0335	10.4238	2.7557	0.0308	2.7865		7,428.3127	7,428.3127	0.1360	0.1699	7,482.3310
Total	**2.7709**	**10.2466**	**22.2486**	**0.1008**	**11.5388**	**0.0826**	**11.6214**	**3.0866**	**0.0778**	**3.1644**		**10,887.2556**	**10,887.2556**	**0.2316**	**0.6760**	**11,094.4940**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2276	8.8199	3.0951	0.0316	1.1485	0.0482	1.1967	0.3309	0.0461	0.3770		3,401.4777	3,401.4777	0.0967	0.4976	3,552.1741
Worker	2.3963	1.2196	18.4738	0.0672	10.3903	0.0314	10.4217	2.7557	0.0289	2.7846		7,314.6484	7,314.6484	0.1266	0.1642	7,366.7312
Total	**2.6239**	**10.0396**	**21.5689**	**0.0988**	**11.5388**	**0.0796**	**11.6184**	**3.0866**	**0.0750**	**3.1616**		**10,716.1261**	**10,716.1261**	**0.2233**	**0.6617**	**10,918.9053**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2031

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2276	8.8199	3.0951	0.0316	1.1485	0.0482	1.1967	0.3309	0.0461	0.3770		3,401.4777	3,401.4777	0.0967	0.4976	3,552.1741
Worker	2.3963	1.2196	18.4738	0.0672	10.3903	0.0314	10.4217	2.7557	0.0289	2.7846		7,314.6484	7,314.6484	0.1266	0.1642	7,366.7312
Total	**2.6239**	**10.0396**	**21.5689**	**0.0988**	**11.5388**	**0.0796**	**11.6184**	**3.0866**	**0.0750**	**3.1616**		**10,716.1261**	**10,716.1261**	**0.2233**	**0.6617**	**10,918.9053**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2239	8.7152	3.0982	0.0311	1.1486	0.0474	1.1960	0.3309	0.0453	0.3763		3,349.7593	3,349.7593	0.0977	0.4900	3,498.2103
Worker	2.2617	1.1461	17.8827	0.0659	10.3903	0.0295	10.4198	2.7557	0.0271	2.7829		7,213.5721	7,213.5721	0.1181	0.1594	7,264.0159
Total	**2.4857**	**9.8612**	**20.9809**	**0.0970**	**11.5389**	**0.0769**	**11.6158**	**3.0867**	**0.0725**	**3.1591**		**10,563.3314**	**10,563.3314**	**0.2158**	**0.6493**	**10,762.2261**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2032

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2239	8.7152	3.0982	0.0311	1.1486	0.0474	1.1960	0.3309	0.0453	0.3763		3,349.7593	3,349.7593	0.0977	0.4900	3,498.2103
Worker	2.2617	1.1461	17.8827	0.0659	10.3903	0.0295	10.4198	2.7557	0.0271	2.7829		7,213.5721	7,213.5721	0.1181	0.1594	7,264.0159
Total	**2.4857**	**9.8612**	**20.9809**	**0.0970**	**11.5389**	**0.0769**	**11.6158**	**3.0867**	**0.0725**	**3.1591**		**10,563.3314**	**10,563.3314**	**0.2158**	**0.6493**	**10,762.2261**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2033

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2211	8.6270	3.1059	0.0306	1.1487	0.0467	1.1954	0.3310	0.0447	0.3756		3,303.4386	3,303.4386	0.0986	0.4832	3,449.9061
Worker	2.1472	1.0872	17.3787	0.0647	10.3903	0.0278	10.4181	2.7557	0.0255	2.7813		7,123.8865	7,123.8865	0.1108	0.1555	7,172.9868
Total	**2.3683**	**9.7142**	**20.4846**	**0.0954**	**11.5390**	**0.0745**	**11.6134**	**3.0867**	**0.0702**	**3.1569**		**10,427.3251**	**10,427.3251**	**0.2093**	**0.6387**	**10,622.8929**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2033

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2211	8.6270	3.1059	0.0306	1.1487	0.0467	1.1954	0.3310	0.0447	0.3756		3,303.4386	3,303.4386	0.0986	0.4832	3,449.9061
Worker	2.1472	1.0872	17.3787	0.0647	10.3903	0.0278	10.4181	2.7557	0.0255	2.7813		7,123.8865	7,123.8865	0.1108	0.1555	7,172.9868
Total	**2.3683**	**9.7142**	**20.4846**	**0.0954**	**11.5390**	**0.0745**	**11.6134**	**3.0867**	**0.0702**	**3.1569**		**10,427.3251**	**10,427.3251**	**0.2093**	**0.6387**	**10,622.8929**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2034

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481		2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**		**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2187	8.5470	3.1156	0.0302	1.1487	0.0461	1.1948	0.3310	0.0441	0.3750		3,260.9784	3,260.9784	0.0995	0.4771	3,405.6354
Worker	2.0460	1.0394	16.9356	0.0637	10.3903	0.0262	10.4165	2.7557	0.0241	2.7798		7,044.2497	7,044.2497	0.1042	0.1523	7,092.2421
Total	**2.2647**	**9.5864**	**20.0512**	**0.0939**	**11.5390**	**0.0722**	**11.6113**	**3.0867**	**0.0681**	**3.1548**		**10,305.2281**	**10,305.2281**	**0.2038**	**0.6294**	**10,497.8774**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2034

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481	0.0000	2,897.5468	2,897.5468	0.1162		2,900.4529
Total	**1.3091**	**7.9346**	**16.1570**	**0.0310**		**0.1481**	**0.1481**		**0.1481**	**0.1481**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1162**		**2,900.4529**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2187	8.5470	3.1156	0.0302	1.1487	0.0461	1.1948	0.3310	0.0441	0.3750		3,260.9784	3,260.9784	0.0995	0.4771	3,405.6354
Worker	2.0460	1.0394	16.9356	0.0637	10.3903	0.0262	10.4165	2.7557	0.0241	2.7798		7,044.2497	7,044.2497	0.1042	0.1523	7,092.2421
Total	**2.2647**	**9.5864**	**20.0512**	**0.0939**	**11.5390**	**0.0722**	**11.6113**	**3.0867**	**0.0681**	**3.1548**		**10,305.2281**	**10,305.2281**	**0.2038**	**0.6294**	**10,497.8774**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2035

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2164	8.4719	3.1246	0.0299	1.1488	0.0454	1.1942	0.3310	0.0435	0.3745		3,222.9117	3,222.9117	0.1003	0.4716	3,365.9529
Worker	1.9535	1.0006	16.5501	0.0628	10.3903	0.0247	10.4150	2.7557	0.0227	2.7784		6,974.8753	6,974.8753	0.0984	0.1497	7,021.9523
Total	**2.1699**	**9.4725**	**19.6747**	**0.0926**	**11.5391**	**0.0701**	**11.6092**	**3.0867**	**0.0662**	**3.1529**		**10,197.7870**	**10,197.7870**	**0.1987**	**0.6213**	**10,387.9052**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2035

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2164	8.4719	3.1246	0.0299	1.1488	0.0454	1.1942	0.3310	0.0435	0.3745		3,222.9117	3,222.9117	0.1003	0.4716	3,365.9529
Worker	1.9535	1.0006	16.5501	0.0628	10.3903	0.0247	10.4150	2.7557	0.0227	2.7784		6,974.8753	6,974.8753	0.0984	0.1497	7,021.9523
Total	**2.1699**	**9.4725**	**19.6747**	**0.0926**	**11.5391**	**0.0701**	**11.6092**	**3.0867**	**0.0662**	**3.1529**		**10,197.7870**	**10,197.7870**	**0.1987**	**0.6213**	**10,387.9052**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2036

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2164	8.4719	3.1246	0.0299	1.1488	0.0454	1.1942	0.3310	0.0435	0.3745		3,222.9117	3,222.9117	0.1003	0.4716	3,365.9529
Worker	1.9535	1.0006	16.5501	0.0628	10.3903	0.0247	10.4150	2.7557	0.0227	2.7784		6,974.8753	6,974.8753	0.0984	0.1497	7,021.9523
Total	**2.1699**	**9.4725**	**19.6747**	**0.0926**	**11.5391**	**0.0701**	**11.6092**	**3.0867**	**0.0662**	**3.1529**		**10,197.7870**	**10,197.7870**	**0.1987**	**0.6213**	**10,387.9052**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2036

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2164	8.4719	3.1246	0.0299	1.1488	0.0454	1.1942	0.3310	0.0435	0.3745		3,222.9117	3,222.9117	0.1003	0.4716	3,365.9529
Worker	1.9535	1.0006	16.5501	0.0628	10.3903	0.0247	10.4150	2.7557	0.0227	2.7784		6,974.8753	6,974.8753	0.0984	0.1497	7,021.9523
Total	**2.1699**	**9.4725**	**19.6747**	**0.0926**	**11.5391**	**0.0701**	**11.6092**	**3.0867**	**0.0662**	**3.1529**		**10,197.7870**	**10,197.7870**	**0.1987**	**0.6213**	**10,387.9052**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2037

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2164	8.4719	3.1246	0.0299	1.1488	0.0454	1.1942	0.3310	0.0435	0.3745		3,222.9117	3,222.9117	0.1003	0.4716	3,365.9529
Worker	1.9535	1.0006	16.5501	0.0628	10.3903	0.0247	10.4150	2.7557	0.0227	2.7784		6,974.8753	6,974.8753	0.0984	0.1497	7,021.9523
Total	**2.1699**	**9.4725**	**19.6747**	**0.0926**	**11.5391**	**0.0701**	**11.6092**	**3.0867**	**0.0662**	**3.1529**		**10,197.7870**	**10,197.7870**	**0.1987**	**0.6213**	**10,387.9052**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2037

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2164	8.4719	3.1246	0.0299	1.1488	0.0454	1.1942	0.3310	0.0435	0.3745		3,222.9117	3,222.9117	0.1003	0.4716	3,365.9529
Worker	1.9535	1.0006	16.5501	0.0628	10.3903	0.0247	10.4150	2.7557	0.0227	2.7784		6,974.8753	6,974.8753	0.0984	0.1497	7,021.9523
Total	**2.1699**	**9.4725**	**19.6747**	**0.0926**	**11.5391**	**0.0701**	**11.6092**	**3.0867**	**0.0662**	**3.1529**		**10,197.7870**	**10,197.7870**	**0.1987**	**0.6213**	**10,387.9052**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2038

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2164	8.4719	3.1246	0.0299	1.1488	0.0454	1.1942	0.3310	0.0435	0.3745		3,222.9117	3,222.9117	0.1003	0.4716	3,365.9529
Worker	1.9535	1.0006	16.5501	0.0628	10.3903	0.0247	10.4150	2.7557	0.0227	2.7784		6,974.8753	6,974.8753	0.0984	0.1497	7,021.9523
Total	**2.1699**	**9.4725**	**19.6747**	**0.0926**	**11.5391**	**0.0701**	**11.6092**	**3.0867**	**0.0662**	**3.1529**		**10,197.7870**	**10,197.7870**	**0.1987**	**0.6213**	**10,387.9052**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2038

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2164	8.4719	3.1246	0.0299	1.1488	0.0454	1.1942	0.3310	0.0435	0.3745		3,222.9117	3,222.9117	0.1003	0.4716	3,365.9529
Worker	1.9535	1.0006	16.5501	0.0628	10.3903	0.0247	10.4150	2.7557	0.0227	2.7784		6,974.8753	6,974.8753	0.0984	0.1497	7,021.9523
Total	**2.1699**	**9.4725**	**19.6747**	**0.0926**	**11.5391**	**0.0701**	**11.6092**	**3.0867**	**0.0662**	**3.1529**		**10,197.7870**	**10,197.7870**	**0.1987**	**0.6213**	**10,387.9052**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2039

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904		2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**		**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2164	8.4719	3.1246	0.0299	1.1488	0.0454	1.1942	0.3310	0.0435	0.3745		3,222.9117	3,222.9117	0.1003	0.4716	3,365.9529
Worker	1.9535	1.0006	16.5501	0.0628	10.3903	0.0247	10.4150	2.7557	0.0227	2.7784		6,974.8753	6,974.8753	0.0984	0.1497	7,021.9523
Total	**2.1699**	**9.4725**	**19.6747**	**0.0926**	**11.5391**	**0.0701**	**11.6092**	**3.0867**	**0.0662**	**3.1529**		**10,197.7870**	**10,197.7870**	**0.1987**	**0.6213**	**10,387.9052**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2039

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904	0.0000	2,897.5468	2,897.5468	0.1079		2,900.2448
Total	**1.2168**	**7.1613**	**16.1178**	**0.0310**		**0.0904**	**0.0904**		**0.0904**	**0.0904**	**0.0000**	**2,897.5468**	**2,897.5468**	**0.1079**		**2,900.2448**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2164	8.4719	3.1246	0.0299	1.1488	0.0454	1.1942	0.3310	0.0435	0.3745		3,222.9117	3,222.9117	0.1003	0.4716	3,365.9529
Worker	1.9535	1.0006	16.5501	0.0628	10.3903	0.0247	10.4150	2.7557	0.0227	2.7784		6,974.8753	6,974.8753	0.0984	0.1497	7,021.9523
Total	**2.1699**	**9.4725**	**19.6747**	**0.0926**	**11.5391**	**0.0701**	**11.6092**	**3.0867**	**0.0662**	**3.1529**		**10,197.7870**	**10,197.7870**	**0.1987**	**0.6213**	**10,387.9052**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2040

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1970	6.8903	16.1185	0.0310		0.0737	0.0737		0.0737	0.0737		2,897.5471	2,897.5471	0.1041		2,900.1503
Total	**1.1970**	**6.8903**	**16.1185**	**0.0310**		**0.0737**	**0.0737**		**0.0737**	**0.0737**		**2,897.5471**	**2,897.5471**	**0.1041**		**2,900.1503**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2119	8.1206	3.1824	0.0284	1.1490	0.0439	1.1928	0.3311	0.0419	0.3730		3,070.4398	3,070.4398	0.1056	0.4486	3,206.7505
Worker	1.6039	0.8839	15.2245	0.0598	10.3903	0.0195	10.4098	2.7557	0.0179	2.7737		6,740.5039	6,740.5039	0.0780	0.1422	6,784.8319
Total	**1.8158**	**9.0045**	**18.4069**	**0.0881**	**11.5393**	**0.0633**	**11.6026**	**3.0868**	**0.0599**	**3.1467**		**9,810.9437**	**9,810.9437**	**0.1836**	**0.5908**	**9,991.5824**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2040

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1970	6.8903	16.1185	0.0310		0.0737	0.0737		0.0737	0.0737	0.0000	2,897.5471	2,897.5471	0.1041		2,900.1503
Total	**1.1970**	**6.8903**	**16.1185**	**0.0310**		**0.0737**	**0.0737**		**0.0737**	**0.0737**	**0.0000**	**2,897.5471**	**2,897.5471**	**0.1041**		**2,900.1503**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2119	8.1206	3.1824	0.0284	1.1490	0.0439	1.1928	0.3311	0.0419	0.3730		3,070.4398	3,070.4398	0.1056	0.4486	3,206.7505
Worker	1.6039	0.8839	15.2245	0.0598	10.3903	0.0195	10.4098	2.7557	0.0179	2.7737		6,740.5039	6,740.5039	0.0780	0.1422	6,784.8319
Total	**1.8158**	**9.0045**	**18.4069**	**0.0881**	**11.5393**	**0.0633**	**11.6026**	**3.0868**	**0.0599**	**3.1467**		**9,810.9437**	**9,810.9437**	**0.1836**	**0.5908**	**9,991.5824**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2040

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0112	3.6566	15.8177	0.0281		0.1164	0.1164		0.1164	0.1164		2,656.5168	2,656.5168	0.0893		2,658.7489
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0112**	**3.6566**	**15.8177**	**0.0281**		**0.1164**	**0.1164**		**0.1164**	**0.1164**		**2,656.5168**	**2,656.5168**	**0.0893**		**2,658.7489**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0229	0.0126	0.2173	8.5000e-004	0.1483	2.8000e-004	0.1486	0.0393	2.6000e-004	0.0396		96.2013	96.2013	1.1100e-003	2.0300e-003	96.8340
Total	**0.0229**	**0.0126**	**0.2173**	**8.5000e-004**	**0.1483**	**2.8000e-004**	**0.1486**	**0.0393**	**2.6000e-004**	**0.0396**		**96.2013**	**96.2013**	**1.1100e-003**	**2.0300e-003**	**96.8340**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2040

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0112	3.6566	15.8177	0.0281		0.1164	0.1164		0.1164	0.1164	0.0000	2,656.5168	2,656.5168	0.0893		2,658.7489
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0112**	**3.6566**	**15.8177**	**0.0281**		**0.1164**	**0.1164**		**0.1164**	**0.1164**	**0.0000**	**2,656.5168**	**2,656.5168**	**0.0893**		**2,658.7489**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0229	0.0126	0.2173	8.5000e-004	0.1483	2.8000e-004	0.1486	0.0393	2.6000e-004	0.0396		96.2013	96.2013	1.1100e-003	2.0300e-003	96.8340
Total	**0.0229**	**0.0126**	**0.2173**	**8.5000e-004**	**0.1483**	**2.8000e-004**	**0.1486**	**0.0393**	**2.6000e-004**	**0.0396**		**96.2013**	**96.2013**	**1.1100e-003**	**2.0300e-003**	**96.8340**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2041

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0112	3.6566	15.8177	0.0281		0.1164	0.1164		0.1164	0.1164		2,656.5168	2,656.5168	0.0893		2,658.7489
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0112**	**3.6566**	**15.8177**	**0.0281**		**0.1164**	**0.1164**		**0.1164**	**0.1164**		**2,656.5168**	**2,656.5168**	**0.0893**		**2,658.7489**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0229	0.0126	0.2173	8.5000e-004	0.1483	2.8000e-004	0.1486	0.0393	2.6000e-004	0.0396		96.2013	96.2013	1.1100e-003	2.0300e-003	96.8340
Total	**0.0229**	**0.0126**	**0.2173**	**8.5000e-004**	**0.1483**	**2.8000e-004**	**0.1486**	**0.0393**	**2.6000e-004**	**0.0396**		**96.2013**	**96.2013**	**1.1100e-003**	**2.0300e-003**	**96.8340**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2041

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0112	3.6566	15.8177	0.0281		0.1164	0.1164		0.1164	0.1164	0.0000	2,656.5168	2,656.5168	0.0893		2,658.7489
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0112**	**3.6566**	**15.8177**	**0.0281**		**0.1164**	**0.1164**		**0.1164**	**0.1164**	**0.0000**	**2,656.5168**	**2,656.5168**	**0.0893**		**2,658.7489**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0229	0.0126	0.2173	8.5000e-004	0.1483	2.8000e-004	0.1486	0.0393	2.6000e-004	0.0396		96.2013	96.2013	1.1100e-003	2.0300e-003	96.8340
Total	**0.0229**	**0.0126**	**0.2173**	**8.5000e-004**	**0.1483**	**2.8000e-004**	**0.1486**	**0.0393**	**2.6000e-004**	**0.0396**		**96.2013**	**96.2013**	**1.1100e-003**	**2.0300e-003**	**96.8340**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2040

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	75.1742					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1149	0.7270	1.7923	2.9700e-003		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003		281.4481	281.4481	9.9000e-003		281.6957
Total	**75.2891**	**0.7270**	**1.7923**	**2.9700e-003**		**7.4300e-003**	**7.4300e-003**		**7.4300e-003**	**7.4300e-003**		**281.4481**	**281.4481**	**9.9000e-003**		**281.6957**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3205	0.1766	3.0420	0.0119	2.0761	3.8900e-003	2.0800	0.5506	3.5800e-003	0.5542		1,346.8181	1,346.8181	0.0156	0.0284	1,355.6753
Total	**0.3205**	**0.1766**	**3.0420**	**0.0119**	**2.0761**	**3.8900e-003**	**2.0800**	**0.5506**	**3.5800e-003**	**0.5542**		**1,346.8181**	**1,346.8181**	**0.0156**	**0.0284**	**1,355.6753**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2040

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	75.1742					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1149	0.7270	1.7923	2.9700e-003		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003	0.0000	281.4481	281.4481	9.9000e-003		281.6957
Total	**75.2891**	**0.7270**	**1.7923**	**2.9700e-003**		**7.4300e-003**	**7.4300e-003**		**7.4300e-003**	**7.4300e-003**	**0.0000**	**281.4481**	**281.4481**	**9.9000e-003**		**281.6957**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3205	0.1766	3.0420	0.0119	2.0761	3.8900e-003	2.0800	0.5506	3.5800e-003	0.5542		1,346.8181	1,346.8181	0.0156	0.0284	1,355.6753
Total	**0.3205**	**0.1766**	**3.0420**	**0.0119**	**2.0761**	**3.8900e-003**	**2.0800**	**0.5506**	**3.5800e-003**	**0.5542**		**1,346.8181**	**1,346.8181**	**0.0156**	**0.0284**	**1,355.6753**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2041

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1149	0.7270	1.7923	2.9700e-003		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003		281.4481	281.4481	9.9000e-003		281.6957
Total	**0.1149**	**0.7270**	**1.7923**	**2.9700e-003**		**7.4300e-003**	**7.4300e-003**		**7.4300e-003**	**7.4300e-003**		**281.4481**	**281.4481**	**9.9000e-003**		**281.6957**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3205	0.1766	3.0420	0.0119	2.0761	3.8900e-003	2.0800	0.5506	3.5800e-003	0.5542		1,346.8181	1,346.8181	0.0156	0.0284	1,355.6753
Total	**0.3205**	**0.1766**	**3.0420**	**0.0119**	**2.0761**	**3.8900e-003**	**2.0800**	**0.5506**	**3.5800e-003**	**0.5542**		**1,346.8181**	**1,346.8181**	**0.0156**	**0.0284**	**1,355.6753**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2041

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1149	0.7270	1.7923	2.9700e-003		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003	0.0000	281.4481	281.4481	9.9000e-003		281.6957
Total	**0.1149**	**0.7270**	**1.7923**	**2.9700e-003**		**7.4300e-003**	**7.4300e-003**		**7.4300e-003**	**7.4300e-003**	**0.0000**	**281.4481**	**281.4481**	**9.9000e-003**		**281.6957**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3205	0.1766	3.0420	0.0119	2.0761	3.8900e-003	2.0800	0.5506	3.5800e-003	0.5542		1,346.8181	1,346.8181	0.0156	0.0284	1,355.6753
Total	**0.3205**	**0.1766**	**3.0420**	**0.0119**	**2.0761**	**3.8900e-003**	**2.0800**	**0.5506**	**3.5800e-003**	**0.5542**		**1,346.8181**	**1,346.8181**	**0.0156**	**0.0284**	**1,355.6753**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2042

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1149	0.7270	1.7923	2.9700e-003		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003		281.4481	281.4481	9.9000e-003		281.6957
Total	**0.1149**	**0.7270**	**1.7923**	**2.9700e-003**		**7.4300e-003**	**7.4300e-003**		**7.4300e-003**	**7.4300e-003**		**281.4481**	**281.4481**	**9.9000e-003**		**281.6957**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3205	0.1766	3.0420	0.0119	2.0761	3.8900e-003	2.0800	0.5506	3.5800e-003	0.5542		1,346.8181	1,346.8181	0.0156	0.0284	1,355.6753
Total	**0.3205**	**0.1766**	**3.0420**	**0.0119**	**2.0761**	**3.8900e-003**	**2.0800**	**0.5506**	**3.5800e-003**	**0.5542**		**1,346.8181**	**1,346.8181**	**0.0156**	**0.0284**	**1,355.6753**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2042

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1149	0.7270	1.7923	2.9700e-003		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003	0.0000	281.4481	281.4481	9.9000e-003		281.6957
Total	**0.1149**	**0.7270**	**1.7923**	**2.9700e-003**		**7.4300e-003**	**7.4300e-003**		**7.4300e-003**	**7.4300e-003**	**0.0000**	**281.4481**	**281.4481**	**9.9000e-003**		**281.6957**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.3205	0.1766	3.0420	0.0119	2.0761	3.8900e-003	2.0800	0.5506	3.5800e-003	0.5542		1,346.8181	1,346.8181	0.0156	0.0284	1,355.6753
Total	**0.3205**	**0.1766**	**3.0420**	**0.0119**	**2.0761**	**3.8900e-003**	**2.0800**	**0.5506**	**3.5800e-003**	**0.5542**		**1,346.8181**	**1,346.8181**	**0.0156**	**0.0284**	**1,355.6753**

4.0 Operational Detail - Mobile

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	8.3769	9.6920	94.1100	0.2091	31.8757	0.1101	31.9857	8.4836	0.1031	8.5867		23,247.0508	23,247.0508	1.1306	0.9238	23,550.5942
Unmitigated	8.3769	9.6920	94.1100	0.2091	31.8757	0.1101	31.9857	8.4836	0.1031	8.5867		23,247.0508	23,247.0508	1.1306	0.9238	23,550.5942

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	200.64	223.44	173.28	915,611	915,611
Apartments Mid Rise	113.40	95.58	79.38	485,275	485,275
Apartments Mid Rise	505.40	425.98	353.78	2,162,770	2,162,770
Government (Civic Center)	25.99	0.00	0.00	49,223	49,223
Office Park	559.84	84.19	37.88	1,836,518	1,836,518
Strip Mall	1,339.20	1,257.36	610.08	5,585,619	5,585,619
Strip Mall	583.20	547.56	265.68	2,432,447	2,432,447
Total	3,327.67	2,634.11	1,520.08	13,467,463	13,467,463

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	23.42	9.01	9.01	35.80	21.00	43.20	86	11	3
Apartments Mid Rise	23.42	9.01	9.01	35.80	21.00	43.20	86	11	3

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	23.42	9.01	9.01	35.80	21.00	43.20	86	11	3
Government (Civic Center)	12.87	10.73	12.48	75.00	20.00	5.00	50	34	16
Office Park	24.95	9.60	6.60	33.00	48.00	19.00	82	15	3
Strip Mall	46.79	18.00	18.00	16.60	64.40	19.00	45	40	15
Strip Mall	46.79	18.00	18.00	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.537981	0.060917	0.197944	0.129503	0.022130	0.006150	0.007595	0.005434	0.000841	0.000325	0.027432	0.000740	0.003008
Apartments Mid Rise	0.537981	0.060917	0.197944	0.129503	0.022130	0.006150	0.007595	0.005434	0.000841	0.000325	0.027432	0.000740	0.003008
Government (Civic Center)	0.537981	0.060917	0.197944	0.129503	0.022130	0.006150	0.007595	0.005434	0.000841	0.000325	0.027432	0.000740	0.003008
Office Park	0.537981	0.060917	0.197944	0.129503	0.022130	0.006150	0.007595	0.005434	0.000841	0.000325	0.027432	0.000740	0.003008
Strip Mall	0.537981	0.060917	0.197944	0.129503	0.022130	0.006150	0.007595	0.005434	0.000841	0.000325	0.027432	0.000740	0.003008

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.5731	5.0543	3.2348	0.0313		0.3960	0.3960		0.3960	0.3960		6,251.9438	6,251.9438	0.1198	0.1146	6,289.0959
NaturalGas Unmitigated	0.5731	5.0543	3.2348	0.0313		0.3960	0.3960		0.3960	0.3960		6,251.9438	6,251.9438	0.1198	0.1146	6,289.0959

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	6163.99	0.0665	0.5681	0.2417	3.6300e-003		0.0459	0.0459		0.0459	0.0459		725.1752	725.1752	0.0139	0.0133	729.4846
Apartments Mid Rise	16579.7	0.1788	1.5279	0.6502	9.7500e-003		0.1235	0.1235		0.1235	0.1235		1,950.5473	1,950.5473	0.0374	0.0358	1,962.1384
Apartments Mid Rise	3720.09	0.0401	0.3428	0.1459	2.1900e-003		0.0277	0.0277		0.0277	0.0277		437.6574	437.6574	8.3900e-003	8.0200e-003	440.2582
Government (Civic Center)	281.392	3.0300e-003	0.0276	0.0232	1.7000e-004		2.1000e-003	2.1000e-003		2.1000e-003	2.1000e-003		33.1049	33.1049	6.3000e-004	6.1000e-004	33.3016
Office Park	24114.1	0.2601	2.3641	1.9859	0.0142		0.1797	0.1797		0.1797	0.1797		2,836.9529	2,836.9529	0.0544	0.0520	2,853.8115
Strip Mall	1589.92	0.0172	0.1559	0.1309	9.4000e-004		0.0119	0.0119		0.0119	0.0119		187.0492	187.0492	3.5900e-003	3.4300e-003	188.1607
Strip Mall	692.384	7.4700e-003	0.0679	0.0570	4.1000e-004		5.1600e-003	5.1600e-003		5.1600e-003	5.1600e-003		81.4569	81.4569	1.5600e-003	1.4900e-003	81.9410
Total		**0.5731**	**5.0543**	**3.2348**	**0.0313**		**0.3960**	**0.3960**		**0.3960**	**0.3960**		**6,251.9438**	**6,251.9438**	**0.1198**	**0.1146**	**6,289.0959**

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	6.16399	0.0665	0.5681	0.2417	3.6300e-003		0.0459	0.0459		0.0459	0.0459		725.1752	725.1752	0.0139	0.0133	729.4846
Apartments Mid Rise	16.5797	0.1788	1.5279	0.6502	9.7500e-003		0.1235	0.1235		0.1235	0.1235		1,950.5473	1,950.5473	0.0374	0.0358	1,962.1384
Apartments Mid Rise	3.72009	0.0401	0.3428	0.1459	2.1900e-003		0.0277	0.0277		0.0277	0.0277		437.6574	437.6574	8.3900e-003	8.0200e-003	440.2582
Government (Civic Center)	0.281392	3.0300e-003	0.0276	0.0232	1.7000e-004		2.1000e-003	2.1000e-003		2.1000e-003	2.1000e-003		33.1049	33.1049	6.3000e-004	6.1000e-004	33.3016
Office Park	24.1141	0.2601	2.3641	1.9859	0.0142		0.1797	0.1797		0.1797	0.1797		2,836.9529	2,836.9529	0.0544	0.0520	2,853.8115
Strip Mall	0.692384	7.4700e-003	0.0679	0.0570	4.1000e-004		5.1600e-003	5.1600e-003		5.1600e-003	5.1600e-003		81.4569	81.4569	1.5600e-003	1.4900e-003	81.9410
Strip Mall	1.58992	0.0172	0.1559	0.1309	9.4000e-004		0.0119	0.0119		0.0119	0.0119		187.0492	187.0492	3.5900e-003	3.4300e-003	188.1607
Total		**0.5731**	**5.0543**	**3.2348**	**0.0313**		**0.3960**	**0.3960**		**0.3960**	**0.3960**		**6,251.9438**	**6,251.9438**	**0.1198**	**0.1146**	**6,289.0959**

6.0 Area Detail

6.1 Mitigation Measures Area

Pismo Beach GP/LCP PEIR - GHG - San Luis Obispo County APCD Air District, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	50.0945	1.0550	91.4179	4.8500e-003		0.5090	0.5090		0.5090	0.5090	0.0000	165.3616	165.3616	0.1577	0.0000	169.3035
Unmitigated	50.0945	1.0550	91.4179	4.8500e-003		0.5090	0.5090		0.5090	0.5090	0.0000	165.3616	165.3616	0.1577	0.0000	169.3035

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.7966					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	40.5588					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.7391	1.0550	91.4179	4.8500e-003		0.5090	0.5090		0.5090	0.5090		165.3616	165.3616	0.1577		169.3035
Total	**50.0945**	**1.0550**	**91.4179**	**4.8500e-003**		**0.5090**	**0.5090**		**0.5090**	**0.5090**	**0.0000**	**165.3616**	**165.3616**	**0.1577**	**0.0000**	**169.3035**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	6.7966					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	40.5588					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.7391	1.0550	91.4179	4.8500e-003		0.5090	0.5090		0.5090	0.5090		165.3616	165.3616	0.1577		169.3035
Total	**50.0945**	**1.0550**	**91.4179**	**4.8500e-003**		**0.5090**	**0.5090**		**0.5090**	**0.5090**	**0.0000**	**165.3616**	**165.3616**	**0.1577**	**0.0000**	**169.3035**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Water Efficient Irrigation System

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix J

Vehicle Miles Traveled (VMT) Memorandum

Memorandum

December 13, 2021

To:	Chris Bersbach, Rincon	Project:	Pismo Beach GPU
From:	Jake Hudson, GHD Kenneth Isenhower Rosanna Southern	Ref/Job No.:	11225678
CC:		File No.:	11225678MEM001.DOCX

Subject: Draft: Pismo Land Use Element Update: Transportation Impact Analysis

1. Introduction

Rincon has retained GHD to assess CEQA Impacts under Senate Bill 743 for the proposed Land Use Element update of the City of Pismo Beach's General Plan. This analysis included assessing the update's consistency with Circulation Element Plan & Policy, Vehicle Miles of Travel, Transportation Safety, Emergency Access, & Induced Travel.

Dudek has prepared the proposed land use assumptions based on the methodology provided in attachment A. These assumptions were developed using a combination of parcel information provided by CoreLogic, an inventory of vacant or underutilized parcels, and potential growth & redevelopment growth based dwelling units per acre and floor to area ratios.

The current land use element was adopted in 2008 and was the basis for the subsequent Circulation element adopted in 2018. The 2008 land use element provided for the growth of 476 residential units and growth of 690 jobs. The proposed land use element update increases that growth to 1,111 residential units and 545 jobs.

2. Significance Thresholds

Based on Appendix G of the CEQA guidelines, impacts are considered significant if implementation of the Land Use Element satisfies any of the following criteria:

A. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities (with the exception of automobile delay & level of service);

B. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b), Criteria for Analyzing Transportation Impacts;

GHD
943 Reserve Drive Roseville California 95678 United States
T +1 916 782 8688 **F** +1 916 782 8689 **W** www.ghd.com

C. Substantially increase hazards due to a design feature (eg. Sharp curves or dangerous intersection) or incompatible uses (e.g. farm equipment); and/or

D. Result in inadequate emergency access.

The City has not yet adopted local Vehicle Miles of Travel Thresholds and associated impact/mitigation policies; therefore, impact criteria is based on California Office of Planning & Research Guidance.

3. Threshold A: Would the Land Use Element Conflict with a Transportation program, plan, ordinance, or policy?

The City's current circulation element was adopted in June of 2018 based on the current Land Use element, adopted in 2008. The city is concurrently preparing a focused update of its Circulation Element, consistent the underlying growth assumptions of the proposed Land Use element. The City also adopted its Bicycle and Pedestrian Master Plan in June of 2010. The primary plan affected by the proposed Land Use Element is the City's Circulation Element.

3.1 Circulation Element Sections 1 & 3

Circulation Element Section 1 summarizes Citywide traffic operations analysis under buildout conditions and provides justification/support for proposed Multimodal Circulation Plan Improvements throughout section 3. As part of the concurrent focused Circulation Element update, planned improvements have been reassessed under the proposed land use assumptions. This was conducted to identify inconsistencies with the Circulation Element and ensure that the City's transportation network can accommodate the increased traffic generation.

3.2 Circulation Element Section 4

Senate Bill 743 replaced level of service as the primary CEQA metric with Vehicle Miles of Travel. However, SB 743 allows local agencies to retain automobile level of service as a local policy threshold outside of CEQA.

Increasing traffic generation is projected to result in deficiencies associated with the City's local level of service thresholds, however new transportation improvements are proposed within the City's Circulation Element to offset those deficiencies. Also, under Senate Bill 743 Automobile Delay and Level of Service are no longer considered impact metrics for determining environmental impacts.

The proposed Land Use Element is consistent with the City's Bicycle & Pedestrian Master Plan. The City is also concurrently preparing a focused update of its Circulation Element, consistent the underlying growth assumptions of the proposed Land Use Element. Therefore, if adopted concurrently, consistency impacts associated with transportation program, plan, ordinance, or policy are less than significant.

4. Threshold B: Vehicle Miles of Travel

Under SB 743, automobile delay, traditionally measured as level of service (LOS), is no longer considered the metric for environmental transportation impacts under the California Environmental Quality Act (CEQA), but rather VMT. VMT measures the number and length of vehicle trips made daily. VMT is a valuable indicator of overall land use and transportation efficiency. The most efficient system minimizes VMT by encouraging shorter vehicle trip lengths, more walking, and biking, or increased carpooling and transit.

4.1 VMT Methodology

The VMT estimates with and without the proposed Land Use Element have been evaluated utilizing the Pismo Beach Travel Demand Model (Pismo Model, 2015). The proposed Element's planning Horizon is 2040, whereas the City's travel demand model's planning horizon is 2035. Although these planning horizons have different theoretical years, they both represent buildout conditions. The Pismo Model was built upon the 2014 San Luis Obispo Council of Governments (SLOCOG) Regional Travel Demand Model, with refinements to the traffic analysis zone structure, roadway network, and land uses. To account for non-boundary-based trip lengths, the model's distance associated with the external gateway cordons was adjusted to reflect distances beyond the model boundaries. The average trip length added to these gateway cordons were determined in the EIR for the Cal Poly San Luis Obispo 2035 Master Plan, Appendix G (2019). The added lengths and gateway cordons are shown in Table 3.1.

Table 3.1 External Gateway Link Distance Added

Location	External Node	Link ID	Distance Added (miles)
Hwy 1 N	1	28442	75
US 101 N (A)	2	28443	40
US 101 N (B)	3	28455	40
Hwy 41 N	4	28445	75
Hwy 46 E	5	28447	50
Hwy 58 E	6	28449	50
Hwy 166 E	7	28451	60
Hwy 33 S	8	28450	60
US 101 S (A)	9	28452	2
US 101 S (B)	9	28453	2
Hwy 1 S	10	28454	10

Notes:
1. Distance added to external Node and corresponding link ID to capture VMT outside of the SLOCOG County boundary.

For the VMT analysis with the proposed Plan, a model scenario was created that modified the Pismo Model forecast land use data to include the proposed General Plan buildout development. The VMT analysis consists of both (1) evaluating net change in total VMT and (2) the change in VMT efficiency metrics for the region. The net change in total VMT Countywide has been evaluated for the proposed Land Use Element against the baseline or "Existing" conditions and the "current General Plan" forecast scenario.

A trip-based VMT assessment was conducted for the model area (County) to estimate the total VMT for each scenario. The trip-based methodology is quantified by the length of the vehicle trips that start or end within the region and does not include VMT associated with vehicles that pass through the region. Project impacts on transportation are determined based on an increase in total VMT with the proposed plan. This methodology is consistent with the Office of Planning and Research's Technical Advisory on Evaluating

Transportation Impacts in CEQA (OPR Technical Advisory, December 2018) and CEQA Guidelines. The list below describes the scenarios analyzed.

- "2010 Base Year" scenario represents existing land uses and existing transportation network
- "2035 Current GP" scenario represents the current General Plan Buildout
- "2035 Proposed GPU" scenario represents the proposed General Plan Buildout (Update)

Regional VMT efficiency metrics have also been analyzed as part of this analysis. The change in Residential VMT per capita and Work VMT per employee have been calculated countywide utilizing the Pismo Model, as previously described. For Residential VMT, all home-based automobile trips were selected for evaluation. For Work VMT, all home-based-work automobile trips were selected for evaluation. The population and employment metrics utilized to calculate residential VMT per capita and work VMT per employee were based on the model's inputs for each scenario.

4.2 VMT Analysis Results

Table 3.2 presents the summary of the net change in total VMT results.

Table 3.2 Total VMT Results Summary

Model Scenario	Net VMT
2010 Base Year	11,226,484
Buildout Current GPU	13,311,157
Buildout Proposed GPU	13,476,666
Difference from 2035	**+ 165,510**
Difference from 2010	**+ 2,250,182**

The VMT results show a net increase in VMT and therefore the proposed land use plan would create a significant and unavoidable impact on transportation.

Table 3.3 presents the Residential VMT per capita results comparing the proposed Plan against the 2010 base year and current General Plan forecast. Table 3.4 present the Work VMT per employee results comparing the proposed Plan against the 2010 base year and current General Plan forecast.

Table 3.3 Residential VMT Results Summary

Pismo Model Scenario	Residential VMT	Residential Trips	Population	Residential VMT per Capita	Average Trip Distance
2010	7,420,936	717,564	255,085	29.09	10.34
2035	8,684,684	861,337	282,559	30.74	10.08
2035 GPU	8,694,346	860,802	283,671	30.65	10.10
Difference from 2035	9,662	(535)	1,112	-0.28%	0.17%
Difference from 2010	1,273,410	143,237	28,586	5.35%	-2.34%

Table 3.4 Work VMT Results Summary

Pismo Model Scenario	Work VMT	Work Trips	Employment	Work VMT per Employee	Average Trip Distance
2010	2,046,641	177,372	92,732	22.07	11.54
2035	2,260,727	197,741	113,867	19.85	11.43
2035 GPU	2,293,885	199,498	112,982	20.30	11.50
Difference from 2035	33,158	1,757	(885)	2.26%	0.57%
Difference from 2010	247,244	22,126	20,250	-8.01%	-0.35%

As shown in Table 3.3, the regional Residential VMT per capita is estimated to decrease by 0.28% with the proposed land uses. As shown in Table 3.4, the regional Work (commute) VMT per employee is estimated to increase by 2.26% with the proposed land uses. Although there are more residents and jobs within Pismo Beach, the model estimates a resulting higher VMT for the work trip purpose.

4.3 Thresholds C & D Induced Travel

The proposed Land Use Element Update proposes no changes to transportation facilities and therefore can be assumed to have a less than significant travel-inducing effect.

The proposed Land Use element is forecasted to increase Net VMT, Residential VMT per Capita, & Work VMT per Employee. These increases exceed thresholds established by the State Office of Planning & Research Guidance as well as the Caltrans Transportation Impact Study Guide. Therefore, this increase is considered a significant an unavoidable transportation impact.

5. Transportation Safety & Emergency Access

In 2020 the City of Pismo prepared a Citywide Systemic Traffic Safety Analysis & Local Roadway Safety Plan. This analysis & plan found that the number of annual traffic collisions remained relatively static from 2014 to 2018. The highest collision concentrations were within the Downtown core, and the primary contributing factor was visibility for vehicles turning from side streets and two-way stop-controlled intersections.

Planned land use growth is expected to occur primarily on vacant or underutilized sites, mainly located in the Downtown core and the U.S. 101 corridor in Shell Beach. Although this coincides with the City's highest collision concentrations, the primary factors associated with those concentrations are roadway geometrics, not incompatible land use patterns. Although more growth is planned as part of the proposed update, overall land use designations are essentially unchanged and have proven not to be incompatible uses in the context of vehicle types.

The proposed Land Use element does not change to the City's roadway network and therefore would not increase hazards due to geometric design features or affect overall Emergency Access. Therefore, the impacts to Transportation Safety & Emergency Access are considered less than significant.

ATTACHMENT A

DUDEK LAND USE PROJECTION METHODOLOGY AND ASSUMPTIONS

Pismo General Plan/Local Coastal Plan: Methodology for Determining Projected Development at Full Build Out

Used to create the LU-4 Table in the Land Use Element

1. Urban Footprint Base Canvas Assumptions

Urban Footprint's Base Canvas constitutes a baseline assessment of existing land use, demographic characteristics, and other conditions in the City, providing the context for scenario planning and the foundation for analysis of alternative scenarios. The default source for parcel information in Urban Footprint is CoreLogic, which is a leading provider of real estate data in the United States.

2. Determination of Land Uses for Inclusion

This buildout compares existing on-the-ground Base Canvas development to the buildout potential of four General Plan land use categories in the City where change is anticipated, including Commercial, Central Commercial, High Density Residential, Mixed Use, and Public/Semi-Public land uses. Only vacant and underutilized parcels within these designations were selected for potential growth.

3. Creation of Future Assumptions

When generating assumptions for the four land uses, Dudek first looked at the stated requirements or maximums for residential dwelling units per acre (du/ac), floor area ratio (FAR), height, and parking where possible. For each land use, employment and density limits were determined by matching them closely to the average employment and du/ac of current developed parcels within each land use category. An example formula to calculate commercial employment density can be seen below.

$$Current\ Commercial\ Employment\ Density = \left(\frac{Total\ Commercial\ Zoned\ Jobs - Underutilized\ Commercial\ Zoned\ Jobs}{Total\ Commercial\ Zoned\ Acres - Underutilized\ Commercial\ Zoned\ Acres}\right)$$

Future assumptions for each land use were built in Urban Footprint using combinations of building components which created numbers closest to the determined employment and residential densities, and that worked to be within FAR, height, and parking requirements. Previous limitations within Urban Footprint required us to match Pismo's land use designations to prescribed building typologies in Urban Footprint, and adjusting them to match as closely as possible with Pismo's land use requirements and growth expectations.

Current standards per the Land Use Element Update and Future Assumptions used in the build out model can be seen for each of the included land uses below.

Current Land Use Density/Intensity Standards

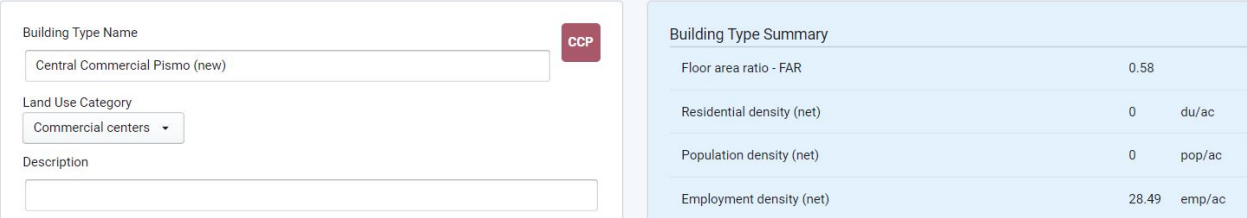
Land Use Designations	FAR or Density *Coastal Zone/Non-Coastal Zone*	Height** *Coastal Zone*	Implementing Zone(s)	Total Acreage
Low-Density Residential	1 to 8 units per ac.	25 feet	R-1, R-R	76.5
Medium-Density Residential	9 to 15 units per ac.	25 - 35 feet	R-2, R-R	247.5
High-Density Residential	16 to 30 units per ac.	25 feet	R-3, R-R	22.2
Very High-Density Residential Overlay	20 to 50 units per ac.	35 – 45 feet***	R-3	1.1
Mobile Home Park	Maximum 8 units to the acre		M-H	58.5
Commercial	Maximum FAR of 2.0	25 - 42 feet	R-4, R-R, C-R, C-1, C-2, C-M	32.5
Resort Commercial	Maximum FAR of 1.25	35 feet	RR, R-4, and CR	73.9
Central Commercial	Maximum FAR of 1.25	35 feet	R-4, R-R, MU	66.4
Mixed-Use	Residential 1.25 maximum Commercial uses: 2.0 maximum	Determined by overlay zone	C-1, C-2, MU	57.2
Industrial	Maximum FAR of 0.5	25 feet	C-M	30.2
Public/Semi Public	Maximum FAR of 2.0	25 feet	G	468.38
Open Space	N/A	15 feet*	OS-1, OS-R	32.21

* Consistency with the View Consideration Overlay Zone must be determined for applicable properties

** Coastal height limits are provided to ensure that the scenic and visual qualities of coastal areas are considered and protected consistent with Coastal Act Section 30251.

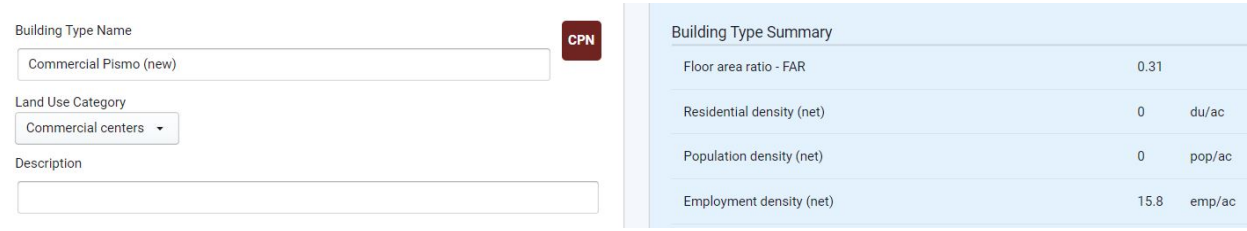
*** Buildings may be up to forty-five (45) feet in height where the Planning Commission finds that significant public views to and along the coast and other scenic areas are protected.

Central Commercial Assumptions



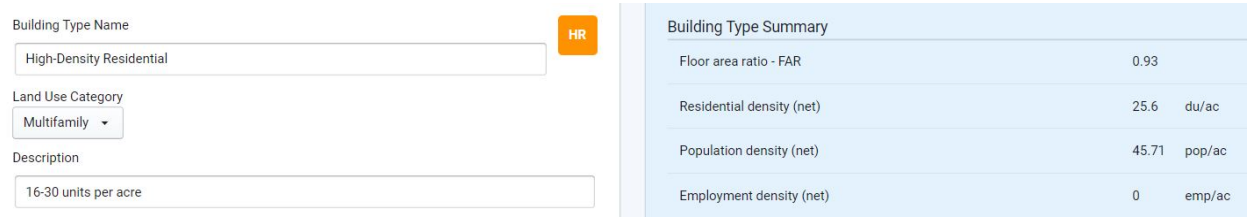
The Central Commercial land use had a maximum FAR of 1.25, and a maximum height of 35 feet. In looking at the currently built out Central Commercial sites, an FAR of 0.58 was determined to be more in line with what Pismo is likely to see built out, with an employment density of 28.49 employees per acre.

Commercial Assumptions



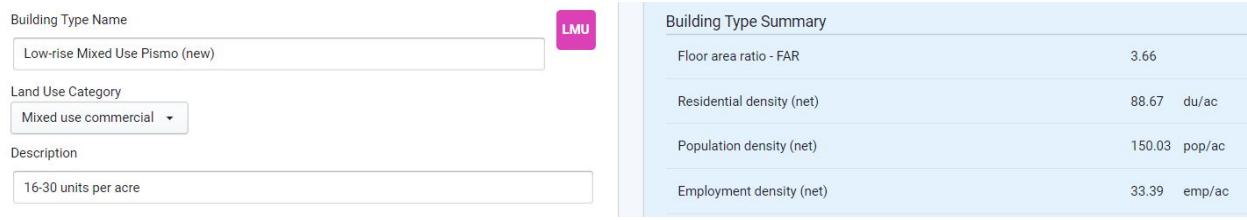
The Commercial land use had a maximum FAR of 2.0, with maximum heights between 25 and 42. Due to the parking required and often offered at commercial sites and in looking at previously built out Commercial sites, an FAR of 0.31 was determined to be more in line with what Pismo is likely to see built out, with an employment density of 15.8 employees per acre.

High-Density Residential Assumptions



The High-Density Residential land use had an allowable range of 16-30 du/ac and a maximum height of 25 feet. Within the model, 25.6 du/ac were allotted for this land use.

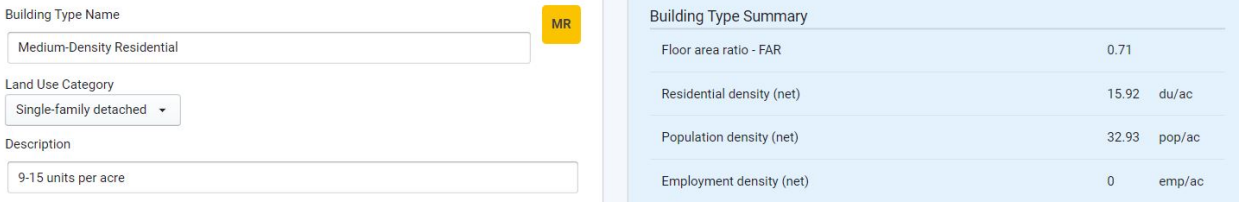
Mixed-Use Assumptions



The Mixed-Use land use had a maximum FAR of 1.25 for residential and 2.0 for commercial. Height maximums varied based on the overlay zoning. The model's FAR for mixed use is shown to be 3.66, far higher than what is allowed by these regulations. Heights were pre-set within the model and its

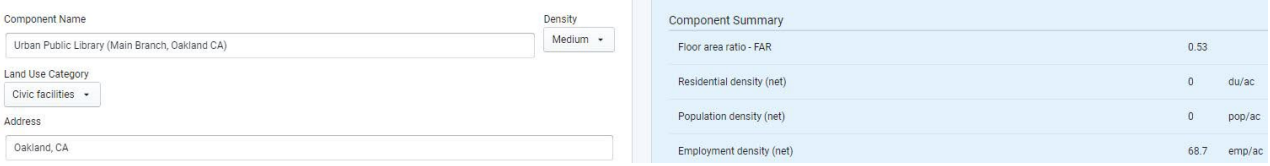
components, so to balance this in the model and create a zoning which is within the FAR requirements, vacant space was added to this mixed use zone. This is the equivalent of reducing the building height, and in turn the FAR, because by removing buildable space building volume is reduced to meet standards.

Medium-Density Residential Assumptions



The Medium-Density Residential land use had an allowed range of 9-15 dwelling units per acre, and a maximum height of 25-35 feet. The closest building type in the model to these requirements slightly overshoots these requirements, coming in at 15.92 dwelling units per acre and leading to 32.93 people per acre. Sites that this assumption applied to were only those that are currently vacant (32 sites), as those were decided to be the only parcels in this land use designation that would experience growth. The slightly increased density is offset by the reduced density in the High-Density Residential designation.

Public/Semi-Public Assumptions



The Public/Semi-Public land use has a maximum FAR or 2.0, and a maximum height of 25 feet. The closest building type in the model to these requirements is a modified public library, coming in at a 0.53 FAR and 68.7 employees per acre. Only one site was identified for build out.

4. Application of Future Assumptions

Future assumptions were applied to all underutilized and vacant parcels. For the Medium-Density Residential land use, as described above, only vacant parcels had future assumptions applied to them. The result of this was a "built out" Pismo Beach. Numbers generated and recorded include increases in population, DU, jobs, and non-residential square footage from 2020 to 2040. These increases can be seen on the table below.

Land Use	Number of Vacant or Underutilized Parcels	Potential Increase in Population	Potential Increase in Dwelling Units	Potential Increase in Jobs
Commercial	42	N/A	N/A	242
Central Commercial	26	N/A	N/A	33

Land Use	Number of Vacant or Underutilized Parcels	Potential Increase in Population	Potential Increase in Dwelling Units	Potential Increase in Jobs
High Density Residential	139	289	162	-12
Mixed Use	48	1,221	722	272
Medium Density Residential	32	471	228	0
Public/Semi-Public	1	-2	-1	10
Total	**288**	**1,979**	**1,111**	**545**

5. Comparison to SLOCOG Predictions

To compare to SLOCOG employment and dwelling unit predictions, growth per year ratios were utilized. SLOCOG's predictions are from 2015 to 2030, or a 15 year range. Dudek's predictions are from 2020 to 2040, a 20 year range. Build outs and assumptions were altered to create predictions closer to SLOCOG's predicted growth, while staying within the land use requirements.

The discrepancies between growth predictions can be seen on the table below.

Growth Comparisons		
	Increase in DU	Increase in Jobs
Dudek Growth Per Year	55.5	25.8
SLOCOG Growth Per Year	47.7	27.4

Dudek's current methodology assumes a 100% build out for the identified underutilized and vacant parcels.

Appendix K

Citywide Transportation Model and Circulation Study

City of Pismo Beach

Citywide Transportation Model and Circulation Study



FINAL REPORT

August 23, 2016

Hatch Mott MacDonald

1300 First Street, Suite B
Gilroy, CA 95020

T: 408.848.5912 | F: 408.848.2202
www.hatchmott.com


Hatch Mott
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1. Introduction

Pismo Beach is a coastal city in southern San Luis Obispo County, within the "Five Cities" region south of the City of San Luis Obispo. Its population has remained at about 8,000 people since the 1980's. This is due to the limited expansion that is possible given its geographic location between the Pacific Ocean and the steep coastal mountains. Also during this time, the city has realized an increase in vacation home ownership and a reduction in resident occupied homes. Pismo Creek flows through Price Canyon, which forms a natural barrier between the downtown and the southern part of the city. A rail line – owned by Union Pacific Railroad – also follows Price Canyon and serves as an additional barrier. US 101 provides the only roadway connection across these barriers, although other routes exist outside of Pismo Beach (such as State Route 1 and West Grand Avenue, to the south). **Exhibit 1 (Page 2)** depicts the location of Pismo Beach in the southern portion of San Luis Obispo County.

The city experiences an inundation of traffic during the summer months, especially in its downtown, as well as on weekends, special events and holidays. This is due to the attractive unique small businesses and a classic California coastal city culture, as well as its beachfront and pier, located adjacent to its downtown. Pismo State Beach, in Grover Beach, is the only beach in California that allows vehicles to drive on its sand dunes, attracting thousands of visitors each year.

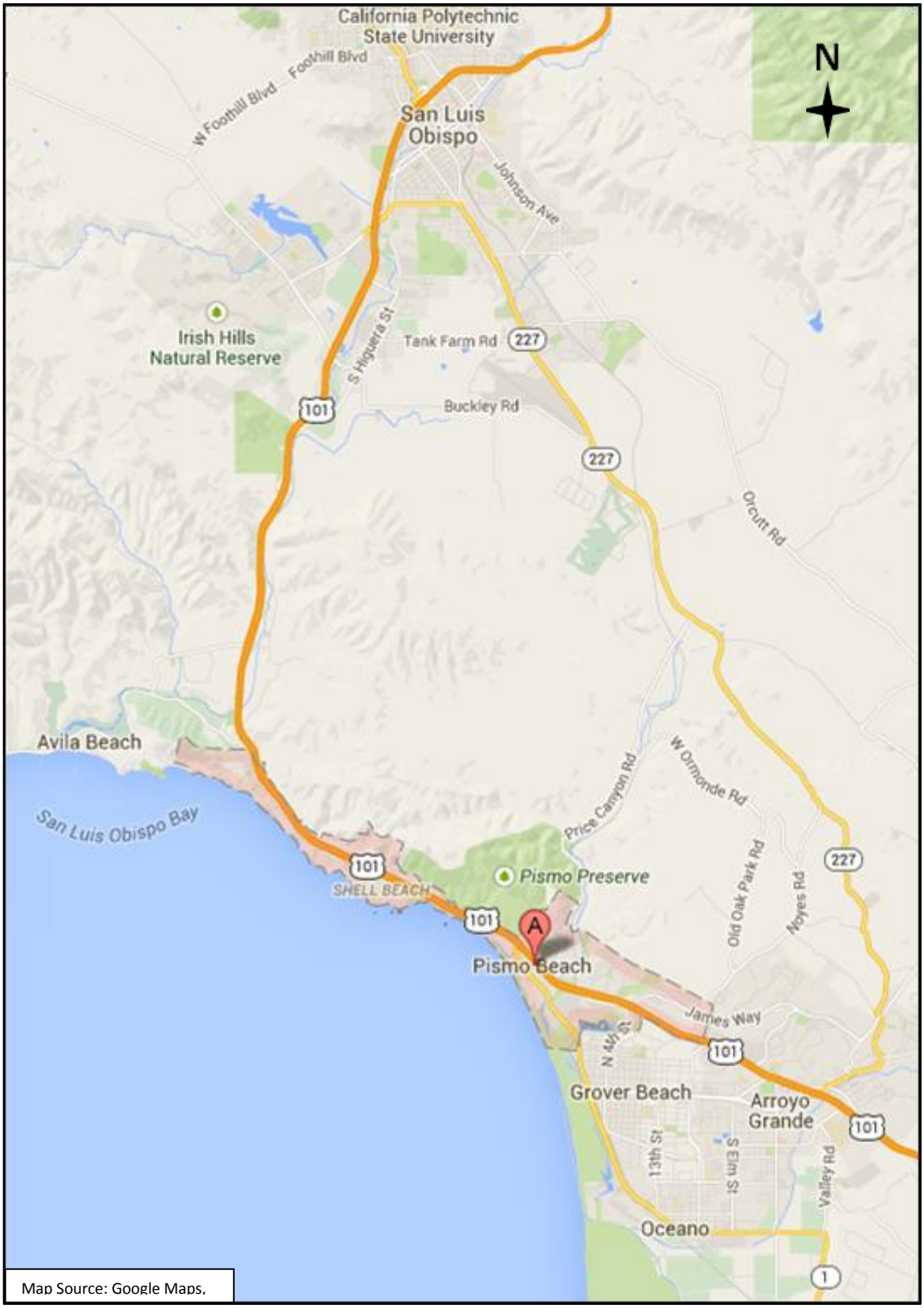
Special events occur frequently in Downtown Pismo Beach throughout the year, including the annual downtown Jazz Festival, The Classic at Pismo Beach Car Show in June, Fourth of July celebrations, and the Clam Festival in October, which attract tens of thousands of visitors per event from across the country. In May 2014 and 2015, the Amgen Tour of California bicycle race started or ended in Downtown Pismo Beach, attracting thousands of visitors and temporarily closing some of the city street network.

A. Background

Pismo Beach is facing a number of major policy and program decisions that will guide the quality of life, economic vitality, and overall future character of the community, with its transportation system being one key factor. It has updated elements of its General Plan and an update to the Circulation Element is anticipated. The General Plan was last updated in 1992. Much has changed since 1992, including major retail and hotel development along Five Cities Drive, residential and retail development on James Way and residential development along Mattie Road. In addition to land use changes within Pismo Beach, substantial development has occurred throughout the Five Cities Area as well as southern San Luis Obispo and northern Santa Barbara Counties.

Other important changes have taken place in our society's overall approach to providing transportation services for our communities. There is now more emphasis on providing a safer, healthier, friendlier environment for pedestrians and bicyclists. Transit is being enhanced to provide an alternative to automobiles. The interrelationship between land use and transportation in terms of energy consumption and environmental impacts is now officially recognized at the State level, most notably with the passage of Senate Bill 375. In response, the San Luis Obispo Council of Governments (SLOCOG) recently adopted a Sustainable Communities Strategy (SCS) as a part of the Regional Transportation Plan. This further encourages the development of transportation modes other than single occupant vehicles as well as compatible land use patterns.

Exhibit 1 – Regional Setting of Greater Pismo Beach Area



Despite these changes, the population of Pismo Beach itself has remained relatively constant over the past several decades. The 2000 United States Census reported a population of approximately 8,600 people, while the 2010 United States Census reported a population of about 7,700 people. Much of the traffic growth on regional routes through Pismo Beach has been due to through traffic, not only from other Five Cities communities like Grover Beach, Oceano and Arroyo Grande, but also regional travel between Santa Barbara and San Luis Obispo Counties and statewide travel between Northern and Southern California. US 101 is the only alternate route to Interstate 5 and Highway 99 for traffic between northern and southern California. This is illustrated by **Exhibits 2 through 5 (Pages 4-5),** which depict the traffic growth on Dolliver Street (State Route 1, or SR 1) and US 101 between 1980 and 2013, according to Caltrans counts. While traffic has been relatively stable on Dolliver Street (SR 1) over the past 20-plus years, growth on US 101 has been substantial. Traffic volumes on US 101 in the Pismo Beach area are noticeably higher than normal when incidents occur on Interstate 5 such as major accidents or road closures from construction or weather (San Joaquin Valley fog or snow on the Grapevine).

SLOCOG has a regional transportation model that forecasts traffic growth in all of San Luis Obispo County. SLOCOG also recently completed the U.S. 101 Corridor Mobility Study, which evaluates the need for U.S. 101 corridor improvements in San Luis Obispo County, including in Pismo Beach. The City has determined that specific circulation issues and alternatives should be evaluated, building on the SLOCOG model and the U.S. 101 Corridor Mobility Study. Therefore, the City has commissioned the preparation of this Citywide Multimodal Transportation Model, which encompasses the City's current City limits and its Sphere of Influence (SOI). It also includes a Citywide Circulation Study that incorporates community input through a public outreach program and exploration of complete streets transportation improvements to meet the needs of the community.

The City has been actively and continuously engaging the community in recent years to address multimodal transportation issues. Public comment, concerns and recommendations have been well documented and helped guide the preparation of the Shell Beach Road Streetscape Plan (Phase I) and *Pismo Beach Complete Street Plan*, the *Bicycle and Pedestrian Master Plan*, and most recently the *Pismo Beach Downtown Strategic Plan*. This Citywide Multimodal Transportation Model and Circulation Study incorporates these local plans, programs, and projects, as well as regional transportation policies to address circulation and mobility in Pismo Beach. The Plan focuses on automobile, transit, bicycle, and pedestrian mobility in an effort to reduce congestion, vehicle miles traveled and associated emissions, meet diverse socioeconomic and mobility needs, and to advance public health, quality-of-life, and economic prosperity.

Exhibit 2 – Historical Growth on Dolliver Street (SR 1) at Pismo Creek

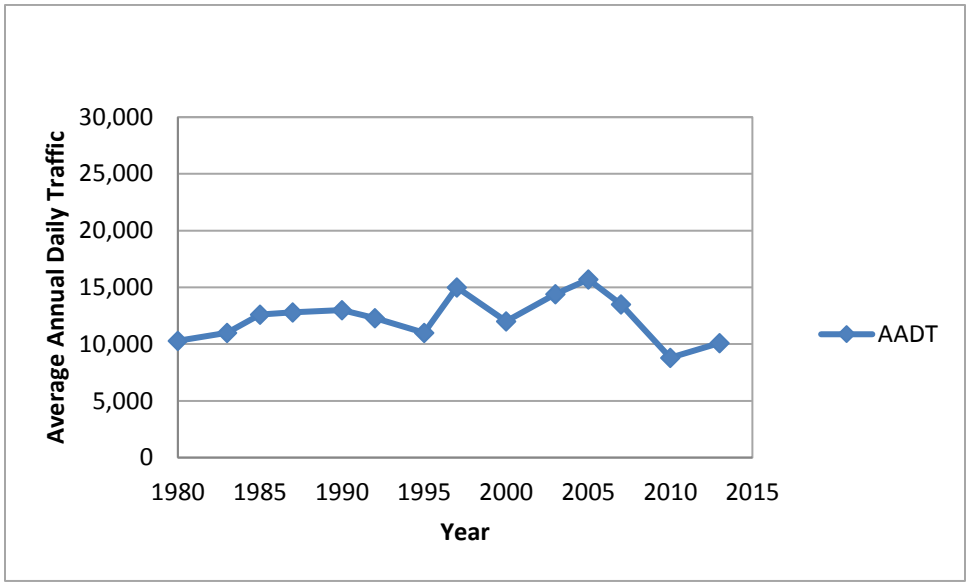


Exhibit 3 – Historical Growth on Dolliver Street (SR 1) at US 101

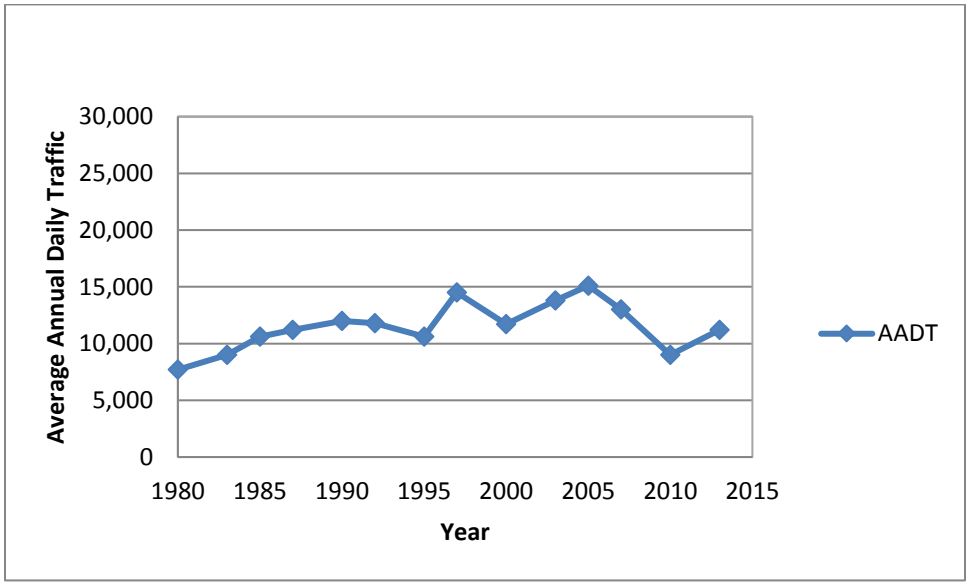


Exhibit 4 – Historical Growth on US 101 at Pismo Creek

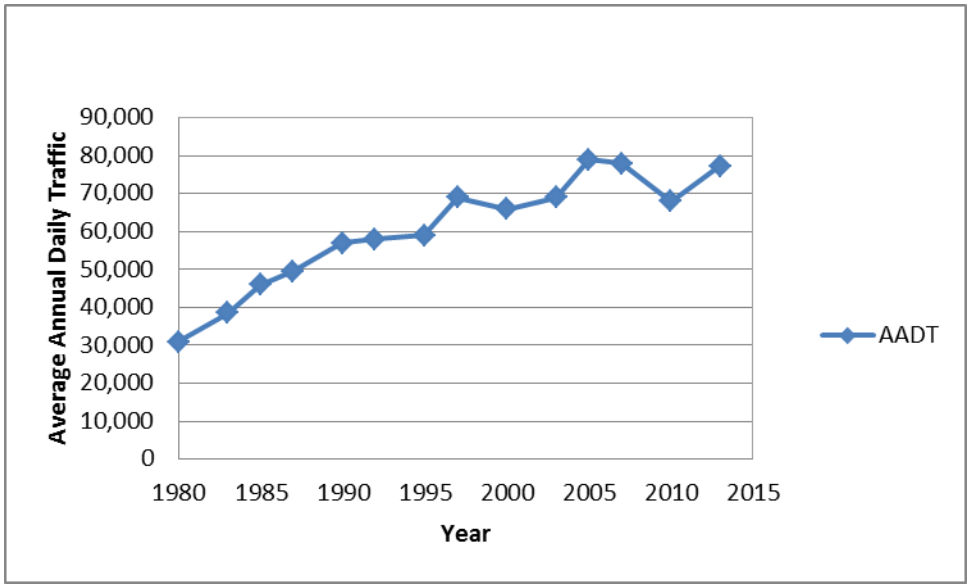
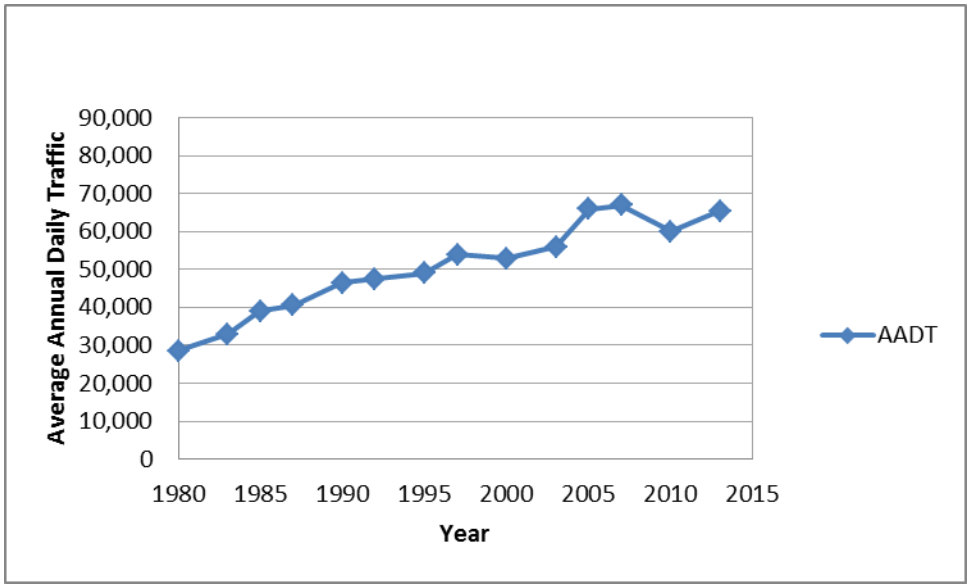


Exhibit 5 – Historical Growth on US 101 North of Price Street



Data Source (**Exhibits 2 through 5**): Caltrans traffic counts, 1980 through 2013.

B. Specific Transportation Issues Facing Pismo Beach

The City of Pismo Beach has a range of specific transportation goals that are addressed in this study. Several of them are listed below.

- **Identify major transportation improvement projects.** The 1992 General Plan identified a number of major street improvements that will be needed as the City approaches the buildout of the land uses anticipated at the time of that update. These include widening US 101 and Price Canyon Road, US 101 frontage roads to connect the downtown area with Five Cities Drive and/or James Way, various interchange improvements and other street extensions. A variety of studies have been prepared over the years to identify improvements along US 101. These are referred to throughout this document with regard to their relation with current and future travel demand.
- **Provide a safe, efficient system for pedestrians and bicyclists.** Pismo Beach has also been on the leading edge of multi-modal transportation planning, evidenced by the recently adopted *Pismo Beach Complete Street Plan,* March 2014, the *Bicycle and Pedestrian Master Plan,* June 15, 2010 and the *City of Pismo Beach Bikeshare Feasibility Study*, August 25, 2014 (http://pismobikeshare.com). Summaries are provided of these studies in Section 2.B - Existing Conditions – Pedestrian and Bicycle Circulation (page 8).
- **Promote transit usage by providing better connectivity with existing and proposed transit facilities as well as transit oriented development**. The *South County Transit Plan, San Luis Obispo County Highway 101 Bus Rapid Transit Applications Study, June 2013*, and *SLOCOG 2013 Park & Ride Lot Study, August 2013*are referenced herein.
- **Analyze traffic impacts of land use alternatives.** The November 2014 election included the *City of Pismo Beach Planning Area R Development Standards General Plan Amendment - Measure H*, which was approved by Pismo Beach voters in November 2014. Measure H amended the General Plan to limit development on 1,100 acres in Price Canyon area if annexed into the City. The initiative designates the land with "watershed and resource management" zoning, a new category that will be in effect for at least the next 30 years. Land with this zoning restricts parcels to a minimum of 40 acres in size, which yields a maximum of two residential units for this development area. The measure precludes development projects such the Spanish Springs project, which was proposed to consist of hundreds of homes, a hotel, conference center and a nine-hole golf course. With the reduction in development potential in and near Price Canyon, future development in Pismo Beach will be comprised primarily of infill and redevelopment projects within the existing city limits.
- **Develop strategies and improvements to enhance access to the Downtown and Pier area.** Several substantial development projects are in various stages of implementation in the downtown and pier area. One of the challenges will be to reduce the congestion that already occurs in the peak season while providing more convenient access and parking. The *Pismo Beach Downtown Strategic Plan* provided a valuable start on this effort.

2. Existing Conditions

A. Roadway Network

As indicated on **Exhibit 1 (Page 2)**, Pismo Beach is located in the southern coastal area of San Luis Obispo County. It is a part of the "Five Cities" region, comprised of Pismo Beach, Arroyo Grande, Grover Beach, Shell Beach and Oceano. It is located approximately 10 miles south of the City of San Luis Obispo.

US 101 is the backbone for travel to and from the Five Cities region. It also serves as an important route for regional and state-wide travel. It is a four-lane freeway through most of Pismo Beach, with auxiliary (weaving lanes) and truck climbing lanes in specific locations. Interchanges along US 101 in Pismo Beach include Spyglass Drive, Mattie Road (northbound on ramp and off ramp only), Price Street north of downtown (southbound off ramp only), State Route (SR) 1 (southbound off ramp only), Wadsworth Avenue (northbound off ramp only), Hinds Avenue – Price Canyon Road (southbound off ramp only), Price Street south of downtown (northbound off ramp and southbound on ramp only), Five Cities Drive (southbound off ramp and on ramp only), Fourth Street and Oak Park Boulevard. Other routes that provide access into and out of the region include SR 1, Price Canyon Road, Noyes Road, and State Route 227.

Within Pismo Beach, there are many arterial and collector roadways that provide local and regional circulation routes. These include Price Street, Shell Beach Road, Mattie Road, Dolliver Street (SR 1), Wadsworth Avenue, Pomeroy Avenue, Hinds Avenue, Fourth Street, James Way, Five Cities Drive and Oak Park Boulevard.

The directional designation of the majority of streets in this study is based upon their orientation, i.e., "north-south" streets are roadways that generally travel in a general north-south alignment. However, exceptions include many streets in downtown, where Price, Dolliver (SR 1), and Cypress Streets are designated north-south streets and their cross streets (e.g. Pomeroy Avenue, Hinds Avenue) are designated as east-west streets.

B. Pedestrian and Bicycle Circulation

The climate and topography of Pismo Beach provide an attractive environment for bicycling, walking, and recreational trail use within the City. The primarily level terrain in the downtown area, extending along the Pacific Ocean, combined with its abundant sunshine, low levels of precipitation, and increasingly dense land use pattern, help make bicycling and walking viable transportation and recreational options year-round. The City has made bicycle and pedestrian mobility a priority with adoption of the following plans related to multimodal circulation access and enhancement:

Pismo Beach General Plan and Local Coastal Plan (Adopted 1992/Updated 2014)

The currently adopted *City of Pismo Beach General Plan/Local Coastal Program* (City of Pismo Beach, 1992) was originally developed in 1992 and certified in 1993 by the California Coastal Commission. It was most recently updated in April, 2014; however, no changes were made to the Circulation Element at that time. The *General Plan* guides growth, development, and infrastructure in Pismo Beach and contains elements that address: land use, housing, growth management, transportation and circulation, conservation, design, public facilities and services, parks and recreation, noise and safety. The *City's Bicycle and Pedestrian Master Plan* is intended to serve as the bicycle, pedestrian, and trails component of the *General Plan*.

Pismo Beach Bicycle and Pedestrian Master Plan (2010)

According to the California Streets and Highways Code, Sections 891.2 and 891.4, local agencies must complete a Bicycle Transportation Plan to qualify for Bicycle Transportation Account (BTA) grant funds issued by the California Department of Transportation Division of Local Assistance. Conforming plans must contain required Bicycle Transportation Plan elements and be no more than five years old. The City of Pismo Beach developed the Bicycle and Pedestrian Master Plan in 2010 and updated it in 2015. This plan establishes goals, policies, implementation actions, and priorities for the development of bicycling and walking facilities in Pismo Beach, as envisioned by the General Plan. Key elements of the plan include maps of existing and proposed bicycle facilities and their proximity to major activity centers. The implementation plan identifies project priorities, locations, improvement descriptions, facility types, and cost estimates. The plan will guide development of the proposed improvements. Recommendations from this Plan are summarized in Section 4.A – Recommendations - Pedestrian and Bicycle.

Pismo Beach Complete Street Plan (2013)

The "Complete Street" Plan provides design concepts, goals and a framework for enhancing Pismo Beach's street network. The plan area extends approximately five miles through the City from its northern boundary to the City of Grover Beach, and includes Shell Beach Road, Price Street and Dolliver Street (Pacific Coast Highway). The plan directs improvements along this major north-south corridor with the goal of increasing the frequency of bicycle and pedestrian use by enhancing the corridor's safety, comfort, connectivity and attractiveness.

Pismo Beach Downtown Strategic Plan (2014)

The City of Pismo Beach prepared the Downtown Strategic Plan as a visioning and guidance tool, developed to help shape future development in the City's downtown. It incorporates adopted transportation infrastructure and mobility strategies from the General Plan, Bicycle and Pedestrian Master Plan, and the Complete Street Plan. The Downtown Strategic Plan includes suggestions ideas such as a roundabout at the Price Street/Dolliver Street intersection and new bike facilities on Dolliver Street. It also builds on the Complete Street Plan by providing additional pedestrian, bicycle, transit, vehicular, and parking opportunities.

City of Pismo Beach Bikeshare Feasibility Study (2014)

The Downtown Strategic Plan noted that a bicycle sharing program – where the public can freely use a city-provided bicycle – may be worth pursuing within the downtown area. A feasibility study was subsequently prepared that determined that a bicycle sharing program is feasible, and identified locations in the downtown area that the shared bicycles can be stored. The website http://pismobikeshare.com was also created to educate citizens and tourists about the concept of bike sharing. The City anticipates that a bike sharing program may be operational by 2019.

US 101 Corridor Mobility Master Plan (2014)

The San Luis Obispo Council of Governments (SLOCOG) sponsored the preparation of the US 101 Mobility Master Plan in partnership with the City of Pismo Beach and other municipalities and agencies in San Luis Obispo County. The purpose was to develop a unified transportation and mobility vision for the US 101 corridor throughout the entire County. The plan contains data and transportation improvement recommendations along US 101 through the City of Pismo Beach; including evaluating opportunities to enhance bicycle and pedestrian connectivity and safety, alleviate traffic in Pismo Beach and improve transit and roadway connectivity. Recommendations from this study that are related to Pismo Beach are included in Section 3.F – Regional Highway Improvements.

Statewide Initiatives and Legislation

Bicycle and pedestrian planning in the City must strive to be consistent with statewide programs governing the implementation of bicycle and pedestrian transportation facilities. These include:

- *Assembly Bill 32 (2006) and Senate Bill 375 (2008)*
  Senate Bill 375 (SB 375) (Steinberg, 2008) is the implementation legislation for *Assembly Bill 32* (AB 32) (Nunez and Pavley, 2006). AB 32 requires the reduction of greenhouse gases (GHG) by 28 percent by the year 2020 and by 50 percent by the year 2050. Reducing automobile trips is one method of reducing GHG emissions. This may be achieved by promoting modes other than the automobile, such as walking, bicycling, or riding transit. Land use strategies that create less auto-dependent development is also encouraged.
- *Assembly Bill 1358 (2007)*
  Assembly Bill 1358 (Leno and Levine, 2007) is the Complete Streets Act. It calls for the inclusion of all modes of transportation (pedestrian, bicycles, transit, and automobile) into the design of roadways.
- *Assembly Bill 1581 (2012)*
  Assembly Bill 1581 (Wieckowski and Wolk, 2012) requires that new actuated traffic signals or modified existing traffic signals include technology that is able to detect bicycles and motorcycles. It also calls for the timing of actuated traffic signals to account for bicycles.
- *Caltrans Deputy Directive 64 (Revision 1) DD-64-R1 (2008)*
  Deputy Directive 64-R1 (DD-64-R1) (Caltrans, 2008) was issued to ensure that travelers of all ages and modes may move "safely and efficiently along and across a network of 'complete streets'." The directive establishes responsibilities for Caltrans staff to safely accommodate bicyclists, pedestrians, and transit users.

C. Pedestrian Facilities

Walkability is an important component of every city. Common pedestrian facilities include sidewalks, marked crosswalks, and curb ramps. There are several different types of crosswalk enhancements that aim to improve safety for pedestrians. **Exhibit 6 (Page 11)** provides the locations of pedestrian facilities within the Pismo Beach Area.

SIDEWALKS AND CURB RAMPS

Sidewalks typically are at least 4 feet of width in most non-commercial areas throughout the City. Sidewalks are typically 9 to 10 feet wide in the downtown and 6 feet wide in newer subdivisions. Streets in Downtown Pismo Beach generally have sidewalks on both sides of the street, with the exception of parts of Park Avenue (east of Dolliver Street), Addie Street (west of Dolliver Street), and Cypress Street (north of Main Street).

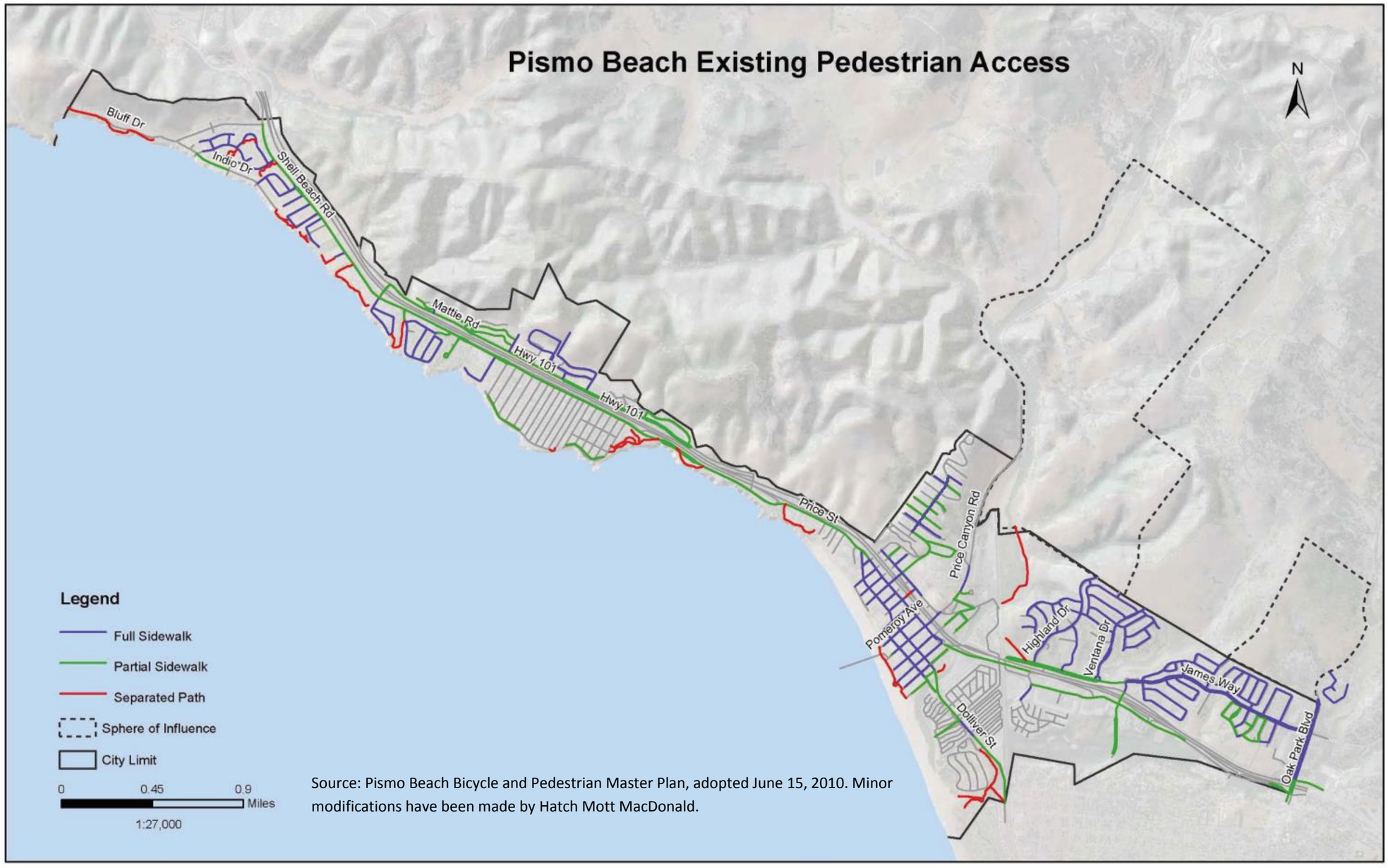
There are numerous streets within the City of Pismo Beach where sidewalks are not provided or are intermittently available. These occur primarily in Shell Beach, Pismo Heights, along portions of Mattie Road and within private mobile home parks, parks and gated communities.

Curb ramps provide wheelchair and stroller access to sidewalks at corners of intersections. Truncated domes alert visually impaired pedestrians as they approach a street crossing. New standards for the construction of ADA compliant curb ramps have prompted recent renovation of several street corners by the City.

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Exhibit 6 – Existing Pedestrian Facilities in Pismo Beach



Source: Pismo Beach Bicycle and Pedestrian Master Plan, adopted June 15, 2010. Minor modifications have been made by Hatch Mott MacDonald.

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CROSSWALKS

Crosswalks are defined as either "that portion of a roadway included within the prolongation or connection of the boundary lines of sidewalks at intersections" or "any portion of a roadway distinctly indicated for pedestrian crossing by lines or other markings" (California Vehicle Code (CVC) Section 275). Therefore, legal unmarked crossings are those at intersections defined by the prolongation of sidewalk areas.

Marked crosswalks feature striping and other enhancements to delineate a street crossing for pedestrians. There are two types of crosswalks: controlled and uncontrolled. At uncontrolled crosswalks, drivers are legally required to yield to pedestrians, but do not have to stop when a pedestrian is not present. Controlled crosswalks are located at intersections with stop signs or traffic signals.

D. Bicycle Facilities

EXISTING BIKEWAYS AND TRAILS

Bicycle facilities can be classified into two types: 1) Bikeways or facilities provided for bicycle travel; and 2) Support facilities for use by bicyclists while travelling or once they have reached their destination. Both types of facilities are described below. The locations of bikeways in Pismo Beach are indicated on **Exhibit 7 (Page 15)**.

BIKEWAYS

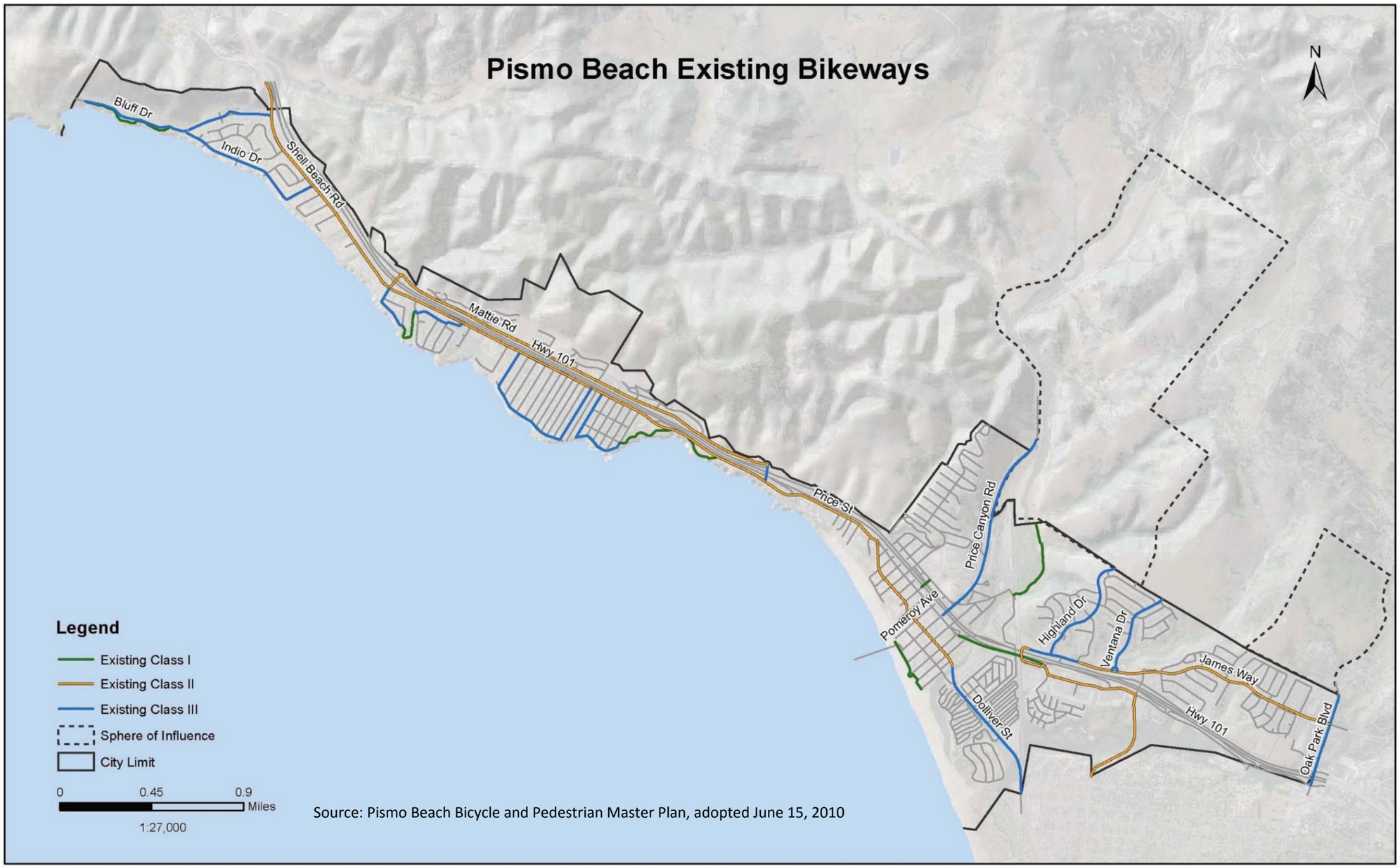
The *Guide for the Development of Bicycle Facilities* (American Association of State Highway and Transportation Officials [AASHTO], 2011) and Chapter 1000 of the *Highway Design Manual* (Caltrans, 2015) identify four primary types of bikeways: Class I Bike Paths, Class II Bike Lanes, Class III Bike Routes, and Class IV Bikeways.

- ***Bike Path or Shared Use Path (Class I Bikeway)***
  Off-street bike paths are facilities for use exclusively by bicycles, pedestrians, equestrians, and other non-motorized users, with minimal cross-flow by motor vehicles. They are almost always located in an exclusive right-of-way.
- ***Bike Lane (Class II Bikeway)***
  Bike lanes are areas within paved streets that are identified with striping, stencils, and signs for preferential (semi-exclusive) bicycle use.
- ***Bike Route or Shared Roadways (Class III Bikeway)***
  Shared roadways are on-street routes intended to provide continuity to the bikeway system. Bike routes are designated by signs or pavement marking and are shared by motorists. Many bike routes provide shoulders that can be used by bicyclists or pedestrians.
- ***Cycle Tracks or Separated Bikeway (Class IV Bikeway)***
  Cycle tracks or separated bikeways, also referred to as "Class IV bikeways," promote active transportation. They provide a separate travel way that is designated exclusively for bicycle travel adjacent to a roadway and are protected from vehicular traffic. Types of separation include, but are not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking.
- ***Innovative Bikeways (Including Bicycle Boulevards)***
  The *NACTO Urban Bikeway Design Guide* (National Association of City Transportation Officials [NACTO], 2014) includes design guidance for a standardized set of treatments for bicycling streets in the United States. Several of these treatments can be implemented using guidance in the *California Manual on Uniform Traffic Control Devices* (CAMUTCD) (Caltrans, 2014). *The NACTO Urban Bikeway Design Guide* also includes design guidance for a variety of bike lanes, cycle tracks, signal enhancements, intersection enhancements, signing and marking enhancements, and bicycle boulevards.

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Exhibit 7 – Existing Bikeways in Pismo Beach



Source: Pismo Beach Bicycle and Pedestrian Master Plan, adopted June 15, 2010

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Roadways with bicycle lanes (Class II) in Pismo Beach include Dolliver Street (SR 1/Pacific Coast Highway) through the downtown, Mattie Street and James Way. Bicycle path (Class I) examples include the bike path over Pismo Creek, adjacent to and immediately south of US 101 that connects Price Street and Five Cities Drive as well as along a portion of Mattie Road.

E. Support Facilities

Support facilities include pedestrian and bicycle bridges and overpasses, short and long-term bicycle parking and gear storage, showers and changing stations, and other amenities not exclusive to, but supportive of walking and bicycling (including wayfinding signage, benches, water fountains and restrooms). The primary examples in Pismo Beach include:

- A pedestrian pathway underneath US 101 at Pismo Avenue, connecting the downtown and Bello Street neighborhood. This is currently the only exclusively non-motorized connection across the US 101 freeway in Pismo Beach.

- A pedestrian bridge exists across Pismo Creek along Dolliver Street, which connects the downtown area to Pismo State Beach and the mobile home parks south of downtown.

- The Cypress Street bridge over Pismo Creek accommodates vehicle and bicycle travel with a separated pedestrian walkway.

- Pedestrian access along Price Street and Shell Beach Road, connecting Downtown Pismo Beach to the Shell Beach neighborhood, is maintained through a network of sidewalks and pedestrian pathways.

- A promenade, or boardwalk, currently extends along the beachfront from Main Street south to Addie Street. The *Pismo Beach Downtown Strategic Plan* proposes to extend this promenade to the north, in order to provide a convenient facility to walk between the downtown and the neighborhoods and hotels north of the downtown.

- There are multiple companies in Pismo Beach and the surrounding area that offer pedicab rides, rent bicycles (capacity for one and two people) and surreys (capacity for two to four people) to members of the public.

- The City of Pismo Beach has prepared a feasibility study to consider initiating a bicycle sharing program. The program would provide bicycles for rent at key locations around the City.

REGIONAL CONNECTIONS

There is currently no continuous dedicated bicycle or pedestrian facility between San Luis Obispo and the Five Cities region. The Bob Jones Trail currently is a discontinuous multi-use paved pathway along San Luis Obispo Creek in the city of San Luis Obispo and the unincorporated community of Avila Beach. In San Luis Obispo, the trail connects Prado Road near Higuera Street with Los Osos Valley Road at US 101. In Avila Beach, the trail starts at a trailhead and parking lot along Ontario Road north of Avila Beach Drive and extends westward to the intersection of San Juan Street and Avila Beach Road. A connection of these two distinct trails is currently being studied.

Within the Five Cities region, the City of Grover Beach published a trail feasibility study in 2010 – *Beach Cities Multi-Purpose Trail* — to create a new multi-use trail between the unincorporated community of Oceano and eastern Pismo Beach via Pismo State Beach, downtown Pismo Beach, and the Pismo Lakes Ecological Reserve (in

southeastern Pismo Beach). This route would be usable by both pedestrians and bicyclists. It is currently not funded and is in need of garnering support throughout the Five Cities Area.

F. Trip Generators and Attractors

Pismo Beach includes a diversity of land uses that range from high density and pedestrian-focused retail commercial in the downtown area, commercial development along Five Cities Drive and Oak Park Boulevard, medium and low density residential throughout the foothill and ocean side communities, and recreation land uses to the south.

Destination areas include multiple City parks, Shell Beach neighborhood commercial and beach access areas, downtown shopping, the beach, and three large shopping areas on the southeast side of the City. The Shell Beach area and downtown are prime bicycling and walking areas given the limited parking during busy periods. Shopping centers located along Five Cities Drive and Oak Park Boulevard in the southeasterly portion of the City have large parking lots, by providing improved bicycling facilities (such as bike racks and bike lockers), they could encourage customers and shopping center employees to travel there by bicycle.

G. Existing Pedestrian and Bicycle Activity

Exhibits 8 through 10 (Pages 19-21) depict the existing pedestrian volumes in Downtown Pismo Beach during the Weekday PM, Summer Sunday Midday, and Memorial Day Sunday Midday (i.e., the Sunday before Memorial Day) peak hours. The corresponding tabular traffic count worksheets are included in **Appendix A**. The most recent counts indicate that pedestrian activity in the downtown is greatest during the Summer Sunday and Memorial Day Sunday peak hours, with hundreds of pedestrians per hour travelling along and across Dolliver Street (State Route 1 – SR 1) and Pomeroy Avenue to and from the beach, pier, and various small businesses. These large concentrations of pedestrians are a main contributor to the circulation challenges in the downtown.

Pedestrian volumes are relatively low outside of the downtown. Pedestrians do not contribute to any vehicle congestion issues in other portions of the city and are generally accommodated by existing sidewalks. The exceptions are locations where sidewalks are not provided. These have been identified in the previously cited Pismo Beach Bicycle and Pedestrian Master Plan.

Exhibits 11 through 13 (Pages 22-24) depict the existing bicycle volumes in Downtown Pismo Beach under Weekday PM, Sunday Summer Midday, and Memorial Day Sunday Midday peak hour conditions. Traffic count worksheets for these volumes are tabulated in **Appendix A**. Bicycle volumes are relatively low in the downtown. The largest volume was about 20-30 bicycles an hour in each direction on Dolliver Street (SR 1) during the Memorial Day Sunday peak hour.

Bicycle use outside of Downtown Pismo Beach is negligible and does not contribute to vehicle congestion.

Exhibit 8 – Pedestrian Volumes - Existing Weekday PM Peak Hour

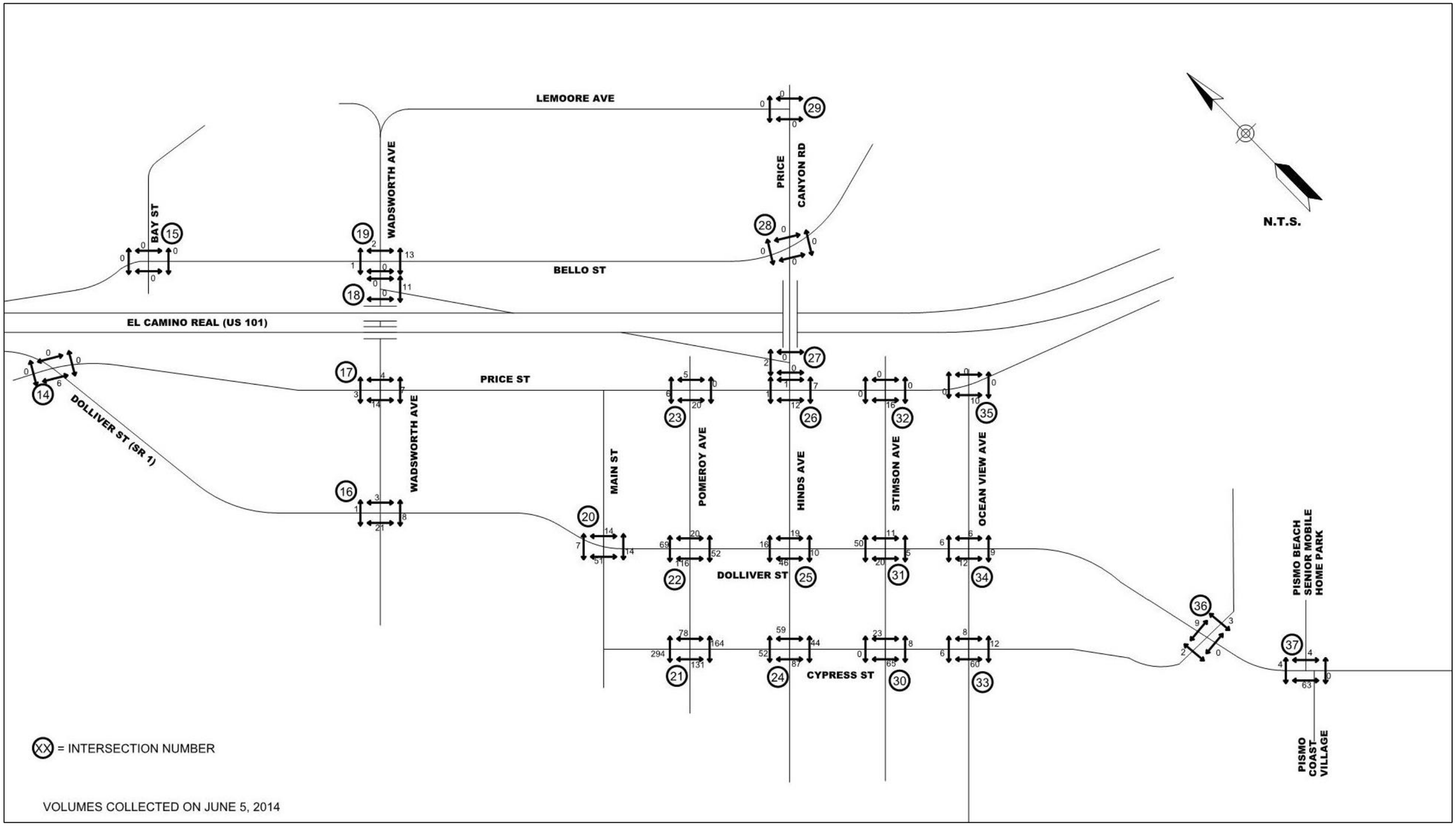


Exhibit 9 – Pedestrian Volumes - Existing Summer Sunday Midday Peak Hour

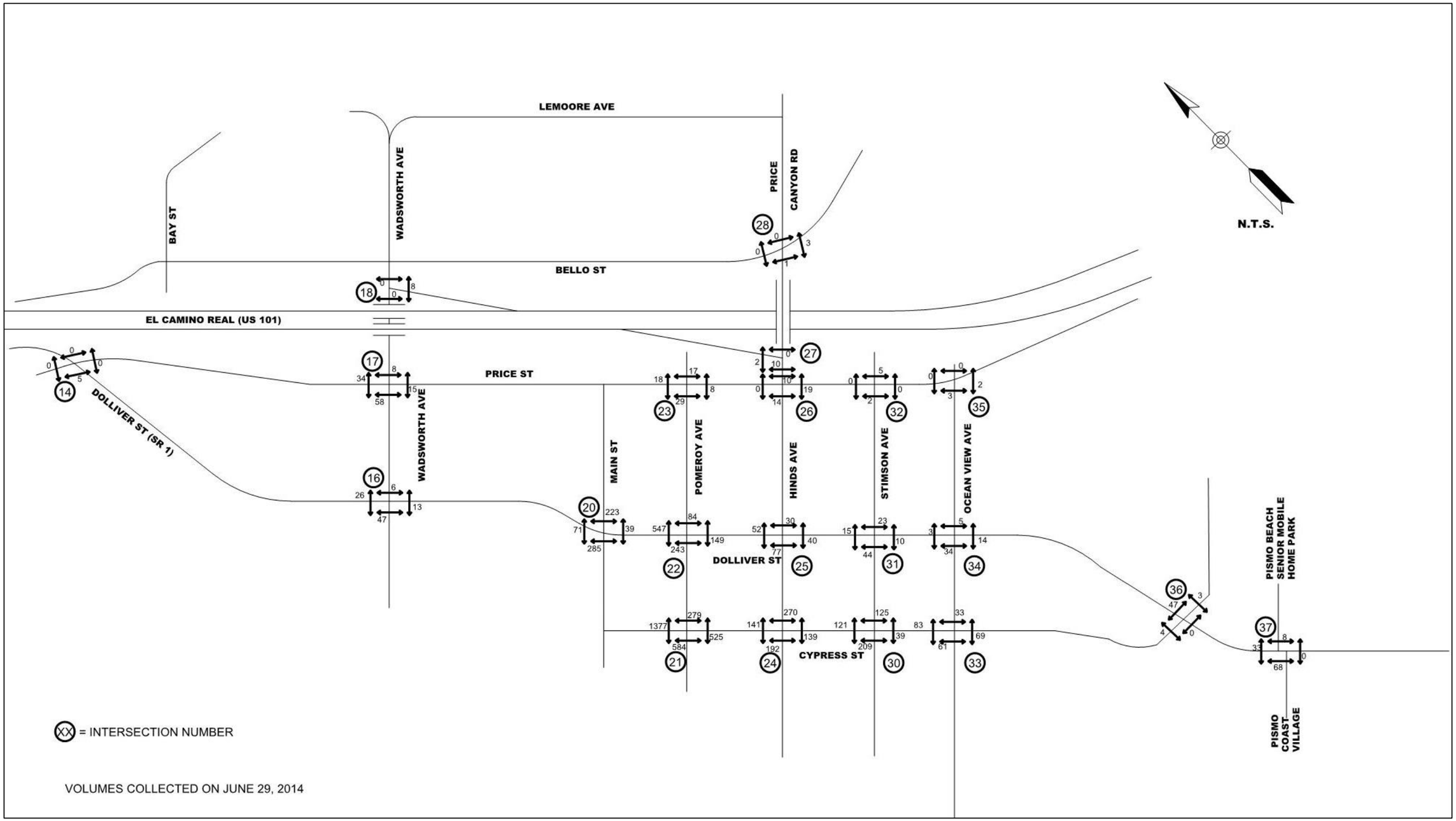


Exhibit 10 – Pedestrian Volumes - Existing Memorial Day Sunday Midday Peak Hour

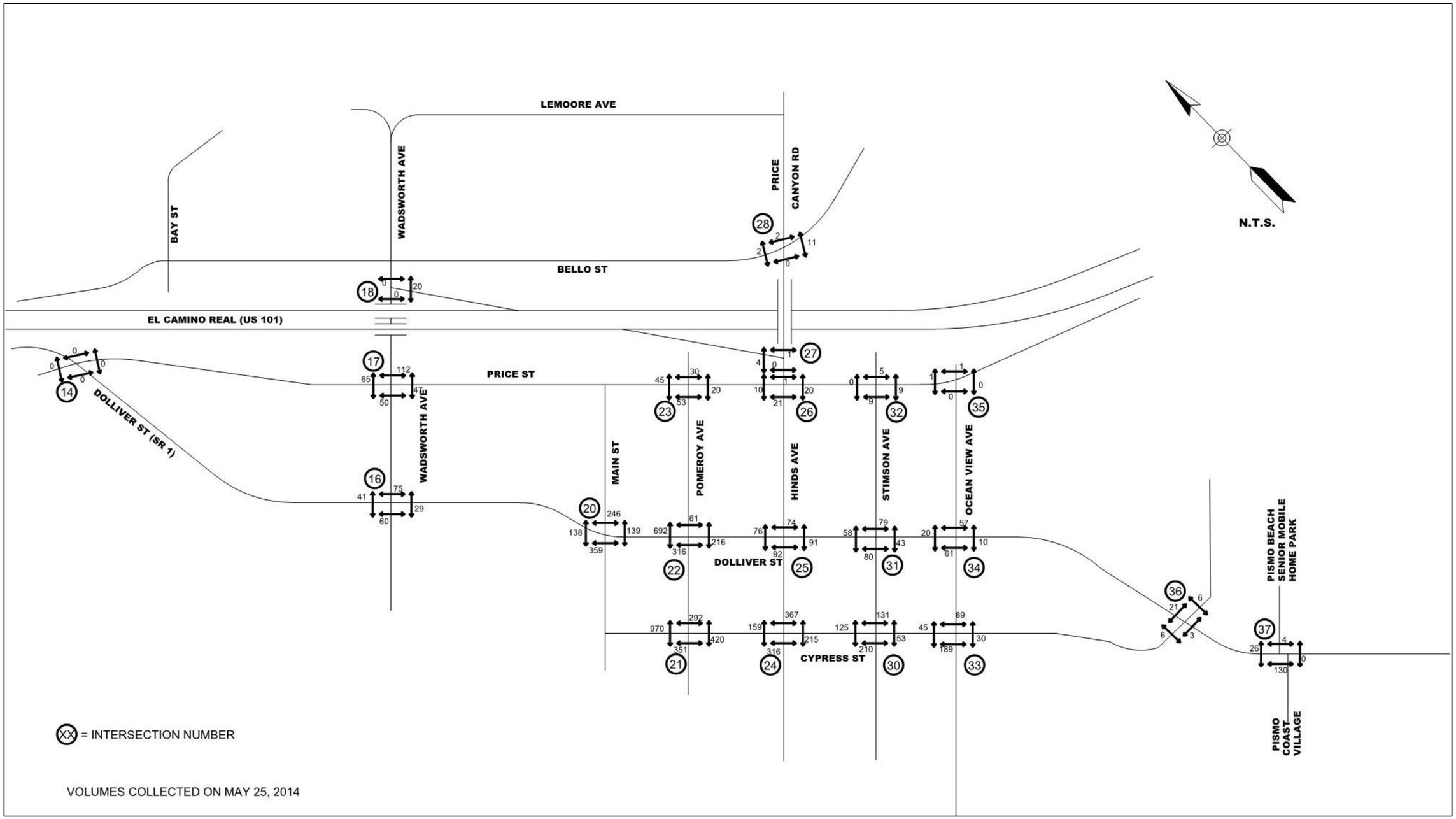


Exhibit 11 – Bicycle Volumes - Existing Weekday PM Peak Hour

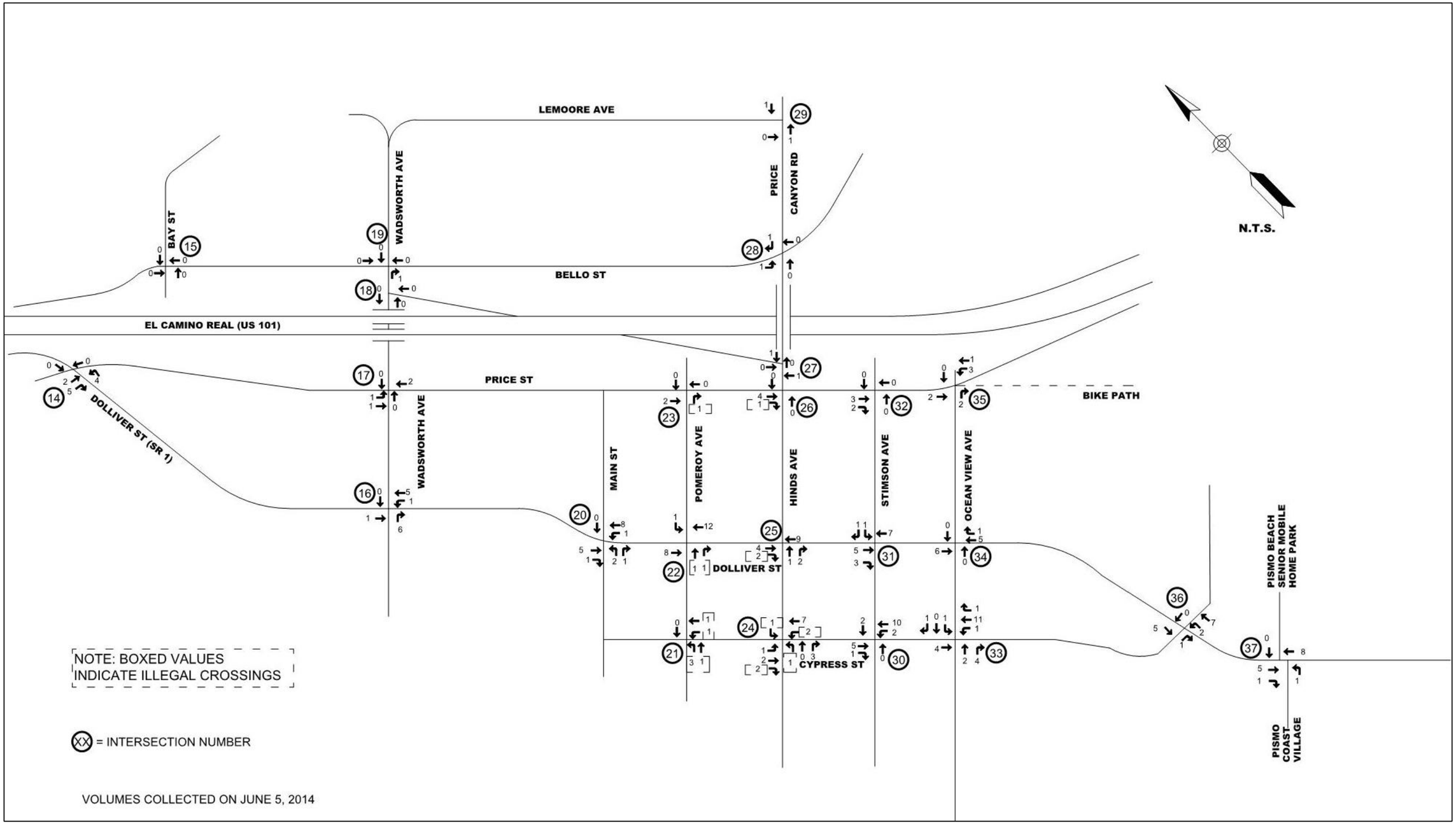


Exhibit 12 – Bicycle Volumes - Existing Summer Sunday Midday Peak Hour

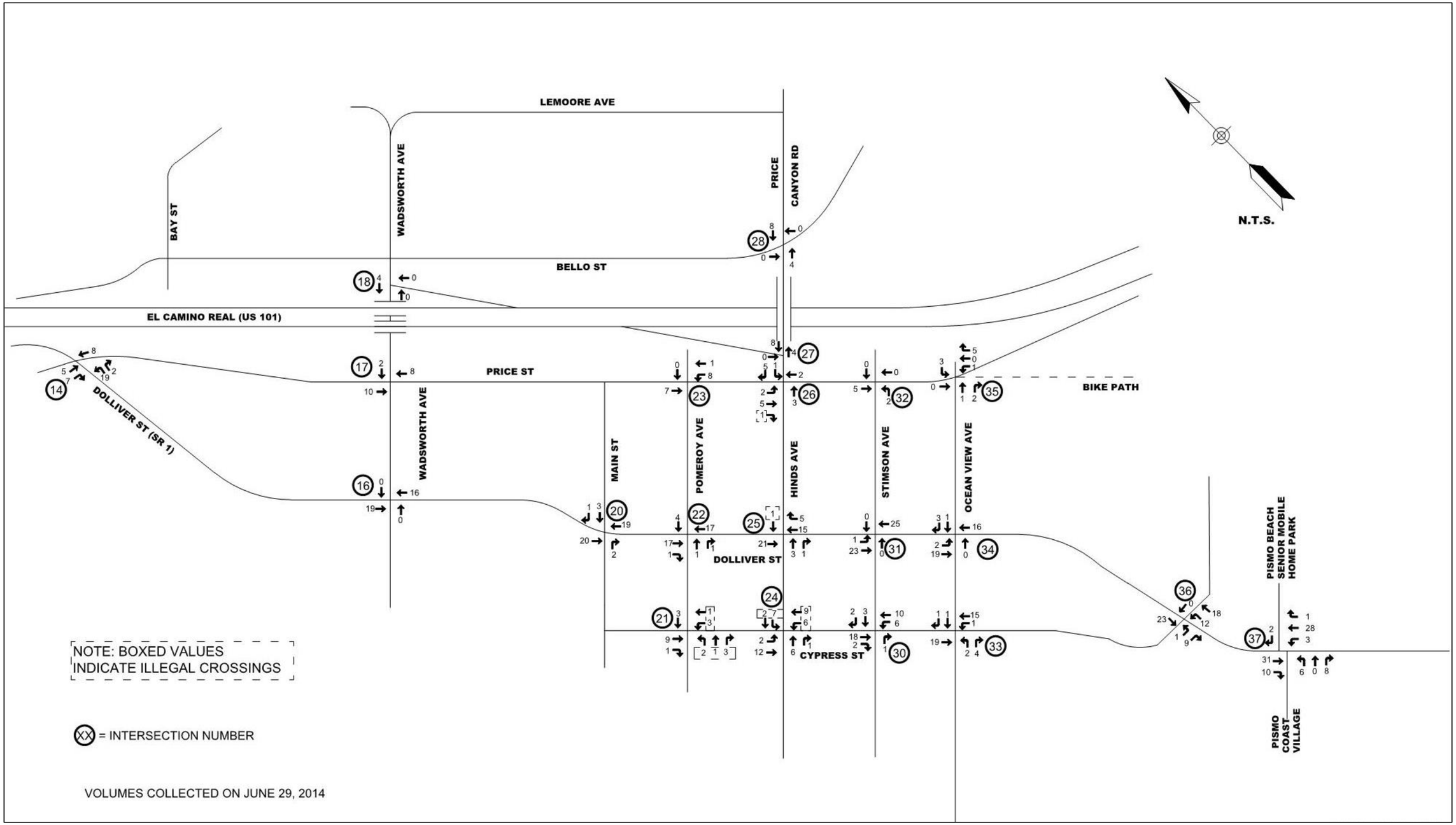
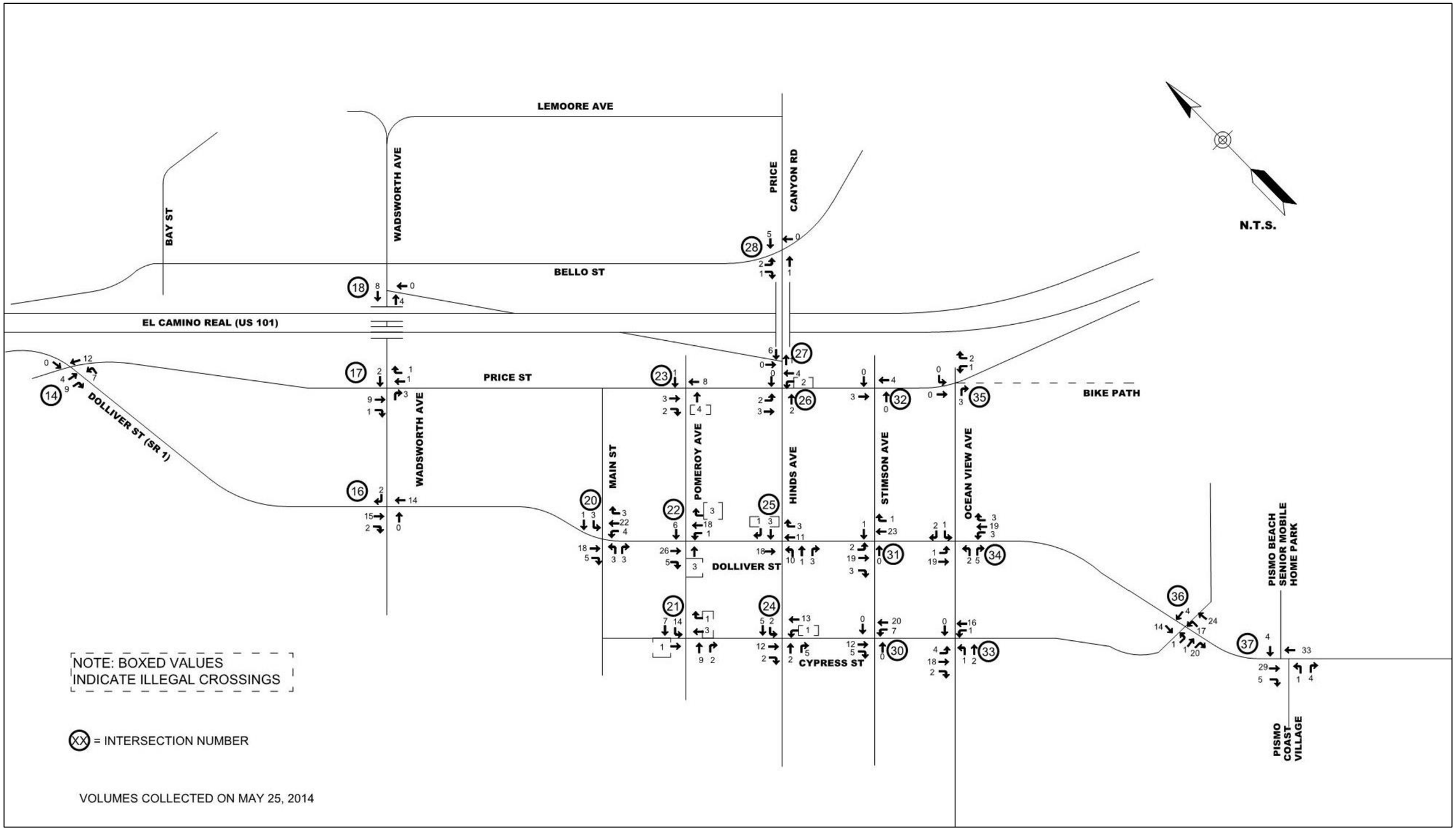


Exhibit 13 – Bicycle Volumes - Existing Memorial Day Sunday Midday Peak Hour



H. Transit

EXISTING TRANSIT SERVICE

The San Luis Obispo Regional Transit Authority (RTA) operates four transit routes through Pismo Beach. **Exhibit 14 (Page 26)** depicts the transit routes in the Pismo Beach Area.

Route 10 is a regional route between San Luis Obispo and Santa Maria, operating hourly on weekdays between roughly 5:45 AM and 8:30 PM in the northbound direction and 6:30 AM and 9:45 PM in the southbound direction. Route 10 also operates every three hours on Saturdays (roughly 7:15 AM – 7:30 PM northbound and 8:30 AM – 8:45 PM southbound) and three trips in each direction on Sundays (between roughly 8:15 AM and 6:45 PM). The only stop along this route in Pismo Beach is at the Pismo Beach Premium Outlets. Approximately 35 passengers were observed exiting from the southbound Route 10 bus on Thursday, March 6, 2014 at 6:00 PM, which represented the evening peak commute period. Route 10 has approximately 1,100 passengers per weekday and approximately 300 passengers per weekend day according to RTA.

The remaining routes are contracted through and branded as "South County Transit," and provide local service within Pismo Beach and to the surrounding communities. **Routes 21 and 24** are interlocking routes that travel in opposing directions on overlapping portions of their routes, with Route 21 traveling clockwise and Route 24 traveling counterclockwise. Route 21 serves the communities of Shell Beach, downtown Pismo Beach, the Pismo Beach Premium Outlets, downtown Grover Beach, and eastern Arroyo Grande. Route 24 follows a similar route, except that it also serves downtown Arroyo Grande and does not serve Shell Beach. Both routes operate hourly between approximately 6:30 AM and 6:30 PM. Three or fewer passengers boarded or disembarked the Route 21 and Route 24 buses at 6pm, which is the evening peak commute period. Route 21 has approximately 240 passengers per day and Route 24 has approximately 200 passengers per day according to RTA.

Finally, RTA also operates the **Avila to Pismo Trolley**, a local bus built to look like a trolley car. The trolley only operates between late March and mid-October, with extended service between June and September. During normal operations, the trolley operates hourly between 10:00 AM and 4:00 PM on Saturdays and Sundays. During the summer months, the trolley operates from 10:00 AM to 6:00 PM on Thursdays through Sundays. It travels between Avila Beach and Pismo Beach, stopping at the Pismo Beach Premium Outlets and many local stops within greater Avila Beach, Shell Beach, and downtown Pismo Beach. The route forms a loop between Avila Beach and Pismo Beach. All of the local bus stops in Shell Beach are bypassed on the way from Pismo Beach Premium Outlets to the outskirts of Avila Beach. The trolley carries approximately 160 passengers per day according to RTA.

FUTURE TRANSIT SERVICE

SLOCOG has been studying potential upgrades to transit service in the South County for the past few years. In 2011, SLOCOG commissioned the *South County Transit Plan*, which evaluated current transit service and identified opportunities to expand service and increase revenues. In 2013, SLOCOG studied the establishment of bus rapid transit along the US 101 corridor (*San Luis Obispo County Highway 101 Bus Rapid Transit Application Study*), including service to the park and ride lot and bus stops at the Pismo Beach Premium Outlets. As a corollary to the bus rapid transit study, SLOCOG also released its *2013 Park & Ride Lot Study* in August 2013, which suggested adding a new park and ride facility on Mattie Road near Spyglass Drive and adjacent to US 101. SLOCOG and the City are now evaluating the implementation of this facility.

Exhibit 14 – Existing Transit Routes Within Pismo Beach



Source: San Luis Obispo Regional Transit Authority, 2015

EXISTING TRAIN SERVICE

A railroad track owned by Union Pacific Railroad extends through Pismo Beach by way of Price Canyon between the greater San Luis Obispo area and Grover Beach. The only roadway crossing of the railroad within Pismo Beach is a grade-separated crossing at US 101. The nearest crossing of the railroad in the vicinity of Pismo Beach is to the south at Grand Avenue in the City of Grover Beach. This is an at-grade crossing near State Route 1.

The nearest rail station is adjacent to the Grand Avenue crossing in Grover Beach and is commonly referred to as "The Train Station". It is serviced four times each day (two northbound and two southbound trains) by the Pacific Surfliner service operated by Amtrak on its route between San Luis Obispo and San Diego. The station also is served three times per day by buses connecting to other train stations along the Pacific Surfliner route and by twice daily, round-trip bus service to the Central Valley and Southern California.

I. Parking

Pismo Beach, due to its beach front location, is typical of numerous coastal communities in California. It is inundated with guests and visitors that not only increase traffic during the summer months, but also significantly increase parking demand. This, in turn, increases traffic volumes and congestion as drivers circulate the downtown area in search of parking. Improving parking operations will assist the City in improving the experience of visitors to the downtown area.

This seasonal swell of traffic and parkers results in high parking occupancies during the seasonal peak periods and very low parking demands during the off-season. The exception is the pier parking lot, which is heavily used throughout the year. These swings in overall downtown parking demand present challenges for how much parking to provide, how to manage the parking and how it is maintained and supported financially.

This parking assessment is designed to provide a high level overview of the parking challenges, and recommendations to adjust parking to enhance the traffic, circulation and public parking operations. This parking study is not intended to serve as a detailed, microscopic level parking strategic plan or parking management plan.

EXISTING PARKING SUPPLY WITHIN DOWNTOWN PISMO BEACH

Exhibit 15 (Page 28) tabulates a parking space inventory of Downtown Pismo Beach. Most parking in Downtown Pismo Beach is on-street parking – virtually all streets in the downtown allow on-street parking. Approximately 873 parking spaces are on-street parking spaces with seasonal enforcement of time limits. The exceptions are Pomeroy and Hinds Avenues from Dolliver Street [SR 1] to the pier area and Cypress Street from Pomeroy to Hinds Avenues, which all have pay parking year round. A total of 588 spaces are provided in parking lots in the downtown. A small number of parking spaces are located in lots with time limited parking only (e.g. Addie Street at Mary Harrington Park of Dolliver Street (SR 1) and a small lot behind the Pismo Beach Chamber of Commerce building at the corner of Dolliver Street (SR 1) and Hinds Avenue). The total number of public parking spaces in downtown, including the Addie Street lot and the Price Street lot is approximately 1,461 spaces. The downtown hotel parking lots provide 816 spaces and the private parking lots include approximately 495 spaces. Thus, a total 2,772 parking spaces are provided.

There are multiple parking lots in the downtown, some of which are heavily utilized. **Exhibit 16A (Page 29)** depicts their locations within the downtown. Except as noted above, on-street parking spaces operate as free parking with no charge for parking but are managed with time-limited parking during the timed parking season. Their locations are illustrated on **Exhibit 16B (Page 29).** A small number of on-street pay parking spaces are provided on Cypress Street, Hinds Avenue and Pomeroy Avenue near the pier.

Exhibit 15 – Downtown Pismo Beach Parking Space Inventory

Parking Type	Number of Spaces
Public Parking	
Pay Parking – Downtown (lots)	*380*
Time-Limit Parking	
Downtown (street)	114
Price Street (street)	94
Year-Round Free Spaces (street)	*873*
Downtown Hotel Spaces	**816**
Downtown Commercial Spaces	**495**
Total Spaces	**2,772**

Source: City of Pismo Beach, 2014.

Two of the largest lots are located near the pier. The largest public lot (210 spaces) is accessible off of Pomeroy (inbound only) and Hinds Avenue (outbound only) and is located at the foot of the pier. This parking lot is the parking location most desired by patrons who want to go to the beach, pier and associated commercial area. As it is located the closest to the beach and pier, many patrons unsuccessfully attempt to park at this location first, and then circulate throughout the downtown looking for other places to park. This causes vehicles to recirculate on downtown streets, which compounds traffic congestion.

Until recently, the second largest parking lot in the downtown was a private dirt parking lot on Cypress Street between Pomeroy and Hinds Avenues, directly adjacent to the pier area. There was no charge for parking in this private lot. This property is being developed as a hotel; thus, this parking lot is no longer available.

The public parking lot at the beach end of Addie Street and Park Avenue is free to the public with no time limits. It serves beach activity at the south end of downtown. This lot, which also has approximately 100 spaces, is not utilized as much as the pier parking lot during most of the year, but during peak seasons it is heavily used. Lifeguard towers are also stored here during the off-season.

The parking lots on Main Street (bordered by Main Street, Dolliver Street (SR 1) and Pismo Avenue) are pay to park lots. Ownership is split between the City of Pismo Beach and a private owner. These lots have approximately 130 spaces.

The public lot on Pomeroy Avenue between Price and Dolliver (SR 1) Streets has approximately 40 spaces and is the public parking lot with the lowest utilization. While it is located less than three blocks from the beach and pier, it is routinely bypassed by patrons hoping to get a parking space closer to those attractions. This could be due to the lot being accessed by Pomeroy, with one-way traffic in the opposite direction of traffic that would attempt to enter it from Dolliver.

A few smaller private lots are available for public use scattered throughout the downtown area, each having between 20 and 40 spaces.

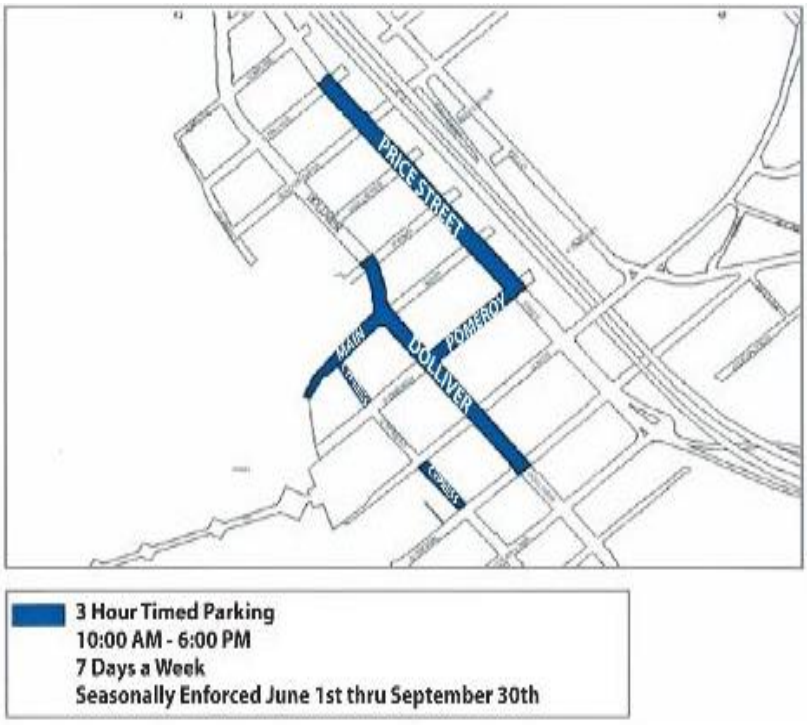
Private lots are not managed or patrolled by the City's Parking Division.

Exhibit 16A – Location of Public Parking Facilities in Downtown Pismo Beach



Source: Pismo Beach Downtown Strategic Plan, 2014. Minor modifications by Hatch Mott MacDonald.

Exhibit 16B – Location of Time-Limit On-Street Parking Areas in Downtown Pismo Beach



Source: City of Pismo Beach web site (http://www.pismobeach.org). Accessed December 14, 2015.

PARKING DATA COLLECTION AND ANALYSIS -- DOWNTOWN PISMO BEACH

Information about the City's parking program was collected from a variety of sources including the following:

- Interviews with City staff, downtown stakeholders, and members of the Parking Advisory Committee.
- Collection of data and parking policy and management information from City Staff.
- Review of historical data collected during the last decade including previous parking studies, and other studies with parking information.
- Discussion with the Parking Advisory Committee during a regularly scheduled meeting.
- Weekday and Weekend day and evening parking counts of public parking areas in downtown during the peak seasonal time period in late July, 2014.

This data collection and review provided a good understanding of how parking is utilized and managed. During the summer weekday and weekend counts, parking lots for the most part fill to capacity and remain fully occupied as do on-street spaces. As soon as one vehicle leaves a space, another vehicle is waiting to take its place. All downtown lots and pay parking spaces exceed 85% capacity from approximately 10:00 AM through 4:00 PM for both weekday and weekend count periods. The lot located on Pomeroy Avenue, between Dolliver (SR 1) and Price Streets, is the last to become fully occupied. This is believed to be caused by the lack of parking wayfinding signs and the one-way flow to access that parking lot at the time of the observations in July, 2014.

Parking utilization in Downtown Pismo Beach is similar to that in other coastal communities, in that:

1. There is a seasonal use of parking spaces, i.e., high parking occupancy occurs during the late spring, summer, and early fall. Demand is lower during the other times of year. Parking occupancies were noted to exceed the 85% level for on-street spaces, the pier lot and parking lots located off of Main Street from 11:00 AM until 4:00 PM during the weekday and 10:00 AM through 4:00 PM count during the weekend.
2. There is an adequate supply of parking during the off-season and "shoulder" seasons (i.e., the very start and very end of the peak season). This was based on a review of the data provided by City staff and the Parking Committee for parking occupancy counts during shoulder and off-season time.
3. There is a shortage of parking spaces within select areas of the downtown. The prime downtown destination for visitors during the peak periods is the pier and surrounding core area. This results in parking demand exceeding supply in this area. Consequently, traffic congestion is intensified as vehicles circulate around the downtown area in search of available parking.
4. In several locations, the on-street parallel parking further adds to traffic congestion due to vehicle maneuvers to enter and leave the parking spaces impeding traffic flows. This is especially true for on-street spaces along Pomeroy and Hinds Avenues (from Price Street to the pier parking lot) and along Price Street (both the curb spaces and the center aisle spaces).
5. The parking lot on Pomeroy Avenue, between Price Street and Dolliver Street (SR 1), rarely reaches 100% occupancy, even though it is within a short walking distance from the pier area. This is primarily due to the one-way access of Pomeroy to the lot. Users of this lot have to be traveling from Price Street to Dolliver Street (SR 1) to access the lot and current wayfinding signage does not indicate how to access this lot from Dolliver Street. Wayfinding signs were recently added by the City that substantially improve the ability of visitors to navigate to parking facilities throughout the downtown area. This will result in better utilization of the current parking supply, but overall demand will continue to exceed the supply during peak times.
6. The City of Pismo Beach recently completed the "Downtown Parking Enhancements and Opportunities Study," Walker Parking Consultants, April 14, 2016, which can be found at

(http://www.pismobeach.org/DocumentCenter/View/47660). It made similar observations to those described above. The study also made an additional observation that enhanced parking management (primarily parking fees that vary according to demand) would largely increase efficiency and reduce the parking supply deficiency during peak seasons.

J. Traffic Operations and Recommendations – Existing Conditions

Exhibit 17 (Pages 35 and 36) shows the study area, which encompasses all of Pismo Beach plus areas in surrounding communities that provide immediate access to Pismo Beach, such as portions of Arroyo Grande, Grover Beach, and unincorporated Avila Beach.

Areas outside of the downtown region experience relatively little variation during the year, traffic volumes within the downtown area substantially increase during the peak season (i.e., roughly June through September). Therefore, in addition to the standard Weekday PM peak hour for the peak season, the downtown area was also analyzed for Summer Sunday and Memorial Day Sunday peak hours in order to obtain data to evaluate peak traffic conditions.

Exhibits 18A-D, 19, and 20 (Pages 37-42) depict the existing traffic volumes in the city. These volumes were collected in May and June, 2014. The three collection periods include Weekday PM Peak Hour, Summer Sunday Midday Peak Hour, and Memorial Day Sunday Midday Peak Hour (i.e., the Sunday before Memorial Day). In total, there are 50 study intersections included in the Weekday PM peak hour and 23 study intersections counted during the Summer Sunday Midday and Memorial Day Sunday Midday peak hours. Raw traffic count data is tabulated in **Appendix A**.

Intersection operations were characterized using the concept of Level of Service (LOS). Average control delays experienced at an intersection correspond to a letter-grade scale of "A" through "F", with LOS A representing little to no delay and LOS F representing very long delay. For signalized and all-way stop intersections, a single level of service grade – representing overall intersection conditions – is presented. For one-way and two-way stop-controlled intersections, both overall and worst side street approach levels of service are presented.

INTERSECTIONS WITH ACCEPTABLE OPERATIONS

Exhibit 21 (Pages 43-47) summarizes the existing levels of service at the study intersections. **Exhibits 22A-B, 23, and 24 (Pages 49-52)** graphically depict the levels of service at those same intersections. The level of service calculations are included in **Appendix B**. The study intersections were evaluated based on the City standard of LOS C (1992 City of Pismo Beach General Plan Circulation Element Principle P-1.c), the San Luis Obispo County standard of LOS C (2009 San Luis Bay Coastal Area Plan) and the Caltrans standard of the transition between LOS C and LOS D (*Guide for the Preparation of Traffic Impact Studies*, December 2002; henceforth referred to as LOS C/D). A total of 47 of 50 intersections studied during the Weekday PM peak hour, 13 of the 21 intersections during the Summer Sunday Midday peak hour, and 12 of the 21 intersections studied under the Memorial Day Sunday Midday peak hour operate acceptably and require no operational improvements based on congestion.

INTERSECTIONS WITH DEFICIENT OPERATIONS

Exhibit 21 (Pages 43-47) also indicates the study intersections that currently operate deficiently, as well as the recommended improvements to correct each deficiency and the resulting operations with implementation of the identified improvements. The deficient intersections, their current operations and their respective improvements are also described below, listed by intersection number. More information about the recommended

improvements and why they are recommended is provided in **Section 3.D – Improvements Recommended in Previous Studies (Page 75)** and **Section 3.E - Network Alternatives (Page 79)**.

The following four (4) intersections operate deficiently under the Weekday PM peak hour:

26. Price Street/Hinds Avenue (Overall LOS B, but long queues on Southbound Hinds) – Review signal timing and consider widening the Hinds bridge over US 101. Vertical clearance about US 101 may be an issue.
34. Dolliver Street (SR 1) / Ocean View Avenue (Side Street LOS F - Implement Ocean View – Stimson Couplet)
42. Fourth Street / Five Cities Drive (Signal LOS D - Add Right Turn Overlap Phase on Eastbound Five Cities Drive)
48. US 101 Southbound Ramps / El Camino Real (All-Way Stop LOS D - Install Signal)

The following eight (8) intersections operate deficiently under the Summer Sunday Midday peak hour:

14. US 101 Southbound Off-ramp - Dolliver Street (SR 1) / Price Street (All-way stop LOS E - Install Roundabout)
20. Dolliver Street (SR 1) / Main Street (Side Street LOS F - Eliminate One On-Street Parking Space to Accommodate a Right Turn Lane on Westbound Main. Consider left turn pockets as an alternative.)
21. Cypress Street / Pomeroy Avenue (Side Street LOS F - Install Signal with Pedestrian Scramble – described in Section 3.5.a – General Plan Buildout Conditions - Network Alternatives – Pier Area Improvements – Cypress Street/Pomeroy, see discussion below)
22. Dolliver Street (SR 1) / Pomeroy Avenue (Signal LOS E - Eliminate Three On-Street Parking Spaces to Accommodate a Right Turn Lane on Southbound Dolliver. Consider northbound left turn pocket as an alternative. Also consider Modifying Signal to include Pedestrian Scramble – described in Section 3.5.b – General Plan Buildout Conditions - Network Alternatives – Pier Area Improvements – Dolliver Street (State Route 1)/Pomeroy, see discussion below)
25. Dolliver Street (SR 1) / Hinds Avenue (Signal LOS D - Eliminate Two On-Street Parking Spaces to Accommodate a Right Turn Lane on Northbound Dolliver Consider left turn pockets as an alternative..)
32. Price Street / Stimson Avenue (Side Street LOS F - Implement Ocean View - Stimson Couplet)
34. Dolliver Street (SR 1) / Ocean View Avenue (Side Street LOS F - Implement Ocean View - Stimson Couplet)
35. US 101 Ramps - Price Street / Ocean View Avenue (Side Street LOS F - Implement Ocean View - Stimson Couplet)

The following nine (9) intersections operate deficiently under the Memorial Day Sunday Midday peak hour:

14. US 101 Southbound Off-ramp - Dolliver Street (SR 1) / Price Street (All-way stop LOS E - Install Roundabout)
20. Dolliver Street (SR 1) / Main Street (Side Street LOS F - Eliminate One On-Street Parking Space to Accommodate a Right Turn Lane on Westbound Main. Consider left turn pockets as an alternative.)
21. Cypress Street / Pomeroy Avenue (Side Street LOS F - Install Signal with Pedestrian Scramble – described in Section 3.5.a – General Plan Buildout Conditions - Network Alternatives – Pier Area Improvements – Cypress Street/Pomeroy, see discussion below)
22. Dolliver Street (SR 1) / Pomeroy Avenue (Signal LOS F - Eliminate Three On-Street Parking Spaces to Accommodate a Right Turn Lane on Southbound Dolliver. Consider northbound left turn pocket as an alternative. Also consider Modifying Signal to include Pedestrian Scramble – described in Section 3.5.b – General Plan Buildout Conditions - Network Alternatives – Pier Area Improvements – Dolliver Street (State Route 1)/Pomeroy, see discussion below)

25. Dolliver Street (SR 1) / Hinds Avenue (Signal LOS F - Eliminate Two On-Street Parking Spaces to Accommodate a Right Turn Lane on Northbound Dolliver. Consider left turn pockets as an alternative.)
31. Dolliver Street (SR 1) / Stimson Avenue (Side Street LOS F - Implement Ocean View - Stimson Couplet)
32. Price Street / Stimson Avenue (Side Street LOS F - Implement Ocean View - Stimson Couplet)
34. Dolliver Street (SR 1) / Ocean View Avenue (Side Street LOS F - Implement Ocean View - Stimson Couplet)
35. US 101 Northbound Ramps - Price Street / Ocean View Avenue (Side Street LOS F - Implement Ocean View - Stimson Couplet)

Intersection 22, Dolliver Street (SR 1) / Pomeroy Avenue - Left turns from northbound Dolliver (SR 1) onto Pomeroy (i.e., towards the pier area) are prohibited during peak tourist periods. This prohibition is indicated by the activation of a NO LEFT TURN (R3-2) "activated blankout" (i.e., back lit) electronic sign posted on a signal mast arm at the intersection.

Intersections 16, 20, 22, 25, 31 and 34 - Dolliver Street (SR 1) Between Wadsworth Avenue and Ocean View Avenue - The addition of short exclusive left turn pockets on Dolliver Street (SR 1) at key intersections in Downtown Pismo Beach, such as at Pomeroy Avenue and Hinds Avenue, should be considered. These are discussed in more detail in **Section 3.E.5) c – General Plan Buildout – Network Alternatives – Pier Area Improvements – Dolliver Street Left Turn Pockets**.

Intersections 21 and 22, Cypress Street / Pomeroy Avenue and Dolliver Street (SR 1) / Pomeroy Avenue - Within Downtown Pismo Beach, some of the traffic congestion on Sundays during the peak season is created by the very large volumes of pedestrian crossings. This is especially true near the pier area, which is one of the primary destinations of many visitors to the area. At the Cypress / Pomeroy intersection, these crossings – both mid-block and at intersections – combine with the congestion caused by the parking maneuvers to create vehicle queues that can extend back to the Dolliver (SR 1) / Pomeroy intersection one block away. This congestion can then radiate out to affect operations at other intersections in the downtown area.

Pedestrian activity is still relatively high on Sundays during the peak season at the Dolliver (SR 1) / Pomeroy intersection, although it is not as high as at the Cypress / Pomeroy intersection one block to the south. Here, the large number of right turning vehicles from southbound Dolliver Street (SR 1) onto westbound Pomeroy (i.e., bound for the pier area) can limit the number of pedestrians that can cross Pomeroy Avenue. This is especially true when congestion at the Cypress / Pomeroy intersection affects upstream operations at Dolliver (SR 1) / Pomeroy, just one block away. A detailed discussion of the causes of this congestion and the recommended remedial measures is included in **Section 3.E.5.a and b - General Plan Buildout Conditions – Network Alternatives - Pier Area Improvements (Page 79).**

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Exhibit 17A – Greater Pismo Beach Study Area

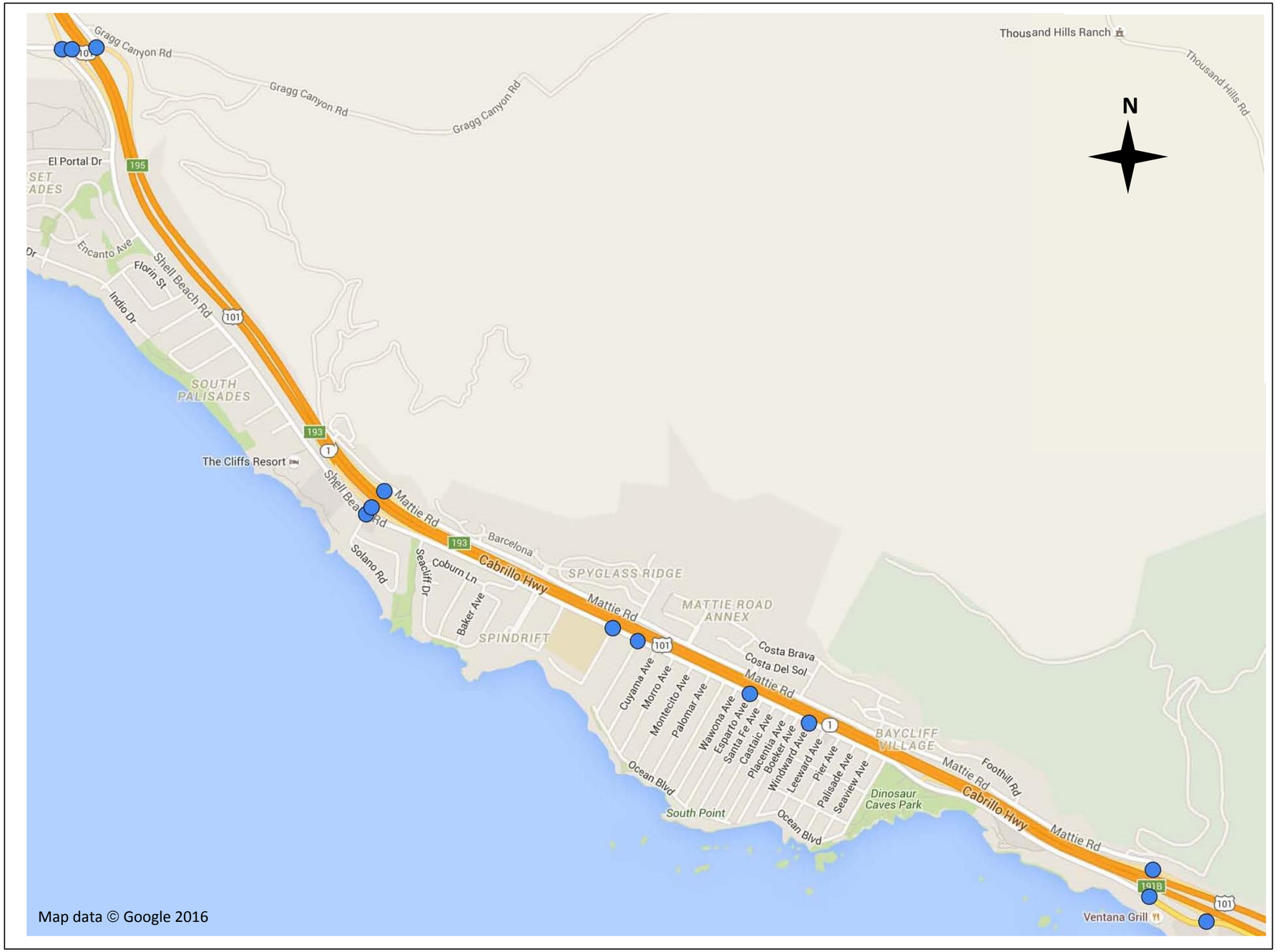
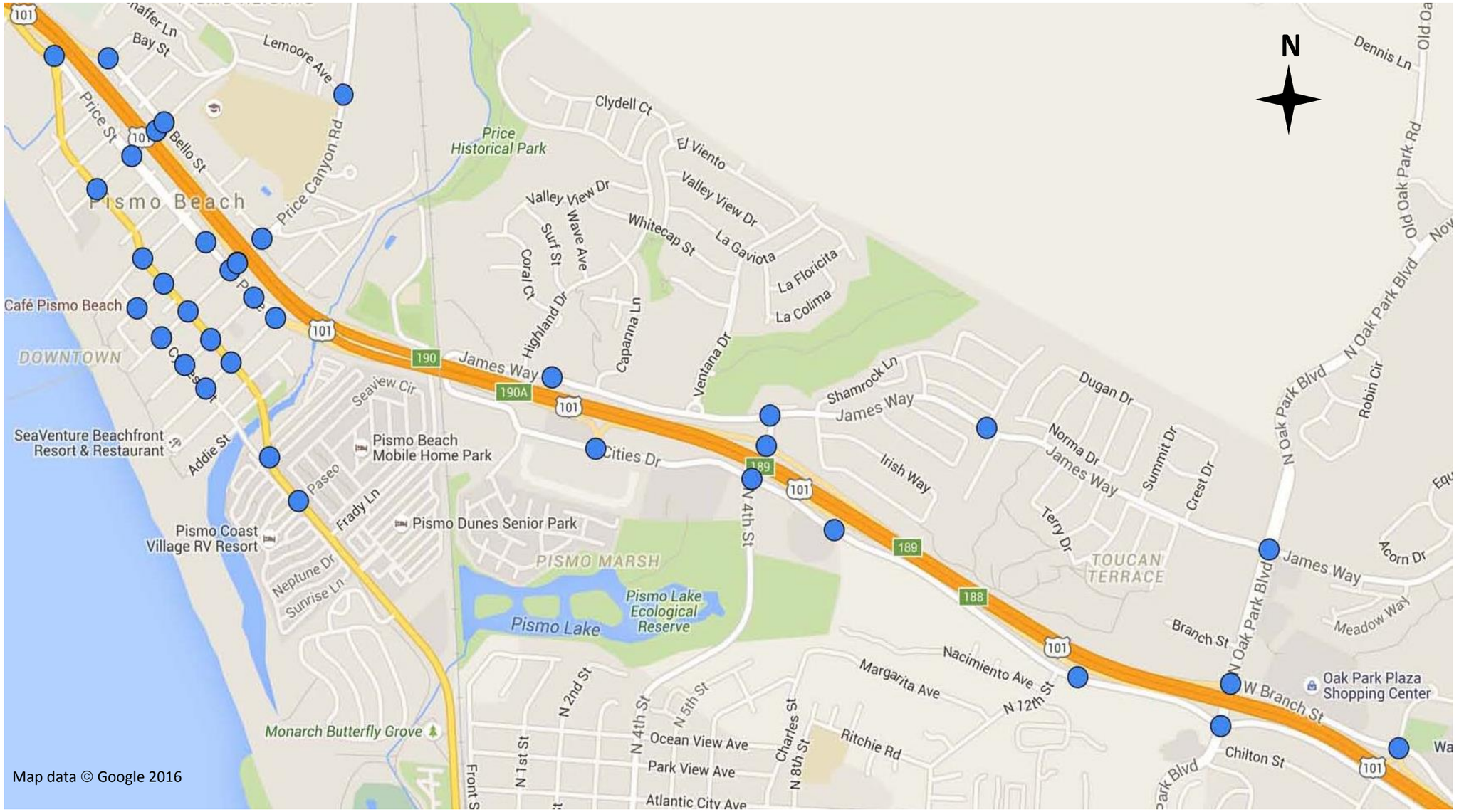


Exhibit 17B– Greater Pismo Beach Study Area



Map data © Google 2016

Exhibit 18A – Existing Weekday PM Peak Hour Volumes

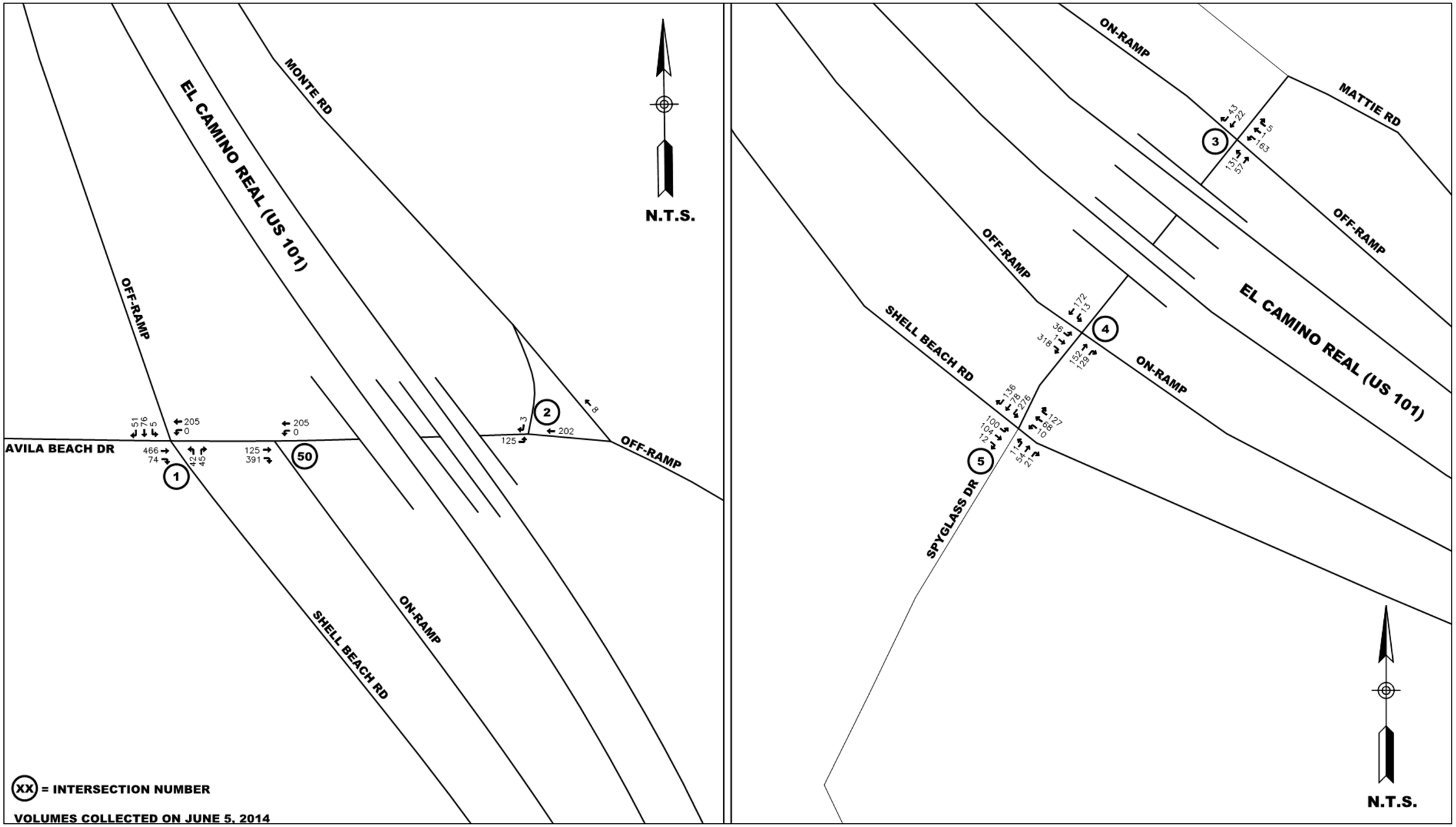


Exhibit 18B – Existing Weekday PM Peak Hour Volumes (continued)

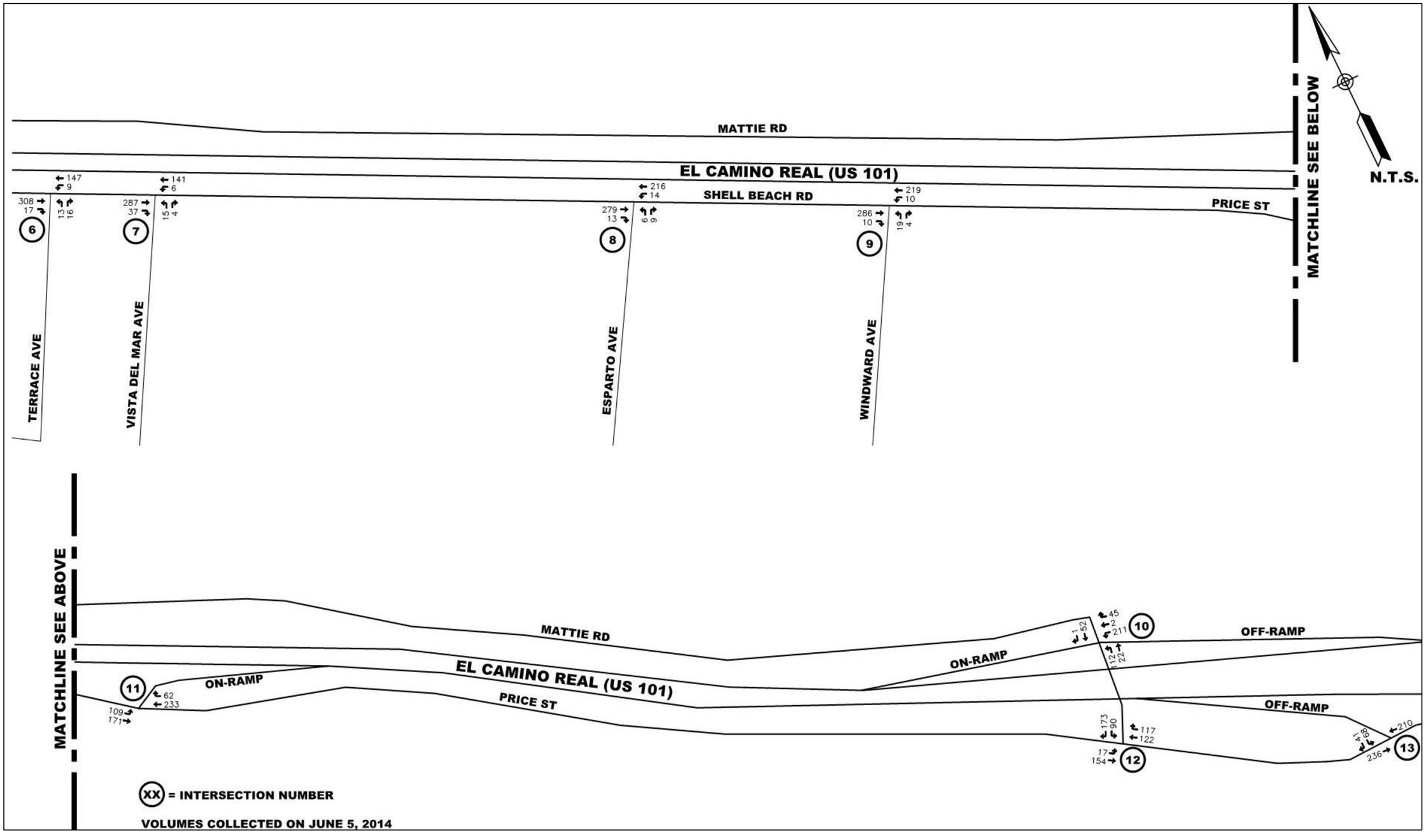


Exhibit 18C – Existing Weekday PM Peak Hour Volumes (continued)

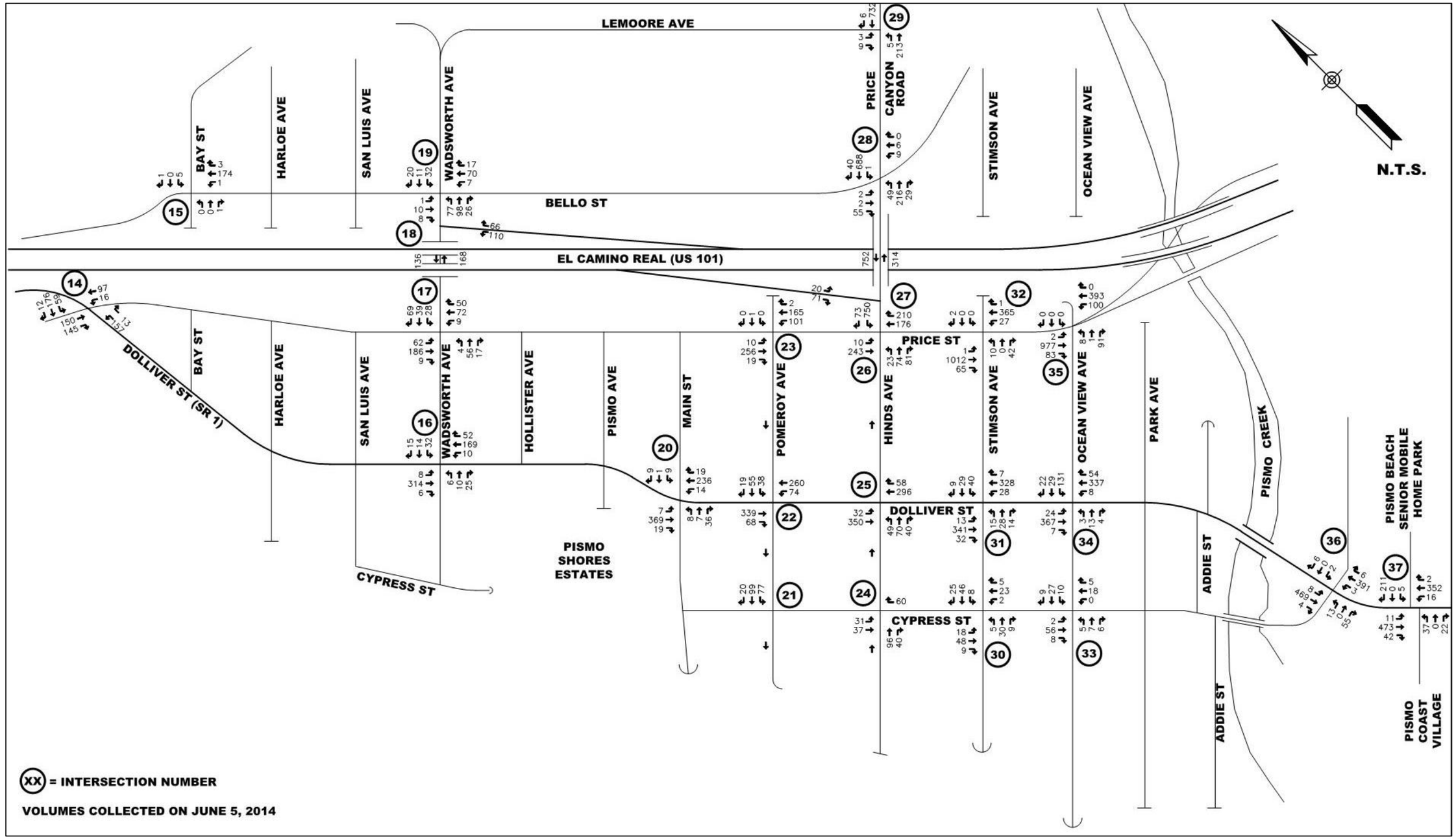


Exhibit 18D – Existing Weekday PM Peak Hour Volumes (continued)

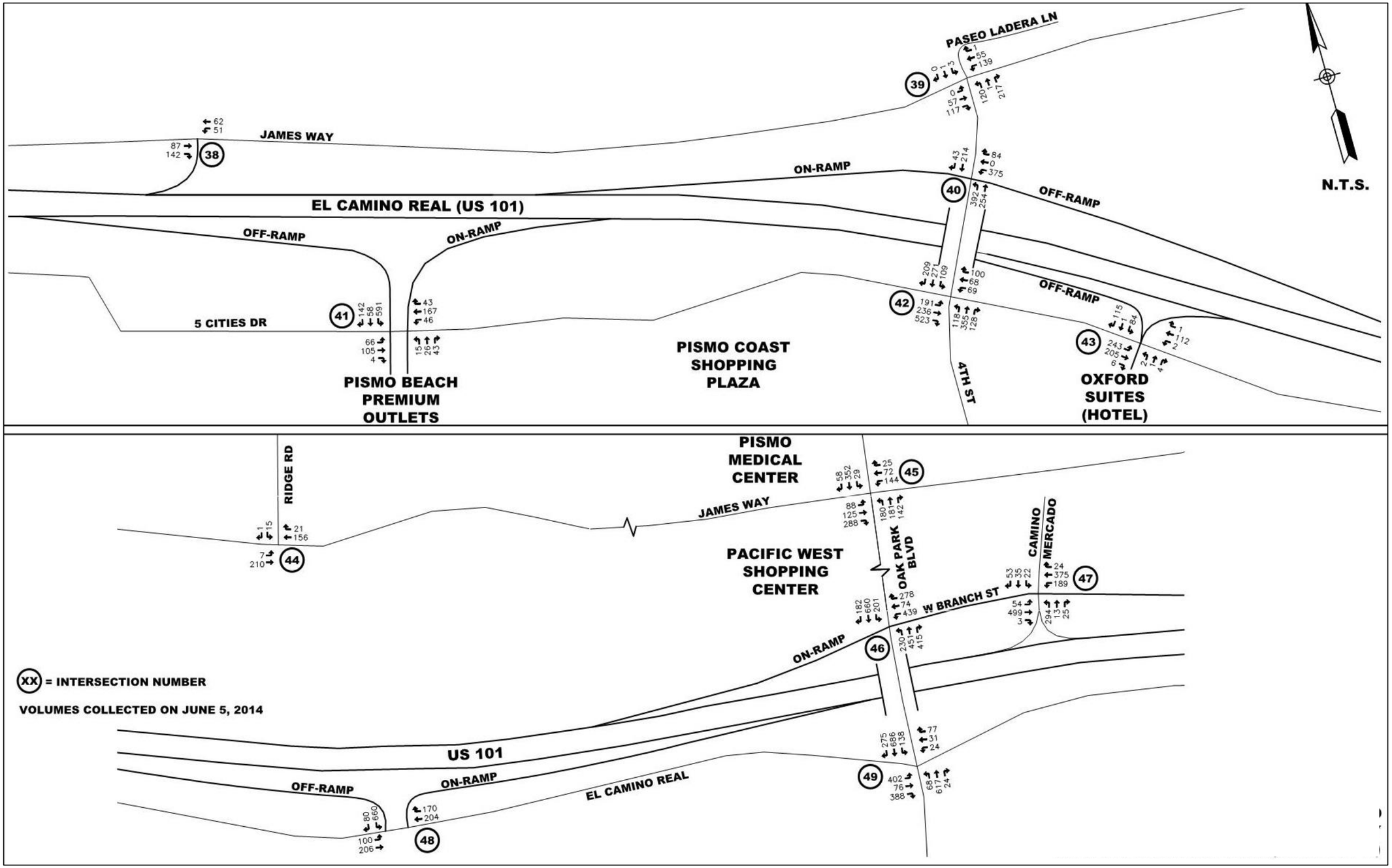


Exhibit 19 – Existing Summer Sunday Midday Peak Hour Volumes

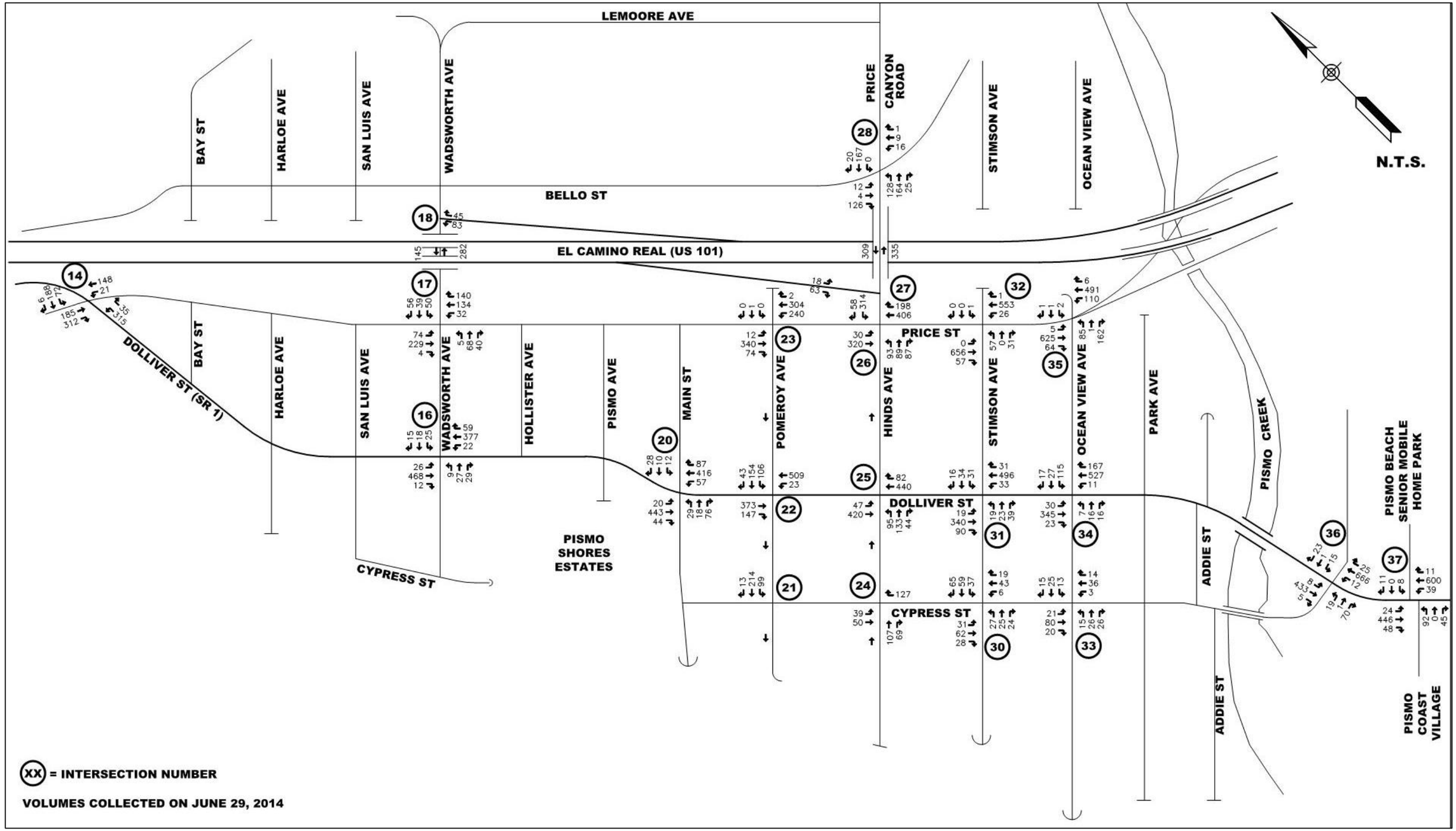


Exhibit 20 – Existing Memorial Day Sunday Midday Peak Hour Volumes

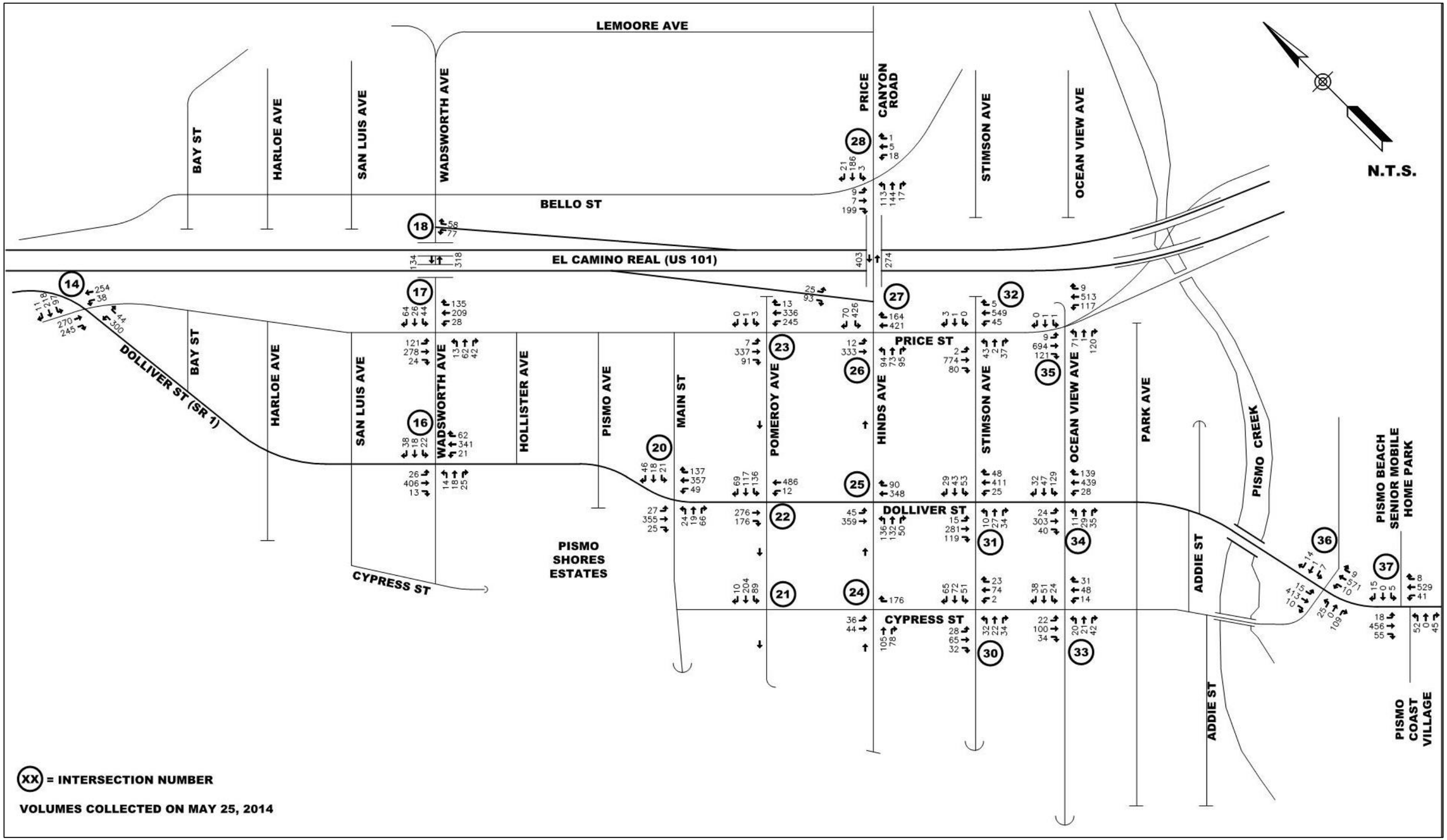


Exhibit 21 – Intersection Levels of Service Existing Conditions

	N-S Street	E-W Street	Existing Lane Configuration	Existing Intersection Control	LOS Standard	Existing Conditons						Existing Conditions With Improvements						Proposed Improvement(s)
						Weekday PM Peak Hr		Summer Sunday Mid		Memorial Day Sunday Mid		Weekday PM Peak Hr		Summer Sunday Mid		Memorial Day Sunday Mid		
						Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	
1	Shell Beach Road - US 101 SB Ramps	Avila Beach Drive	NB 1-L/R SB 1-L/T, 1-R EB 1-T/R WB 1-L/T	Two-Way Stop *(County)*	**C/D** Side Street	4.2 21.3	A C											
2	Monte Road	Avila Beach Drive - US 101 NB Ramps	SB 1-R EB 1-L WB 1-T/R	Two-Way Stop *(County)*	**C/D** *Side Street*	3.0 9.4	A A											
3	Spyglass Drive	US 101 NB Ramps	NB 1-L, 1-T SB 1-T/R EB 1-L, 1-T/R	One-Way Stop	**C/D** *Side Street*	8.1 14.5	A B											
4	Spyglass Drive	US 101 SB Ramps	NB 1-T/R SB 1-L, 1-T WB 1-L/T, 1-R	One-Way Stop	**C/D** *Side Street*	5.4 12.1	A B											
5	Spyglass Drive	Shell Beach Road	NB 1-L/T/R SB 1-L, 1-T, 1-R EB 1-L, 1-T/R WB 1-L, 1-T, 1-R	All-Way Stop	**C**	13.4	B											
6	Terrace Avenue	Shell Beach Road	NB 1-L/R EB 1-T/R WB 1-L, 1-T	All-Way Stop	**C**	9.7	A											
7	Vista Del Mar Avenue	Shell Beach Road	NB 1-L/R EB 1-T/R WB 1-L/T	All-Way Stop	**C**	9.2	A											
8	Esparto Avenue	Shell Beach Road	NB 1-L/R EB 1-T/R WB 1-L/T	All-Way Stop	**C**	9.3	A											
9	Windward Avenue	Shell Beach Road	NB 1-L/R EB 1-T/R WB 1-L/T	All-Way Stop	**C**	9.4	A											
10	Mattie Road	US 101 NB Ramps	NB 1-L/T SB 1-T/R EB 1-L, 1-T/R	One-Way Stop	**C/D** *Side Street*	7.0 12.0	A B											

Notes:

1. L, T, R = Left, Through, Right.
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound.
3. Analysis performed using 2010 Highway Capacity Manual methodologies.
4. Overall level of service standard for Caltrans is the transition between LOS C and D.
5. Overall level of service standard for the City of Pismo Beach and County of San Luis Obispo is LOS C.
6. Worst approach level of service standard is generally LOS E. Level of service "F" is the level of service at which improvements would be required.
7. * = Delay is over 300 seconds (5 minutes)

Exhibit 21 – Intersection Levels of Service Existing Conditions (Continued)

	N-S Street	E-W Street	Existing Lane Configuration	Existing Intersection Control	LOS Standard	Existing Conditons						Existing Conditions With Improvements						Proposed Improvement(s)
						Weekday PM Peak Hr		Summer Sunday Mid		Memorial Day Sunday Mid		Weekday PM Peak Hr		Summer Sunday Mid		Memorial Day Sunday Mid		
						Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	
11	US 101 SB On-ramp	Price Street	EB 1-L/T WB 1-T/R	None	**C** *Side Street*	0.0 0.0	A A											
12	Mattie Road	Price Street	SB 1-L, 1-R EB 1-L/T WB 1-T/R	Signal	**C**	6.6	A											
13	US 101 SB Off-ramp	Price Street	SB 1-L, 1-R EB 1-T WB 1-T	One-Way Stop	**C/D** *Side Street*	2.3 11.6	A B											
14	US 101 SB Off-ramp - Dolliver Street (SR 1)	Price Street	NB 1-L, 1-R SB 1-L, 1-T, 1-R EB 1-T/R WB 1-L/T	All-Way Stop	**C/D**	14.0	B	43.0	E	48.6	E	*7.4*	*A*	*12.4*	*B*	*16.3*	*C*	**Roundabout**
15	US 101 NB On-ramp - Bello Street	Bay Street	NB 1-L/T/R EB 1-L/T/R WB 1-L/T/R	Two-Way Stop	**C/D** *Side Street*	0.3 9.5	A A											
16	Dolliver Street (SR 1)	Wadsworth Avenue	NB 1-L/T/R SB 1-L/T/R EB 1-L/T/R WB 1-L/T/R	Two-Way Stop	**C/D** *Side Street*	2.4 15.1	A C	3.5 32.0	A D	4.0 27.0	A D							
17	Price Street	Wadsworth Avenue	NB 1-L/T/R SB 1-L, 1-T/R EB 1-L/T/R WB 1-L/T/R	All-Way Stop	**C**	9.4	A	12.0	B	14.1	B							
18	US 101 NB Off-ramp	Wadsworth Avenue	NB 1-L, 1-R EB 1-T WB 1-T	One-Way Stop	**C/D** *Side Street*	5.2 9.9	A A	3.0 11.3	A B	3.0 11.4	A B							
19	Bello Street	Wadsworth Avenue	NB 1-L/T/R SB 1-L/T/R EB 1-L/T/R WB 1-L/T/R	All-Way Stop	**C**	8.4	A											
20	Dolliver Street (SR 1)	Main Street	NB 1-L/T/R SB 1-L/T/R EB 1-L/T/R WB 1-L/T/R	Two-Way Stop	**C/D** *Side Street*	1.6 15.2	A C	18.2 146.7	C F	42.4 248.8	E F	*1.5* *14.8*	*A* *B*	*8.8* *60.4*	*A* *F*	*18.4* *111.5*	*C* *F*	**Eliminate 1 On-Street Parking Space to Accommodate Right Turn Lane on Westbound Main**

Notes:

1. L, T, R = Left, Through, Right.
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound.
3. Analysis performed using 2010 Highway Capacity Manual methodologies.
4. Overall level of service standard for Caltrans is the transition between LOS C and D.
5. Overall level of service standard for the City of Pismo Beach and County of San Luis Obispo is LOS C.
6. Worst approach level of service standard is generally LOS E. Level of service "F" is the level of service at which improvements would be required.
7. * = Delay is over 300 seconds (5 minutes)

Exhibit 21 – Intersection Levels of Service Existing Conditions (Continued)

	N-S Street	E-W Street	Existing Lane Configuration	Existing Intersection Control	LOS Standard	Existing Conditons						Existing Conditions With Improvements						Proposed Improvement(s)
						Weekday PM Peak Hr		Summer Sunday Mid		Memorial Day Sunday Mid		Weekday PM Peak Hr		Summer Sunday Mid		Memorial Day Sunday Mid		
						Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	
21	Cypress Street	Pomeroy Avenue	WB 1-L/T/R	One-Way Stop	**C** *Side Street*	16.1 16.3	C C	* *	F F	* *	F F	***5.5***	***A***	***4.8***	***A***	***5.1***	***A***	**Signal with Pedestrian Scramble**
22	Dolliver Street (SR 1)	Pomeroy Avenue	NB 1-L/T SB 1-T/R WB 1-L, 1-T/R	Signal	**C/D**	17.4	B	65.0	E	210.1	F	***9.3***	***A***	***24.6***	***C***	***39.4***	***D***	**Eliminate On-Street Parking to Accommodate Right Turn Lane on Southbound Dolliver**
23	Price Street	Pomeroy Avenue	NB 1-L, 1-T/R SB 1-L/T/R WB 1-L/T/R	All-Way Stop	**C**	9.3	A	12.2	B	12.7	B							
24	Cypress Street	Hinds Avenue	NB 1-R SB 1-L.T EB 1-T/R	All-Way Stop	**C**	7.6	A	8.1	A	8.3	A							
25	Dolliver Street (SR 1)	Hinds Avenue	NB 1-T/R SB 1-L/T EB 1-L/T, 1-T/R	Signal	**C/D**	5.7	A	35.8	D	144.2	F	***6.5***	***A***	***19.7***	***B***	***26.6***	***C***	**Eliminate On-Street Parking to Accommodate Right Turn Lane on Northbound Dolliver**
26	Price Street	Hinds Avenue	NB 1-T, 1-T/R SB 1-L/T, 1-T EB 1-L, 1-T/R WB 1-L, 1-L/R	Signal	**C**	14.1	B	13.2	B	14.8	B	14.1	B	13.2	B	14.8	B	**1. Review signal timing to minimize SB Hinds queue** **2. Consider widening Hinds bridge over US 101 to mitigate SB Hinds queue**
27	US 101 SB Off-ramp	Hinds Avenue	SB 1-L, 1-R EB 1-T WB 2-T	One-Way Stop	**C/D** *Side Street*	1.2 30.4	A D	1.2 10.9	A B	1.7 12.0	A B							
28	Bello Street	Price Canyon Road	NB 1-L/T/R SB 1-L/T/R EB 1-L, 1-T/R WB 1-L, 1-T/R	Two-Way Stop	**C** *Side Street*	1.6 30.4	A D	4.1 18.1	A C	5.1 19.0	A C							
29	Lemoore Avenue	Price Canyon Road	NB 1-L, 1-T SB 1-T/R EB 1-L/R	One-Way Stop	**C** *Side Street*	0.2 16.0	A C											
30	Cypress Street	Stimson Avenue	NB 1-L/T/R SB 1-L/T/R EB 1-L/T/R WB 1-L/T/R	Two-Way Stop	**C** *Side Street*	6.2 10.3	A B	12.9 22.6	B C	15.2 28.6	C D	***6.5*** ***10.4***	***A*** ***B***	***14.0*** ***24.2***	***B*** ***C***	***18.2*** ***33.1***	***C*** ***D***	**Implement Ocean View - Stimson Couplet**

Notes:

1. L, T, R = Left, Through, Right.
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound.
3. Analysis performed using 2010 Highway Capacity Manual methodologies.
4. Overall level of service standard for Caltrans is the transition between LOS C and D.
5. Overall level of service standard for the City of Pismo Beach and County of San Luis Obispo is LOS C.
6. Worst approach level of service standard is generally LOS E. Level of service "F" is the level of service at which improvements would be required.
7. * = Delay is over 300 seconds (5 minutes)

Exhibit 21 – Intersection Levels of Service Existing Conditions (Continued)

	N-S Street	E-W Street	Existing Lane Configuration	Existing Intersection Control	LOS Standard	Existing Conditons						Existing Conditions With Improvements						Proposed Improvement(s)
						Weekday PM Peak Hr		Summer Sunday Mid		Memorial Day Sunday Mid		Weekday PM Peak Hr		Summer Sunday Mid		Memorial Day Sunday Mid		
						Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	
31	Dolliver Street (SR 1)	Stimson Avenue	NB 1-L/T/R SB 1-L/T/R EB 1-L/T/R WB 1-L/T/R	Two-Way Stop	**C/D** *Side Street*	4.9 32.3	A D	5.0 40.0	A E	8.1 54.9	A F	***8.4***	***A***	***7.4***	***A***	***8.6***	***A***	**Implement Ocean View - Stimson Couplet and Signal**
32	Price Street	Stimson Avenue	NB 1-L/T/R SB 1-L/T, 1-T/R EB 1-L/T, 1-R WB 1-L/T/R	Two-Way Stop	**C** *Side Street*	1.0 23.4	A C	3.9 58.5	A F	4.7 80.5	A F	***1.1*** ***9.7***	***A*** ***A***	***1.0*** ***21.9***	***A*** ***C***	***1.2*** ***10.7***	***A*** ***B***	**Implement Ocean View - Stimson Couplet and Price Street Restriping**
33	Cypress Street	Ocean View Avenue	NB 1-L/T/R SB 1-L/T/R EB 1-L/T/R WB 1-L/T/R	Two-Way Stop	**C** *Side Street*	4.2 9.9	A A	6.5 12.7	A B	7.2 15.0	A B	***3.6*** ***10.1***	***A*** ***B***	***5.4*** ***13.3***	***A*** ***B***	***6.3*** ***14.9***	***A*** ***B***	**Implement Ocean View - Stimson Couplet**
34	Dolliver Street (SR 1)	Ocean View Avenue	NB 1-L/T/R SB 1-L/T/R EB 1-L/T/R WB 1-L/T/R	Two-Way Stop	**C/D** *Side Street*	10.3 52.9	B F	28.3 221.8	D F	45.8 264.1	E F	***1.1*** ***17.6***	***A*** ***C***	***1.3*** ***21.1***	***A*** ***C***	***2.1*** ***21.1***	***A*** ***C***	**Implement Ocean View - Stimson Couplet**
35	US 101 Ramps - Price Street	Ocean View Avenue	NB 1-L, 1-T/R SB 1-L, 1-T, 1-R EB 1-L/T, 1-R WB 1-L/T/R	Two-Way Stop	**C/D** *Side Street*	2.6 30.9	A D	13.1 76.6	B F	11.4 91.2	B F	***1.8*** ***18.6***	***A*** ***C***	***8.1*** ***37.0***	***A*** ***E***	***6.5*** ***37.3***	***A*** ***E***	**Implement Ocean View - Stimson Couplet and Price Street Restriping**
36	Dolliver Street (SR 1)	Cypress Street - Holiday RV Park Ent.	NB 1-L, 1-T/R SB 1-L, 1-T/R EB 1-L/T/R WB 1-L/T/R	Two-Way Stop	**C/D** *Side Street*	1.1 13.0	A B	1.8 18.0	A C	2.2 15.8	A C							
37	Dolliver Street (SR 1)	Pismo Beach Senior MHP - Pismo Coast Village	NB 1-L, 1-T/R SB 1-L, 1-T/R EB 1-L/T/R WB 1-L/T/R	Signal	**C/D**	7.2	A	11.0	B	9.9	A							
38	US 101 NB On-ramp	James Way	EB 1-T/R WB 1-L, 1-T	None	**C/D** *Side Street*	0.0 0.0	A A											
39	Fourth Street - Paseo Ladera Lane	James Way	NB 1-L/T, 1-R SB 1-L/T/R EB 1-L/T, 1-R WB 1-L, 1-T/R	All-Way Stop	**C**	10.0	A											
40	Fourth Street	US 101 NB Ramps	NB 2-L, 2-T SB 1-T, 1-T/R EB 1-L, 1-T/R	Signal	**C/D**	12.1	B											

Notes:

1. L, T, R = Left, Through, Right.
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound.
3. Analysis performed using 2010 Highway Capacity Manual methodologies.
4. Overall level of service standard for Caltrans is the transition between LOS C and D.
5. Overall level of service standard for the City of Pismo Beach and County of San Luis Obispo is LOS C.
6. Worst approach level of service standard is generally LOS E. Level of service "F" is the level of service at which improvements would be required.
7. * = Delay is over 300 seconds (5 minutes)

Exhibit 21 – Intersection Levels of Service Existing Conditions (Continued)

	N-S Street	E-W Street	Existing Lane Configuration	Existing Intersection Control	LOS Standard	Existing Conditons						Existing Conditions With Improvements						Proposed Improvement(s)
						Weekday PM Peak Hr		Summer Sunday Mid		Memorial Day Sunday Mid		Weekday PM Peak Hr		Summer Sunday Mid		Memorial Day Sunday Mid		
						Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	
41	US 101 SB Ramps - Outlets Main Entrance	Five Cities Drive	NB 1-L, 1-T/R SB 1-L, 1-L/T, 1-T/R EB 1-L, 1-T, 1-T/R WB 1-L, 1-T, 1-R	Signal	**C/D**	27.1	C											
42	Fourth Street	Five Cities Drive	NB 1-L, 1-T, 1-T/R SB 1-L, 1-T, 1-R EB 1-L, 1-T, 1-R WB 1-L, 1-T/R	Signal	**C**	**36.3**	**D**					***26.8***	***C***					**Add Right Turn Overlap Phase on Eastbound Five Cities Drive**
43	US 101 SB Ramps - Hotel Driveway	Five Cities Drive - El Camino Real	NB 1-L/T/R SB 1-L/T, 1-R EB 1-L/T/R WB 1-L/T/R	All-Way Stop	**C/D**	13.8	B											
44	Ridge Road	James Way	SB 1-L/R EB 1-L, 1-T WB 1-T/R	All-Way Stop	**C**	9.0	A											
45	Oak Park Boulevard	James Way	NB 1-L, 1-T, 1-T/R SB 1-L, 1-T, 1-T/R EB 1-L, 1-T, 1-R WB 1-L, 1-T/R	Signal	**C**	25.7	C											
46	Oak Park Boulevard	US 101 NB On-Ramp - West Branch Street	NB 1-L, 1-T, 1-T/R SB 1-L, 1-T, 1-T/R WB 1-L, 1-L/T, 1-R	Signal	**C**	11.1	B											
47	Camino Mercado- US 101 NB Ramps	West Branch Street	NB 1-L, 1-T/R SB 1-L, 1-T/R EB 1-L, 1-T, 1-T/R WB 1-L, 1-T	Signal *(Arroyo Grande)*	**C/D**	28.3	C											
48	US 101 SB Ramps	El Camino Real	SB 1-L, 1-L/R EB 1-L/T WB 1-T/R	All-Way Stop *(Grover Beach)*	**C/D**	**33.8**	**D**					***10.1***	***B***					**Signal**
49	Oak Park Boulevard	El Camino Real	NB 1-L, 1-T, 1-T/R SB 1-L, 2-T, 1-R EB 1-L, 1-L/T, 1-R WB 1-L, 1-T/R	Signal	**C**	22.3	C											
50	US 101 SB On-ramp	Avila Beach Drive	EB 1-T/R WB 1-L/T	None *(County)*	**C/D** *Side Street*	0.0 0.0	A A											

Notes:

1. L, T, R = Left, Through, Right.
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound.
3. Analysis performed using 2010 Highway Capacity Manual methodologies.
4. Overall level of service standard for Caltrans is the transition between LOS C and D.
5. Overall level of service standard for the City of Pismo Beach and County of San Luis Obispo is LOS C.
6. Worst approach level of service standard is generally LOS E. Level of service "F" is the level of service at which improvements would be required.
7. * = Delay is over 300 seconds (5 minutes)

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Exhibit 22A – Intersection Operations Existing Weekday PM Peak Hour

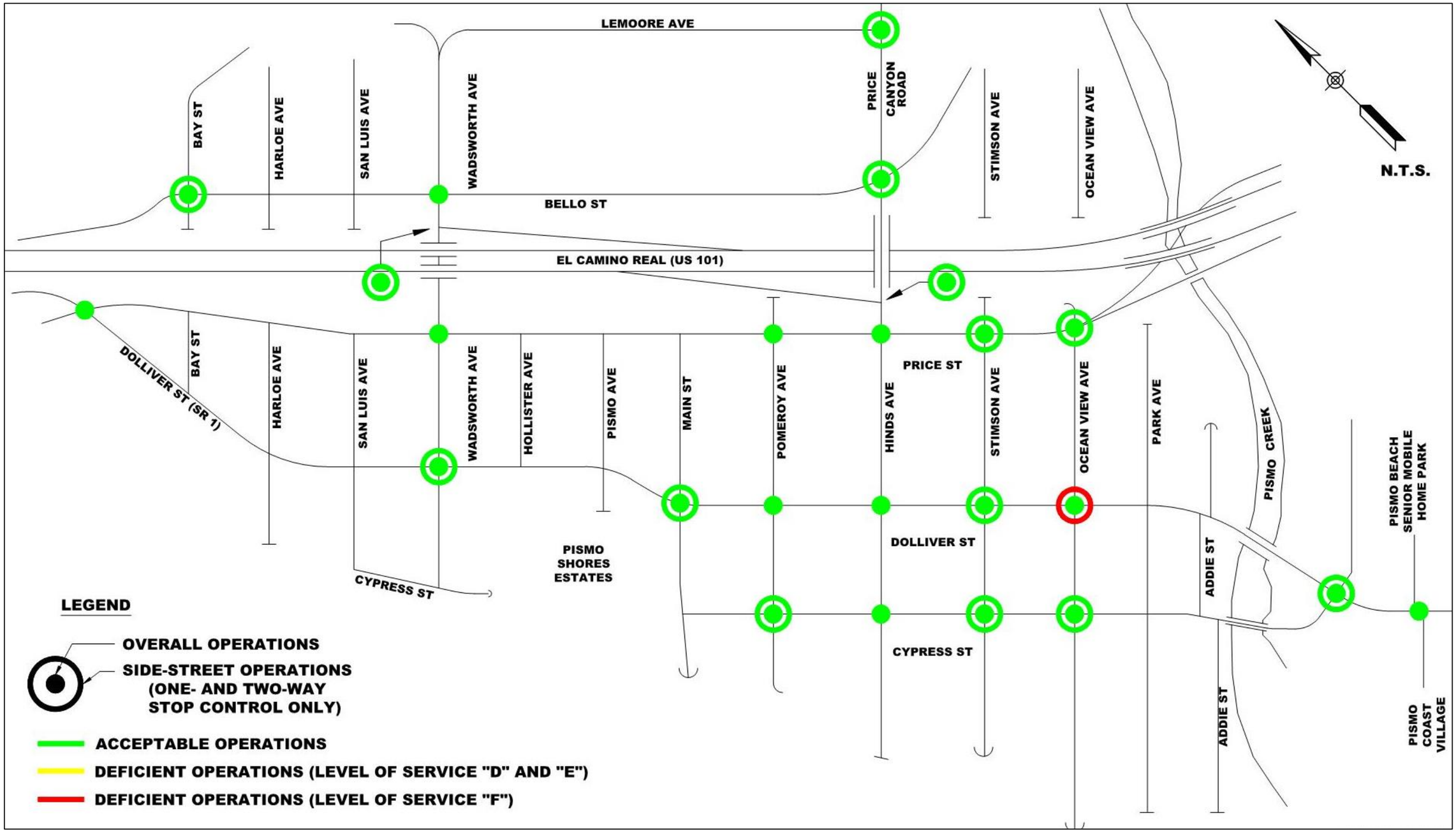


Exhibit 22B – Intersection Operations Existing Weekday PM Peak Hour (Continued)

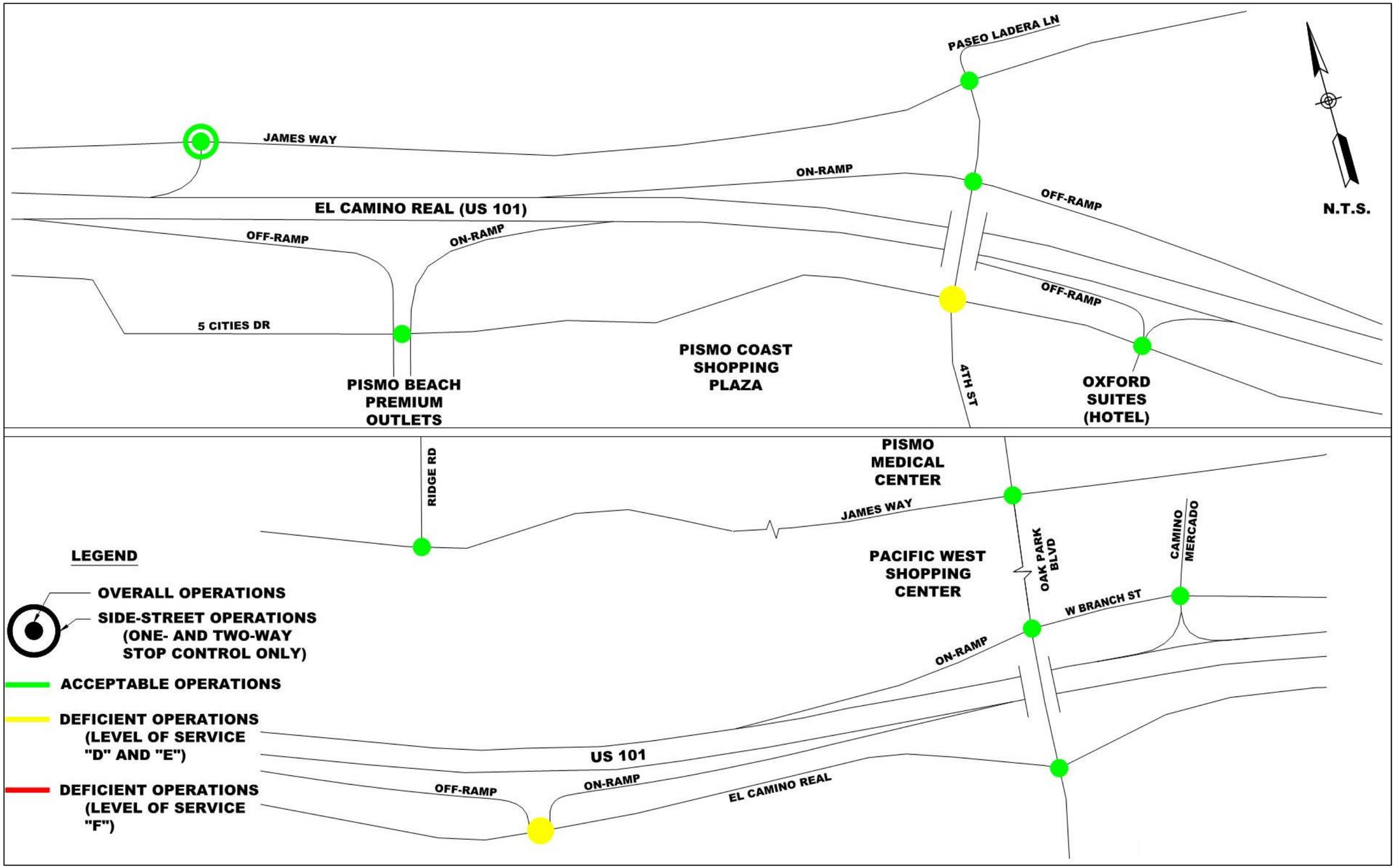


Exhibit 23 – Intersection Operations Existing Summer Sunday Midday Peak Hour

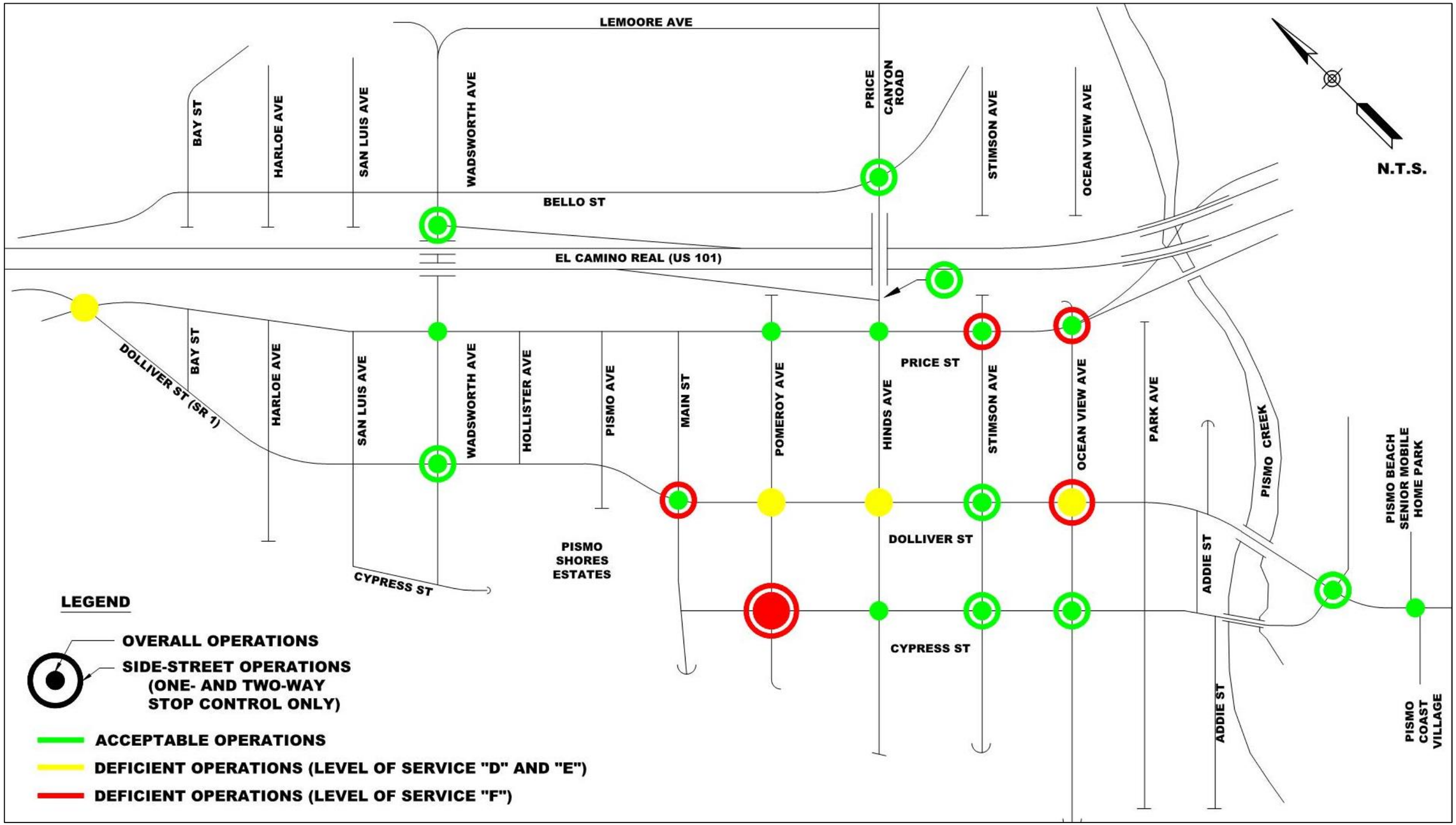
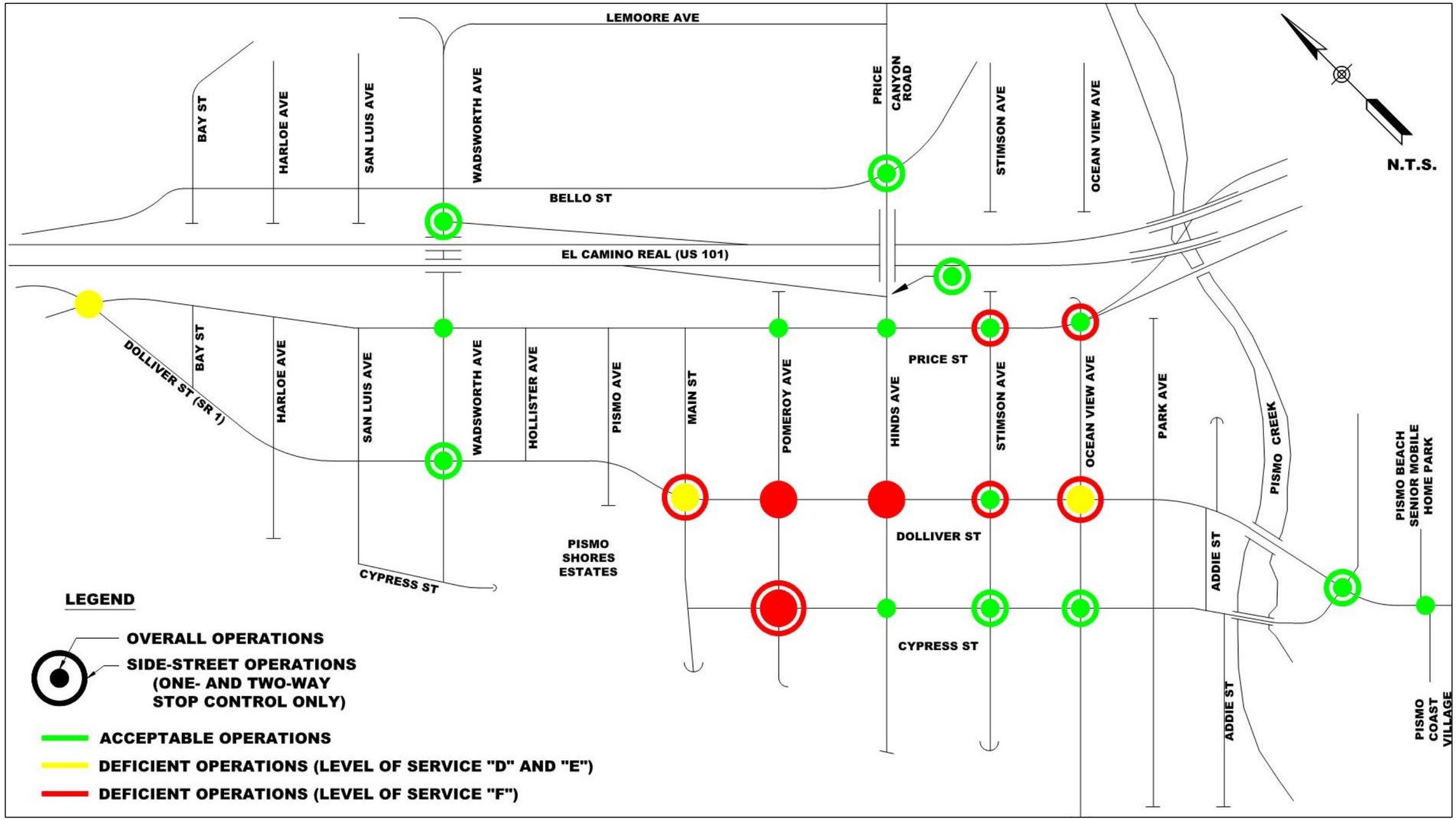


Exhibit 24 – Intersection Operations Existing Memorial Day Sunday Midday Peak Hour



K. Community Participation

Public participation played an essential role in this Study. Public input was solicited especially regarding existing conditions for bicyclists and pedestrians, desired bicycling and walking infrastructure, and types of support facilities or programs needed to improve bicycling in Pismo Beach. Public input was also used to generally develop and prioritize recommended network improvements.

Stakeholders within the community were interviewed, including city staff, the Parking Advisory Committee, the Pismo Beach City Council, the Pismo Beach Chamber of Commerce, and city residents. Other adjacent cities were also contacted, such as the Cities of Arroyo Grande and Grover Beach, as well as other agencies whose jurisdictions are either adjacent to or within portions of Pismo Beach, such as County of San Luis Obispo, Caltrans, and the San Luis Obispo Council of Governments (SLOCOG). A brief summary of the common themes identified by the stakeholders follows below. A full summary of the stakeholder comments is included in **Appendix C**.

Common themes identified by the stakeholders included the following:

1. Parking capacity and circulation demand varies with the peak season, with very high demand during the summer months and little demand during other times of the year.
2. General desire for a new parking structure within the downtown core. However, it was understood that public spending for a parking structure that may only be used for three months out of the year makes this fiscally challenging.
3. The Pomeroy-Hinds one-way couplet had greatly reduced collision rates at the Price Street / Hinds Avenue intersection. Other one-way couplets within the downtown area may be useful.
4. Price Street between Price Canyon Road and the US 101 Ramps at the south side of Downtown is used as a primary thoroughfare for commuters to and from San Luis Obispo. Extending Price Street to Five Cities Drive and adding other frontage roads to US 101 would allow for these and other local trips to avoid using the freeway when traveling between southeastern and downtown Pismo Beach.
5. Strategically placed satellite parking lots (i.e., park and ride lots) are being considered to serve bus routes along US 101. Some of the satellite parking lots are within the City of Pismo Beach.

The City also hosted two public workshops to encourage public feedback on existing circulation issues for all modes of transportation in Pismo Beach. The purpose of the first workshop was to provide an opportunity for members of the public to identify key transportation and circulation issues (including bicycle and pedestrian related issues) throughout the City of Pismo Beach. The second workshop was held to summarize the findings of the analysis, including identifying existing and future circulation problems and corresponding solutions, and physical or operational improvements needed citywide. The workshops were held on:

- *Wednesday, September 17, 2014 from 6:00 PM to 8:00 PM* – at City Hall (Council Chambers), 760 Mattie Road, Pismo Beach.
- *Wednesday, January 7, 2015 from 6:00 PM to 8:00 PM* – at City Hall (Council Chambers), 760 Mattie Road, Pismo Beach.

Summaries of each public workshop are provided in **Appendix D.**

The following points of discussion during the first workshop are summarized in **Exhibit 25 (Page 54)**. (A summary of the second workshop can be found in **Chapter 5** of this document.)

Exhibit 25 – Public Comments from September 2014 Workshop

Item No.	Comment
1.	Elevated Pedestrian Boardwalk – Important to construct between Pier and Shell Beach along hotel beach frontage. Would provide safe, attractive alternative to driving. Would alleviate parking demand within the downtown and enhance local connectivity.
2.	Attractive, Clean Streets – Important to provide. Should feature wide sidewalks, visible bicycle facilities, working streetlights, and readable directional signs.
3.	Emphasis Away from Vehicle Level of Service in Downtown – Should instead focus on efficient use of existing and proposed parking facilities, maintaining high-level of pedestrian usability, increase bicycle use, and increase public safety. However, should use criteria to determine investment in future capital projects.
4.	High Visitor Demand to Pismo Beach Area: a. 2.4 million visitors to Pismo Beach each year b. 1+ million visitors to Pismo State Park (specifically the Dunes) each year c. $600,000 in sales tax generated in Pismo Beach each year from tourist activity d. Hotel Occupancy – an annual average of about 70%, much higher during the peak season and much lower during the off-season
5.	Paid Parking: a. 200,000 cars utilize paid parking facilities annually b. Average length of stay in paid parking – 2 hours c. Visitors within campgrounds, hotels and RV parks park for free
6.	Bus Tour Groups – not common: a. Few areas for buses to stage within downtown b. Hotels within downtown charge more than outside of downtown
7.	Hotels, RV Parks and Vacation Rentals have high occupancy: a. 75% to 80% of Transient Occupancy Tax is generated by hotels, followed by vacation rentals and RV parks b. RV park occupancy never drops below 85% during summer months and approaches 100% during holidays and peak summer periods c. Person Occupancies: i. Hotel – 2.1 person/room (estimated) ii. RV Parks – above 2.1 persons/RV
8.	Tourist Activity Growth: a. Most visitors to Pismo Beach are driving from within a 5-hour radius, including from the Los Angeles, San Francisco, and Central Valley metropolitan areas. Growth in population within those areas will lead to tourist growth within Pismo Beach b. Transient Occupancy Tax is not good measure of past tourist growth, as increase is more tied to increased room rates rather than increased demand c. Building permits and retail sales are up dramatically within the year. Sales tax may be used to project future retail growth in Pismo Beach
9.	Other Traffic Issues: a. Many visitors drive, walk, and bicycle into the downtown from hotels and RV parks located outside of downtown b. Number of surreys and bicycles within downtown are increasing c. Parking demand has remained relatively flat – annual paid parking occupancy changed from 35% to 39% over six years d. More demand for hotel and RV area parking than downtown parking

In addition, a workshop exercise was conducted to discuss specific street network and congestion issues within the greater Pismo Beach region. **Exhibit 26 (Page 55)** summarizes those network issues.

Exhibit 26 – Street Network Issues Discussed at September 2014 Workshop

Item No.	Network Issue
1.	Trail parking at Cave Landing and Shell Beach Road (near Avila Beach) creates potential traffic hazard, as well as parking availability issues on El Portal Drive and Indio Drive (adjacent residential roadways) for trail users.
2.	Southbound US 101 merge from three lanes to two lanes, between Avila Beach Drive and Spyglass Drive and creates traffic congestion on US 101.
3.	Increasing congestion at the Spyglass Drive / Shell Beach Road intersection during peak hours.
4.	Mattie Road sidewalks and bicycle lanes are not connected to the rest of the city: a. Lack of sidewalk or bicycle lanes on Spyglass Drive between Mattie Road and Shell Beach Road. b. No striped bike lane along northbound Mattie Road. c. Lack of sidewalk along Mattie Road between 2400 Mattie Road and just south of Bayview Lane (i.e., Spyglass Drive). d. Lack of sidewalk and bicycle lanes between 1050 Mattie Road and Price Street. e. Bicycle lanes on Price Street near Mattie Road ends abruptly.
5.	Left turn from Price Street onto Wadsworth Avenue is problematic.
6.	Turning movement conflicts at Price Street / Dolliver Street (SR 1) – Southbound US 101 Off-Ramp cause traffic to back up onto southbound US 101.
7.	Lack of crosswalks across Dolliver Street (SR 1) creates pedestrian/vehicle conflicts and a safety hazard, especially during peak hours and peak season.
8.	Lack of surface street connections between north and south Pismo Beach. Extend Price Street to Five Cities Drive to relieve congestion at Five Cities Drive/US 101 interchange and provide direct pedestrian and transit connection to downtown.
9.	Major Perceived Traffic Congestion Locations (outside of downtown): a. Price Street / Hinds Avenue (Price Canyon Road) b. Oak Park Boulevard / US 101 Interchange c. Fourth Street / James Way d. Five Cities Drive / US 101 Interchange
10.	Major Perceived Traffic Congestion Locations (within downtown): a. Dolliver Street (SR 1) / Pomeroy Avenue b. Dolliver Street (SR 1) / Stimson Avenue c. Dolliver Street (SR 1) / Ocean View Avenue d. Price Street / Ocean View Avenue e. Price Street / Stimson Avenue f. Price Street / Hinds Avenue (Price Canyon Road) g. Price Street /Pomeroy Avenue
11.	Consider One-Way Turning Movements and Road Reconfiguration at: a. Ocean View Avenue b. Stimson Avenue c. Hinds Avenue d. Pomeroy Avenue
12.	Provide a pedestrian bridge across the Union Pacific Railroad tracks from James Way/Five Cities Drive to Pismo Beach Sports Complex on Frady Lane.
13.	Replace the US 101 bridge over Frady Lane and Pismo Creek to improve vehicular and emergency travel time for traffic underneath bridge.
14.	Consider converting part of Cypress Street into a bicycle boulevard, including lane configurations with one-way and two-way vehicle travel.

Possible future downtown and recreational parking areas were also suggested. These sites could provide access to the downtown, the future boardwalk promenade extension and the Pismo Preserve trailhead. **Exhibit 27** summarizes these suggestions. Other issues discussed are summarized in **Exhibit 28**.

Exhibit 27 – Suggested Future Parking Areas Discussed at September 2014 Workshop

Item No.	Suggested Future Parking Area
1.	New public parking lot off Terrace Avenue at Shell Beach Elementary School.
2.	Pismo Preserve trailhead at 850 Mattie Road (in addition to paving an existing dirt parking area along Price Street near Mattie Road)
3.	Kon Tiki Inn hotel, Steamers restaurant and Bank of America building near the intersection of Price and Dolliver (SR 1) Streets, including below-grade parking structures.
4.	Pismo Beach Self Storage site on Five Cities Drive.

Exhibit 28 – Other Issues Discussed at September 2014 Workshop

Item No.	Other Item
1.	Southbound US 101 off-ramp to Hinds Avenue – preserve, because it provides direct freeway access to downtown.
2.	Perhaps add signing to direct RV traffic from northbound US 101 to use Price Street, Pomeroy Avenue, and Dolliver Street (SR 1) and avoid Ocean View Avenue. Direct RV traffic bound for southbound US 101 to use Dolliver Street (SR 1), Hinds Avenue, and Price Street to avoid Ocean View Avenue.
3.	Color the existing bike lanes along Dolliver Street (SR 1).
4.	Vehicles utilize the one-lane bridge on Cypress Street over Pismo Creek to exit the downtown during high traffic periods.
5.	Pedestrians and bicyclists also use the Cypress Street bridge.
6.	Optimize downtown parking by adding spaces where possible and removing red curb and consolidating driveways.
7.	Heavy pedestrian traffic along Pomeroy Avenue near pier.
8.	Congestion on Hinds Avenue (Price Canyon Road) between Price Street and Bello Street

3. General Plan Buildout Conditions

A. Weekday PM – Volume Derivation

SLOCOG manages a transportation demand model that forecasts future traffic growth throughout San Luis Obispo County, including Pismo Beach in the Year 2035. This model, updated in 2014, was modified to add additional land use and street network detail in Pismo Beach to create a citywide model for Pismo Beach. The Existing Conditions model (i.e., Year 2010) land use information was updated in Pismo Beach to reflect 2014 conditions (i.e., the Year 2014 model). The resulting existing and 2035 volumes from the Pismo Beach model are included in **Appendix E**, in addition to the documentation of the SLOCOG model modifications.

Appendix F tabulates the net change in land use in the Pismo Beach area between the Existing Year model (Year 2014) and the Future Year model (Year 2035). In total, an additional 476 new homes (286 single family and 190 multi-family) and 690 new jobs are anticipated by both SLOCOG and the Pismo Beach Planning Department in Pismo Beach by the Year 2035. The net change in land use in **Appendix F** has been estimated for each of the 17 Neighborhood Planning Areas defined in the 1992 General Plan. For reference, **Appendix F** also includes the 1992 General Plan Neighborhood Planning Area Map. The Neighborhood Planning Areas where the highest growth in housing is expected include Area N - Oak Park Heights (144 dwelling units-d.u.), Area K - Commercial Core (103 d.u.), Area P - Pismo Heights and Freeway Foothills (101 d.u.) and Area B - South Palisades (48 d.u.). These represent 406 dwelling units, or 85% of the citywide growth. The remaining residential growth is scattered throughout the city. Most of the employment is anticipated in the hospitality and retail industries, primarily in Areas K (future downtown hotels) and N (retail).

The average percentage growth in volume forecasted on city streets from 2014 to 2035 was determined for six distinct regions of the city. This was then applied to forecast the resulting traffic volumes at each intersection in the study area. The future percentage growth will vary by region, ranging from a low of 12% to a high of 28% over existing conditions, averaging about 19% at study intersections citywide. **Appendix G** provides a table summarizing the growth factor for each intersection.

Exhibits 29A-C (Pages 59-62) depict the existing and future Weekday PM peak hour segment traffic volumes in the Pismo Beach region along city streets, the US 101 freeway, and freeway on- and off-ramps. Overall, the Pismo Beach region is projected to experience an overall 15% growth in traffic volumes along all city streets, freeways, and ramps between 2014 and 2035.

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Exhibit 29A – Weekday PM Peak Hour Segment Volumes on Greater Pismo Beach Area – Roadways

Street Name	Limits	Direction	Actual Count (2014)			Existing Model (2014)			Percent	Buildout Model (2035)			Percent
			N or E	S or W	Total	N or E	S or W	Total	Existing	N or E	S or W	Total	Growth
Avila Beach Drive	Shell Beach Road - US 101 SB Offramp to US 101 SB Onramp	E-W	516	205	721	363	147	510	71%	393	149	542	6%
Bello Street	Price Canyon Road to Bay Street	N-S	178	68	246	330	85	415	169%	321	88	410	-1%
Cypress Street	Dolliver Street (SR 1) to Ocean View Avenue	N-S	23	72	95	11	148	159	167%	20	194	215	35%
Cypress Street	Ocean View Avenue to Stimson Avenue	N-S	32	66	98	11	155	166	169%	21	203	225	35%
Cypress Street	Stimson Avenue to Hinds Avenue	N-S	60	77	137	2	137	138	101%	2	166	169	22%
Cypress Street	Hinds Avenue to Pomeroy Avenue	N-S	N/A	77	77	N/A	185	185	240%	N/A	232	232	26%
Cypress Street	Pomeroy Avenue to Main Street	N-S	20	N/A	20	47	N/A	47	234%	50	N/A	50	6%
Dolliver Street (SR 1)	South of Pismo Beach Senior MHP - Pismo Coast Village	N-S	370	500	870	174	502	676	78%	219	664	883	31%
Dolliver Street (SR 1)	Pismo Beach Senior MHP - Pismo Coast Village to Cypress Street - Holiday RV Park Ent.	N-S	600	526	1126	215	588	803	71%	261	754	1015	26%
Dolliver Street (SR 1)	Cypress Street - Holiday RV Park Ent. to Ocean View Avenue	N-S	410	502	912	230	470	700	77%	267	591	858	23%
Dolliver Street (SR 1)	Ocean View Avenue to Stimson Avenue	N-S	363	398	761	124	245	369	48%	148	323	471	28%
Dolliver Street (SR 1)	Stimson Avenue to Hinds Avenue	N-S	354	390	744	134	213	347	47%	167	284	451	30%
Dolliver Street (SR 1)	Hinds Avenue to Pomeroy Avenue	N-S	345	382	727	168	210	378	52%	212	284	496	31%
Dolliver Street (SR 1)	Pomeroy Avenue to Main Street	N-S	279	414	693	104	151	254	37%	130	220	350	37%
Dolliver Street (SR 1)	Main Street to Wadsworth Avenue	N-S	253	395	648	117	176	293	45%	140	247	386	32%
Dolliver Street (SR 1)	Wadsworth Avenue to Price Street	N-S	190	337	527	80	140	220	42%	96	203	299	36%
Dolliver Street (SR 1)	North of Price Street	N-S	N/A	247	247	N/A	88	88	36%	N/A	105	105	19%
Esparto Avenue	South of Shell Beach Road	N-S	15	27	42	0	0	0	0%	0	0	0	0%
Five Cities Drive	West of US 101 SB Ramps - Outlets Main Entrance	E-W	175	324	499	49	218	267	53%	57	248	305	14%
Five Cities Drive	US 101 SB Ramps - Outlets Main Entrance to Fourth Street	E-W	950	395	1345	540	307	847	63%	695	355	1050	24%
Five Cities Drive	East of Fourth Street	E-W	473	237	710	161	166	327	46%	271	232	503	54%
Fourth Street	South of Five Cities Drive	N-S	601	863	1464	371	528	899	61%	423	574	996	11%
Fourth Street	Five Cities Drive to US 101 NB Ramps	N-S	646	589	1235	481	379	860	70%	556	401	957	11%
Fourth Street	US 101 NB Ramps to James Way	N-S	338	257	595	356	235	591	99%	408	255	663	12%
Hinds Avenue	West of Cypress Street	E-W	136	N/A	136	173	N/A	173	127%	177	N/A	177	2%
Hinds Avenue	Cypress Street to Dolliver Street (SR 1)	E-W	187	N/A	187	223	N/A	223	119%	245	N/A	245	10%
Hinds Avenue	Dolliver Street (SR 1) to Price Street	E-W	178	N/A	178	187	N/A	187	105%	200	N/A	200	7%
Hinds Avenue	Price Street to US 101 SB Offramp	E-W	294	823	1117	262	682	944	85%	301	721	1022	8%
Hinds Avenue	US 101 SB Offramp to Bello Street	E-W	314	752	1066	279	363	643	60%	319	428	746	16%
James Way	West of US 101 NB Onramp	E-W	229	62	291	237	63	300	103%	262	65	327	9%
James Way	US 101 NB Onramp to Fourth Street - Paseo Ladera Lane	E-W	174	175	349	139	143	282	81%	156	168	324	15%
James Way	Fourth Street - Paseo Ladera Lane to Ridge Road	E-W	277	195	472	246	131	377	80%	278	137	415	10%
James Way	Ridge Road to Oak Park Boulevard	E-W	501	310	811	316	211	527	65%	179	106	285	-46%
James Way	East of Oak Park Boulevard	E-W	296	241	537	177	134	310	58%	195	141	336	8%
Main Street	West of Dolliver Street (SR 1)	E-W	51	34	85	47	0	47	55%	50	0	50	6%
Main Street	Dolliver Street (SR 1) to Price Street	E-W	33	19	52	509	21	530	1019%	485	21	506	-5%
Mattie Road	Price Street to US 101 NB Ramps	N-S	134	263	397	39	162	201	51%	44	199	243	21%
Mattie Road	North of US 101 NB Ramps	N-S	67	53	120	41	52	93	78%	57	68	125	34%
Mattie Road	South of Spyglass Drive	N-S	65	62	127	63	108	171	135%	86	140	226	32%
Oak Park Boulevard	South of El Camino Real	N-S	709	1098	1807	699	910	1609	89%	842	1039	1881	17%
Oak Park Boulevard	El Camino Real to US 101 NB Onramp - West Branch Street	N-S	1096	1099	2195	953	679	1632	74%	1110	835	1945	19%
Oak Park Boulevard	US 101 NB Onramp - West Branch Street to James Way	N-S	729	1043	1772	590	691	1281	72%	692	866	1558	22%
Oak Park Boulevard	North of James Way	N-S	294	439	733	217	204	421	57%	280	319	599	42%

Exhibit 29A – Weekday PM Peak Hour Segment Volumes in Greater Pismo Beach Area – Roadways (Continued)

Street Name	Limits	Direction	Actual Count (2014)			Existing Model (2014)			Percent	Buildout Model (2035)			Percent
			N or E	S or W	Total	N or E	S or W	Total	Existing	N or E	S or W	Total	Growth
Ocean View Avenue	West of Cypress Street	E-W	18	35	53	0	0	0	0%	0	0	0	0%
Ocean View Avenue	Cypress Street to Dolliver Street (SR 1)	E-W	20	46	66	145	134	279	422%	149	146	295	6%
Ocean View Avenue	Dolliver Street (SR 1) to Price Street - US 101 Ramps	E-W	100	183	283	330	387	716	253%	257	381	638	-11%
Pomeroy Avenue	West of Cypress Street	E-W	N/A	99	99	N/A	129	129	131%	N/A	136	136	5%
Pomeroy Avenue	Cypress Street to Dolliver Street (SR 1)	E-W	N/A	197	197	N/A	286	286	145%	N/A	330	330	15%
Pomeroy Avenue	Dolliver Street (SR 1) to Price Street	E-W	N/A	121	121	N/A	563	563	466%	N/A	571	571	1%
Price Canyon Road	East of Bello Street	E-W	218	741	959	173	290	463	48%	211	357	568	23%
Price Street	South of Ocean View Avenue	N-S	493	1068	1561	667	1059	1726	111%	752	1135	1887	9%
Price Street	Ocean View Avenue to Stimson Avenue	N-S	401	1062	1463	633	1007	1639	112%	704	1155	1858	13%
Price Street	Stimson Avenue to Hinds Avenue	N-S	386	1078	1464	616	1103	1720	117%	674	1196	1870	9%
Price Street	Hinds Avenue to Pomeroy Avenue	N-S	272	256	528	592	472	1065	202%	601	503	1104	4%
Price Street	Pomeroy Avenue to Main Street	N-S	165	285	450	29	472	501	111%	30	503	533	6%
Price Street	Main Street to Wadsworth Avenue	N-S	131	231	362	254	210	464	128%	234	244	478	3%
Price Street	North of Wadsworth Avenue	N-S	145	257	402	162	276	438	109%	200	319	520	19%
Price Street	South of US 101 SB Offramp - Dolliver Street (SR 1)	N-S	113	222	335	134	249	383	114%	151	282	433	13%
Price Street	North of US 101 SB Offramp - Dolliver Street (SR 1)	N-S	266	295	561	203	291	494	88%	231	356	586	19%
Price Street	South of US 101 SB Offramp	N-S	210	304	514	98	93	191	37%	113	153	266	39%
Price Street	US 101 SB Offramp to Mattie Road	N-S	251	244	495	124	63	188	38%	116	124	241	28%
Price Street	Mattie Road to US 101 SB Onramp	N-S	295	171	466	199	14	213	46%	214	46	260	22%
Price Street	US 101 SB Onramp to Windward Avenue	N-S	233	290	523	148	167	315	60%	179	206	385	22%
Shell Beach Road	West of Avila Beach Drive	E-W	132	N/A	132	95	N/A	95	72%	111	N/A	111	17%
Shell Beach Road	East of Avila Beach Drive	E-W	150	87	237	125	68	193	81%	182	101	283	47%
Shell Beach Road	West of Spyglass Drive	E-W	216	215	431	210	143	353	82%	166	237	403	14%
Shell Beach Road	Spyglass Drive to Terrace Avenue	E-W	401	205	606	291	150	441	73%	294	156	450	2%
Shell Beach Road	Terrace Avenue to Vista Del Mar Avenue	E-W	324	156	480	238	123	361	75%	274	144	419	16%
Shell Beach Road	Vista Del Mar Avenue to Esparto Avenue	E-W	292	222	514	141	73	214	42%	171	88	259	21%
Shell Beach Road	Esparto Avenue to Windward Avenue	E-W	296	238	534	159	133	291	55%	196	161	357	23%
Spyglass Drive	South of Shell Beach Road	N-S	86	100	186	65	73	139	75%	74	82	156	13%
Spyglass Drive	Shell Beach Road to US 101 SB Ramps	N-S	281	490	771	338	420	758	98%	433	541	974	29%
Spyglass Drive	US 101 SB Ramps to US 101 NB Ramps	N-S	188	185	373	249	134	383	103%	293	157	450	17%
Stimson Avenue	West of Cypress Street	E-W	44	57	101	74	61	135	134%	133	105	238	77%
Stimson Avenue	Cypress Street to Dolliver Street (SR 1)	E-W	57	89	146	51	47	98	67%	89	79	167	71%
Stimson Avenue	Dolliver Street (SR 1) to Price Street	E-W	52	92	144	35	73	108	75%	63	109	172	59%
Terrace Avenue	South of Shell Beach Road	N-S	29	26	55	40	30	71	129%	44	35	79	11%
Vista Del Mar Avenue	South of Shell Beach Road	N-S	19	43	62	50	98	148	238%	56	103	159	8%
Wadsworth Avenue	Cypress Street to Dolliver Street (SR 1)	E-W	41	30	71	0	0	0	0%	0	0	0	0%
Wadsworth Avenue	Dolliver Street (SR 1) to Price Street	E-W	77	61	138	38	37	75	55%	51	52	103	37%
Wadsworth Avenue	Price Street to US 101 NB Offramp	E-W	168	136	304	360	179	540	178%	363	225	588	9%
Wadsworth Avenue	US 101 NB Offramp to Bello Street	E-W	234	26	260	457	43	500	192%	470	44	513	3%
Wadsworth Avenue	Bello Street to Lemoore Avenue	E-W	116	63	179	179	75	255	142%	200	87	288	13%
West Branch Street	Oak Park Boulevard to Camino Mercado - US 101 NB Ramps	E-W	616	791	1407	374	385	759	54%	404	361	765	1%
Windward Avenue	South of Shell Beach Road	N-S	23	20	43	0	0	0	0%	0	0	0	0%
		Total:	20514	24533	45047	17543	19638	37181	83%	19697	23031	42728	15%

Exhibit 29B – Daily and Weekend PM Peak Hour
Segment Volumes in Greater Pismo Beach Area – Freeways

US 101	Caltrans Count (AADT)	PM Peak Hour*			Existing Model (2014)			Percent Existing	Buildout Model (2035)			Percent Growth
		North	South	Total	North	South	Total		North	South	Total	
South of Oak Park Boulevard	57500	2013	3738	5750	2306	3351	5657	98%	2612	3612	6223	10%
Oak Park Boulevard to Fourth Street	62900	2202	4089	6290	2639	3862	6501	103%	3022	4086	7107	9%
Fourth Street to Price Street (South)	69400	2429	4511	6940	2804	4264	7068	102%	3236	4624	7860	11%
Price Street (South) to Price Street (North)	63100	2209	4102	6310	2137	3542	5679	90%	2484	3800	6284	11%
Price Street (North) to Mattie Road	62200	2177	4043	6220	2267	3630	5897	95%	2562	3905	6467	10%
Mattie Road to Spyglass Drive	66450	2326	4319	6645	2156	3664	5820	88%	2418	3937	6355	9%
Spyglass Drive to Avila Beach Drive	67800	2373	4407	6780	2226	3657	5883	87%	2500	3986	6486	10%
North of Avila Beach Drive	64600	2261	4199	6460	2138	3447	5586	86%	2425	3778	6202	11%
	Total:	17988	33407	51395	18673	29418	48091	94%	21260	31726	52986	10%

* PM Peak Hour volumes estimated by assuming 10% of daily traffic is in PM Peak Hour and 65% of that is in SB direction

Exhibit 29C – Daily and Weekend PM Peak Hour
Segment Volumes in Greater Pismo Beach Area – Ramps

US 101 Ramp Type	Location	Caltrans Count ADT	Caltrans Count PM Pk Hr*	Actual Count	Existing Model	Percent Existing	Buildout Model	Percent Growth
NB Offramp	West Branch Street / Camino Mercado	2900	290	332	163	49%	166	2%
NB Onramp	West Branch Street / Camino Mercado	2500	250	227	111	49%	118	6%
NB Onramp	Oak Park Boulevard	6300	630	486	386	79%	459	19%
SB Onramp	El Camino Real	2300	230	270	32	12%	43	34%
SB Offramp	El Camino Real	1800	180	740	543	73%	517	-5%
SB Onramp	Fourth Street (South)	2100	210	245	90	37%	112	25%
NB Offramp	Fourth Street	4500	450	459	267	58%	283	6%
SB Offramp	Fourth Street (South)	6700	670	200	233	116%	272	17%
NB Onramp	Fourth Street	6300	630	435	250	57%	284	14%
NB Onramp	James Way	1600	160	193	182	94%	213	17%
SB Onramp	Five Cities Drive / Premium Outlets	1100	110	135	227	168%	155	-32%
SB Offramp	Five Cities Drive / Premium Outlets	7300	730	791	486	61%	533	10%
NB Offramp	Price Street (South)	5900	590	493	667	135%	752	13%
SB Onramp	Price Street (South)	8400	840	1068	1059	99%	1135	7%
SB Offramp	Hinds Avenue	757	76	91	336	370%	311	-8%
NB Offramp	Wadsworth Avenue	1548	155	176	234	133%	288	23%
NB Onramp	Bello Street	1686	169	175	364	208%	366	0%
SB Offramp	Dolliver Street (SR 1)	2070	207	247	88	36%	105	19%
NB Offramp	Mattie Road	2567	257	258	138	53%	171	24%
SB Offramp	Price Street	810	81	109	34	31%	32	-5%
NB Onramp	Mattie Road	1282	128	115	27	23%	27	1%
SB Onramp	Price Street (North)	1973	197	171	204	119%	195	-4%
SB Onramp	Spyglass Drive	1812	181	143	173	121%	160	-8%
NB Offramp	Spyglass Drive	1717	172	169	112	66%	123	10%
NB Onramp	Spyglass Drive	1877	188	175	182	104%	204	12%
SB Offramp	Spyglass Drive	1988	199	355	370	104%	404	9%
SB Onramp	Avila Beach Drive	2560	256	391	305	78%	319	5%
NB Offramp	Avila Beach Drive	2562	256	210	146	70%	149	2%
SB Offramp	Avila Beach Drive	975	98	132	95	72%	111	17%
NB Onramp	Avila Beach Drive	987	99	125	59	47%	74	25%
		Total:	8687	9116	7563	83%	8081	7%

* PM Peak Hour volumes estimated by assuming 10% of daily traffic is in PM Peak Hour

B. Summer Sunday and Memorial Day Sunday – Volume Derivation

The SLOCOG model forecasts traffic volume for typical weekdays. It does not forecast traffic volumes during Sundays. Two different methods were used to forecast traffic growth during the Summer Sunday and Memorial Day Sunday analysis periods:

1) Downtown Projects – The trip generation was estimated on a Sunday for each of the anticipated development projects in the downtown area. Their trips were assigned to the downtown street system on an intersection-by-intersection basis; and
2) Tourist Growth – projected tourist activity traffic growth in the downtown area.

Appendix H includes a trip generation table documenting Sunday peak hour traffic generated by future downtown developments. This was developed using the Institute of Transportation Engineers' publication *Trip Generation Manual*, 9th Edition, 2012. These trips were then distributed throughout the downtown region, using the trip distribution also depicted in **Appendix H**. It was assumed that none of these trips would remain within the downtown; instead, it was assumed that all of these trips would be coming from or going to destinations outside of the downtown. All visitor serving uses such as hotels and rental homes are assumed to be 100% occupied, which represents a worst case condition, but is typical of the busy summer weekends.

Future tourist growth in Downtown Pismo Beach is projected based on two sources. The first is the State of California projections for statewide population growth by county by the Year 2035. **Appendix I** contains those projections, along with calculations of the net percentage population growth in the five metropolitan regions of California from which most tourists to Pismo Beach are anticipated – San Francisco Bay Area, Monterey Bay Area, Central Coast, Southern California (Coastal), and the Southern Central Valley. These growth projections indicate an average population growth of about 1% per year between 2014 and 2035, or 21% total. Assuming that tourist activity in the Pismo Beach region would increase at the same rate as the statewide population growth, tourist activity would also increase by 21% between 2014 and 2035.

The conversion of the increase in tourist activity to an increase in vehicular activity was achieved in part by estimating the net increase in traffic volumes at key intersections in in the downtown during the summer season above the off-peak season. This represents the net increase in traffic in Pismo Beach during the summer season created by existing tourist activity. The percentage increase varied by intersection, but was approximately 30% for the Summer Sunday Midday peak hour and 25% for the Memorial Day Sunday Midday peak hour. When applied to the 21% growth in tourist activity anticipated by the Year 2035, they equated to a 6% increase in overall vehicle traffic by the Year 2035 for the Summer Sunday Midday peak hour, and a 5% increase in overall vehicle traffic by the Year 2035 for the Memorial Day Sunday Midday peak hour. These percentages were added to the forecasted traffic growth from increased development at intersections on the major roadways within the downtown that lead to the pier and beach areas.

The total increase in traffic at intersections in the downtown area during the Summer Sunday Midday and Memorial Day Sunday peak hours will range from 9% to 25% above Existing volumes over the next 20 years. For comparative purposes, Dolliver Street (SR 1) volumes have not increased over the past 35 years.

C. Traffic Operations and Recommendations - General Plan Buildout

INTERSECTIONS WITH ACCEPTABLE OPERATIONS

Exhibit 30 (Pages 66-70) summarizes the levels of service at the study intersections under General Plan Buildout Conditions (i.e., Year 2035), while **Exhibits 31A-B, 32, and 33 (Pages 71-74)** graphically depict the levels of service at those same intersections. The level of service calculations can be found in **Appendix J**. Most of the study intersections continue to operate better than the City and County standard of Level of Service (LOS) "C" and the Caltrans standard of the transition between LOS C and LOS D (i.e., LOS C/D). This includes 44 of 50 intersections studied during the Weekday PM peak hour, 11 of the 21 intersections during the Summer Sunday Midday peak hour, and 11 of the 21 intersections studied under the Memorial Day Sunday Midday peak hour.

INTERSECTIONS WITH DEFICIENT OPERATIONS

Exhibit 30 (Pages 66-70) also indicates the study intersections under General Plan Buildout Conditions that would operate at a deficient level of service, as well as the recommended improvements to correct each deficiency and the resulting operations with implementation of the identified roadway improvements. The deficient intersections, their projected operations and their respective improvements are also repeated below, organized by intersection number. More information about the recommended improvements and why they are recommended is provided in the following two sections, **Section 3.D – Improvements Recommended in Previous Studies (Page 75)** and **Section 3.E - Network Alternatives (Page 79)**.The following six (6) intersections will operate deficiently under the Weekday PM peak hour:

26. Price Street/Hinds Avenue (Overall LOS B, but long queues on Southbound Hinds) – Review signal timing and consider widening the Hinds bridge over US 101. Vertical clearance about US 101 may be an issue.
31. Dolliver Street (SR 1) / Stimson Avenue (Side Street LOS F - Implement Ocean View - Stimson Couplet)
34 Dolliver Street (SR 1) / Ocean View Avenue (Side Street LOS F - Implement Ocean View - Stimson Couplet)
35. US 101 Ramps - Price Street / Ocean View Avenue (Side Street LOS F - Implement Ocean View - Stimson Couplet)
42. Fourth Street / Five Cities Drive (Signal LOS E - Add Right Turn Overlap Phase on Eastbound Five Cities Drive and Optimize Signal Timing)
47. Camino Mercado - US 101 Northbound Ramps / West Branch Street (Signal LOS D - Optimize Signal Timing)
48. US 101 Southbound Ramps / El Camino Real (All-Way Stop LOS E - Install Signal)

The following ten (10) intersections will operate deficiently under the Summer Sunday Midday peak hour:

14. US 101 Southbound Off-ramp - Dolliver Street (SR 1) / Price Street (All-way stop LOS E - Install Roundabout)
16. Dolliver Street (SR 1) / Wadsworth Avenue (Side Street LOS F - Eliminate Two On-Street Parking Spaces to Accommodate a Right Turn Lane on Eastbound Wadsworth. Consider left turn pockets as an alternative.)
20. Dolliver Street (SR 1) / Main Street (Side Street LOS F - Eliminate One On-Street Parking Space to Accommodate a Right Turn Lane on Westbound Main. Consider left turn pockets as an alternative.)
21. Cypress Street / Pomeroy Avenue (Side Street LOS F - Install Signal with Pedestrian Scramble – described in Section 3.5.a – General Plan Buildout Conditions - Network Alternatives – Pier Area Improvements – Cypress Street/Pomeroy)
22. Dolliver Street (SR 1) / Pomeroy Avenue (Signal LOS E - Eliminate Three On-Street Parking Spaces to Accommodate a Right Turn Lane on Southbound Dolliver. Consider a northbound left turn pocket as an alternative. Also consider Modifying Signal to include Pedestrian Scramble – described in Section 3.5.b –

General Plan Buildout Conditions - Network Alternatives – Pier Area Improvements – Dolliver Street (State Route 1)/Pomeroy)

25. Dolliver Street (SR 1) / Hinds Avenue (Signal LOS F - Eliminate Two On-Street Parking Spaces to Accommodate a Right Turn Lane on Northbound Dolliver. Consider a southbound left turn pocket as an alternative.)
31. Dolliver Street (SR 1) / Stimson Avenue (Side Street LOS F - Implement Ocean View - Stimson Couplet)
32. Price Street / Stimson Avenue (Side Street LOS F - Implement Ocean View - Stimson Couplet)
34. Dolliver Street (SR 1) / Ocean View Avenue (Side Street LOS F - Implement Ocean View - Stimson Couplet)
35. US 101 Ramps - Price Street / Ocean View Avenue (Side Street LOS F - Implement Ocean View - Stimson Couplet)

The following ten (10) intersections will operate deficiently under the Memorial Day Midday peak hour:

14. US 101 Southbound Off-ramp - Dolliver Street (SR 1) / Price Street (All-way stop LOS F - Install Roundabout)
20. Dolliver Street (SR 1) / Main Street (Side Street LOS F - Eliminate One On-Street Parking Space to Accommodate a Right Turn Lane on Westbound Main. Consider left turn pockets as an alternative.)
21. Cypress Street / Pomeroy Avenue (Side Street LOS F - Install Signal with Pedestrian Scramble – described in Section 3.5.a – General Plan Buildout Conditions - Network Alternatives – Pier Area Improvements – Cypress Street/Pomeroy)
22. Dolliver Street (SR 1) / Pomeroy Avenue (Signal LOS E - Eliminate On-Street Parking to Accommodate Right Turn Lane on Southbound Dolliver. Consider a northbound left turn pocket as an alternative. Also consider Modifying Signal to include Pedestrian Scramble – described in Section 3.5.b – General Plan Buildout Conditions - Network Alternatives – Pier Area Improvements – Dolliver Street (State Route 1)/Pomeroy)
25. Dolliver Street (SR 1) / Hinds Avenue (Signal LOS F - Eliminate On-Street Parking to Accommodate Right Turn Lane on Northbound Dolliver. Consider a southbound left turn pocket as an alternative.)
30. Cypress Street / Stimson Avenue (Side Street LOS F - Implement Ocean View - Stimson Couplet)
31. Dolliver Street (SR 1) / Stimson Avenue (Side Street LOS F - Implement Ocean View - Stimson Couplet)
32. Price Street / Stimson Avenue (Side Street LOS F - Implement Ocean View - Stimson Couplet)
34. Dolliver Street (SR 1) / Ocean View Avenue (Side Street LOS F - Implement Ocean View - Stimson Couplet)
35. US 101 Ramps - Price Street / Ocean View Avenue (Side Street LOS F - Implement Ocean View - Stimson Couplet)

Exhibit 30 (Pages 66-70) also lists the improved levels of service at the deficient intersections resulting from the implementation of the corresponding recommended improvements. In many cases, the improvements are identical to those suggested under Existing conditions (i.e., in **Exhibit 21 (Pages 43-47)**).

Additional considerations for intersection improvements under General Plan Buildout conditions are identical to those described under Existing Conditions on Page 36.

Exhibit 30 – Intersection Levels of Service General Plan Buildout (Year 2035)

	N-S Street	E-W Street	Existing Lane Configuration	Existing Intersection Control	LOS Standard	General Plan Buildout (Year 2035)						General Plan Buildout With Improvements						Proposed Improvement(s)
						Weekday PM Peak Hr		Summer Sunday Mid		Memorial Day Sunday Mid		Weekday PM Peak Hr		Summer Sunday Mid		Memorial Day Sunday Mid		
						Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	
1	Shell Beach Road - US 101 SB Ramps	Avila Beach Drive	NB 1-L/R SB 1-L/T, 1-R EB 1-T/R WB 1-L/T	Two-Way Stop *(County)*	**C/D** *Side Street*	5.6 30.7	A D					***12.2***	***B***					**Roundabout**
2	Monte Road	Avila Beach Drive - US 101 NB Ramps	SB 1-R EB 1-L WB 1-T/R	Two-Way Stop *(County)*	**C/D** *Side Street*	3.1 9.6	A A											
3	Spyglass Drive	US 101 NB Ramps	NB 1-L, 1-T SB 1-T/R EB 1-L, 1-T/R	One-Way Stop	**C/D** *Side Street*	9.0 16.7	A C											
4	Spyglass Drive	US 101 SB Ramps	NB 1-T/R SB 1-L, 1-T WB 1-L/T, 1-R	One-Way Stop	**C/D** *Side Street*	5.9 13.3	A B											
5	Spyglass Drive	Shell Beach Road	NB 1-L/T/R SB 1-L, 1-T, 1-R EB 1-L, 1-T/R WB 1-L, 1-T, 1-R	All-Way Stop	**C**	16.4	C											
6	Terrace Avenue	Shell Beach Road	NB 1-L/R EB 1-T/R WB 1-L, 1-T	All-Way Stop	**C**	10.5	B											
7	Vista Del Mar Avenue	Shell Beach Road	NB 1-L/R EB 1-T/R WB 1-L/T	All-Way Stop	**C**	9.9	A											
8	Esparto Avenue	Shell Beach Road	NB 1-L/R EB 1-T/R WB 1-L/T	All-Way Stop	**C**	9.9	A											
9	Windward Avenue	Shell Beach Road	NB 1-L/R EB 1-T/R WB 1-L/T	All-Way Stop	**C**	10.1	B											
10	Mattie Road	US 101 NB Ramps	NB 1-L/T SB 1-T/R EB 1-L, 1-T/R	One-Way Stop	**C/D** *Side Street*	7.7 13.2	A B											

Notes:

1. L, T, R = Left, Through, Right.
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound.
3. Analysis performed using 2010 Highway Capacity Manual methodologies.
4. Overall level of service standard for Caltrans is the transition between LOS C and D.
5. Overall level of service standard for the City of Pismo Beach and County of San Luis Obispo is LOS C.
6. Worst approach level of service standard is generally LOS E. Level of service "F" is the level of service at which improvements would be required.
7. * = Delay is over 300 seconds (5 minutes)
8. N/A = Not Applicable. Proposed improvement combines intersections #1 and #50 into a single intersection.

Exhibit 30 – Intersection Levels of Service General Plan Buildout (Year 2035-Continued)

	N-S Street	E-W Street	Existing Lane Configuration	Existing Intersection Control	LOS Standard	General Plan Buildout (Year 2035)						General Plan Buildout With Improvements						Proposed Improvement(s)
						Weekday PM Peak Hr		Summer Sunday Mid		Memorial Day Sunday Mid		Weekday PM Peak Hr		Summer Sunday Mid		Memorial Day Sunday Mid		
						Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	
11	US 101 SB On-ramp	Price Street	EB 1-L/T WB 1-T/R	None	**C** *Side Street*	0.0 0.0	A A											
12	Mattie Road	Price Street	SB 1-L, 1-R EB 1-L/T WB 1-T/R	Signal	**C**	6.9	A											
13	US 101 SB Off-ramp	Price Street	SB 1-L, 1-R EB 1-T WB 1-T	One-Way Stop	**C/D** *Side Street*	2.4 12.4	A B											
14	US 101 SB Off-ramp - Dolliver Street (SR 1)	Price Street	NB 1-L, 1-R SB 1-L, 1-T, 1-R EB 1-T/R WB 1-L/T	All-Way Stop	**C/D**	16.8	C	**49.8**	**E**	**58.7**	**F**	***8.9***	***A***	***17.3***	***C***	***24.4***	***C***	**Roundabout**
15	US 101 NB On-ramp - Bello Street	Bay Street	NB 1-L/T/R EB 1-L/T/R WB 1-L/T/R	Two-Way Stop	**C/D** *Side Street*	0.3 9.7	A A											
16	Dolliver Street (SR 1)	Wadsworth Avenue	NB 1-L/T/R SB 1-L/T/R EB 1-L/T/R WB 1-L/T/R	Two-Way Stop	**C/D** *Side Street*	2.8 18.1	A C	5.3 **56.4**	A **F**	5.0 38.5	A E	***2.7*** ***17.2***	***A*** ***C***	***4.7*** ***50.1***	***A*** ***F***	***43.0*** ***31.5***	***E*** ***D***	**Eliminate 2 On-Street Parking Spaces to Accommodate Right Turn Lane on Eastbound Wadsworth**
17	Price Street	Wadsworth Avenue	NB 1-L/T/R SB 1-L, 1-T/R EB 1-L/T/R WB 1-L/T/R	All-Way Stop	**C**	10.2	B	13.5	B	16.4	C							
18	US 101 NB Off-ramp	Wadsworth Avenue	NB 1-L, 1-R EB 1-T WB 1-T	One-Way Stop	**C/D** *Side Street*	5.4 10.3	A B	3.2 12.0	A B	3.2 12.2	A B							
19	Bello Street	Wadsworth Avenue	NB 1-L/T/R SB 1-L/T/R EB 1-L/T/R WB 1-L/T/R	All-Way Stop	**C**	8.9	A											
20	Dolliver Street (SR 1)	Main Street	NB 1-L/T/R SB 1-L/T/R EB 1-L/T/R WB 1-L/T/R	Two-Way Stop	**C/D** *Side Street*	1.8 17.9	A C	**40.0** *	**E** **F**	**85.7** *	**F** **F**	***1.7*** ***17.2***	***A*** ***C***	***17.9*** ***145.9***	***C*** ***F***	***37.7*** ***284.4***	***E*** ***F***	**Eliminate 1 On-Street Parking Space to Accommodate Right Turn Lane on Westbound Main**

Notes:

1. L, T, R = Left, Through, Right.
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound.
3. Analysis performed using 2010 Highway Capacity Manual methodologies.
4. Overall level of service standard for Caltrans is the transition between LOS C and D.
5. Overall level of service standard for the City of Pismo Beach and County of San Luis Obispo is LOS C.
6. Worst approach level of service standard is generally LOS E. Level of service "F" is the level of service at which improvements would be required.
7. * = Delay is over 300 seconds (5 minutes)
8. N/A = Not Applicable. Proposed improvement combines intersections #1 and #50 into a single intersection.

Exhibit 30 – Intersection Levels of Service General Plan Buildout (Year 2035-Continued)

	N-S Street	E-W Street	Existing Lane Configuration	Existing Intersection Control	LOS Standard	General Plan Buildout (Year 2035)						General Plan Buildout With Improvements						Proposed Improvement(s)
						Weekday PM Peak Hr		Summer Sunday Mid		Memorial Day Sunday Mid		Weekday PM Peak Hr		Summer Sunday Mid		Memorial Day Sunday Mid		
						Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	
21	Cypress Street	Pomeroy Avenue	WB 1-L/T/R	One-Way Stop	**C** *Side Street*	17.7 17.9	C C	* *	F F	* *	F F	***4.6***	***A***	***4.5***	***A***	***4.5***	***A***	**Signal with Pedestrian Scramble**
22	Dolliver Street (SR 1)	Pomeroy Avenue	NB 1-L/T SB 1-T/R WB 1-L, 1-T/R	Signal	**C/D**	17.1	B	106.4	F	287.9	F	***16.4***	***B***	***40.9***	***D***	***76.6***	***E***	**Eliminate On-Street Parking to Accommodate Right Turn Lane on Southbound Dolliver**
25	Dolliver Street (SR 1)	Hinds Avenue	NB 1-T/R SB 1-L/T EB 1-L/T, 1-T/R	Signal	**C/D**	5.9	A	81.3	F	177.9	F	***5.8***	***A***	***47.0***	***D***	***38.4***	***D***	**Eliminate On-Street Parking to Accommodate Right Turn Lane on Northbound Dolliver**
26	Price Street	Hinds Avenue	NB 1-T, 1-T/R SB 1-L/T, 1-T EB 1-L, 1-T/R WB 1-L, 1-L/R	Signal	**C**	18.1	B	16.8	B	18.8	B	18.1	B	16.8	B	18.8	B	**1. Review signal timing to minimize SB Hinds queue** **2. Consider widening Hinds bridge over US 101 to mitigate SB Hinds queue**
27	US 101 SB Off-ramp	Hinds Avenue	SB 1-L, 1-R EB 1-T WB 2-T	One-Way Stop	**C/D** *Side Street*	1.4 17.6	A C	1.5 11.3	A B	2.0 11.9	A B							
28	Bello Street	Price Canyon Road	NB 1-L/T/R SB 1-L/T/R EB 1-L, 1-T/R WB 1-L, 1-T/R	Two-Way Stop	**C** *Side Street*	2.1 46.9	A E	4.4 23.4	A C	5.3 24.2	A C							
29	Lemoore Avenue	Price Canyon Road	NB 1-L, 1-T SB 1-T/R EB 1-L/R	One-Way Stop	**C** *Side Street*	0.3 19.0	A C											
30	Cypress Street	Stimson Avenue	NB 1-L/T/R SB 1-L/T/R EB 1-L/T/R WB 1-L/T/R	Two-Way Stop	**C** *Side Street*	6.4 10.6	A B	21.7 34.6	C D	31.1 55.1	D F	***7.8***	***A***	***9.2***	***A***	***9.9***	***A***	**Implement Ocean View - Stimson Couplet and All-Way Stop Control**

Notes:

1. L, T, R = Left, Through, Right.
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound.
3. Analysis performed using 2010 Highway Capacity Manual methodologies.
4. Overall level of service standard for Caltrans is the transition between LOS C and D.
5. Overall level of service standard for the City of Pismo Beach and County of San Luis Obispo is LOS C.
6. Worst approach level of service standard is generally LOS E. Level of service "F" is the level of service at which improvements would be required.
7. * = Delay is over 300 seconds (5 minutes)
8. N/A = Not Applicable. Proposed improvement combines intersections #1 and #50 into a single intersection.

Exhibit 30 – Intersection Levels of Service General Plan Buildout (Year 2035-Continued)

	N-S Street	E-W Street	Existing Lane Configuration	Existing Intersection Control	LOS Standard	General Plan Buildout (Year 2035)						General Plan Buildout With Improvements						Proposed Improvement(s)
						Weekday PM Peak Hr		Summer Sunday Mid		Memorial Day Sunday Mid		Weekday PM Peak Hr		Summer Sunday Mid		Memorial Day Sunday Mid		
						Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	
31	Dolliver Street (SR 1)	Stimson Avenue	NB 1-L/T/R SB 1-L/T/R EB 1-L/T/R WB 1-L/T/R	Two-Way Stop	C/D *Side Street*	8.2 60.4	A F	16.9 129.5	C F	27.6 194.4	D F	***9.2***	***A***	***9.7***	***A***	***10.5***	***B***	**Implement Ocean View - Stimson Couplet and Signal**
32	Price Street	Stimson Avenue	NB 1-L/T/R SB 1-L/T, 1-T/R EB 1-L/T, 1-R WB 1-L/T/R	Two-Way Stop	C *Side Street*	1.5 37.4	A E	7.9 117.3	A F	9.2 155.6	A F	***1.3*** ***10.1***	***A*** ***B***	***1.1*** ***25.8***	***A*** ***D***	***1.3*** ***11.0***	***A*** ***B***	**Implement Ocean View - Stimson Couplet**
33	Cypress Street	Ocean View Avenue	NB 1-L/T/R SB 1-L/T/R EB 1-L/T/R WB 1-L/T/R	Two-Way Stop	C *Side Street*	4.3 10.1	A B	7.3 12.6	A B	7.2 16.0	A C	***3.6*** ***10.4***	***A*** ***B***	***5.3*** ***14.0***	***A*** ***B***	***6.3*** ***15.9***	***A*** ***C***	**Implement Ocean View - Stimson Couplet**
34	Dolliver Street (SR 1)	Ocean View Avenue	NB 1-L/T/R SB 1-L/T/R EB 1-L/T/R WB 1-L/T/R	Two-Way Stop	C/D *Side Street*	32.7 175.6	D F	50.6 *	F F	82.9 *	F F	***1.4*** ***22.9***	***A*** ***C***	***1.8*** ***29.6***	***A*** ***D***	***2.7*** ***28.2***	***A*** ***D***	**Implement Ocean View - Stimson Couplet**
35	US 101 Ramps - Price Street	Ocean View Avenue	NB 1-L, 1-T/R SB 1-L, 1-T, 1-R EB 1-L/T, 1-R WB 1-L/T/R	Two-Way Stop	C/D *Side Street*	4.2 55.5	A F	22.4 147.5	C F	19.7 174.3	C F	***2.5*** ***25.7***	***A*** ***D***	***14.1*** ***67.6***	***B*** ***F***	***10.9*** ***64.1***	***B*** ***F***	**Implement Ocean View - Stimson Couplet and Price Street Restriping**
36	Dolliver Street (SR 1)	Cypress Street - Holiday RV Park Ent.	NB 1-L, 1-T/R SB 1-L, 1-T/R EB 1-L/T/R WB 1-L/T/R	Two-Way Stop	C/D *Side Street*	1.3 14.7	A B	2.1 21.5	A C	2.5 17.9	A C							
37	Dolliver Street (SR 1)	Pismo Beach Senior MHP - Pismo Coast Village	NB 1-L, 1-T/R SB 1-L, 1-T/R EB 1-L/T/R WB 1-L/T/R	Signal	C/D	8.3	A	12.9	B	11.1	B							
38	US 101 NB On-ramp	James Way	EB 1-T/R WB 1-L, 1-T	None	C/D *Side Street*	0.0 0.0	A A											
39	Fourth Street - Paseo Ladera Lane	James Way	NB 1-L/T, 1-R SB 1-L/T/R EB 1-L/T, 1-R WB 1-L, 1-T/R	All-Way Stop	C	10.6	B											
40	Fourth Street	US 101 NB Ramps	NB 2-L, 2-T SB 1-T, 1-T/R EB 1-L, 1-T/R	Signal	C/D	15.1	B											

Notes:

1. L, T, R = Left, Through, Right.
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound.
3. Analysis performed using 2010 Highway Capacity Manual methodologies.
4. Overall level of service standard for Caltrans is the transition between LOS C and D.
5. Overall level of service standard for the City of Pismo Beach and County of San Luis Obispo is LOS C.
6. Worst approach level of service standard is generally LOS E. Level of service "F" is the level of service at which improvements would be required.
7. * = Delay is over 300 seconds (5 minutes)
8. N/A = Not Applicable. Proposed improvement combines intersections #1 and #50 into a single intersection.

Exhibit 30 – Intersection Levels of Service General Plan Buildout (Year 2035-Continued)

	N-S Street	E-W Street	Existing Lane Configuration	Existing Intersection Control	LOS Standard	General Plan Buildout (Year 2035)						General Plan Buildout With Improvements						Proposed Improvement(s)
						Weekday PM Peak Hr		Summer Sunday Mid		Memorial Day Sunday Mid		Weekday PM Peak Hr		Summer Sunday Mid		Memorial Day Sunday Mid		
						Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	
41	US 101 SB Ramps - Outlets Main Entrance	Five Cities Drive	NB 1-L, 1-T/R SB 1-L, 1-L/T, 1-T/R EB 1-L, 1-T, 1-T/R WB 1-L, 1-T, 1-R	Signal	C/D	29.2	C											
42	Fourth Street	Five Cities Drive	NB 1-L, 1-T, 1-T/R SB 1-L, 1-T, 1-R EB 1-L, 1-T, 1-R WB 1-L, 1-T/R	Signal	C	61.3	E					***34.5***	***C***					**Add Right Turn Overlap Phase on Eastbound Five Cities Drive and Optimize Signal Timing**
43	US 101 SB Ramps - Hotel Driveway	Five Cities Drive - El Camino Real	NB 1-L/T/R SB 1-L/T, 1-R EB 1-L/T/R WB 1-L/T/R	All-Way Stop	C/D	21.7	C											
44	Ridge Road	James Way	SB 1-L/R EB 1-L, 1-T WB 1-T/R	All-Way Stop	C	9.3	A											
45	Oak Park Boulevard	James Way	NB 1-L, 1-T, 1-T/R SB 1-L, 1-T, 1-T/R EB 1-L, 1-T, 1-R WB 1-L, 1-T/R	Signal	C	34.9	C											
46	Oak Park Boulevard	US 101 NB On-ramp - West Branch Street	NB 1-L, 1-T, 1-T/R SB 1-L, 1-T, 1-T/R WB 1-L, 1-L/T, 1-R	Signal	C	14.8	B					***27.6***	***C***					**Revise NS Oak Park Blvd. Protected/Pemissive Left Turn Phasing to Protected Only**
47	Camino Mercado-US 101 NB Ramps	West Branch Street	NB 1-L, 1-T/R SB 1-L, 1-T/R EB 1-L, 1-T, 1-T/R WB 1-L, 1-T	Signal *(Arroyo Grande)*	C/D	41.0	D					***34.9***	***C***					**Optimize Signal Timing**
48	US 101 SB Ramps	El Camino Real	SB 1-L, 1-L/R EB 1-L/T WB 1-T/R	All-Way Stop *(Grover Beach)*	C/D	43.6	E					***12.9***	***B***					**Signal**
49	Oak Park Boulevard	El Camino Real	NB 1-L, 1-T, 1-T/R SB 1-L, 2-T, 1-R EB 1-L, 1-L/T, 1-R WB 1-L, 1-T/R	Signal *(Arroyo Grande)*	C	29.7	C					**33.9**	***C***					**Revise NS Oak Park Blvd. Protected/Pemissive Left Turn Phasing to Protected Only**
50	US 101 SB On-ramp	Avila Beach Drive	EB 1-T/R WB 1-L/T	None *(County)*	C/D *Side Street*	0.0 0.0	A A					***N/A***						**Consolidate with Intersection #1**

Notes:

1. L, T, R = Left, Through, Right.
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound.
3. Analysis performed using 2010 Highway Capacity Manual methodologies.
4. Overall level of service standard for Caltrans is the transition between LOS C and D.
5. Overall level of service standard for the City of Pismo Beach and County of San Luis Obispo is LOS C.
6. Worst approach level of service standard is generally LOS E. Level of service "F" is the level of service at which improvements would be required.
7. * = Delay is over 300 seconds (5 minutes)
8. N/A = Not Applicable. Proposed improvement combines intersections #1 and #50 into a single intersection.

Exhibit 31A – Intersection Operations General Plan Buildout Weekday PM Peak Hour

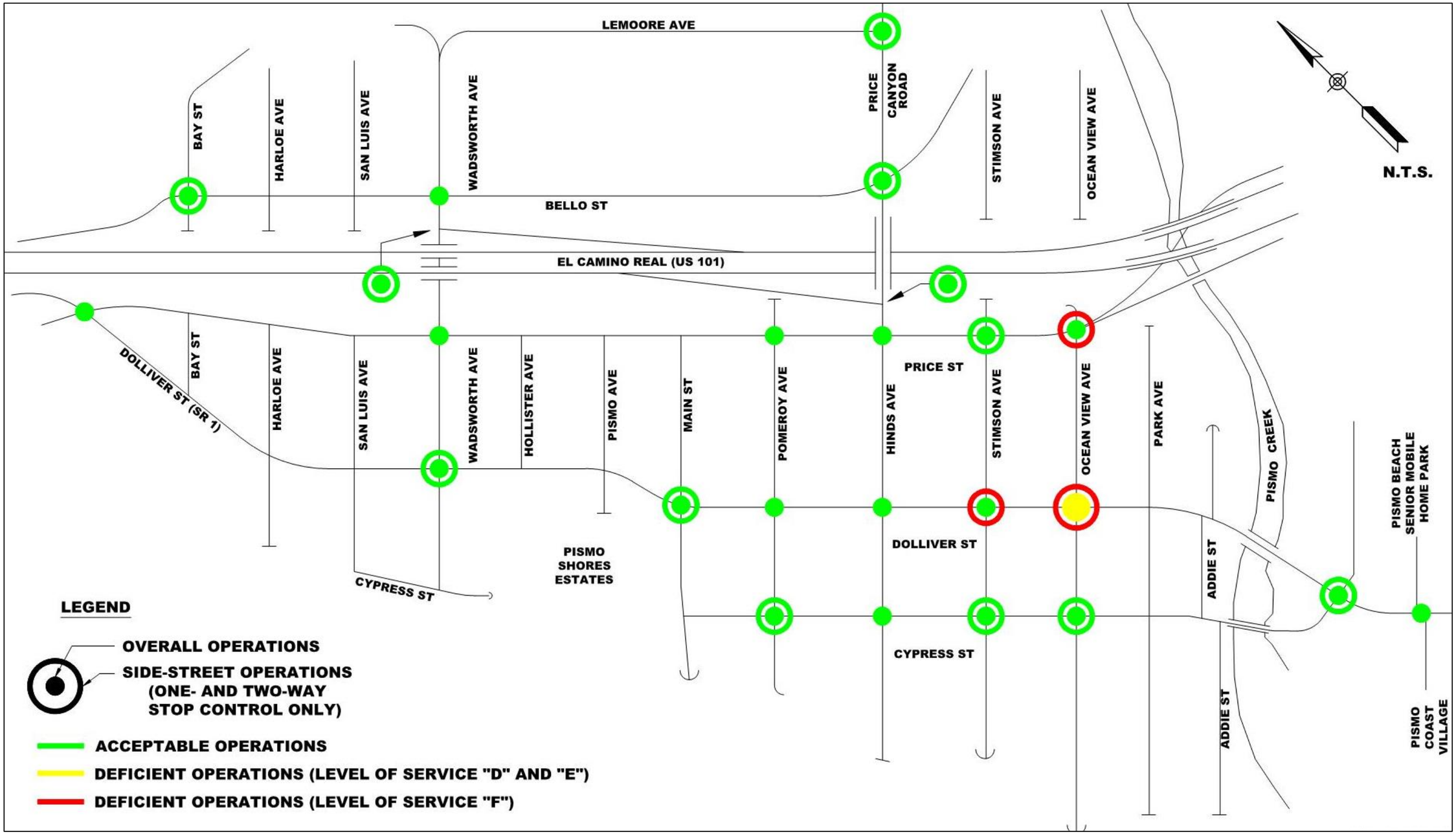


Exhibit 31B – Intersection Operations General Plan Buildout Weekday PM Peak Hour (Continued)

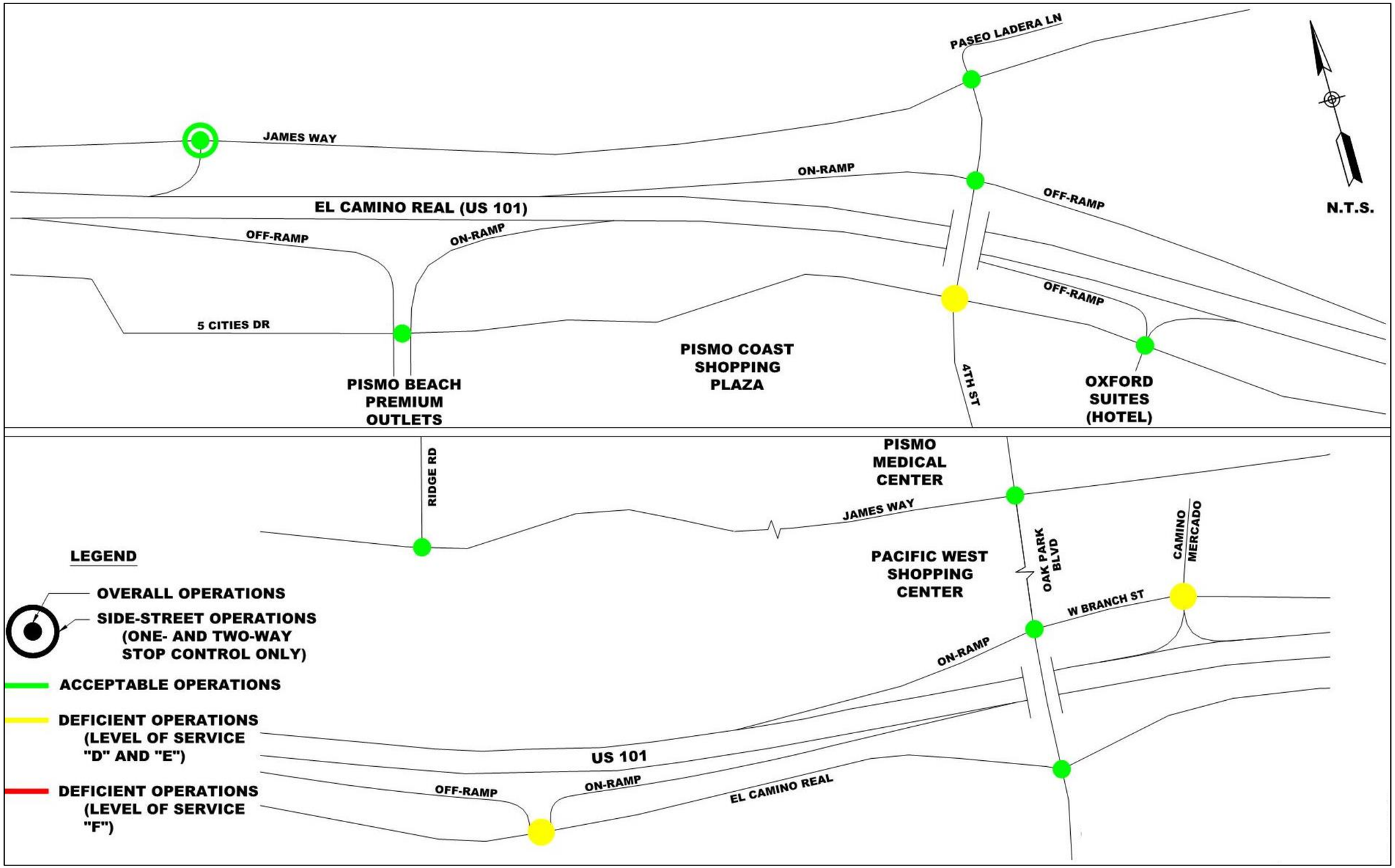


Exhibit 32 – Intersection Operations General Plan Buildout Summer Sunday Midday Peak Hour

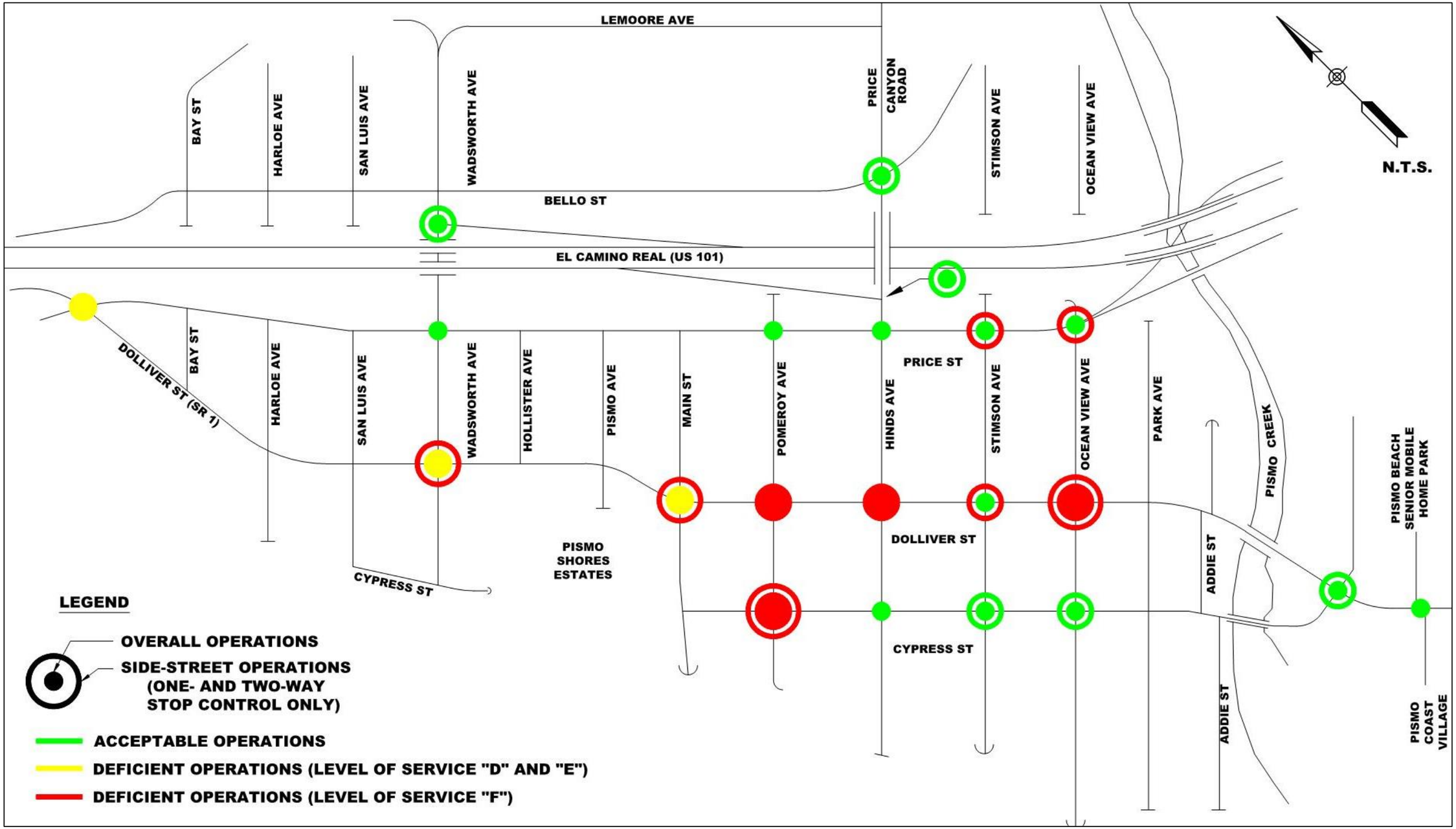
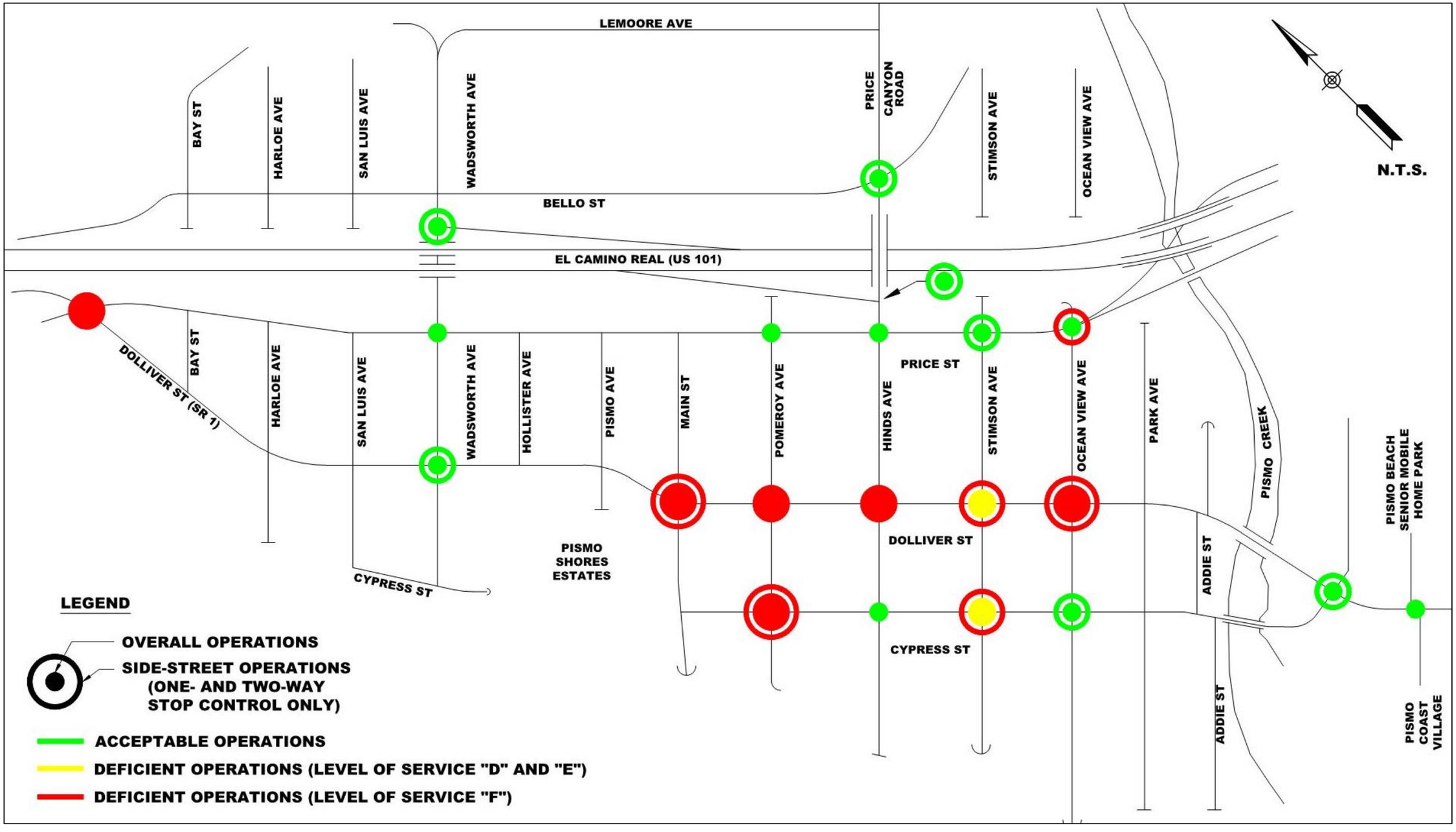


Exhibit 33 – Intersection Operations General Plan Buildout Memorial Day Sunday Midday Peak Hour



D. Improvements Recommended in Previous Studies

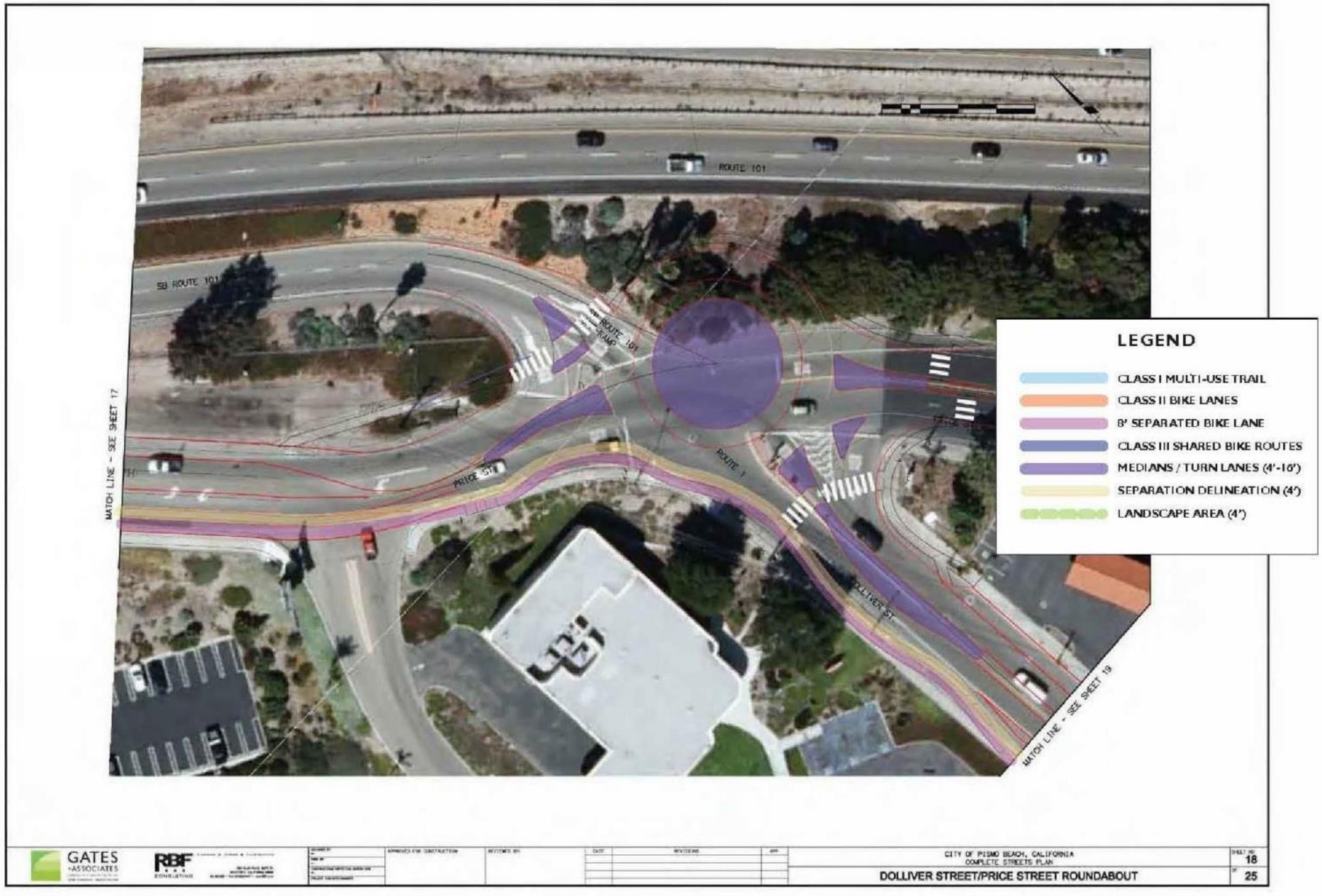
A roundabout was recommended at the intersection of the US 101 Southbound Off-ramp – Dolliver Street (SR 1) and Price Street intersection (Intersection No. 14) in the Pismo Beach Complete Street Plan. It is depicted on **Exhibit 34 (Page 77)**. As indicated in the level of service summary table on **Exhibit 30 (Pages 66-70),** a one-lane roundabout can successfully accommodate Year 2035 traffic demand at Level of Service C.

Caltrans has proposed adding a new southbound on-ramp to US 101 at this intersection. **Exhibit 35 (Page 78)** illustrates how it would connect into the roundabout. It is anticipated that this ramp could be added to the proposed roundabout without requiring major modifications to the physical layout of the roundabout.

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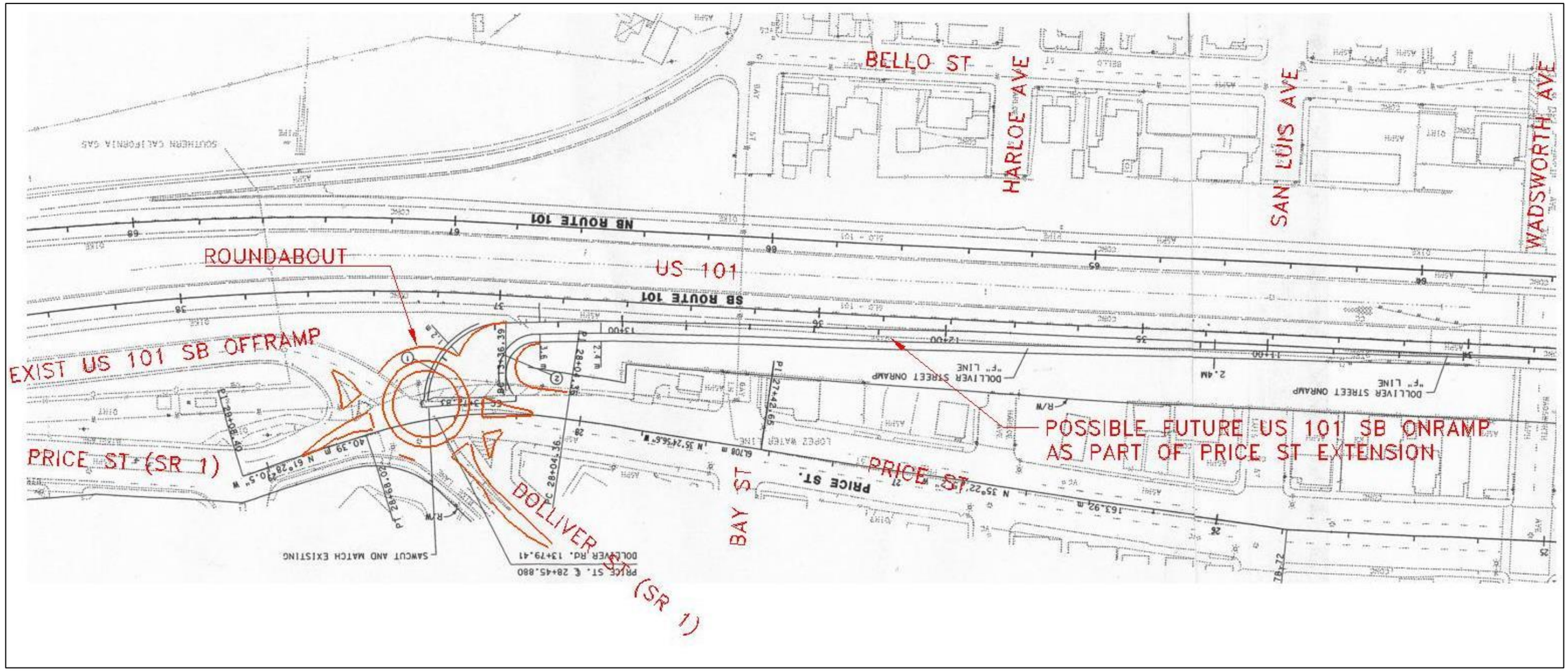
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Exhibit 34 – Dolliver St. (SR1) / Price St. Roundabout



Source: "Pismo Beach Complete Street Plan", Gates + Associates, March 2013, p77

Exhibit 35 – Dolliver St. (SR1) / Price St. Roundabout with Future US 101 SB Onramp



Sources:

1. Roundabout Layout- "Pismo Beach Complete Street Plan", Gates + Associates, March 2013, p77
2. Future Southbound On-Ramp – "Price Street Extension Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment", Caltrans, September 2004

E. Network Alternatives

In addition to the existing street network, which was considered the base condition, various major network alternatives (i.e., changes to the Pismo Beach street network such as new streets, conversions to one way streets or street realignments) were also evaluated for Year 2035 conditions. This study evaluates their effectiveness in improving operations at the study intersections or achieving other network enhancements. They are in addition to the intersection improvements described in Section 3.C – Traffic Operations and Recommendations – General Plan Buildout. They are listed below and separately described in the following pages.

1) Price Street Extension;
2) Frady Lane Improvements
3) Mattie Road Extension.

The citywide model was used to forecast traffic with these network alternatives. The forecast volumes are included in **Appendix E**.

A number of downtown-specific network alternatives were also evaluated. They include:

4) Stimson / Ocean View Couplet and Downtown Price Street Modifications;
5) Pier Area Improvements
    a. Cypress Street/Pomeroy Avenue Pedestrian Scramble Traffic Signal and
    b. Dolliver Street (State Route 1)/Pomeroy Signal Modification to Pedestrian Scramble
    c. Dolliver Street Left Turn Pockets
    d. Restrict Motorized Vehicles on the Cypress Street Bridge
    e. Cypress Street Bike Boulevard;
    f. Addie / Park Avenue Couplet; and
    g. Restrict Motorized Vehicles on Pomeroy Avenue South of Cypress
6) Other downtown network modifications were also considered. They include:
    a. Reverse One-Way on Pomeroy and Hinds;
    b. Dolliver / Price Couplet; and
    c. Dolliver / Bello Couplet.

1) Price Street Extension

The Price Street Extension would extend Price Street eastward across Pismo Creek to connect to Five Cities Drive. In 2004, Caltrans prepared an environmental evaluation of the potential design options for this improvement (*Price Street Extension Initial Study with Proposed Mitigated Negative Declaration/ Environmental Assessment*), based on the *James Way/Price Street Frontage Road Project Study Report,* March 1998. The recommended option had the following four components:

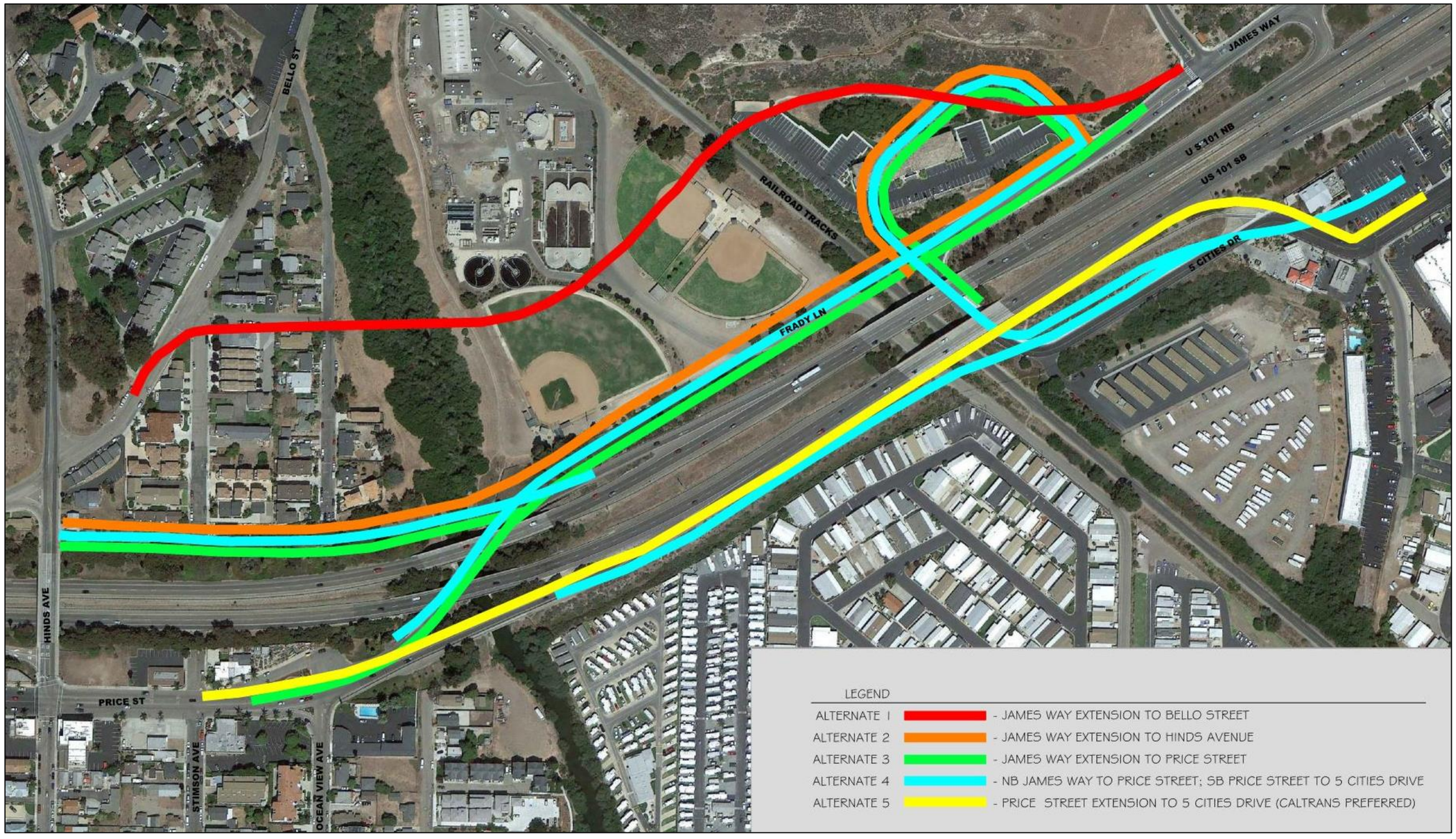
1. Extend Price Street over Pismo Creek and over the Union Pacific Railroad to connect with Five Cities Drive. This would be a two-lane road with 6-foot shoulders on each side (suitable for use by bicycle traffic) and a 5-foot sidewalk along the ocean-side of the street.
2. Closure of the existing southbound US 101 on-ramp from southbound Price Street.
3. Closure of the existing southbound US 101 off-ramp at Hinds Avenue.
4. Addition of a new southbound US 101 on-ramp at the Price / Southbound US 101 Off-Ramp – Dolliver intersection.

A schematic layout of this improvement is included as **Exhibit 36 (Page 81)**. This exhibit also illustrates four other alternative alignments analyzed in the 1998 Project Study Report (PSR) for either the Price Street Extension or James Way Extension. The following is a list of the five alternatives.

1. Alternative 1 – James Way Extension to Bello Street
2. Alternative 2 – James Way Extension to Hinds Avenue
3. Alternative 3 – James Way Extension to Price Street
4. Alternative 4 – Northbound James Way to Price Street; Southbound Price Street to Five Cities Drive
5. Alternative 5 – Price Street Extension to Five Cities Drive (Caltrans Preferred Alternative and the recommended alignment described above and analyzed below).

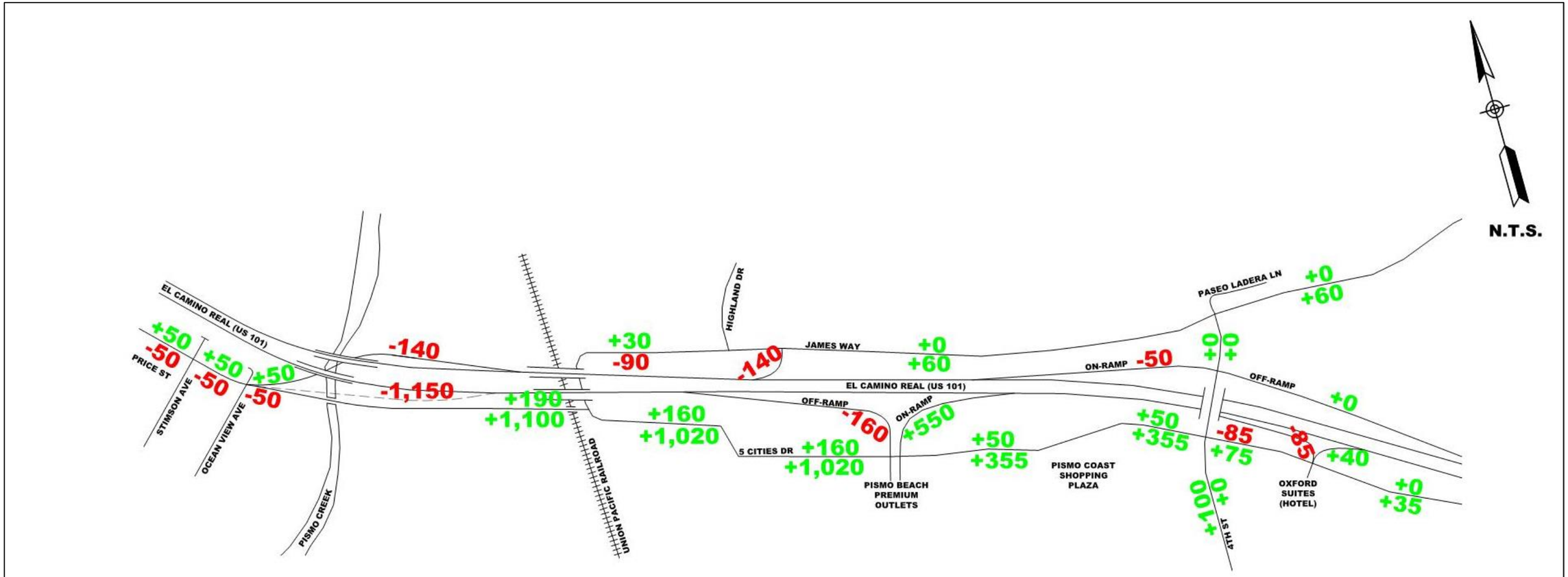
Year 2035 citywide model volume projections for Alternative 5 is included in **Appendix K**. The projected traffic diversions are displayed in **Exhibit 37 (Page 82)**. Total traffic volumes on the Price Street extension are anticipated to be almost 1,100 vehicles in the southbound direction and about 190 vehicles in the northbound direction. Most of this traffic is taken off of US 101 between the Price Street and Fourth Street interchanges. About 140 of the 190 vehicles in the northbound direction would be diverted from that section of freeway. About 1,150 vehicles would be diverted from US 101 in the southbound direction.

Exhibit 36 – Price Street / James Way Extension Alternatives



Source of Alternatives: "James Way/Price Street Frontage Road Project Study Report", March 1998 and
"Price Street Extension Initial Study with Proposed Mitigation Negative Declaration/Environmental Assessment", September 2004.

Exhibit 37 – Projected Traffic Diversions with Price Street Extension (Year 2035 – PM Peak Hour)



LEGEND

+XX INCREASE IN PEAK HOUR TRAFFIC (PM PEAK HOUR)

-XX DECREASE IN PEAK HOUR TRAFFIC (PM PEAK HOUR)

Exhibit 38 – US 101 SB Ramps – Outlets Main Entrance
Intersection Level of Service – General Plan Buildout
Weekday PM Peak Hour – With Price Street Extension

	N-S Street	E-W Street	Existing Lane Configuration	Existing Intersection Control	LOS Standard	General Plan (Year 2035) Weekday PM Peak Hr Delay (sec)	General Plan (Year 2035) Weekday PM Peak Hr LOS	General Plan With Imprvmnts. Weekday PM Peak Hr Delay (sec)	General Plan With Imprvmnts. Weekday PM Peak Hr LOS	Proposed Improvement(s)
41	US 101 SB Ramps - Outlets Main Entrance	Five Cities Drive	NB 1-L, 1-T/R SB 1-L, 1-L/T, 1-T/R EB 1-L, 1-T, 1-T/R WB 1-L, 1-T, 1-R	Signal	C/D	256.0	F	*38.6*	*D*	Add 2nd WB L, 2nd EB L, Change E/W Left Turn Phasing to Protected Phasing, Lag WB L Phase behnd EB T Phase, Accept LOS D as Standard

Notes:

1. L, T, R = Left, Through, Right.
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound.
3. Analysis performed using 2010 Highway Capacity Manual methodologies.
4. Overall level of service standard for Caltrans is the transition between LOS C and D.
5. Overall level of service standard for the City of Pismo Beach and County of San Luis Obispo is LOS C.

The Price Street Extension would improve southbound freeway operations with the substantial diversion of traffic from US 101. However, it will have an impact that was not addressed in either the 1998 or 2004 Caltrans reports – the diversion of commute traffic on Price Canyon Road that currently uses Hinds Avenue and Price Street to access southbound US 101. With the removal of the southbound US 101 on-ramp at Price Street, this traffic would proceed westward to the Five Cities Drive southbound US 101 on-ramp. In the weekday PM peak hour, almost 1,100 vehicles in the southbound direction and about 190 vehicles in the northbound direction will be added to Five Cities Drive west of the US 101 Ramps / Pismo Beach Premium Outlets intersection. The SLOCOG model projects that an additional 550 vehicles during the weekday PM peak hour will enter US 101 at the Five Cities Drive southbound on-ramp. As noted on **Exhibit 38 (above)**, this increase in hourly traffic would overwhelm the existing westbound Five Cities Drive left turn lane onto southbound US 101, resulting in an F level of service. This left turn movement would need two lanes to accommodate this level of traffic, which in turn would require widening of the southbound US 101 on-ramp. A conceptual design of these improvements is shown in **Exhibit 39 (Page 85)**. Even with this improvement, it may not be possible to achieve acceptable operations at this intersection, with a mitigated level of service "D" during the weekday evening peak hour.

The Caltrans report also did not finalize the design of the merge between the Price Street extension and the existing northbound US 101 off-ramp to Price Street, nor did it finalize the necessary lane configuration along Price Street between Hinds and Ocean View Avenues. The merge between the northbound Price Street extension and the northbound US 101 off-ramp will need to continue along Price Street between Stimson and Ocean View Avenues, to for proper merge length between through lanes. A left turn lane at Ocean View Avenue is thus not recommended, as it would encourage off-ramp traffic to immediately weave directly across Price Street and into the left turn lane that would start only a few feet away from the merge point. This maneuver would not be expected by traffic on the Price Street extension and could result in undesirable safety consequences. The Stimson / Ocean View couplet would also be indispensable to mitigate the short weaving operational problems (see below for more on the Stimson / Ocean View couplet).

The Price Street Extension includes the addition of a southbound US 101 on-ramp at the Price Street / Southbound US 101 Off-Ramp – Dolliver Street (SR 1) intersection. This ramp is expected to only attract a few of the commuters using Price Canyon Road, because accessing an on-ramp at that location would require Price Canyon Road traffic to travel too far out of their way. It would also have a limited attraction from within the downtown area. It is forecasted to attract a total about 110 vehicles during the PM peak hour.

The addition of the US 101 southbound on-ramp at Dolliver Street - Price Street intersection would require the closure of the southbound US 101 off-ramp to Hinds Avenue. This ramp only carries about 90 vehicles in the PM peak hour. However, its closure would also have unintended consequences. It is the primary route for trucks servicing the oil fields along Price Canyon Road north of Pismo Beach. With its closure, those trucks would be forced to travel through the downtown, presumably on Price Street. It is recommended that if the Hinds Avenue off-ramp is closed in the future, that the City of Pismo Beach prohibit through trucks on Price Street, forcing trucks to use Dolliver Street (SR 1) and Hinds Avenue to access Price Canyon Road, which is also through downtown Pismo Beach.

Two other design options for the Price Street extension would be an extension of James Way, the frontage road on the inland side of US 101. The James Way extension options evaluated in the 2004 Caltrans report were:

i. James Way Extension to Hinds Avenue – This improvement would extend James Way westward along the freeway to Hinds Avenue. It is designated Alternative 2 in the 1998 PSR and on **Exhibit 33 (page 74)**. Five Cities Drive would be rerouted underneath the James Way extension and looped back to James Way near Highland Drive. This option was originally proposed prior to the development of the Pismo Beach Medical Center at the current western end of James Way. The Five Cities Drive loop would now require a larger loop that around the perimeter of that development. Also, the western end of the James Way extension and the northern end of the Five Cities Drive Loop would both be located very close to the Highland Drive intersection. Adequate left turn lane storage may not be able to be provided along this section of James Way.

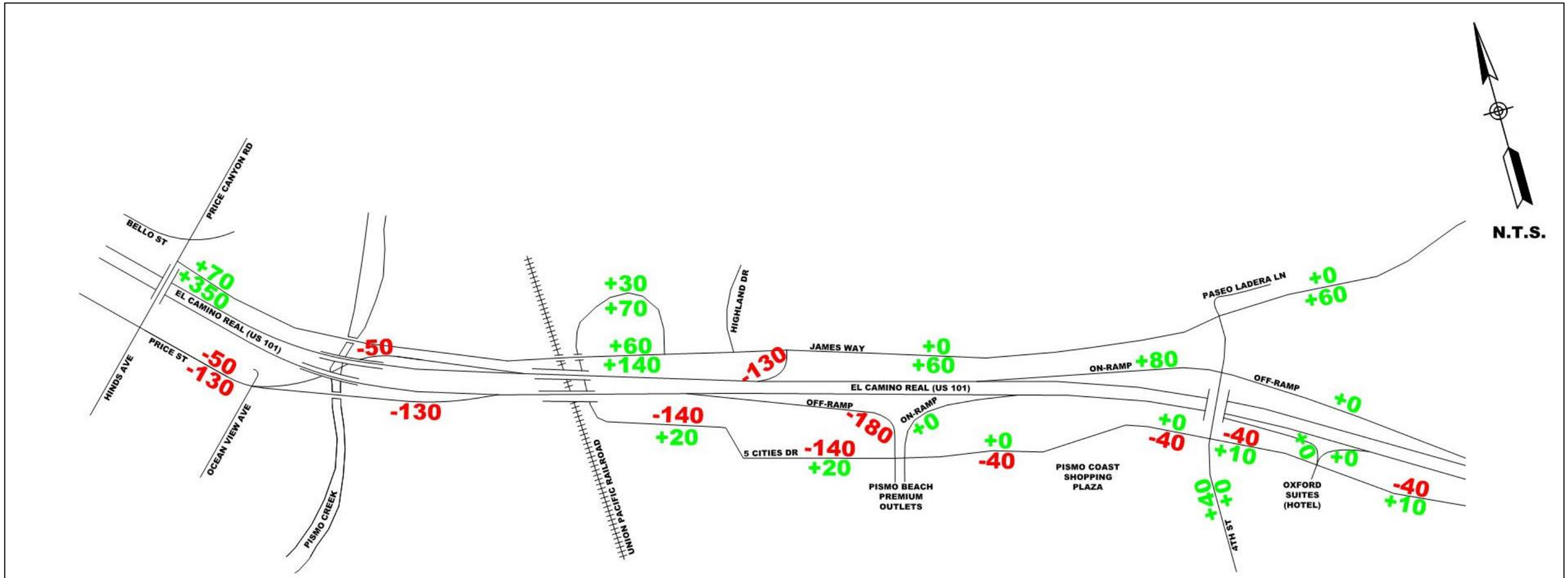
   The effect of the James Way extension on traffic patterns would primarily be regional in nature. Year 2035 citywide model volume projections for this alternative can be found in **Appendix K**, and the projected traffic diversions are displayed in **Exhibit 40 (Page 86)**. The James Way extension would carry about 70 vehicles in the northbound direction and 350 vehicles in the southbound direction. This diversion would be from both commuters along Price Canyon Road and traffic from within the downtown area, some of which would be diverted from the US 101 southbound on- and northbound off-ramp at Price Street. Diversions would also occur from the southbound Five Cities Drive off-ramp.

ii. James Way Extension to Price Street – This improvement would extend James Way to Price Street on the alignment of the northbound US 101 off-ramp to Price Street. The existing northbound US 101 off-ramp to Price Street would be removed. It is designated Alternative 4 in the PSR and **Exhibit 33 (page 74)**. The primary negative aspect of this improvement would be that it would remove the primary access into the downtown from northbound US 101. During the weekday PM peak hour, approximately 500 vehicles would be forced to divert to either the Wadsworth Avenue or Fourth Street off-ramps to access downtown Pismo Beach.

Exhibit 39 – Five Cities Drive / US101 SB Ramps – Outlets Main Entrance Improvements with Price Street Extension



Exhibit 40 – Projected Traffic Diversions with James Way Extension (Year 2013- PM Peak Hour)



LEGEND

+XX INCREASE IN PEAK HOUR TRAFFIC (PM PEAK HOUR)

-XX DECREASE IN PEAK HOUR TRAFFIC (PM PEAK HOUR)

2) **Frady Lane Improvements**

The Frady Lane Improvement would realign Frady Lane near the Pismo Beach Sports Complex. **Exhibit 41 (Page 89)** depicts a conceptual design of this improvement. Currently, it meanders between the existing baseball fields, bisecting the Sports Complex. The proposed alignment would be much straighter and be located between the baseball fields and the Union Pacific Railroad tracks. The proposed improvement would provide better pedestrian connectivity between the baseball fields and provide additional onsite parking spaces.

A vehicular bridge over Pismo Creek between Frady Lane and Bello Street is currently being designed that will connect the Sports Complex and Frady lane to Price Canyon Road and the northern area of Pismo Beach. This would provide a secondary access into the Pismo Beach Sports Complex. This improvement would replace the existing bridge that has been closed to vehicular traffic since 1983. It would also improve emergency response times to the sports complex and mobile home parks south of US 101 for police and fire services. It also would improve public works corporation yard access to northern parts of the City and PG&E access to the southern part of the City. Finally, it would serve as an alternate route during incidents involving closure of parallel routes including crossings of Pismo Creek.

Exhibit 42 (Page 90) depicts the projected traffic diversions in the Year 2035 due to the Frady Lane Realignment, including the proposed vehicle bridge, as projected by the citywide model. The projections show that there would be minimal diversion of through traffic onto the Frady Lane corridor. Rather, most of the diversion that would occur will be sports complex traffic from Frady Lane to the new Bello Street access, with a total of 15 trips in and 10 trips out during the PM peak hour. This level of traffic diversion is not anticipated to result in any noticeable effect on the operations of the study network. Midday traffic redistribution will also occur from the City corporation yard and PG&E, although not substantial enough to affect traffic operations elsewhere in the City.

Finally, as illustrated on **Exhibit 41 (Page 89),** a relatively straightforward method can be implemented to provide a pedestrian and bicycle connection between the downtown, the Pismo Beach Sports Complex, and the eastern portion of Pismo Beach. This improvement would include two connections to the existing pedestrian/bicycle path adjacent to US 101 between Price Street and Five Cities Drive. One connection would be a pedestrian/bicycle ramp connecting the path to Frady Lane, with a new sidewalk along Frady Lane between this ramp and the Pismo Beach Sports Complex. The second would be a stairwell connecting the path to Five Cities Drive.

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Exhibit 41 – Frady Lane Improvements

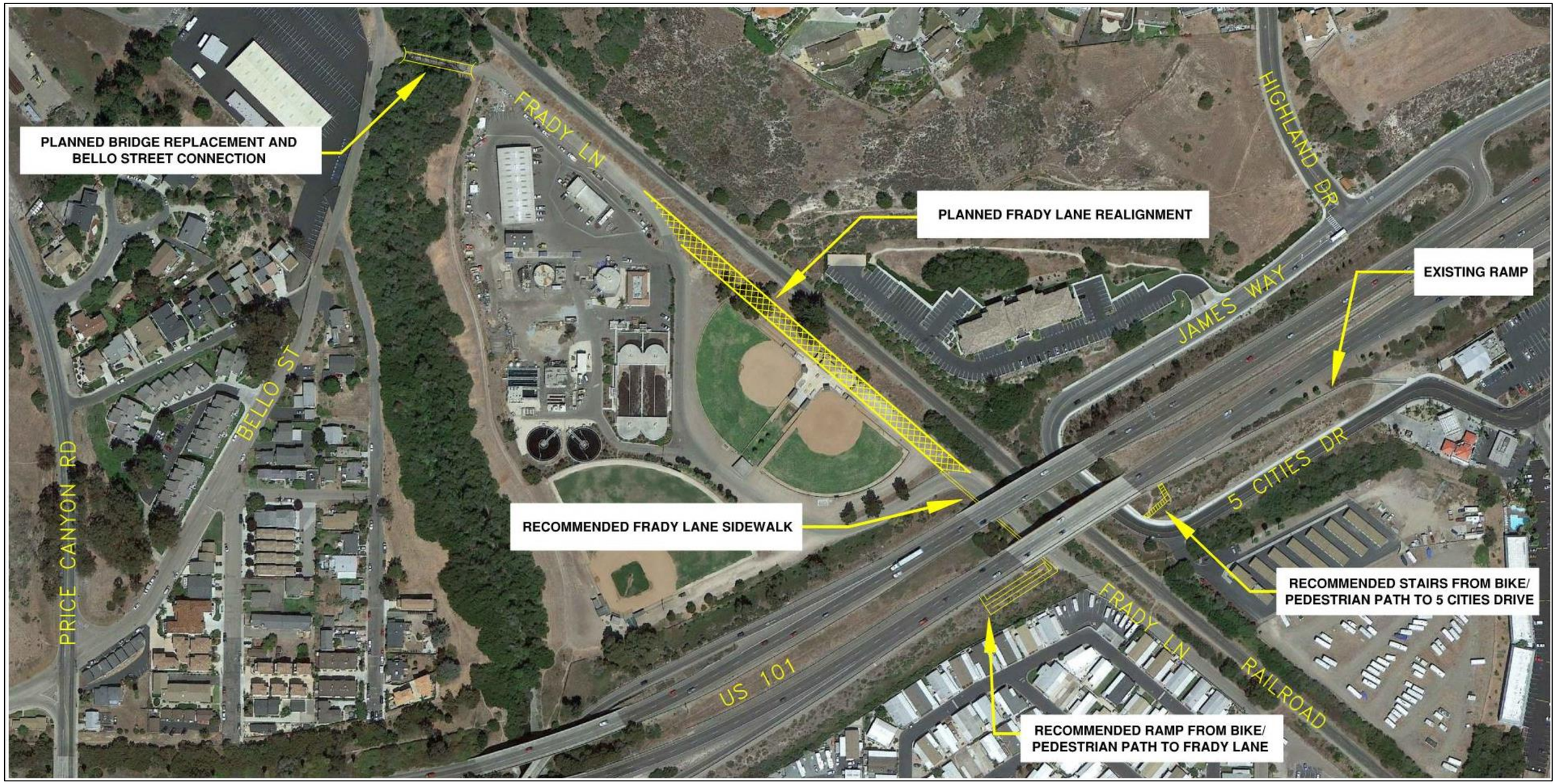
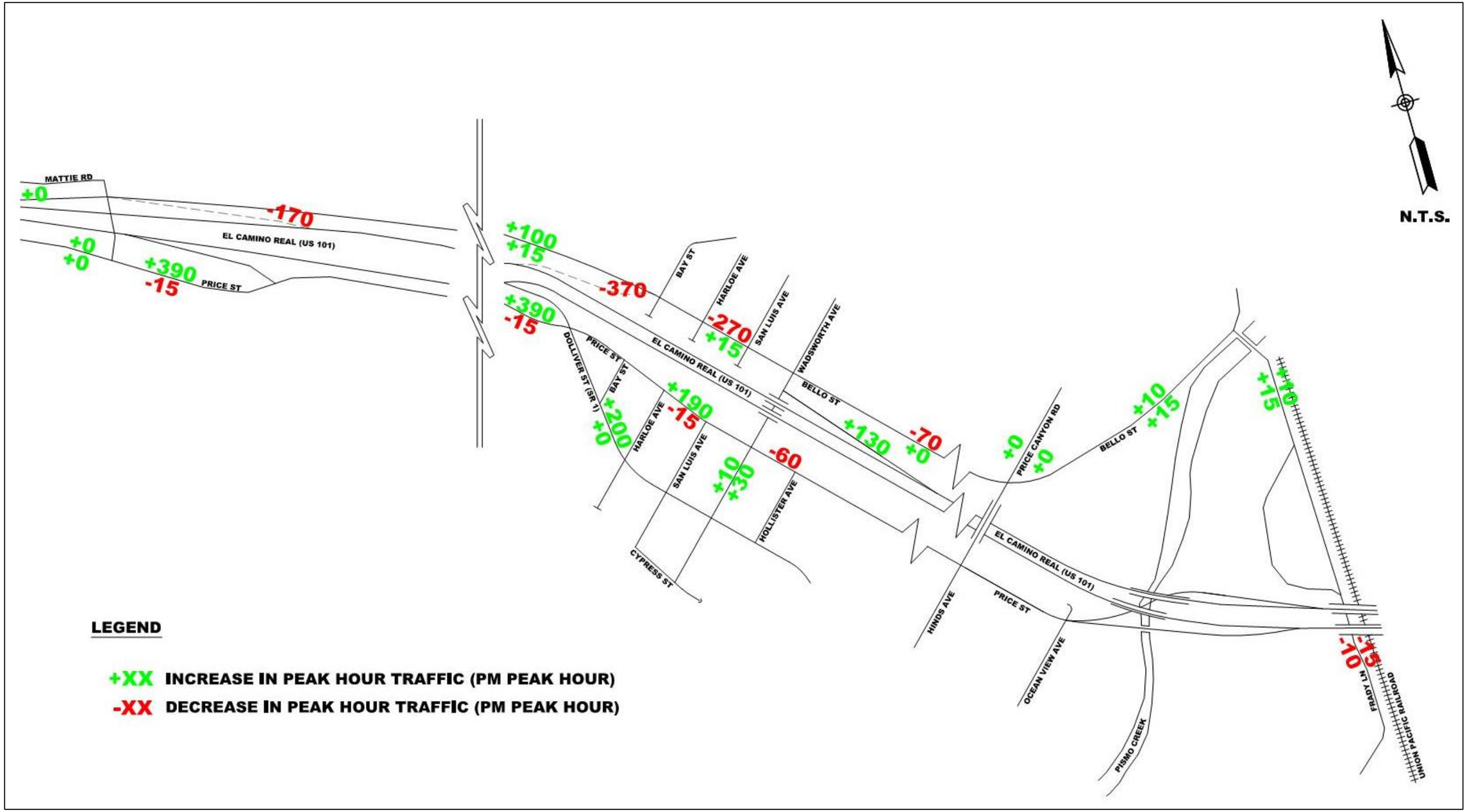


Exhibit 42 – Projected Traffic Diversions with Frady Lane Realignment and Mattie Road Extension (Year 2035 – PM Peak Hour)



3) Mattie Road Extension

The Mattie Road Extension would connect Mattie Road eastward to Bello Street along the northern frontage of US 101. The potential alignment would route it through the southern end of the adjacent Pismo Preserve. The Land Conservancy of San Luis Obispo has indicated it will permit this connection.

A conceptual plan and profile as well as typical cross sections of this extension as a two lane road are included on **Exhibits 43A-C (Pages 93-95)**. The existing topography in this area will make establishing this connection rather expensive due to the need for extensive grading and retaining walls along the route. Therefore, to minimize the expense of constructing this roadway, the improvement may require the complete removal of the existing northbound US 101 on-ramp at Bello Street and the existing northbound US 101 off-ramp at Shell Beach Road / Mattie Road. This will impact the ability to access northbound US 101 from the downtown and Mattie Road from northbound US 101, unless replacement ramps are included.

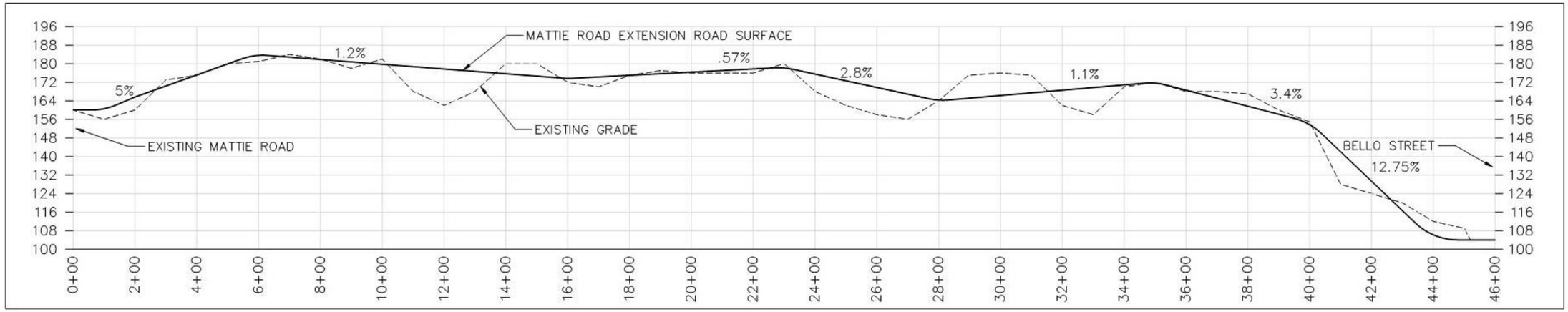
The projected traffic diversions associated with the Mattie Road extension are also depicted in **Exhibit 42 (Page 90)**. About 100 PM peak hour vehicles are projected on Mattie Road. In the southbound direction on the Mattie Road extension, only 15 PM peak hour vehicles are projected, all attracted from the Price Street corridor. The closure of the northbound US 101 northbound on-ramp at Bello Street and off-ramp at Mattie Road would shift traffic onto Price and Dolliver (SR 1) Streets and away from Bello Street and the Mattie Road extension. South of the existing Mattie Road interchange, Price Street would experience an additional 390 vehicles in the northbound direction during the PM peak hour, more than doubling the current traffic at this location due to the ramp closure.

Exhibit 44 (Page 97) tabulates the levels of service at key study intersections with the Mattie Road extension. Despite the potential diversion of traffic onto Price Street, no additional improvements would be required at the study intersections beyond those already required under either Existing or General Plan Buildout conditions.

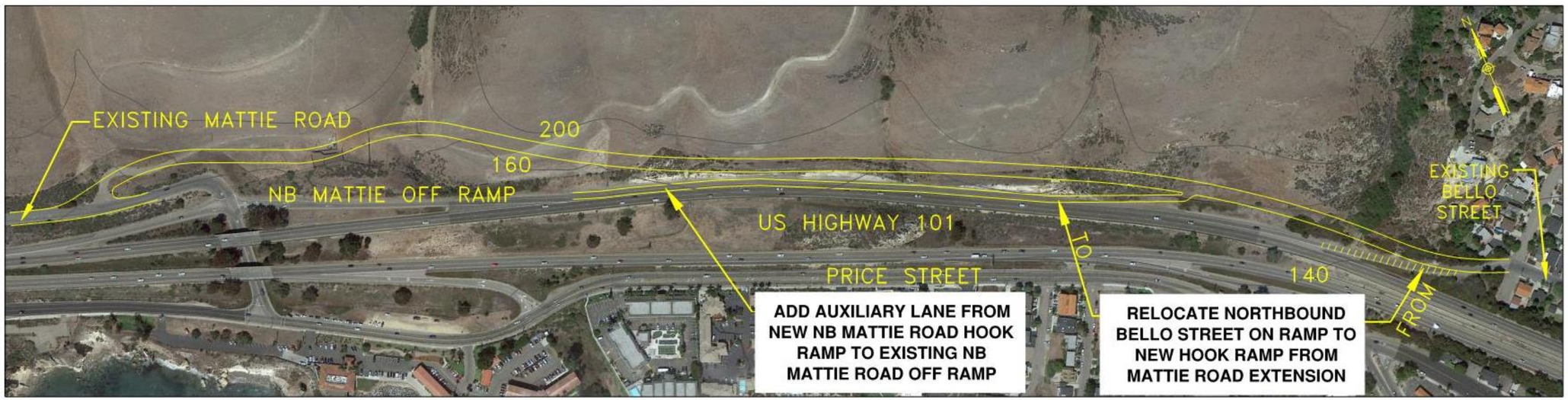
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Exhibit 43A – Mattie Road Extension Conceptual Plan/Profile



PROFILE



PLAN

HORIZONTAL 1"=150'

VERTICAL 1"=20'

NOTE: MATTIE ROAD EXTENSION AND NORTHBOUND HOOK RAMP ALIGNMENTS MUST ACCOMMODATE FUTURE WIDENING OF US 101 TO SIX LANES

Exhibit 43B – Mattie Road Extension Conceptual Cross Sections STA 5+00 to STA 20+0

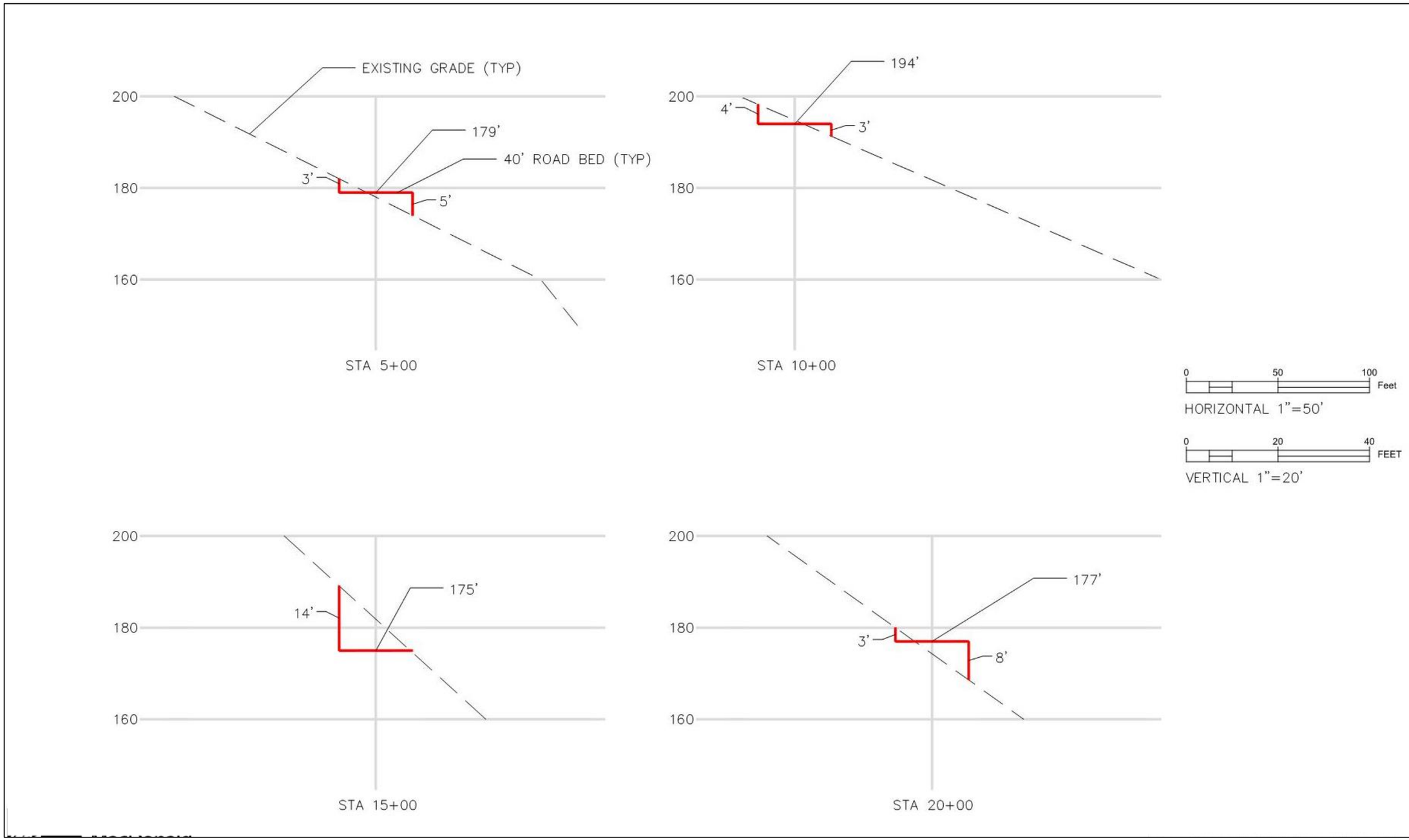
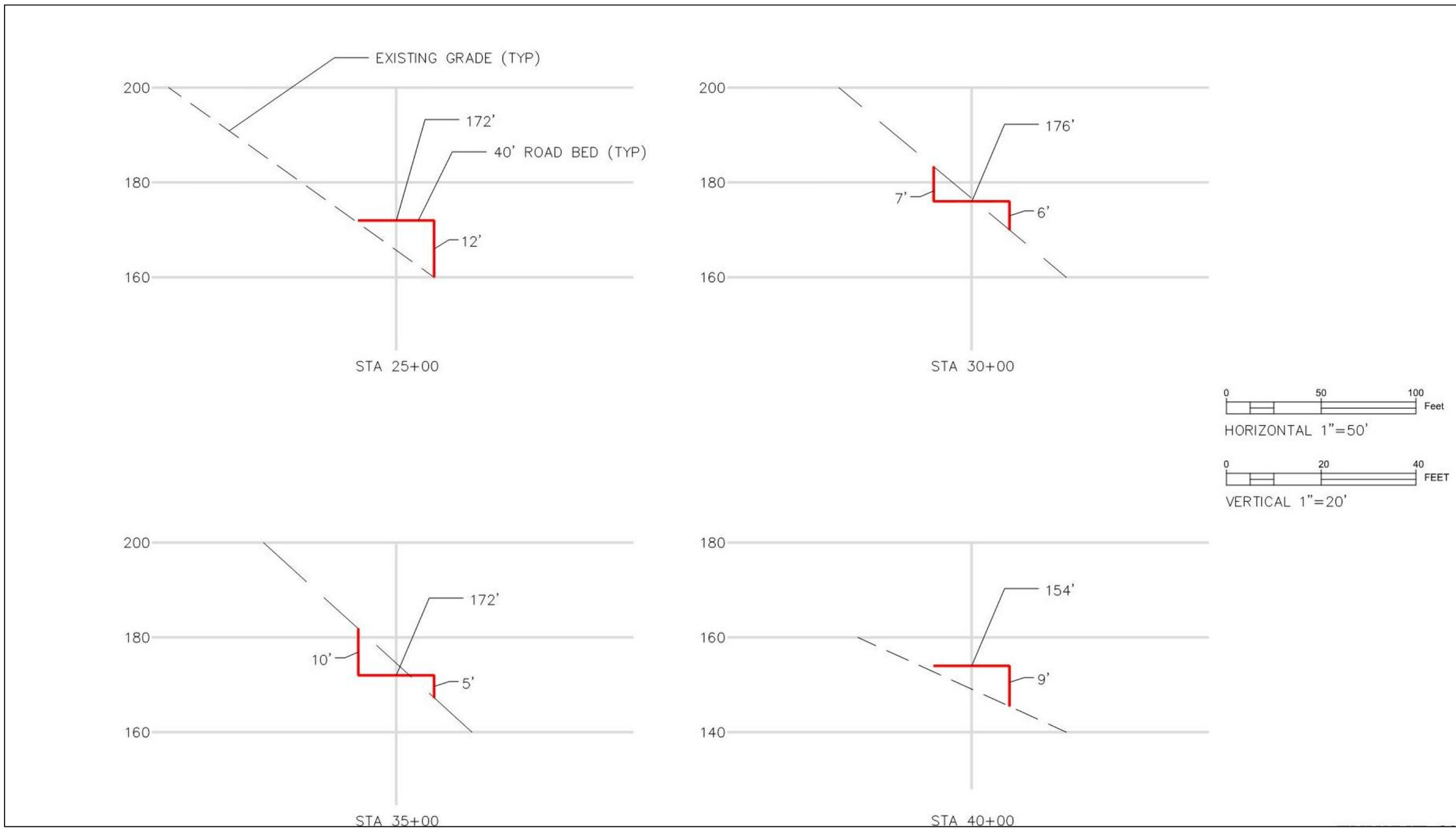


Exhibit 43C– Mattie Road Extension Conceptual Cross Sections STA 25+00 to STA 40+00



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Exhibit 44 – Mattie Road Area Intersection Levels of Service – General Plan Buildout Weekday PM Peak Hour – With Mattie Road Extension

	N-S Street	E-W Street	Existing Lane Configuration	Existing Intersection Control	LOS Standard	General Plan Buildout (Year 2035) Without Mattie Rd. Extension — No Imprvmnts. Weekday PM Peak Hr Delay (sec)	LOS	General Plan Buildout (Year 2035) Without Mattie Rd. Extension — With Imprvmnts. Weekday PM Peak Hr Delay (sec)	LOS	General Plan Buildout (Year 2035) With Mattie Rd. Extension — No Imprvmnts. Weekday PM Peak Hr Delay (sec)	LOS	General Plan Buildout (Year 2035) With Mattie Rd. Extension — With Imprvmnts. Weekday PM Peak Hr Delay (sec)	LOS	Proposed Improvement(s)
12	Mattie Road	Price Street	SB 1-L, 1-R EB 1-L/T WB 1-T/R	Signal	**C**	6.9	A			9.3	A			
14	US 101 SB Off-ramp - Dolliver Street (SR 1)	Price Street	NB 1-L, 1-R SB 1-L, 1-T, 1-R EB 1-T/R WB 1-L/T	All-Way Stop	**C/D**	16.8	C	***8.9***	***A***	48.8	E	***13.0***	***B***	**Roundabout**

Notes:

1. L, T, R = Left, Through, Right.
2. NB, SB, EB, WB = Northbound, Southbound, Eastbound, Westbound.
3. Analysis performed using 2010 Highway Capacity Manual methodologies.
4. Overall level of service standard for Caltrans is the transition between LOS C and D.
5. Overall level of service standard for the City of Pismo Beach and County of San Luis Obispo is LOS C.

4) Stimson / Ocean View Couplet and Downtown Price Street Modifications

The Stimson Avenue/Ocean View Avenue Couplet would convert Stimson and Ocean View Avenues into one-way streets between Dolliver (SR 1) and Price Streets. Ocean View Avenue would be one-way eastbound and Stimson Avenue would be one-way westbound. Currently, both streets are two-way streets. The project would also add a two-way bicycle facility along Ocean View Avenue between Dolliver (SR 1) and Price Streets. **Exhibits 45A and 45B (Pages 99 and 100, respectively)** depict this improvement. **Exhibit 45A (Page 99)** includes associated channelization modifications along Price Street through lanes through the Ocean View Avenue intersection. **Exhibit 45B (Page 100)** provides a single southbound through lane from Hinds Avenue, requiring the elimination of westbound left turns from the outside lane (currently and optional left/right lane) on the Price Canyon Road approach.

Exhibit 45A (Page 99) shows the extension of two eastbound lanes on Price Street from Stimson Avenue, where they currently transition into a single lane, to Ocean View Avenue. This will provide additional capacity at the Price Street/Stimson Avenue intersection. It will also improve lane utilization on southbound Price Canyon Road at Price Street, which currently experiences long queues during the evening peak period. It will also include a northbound Price Street left turn lane at Stimson Avenue. However, two parking spaces would be lost on the Price Street frontage of the Pismo Food Store as well as three spaces on the east side of Price Street, north of Stimson. A bike lane also would be provided from Hinds Avenue to Ocean View Avenue.

Exhibit 45B (Page 100) shows the provision of a single through lane on southbound Price Street. This has the advantage of preserving on-street parking with ample room for a protected bike lane (cycle track) and northbound Price Street left turn lane at Stimson Avenue. The disadvantage is that it will reduce the capacity of the Price Street/Price Canyon Road-Hinds Avenue intersections, especially for westbound Price Canyon Road. Queues already are long for the westbound to southbound left turn movement with two lanes available for left turns.

The City will need to determine which alternative is the most beneficial. Additional detailed design alternatives also need to be explored, which would require a more detailed alternatives analysis.

The following are features common to both alternatives.

1. The left turn lane on Price Street at Ocean View Avenue is currently only about 40 feet long. This is not enough storage to accommodate current demand (including recreational vehicles), and the geometrics of the upstream northbound off-ramp preclude the lengthening of the left turn lane. By changing Stimson and Ocean View Avenues into a one-way couplet, left turns can be provided at Stimson Avenue (instead of Ocean View Avenue), which can better accommodate a longer left turn lane. This improvement also works well with the proposed Price Street extension (as noted previously). **Exhibits 21 and 30 (Pages 43-47 and 66-70)** depict operations under Existing and General Plan Buildout with the Stimson / Ocean View couplet in place.

2. The Stimson / Ocean View couplet also eliminates one other potential roadway hazard. At the Dolliver (SR 1) / Ocean View intersection, many RVs make the turn from northbound Dolliver Street (SR 1) onto eastbound Ocean View Avenue. These RVs require a large right turning radius, which can cause these vehicles to encroach into oncoming traffic on westbound Ocean View when making the northbound-to-eastbound right turn. With implementation of the Stimson / Ocean View couplet, there will no longer be an opposing traffic stream on westbound Ocean View east of Dolliver Street (SR 1), thus eliminating this issue.

3. Signalization of the Dolliver (SR 1) / Stimson intersection would be preferred to achieve acceptable operations at this location. While this improvement also may be required without implementation of the Stimson / Ocean View couplet, the couplet would eliminate the need to also signalize the adjacent Dolliver (SR 1) / Ocean View intersection.

Appendix L provides recommended design considerations (i.e., “best practices”) for the proposed two-way bicycle facilities on Ocean View Avenue and Price Street.

A short term alternative that can be easily implemented is to provide wayfinding signs directing large vehicles to continue northbound on Dolliver Street to Hinds Avenue. Hinds Avenue is a two lane, one-way street that can accommodate large right turning vehicles without encroaching into on-coming traffic.

Exhibit 45A – Stimson Ave. / Ocean View Ave. One way Couplet with Two Eastbound Price St. Through Lanes



Exhibit 45B – Stimson Ave. / Ocean View Ave. One way Couplet with Two-Way Cycle Track



5) Pier Area Improvements

The downtown area, especially in the vicinity of the Pismo Beach Pier, is the location of the most severe congestion in the City of Pismo Beach, occurring on nearly all summer weekends and holidays. Downtown is also the location of the highest pedestrian traffic, which is a major contributor to vehicle congestion, due to the requirement of vehicles to yield to pedestrians in crosswalks.

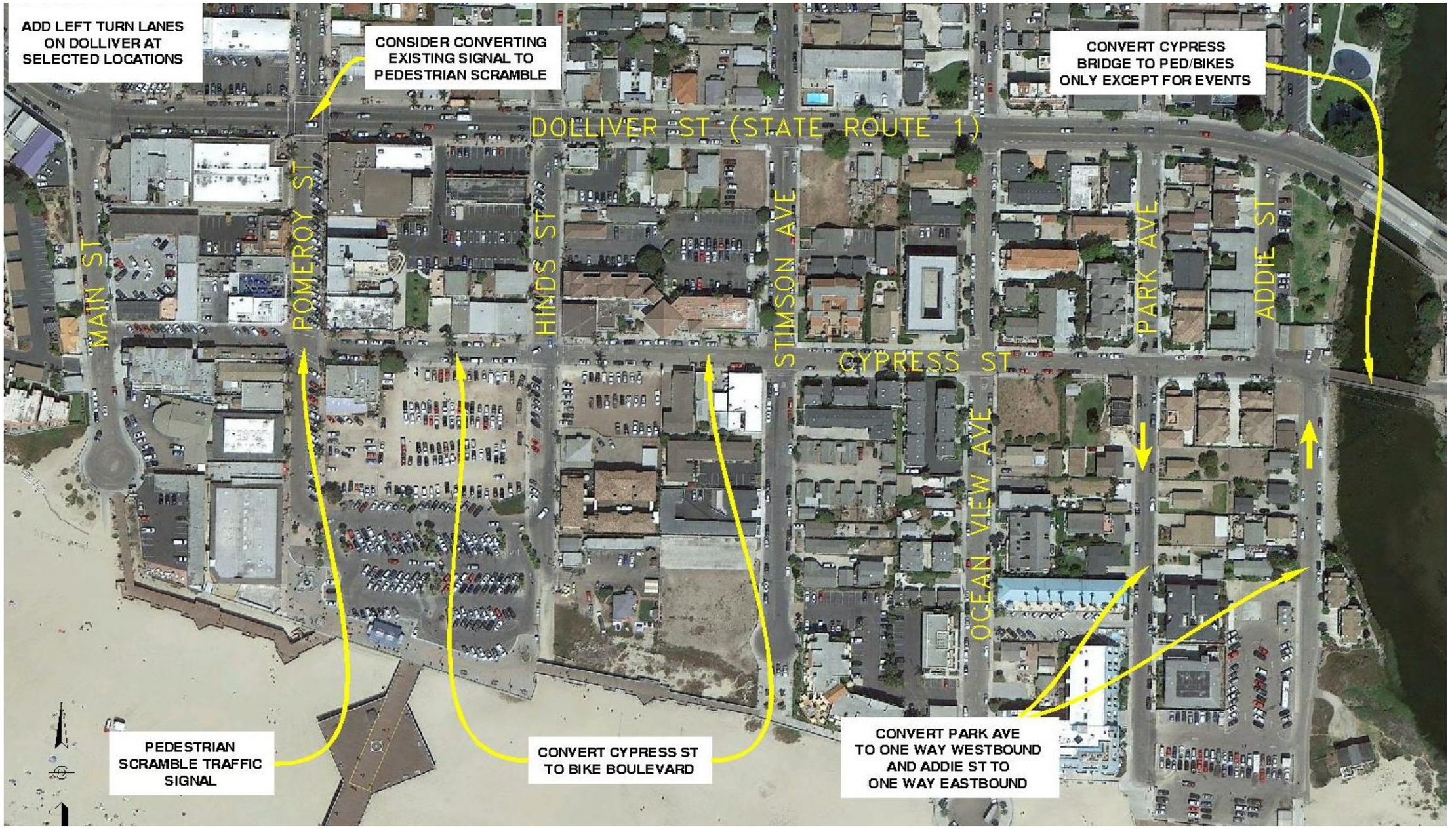
Bicycle traffic is also highest in the downtown area and between the pier area and the RV and camping facilities to the east along Dolliver (SR 1), with about 60 bicyclists (30 bicyclists in each direction) during both the Summer Sunday and Memorial Day Sunday afternoon peak hours. This is more than four times as much as occurs during the Weekday PM peak hour (about 13 bicyclists in each direction). A similar trend also occurs along Dolliver Street (SR 1) within the downtown, with about 40 bicyclists (20 in each direction) on Sundays, versus 10-20 bicyclists during the Weekday PM peak hour.

Recommended improvements in the Pier Area that improve traffic operations, pedestrian and bicycle facilities or provide signal operations that reduce pedestrian impacts on traffic operations are listed below. They are located in **Exhibit 46 (Page 103)**, followed by individual discussions on the subsequent pages.

a. Cypress Street/Pomeroy Avenue Pedestrian Scramble Traffic Signal and
d. Dolliver Street (State Route 1)/Pomeroy Signal Modification to Pedestrian Scramble
e. Dolliver Street Left Turn Pockets
f. Restrict Motorized Vehicles on the Cypress Street Bridge
g. Cypress Street Bike Boulevard;
h. Addie / Park Avenue Couplet; and
i. Restrict Motorized Vehicles on Pomeroy Avenue South of Cypress

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Exhibit 46 – Recommended Pier Area Improvements



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a. Cypress Street/Pomeroy Avenue Pedestrian Scramble Traffic Signal and

b. Dolliver Street (State Route 1)/Pomeroy Signal Modification to Pedestrian Scramble

A total of 257 pedestrians crossed the four legs of the Dolliver (SR 1)/Pomeroy intersection during the weekday evening peak hour, compared with 1,023 crossings on a Summer Sunday afternoon and 1,305 on Memorial Day Sunday afternoon (see Exhibits 8 through 10 (Pages 19-21)). The Pomeroy/Cypress intersection experienced 665 pedestrian crossings on the weekday evening, 2,765 on a summer afternoon and 2,033 on the Memorial Day Sunday afternoon. All of these are extremely high volumes that severely affect intersection operations. Installation of a pedestrian-based signal, also called a "pedestrian scramble", may be a viable option at both locations. An example of a pedestrian scramble is depicted in **Exhibit 47 (right)**. This signal would provide a pedestrian-only phase at the intersection. During the pedestrian phase, pedestrians would be allowed to cross all of the intersection approaches at once, without vehicular conflicts. Pedestrians would also be allowed to cross diagonally across the intersection, again without any vehicular conflicts.



Exhibit 47 – Example of a Pedestrian Scramble

At the Cypress / Pomeroy intersection, the pedestrian scramble will improve existing congestion levels by organizing the current randomness of pedestrian crossings. This signal would operate as a two-phase signal, alternating between traffic flow and pedestrian crossings. Organizing the pedestrian crossings into a set timeframe (versus the current random timing of the pedestrian crossings) would reduce vehicle queuing on Pomeroy Avenue and reduce the potential for pedestrian collisions. The pedestrian scramble signal could also be turned off during the off season, reverting the intersection back to the stop control that is present today.

The addition of a pedestrian scramble should be investigated at the Dolliver Street (SR 1)/ Pomeroy Avenue signal. As noted in **Section 2.J - Traffic Operations and Recommendations – Existing Conditions**, pedestrians are occasionally restricted from crossing Dolliver by vehicular congestion on Sundays during the peak season, which will be more difficult as vehicular and pedestrian traffic increase in the future. The addition of a pedestrian scramble could be a method to improve the capacity of pedestrian crossings at this intersection. This intersection is owned by Caltrans, which has investigated the use of pedestrian scramble phases on state highways in the past. However, it has not pursued or implemented them on any state highways to date.

c. Dolliver Street Left Turn Pockets

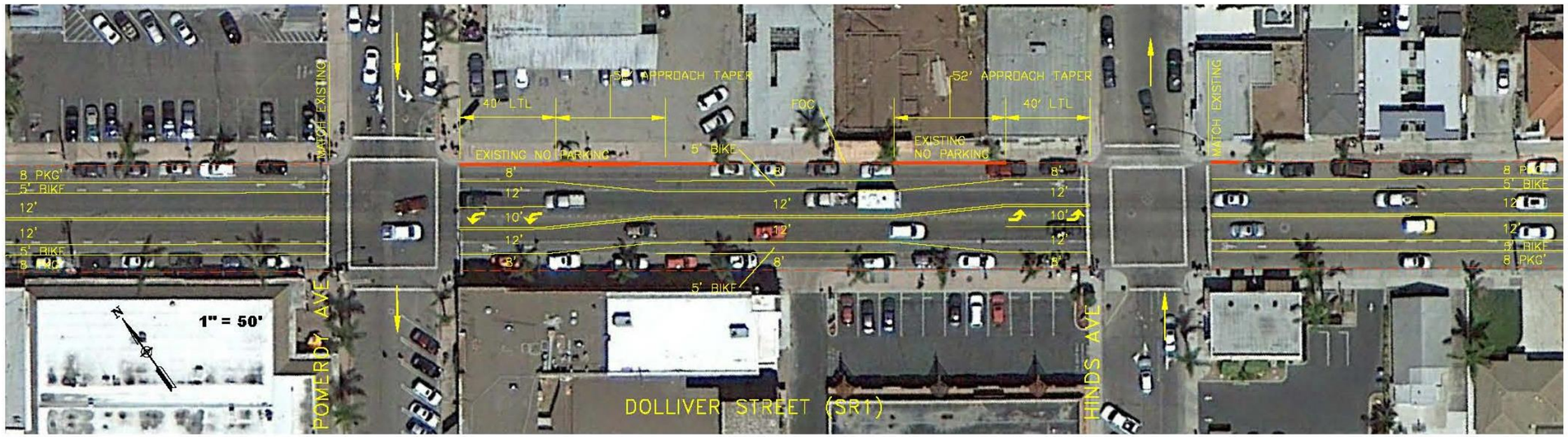
The addition of short exclusive left turn pockets (40 foot long by 10 feet wide) on Dolliver Street (SR 1) at key intersections between Wadsworth Avenue and Ocean View Avenue, such as at Pomeroy Avenue and Hinds Avenue, should be considered. Most left-turning vehicles on Dolliver Street (SR 1) would be able to leave the through lane while waiting for gaps in opposing traffic, thus allowing through traffic to flow freely in an adjacent lane. This would help mitigate the current situation, where left-turning vehicles wait in through lanes and block through traffic on Dolliver Street (SR 1). Blocked vehicles can often attempt to bypass these left-turning vehicles via the bicycle lane, potentially endangering passing bicyclists.

However, due to the narrow width of Dolliver Street (SR 1) – 50 feet of pavement –some on-street parking will be lost – up to three spaces on each side of Dolliver where a left turn pocket is provided. Alternatively, the existing bike lane would need to be terminated in the proximity of the left turn lane. However, the beneficial improvement in traffic congestion justifies this improvement. Two alternative left turn pockets are conceptually illustrated on **Exhibit 48** on the following page. Alternative A illustrates a left turn pocket centered on Dolliver Street. Alternative B illustrated a left turn pocket offset to the northbound side of Dolliver Street. Alternative B probably would result in the loss of fewer on-street parking spaces. Dolliver Street is a state highway and any modifications will require Caltrans approval. Also, consideration needs to be given to maintaining continuous northbound and southbound Class II bike lanes as recommended in the *Pismo Beach Complete Street Plan*.

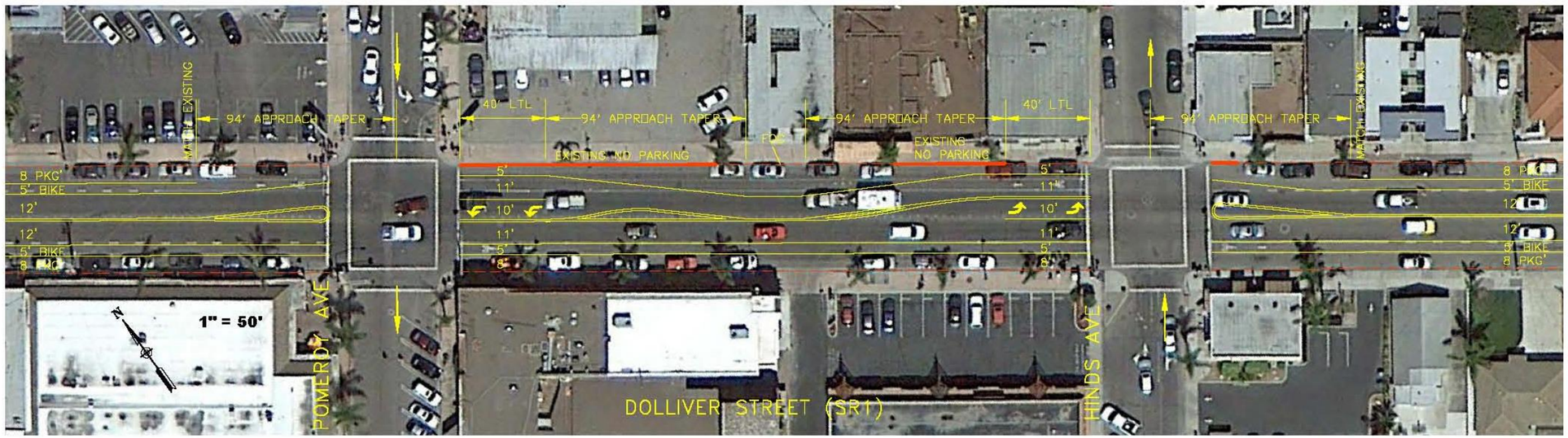
d. Restrict Motorized Vehicles on the Cypress Street Bridge

The Downtown Strategic plan recommended considering the prohibition of vehicle traffic along the Cypress Street bridge over Pismo Creek. The bridge would instead be exclusively used by pedestrians and bicyclists, with the exception of small electric vehicles, emergency vehicles and special event traffic. This closure could be done on a trial basis to better assess the benefits and consequences of this modification.

Exhibit 48 – Left Turn Pocket Alternatives on Dolliver St. (SR1)



ALTERNATIVE A - LEFT TURN POCKET CENTERED ON DOLLIVER (SR1)



ALTERNATIVE B - LEFT TURN ON NORTHBOUND SIDE OF DOLLIVER (SR1)

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e. **Cypress Street Bike Boulevard**

This improvement was suggested in the Downtown Strategic Plan. It would convert Cypress Street into a bicycle boulevard (i.e., a street where bicycles have the right-of-way over vehicles). The conversion would be similar to that of Morro Street in San Luis Obispo, with pavement striping indicating that Cypress Street is a bicycle boulevard, although unlike Morro Street, no forced vehicle traffic diversions would be implemented on Cypress Street. **Exhibit 49 (right)** depicts a sample roadway pavement striping (similar to striping on Morro Street in San Luis Obispo) that could be added to Cypress Street to indicate that the roadway is a bike boulevard. Cypress Street carries about 200 to 250 vehicles in the peak hour at relatively low speeds. A bike boulevard should be easily implemented. Consideration could also be given to reducing the speed limit to 20 miles per hour, which would reduce the speed differential between motorized vehicles and bicycles.



Exhibit 49 – Example of Bike Boulevard Pavement Striping

f. **Addie Street / Park Avenue Couplet**

Convert Addie Street and Park Avenue into one-way streets between Dolliver Street and the public parking lot along the beachfront. Addie would be one-way westbound (toward the beach) and Park one-way eastbound (toward Dolliver). Both Addie Street and Park Avenue are very narrow for roadways that allow two-way traffic (30 feet wide or less). With parking on both sides of the street, only about 14 feet remains for two-way travel. Most local streets have at least 20 feet for vehicle travel. By converting both roadways into a one-way couplet, only one lane of traffic will be needed on each street and parking can be preserved on both sides of each street.

Converting Addie Street and Park Avenue to one-way streets will require traffic generated from land uses along these streets to travel through the city parking area at the beach end of Addie Street. This parking lot layout should be reconfigured to both improve vehicle throughput and also improve the efficiency of the parking layout.

Neither street experiences a large volume of traffic. The Addie Street / Park Avenue one-way couplet conversion will have little effect on traffic operations in the area during normal traffic conditions, although it may have an effect during special events held in the vicinity of the Addie Street parking lot.

g. Restrict Motorized Vehicles on Pomeroy Avenue South of Cypress

Convert Pomeroy Avenue to pedestrian traffic only between Cypress Street and the pier area. As previously shown on **Exhibits 9 and 10 (Pages 20-21)**, the extreme pedestrian activity crossing both Pomeroy Avenue and Cypress Street on Sundays during the peak season affects the operation of both streets at their intersection. For this reason, Pomeroy Avenue could be converted into a pedestrian walkway between Cypress Street and the pier. This would force all traffic currently using Pomeroy to turn left onto Cypress, eliminating one of the largest pedestrian/vehicle conflicts in the city. In addition, converting Pomeroy Avenue into a pedestrian walkway would be consistent with the long-term vision of the pier plaza as described in the *Pismo Beach Downtown Strategic Plan.* The entrance to the pier would be converted to a pedestrian-only plaza with minimal or no adjacent parking.

One of the major disadvantages of this improvement would be the loss of on-street parking on Pomeroy between Cypress and the pier parking area, although these spaces could be replaced elsewhere in the downtown area.

If the pier parking area were to remain in place (or moved underneath the plaza in front of the pier, as shown in the Strategic Plan concepts of the pier area), the entrance to the pier parking area would need to be relocated to Hinds Avenue. This, in turn, would require the conversion of Hinds Avenue to two-way travel between the pier parking lot and Cypress Street. Inbound traffic would be diverted onto Cypress Street and Hinds Avenue. Both Hinds Avenue and Cypress Street could accommodate the additional traffic.

Consideration should be given to maintaining emergency and evacuation access via the Pomeroy pedestrian facility. If the City of Pismo Beach desires to underground the pier parking area, it could still place the entrance off of Pomeroy Avenue west of Cypress Street, via an access ramp into the parking lot. Pedestrian access to the pier area could be preserved via a widened sidewalk at ground level alongside the existing businesses along the north frontage of Pomeroy Avenue near the pier.

There are many different access and configuration decisions that would need to be made prior to a restriction of motorized vehicles on Pomeroy Avenue south of Cypress Street. It is therefore recommended that this improvement not be implemented until a plan for the pier parking area is completed.

6) Downtown One-Way Couplet Alternatives

Several downtown one-way couplet alternatives were evaluated as a part of this study. They include reversing the existing Pomeroy-Hinds couplet, creating a Dolliver (SR 1)/Price couplet, and creating a Dolliver (SR 1)/Bello couplet. Each is discussed below.

a. Reverse One-Way on Pomeroy and Hinds

Currently, Pomeroy Avenue is one-way westbound (i.e., towards the beach) and Hinds Avenue is one-way eastbound (i.e., away from the beach) between the pier and Price Street. This alternative would reverse the one-way directions of Pomeroy and Hinds Avenues, so that Pomeroy is one-way eastbound and Hinds Avenue is one-way westbound.

The current one-way couplet was created in the 1990s to address the collision history at the Price Street / Hinds Avenue intersection, specifically collisions created by traffic turning from Price Street onto Hinds Avenue. Reversing the one-way directions on Pomeroy and Hinds would re-introduce these movements at the Price / Hinds intersection, and thus may lead to an increase in collisions. For this reason, it is recommended that this improvement not be implemented.

b. Dolliver (SR 1)/ Price Couplet

This alternative would convert Dolliver (SR 1) and Price Streets into one-way streets between the Price/Dolliver intersection and their mutual intersections with Hinds Avenue. Dolliver Street (SR 1) would be one-way southbound and Price one-way northbound. Based upon the volumes on both corridors, Dolliver Street (SR 1) would likely need to have two through lanes. Price Street would operate acceptably with one lane.

This alternative would change the character of the Price Street corridor between Pomeroy and San Luis Avenues, as the roadway would function as a major through street rather than its current function of primarily providing access to adjoining businesses. The existing median on-street parking on Price Street in this area would likely need to be eliminated due to the potential conflicts between pedestrians and the increased through traffic. The resulting parking supply may not be adequate to serve the demand from Price Street businesses.

It is also likely that Caltrans may require that Price Street also be designated as SR 1, in order to provide a state facility in the opposing direction to Dolliver Street. Caltrans encroachment permits would then be required for any work within the Price Street right of way, which could constrain the City's ability to manage traffic operations in the downtown. The through traffic function of a state highway designation for Price Street would likely also conflict with the pedestrian-orientation of Price Street that the City has created in the area, such as the stop sign locations and the 15 miles per hour speed limit, and would likely need to be removed. The designation as a state highway would not be necessary if Caltrans were to relinquish the portion of SR 1 within the downtown, in which case the jurisdiction of the streets would revert to the City of Pismo Beach. However, the typical relinquishment process with Caltrans can take many years to accomplish. For these reasons, this couplet alternative is not recommended for implementation.

c. Dolliver/Bello Couplet

One variant to the Dolliver/Price Couplet is the Dolliver / Bello Couplet. This improvement would be similar to the Dolliver / Price couplet, except that Price Street would be replaced by Bello Street as the westbound one-way street. This variant would not have the same configuration effects upon Price Street as the Dolliver / Price couplet, but would introduce considerable through traffic on Bello Street, which is mostly residential and would still be subject to the probable need to designate Bello Street at SR 1. For these reasons, the Dolliver / Bello couplet is not recommended for implementation.

F. Regional Highway Improvements

SLOCOG is proposing a number of improvements to the US 101 corridor, which connects the Five Cities region to the rest of San Luis Obispo County and beyond. The segment of US 101 within Pismo Beach experiences the largest traffic volume along US 101 in the South County region with approximately 68,000 vehicles per day. The widening of US 101 to six lanes has been proposed through the Five Cities region for many decades (including in the 1992 Pismo Beach General Plan). However, the high expense and limited funding sources for this widening have led SLOCOG to attempt to maximize the capacity of the existing corridor with multi-modal, relatively low cost strategies. This effort began in the early 2000s with the addition of auxiliary lanes (i.e., ramp-to-ramp lanes) between Price Street and Oak Park Boulevard. SLOCOG and RTA (San Luis Obispo Regional Transit Authority) are currently planning Bus Rapid Transit (BRT) service along the US 101 corridor.

The latest plans proposed by SLOCOG are described in the *US 101 Corridor Mobility Master Plan.* They include improvements to the ramps and segments along southbound US 101 between Avila Beach Drive and Hinds Avenue and are listed in **Exhibit 50 (Page 114)**. They include the addition of auxiliary lanes, ramp meters, extensions of the acceleration and deceleration distances on various ramps, extending the climbing lane on southbound US 101 to the Spyglass Drive off-ramp, and other ramp improvements. Many of these improvements are currently being evaluated in more detail by Caltrans staff.

In December 2014, SLOCOG released its draft 2014 Regional Transportation Plan, which identifies its transportation goals for San Luis Obispo County, its preferred regional transportation improvements within the County and how it will fund them. This continues the theme of maximizing the capacity of the existing corridor, as well as increasing the number of transportation mode choices that are available to San Luis Obispo County residents. Proposed improvements in the Pismo Beach region include regional Transportation System Management strategies (such as the establishment of three new park and ride lots within Pismo Beach), the addition of regional transit service at the US 101 / Spyglass Drive interchange, the Price Street/James Way extension, reconstruction of the Hinds Avenue bridge over US 101, and the previously mentioned improvements along US 101 in Pismo Beach. Many of these proposed improvements do not have available funding at this time.

Exhibit 50 – Regional Improvement Concept List in Five Cities Area

ID	Description	Project Location
US 101 Freeway Improvements		
1.1.a	Add General Purpose Lanes	NB/SB 101 - Traffic Way to Avila Beach Drive
1.1.b	Add HOV Lanes	NB/SB 101 - Traffic Way to Avila Beach Drive
1.1.c	Add Auxiliary Lanes *	Various
1.1.d	Add Ramp Meters	NB/SB 101 - On-Ramps Traffic Way to Avila Beach Drive
1.1.e	N/A (see Project 1.5.a)	
1.1.f	N/A (see Project 1.5.b)	
1.1.g	Increase Regional Transit Service	Traffic Way to Avila Beach Drive
1.1.h	Travel Demand Management	Traffic Way to Avila Beach Drive
* US 101 Freeway Auxiliary Lane Improvements		
1.1.c01	1300' Deceleration Lane	NB 101 - Grand Avenue Off-Ramp
1.1.c02	Ramp to Ramp Auxiliary Lane	NB 101 - Brisco Road to Camino Mercado
1.1.c03	Acceleration Lane to N. Oak Park Blvd Overcrossing	NB 101 - Camino Mercado On-Ramp
1.1.c04	Close James Hook On-Ramp. Extend Auxiliary Lane to 4th Street	NB 101 - 4th Street to James Way On-Ramp
1.1.c05	600' Deceleration Lane	NB 101 - Wadsworth Avenue Off-Ramp to Hinds Avenue Overcrossing
1.1.c06	2000' Acceleration Lane	NB 101 - Mattie Road On-Ramp
1.1.c07	1300' Deceleration Lane	NB 101 - Spyglass Drive On-Ramp
1.1.c08	Ramp to Ramp Auxiliary Lane	NB 101 - Spyglass Drive to Avila Beach Drive
1.1.c09	2000' Acceleration Lane	NB 101 - Avila Beach Drive On-Ramp
1.1.c10	1300' Deceleration Lane	SB 101 - Avila Beach Drive Off-Ramp
1.1.c11	Extend Truck Climb Lane	SB 101 - Spyglass Drive Off-Ramp
1.1.c12	Add 3rd Lane (Project 1.1.c11 + 1.1.a or 1.1.b)	SB 101 - Spyglass Drive Off-Ramp
1.1.c13	Extend Auxiliary Lane to Avila Beach On-Ramp	SB 101 - Avila Beach Drive On-Ramp to Project 1.1.c12
1.1.c14	2000' Acceleration Lane	SB 101 - Spyglass Drive On-Ramp
1.1.c15	Ramp to Ramp Auxiliary Lane	SB 101 - Price Street (Dinosaur Cave Park) to Price Street (Mattie Road)
1.1.c16	1300' Deceleration Lane	SB 101 - SB 1 Off-Ramp
1.1.c17	1300' Deceleration Lane	SB 101 - Hinds Avenue Off-Ramp
1.1.c18	2000' Acceleration Lane	SB 101 - El Camino Real (12th Street) On-Ramp
1.1.c19	1300' Deceleration Lane	SB 101 - Halcyon Road Off-Ramp
Fair Oaks Avenue Intersection Improvements		
1.2.a	Add Traffic Signal (Offset Intersection)	Fair Oaks Avenue at Orchard Avenue and SB 101 Off-Ramp
1.2.b	Add Roundabout (Offset Intersection)	Fair Oaks Avenue at Orchard Avenue and SB 101 Off-Ramp
1.2.c	*Convert Orchard Avenue to Right In/Out*	*Fair Oaks Avenue at Orchard Avenue*
1.2.d	*Close Orchard Avenue Access to Fair Oaks Avenue*	*Fair Oaks Avenue at Orchard Avenue*
1.2.e	Realign SB 101 Ramp Terminal to Orchard Avenue (Signal)	Fair Oaks Avenue at Orchard Avenue and SB 101 Off-Ramp
1.2.e	Realign SB 101 Ramp Terminal to Orchard Avenue (Roundabout)	Fair Oaks Avenue at Orchard Avenue and SB 101 Off-Ramp
Carpool / Vanpool / Transit Access		
1.3.c	Small Park & Ride Lot (Spyglass Drive)	Spyglass Drive at Mattie Road or Shell Beach Road
Price Street Gap Closure		
1.5.a	Extend Price Street to Five Cities Drive	Price Street between Ocean View Avenue & Five Cities Drive
1.5.b	US 101 Collector Distributor Lanes	US 101 - NB/SB between Price Street and 4th Street
Pismo Creek / Anza Trail Improvements		
1.6.a	New Bicycle / Pedestrian Bridge at UP Railroad	James Way to Pismo Beach Sports Complex
1.6.b	Class I Trail along Pismo Creek	Pismo Creek between UP Railroad and Price Street
1.6.c	Class I Trail along the UP Railroad	UP Railroad between Pismo Creek and James Way

Projects shown in *italics* were not carried thorugh full analysis due to other factors that rendered them infeasible or if they have already been programmed for funding through other efforts.

Abridged from: *US 101 Corridor Mobility Master Plan* , Kittleson & Associates, December 2014.

4. Recommendations

Study recommendations are summarized in **Exhibit 51 (Page 116)** and repeated below. The recommendations are organized into the following categories:

A. Pedestrian and Bicycle
B. Transit
C. Rail
D. Parking
E. Traffic Operations
F. Transportation Demand Management

A. Pedestrian and Bicycle

CROSSWALK ENHANCEMENTS

The *Pismo Beach Bicycle and Pedestrian Master Plan*, *Complete Street Plan*, and *Downtown Strategic Plan*, encourage pedestrian activity throughout the City in order to minimize automobile congestion and increase walking, bicycling, and other healthy living practices. In particular, high traffic areas within and adjacent to downtown, local schools, sports facilities, and parking/transit facilities should be areas of focus where enhancement of existing crosswalks or the incorporation of new crosswalks would encourage increased pedestrian activity and/or would improve pedestrian safety. Additional recommendations for crosswalk enhancements in the Pismo Beach Complete Street Plan and Downtown Strategic Plan include:

Complete Street Plan

- At the Terrace Avenue intersection with Shell Beach Road and the Shell Beach Road/Price Street/Cliff Avenue intersection, crosswalks should be highlighted through the incorporation of decorative paving treatments with separate markings for bicycles and pedestrians.

- Within the downtown area, enhancements of existing crosswalks should include decorative pavers and/or markings to enhance the walkability and beautification of the street scene.

- Where appropriate, raised sidewalks, decorative pavers, and ADA crosswalk upgrades should be incorporated to improve and enhance the existing or proposed pedestrian infrastructure and safety throughout the City.

Downtown Strategic Plan

- The City should enhance crosswalks at Main Street, Pomeroy Avenue, Hinds Avenue, and Stimson Avenue with special paving and/or markings.

Exhibit 51 – Summary of Recommendations

Item No.	Recommendations
A. Pedestrian and Bicycle	
1.	Identify locations within Pismo Beach where crosswalks should be added or enhanced
2.	Pursue implementation of recreational trails, as funding becomes available
3.	Convert Cypress Street, between Hinds Avenue and Addie Street, into a bicycle boulevard
4.	Convert the existing Cypress Street bridge over Pismo Creek into primarily bicycle and pedestrian use, but open to one-way vehicle traffic during special events.
5.	Provide additional support facilites for pedestrian and bicycle use throughout the city
6.	Consider establishing a bicycle sharing program
7.	Extend the existing promenade north of Main Street
8.	Increase eduction, encouragement, and enforcement of bicycle facilities
9.	Implement other recommendations within the Bicycle and Pedestrian Master Plan
10.	Implement other recommendations within Pismo Beach Complete Streets Plan
11.	Implement other recommendations within the Downtown Strategic Plan
B. Transit	
1.	Work with San Luis Obispo Council of Goverments (SLOCOG) and San Luis Obispo Regional Transportation Authority (RTA) to improve transit availability and accessibility within Pismo Beach
C. Rail	
1.	Work with RTA, SLOCOG, and the City of Grover Beach to add a shuttle service between the Grover Beach train station and Downtown Pismo Beach
D. Parking	
1.	Develop a Parking Strategy Plan for Downtown Pismo Beach
2.	"Right Size" (i.e. utilize during off-season) the parking inventory within Downtown Pismo Beach
3.	Add both static and dynamic parking wayfinding systems
4.	Study further feasibility of potential parking structure site, including:
	a. Parking structure site analysis
	b. Analyze cost benefit anaysis for each site
	c. Prepare financial feasibility for each site
	d. Prioritize development of site ranking; select site and move forward with development plan
5.	Need for downtown parking standards review
6.	Site-Specific parking improvements:
	a. Parking inventory control system (i.e. dynamic system) at pier parking area
	b. Back-in parking in on-street spaces on Pomeroy Avenue between Price Street and pier parking area
	c. Back-in parking in on-street spaces on Hinds Avenue between pier parking area and Price Street
	d. Convert existing parking into back-in parking on Price Street, Pomeroy Avenue, and Hinds Avenue (see **Appendix N**)
	e. Re-evaluate parking lot layout for Addie Street lot to increase parking inventory and improve flow

(Table continued on next page)

Exhibit 51 – Summary of Recommendations (Continued)

Item No.	Recommendations
E. Traffic Operations	
1.	Implement intersection improvements identified within **Exhibits 21** and **30**
2.	Implement Stimson/Ocean View one-way couplet, including signal at Dolliver Street (SR 1) / Stimson Avenue and striping improvements along Price Street
3.	Adopt policy that establishes a lower or no level of service standard within the Downtown area
4.	If implement Price Street extension, also implement associated striping improvements along Price Street, Stimson/Ocean View one-way couplet, and improvements at the US 101 Southbound Ramps - Outlets Main Entrance / Five Cities Drive intersection
5.	If the Southbound US 101 Off-Ramp to Hinds Avenue is closed, prohibit through trucks on Price Street [Dolliver Street (SR 1) to Hinds Avenue]
6.	Implement the Addie Street / Park Avenue one-way couplet
7.	Only convert Pomeroy Avenue to pedestrian-only traffic if way(s) to replace lost parking spaces are identified.
8.	Add left turn lanes on Dolliver Street once have identified way(s) to replace any lost parking spaces
9.	Work with San Luis Obispo Council of Governments (SLOCOG) in its efforts to implement the improvements identified within the *US 101 Corridor Mobility Master Plan* and the *2014 Regional Transportation Plan*
F. Transportation Demand Management	
1.	Consider establishing a Transportation Demand Management (TDM) plan for the Downtown area

PROPOSED TRAILS

The City of Pismo Beach should pursue recreational trails as funding becomes available. One example is the Pismo Creek Recreational Path, whose alignment is included in **Appendix M**. Both the City of Pismo Beach and San Luis Obispo County have identified the establishment of this trail as a long-term goal.

PROPOSED BIKEWAYS

Bikeway improvements and enhancements recommended in the *Pismo Beach Bicycle and Pedestrian Master Plan*, *Complete Street Plan*, and *Downtown Strategic Plan* include the following, listed individually for each of the three documents.

Bicycle and Pedestrian Master Plan

- Planning and development activities that construct, reconstruct, or reconfigure existing roadways shall, to the extent feasible as determined by the City, provide pedestrian and bicycle facilities as shown on **Exhibits 7 and 8 (Pages 15 and 19)**.
- Future Planning projects and right-of-way dedications will take the existing layout and circulation of bicycle facilities into consideration and make appropriate adjustments for facilities identified in the plan.
- Whenever new development is adjacent to an existing commercial center, school or other community facilities, development should include non-motorized pathways to the center/school/facility.
- The Bike Plan shall be consulted when assembling and updating the Capital Improvement Program.

Complete Street Plan

- Class II bicycle lanes should be extended along both sides of Shell Beach Road from the northern City limits to Spyglass Drive.

- A separate multi-use trail along the west side of Shell Beach Road from the northern City limits to Spyglass Drive should be incorporated to encourage non-motorized transportation and recreational activities within and outside the City limits.

- At the Shell Beach Road and Spyglass Drive intersection, Class II bicycle lane striping should be incorporated east of the intersection with appropriate signage directing cyclists to the Class II bicycle lane on Mattie Road.

- The multi-use trail should continue along the east side of Shell Beach Road from Spyglass Drive to Cliff Avenue.

- Existing Class III travel lanes along Shell Beach Road between Spyglass Drive and Vista Del Mar Avenue should be marked with shared lane markings or other appropriate Class III indicators.

- The City should coordinate with Caltrans to determine the appropriate pavement markings to improve cyclist visibility along Price Street from Cliff Avenue to the Price Street/Dolliver Street/US 101 intersection.

- The City should work with Caltrans to evaluate the configuration and determine the most appropriate alternative for the incorporation of either a Class I multi-use trail or Class II bicycle lanes from Cliff Avenue to the Price Street/Dolliver Street/US 101 intersection.

- The City should consider incorporating a Class I multi-use trail behind the Best Western Hotel that connects with Price Street to the north and south.

- A two-way, separate bicycle lane should be incorporated along the west side of Dolliver Street from Price Street to Main Street.

- Due to high automobile traffic volumes along Dolliver Street south of Main Street, Class III bicycle lanes should be incorporated along Main Street, Pomeroy Avenue, Hinds Avenue, and Addie Avenue to connect with the Class III bicycle routes along Cypress Street and the Promenade.

- The City should consider incorporating a multi-use pathway that would allow casual cyclists to traverse from the Cypress Street Bridge to the intersection of Dolliver Street and Village Drive.

- Where appropriate, bicycle activity enhancements should be considered and incorporated to encourage bicycle use and safety throughout the City.

Downtown Strategic Plan

- The City should designate Cypress Street a bicycle boulevard from Main Street to Dolliver Street (State Route 1), orienting and prioritizing bicycle use along the boulevard but still remaining open to use by automobiles. This closure could be done on a trial basis to better assess the benefits and consequences of this modification.

SUPPORT FACILITIES

Support facilities recommended in the *Pismo Beach Bicycle and Pedestrian Master Plan*, *Complete Street Plan*, and *Downtown Strategic Plan*, listed individually for each of the three documents.

Bicycle and Pedestrian Master Plan

- Future updates to the Municipal Code Section 17.108.020 should consider a ratio of one bike rack for every 10 car spaces for commercial uses and one bike rack for every two car spaces for multi-family residential uses.

- All new City parking lots should provide bicycle parking of not less than 10% of the number of planned parking spaces.

- Long and short-term bicycle parking shall be provided at all park and ride lots and transit centers within the City and the City shall work with SLOCOG and RTA to identify funds for the provision of bicycle parking.

- City staff shall identify locations where additional long and short-term bike parking may be necessary and:
    - May develop a "racks-with-plaques" program to provide for additional bike parking at those locations.
    - Recommend long-term parking facilities including lockers and showers for new developments.

  The City should consider placing short-term bicycle parking adjacent to shops, areas lacking automobile parking spaces, and/or in areas of observed needs where appropriate as it has already done in the downtown.

Complete Street Plan

- Consider opportunities to incorporate bicycle parking and seating amenities near view corridors along Shell Beach Road south of El Portal Drive, at Palisades Park, and at coastal access trail connections.

- The City should consider including locations for parking and/or pedestrian bicycle amenities on the east side of Price Street, especially where the available space widens at ramp locations.

- Within the downtown pedestrian core, consider incorporating pedestrian amenities such as benches to enhance walkability.

- Integrate long-term bicycle parking locations to serve people who leave their bicycles at the same location for the day or overnight near transit locations, schools, and places of work.

- Integrate short-term bicycle parking to serve people who leave their bicycles for short periods of time while shopping, recreating, eating, and/or running errands.

Downtown Strategic Plan

- Bicycle racks should be placed in prominent locations or gathering spaces that are easily accessible and, where appropriate, be in the form of public art that is reflective of the character of the downtown.

BIKE SHARING

As noted earlier, the City of Pismo Beach has completed but not adopted a feasibility study to consider establishing a bicycle sharing program within the City. This program would provide bicycle rental stations at key locations around the City. The traffic study encourages the development of this program and is envisioned to provide a range of benefits to the public and local business throughout the City by expanding healthy/active living choices, reducing automobile usage, improving circulation within the City particularly in the summer months, and increasing exposure to local businesses among others. Recommendations for a bike sharing program within the *Pismo Beach Downtown Strategic Plan* include:

The City should continue the process to incorporate a bike share program within the downtown area to encourage bicycle use, reduce automobile usage, and free additional parking spots.

LOCATION–SPECIFIC RECOMMENDATIONS

Recommendations for location-specific enhancements focus on expansion of the existing promenade that currently runs from Addie Street north to Main Street. The promenade expansion would extend north from Main Street to connect neighborhoods and hotels to the downtown. It is envisioned that this would reduce automobile related trips downtown, increase pedestrian mobility, and improve access to the beach. Recommendations for expanding the existing promenade in the *Pismo Beach Bicycle and Pedestrian Master Plan* and the *Downtown Strategic Plan* include (see next page):

Bicycle and Pedestrian Master Plan

- Consistent with the 2005 San Luis Obispo County Regional Transportation Plan (Vision 2025), the City should encourage the development of boardwalks, recreation and multi-use trails, which travel through or connect scenic areas or other destinations to promote walking and equestrian travel where appropriate.

Downtown Strategic Plan

- A new promenade extension should be incorporated north of Main Street to connect the neighborhoods and hotels to the downtown.

- Stairs providing access to and from the beach located at hotels and streets between Dolliver Street and Mattie Road should connect to the extended promenade.

EDUCATION, ENCOURAGEMENT AND ENFORCEMENT

Recommendations for increasing education, encouragement, and enforcement described in the *Pismo Beach Bicycle and Pedestrian Master Plan* include:

- The City shall work with SLO Regional Rideshare to provide Transportation Choices Programs to City employees.

- The City should consider adding the following text to the Municipal Code 12.16.160 Content of Special Event form:
    - *As a condition of the issuance of a Special Event permit, the applicant may be required to provide bicycle parking. Bicycle parking provision may include "Bike Valet" services provided by SLOCBC or by event volunteers.*

- The City may work with the bike coalition to advertise Bicycle Confidence Workshops in Pismo Beach.

- The City should encourage Lucia Mar School District to provide bike and pedestrian safety programs at schools within City limits. The City may participate in bike rodeos or assemblies and organized walk/bike to school day events.

The City may participate in Bicycle Confidence Workshops or another equivalent program, to individuals ticketed for bicycling illegally.

- The City may participate in education programs for motorists on rights/rules of pedestrian and bicyclists.

- The City should promote proper cycling to tourists by providing safe cycling information on the Conference and Visitors Bureau website and at the Chamber of Commerce Building downtown.

- The City will continue its advertisement of the many walking and beach access options within the City by print, on-line advertisement and public access television.

- The City may assist and provide support for organizations and individuals who wish to use pedestrian facilities for social activity and improvement.

- The City encourages school participation with the SLOCOG Safe Routes to School program.

- The City encourages Rideshare Employee Incentive Programs. Helps employers promote bicycling, walking, carpooling, and riding the bus to work. This would reduce the employers' parking demand. This program may provide financial incentives or only promotional materials.

- The City may engage Cal Poly, the San Luis Distance Club, SLO Soles Volkssport and/or other walking/running clubs, SLO County Bicycle Coalition, biking clubs or Regional Rideshare assistance to implement elements of this bicycle/pedestrian plan by doing the following:
    - *Organizing an outreach campaign for International Walk to School Day each October or other similar walking programs.*
    - *Coordination of walking programs for varying segments of the population, including, but not limited to children and seniors.*
    - *Seeking and writing grants for bicycle and pedestrian infrastructure.*
    - *Monitoring success of the implementation procedures identified in this document.*
    - *Developing a safety campaign to reduce car/bike conflicts.*
    - *Liaising between local schools and Rideshare to provide bike education*
    - *Creating or working with the SLOCBC to provide bike valet at events*
    - *Starting a "racks with plaques" and other promotion programs.*

- The City may participate with others to address countywide bicycle and pedestrian access issues.

- The City may provide advertising opportunities through its quarterly recreation guide for walking clubs along City pedestrian trails.

- The City may work collaboratively with others to support events and programs promoting pedestrian/biking/beach access opportunities.

B. Transit

SLOCOG and the San Luis Obispo RTA are both working to improve transit availability and accessibility within San Luis Obispo County. This includes the establishment of a future Bus Rapid Transit (BRT) route in the southern portion of San Luis Obispo County , the goal of which is also to reduce congestion along US 101. It is recommended that the City of Pismo Beach support these efforts.

C. Rail

There is currently no shuttle service between the Grover Beach train station and Downtown Pismo Beach. It is recommended that the City of Pismo Beach work with RTA, SLOCOG and the City of Grover Beach to establish such a service. This would enhance the alternative to travel by train rather than driving to Pismo Beach for visitors from locations along the California coast.

D. Parking

The following are recommendations for the parking program:

1. There is a need for development of a Parking Strategic Plan for Downtown Pismo Beach. The last formal parking study was completed in 2006 which primarily addressed the parking management of existing spaces. A Parking Strategic plan will follow the City's Vision, Mission and Objectives statement. It will define the strategic goals for the parking system and develop the guiding principles which will serve the community to make policy and operational decisions for a 20 -30 year time period. It also will provide the implementation strategy to guide the City through the long time period of development of the program. It is important to note that a parking strategic plan is a long-term guidance document. It will take both time and money to implement all of the plan's recommendations.

2. It is important to "right size" the downtown parking inventory to meet the needs of all seasons. This includes balancing the parking demands by creating year-round destination events which will assist with development and use of the parking inventories. It also creates the opportunity for public parking development in partnership with private developers to provide shared parking resources.

3. There is a need for a parking wayfinding system to assist the public with finding available parking, which allows them to park once and walk through-out the downtown, and reduces the repeated circulating of traffic and queuing of vehicles waiting for parking spaces to become available. The wayfinding system can include both dynamic and static signage and dynamic signage may be activated or de-activated based on seasonal demands. A static wayfinding signage program was implemented in 2015.

4. The Parking Strategic Plan also needs to analyze the potential sites for future parking structures once the "right size" parking system is determined. A parking structure feasibility plan a step-by-step process for development of parking facilities, prioritizes the sites and plan and provides a guiding plan to take advantage of partnering opportunities with private sector developers as they arise during a 20-30 year time frame. The plan includes site analysis for each site, cost benefit analysis, financial feasibility, as well as development of a ranking system for moving forward. Without such a plan, most cities function in a reactionary mode and miss opportunities for timing and forecasting parking needs and often miss opportunities for public- private partnerships in the development of shared facilities.

5. The City should undertake a review of its parking standards and requirements and adjust standards to allow public-private projects and shared parking opportunities. Such plans result in reduced parking requirements for a compact downtown such as that in Downtown Pismo Beach.

6. There are a number of site-specific parking improvements which will not only improve the parking inventory and functional use of parking inventories, they will also improve traffic flow and circulation of the downtown. These options include:
    a. Implement a parking inventory control system (i.e., dynamic parking guidance system) at the pier parking area which will assist with parking utilization and reduce traffic in a very congested location of downtown.
    b. Provide two rows of interlocking diagonal parking in the median on Price Street between Wadsworth Avenue and Hinds Avenue. These could be back-in spaces as illustrated on **Exhibit 53A (Page 125)**). Either conventional or back-in spaces will eliminate curb side parking spaces and relocate all parking to the center of the street. Thus, the conflicts of backing out of parking spaces into both moving traffic and curb-side parked vehicles are eliminated. (Note: This improvement could also allow the City to lengthen the left turn lanes on Price Street at Wadsworth Avenue. Although the example in Exhibit 51A matches the length of the existing 50 foot left turn lane, it could be lengthened through the elimination of one or more spaces.)
    c. Consider development of on-street back-in parking spaces on Pomeroy Avenue between Price Street and Cypress Street. A sample of this type of parking is provided in **Exhibit 53B (Page 126)**.
    d. Consider development of on-street back-in parking spaces on Hinds Avenue between Price Street and Cypress Street. A sample of this type of parking is provided in **Exhibit 53C (Page 127)**.
    e. Re-evaluate the parking lot layout for the Addie Street lot to increase the number of parking spaces and improve flow. This coupled with street improvements recommended for Addie and Park Street will increase the parking inventories within the lot.

Although back-in parking would be a relatively new concept to Pismo Beach, it is a concept that has been used successfully in other areas of the state and country for decades. Examples include the cities of Oceanside, California (on Mission Avenue in its main downtown core) and San Francisco (near AT&T Park). One of the major safety benefits of back-in angled parking is that exiting vehicles who have back-in parked into angled spaces have improved visibility of through traffic and bicyclists, compared to standard angled parking.

The "Downtown Parking Enhancements and Opportunities Study" previously cited on page 30 represents the Parking Strategic Plan described in Item 1 above. It makes the following additional recommendations.

1. Implement variable parking rates based on demand. This will encourage more efficient parking utilization.
2. Implement enhanced parking meters, fee collection and enforcement systems.
3. Postpone development of parking structures until parking management strategies have been fully implemented and evaluated. A parking structure is the most expensive means of addressing the peak season parking deficiency. Current and future revenue streams are not adequate to finance this option.
4. The Pier Plaza with underground parking appears to be able to be implemented without negatively impacting local businesses. The concept should be tested with a pilot project to simulate the reduced parking supply before implementing a permanent project.

E. Traffic Operations

The following transportation-related improvements are recommended for implementation:

1. Implement the intersection improvements identified in **Exhibits 21 and 30 (Pages 43-47 and 66-70)**.

2. Implement the Stimson / Ocean View one-way couplet, including a new signal at the Dolliver Street (SR 1) / Stimson Avenue intersection and striping improvements along Price Street at Stimson and Ocean View Avenues as depicted on **Exhibit 45 (Pages 99-100)**.

3. The Pismo Beach City Council should adopt a policy that establishes either a lower level of service standard or no level of service standard in Downtown Pismo Beach. The 1992 General Plan Circulation Element Principle P-1 stated that "A lower standard (than Level of Service C) may be used for the downtown area," but did not define the level of service, the specific locations it would apply to and how this policy would relate to the applicable Caltrans level of service policy of C/D. This should be clarified.

4. If the Price Street extension to Five Cities Drive is implemented, the improvements described in Improvement 2 above as well as the recommended improvements at the US 101 Southbound Ramps – Outlets Main Entrance / Five Cities Drive intersection (**Exhibit 39 (Page 85)**) will be required.

5. If the southbound US 101 Off-Ramp to Hinds Avenue is closed, adjust approved through truck routes to prohibit through trucks on Price Street [Dolliver Street (SR 1) to Hinds Avenue].

6. Implement the Addie Street / Park Avenue one-way couplet.

7. Consider converting Pomeroy Avenue (Cypress Street to pier) to pedestrian-only traffic only when a method has been determined to replace the lost parking spaces.

8. Add left turn pockets on Dolliver Street (SR 1) at selected intersections in consultation with Caltrans.

9. Work with SLOCOG to maximize throughput along the US 101 corridor in the Five Cities region.

F. Transportation Demand Management

The City of Pismo Beach should also consider a Transportation Demand Management (TDM) plan. This plan would identify measures and policies that can manage or reduce traffic demand within the city, especially during the summer peak season. A preliminary plan is included in **Appendix N** and summarized on **Exhibit 52 (Below)**. Some of the bicycle-related recommendations are also identified in other documents, such as the *Complete Streets Plan*.

Exhibit 52 – Transportation Demand Management Options

Item No.	Potential Transportation Demand Management Measure
1.	Create TDM steering group
2.	Create Pismo Beach TDM program
3.	Review options for a formal park and ride and assess feasibility
4.	Implement a formal park and ride
5.	Increase localized bus stops on existing routes
6.	Add public showers / enhance beach facilities for use by cyclists
7.	Install cycling / walking lockers
8.	Continue the Pismo Beach Rideshare program – www.pismobikeshare.com
9.	Ensure cycle parking provided at key bus stops and other key locations
10.	Ensure that walking and cycling routes are fully linked and fill in any gaps
11.	Develop a dedicated area on city web site with transportation information
12.	Develop a Pismo Beach TDM logo
13.	Develop a TDM marketing campaign to encourage use of non-motorized transportation
14.	Develop walking and cycling maps to promote active travel
15.	Hold specific events that can be a focus for TDM promotion
16.	Free "Dr. Bike sessions" to help residents and visitors maintain their bicycles
17.	"Beat the Streets" challenge
18.	"Drive Less" challenge
19.	Free cycle training to local residents / employees

Exhibit 53A – Price Street from San Luis Ave. to Pomeroy Ave. Possible Double Loaded Median Back-In Angled Parking



Exhibit 53B – Pomeroy Ave. from Cypress St. to Price St. Possible Back-In Angled Parking



Exhibit 53C – Hinds Ave. from Cypress St. to Price St. Possible Back-In Angled Parking



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5. Public Comments on Recommendations

Many of the recommendations identified in Chapter 4 were presented at a public workshop on January 7, 2015 at Pismo Beach City Hall. Below are the primary topics of discussion during that workshop. A summary of the discussion at the second public workshop, including all public comments, is provided in **Appendix D**.

Primary Topics of Discussion:

1. Scope of Work
2. Future Forecasting Methods
3. Recommendations:
    a. Network Alternatives
    b. Intersection Alternatives
    c. Why are improvements necessary?
    d. Alternatives to identified recommendations
    e. Public-initiated recommendations
    f. Cooperation from other jurisdictions (e.g. Caltrans District 5)
4. Parking:
    a. Parking Structure
    b. Back-in Parking
    c. Advantages and Disadvantages of Parklets
    d. Park and Ride Lots
5. Dissemination of Documents via City Web Page

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7. Report Preparation

Hatch Mott MacDonald (Transportation)

Chris Metzger, PE, LEED AP
Keith Higgins, PE, TE
Allen Nie, PhD, PE
Jeff Waller, TE
Travis Low, EIT
Ankit Sharma

RRM Design Group (Land Use Public Outreach)

Debbie Rudd, AICP, LEED AP
Paul Kronser

JR Parking Consultants (Parking)

Janis Rhodes