3.16 TRANSPORTATION/TRAFFIC

TRANSPORTATION/TRAFFIC - Would the Project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☒	☐	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☒	☐	☐
c) 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?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

3.16.1 Environmental Setting

3.16.1.1 Onshore Transportation

The northern portion of the pipeline terminus is located within an onshore valve pit on Sherman Island located in Sacramento County. Access to the northern landing is gained by crossing the Senator John A. Nejedly Bridge (Antioch Bridge - SR 160) approximately 2 miles to Victory Highway which turns southwest to the Sherman Island East Levee Road (Figure 3.16-1). The southern landing of the pipeline corridor comes ashore at Lauritzen Yacht Harbor in the City and terminates in a subterranean valve pit. Onshore access to the southern Project site is generally gained from SR 160 to Wilbur Avenue, north onto Bridgehead Road and east onto Lauritzen Lane (Figure 3.16-2).

Figure 3.16-1. Northern Landing Onshore Ingress/Egress Route

Figure 3.16-2. Southern Landing Onshore Ingress/Egress Route

In addition, marine crews would access the offshore Project site via a pick-up location within the northeastern portion of the harbor. The Lauritzen Yacht Harbor is a privately owned marina which provides berths for recreational boaters, a gas dock and boat launching facilities. Directly adjacent to and west of the Lauritzen Yacht Harbor is the Driftwood Marina. Use of Lauritzen Yacht Harbor on behalf of the Project has been approved and coordinated by PG&E with the Lauritzen Yacht Harbormaster.

Traffic counts in the City are generally measured by Level of Service (LOS) designations. LOS is a measure of the capacity at which a roadway or intersection is operating with regard to traffic flow. Intersection or roadway segment LOS values range from LOS A, which indicates free flow or excellent conditions with short delays, to LOS F, which indicates congested or overloaded conditions with extremely long delays. LOS values A through C indicate that an intersection or roadway segment is operating at acceptable levels.

The City has adopted LOS D, or a volume-to-capacity (V/C) ratio of 0.90, as the threshold of acceptability for signalized intersections. Any signalized intersection operating worse than LOS D would therefore be considered inconsistent with this standard (City of Oakley 2010). A traffic study in 2006 conducted on behalf of the City for the Cline Specific Plan (Fehr and Peers 2007) determined that Wilbur Avenue at its intersection with Bridgehead Road and the on/off-ramps to SR 160 is currently operating at LOS A-C during peak hours (Table 3.16-1).

Table 3.16-1. City of Oakley Traffic Data for Wilbur Road at Bridgehead Road and SR 160 On/Off-Ramps

Roadway	Peak Hour	LOS
Wilbur Avenue/SR 160 Southbound Ramp	a.m.	A (B)
	p.m.	A (C)
Wilbur Avenue/SR 160 Northbound Ramp	a.m.	A (B)
	p.m.	A (C)
Wilbur Avenue/Bridgehead Road	a.m.	C
	p.m.	B

Source: Fehr and Peers 2007

Notes: *Delay for worst approach is shown in parentheses

Additionally, the Caltrans provides annual average daily traffic (AADT) counts and Peak Hour counts for the SR 160 at the nearest MP (Wilbur Avenue and the Contra Costa/Sacramento County Line). Table 3.16-2 below provides applicable AADT and peak hour data for this portion of SR 160.

Table 3.16-2. Caltrans Traffic Data for SR 160 within the Project Area

Back Peak Hour	Back Peak Month	Back AADT	Ahead Peak Hour	Ahead Peak Month	Ahead AADT
Route 160 in Contra Costa County at the Wilbur Avenue Intersection Mile Post 0.486					
1,050	12,600	11,000	1,150	1,330	12,200
Route 160 at Contra Costa/Sacramento County Line at Mile Post 1.327					
1,150	13,300	12,200	NA	NA	NA
Route 160 at Contra Costa/Sacramento County Line at Mile Post 0					
NA	NA	1,150	13,300	12,200	NA

Source: Caltrans 2013

AADT usually represents the total volume for the year divided by 365 days. Peak hour usually represents an estimate of the heaviest traffic flow which usually occurs between 7:00 a.m. to 9:00 a.m. and 5:00 p.m. to 7:00 p.m. Peak hour values indicate the volume in both directions. On roads with large seasonal fluctuations in traffic (such as SR 160), the peak hour is the hour near the maximum for the year but excluding a few (30 to 50 hours) that are exceedingly high and are not typical of the frequency of the high hours occurring during the season. Peak month ADT is the average daily traffic for the month of heaviest traffic flow, usually July or August. The AADT for this segment is 12,200 trips with a peak hour V/C ratio of 0.51 resulting in an LOS of E (Caltrans 2014).

3.16.1.2 Offshore Transportation

Project vessels for offshore work would mobilize from a local port, most likely Mare Island located approximately 30 miles west of the Project pipeline corridor (refer to Figure 2-7). From Mare Island, vessels would travel east through Suisun Bay and Honker Bay to the confluence of the Sacramento River and the San Joaquin River. From there, Project vessels would follow the San Joaquin River to the offshore Project site located offshore of Sherman Island in the San Joaquin River.

The San Joaquin River is an important commercial and recreational waterway in the Sacramento-San Joaquin Delta. The main 40 feet deep shipping channel, the Stockton Deep Water Channel, lies within the San Joaquin River approximately 3,000 feet north of the Project site near the northern shore of the river (Figure 3.16-3). Two marinas, the Lauritzen Yacht Harbor and the Driftwood Marina, serve recreational boaters and fisherman are located on the river immediately south and west of the Project site. The Contra Costa Sheriff's Department operates a Marina Patrol Support Services facility on Bridgehead Road and launches boats from the Lauritzen Yacht Harbor (CSLC 2013).

Figure 3.16-3. Vessel Traffic Lanes

3.16.2 Regulatory Setting

3.16.2.1 Federal and State

Federal and State laws and regulations pertaining to this issue area and relevant to the Project are identified in Table 3.16-3.

Table 3.16-3. Federal and/or State Laws, Regulations, and Policies Potentially Applicable to the Project (Transportation/Traffic)

U.S.	Ports and Waterways Safety Act	This Act provides the authority for the USCG's program to increase vessel safety and protect the marine environment in ports, harbors, waterfront areas, and navigable waters, including by authorizing the Vessel Traffic Service, controlling vessel movement, and establishing requirements for vessel operation.
CA	California Vehicle Code	Chapter 2, Article 3 of the Vehicle Code defines the powers and duties of the California Highway Patrol, which has enforcement responsibilities for the vehicle operation and highway use in the State.
CA	Other	The California Department of Transportation is responsible for the design, construction, maintenance, and operation of the California State Highway System and the portion of the Interstate Highway System in California.

In addition, the USCG requires specific Vessel Traffic Service (VTS) protocols for areas including the San Joaquin River. The proposed Project is located within the Inshore Section of the USCG VTS - San Francisco. The primary mission of VTS is to "facilitate good order and predictability on a waterway by coordinating vessel movements through the collection, verification, organization and dissemination of information."

The VTS uses a concept called "continuum of control" to coordinate vessel movements within its jurisdiction. The continuum is based on four levels of control: Monitor, Inform, Recommend, and Direct. All four levels of control would be used to coordinate certain marine operations of the marine construction work with shipping traffic.

1) Monitor - The VTS requires that all support vessel operations provide a sailing plan and position reports to VTS as described in the VTS User's Manual.
2) Inform - When working in or near a shipping channel, the VTS requires that a full-time radio watch monitors and communicates with VTS on VHF-FM channels 14. The marine crews will coordinate with the VTS, informing VTS prior to the start of each vessel trip that crosses the shipping channel.
3) Recommend - The marine crews will incorporate all VTS project specific recommendations into its marine remediation operation.
4) Direct - The USCG VTS "direct" level of control, per the USCG VTS User's Manual, is typically reserved for exceptional intervention by the USCG San Francisco Sector. The marine crews will comply with all USCG VTS directives.

3.16.2.2 Local

Sacramento County General Plan Circulation Element

Policy CI-9 of the Sacramento County General Plan Circulation Element (County of Sacramento 2014) requires the County to plan and design the roadway system in a manner that meets LOS D on rural roadways and LOS E on urban roadways, unless it is infeasible to implement project alternatives or mitigations that would achieve LOS D on rural roadways or LOS E on urban roadways. The urban areas are those areas within the Urban Service Boundary as shown in the Land Use Element of the Sacramento County General Plan.

Contra Costa Transportation Authority

The Contra Costa Transportation Authority (CCTA) is a public agency formed in 1988 responsible for County-wide transportation planning. Its mission is to deliver a comprehensive transportation system that enhances mobility and accessibility while promoting a healthy environment and strong economy. The Countywide Comprehensive Transportation Plan (CTP) is the Authority's broadest policy and planning document. Besides outlining the Authority's vision and goals, the CTP outlines the various strategies for addressing transportation and growth management issues within Contra Costa County. The CTP also "knits together" the various Action Plans for Routes of Regional Significance, jointly prepared by jurisdictions within each sub-area of the county, which outline plans for each regional roadway. Another one of the CCTA's duties is to develop and implement the Congestion Management Plan (CMP), which identifies comprehensive strategies necessary for the development of appropriate responses to transportation needs. The CMP includes the following:

- Traffic LOS standards for State highways and principal arterials within the County
- Multi-modal performance measures to evaluate current and future systems
- A seven-year capital improvement program to maintain or improve the system or to mitigate any regional impacts of land use projects
- A travel demand element that promotes transportation alternatives to the single occupant vehicle. There are no traffic or transportation objectives or goals within the Contra Costa County General Plan 2005-2020 (Contra Costa County 2010) relevant to the proposed Project.

City of Oakley General Plan

The City includes several policies within its General Plan Circulation Element regarding the approval of Projects within the City's jurisdiction. The following applicable policy is listed below.

- Policy 4.4.2: If it cannot be demonstrated prior to project approval that levels of service will be met per Policy 4.1.1, the City may consider the development but defer its approval until the standards can be met or assured. In the event that a signalized intersection exceeds the applicable level of service standard, the City may approve projects if the City can establish appropriate mitigation measures, or determine that the intersection or portion of the roadway is subject to a finding of special circumstance, or is a route of regional significance, consistent with those findings and/or action plans adopted by the Contra Costa Transportation Authority.

3.16.3 Impact Analysis

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Less than Significant with Mitigation. The Project includes the decommissioning and removal of three inactive natural gas pipelines between Sherman Island and the City offshore, as well as some onshore decommissioning work on the shoreline of Sherman Island and within the City at the Lauritzen Yacht Harbor. The anchored derrick barge, its mooring system, and any other Project support vessels would be marked with appropriate painted markings, day shapes, and lighting. Construction activities would include a temporary minor increase in vessel and commuter traffic within the Project area. Following Project the decommissioning and removal of the pipelines and northern valve pit, transportation conditions would return to pre-Project levels. No increases in traffic or estimated future volume would occur. By law, all vessels are required to act in accordance with all USCG requirements. The Project would be required to submit a local Notice to Mariners to the USCG (**MM TRANS-1: Local Notice to Mariners**) at least 15 days prior to construction, and Project vessels would be required to adhere to existing vessel corridors as appropriate while traveling from ports, harbors, and piers from which crew and supplies are conveyed. As such, the Project is consistent with all applicable policies and plans. With implementation of **MM TRANS-1**, impacts associated with Project activities would be less than significant with mitigation.

MM TRANS-1: Local Notice to Mariners. A Local Notice to Mariners shall be submitted to the U.S. Coast Guard (USCG) at least 15 days prior to offshore decommissioning activities. All marine operations at the Project site shall operate in compliance with a USCG Anchor Waiver obtained specifically for the Project and shall comply with the USCG Vessel Traffic Service.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Less Than Significant with Mitigation

Onshore

The southern landing and pipeline terminus valve pit is located within Lauritzen Yacht Harbor in the City. The City has adopted LOS D, or a V/C ratio of 0.90, as the threshold of acceptability for signalized intersections. A traffic study in 2006 conducted on behalf of the City for the Cline Specific Plan (Fehr and Peers 2007) determined that Wilbur Avenue (at its nearest intersection to the Project at Bridgehead Road as well as the on/off-ramps to SR 160) is currently operating at LOS A-C during peak hours (Table 3.16-1).

The northern landing of the pipeline corridor is located within an unincorporated portion of Sacramento County on Sherman Island. No LOS data are currently available for the rural roads accessing the shoreline to the Project site. SR 160 from the City of Antioch to Sherman Island within the Project area is located within Caltrans jurisdiction. According to Caltrans within its Transportation Concept Report (Caltrans, 2014) a threshold of LOS D exists in rural areas (population less than 2,500) within this segment of SR 160. This segment of SR 160 currently maintains a LOS of E (Caltrans 2014) which is over the existing threshold of significance.

The Project would generate a small number of daily trips, up to approximately 20 for onshore personnel activities (northern and southern landings if activities occur simultaneously) plus a total of 15 truck trips per day for hauling. An additional 17 offshore commuters would park and access vessel crew boats within Lauritzen Yacht Harbor. Use of Lauritzen Yacht Harbor on behalf of the Project has been approved and coordinated by PG&E with the Lauritzen Yacht Harbormaster. Impacts to these areas would cause a slight increase in traffic along SR 160 while crossing the Senator John A. Nejedly Bridge; however, this increase would be minimal and temporary in nature. No long-term traffic impacts would result. With the incorporation of **MM TRANS-2: Avoidance of Peak Hours**, impacts to traffic would be mitigated to less than significant.

MM TRANS-2: Avoidance of Peak Hours. Construction traffic affecting State highways shall be required to avoid a.m. and p.m. peak hours between 7:00 a.m. to 9:00 a.m. and 5:00 p.m. to 7:00 p.m.

Offshore

Offshore Project activities are limited to temporary construction vessels mobilizing to the Project area and mooring along the pipeline corridor, as well as one to two tug/barge trips to shore (approximately 30 miles one way) to offload recovered pipe. The decommissioning work would involve operations within the Stockton Deep Water Channel and would require that the derrick barge moor adjacent to or within the shipping channel. The PG&E decommissioning contractor would be required to maintain an open corridor through the shipping channel to provide adequate passage for shipping. This would be accomplished by using an anchorage that enables the derrick barge to move on its anchor wires or pickup spuds and move to either side of the river, clear of the shipping channel on notification from USCG of the approach of a ship.

Project vessels are anticipated to be onsite for approximately 3 months between August 1 and October 31, 2015. Only a limited number of vessel crew trips would occur between the primary Project vessels and the harbor area each day (likely no more than four) to allow for crew commuting and deliveries. Project vessels would comply with all USCG requirements including obtaining the required USCG anchor waiver for anchoring at the underwater work site and would participate in the USCG VTS monitoring system while working at the underwater work site.

There are currently no thresholds of significance that exist for offshore vessel traffic within the San Joaquin River area, however **MM TRANS-3: Marine Safety Zones**, would require the minimization of marine safety zones to preclude vessel traffic impacts. Due to the temporary nature of Project activities, as well as the minimal number of vessel trips required to move crews and transport equipment, with the inclusion of **MM TRANS-3**, impacts would be less than significant.

> **MM TRANS-3: Marine Safety Zones.** Marine safety zones shall be minimized to the extent practicable to preclude vessel traffic impacts. All vessels would be requested to maintain a 500-foot safety zone around Project buoys, or if no buoys are present, a minimum offset of 500 feet from the derrick barge.

c) 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?

No Impact. The Project site is not located within an airport land use planning area. The nearest airfields (the Rio Vista Municipal Airport [Jack Bauman Field]) located about 11 miles north of the Project site and the privately owned Funny Farm Airstrip located in Brentwood more than 7 miles to the southeast) would not be subjected to safety impacts caused by the Project. No impact would result.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. No permanent above-ground facilities are proposed. Project activities are limited to the pipeline corridor and to within the valve pit equipment laydown areas as well as offshore within the confines of Project vessels. Project activities would remove potential hazards associated with spanned pipelines across the San Joaquin River. As such, Project activities would actually reduce potential hazards within the area. No negative impact would result.

e) Result in inadequate emergency access?

Less than Significant Impact. Project activities within the shore base (assumed to be Mare Island or its equivalent) and at the Lauritzen Yacht Harbor would be in accordance with normal activities taking place and would not preclude any access including ingress or egress of emergency vehicles. Use of Lauritzen Yacht Harbor on behalf of the Project has been approved and coordinated by PG&E with the Lauritzen Yacht Harbormaster.

Project activities are limited to pipeline corridors and temporary construction equipment located within the onshore valve pit equipment laydown areas as well as offshore within the confines of Project vessels working within the pipeline corridor. Offshore work would be temporary and transitory allowing for emergency boats and other vessels to use sections of the San Joaquin River not included within the immediate work area. Impacts to transportation and emergency access would be minor and less than significant.

f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

No Impact. The decommissioning and removal of Project pipelines and the southern valve pit would not conflict with any plans, policies or programs in place for the Project area. Project activities are not located within an area that would disrupt local public transportation or reduce support involving alternative transportation routes or equipment. No impact would result.

3.16.4 Mitigation Summary

Implementation of the following MMs would reduce the potential for Project-related impacts to transportation/traffic to less than significant.

- MM TRANS-1: Local Notice to Mariners.
- MM TRANS-2: Avoidance of Peak Hours.
- MM TRANS-3: Marine Safety Zones.