3.13 Traffic and Transportation

This section evaluates the potential impacts to traffic and transportation that could result from the construction and/or operation of the proposed PWIMP.

3.13.1 Introduction

A community is both defined and constrained by the network of highways, roads, streets, waterways, and railways that move its residents and goods through and also in and out of the area. The historical emphasis of transportation planning efforts in the City of Oxnard has been on the development of a street and highway network that would meet the demands of private automobile users and industry. Alternative transportation modes, including public transportation, bicycling, and passenger rail facilities, are becoming more important as the City of Oxnard focuses on reducing the dependency on private automobiles for transportation. This evaluation of noise was completed using information collected from the City's existing 2030 General Plan and the City's May 2017 *CEQA Guidelines* were also reviewed. Key Terms and concepts include the following:

- **Average Daily Traffic (ADT).** The total traffic volume during a given period of time divided by the number of days in the period. Current ADT volumes can be determined by continuous traffic counts or periodic counts. Where only periodic traffic counts are taken, ADT volume can be established by applying correction factors such as for the season or day of the week.
- **Capacity.** Maximum rate of flow that can be accommodated on a facility segment under prevailing conditions.
- **Congestion.** The resulting reduction of flow that occurs when demand exceeds the capacity of a roadway.
- **Level of Service (LOS).** A descriptive indicator of operating conditions on a lane or roadway. LOS is a qualitative measure of the effect of traffic flow factors, such as speed and travel time, interruption, freedom to maneuver, driver comfort, and convenience.
- **Volume to Capacity Ratio (V/C).** The V/C ratio is a comparison of traffic volume on a roadway to the traffic capacity of the roadway, based on the number of lanes available.

3.13.2 Regulatory Context

Standards applicable to traffic and transportation are summarized below.

3.13.2.1 Federal

Federal laws that apply to the PWIMP include the following:

Title 49, Code of Federal Regulations (CFR), Sections 171-177 (49 CFR 171-177). Title 49, Code of Federal Regulations (CFR), Sections 171-177 (49 CFR 171-177) governs the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of the transportation vehicles.

49 CFR 350-399, and Appendixes A-G, Federal Motor Carrier Safety Regulations. 49 CFR 350-399, and Appendixes A-G, Federal Motor Carrier Safety Regulations address safety considerations for the transport of goods, materials, and substances over public highways.

49 CFR 397.9, the Hazardous Materials Transportation Act of 1974. 49 CFR 397.9, the Hazardous Materials Transportation Act of 1974, directs the U.S. Department of Transportation to establish criteria and regulations for the safe transportation of hazardous materials.

3.13.2.2 State

State laws that apply to this project include the following sections of this California Vehicle Code (CVC), unless specified otherwise:

California Streets and Highways Code (S&HC). California Streets and Highways Code (S&HC), Sections 660, 670, 1450, 1460 et seq., 1470, and 1480, regulates right-of-way encroachment and granting of permits for encroachments on state and county roads.

Sections 13369, 15275, and 15278. Sections 13369, 15275, and 15278 address the licensing of drivers and classifications of licenses required to operate particular types of vehicles. In addition, certificates permitting the operation of vehicles transporting hazardous materials are addressed.

Sections 25160. Sections 25160 et seq. addresses the safe transport of hazardous materials.

Sections 2500-2505. Sections 2500-2505 authorize the issuance of licenses by the Commissioner of the CHP to transport hazardous materials, including explosives.

Sections 31303-31309. Sections 31303-31309 regulate the highway transportation of hazardous materials, routes used, and restrictions. CVC Section 31303 requires hazardous materials to be transported on state or interstate highways that offer the shortest overall transit time possible.

Sections 31600-31620. Sections 31600-31620 regulate the transportation of explosive materials.

Sections 32000-32053. Sections 32000-32053 regulate the licensing of carriers of hazardous materials and include noticing requirements.

Sections 32100-32109. Sections 32100-32109 establish special requirements for the transportation of substances presenting inhalation hazards and poisonous gases. CVC Section 32105 requires shippers of inhalation or explosive materials to contact the CHP and apply for a Hazardous Material Transportation License. Upon receiving this license, the shipper will obtain a handbook specifying approved routes.

Sections 34000-34121. Sections 34000-34121 establish special requirements for transporting flammable and combustible liquids over public roads and highways.

Sections 34500, 34501, 34501.2, 34501.3, 34501.4, 34501.10, 34505.5-7, 34506, 34507.5, and 34510-11. Sections 34500, 34501, 34501.2, 34501.3, 34501.4, 34501.10, 34505.5-7, 34506, 34507.5, and 34510-11 regulate the safe operation of vehicles, including those used to transport hazardous materials.

S&HC, Sections 117 and 660-72, and CVC, Sections 35780 et seq. S&HC, Sections 117 and 660-72, and CVC, Sections 35780 et seq., require permits to transport oversized loads on county roads. California S&HC Sections 117 and 660 to 711 require permits for any construction, maintenance, or repair involving encroachment on state highway rights-of-way. CVC Section 35780 requires approval for a permit to transport oversized or excessive loads over state

highways

California State Planning Law, Government Code Section 65302. California State Planning Law, Government Code Section 65302, requires each city and county to adopt a General Plan, consisting of seven mandatory elements, to guide its physical development. Section 65302(b) requires that a circulation element be one of the mandatory elements.

- All construction in the public right-of-way will need to comply with the "Manual of Traffic Controls for Construction and Maintenance of Work Zones" (Caltrans, 1996).
- The Caltrans weight and load limitations for state highways apply to all state and local roadways. The weight and load limitations are specified in the CVC Sections 35550 to 35559. The following provisions, from the CVC, apply to all roadways and are therefore applicable to this project.
- General Provisions:
  - The gross weight imposed upon the highway by the wheels on any axle of a vehicle shall not exceed 20,000 pounds; and the gross weight upon any one wheel, or wheels, supporting one end of an axle, and resting upon the roadway, shall not exceed 10,500 pounds.
  - The maximum wheel load is the lesser of the following: (a) the load limit established by the tire manufacturer or (b) a load of 620 pounds per lateral inch of tire width, as determined by the manufacturer's rated tire width.
- Vehicles with Trailers or Semitrailers:
  - The gross weight imposed upon the highway by the wheels on any one axle of a vehicle shall not exceed 18,000 pounds; and the gross weight upon any one wheel, or wheels, supporting one end of an axle and resting upon the roadway, shall not exceed 9,500 pounds. The exception is that the gross weight imposed upon the highway by the wheels on any front steering axle of a motor vehicle shall not exceed 12,500 pounds.

3.13.2.3 Local

The local laws that apply are as follows:

City of Oxnard 2030 General Plan. The City of Oxnard 2030 General Plan (transportation and circulation element) sets forth policies that are applicable to the GREAT project. They are as follows:

- The City LOS standards for the state highway system and specific routes of regional significance shall be those standards adopted in the Comprehensive 2030 General Plan and Environmental Impact Report (EIR). (City of Oxnard, 1990)
- The City shall require the managers of all new development projects to analyze their contribution to increased traffic and to implement improvements necessary to address the increase.

Ventura County General Plan. The Transportation and Circulation Element of the Ventura County General Plan identifies the goals, policies, and implementation measures that ensure compatibility between land use, infrastructure, and transportation modes (motorized and non-

motorized). The plan describes the circulation diagram and functional roadway classification system of the County. The element establishes standards that guide the development of the transportation system and management of access to the highway system by new development, throughout the unincorporated areas of the County. (Ventura County, 1988)

Ventura County Transportation Commission (VCTC). The VCTC is a planning partnership among the local, county, regional, nonattainment area, and state planning agencies that creates processes to facilitate coordination and cooperation and to provide a synergistic environment where optimum transportation decisions can be made.

Regional Transportation Plan. The RTP represents the blueprint for major transportation investments in the region. The plan provides a vision for the regional transportation system, now and in the future, and is designed to achieve specific goals defined by the Ventura County community.

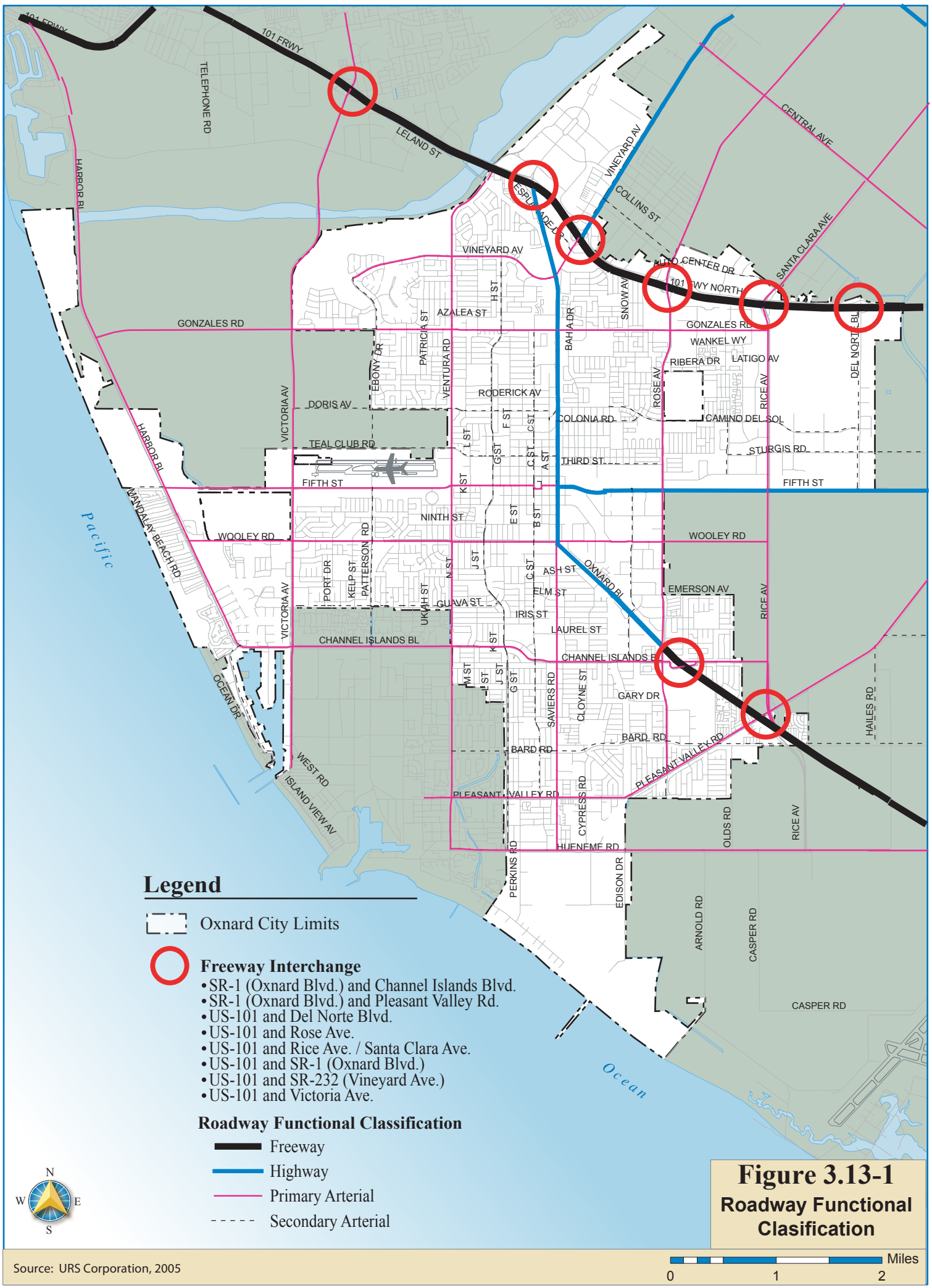
3.13.3 Environmental Setting

This section describes the existing conditions of traffic and transportation in the PWIMP Planning Area.

Functional Classification of Roadways. A functionally classified roadway system allows streets to be grouped according to their purpose and function within the transportation network. Urban streets generally serve two primary functions: traffic movement or mobility, and accessibility. Functional classification describes the level of mobility and access provided by facilities within a community's transportation network.

The City of Oxnard currently provides standards for facilities described in four functional categories: freeways, arterials, collectors, and local roads. Each type of road serves a specific purpose outlined below. This hierarchy of streets and highways is only a general guide to the classification of roadways, which make up the circulation system. Often a street serves a dual function (both mobility and accessibility) and it is difficult to provide a definitive classification. In addition, the width of a roadway does not always correspond directly to its function in the overall circulation system, although the wider roadways tend to have more regional functions within the overall circulation system. Figure 3.13-1 illustrates the functional classification of Oxnard's road network.

- **Freeways.** Freeways (expressways) are intended to serve both intra- regional and inter-regional travel. Freeways provide for high speed, through traffic movement on continuous routes. Freeways provide connections to other regional highways and are capable of carrying heavy traffic volumes. Speed limits on freeways are usually the highest allowed by law. Access to freeways is strictly controlled and accomplished through on- and off-ramps. Freeways provide no access to adjacent properties (but do provide high visibility). Collector streets require 80 feet of Right-of-Way (ROW) and are typically designed to accommodate three to four lanes of traffic.
- **Arterials.** Arterials provide for mobility within Oxnard and adjacent areas. Arterials are designed to carry through traffic on continuous routes and join major traffic origins and destinations, freeways, and other arterials. For arterials, access is less restricted than freeways, although access to and from adjacent property is generally selective. Collector streets require 80 feet of ROW and are typically designed to accommodate



Legend

Oxnard City Limits

Freeway Interchange

- SR-1 (Oxnard Blvd.) and Channel Islands Blvd.
- SR-1 (Oxnard Blvd.) and Pleasant Valley Rd.
- US-101 and Del Norte Blvd.
- US-101 and Rose Ave.
- US-101 and Rice Ave. / Santa Clara Ave.
- US-101 and SR-1 (Oxnard Blvd.)
- US-101 and SR-232 (Vineyard Ave.)
- US-101 and Victoria Ave.

Roadway Functional Classification

- Freeway
- Highway
- Primary Arterial
- Secondary Arterial

N W E S

Figure 3.13-1
Roadway Functional Clasification

Source: URS Corporation, 2005

0 1 2 Miles

three to four lanes of traffic.

- **Collectors.** Collectors provide for internal traffic movement within Oxnard and connect local roads to arterials. Collectors are designed to take traffic off of local roads and feed it into arterials and freeways. Collector streets require 80-feet of ROW and are typically designed to accommodate two lanes of traffic. Collector streets require 80 feet of ROW and are typically designed to accommodate two lanes of traffic.
- **Local Roads.** Local roads provide direct access to adjacent property and connect with collectors and arterials. Local roads are typically developed as two lane undivided roadways. Long-term planning is limited to protecting the ability of future developments to extend local roads through existing parcels. Collector streets require 80 feet of ROW and are typically designed to accommodate one lane of traffic in each direction.
- **Alleys.** Alleys are narrow roadways providing secondary access to land uses. Generally, alleys provide access to the rear of properties and pass through the middle of a block. Alleys are generally no more than twenty-five feet in width because they provide for turning movements into adjacent properties along with allowing vehicles to pass one another.

Major Oxnard Corridors. Major corridors in the PWIMP Planning Area include state highways and freeways, and roadways, which serve inter-county and intra-county travel. According to the Ventura County Congestion Management Plan (CMP), the only major CMP corridors that impact Oxnard are State Route (SR) 118 and US-101. Figure 3.13-2 illustrates Oxnard's major north-south and east-west corridors in Oxnard.

- **Major North-South Travel Corridors.** There are eight north-south travel corridors within the City: Harbor Boulevard, Victoria Avenue, Ventura Road, Oxnard Boulevard, Saviers Road, Rose Avenue, Rice Avenue, and Del Norte Boulevard.

- **Major East-West Travel Corridors.** There are eight primary east-west travel corridors within the City: Fifth Street, Camino Del Sol, Channel Islands Boulevard, Gonzales Road, Hueneme Road, Pleasant Valley Road, Vineyard Avenue, and Wooley Road.

State Highways. Parts of five state highways and routes pass through the PWIMP Planning Area. These state highways are described below.

SR-1 - SR-1 (Pacific Coast Highway) is a 656-mile north south route and is a part of the California Scenic Highway System. SR-1 extends from the Los Angeles County line to Santa Barbara County and provides interregional, recreational, commuter and local travel through both rural and urban settings. In relation to Oxnard, SR-1 has a junction with SR-34, SR-232, and US-101.

- **State Route 34 (SR-34)** - SR-34 (Fifth Street) is a 13-mile east-west route that starts on the west at the intersection of SR-1 / Oxnard Boulevard and Fifth Street in Oxnard. SR-34 continues to the City of Camarillo and ends at SR-118.


101 FRWY
101 FRWY
TELEPHONE RD
HARBOR BL
Santa Clara River
LELAND ST
CENTRAL AVE
VINEYARD AV
COLLINS ST
ESPLANADE DR
SANTA CLARA AVE
VINEYARD AV
CENTER ST
101 FWY NORTH
GONZALES RD
AZALEA ST
H ST
SNOW AV
BAHIA DR
GONZALES RD
WANKEL WY
RIBERA DR
LATIGO AV
DEL NORTE BL
PATRICIA ST
VENTURA RD
EBONY DR
VICTORIA AV
DORIS AV
RODERICK AV
RICE AV
COLONIA RD
TEAL CLUB RD
L ST
F ST
C ST
G ST
THIRD ST
STUDIO DR
HARBOR BL
FIFTH ST
K ST
E ST
B ST
FIFTH ST
Pacific
WANDALAY BEACH RD
NINTH ST
ROSE AV
PIER WK
WOOLEY RD
PATTERSON RD
WOOLEY RD
PORT DR
KELP ST
J ST
ASH ST
OXNARD BL
VICTORIA AV
UKIAH ST
N ST
ELM ST
EMERSON AV
IRIS ST
LAUREL ST
RICE AV
CHANNEL ISLANDS BL
H ST
CHANNEL ISLANDS BL
OCEAN DR
M ST
L ST
J ST
G ST
SAVIERS RD
CLOYNE ST
GARY DR
HAILES RD
BARD RD
BARD RD
PLEASANT VALLEY RD
WEST RD
ISLAND VIEW AV
PLEASANT VALLEY RD
CYPRESS RD
OLDS RD
RICE AV
HUENEME RD
PERKINS RD
EDISON DR
ARNOLD RD
CASPER RD
CASPER RD
Ocean
Legend
Oxnard City Limits
South Coast Area Transit (SCAT)
City of Oxnard
City of Port Hueneme
Existing Major Traffic Corridors
Traffic Corridor
Traffic Signals by Agency
Caltrans District 7 (37)
City of Oxnard (125)
City of Port Hueneme (7)
Ventura County (8)
N
W
E
S
Figure 3.13-2
Streets and Highways
Source: City of Oxnard, 2005 and URS Corporation, 2006
0
1
2
Miles

- **State Route 118 (SR-118)** - SR-118 is a 47-mile east-west route and is a part of the California Scenic Highway System. SR-118 extends from SR- 126, in Ventura, to the Los Angeles County line within Ventura County. SR-118 travels north its last four miles, widening out to four lanes at Vineyard Avenue (SR-232), then crossing the Santa Clara River. In relation to the PWIMP, SR-118 has a junction with SR-34 and SR-232.
- **State Route 232 (SR-232)** - SR-232 (Vineyard Avenue) is a 4-mile north-south route and extends from SR-1 to SR-118 within Ventura County. SR-232 starts on the west at the intersection of SR-1 / Oxnard Boulevard and Vineyard Avenue. SR-232 continues northeast on Vineyard Avenue, intersects with US-101, and ends at SR-118. In relation to the PWIMP, SR-232 has a junction with SR-1, SR-118 and US-101.
- **US Highway 101 (US-101)** – US-101 is a 1,540-mile north south-route that terminates in Washington State. US-101 extends from the Los Angeles County line to the Santa Barbara County line within Ventura County. US-101 is heavily used by commuters traveling between Ventura, Los Angeles and Santa Barbara Counties and the route experiences heavy seasonal recreational traffic bound for vacation destinations along the coast. Regional activity centers such as Oxnard's Esplanade Shopping Center generate a great deal of localized traffic activity that impacts US-Weekend traffic, which has a high recreational component, also results in sporadic traffic congestion for US-101. Locations on US-101 with especially heavy traffic are the stretches between Camarillo and the Santa Clara River Bridge in Oxnard. In relation to the PWIMP, US-101 has a junction with SR-1, SR-232 and SR-34.

Major Arterials. Significant traffic generator routes pass through the PWIMP Planning Area. These arterials are described below.

- **Bard Road.** Bard Road serves as a secondary arterial from Saviers Road to Pleasant Valley Road. Bard Road provides east-west access to Oxnard's south central and southeast neighborhoods and also serves as a route from the City of Port Hueneme and the Navy's Construction Battalion Center to SR-1.
- **C Street.** C Street functions as a local arterial from Gonzales Road to Bard Road. Although it does not have a cross section consistent with the local arterial standard, C Street functions as the one carrying traffic parallel to relatively congested Oxnard Boulevard.
- **Channel Islands Boulevard.** From Harbor Boulevard in Oxnard through the City of Port Hueneme to Rice Avenue, Channel Islands Boulevard is primarily a four lane street with limited driveway access in commercial and residential areas.
- **Del Norte Boulevard.** Del Norte Boulevard provides access to US-101 from the Northeast Industrial Area. Del Norte Boulevard functions as a secondary arterial from US-101 to Sturgis Road and as a local roadway from Sturgis Road south to Fifth Street (SR-34).
- **Emerson Avenue.** Emerson Avenue is a local arterial that provides access to the Channel Islands Business Center from Rose Avenue and SR-1 via Statham Boulevard.

East of Rose Avenue, Emerson Avenue functions as a collector street for the Lemonwood Neighborhood.

- **Fifth Street (SR-34).** Fifth Street is the principal east-west street serving the Central Business District of Oxnard and the mid Oxnard region on both the east and west sides of Oxnard. Fifth Street is currently designated SR-34 east of Oxnard Boulevard. Fifth Street functions as a secondary arterial except for the segments from Patterson Road to H Street and Oxnard Boulevard to Rose Avenue, which presently function as primary arterials. Fifth Street provides access to Harbor Boulevard, which is a major route into and out of Oxnard.
- **Gonzales Road.** From Victoria Avenue to Rice Avenue in Oxnard, Gonzales Road is a four-lane divided primary arterial serving mostly residential and commercial areas. Gonzales Road is also a six-lane road at certain locations including east of Entrada. Gonzales Road extends out to Harbor Boulevard into Ventura County.
- **Harbor Boulevard.** From the Santa Clara River south to Fifth Street in Oxnard, Harbor Boulevard is a two-lane road serving primarily recreational and agricultural uses. South of Fifth Street to Channel Islands Boulevard, Harbor Boulevard is a four-lane city street with limited driveway access.
- **H Street/ J Street.** H and J Street presently function as local arterials from Vineyard Avenue to Channel Islands Boulevard. H and J Streets don't have cross sections consistent with the local arterial standard.
- **Hueneme Road.** From Ventura Road in the City of Port Hueneme to J Street in Oxnard, Hueneme Road is a four lane divided roadway. From J Street in Oxnard east to Las Posas Road, Hueneme Road is primarily a two-lane road serving light industrial and agricultural areas. Hueneme Road is part of the National Highway System and is a Port of Hueneme access route.
- **Lombard Avenue.** Lombard Avenue functions as a local arterial serving a portion of the Oxnard Northeast Industrial Area.
- **Oxnard Boulevard (SR-1.)** Oxnard Boulevard is one of the principal entrances to Oxnard from both the north and south. Oxnard Boulevard is also the principal north south access to the Central Area and continues southerly through the Five Points intersection to southeast commercial and residential areas. Although Oxnard Boulevard's development as a commercial strip is an obstacle, its location in the center of Oxnard has led to its functioning as a primary arterial. Oxnard Boulevard is currently designated as SR-1 and the State of California is responsible for operations and maintenance. Oxnard Boulevard is one of the three major arterials that create the Five Points Intersection (Oxnard Boulevard/ Saviers Road/ Wooley Road).
- **Patterson Road.** Patterson Road is a local arterial which provides access to residential neighborhoods in the northwest and southwest areas of Oxnard. Patterson Road provides access to the Oxnard Airport, the City of Port Hueneme and the U.S. Navy Construction Battalion Center.
- **Pleasant Valley Road.** From US-101 in the City of Camarillo south to SR-1 in

Oxnard, Pleasant Valley Road is a two-lane road serving light industrial and agricultural areas. South of SR-1 to Ventura Road in the City of Port Hueneme, Pleasant Valley Road is a four-lane city street serving residential and commercial areas.

- **Rice Avenue.** From US-101 south to Fifth Street in Oxnard, Rice Avenue is primarily a six-lane city street with limited access serving light industrial areas. South of Fifth Street to SR-1, Rice Avenue is a four-lane divided rural highway in Ventura County and extends to Hueneme Road. Rice Avenue is part of the National Highway System and is a Port of Hueneme access route.
- **Rose Avenue.** From US-101 south to Pleasant Valley Road, Rose Avenue is primarily a four-lane road with six lanes at certain locations
- **Santa Clara Avenue.** From SR-118 to north of US-101 in Oxnard, Santa Clara Avenue is a two-lane rural road through agricultural areas.
- **Saviers Road.** From Oxnard Boulevard south to Hueneme Road in Oxnard, Saviers Road is a four-lane city street serving primarily commercial and residential areas. Saviers Road is one of the three major arterials that create the Five Points Intersection (Oxnard Boulevard/ Saviers Road/ Wooley Road).
- **Ventura Road.** From US-101 in Oxnard south to Hueneme Road in the City of Port Hueneme, Ventura Road is a four-lane city street with limited driveway access that serves commercial and residential areas.
- **Victoria Avenue** - From Olivas Park Drive in the City of Ventura south to Channel Islands Boulevard, Victoria Avenue is a four lane, divided street that serves the agricultural areas north of Wooley Road and the residential and commercial areas south of Wooley Road.
- **Vineyard Avenue (SR-232).** Vineyard Avenue is an important connection between Route 101 and central Oxnard via Oxnard Boulevard. Between Oxnard Boulevard and the Route 101 interchange, Vineyard Avenue is a six-lane divided facility. Northeast of Route 101, Vineyard Avenue is a secondary arterial facility. Vineyard Avenue is a principal entrance to Oxnard for westbound traffic on US-101.
- **Wooley Road** - In Oxnard from Victoria Avenue east to Rose Avenue, Wooley Road is a divided four lane city street serving residential, commercial areas and light industrial areas. Wooley Road from Harbor Boulevard to Victoria Avenue is a secondary arterial with two to four lanes. Wooley Road also extends out to Rice Avenue with two lanes into Ventura County as a collector west of Harbor Boulevard. Wooley Road is one of the three major arterials that create the Five Points Intersection (Oxnard Boulevard/ Saviers Road/ Wooley Road).

Existing Traffic Volumes and Level of Service. The purpose of Level of Service (LOS) is to determine how much traffic during the rush hour is acceptable on our state freeways, highways and major streets. A LOS measurement makes sure that traffic is measured the same way throughout the City of Oxnard and other regions. To evaluate traffic operating conditions and to provide a basis for comparison of operation conditions, traffic planners use

the LOS. LOS is a qualitative measure of traffic flow representing the measurement of several factors, including speed and travel time, traffic interruption, freedom to maneuver, safety, driving comfort and convenience and operating costs.

LOS is identified by letter grades ranging from A through F. Table 3.13-1 illustrates the characteristics associated with the LOS grade for signalized intersections. LOS A represents the best driving conditions, while LOS F represents the worst conditions. LOS A, B and C indicate conditions where traffic moves without significant delays over periods of peak travel demand. LOS D and E are progressively worse peak hour operating conditions and F conditions represent where demand exceeds the capacity of an intersection.

Table 3.13-1
Level of Service (LOS) Descriptions for Signalized Intersections

LOS	Description	Duration (seconds)
A	Free/Flow/Insignificant Delays	< 10.00
B	Stable Operation/Minimal Delays	10.10 – 20.00
C	Stable Operation/Acceptable Delays	20.01 – 35.00
D	Approaching Unstable/Tolerable Delays	35.10 – 55.00
E	Unstable Operation/Significant Delay	55.10 0 80.00
F	Forced Flows/Excessive Delays	> 80.00

Source: Transportation Research Board, Highway Capacity Manual, 2000
Comment: Delay in seconds is illustrated with decimal place values because of accuracy – For a general understanding of the traffic delay, the decimal places can be removed. For example, 20.1 – 35.0 would become 20 – 35

The Highway Capacity Manual (HCM) contains considerable detail on roadway conditions, including width, terrain and other factors. These factors have been simplified and generalized for planning purposes. LOS for signalized intersections is evaluated based upon average vehicle delay experienced by vehicles entering an intersection. Control delay, or signal delay, includes initial deceleration, queue move up time, stopped delay and final acceleration delay. As delay increases, the LOS decreases. Calculations for signalized and unsignalized intersections are different due to the variation in traffic control.

In general, a deficient LOS in a City would increase congestion and reduce the mobility of residents by use of transit, private automobile, passenger railroad, etc. This decrease in mobility could have fluctuating impacts on City business and revenue generation, especially if goods movement from the Port of Hueneme were impacted as to be a decreased economic resource for Oxnard. Also, a City's deficient LOS does not assist in an emergency situation, such as fire departments, medical response teams and general citywide evacuation for any reason. In the 2030 General Plan, the acceptable LOS for Oxnard intersections was grade C or better. A LOS of a grade C or better is still considered acceptable for the PWIMP.

Existing Road Conditions. A summary of the existing road conditions within the PWIMP Planning Area is as follows.

- **SR-1 (Oxnard Boulevard):** SR-1 on Oxnard Boulevard is two lanes in each direction and carries a large volume of truck traffic from the Port of Hueneme, the fourth busiest ocean port in the State of California. This portion of SR-1 (Oxnard Boulevard) traveling through Oxnard is heavily congested and operates at Level of Service F.

- **SR-118:** On westbound SR-118, traffic volume increases approaching the Cities of Oxnard and Ventura, with 37,000 Average Daily Trips (ADT) using the bridge over the Santa Clara River. SR-118 has been subjected to heavy truck use due to trucks bypassing the congestion, steep grade and weighing station on US-101. According to the Ventura County CMP, 16 percent of the total volume of vehicles on SR-118 is truck traffic. This volume of trucks creates severe congestion, noise, and safety impacts on the two-lane segment in Oxnard.
- **US-101:** US-101 experiences heavy daily traffic with volumes ranging from 133,000 to 199,000 ADT, with about 5 percent of this volume consisting of truck traffic, according to the Ventura County CMP. About 46 percent of daily truck traffic from the Port of Hueneme, approximately 300 truck trips per day, use US-101 to travel between the Port of Hueneme and the Los Angeles area. The amount of truck traffic from the Port of Hueneme is expected to increase as Port of Hueneme operations are expected to continue to expand.

Based on recent traffic counts including turning movement counts, often referred to as AM PM Peak counts, and 24- hour counts, often referred to as Average Daily Trip (ADT) counts, the LOS for Oxnard intersections were calculated.

The Highway Capacity Manual by the Transportation Research Board calculates a signalized and non-signalized intersection differently based on the differences in the amount of queue time and the characteristics of the intersection. For example, there is a difference in the amount of time a driver is required to wait at a red light at a signalized intersection as compared with a driver without that particular wait at an un-signlaized intersection. Un-signalized intersections do not use a v/ c ratio, but rather an amount of time measured in seconds for the LOS analysis.

Most Deficient Intersections

Based on the 2030 General Plan, six intersections have a deficient LOS in the AM and PM peak periods. These intersections include:

- Fifth Street and Del Norte
- Harbor Boulevard and Gonzales
- SR-1 (Oxnard Boulevard)/ Saviers Road and Wooley Road (Five Points)
- Victoria Avenue and Doris Avenue
- Victoria Avenue and Teal Club Drive
- SR-232 (Vineyard Avenue) and SR-1 (Oxnard Boulevard)

Critical AM

Based on the 2030 General Plan, five intersections had a deficient LOS in the AM peak period. These intersections include:

- Harbor Boulevard and Fifth Street
- Lombard Street and Gonzales Road

- Ventura Road and Gonzales Road
- Victoria Avenue and Gonzales Road
- US-101 and Del Norte Boulevard

Critical PM Intersections

Based on the 2030 General Plan, fourteen intersections had a deficient LOS in the PM peak period (See Figure 3.13-3). These intersections include:

- C Street and Gonzales Road
- H Street and Gonzales Road
- Rice Avenue and Fifth Street
- Rose Avenue and Third Street
- Rose Avenue and Auto Center Drive
- Rose Avenue and Camino Del Sol
- Rose Avenue and Channel Islands Boulevard
- Santa Clara Avenue and Auto Center Drive
- Santa Clara Avenue and Central Avenue
- SR-1 (Oxnard Boulevard) and Pleasant Valley Road
- SR-232 (Vineyard Avenue) and Myrtle Street
- Rose Avenue and Fifth Street
- Rose Avenue and SR-1 (Oxnard Boulevard)
- Rose Avenue and Wooley Road=

3.13.4 Impact Analyses

This section includes a discussion of the relevant significance criteria, the approach and methodology to the analyses, and any identified impacts and mitigation measures.

3.12.4.1 Significance Criteria

Significance thresholds below are based on Appendix G (Environmental Checklist Form) of the *CEQA Guidelines* and modified from the City's *May 2017 CEQA Guidelines*, which indicates that a potentially significant impact on traffic and transportation would occur if the construction and/or operation of the PWIMP would:

- Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections) based on adopted City of Oxnard level of service (LOS) standards;


101 FRWY
101 FRWY
TELEPHONE RD
LELAND ST
HARBOR BL
CENTRAL AVE
VINEYARD AV
COLLINS ST
ESPLANADE DR
VINEYARD AV
AUTO CENTER DR
101 FWY NORTH
SANTA CLARA AVE
GONZALES RD
AZALEA ST
H ST
BAHIA DR
SNOW AV
GONZALES RD
WANKEL WY
RIBERA DR
LATIGO AV
DEL NORTE BL
VICTORIA AV
EBONY DR
PATRICIA ST
VENTURA RD
RODERICK AV
ROSE AV
RICE AV
DORIS AV
COLONIA RD
CAMINO DEL SOL
HARBOR BL
TEAL CLUB RD
L ST
F ST
C ST
G ST
C ST
A ST
THIRD ST
STURGIS RD
FIFTH ST
K ST
FIFTH ST
Pacific
MANDALAY BEACH RD
NINTH ST
E ST
B ST
WOOLEY RD
WOOLEY RD
PORT DR
KELP ST
PATTERSON RD
N ST
J ST
C ST
ASH ST
OXNARD BL
VICTORIA AV
UKIAH ST
GUAVA ST
ELM ST
EMERSON AV
RICE AV
IRIS ST
LAUREL ST
CHANNEL ISLANDS BL
K ST
CHANNEL ISLANDS BL
OCEAN DR
M ST
L ST
J ST
G ST
SAVIERS RD
CLOYNE ST
GARY DR
HAILES RD
BARD RD
BARD RD
PLEASANT VALLEY RD
WEST RD
ISLAND VIEW AV
PLEASANT VALLEY RD
CYPRESS RD
OLDS RD
RICE AV
HUENEME RD
PERKINS RD
EDISON DR
ARNOLD RD
CASPER RD
CASPER RD
Ocean
Legend
Oxnard City Limits
Intersections with LOS of D-E-F in both AM and PM
Intersections with Highest Deficiencies
Intersections with LOS of D-E-F in AM or PM
Oxnard Intersections with Traffic Signal Deficiencies in AM
Oxnard Intersections with Traffic Signal Deficiencies in PM
N
W
E
S
Figure 3.13-3
Level of Service (LOS)
Source: URS Corporation, 6-2006
Miles
0
1
2

- Exceed, either individually or cumulatively, a LOS standard established by the Ventura County Congestion Management Program (CMP) for designated roads or highways;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access; and/or
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

3.13.4.2 Approach and Methodology

As described in Chapter 2, Project Description, the City's PWIMP is comprised of improvements to the City's Water Supply System, Recycled Water System, Wastewater System, and Stormwater System through build-out of the City's 2030 General Plan. However, the design details, final options, and the timing of construction phases are not precisely known, despite the best estimates provided in the schedules in Chapter 2. Further, it is not practical or prudent to try to provide project-level or detailed quantitative analysis at this time as many of the details are not known and the timing will likely change and/or the requirements for project-level analysis could change and be different in the future. As such, the environmental impact analysis for this section has been prepared at a programmatic level of detail and it addresses the full range of potential environmental effects associated with implementation of the PWIMP, but the analysis is more qualitative and general. Specifically, the analysis focuses on providing a discussion on potential significant impacts and provides broad mitigation measures that can and should be implemented at the project-level. This approach is consistent with the State CEQA Guidelines provisions for a Program EIR, as described in Section 15168, which suggests that the level of detail is dictated by "ripeness"; detailed analysis should be reserved for issues that are ripe for consideration.

For the purposes of this PEIR, construction of PWIMP project components would have temporary effects on segments of the roadway network in the project area by increasing traffic volumes on roads that provide access to the construction work areas. Construction-generated traffic potentially would have an impact on traffic flow and traffic safety conditions by increasing congestion on area roads. Construction characteristics, including proposed labor and equipment, location of construction, and rate of construction need to be developed for each and every individual PWIMP project component to conservatively estimate the number of vehicles that would be required for facilities installation. This should be done in subsequent environmental analyses and are not specified in this PEIR.

The following analysis is focused primarily on construction-related traffic effects. Traffic, transportation, and circulation impacts from long-term operation and maintenance of the PWIMP would be less than significant because of the limited trip generation (and minimal effects on traffic congestion) associated with those on-going activities (i.e., fewer than ten full-time workers needed at any one time to operate and maintain the new facilities, and one or two workers needed for other typical maintenance procedures). Therefore, typical traffic standards such as level of service (LOS), which are often calculated by counties' congestion management agencies and are a useful measure for analyzing potential long- term effects on traffic flow, were not used in this analysis. The direct impacts of project construction would not be long-term, ongoing effects. The duration

of potentially significant impacts related to short-term disruption of traffic flow and increased congestion generated by construction vehicles would be limited to the period of time needed to complete construction of a particular PWIMP project component(s). Therefore, mitigation measures identified in this PEIR are focused on reducing the short-term project construction effects rather than long-term mitigation measures as long-term operations are not expected to have any significant impacts on traffic, transportation, and circulation.

As described in Chapter 2, Project Description, the following describes typical construction methods to be used for PWIMP project/facility components:

- Construction of stationary facilities (e.g., AWPF expansion, desalter expansion, pump stations, reservoirs, and wells) would include site preparation, equipment delivery, and building construction. Some excavation and grading would be required for locations with uneven gradient. Ground clearing and excavation of the sites would be performed using heavy construction equipment such as bulldozers, backhoes, cranes, and graders. Upon completion of excavation, construction activities would also include pouring concrete footings for tanks, laying pipeline and making connections, installing support equipment such as control panels, and fencing the perimeter of the site.
- Proposed new and rehabilitated/replaced pipelines and conveyance facilities would be installed using both conventional open-trench and horizontal directional drilling construction techniques, with most of the construction using the former method. Pipe sections would be placed in a trench of varying depth depending on pipe size and topography, and covered using conventional equipment such as backhoes and compactors. For portions of the alignment where it is not feasible to perform open-cut trenching (such as State highway crossings, stream and drainage crossings, and high utility congestion areas), tunneling technology methods such as boring and jacking, micro-tunneling or horizontal directional drilling may be used.
- All construction activities would be restricted to the ROW approved by the applicable landowner or agency. All roadways disturbed during pipeline/conveyance facility installation would be restored. Generally, trench spoils would be temporarily stockpiled within the construction easement, then backfilled into the trench after pipeline/conveyance facility installation.

3.13.4.3 Impacts and Mitigation Measures

Based on the significance criteria and approach and methodology described above, the potential impacts are discussed below.

Impact 3.13-1: Construction and operation of the PWIMP could cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections) based on adopted City of Oxnard level of service (LOS) standards. The potential temporary construction and long-term operational impacts are discussed below.

Temporary Construction Impacts

Construction would temporarily disrupt transportation and circulation patterns in the vicinity of the PWIMP projects thus disrupting local vehicle, bicycle, and pedestrian traffic along the haul

routes from stationary facilities and along the planned pipeline/conveyance alignments. Although construction-generated traffic would be temporary during peak excavation and earthwork activities, average daily truck trips could exceed 40 round-trip truck trips per day, depending on the PWIMP project and/or number of PWIMP projects under construction at any one time. The primary impacts from the movement of trucks would include short-term and intermittent lessening of roadway capacities due to slower movements and larger turning radii of the trucks compared to passenger vehicles and temporary lane closures and possible detours during certain times. As a result, the following mitigation measures are proposed to reduce any impacts to less than significant levels

Temporary Construction Mitigation Measures

Mitigation Measure 13.1-1a: Prepare and Implement Traffic Control Plan(s). As is consistent with existing policy, the City shall require the contractor to prepare and implement effective traffic control plans to show specific methods for maintaining traffic flows for each PWIMP project to be constructed. Examples of traffic control measures to be considered include: 1) use of flaggers to maintain alternating one-way traffic while working on one-half of the street; 2) use of advance construction signs and other public notices to alert drivers of activity in the area; 3) use of "positive guidance" detour signing on alternate access streets to minimize inconvenience to the driving public; 4) provisions for emergency access and passage; and 5) designated areas for construction worker parking.

Mitigation Measure 13.1b: Return Roads to Pre-construction Condition. Following construction, the City shall ensure that road surfaces that are damaged during construction are returned to their pre-construction condition or better.

Significance After Mitigation: Less-Than-Significant Impact.

Long-Term Operational Impacts

Operation of the PWIMP would require trucks to periodically deliver/pick up replacement parts, lubricants, water treatment chemicals, trash, and other consumables. For planning purposes, it has been conservatively assumed that there would be two truck trips to the AWPF, new wells, and regional desalter at the City Water Yard each day. Visits by trade persons, vendors, consultants, and other non-plant personnel are expected to be minimal and would likely occur primarily during nonpeak commute periods. Therefore, the operation of PWIMP facilities would be a less-than-significant impact on the transportation system and no mitigation measures are required or necessary.

Significance After Mitigation: Less-Than-Significant Impact.

Impact 3.13-2: Construction of the PWIMP could exceed, either individually or cumulatively, an LOS standard established by the Ventura County Congestion Management Program (CMP) for designated roads or highways. As discussed above, the long-term operations of the PWIMP would not significantly affect traffic, transportation, and circulation and is not discussed further. The potential temporary construction impacts are discussed below.

Temporary Construction Impacts

As discussed above, construction activities associated with the PWIMP would result in increased vehicle trips. This could temporarily exceed, either individually or cumulatively, existing LOS standards established by the Ventura County Congestion Management Program (CMP) for designated roads or highways. However, the Proposed Project/Action would not result in any long-term degradation in operating conditions or level of service on any project roadways. With the implementation of **Mitigation Measure 13.1a,** impacts associated with exceeding level of service standards would be reduced to a less-than-significant level.

Significance After Mitigation: Less-Than-Significant Impact.

Impact 3.13-3: Construction and operation of the PWIMP could result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. The potential temporary construction and long-term operational impacts are discussed below.

Temporary Construction Impacts and Long-Term Operational Impacts

Construction and operation of the PWIMP facilities would not be located in a location, which would or could result in a change in air traffic patterns, including either an increase in traffic levels or change in location in substantial safety risks. Therefore there is no impact.

Significance Determination: No Impact.

Impact 13.3-4: Construction and operation of the PWIMP could substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). The potential temporary construction and long-term operation impacts are discussed below.

Temporary Construction Impacts and Long-Term Operational Impacts

Delivery of hazardous materials and disposal of hazardous wastes during construction would occur on prearranged routes and would be in compliance with all applicable regulations and standards governing the safe transport of these materials. Therefore, no significant impacts would occur; and no mitigation is required.

Significance Determination: Less-than-Significant Impact.

Impact 13.3-5: Construction and operation of the PWIMP could result in inadequate emergency access. The potential temporary construction and long-term operational impacts are discussed below.

Temporary Construction Impacts and Mitigation Measures

Construction of the PWIMP facilities would have temporary effects on traffic flow, due to added truck traffic during construction activities that could result in delays for emergency vehicle access in the vicinity of the project. Implementation of **Mitigation Measure 13.3-1a** would require the contractor to establish methods for maintaining traffic flow in the project vicinity and minimizing disruption to emergency vehicle access to land uses along the truck route and/or pipeline alignment. Implementation of **Mitigation Measure 13.3-1a** would also ensure potential impacts associated with temporary effects on emergency access would be mitigated to a less-than-significant level.

Significance After Mitigation: Less-Than-Significant Impact.

Long-Term Operational Impacts

Over the long-term, the PWIMP facilities would require operation and routine maintenance procedures. Daily traffic would be generated by operational and maintenance personnel monitoring the various new, expanded, and rehabilitated facilities. Operation and maintenance of the new, expanded, and rehabilitated facilities is estimated to require fewer than ten new full-time workers at any one time. Maintenance procedures will generally involve routine maintenance checks, landscape maintenance, weekly visual inspection of pipeline/conveyance alignments, and ensuring ongoing access to system facilities, among other tasks, with one or two workers expected to perform these maintenance activities. Given the minimal number of employees onsite at any one time, operational and maintenance activities would not generate a significant increase in traffic to the existing circulation system, or result in a level of service degradation over the long-term, including resulting in inadequate emergency access. Therefore, no mitigation is required.

Significance Determination: Less-than-Significant Impact.

Impact 13.3-6: Construction and operation of the PWIMP could conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks). The potential temporary construction and long-term operational impacts are discussed below.

Temporary Construction Impacts

The construction activities associated with the PWIMP and individual PWIMP facilities would be short term and would not conflict with adopted policies, plans, or programs supporting alternative transportation. Any short-term effects would be considered less-than-significant. Further, with the implementation of **Mitigation Measure 13.3-1a**, any impacts would be further reduced to less than significant levels.

Significance Determination: Less-than-Significant Impact.

Long-Term Operational Impacts

Once constructed, the operations of the PWIMP and individual facilities would not conflict with adopted policies, plans, or programs supporting alternative transportation. Therefore, no significant impacts would occur; and no mitigation is required.

Significance Determination: Less-than-Significant Impact.

3.13.5 Cumulative Effects

Construction of the PWIMP has the potential to have significant impacts on traffic and transportation in the area. However, with the implementation of the identified mitigation measures above would reduce these impacts to less-than-significant levels. As for cumulative impacts, the City would need to further analyze the construction of each of these PWIMP facilities on a project-level basis at the appropriate time with a full understanding of other projects being constructed in the area at the same time to be able to further assess the potential for the PWIMP to have cumulative traffic and transportation impacts.