

C.12 TRANSPORTATION AND TRAFFIC

This section addresses the environmental setting and impacts related to the Proposed Project. Specifically, Section C.12.1 provides a description of the environmental baseline and regulatory settings, followed by an environmental impacts analysis of the proposed project in Section C.12.2. A description of the baseline and impact analysis for the alternatives are provided in subsequent sections.

C.12.1 ENVIRONMENTAL BASELINE AND REGULATORY SETTING

C.12.1.1 Environmental Setting

Existing Roadway Network

The roadway network that could potentially be affected by the Proposed Project includes the streets and highways in which the pipeline would be located, the streets and highways that would be crossed by the pipeline, and the streets and highways that run parallel and adjacent to the pipeline corridor. As illustrated in Figure C.12-1, there are numerous roadway segments that would be directly impacted by the pipeline construction project because the pipeline route is located within or adjacent to the right-of-way (ROW) of the streets or highways. The names and locations of these roadway segments, the general roadway classification, the number of lanes and divider type, and the traffic volumes along each roadway are listed in Table C.12-1.

Existing Traffic Volumes Along Pipeline Route

The proposed 13-mile pipeline would encroach the ROW of 13 streets that are located within the Los Angeles County community of Rancho Dominguez, as well as the Cities of Carson, Long Beach, Bellflower, Cerritos, and Norwalk. As described in Table C.12-1, the number of lanes per street range from two lanes to four lanes, depending on whether the street is a residential street or a major arterial. As illustrated in Figure C.12-2, the traffic volumes along the subject streets range from 5,000 to 27,000 average daily traffic (ADT). In addition to ADT volumes, Table C.12-1 lists morning and evening peak hour volumes for the streets located within the Los Angeles County community of Rancho Dominguez, as well as the streets located within the City of Bellflower. Peak hour data for the other streets was not available, and are listed as “n/a.”

Existing Traffic Volumes Along Alternative Pipeline Routes

Seven alternative pipeline segments have been identified for the proposed pipeline, and they include Santa Fe, Cherry, Paramount, Alondra, Bellflower Rail, Artesia, and Shoemaker Alternatives (see Figure C.12-1). As described in Table C.12-2, the number of lanes for each roadway varies between 2 and 6 lanes,

Table C.12-1 Traffic Volumes Along Proposed Pipeline Route

Roadway (Location)	Classification	Number of Lanes/ Divider Type	Traffic Volume	
			Daily	Peak Hour (am/pm)
City of Carson				
Del Amo Bl. (Wilmington Ave. to Rancho Way)	Major Highway	4 lanes/island	16,000	n/a
Los Angeles County Community of Rancho Dominguez				
Rancho Way (Del Amo Bl. to Laurel Park Rd.)	Local Street	2 lanes/no lines	5,263	472 / 444
Laurel Park Rd. (Rancho Way to Victoria)	Local Street	4 lanes/double yellow	8,190	632 / 758
Victoria St. (Santa Fe Ave. to Susana Rd.)	Minor Arterial	4 lanes/double yellow	5,790	535 / 509
City of Long Beach				
Victoria St. (Susana Rd. to Long Beach Bl.)	Minor Arterial	4 lanes/double yellow	2,500	n/a
Gordon St. (Long Beach Blvd. to White Ave.)	Residential Street	2 lanes/no lines	n/a	n/a
White Ave. (Gordon St. to Cambridge St.)	Residential Street	2 lanes/no lines	n/a	n/a
DeForest Ave. (DeForest Park to South St.)	Residential Street	2 lanes/single yellow striped	n/a	n/a
South St. (DeForest Ave. to Dairy Ave.)	Residential Street	2 lanes/single yellow striped	n/a	n/a
South St. (Dairy Ave. to Atlantic Ave.)	Residential Street	4 lanes/single yellow	10,000	n/a
South St. (Atlantic Ave. to Orange Ave.)	Minor Arterial	4 lanes/single yellow	15,000	n/a
South St. (Orange Ave. to Cherry Ave.)	Minor Arterial	4 lanes/single yellow	16,000	n/a
South St. (Cherry Ave. to Paramount Bl.)	Minor Arterial	4 lanes/island & double yellow	26,000	n/a
Paramount Bl. (South St. to Artesia Bl.)	Major Arterial	4 lanes/turning lane	24,500	n/a
Artesia Bl. (Paramount Bl. to Downey Ave.)	Major Arterial	4 lanes/island	25,000	n/a
City of Bellflower				
Artesia Bl. (Downey Ave. to Lakewood Bl.)	Arterial	4 lanes/turning lane	20,400	1,400 / 2,010
Artesia Bl. (Lakewood Bl. to Clark Ave.)	Arterial	4 lanes/turning lane	20,500	1,480 / 1,860
Artesia Bl. (Clark Ave. to Bellflower Bl.)	Arterial	4 lanes/turning lane	18,000	1,380 / 1,730
Artesia Bl. (Bellflower Bl. to Woodruff Ave.)	Arterial	4 lanes/turning lane	19,600	1,400 / 1,730
Artesia Bl. (Woodruff Ave. to Palo Verde Ave.)	Arterial	4 lanes/turning lane	21,900	1,760 / 2,090
City of Cerritos				
Artesia Bl. (Palo Verde Ave. to Studebaker Rd.)	Major Highway	4 lanes/island	23,700	n/a
Studebaker Rd. (Artesia Bl. to 166th St.)	Major Highway	4 lanes/island	26,700	n/a
City of Norwalk				
166th St. (Studebaker Rd. to Gridley Rd.)	Secondary Highway	4 lanes/turning lane & dbl yellow	n/a	n/a
166th St. (Gridley Rd. to Pioneer Bl.)	Secondary Highway	4 lanes/turning lane & dbl yellow	11,800	n/a
166th St. (Pioneer Bl. to Norwalk Bl.)	Secondary Highway	4 lanes/turning lane & dbl yellow	10,300	n/a
Norwalk Bl. (166th St. to Alondra Bl.)	Secondary Highway	4 lanes/turning lane	18,900	n/a
Norwalk Bl. (Alondra Bl. to Excelsior Dr.)	Secondary Highway	4 lanes/turning lane	27,200	n/a

n/a = not available; dbl yellow = double yellow divider line; sgl yellow = single yellow divider line; island = island divider

- Sources:
1. SFPP, 1997. PEA - Santa Fe Pacific Pipeline
 2. County of Los Angeles, DPW, Telephone conversation with Jose Melgar, Traffic Engineering, Oct 28, 1997.
 3. City of Cerritos: Telephone conversation with Rudy Natavio, City Engineering, Oct 28, 1997.
 4. Site Roadway Classification Survey, conducted by Aspen Environmental Group, October 14, 1997.

depending on whether the roadway is a local street or major highway. In addition, based on the classification of a particular street, the average daily traffic volume on the subject streets range from 2,000 ADT to 51,000 ADT. Similar to the proposed route, Table C.12-2 lists morning and evening peak hour volumes for the streets located within the City of Bellflower (the only jurisdiction for which this information is available).

Table C.12-2 Traffic Volumes Along Alternative Routes

Roadway (Location)	Jurisdiction	Classification	Number of Lanes	Traffic Volume	
				Daily	Peak Hour (am/pm)
Santa Fe Alternative					
Santa Fe Ave. (Laurel Park Rd. to Victoria St.)	Rancho Dominguez	Major Arterial	4 lanes	6,800	n/a
Cherry & Paramount Alternatives					
Cherry/Garfield Ave. (South St. to Alondra Bl.)	Long Beach	Arterial	4 lanes	29,000	n/a
Artesia Bl. (Cherry Ave. to Paramount Bl.)	Long Beach	Major Highway	4 lanes	24,000	n/a
Alondra Bl. (Cherry/Garfield to Lakewood)	Paramount/ Bellflower	Major Arterial	4 lanes	19,200	n/a
Alondra Alternative					
Lakewood Bl. (Artesia Bl. to Alondra Bl.)	Bellflower	State Highway	4 lanes	34,900- 41,000	n/a
Alondra Bl. (Lakewood Bl. to Clark Ave.)	Bellflower	Major Arterial	4 lanes	19,200	1,200/1,740
Alondra Bl. (Clark Ave. to Bellflower Bl.)	Bellflower	Major Arterial	4 lanes	18,800	1,220/1,740
Alondra Bl. (Bellflower Bl. to Woodruff Ave.)	Bellflower	Major Arterial	4 lanes	20,900	1,370/1,850
Alondra Bl. (Woodruff Ave. to Interstate 605)	Bellflower	Major Arterial	4 lanes	24,000	1,610/1,980
Alondra Bl. (Interstate 605 to Studebaker Rd.)	Norwalk	Major Highway	6 lanes	51,400	n/a
Alondra Bl. (Studebaker Rd. to Gridley Rd.)	Norwalk	Major Highway	6 lanes	46,800	n/a
Alondra Bl. (Gridley Rd. to Pioneer Bl.)	Norwalk	Major Highway	4 lanes	43,000	n/a
Alondra Bl. (Pioneer Bl. to Norwalk Bl.)	Norwalk	Major Highway	4 lanes	41,200	n/a
Bellflower Rail Alternative					
Lakewood Bl. (Artesia to RR ROW)	Bellflower	State Highway	4 lanes	34,900- 41,000	n/a
Railroad ROW (Lakewood Bl. to Artesia Bl)	Bellflower/ Cerritos	n/a	n/a	n/a	n/a
Artesia Alternative					
Artesia Bl. (Studebaker Rd. to Norwalk Bl.)	Cerritos/ Artesia	Major Highway	4 lanes/dbl yell	16,800	n/a
Norwalk Bl. (Artesia to 166th St.)	Cerritos	Secondary Highway	4 lanes	24,800	n/a
Shoemaker Alternative					
Alondra Bl. (Norwalk Bl. to Bloomfield Ave.)	Norwalk	Major Highway	4 lanes/island	20,900	n/a
Alondra Bl. (Bloomfield to Shoemaker Ave.)	Norwalk	Major Highway	4 lanes/island	19,800	n/a
Shoemaker Ave. (Alondra Bl. to Excelsior Dr.)	Norwalk	Arterial	2 lanes	9,700	n/a

n/a = not available

- Sources:
1. SFPP, 1997. PEA - Santa Fe Pacific Pipeline
 2. County of Los Angeles, DPW, Telephone conversation with Jose Melgar, Traffic Engineering, Oct 28, 1997.
 3. City of Cerritos: Telephone conversation with Rudy Nativio, City Engineering, Oct 28, 1997.
 4. Site Roadway Classification Survey, conducted by Aspen Environmental Group, October 14, 1997.

Placeholder for Figure C.12-1

Placeholder for Figure C.12-2

Existing Traffic Volumes Adjacent to SFPP Stations

As described in Section B.3.2, SFPP plans to modify certain existing facilities (i.e., Watson Station in the City of Carson, Norwalk Station, Industry Station, and Colton Station in the City of Rialto) as a part of the proposed expansion project. All terminal-related modifications will occur within the boundaries and easements of the existing facilities, or within an adjacent railroad ROW (such as the pipeline re-route at the Industry Station). Therefore, no baseline traffic volumes are presented for the adjacent streets because it is assumed that the modifications will not impact transportation related issues.

Existing Rail Facilities

As illustrated in Figure C.12-1, the proposed pipeline route traverses several rail lines which serve the Los Angeles Basin. These lines include:

- Port of Long Beach Railroad ROW (crossing Del Amo Boulevard in the City of Carson)
- Los Angeles County Metropolitan Transportation Authority (MTA) Blue Line ROW (near Victoria Street in Rancho Dominguez)
- Port of Long Beach Railroad ROW (crossing South Street between Cherry and Paramount in the City of Long Beach)
- MTA ROW (previously Union Pacific Railroad), at Artesia Boulevard in the City of Cerritos (proposed route) and within the ROW from Lakewood to Artesia Boulevards (for the Bellflower Rail Alternative).

Three of the rail facilities are single-track main lines which provide freight service to the Los Angeles Basin, and the other line is a light rail system that provides passenger service between downtown Los Angeles and downtown Long Beach. It should be noted that the Southern Pacific line, through Cerritos, also provides AMTRAK passenger service south to San Diego and north through Los Angeles.

The Union Pacific Railroad currently operates approximately four trains per week along the MTA ROW passing through the Cities of Bellflower, Paramount, and Cerritos (see Figure C.12-1). Each of these trains services the Paramount Petroleum Company, an oil refinery in the City of Paramount that is currently Union Pacific's only customer on the West Santa Ana Branch (City of Bellflower, 1997).

Existing Transit Operations

Public transportation service along the proposed pipeline route includes buses and rail transit. Buses are operated in the various respective jurisdictions by the Los Angeles County MTA, Orange County Transit District (OCTD), Long Beach Transit, Norwalk Transit System, and the Bellflower Bus.

As described above, the MTA provides rail service throughout the Los Angeles Basin. The project route crosses the MTA's Metro Blue Line light rail system in the Rancho Dominguez community of the County (see Figure C.12-1). The MTA Blue Line light rail trains pass through the subject area approximately every 10 to 15 minutes during operating hours.

C.12.1.2 Applicable Laws, Regulations, and Standards

Construction of the Santa Fe Pipeline could potentially affect roadway conditions, access, traffic flow, and parking on public streets and highways. Therefore, it will be necessary for the Applicant and/or the construction contractor to obtain encroachment permits or similar legal agreements from the public agencies responsible for each affected roadway. Such permits are needed for roads that would be crossed by the pipeline as well as for the parallel roads where pipeline construction activities would require the use of public ROW. These encroachment permits would be issued by Caltrans, Los Angeles County, City of Carson, City of Long Beach, City of Bellflower, City of Cerritos, and the City of Norwalk. Alternative pipeline routes would require permits from the City of Paramount and the City of Artesia.

Transportation management plans would be required for each location where a roadway would be directly affected by pipeline construction activities, and such plans would be subject to approval by the responsible jurisdictions. These transportation management plans would be required to incorporate the standards and techniques presented in such references as the Caltrans' Traffic Manual, Chapter 5, "Manual of Traffic Controls for Construction and Maintenance Work Zones," the "Work Area Traffic Control Handbook," and/or the "Standard Specifications for Public Works Construction," as specified by each affected jurisdiction. The transportation plans would include traffic control measures, methods of advance notification for businesses along the route, telephone numbers to call if there are problems during construction, and other procedures that may be necessary during the construction phase.

C.12.2 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES: PROPOSED PROJECT

C.12.2.1 Definition of Significance Criteria

The traffic/transportation impacts of the Proposed Project would be considered significant if one or more of the following conditions were to occur as a result of pipeline construction or operation. These criteria are based on a review of the environmental documentation for other pipeline projects in southern California, as well as on input from staff at the public agencies responsible for the transportation facilities that could potentially be affected by the pipeline project. Traffic/transportation impacts would be significant under the following conditions:

- The installation of the pipeline within, adjacent to, or across a roadway would reduce the number of, or the available width of, one or more travel lanes during the peak traffic periods, resulting in a temporary disruption to traffic flow and/or increased traffic congestion.
- A major roadway (arterial or collector classification) would be closed to through traffic as a result of construction activities and there would be no suitable alternative route available.
- Construction activities would restrict access to or from adjacent land uses and there would be no suitable alternative access.
- Construction activities would restrict the movements of emergency vehicles (police cars, fire trucks, ambulances, and paramedic units) and there would be no reasonable alternative access routes available.

- An increase in vehicle trips associated with construction workers or equipment would result in an unacceptable reduction in level of service on the roadways in the project vicinity, as defined by each affected jurisdiction.
- Construction activities would disrupt bus or rail transit service and there would be no suitable alternative routes or stops.
- Construction activities within, adjacent to, or across a railroad right-of-way (ROW) would result in a temporary disruption of rail traffic.
- Construction activities would impede pedestrian movements or bike trails in the construction area and there would be no suitable alternative pedestrian/bicycle access routes.
- Construction activities or staging activities would increase the demand for and/or reduce the supply of parking spaces and there would be no provisions for accommodating the resulting parking deficiencies.
- Construction activities would conflict with planned transportation projects in the project area.
- An increase in roadway wear in the vicinity of the pipeline construction zone would occur as a result of heavy truck or construction equipment movements, resulting in noticeable deterioration of roadway surface.
- Construction activities or operation of the pipeline would result in safety problems for vehicular traffic, pedestrians, transit operations, or trains.

C.12.2.2 Applicant Proposed Measures

In the project description from SFPP's PEA, there are numerous measures proposed that are intended to reduce the adverse impacts of the project. Outlined below are the measures that have been developed by SFPP to reduce the project's traffic impacts (SFPP, 1997). The traffic analysis is based on the assumption that these measures would be implemented by SFPP.

- 1 Restrict all necessary lane closures or obstructions on major roadways to off-peak periods (including night-time construction where allowed) to mitigate traffic congestion and delays which could be caused by lane closures during construction and by exploratory excavations.
- 2 Notify appropriate parties of potential obstructions and alternative access provisions. Blocked access to nearby properties will require advance coordination with property owners and tenants. Where construction activities would interfere with access to local businesses and/or residents, property owners shall be notified of the potential obstructions. Alternative access provisions and parking will be provided where feasible, with guide signs to inform the public.
- 3 Schedule construction for critical land uses so that at least one access driveway is left unblocked at all hours or during business hours.
- 4 Provide alternative pedestrian access routes, signed/marked appropriately, to avoid obstruction to pedestrian circulation.
- 5 Develop a traffic plan in order to increase safety for the traveling public. Obtain input and approval from responsible public agencies as required. Use flaggers, warning signs, lights, barricades, cones, and other forms of traffic safety devices according to standard guidelines outlined in the Caltrans Traffic Manual, the Standard Specifications for Public Works Construction, and the Work Area Traffic Control Handbook (WATCH).

- 6 Coordinate with emergency service providers in advance to avoid restricted movements for emergency vehicles. Notify police departments, fire departments, ambulance and paramedic services in advance of the proposed locations, nature, timing, and duration of construction activities and access restrictions that could impact their effectiveness. At locations where access to nearby property is blocked, provisions such as plating over excavations, short detours, and alternate routes shall be made at all times to accommodate emergency vehicles. The traffic plan (see Measure T-5) will include details regarding emergency service coordination and procedures.
- 7 Ease the temporary loss of parking spaces through advance notification and temporary replacement of spaces. Where construction activities would eliminate existing parking spaces, advance signing (at least 72 hours) and notification to nearby residents and businesses will occur. If the loss of spaces would create a hardship, alternative spaces will be arranged, if feasible, and appropriate guide signs installed. The traffic plan (see Measure T-5) will include provisions regarding the loss of existing parking spaces.
- 8 Coordinate in advance with public transit agencies to avoid disruption to transit operations. Public transit agencies which operate bus routes on the roadways potentially affected by the proposed construction activities will be informed in advance of the pipeline project and the potential impacts at bus stop locations. Alternate pick-up/drop-off locations will be determined and signed appropriately.
- 9 Coordinate rail operations compatibility issues with the MTA, Union Pacific Railroad, and other rail operators as applicable. SFPP and contractors will plan and implement activities within the railroad ROW with appropriate railroad personnel. Access to the railroad tracks will be maintained at all times, and access to all rail passenger stations will be maintained during operating hours.

C.12.2.3 Impacts of Pipeline Construction

A pipeline is inherently more likely to affect transportation facilities during construction than during operation because there is typically only a minimal amount of surface activity required to operate and maintain a pipeline after construction is complete. Consequently, the bulk of the traffic/transportation analysis is devoted to the potential impacts during the construction phase. The following sections describe anticipated construction impacts and suggest detailed mitigation measures that could be used to alleviate potentially adverse traffic impacts.

Impact of Construction on Roadways and Traffic

As described in Section B.4, the pipeline would be constructed by beginning at a given location and proceeding linearly along the designated 13-mile alignment. It is estimated that the typical construction zone, when construction would occur in or next to roadways, would be up to approximately 50 feet in width and from 500 feet to two miles in length. This area would accommodate the activities of digging a trench, installing the pipe, back-filling, compacting the fill material, and reconstructing/paving the surface area (see Section B.4 for description of construction methodology).

SFPP has estimated that the construction zone would advance linearly along the route at an average rate of 300 to 500 feet per day; however, during construction of another pipeline recently in the Los Angeles urban area, it was found that in many cases construction proceeded at less than 200 feet per day. Therefore, it is assumed

that any particular location would be directly impacted by the construction activities for up to two weeks. SFPP expects pipeline construction to take approximately six months to complete.

As the precise alignment of the pipeline and the exact width of the construction zone at each location has not yet been established, the specific area of blockage and the impacts related to the blockage cannot be identified for each affected roadway. The following discussion, therefore, focuses on the impacts which would typically occur during construction of a pipeline in an urban area.

There are two ways that pipeline construction activities would interface with the roadway network. Construction would either cross a roadway or it would run parallel to a roadway within or adjacent to the public ROW. At the locations where the pipeline would run parallel to and/or longitudinally within a roadway, portions of the roadway which are currently used for traffic circulation and/or parking would be temporarily displaced. Detouring around each construction zone would be necessary.

Construction activities would displace the equivalent of 1.5 to 2 lanes along each roadway of the proposed route. This blockage would affect either two travel lanes, one travel lane and the adjacent shoulder/parking area, or just the shoulder/parking area, depending upon the pipeline's lateral placement within the ROW. These blockages would have a duration of one to two weeks at any given location.

The proposed pipeline would traverse major streets (e.g., Artesia Boulevard) with a large number of businesses and residences that require access to the street on an ongoing basis. Therefore, the impacts of pipeline construction on roadway blockage and traffic congestion would be significant, but mitigable (**Class II**) through the implementation of Mitigation Measures T-1 and T-2. Although SFPP has committed to these measures in general terms, they are further detailed below for additional clarity.

During construction activities, a short-term increase in the potential for accidents involving motor vehicles, bicycles, and/or pedestrians would occur. Because of the temporary disruption to traffic flow, the removal of lanes, the presence of construction equipment in the public ROW, and the localized increase in traffic congestion, drivers would be presented with unexpected driving conditions and obstacles. This could potentially result in an increased occurrence of automobile accidents, a significant impact mitigable by implementation of Mitigation Measure T-2 below (**Class II**).

Mitigation Measure for Impacts of Roadway Blockage & Traffic Congestion

Impact: Pipeline construction would block traffic lanes, causing traffic congestion and a potential increase in traffic accidents (**Class II**).

T-1 SFPP shall restrict all necessary land closures or obstructions on major roadways to off-peak period in urbanized areas to mitigate traffic congestion and delays which would be caused by lane closures during construction and by exploratory excavations. Lane closures must not occur between 6:00 and 9:30 a.m. and between 3:30 and 6:30 p.m., or as directed in writing by the affected public agency. Alternatively, SFPP shall consider nighttime construction in areas where no residences are located within 500 feet, and where traffic impacts could be reduced by avoidance of daytime construction. SFPP shall have a Traffic Management Plan prepared by a registered Traffic Engineer, describing which traffic lanes would require closure based on the pipeline location within each street, and where night construction is proposed. This plan shall be approved by each affected local jurisdiction and by the CPUC prior to construction and implemented by SFPP.

T-2 SFPP shall develop and implement detailed Traffic Control Plans (TCPs), prepared by a registered Traffic Engineer, for the entire pipeline route at all locations where construction activities would interact with the existing transportation system. Input and approval from the responsible public agencies shall be obtained; copies of approval letters from each jurisdiction must be provided to the CPUC prior to the start of construction within that jurisdiction. The TCP shall define the use of flaggers, warning signs, lights, barricades, cones, etc. according to standard guidelines outlined in the Caltrans Traffic Manual, the Standard Specifications for Public Works Construction, and the Work Area Traffic Control Handbook (WATCH).

Impacts of Construction on Property Access

When construction would occur in the outer lane and/or shoulders of roads, access to driveways would temporarily be blocked by the construction zone, thereby affecting access and parking for the adjacent businesses, residences, and institutions. Based on the information in the PEA, SFPP has committed to notify affected parties of potential obstructions and make provisions for alternative access. Alternative access provisions and parking will be provided by SFPP where feasible, with guide signs to inform the public. On most of the affected roads, these impacts would be adverse (**Class III**) but not significant because access would not be directly affected. SFPP's Applicant Proposed Measures address maintaining access; however Mitigation Measures T-3 and T-4 provide additional detail.

Access restrictions could pose a significant impact in areas with more intense business and residential uses. The proposed pipeline route includes a large number of businesses (including several major automobile dealerships) that require ongoing access to their parking lots. A significant impact (**Class II**) could occur where access to a parking lot, parking structure, hospital, or other critical land use (such as a school, business, or recreation area) would be blocked. This impact can be reduced to a level that is not significant through application of Mitigation Measure T-3 through T-5, below. Although SFPP has committed to this measure in general terms, it is detailed below for additional clarity.

Mitigation Measures for Impacts on Property Access

Impact: Pipeline construction would restrict access to residences and businesses along the ROW (**Class II**).

T-3 Prior to finalizing construction plans, SFPP shall work with each jurisdiction to identify all land uses along the ROW with access concerns. Where possible based on existing substructure, SFPP shall attempt to install the pipeline in a street location which minimizes access problems (e.g., where major businesses are located on the north side of a divided street, consider keeping construction on the south side of the street). SFPP shall also develop construction scheduling in a manner that minimizes impacts to businesses or residential areas, scheduling construction to avoid the hours or days of the week during which businesses receive the most customers, and avoiding peak traffic times adjacent to residential areas.

T-4 SFPP shall give written notification to all landowners, tenants, business operators, and residents along the ROW of the construction schedule, and shall explain the exact location and duration of the pipeline and construction activities within each street (e.g., which lane/s will be blocked, at what times of day, and on what dates). SFPP shall identify any potential obstructions to their access, and shall make alternative access provisions. The written notification shall include a toll-free telephone number for SFPP's Business Coordinator (see Mitigation Measures S-1 and S-2 in Socioeconomics, Section C.10) and shall encourage affected parties to discuss their concerns with SFPP prior to the start of construction so individual problems and solutions can be identified. Alternative access provisions shall include SFPP-provided signage and alternate parking as provided and approved by local agencies. The notification shall be provided in conjunction with that required in Mitigation Measures L-1 and L-2.

T-5 SFPP shall schedule construction on or adjacent to sensitive land uses (hospitals, schools, residences, major employers, recreational areas, etc.) so that at least one access driveway is left unblocked during all business hours or hours of use. This scheduling shall be provided by SFPP to the landowners or tenants so they can inform residents or customers. If access problems can be avoided by scheduling night construction in non-residential areas, this option should be considered (see Mitigation Measure T-1).

Impacts of Construction on Pedestrian/Bicycle Circulation and Traffic Safety

Pedestrian/bicycle circulation would be affected by the pipeline construction activities if pedestrians are unable to pass through the construction zone or if established bike routes are blocked. This impact affects pedestrian/bicycle routes that cross the alignment as well as those that are parallel to the alignment (i.e., sidewalks, shoulders, unpaved paths, and bike trails). Such pedestrian/bicycle routes would be blocked for a duration of approximately one week. Based on the information in the PEA, alternative access routes would

be provided where feasible. This impact is considered to be significant, but mitigable through the implementation of Mitigation Measure T-6 (**Class II**). Again, although SFPP has committed to this measure in general terms, it is detailed below for additional clarity.

Additionally, since there may be disruption to bicycle routes, sidewalks, shoulders, and pedestrian crossings, pedestrians and bicyclists may enter the affected streets and highways and risk a vehicular-related accident. This impact is considered to be significant, but mitigable (**Class II**) through the implementation of Mitigation Measure T-6 (below) and T-2 (above). Again, although SFPP has committed to these measures in general terms, they are detailed below for additional clarity.

Mitigation Measures for Impacts on Pedestrian/Bicycle Circulation and Traffic Safety

Impact: Pipeline construction could disrupt pedestrian/bicycle traffic or cause increased accidents (**Class II**).

T-6 SFPP shall provide alternative pedestrian/bicycle access routes to avoid obstruction to pedestrian/bicycle circulation. Where existing pedestrian circulation routes or bike trails would be obstructed by pipeline construction, alternative access routes shall be developed and signed/marked appropriately, in conjunction with local agencies. |

Impact of Construction on Emergency Response

Construction activities could potentially interfere with emergency response by ambulance, fire, paramedic, and police vehicles. The loss of a lane and the resulting increase in congestion could lengthen the response time required for emergency vehicles passing through the construction zone. Moreover, there is a possibility that emergency services may be needed at a location where access is temporarily blocked by the construction zone. This impact is considered to be significant, but mitigable (**Class II**). Again, although SFPP has committed to the following measure in general terms, additional specificity are provided below under Mitigation Measure T-7 which provides additional details to the Applicant Proposed Measure.

Mitigation Measure for Impact on Emergency Response

Impact: Emergency response vehicles could be blocked or impeded by pipeline construction activities (**Class II**).

T-7 SFPP shall coordinate in advance with emergency service providers to avoid restricting movements of emergency vehicles. Police departments, fire departments, ambulance services, and paramedic services shall be notified in advance by SFPP of the proposed locations, nature, timing, and duration of any construction activities and advised of any access restrictions that could impact their effectiveness. At

locations where access to nearby property is blocked, provision shall be ready at all times to accommodate emergency vehicles, such as plating over excavations, short detours, and alternate routes in conjunction with local agencies. The Traffic Control Plans (Mitigation Measure T-2) shall include details regarding emergency services coordination and procedures, and copies shall be provided to all relevant service providers. Documentation of coordination with service providers shall be provided to the CPUC prior to the start of construction.

Impact of Construction on Traffic Volumes

Another traffic impact would be the generation of additional traffic on the roadways in the project area as construction workers, equipment delivery trucks, and excavation trucks travel to and from the pipeline construction zone. During construction approximately 95 personnel would be employed on the project during the peak construction period. As described in Section B.4.1.2, it is expected that most laborers would be meeting in a staging yard and would be transported to the construction site in the work trucks and pick-up trucks. The welders would arrive at the construction site in their welding trucks.

In the reasonable worst case, between 90 to 95 workers could arrive at a single staging area their 95 private vehicles. The workers would then be transported to each construction site by vans or work trucks. The impacts of employee traffic on specific streets and intersections cannot be determined as the locations of the staging areas have not yet been established. Parking requirements could result in adverse conditions, but it would be less than significant (**Class III**) Mitigation Measure T-8 provides for approval of these areas with consideration of both traffic and parking impacts.

In addition to worker traffic, construction activities would generate truck traffic on the streets and highways providing access to the construction site. It is estimated that SFPP would require approximately 71,000 linear feet of pipeline between the Watson and Norwalk Stations. Based on the construction schedule of six months, construction would require two to four truck trips per day to haul pipe.

According to Section B.4.1.4, trench excavation activities would generate approximately 45,760 cubic yards (cy) of material along the 13-mile pipeline route. SFPP estimates that 22,880 cy of excavated soils would be used to backfill the trench. The remaining 22,829 cy of concrete/asphalt rubble and soil would be disposed of at an approved demolition materials recrushing company or landfill. Approximately 750 dump trucks trips would be required to haul away the old road material; other truck trips would deliver fresh asphalt that would be used to repave the trench.

Utility vehicles would also arrive and depart from each construction site. The arrival/departure routes for these truck trips would be changing from week to week as the location of the construction zone would be continually changing.

The automobile traffic generated by construction workers would be at two specific times during the day - arriving at the staging areas in the morning and leaving in the afternoon (for a daytime shift). The truck trips would be distributed throughout the day. As compared to the existing traffic volumes on the arterial streets serving the project area, the temporary increase in traffic generated by the construction of the pipeline would be minimal. The impact of automobile traffic and truck trips would be adverse but not significant with the utilization of staging areas (**Class III**), assuming the implementation of Mitigation Measure T-8 above. Mitigation Measure T-9 would further help to reduce and residual traffic congestions from commuting workers.

There may be some locations where construction trucks would create traffic safety and operational problems. These problems could be minimized through development of the Traffic Control Plan (Mitigation Measure T-2), which would mitigate the impacts to a level that is less than significant (**Class II**). Although SFPP has committed to this measure in general terms, it is detailed below for additional clarity.

Mitigation Measure for Impact of Increased Traffic Volume

T-8 SFPP shall submit the location of proposed staging area(s) to the CPUC and to appropriate local jurisdictions for review and approval. SFPP shall state the size of the area, the purpose (e.g., storage of construction equipment and employee parking), the number of vehicles and pieces of equipment to be stored, and the duration (in number of days and number of hours per day) that each staging area will be used.

T-9 SFPP shall provide a shuttle bus service for construction workers from convenient off-street parking areas to the work sites to minimize traffic volumes and parking demand at the work sites. Sufficient off-street parking shall be provided at the bus service staging areas so that adjacent or nearby parking facilities are not adversely affected. Multiple staging areas shall be utilized, if necessary, to reduce traffic impacts on the roadways serving the staging areas. A plan for use of shuttle buses and parking areas shall be submitted to the CPUC and to the affected local jurisdictions for review and written approval.

Impact of Construction on Storage Space and Parking Spaces

There would be a need to store equipment, such as trucks, backhoes, compressors, dozers, cranes, pavers, rollers, and pumps, at or near the construction sites. The trucks and active equipment would likely be parked near the construction zone along the nearby streets, while the equipment which is not actively in use would be stored at a pre-arranged off-street parking area. This could displace areas which otherwise could be used for public parking. This impact is considered adverse, but not significant (**Class III**). Mitigation Measures T-10, T-11, and T-11a would further reduce any impacts on storage space and parking spaces.

Mitigation Measures for Impact on Storage Space and Parking Spaces

Impact: Parking of construction equipment on public roadways could limit available parking (**Class III**).

T-10 SFPP shall provide an off-street area for the storage of construction equipment, vehicles, and materials to address the increased demand for construction equipment storage. This storage space shall be approved by the CPUC and the affected jurisdiction in writing prior to the start of construction. |

T-11 SFPP shall ease the temporary loss of parking spaces through advance notification and temporary replacement of parking spaces. Where the construction activities would eliminate existing parking spaces, SFPP shall post signs (at least 72 hours prior to construction in the area) in conjunction with local agencies and provide written notification to nearby businesses/residents. If the loss of parking spaces would create a hardship (as determined by the affected public agencies), alternative spaces shall be arranged by SFPP, if feasible, and appropriate guide signs installed. |

T-11a SFPP shall submit the location(s) of staging areas to the CPUC and the appropriate local jurisdiction(s) for review and approval 30 days prior to the start of construction. These locations and truck routes used during construction shall avoid residential areas. |

Impact of Construction on Road Conditions

Pipeline construction would cause potential physical impacts to roads in which the pipeline would be buried as well as to roads that would be used for construction access by heavy trucks and equipment. This potential impact is of special concern regarding roads within the affected jurisdictions. This impact is associated with physical disturbance to the road itself, rather than traffic congestion and safety. There is the potential for road surfaces to be damaged or altered during construction. In particular, road drainage features (e.g., structures or rolling dips in the road) and pavement may be damaged by construction vehicles or improper restoration techniques. This impact is considered significant, but mitigable with implementation of Mitigation Measure T-12 (**Class II**).

Mitigation Measure for Impact on Road Conditions

Impact: Construction activities and vehicles could damage road surfaces (**Class II**).

T-12 Roads disturbed by construction activities or construction vehicles shall be properly restored to ensure long-term protection of road surfaces. Care shall be taken to prevent damage to roadside drainage structures. Roadside drainage structures and road drainage features (e.g., rolling dips) shall be protected by regrading and reconstructing roads to drain properly. A road maintenance program shall

be established and implemented by SFPP for portions of the road where the pipeline is buried. Said measures shall be incorporated into an access agreement/easement with the applicable governing agency prior to construction.

Impact of Construction on Public Transit

The primary impact regarding public transit is the effect of pipeline construction on buses which travel on the roadways that will be physically blocked by construction activities. The loss of lanes on the roadways described in the above discussion would result in disruption to transit service. Buses could continue to operate, as the streets and highways would not be totally blocked; however, there would be traffic delays and some of the bus stops would be rendered temporarily inaccessible for a period of one to two weeks.

As described in Section C.12.1.1, the MTA provides rail service throughout the Los Angeles Basin. The project route crosses the MTA's Metro Blue Line light rail system in the Rancho Dominguez community of the County (see Figure C.12-2). The project would have only minor effects on railroad operations during project construction, resulting from the presence of construction equipment and activities in the ROW. There would be no significant adverse impacts on rail operations, as train movements would not be disrupted and all Railroad and California PUC safety requirements would be met. Access would be maintained at all rail passenger stations (AMTRAK and Metrolink) during operating hours.

Impacts on bus traffic could be reduced to a level that is not significant (**Class II**) through the implementation of Mitigation Measure T-13. Although SFPP has committed to this measure in general terms, it is detailed below for additional clarity.

Mitigation Measure for Impact on Public Transit

Impact: Construction could affect public transit operations (**Class II**).

T-13 SFPP shall coordinate in advance with public transit agencies to avoid disruption to transit operations. Public transit agencies which operate bus routes on the roadways potentially affected by the proposed construction activities shall be informed in advance of the pipeline project and the potential impacts at bus stop locations. Alternate pick-up/drop off locations shall be determined and signed appropriately. SFPP shall document coordination with transit agencies and provide documentation to the CPUC prior to the start of construction.

Impact of Construction on Rail Operations

Similar to the rail transit discussion above, the project would have only minor effects on railroad operations during project construction, resulting from the presence of construction equipment and activities in the ROW. There would be no significant impacts on rail operations, as train movements would not be disrupted and all Railroad and CPUC safety requirements would be met. Access would be maintained at all rail passenger stations (AMTRAK and Metrolink) during operating hours. Overall, the impact would be adverse, but not significant (**Class III**). Measure T-14 would help to further reduce any potential impacts to rail operations.

Mitigation Measure for Impact on Rail Operations

Impact: Construction could affect rail operations (**Class III**).

T-14 SFPP shall coordinate issues of construction compatibility of rail operations with MTA, Port of Long Beach, and other rail operators as applicable. SFPP and contractors shall plan and implement all activities within the railroad ROW with the appropriate railroad personnel. Railroad representatives shall be on site at all times during construction along active rail lines. SFPP shall submit documentation of coordination with rail operators to the CPUC prior to construction.

C.12.2.4 Impacts of Station Modifications

SFPP plans to modify certain existing facilities as a part of the proposed expansion project (refer to Section B.3.2 for description of the planned modifications). The hauling of construction materials and the movement of equipment onto and off each site would be staggered over time and would not impose significant impacts on the circulation infrastructure. All terminal-related modifications will occur within the boundaries and easements of the existing facilities, or within an adjacent railroad ROW (such as the pipeline reroute at the Industry Station). With proper planning, no demand would be placed upon offsite or curb side parking and the impact on parking facilities would not be significant. Damage to the surface of adjacent roadways is expected to be minimal and any roadway damage would be repaired with the implementation of Mitigation Measure T-12 above. Overall, impacts of station modifications would be adverse (**Class III**) but not significant.

C.12.2.5 Impacts of Pipeline Operation

Operation of the proposed pipeline would have negligible impacts on the area's transportation system under normal circumstances as only inspection and maintenance activities would generate vehicular traffic. If a major pipeline repair were required at a particular location, the temporary transportation impacts would be similar to the construction impacts addressed above for each location and the mitigation measures would continue to apply.

As described in Section B.5.1, the proposed pipeline, as part of SFPP's pipeline system, would be remotely operated from SFPP's central control facility at the Orange Headquarters with back-up monitoring at the Watson and Colton stations. No additional positions to SFPP's existing staff will be required as a result of this project. Therefore, no traffic impacts would result from workers commuting to the control center.

In the event of a pipeline rupture or leak, significant impacts on rail operations, highway traffic, pedestrian circulation, and transit activity could result as partial or complete closures of transportation facilities may be required. This would be considered significant but mitigable (**Class II**) through the implementation of Mitigation Measure SS-16 (Section C.11). A more detailed discussion of oil spills is presented in System Safety, including a description of SFPP's existing Oil Spill Core Plan (see Section C.11.2).

Mitigation Measure T-15 has been deleted; text is incorporated into Mitigation Measure SS-16 (Section C.11).

C.12.2.6 Secondary Impacts of Project Operations

As described in Section B.3.3, the implementation of the proposed project would result in increased product shipment from Colton through the CalNev Pipeline and SFPP's Phoenix-West Line, as well as an increase in the amount of product to the Inland Empire via tanker trucks. Based on the information in Section C.11 (System Safety), the increase in product through the lines would increase the spill size in the event of an oil spill, thus impacting a larger area, which could impact rail operations, highway traffic, pedestrian circulation, and transit activity. Similar to what was described in Section B.12.2.5, this would be considered significant (**Class I**) and unavoidable (see Mitigation Measure T-15).

Operation of the proposed pipeline would result in an increase of approximately 250 additional tanker truck trips. It is estimated that 80 percent of the additional trucks would be transporting product to destination within the Riverside/San Bernardino Area. The other 20 percent of the truck trips would be to distant locations such as Palm Springs, Escondido, etc. The tanker trips would be staggered throughout the day and would consist mainly of trucks from independent companies servicing the Inland Empire. These additional truck trips, in comparison to the number of vehicles traveling on the local roadways within the Inland Empire, would not excessively contribute to any traffic related impacts (**Class III**).

C.12.2.7 Cumulative Impacts

Cumulative traffic impacts would occur on the roadways affected by the Proposed Project if other construction activities, such as utility projects, pipeline projects, roadway construction and repair, or property development projects, were implemented simultaneously with the construction of the Proposed Project on or near a roadway which would be disrupted by the proposed pipeline construction. The transportation facilities potentially affected by the Proposed Project are described in Section C.12.1. As the project's impacts on traffic conditions

would occur during the construction phase and would be negligible during operation (except for a major oil spill), the cumulative traffic impacts would likewise occur during construction of the Proposed Project. Transportation related cumulative impacts would be adverse, but less than significant (**Class III**). Implementation of Mitigation Measure T-16 would further reduce the level of impact.

Mitigation Measure for Cumulative Traffic Impacts

T-16 SFPP shall maintain close coordination with the agencies responsible for encroachment permits on each affected roadway and with the utility companies which have facilities along the same ROW. The Traffic Control Plans (Mitigation Measure T-2) shall take into account other construction projects and their planned mitigation procedures.

C.12.2.8 Significant Unavoidable Impacts

With the implementation of Mitigation Measures T-1 through T-16, most identified adverse traffic and parking impacts of the proposed 13-mile pipeline would be reduced to a level that is less than significant. However, the potential occurrence of a major oil spill could result in a significant unmitigable traffic impact.

C.12.3 SANTA FE ALTERNATIVE SEGMENT

The Santa Fe Alternative is a 0.6-mile alternative in the Rancho Dominguez area of Los Angeles County at the western end of the proposed pipeline. As described in Section B.8.1, this alternative would replace the Laurel Park portion of the proposed route. Santa Fe Avenue is a four lane major arterial with an average traffic volume of 6,800 ADT. This alternative would have similar types of construction and operational impacts as identified for the proposed route. Mitigation Measures T-1 through T-16 would help to eliminate and further reduce any potential impacts to transportation related issues.

C.12.4 CHERRY ALTERNATIVE SEGMENT

The 1.5 mile long segment would diverge from the proposed route by turning north on Cherry Avenue from South Street, then east on Artesia Boulevard to re-join the proposed route at Artesia and Paramount. As described in Section B.8.2, the Cherry Alternative Segment would eliminate construction on South Street (between Cherry and Paramount) and no construction would occur on Paramount. The average daily traffic volumes along Cherry Avenue and Artesia Boulevard are 29,000 and 24,000, respectively. In comparison to the proposed route, this alternative would have similar types of construction and operational impacts as identified for the proposed route. Mitigation Measures T-1 through T-16 would help to eliminate and further reduce any potential impacts to transportation related issues.

C.12.5 PARAMOUNT ALTERNATIVE SEGMENT

This segment would diverge from the Cherry Alternative by continuing north on Cherry/Garfield to Alondra Boulevard, and turning east to meet the Alondra Alternative at the corner of Lakewood Boulevard. Traffic volumes are comparable to those on the proposed route, although this portion of Alondra Boulevard is less heavily traveled than this portion of Artesia Boulevard (19,000 versus 24,000 vehicles per day). Mitigation Measures T-1 through T-16 should be implemented to reduce traffic impacts.

C.12.6 ALONDRA ALTERNATIVE SEGMENT

The Alondra Alternative is an approximately 4-mile route in the central and eastern portions of the proposed pipeline route, through the Cities of Bellflower and Norwalk. It would diverge from the proposed route by turning north from Artesia Boulevard on Lakewood Boulevard, then east on Alondra Boulevard to Norwalk Boulevard, where it would re-join the proposed pipeline route. The average daily traffic volume along the roadways range from 18,800 ADT to 50,000 ADT. In comparison to the Proposed Project, this alternative would impact traffic to a greater extent because, as defined in Table C.12-2, the pipeline would be located within a major highway (Alondra Boulevard east of Studebaker) that in the eastern half (east of the 605 Freeway) has significantly higher traffic volumes than the roadways used in the proposed route (i.e., Artesia Boulevard). However, it should be noted, that through the implementation of mitigation measures T-1 through T-16, any potential transportation related would be reduced to a level that is not significant, with the exception of the potential for a pipeline spill.

If this alternative is selected, use of Alondra Boulevard would disrupt traffic in the vicinity of Cerritos College, where periodic very high traffic volumes result from student access to parking lots. This disruption is a potentially significant (**Class II**) impact, mitigable with implementation of Mitigation Measure T-17 below.

Impact: Construction in Alondra Boulevard would disrupt traffic adjacent to Cerritos College (**Class II**).

T-17 SFPP shall meet with administration officials of Cerritos College and with traffic engineers from the Cities of Cerritos and Norwalk prior to final construction planning to develop a construction schedule and specific route (i.e., use of east- or west-bound lanes and which portions of these lanes) that would minimize interference with College traffic. Construction shall be scheduled during school vacations or breaks, if possible, or at hours during the day when school attendance is lowest.

C.12.7 BELLFLOWER RAIL ALTERNATIVE SEGMENT

This alternative segment would diverge from the proposed route by turning north on Lakewood Boulevard for 1.8 miles to the intersection of Lakewood and the MTA railroad ROW, just south of Compton/Somerset Boulevards. The pipeline would turn southeast into the rail ROW, following the 100-foot wide ROW for about 2.4 miles until it crosses Artesia Boulevard. At that point, the pipeline would re-join the proposed route. While this route is longer than the proposed route, it would result in reduced traffic impacts because construction in the rail ROW would affect roadways only where they are crossed by the ROW. Construction in the rail ROW would require 4 street crossings: Clark Avenue, Alondra Boulevard, Bellflower Boulevard, Flaver Avenue, and

Woodruff Avenue. Mitigation Measures T-1 through T-16 would still apply to this alternative and would reduce impacts while construction is in Lakewood Boulevard and at the 4 crossings.

C.12.8 ARTESIA ALTERNATIVE SEGMENT

This segment would diverge from the proposed route by staying on Artesia Boulevard where the proposed route turns north on Studebaker Road. This alternative route would continue east on Artesia Boulevard to Norwalk Boulevard, turning north on Norwalk to the Norwalk Station. As listed in Table C.12-2, the average daily traffic volume for Artesia Boulevard and Norwalk Boulevard are 17,000 and 25,000, respectively. In comparison to the proposed route, this alternative would have similar types of construction and operational impacts as identified for the proposed route. Mitigation Measures T-1 through T-16 would help to reduce or eliminate potential impacts to transportation related issues.

C.12.9 SHOEMAKER ALTERNATIVE SEGMENT

The alternative segment is approximately 1.5 miles long, and would result in about 0.9 miles being added to the total length of the proposed pipeline within the City of Norwalk. It would diverge from either the proposed route of the Alondra Alternative by turning east on Alondra Boulevard from the corner of Norwalk Boulevard, then turning north on Shoemaker Avenue. Average daily traffic along the Alondra Boulevard and Shoemaker Avenue are approximately 20,000 and 10,000 ADT as compared with 27,200 on Norwalk Boulevard. In comparison to the proposed route, this alternative would have similar types of construction and operational impacts as identified for the proposed route. However, because this alternative would increase the length of the subject pipeline, the amount of time required to construct this alternative would extend the impact period within the study area. Mitigation Measures T-1 through T-16 would help to reduce or eliminate potential impacts to transportation related issues.

C.12.10 NO ACTION ALTERNATIVE

If the proposed project is not built, and demand grows as predicted by SFPP, petroleum products would have to be provided to the Nevada, Arizona, and Inland Empire markets by other methods (either via other pipelines or trucks). From a transportation perspective, the impacts of the operational phase of the No Project Alternative would be adverse, but less than significant (**Class III**). However, it should be noted that significant impacts on transportation and traffic could result from truck and pipeline accidents and subsequent oil spills (**Class I**).

C.12.11 MITIGATION MONITORING PROGRAM

Table C.12-3 presents the mitigation monitoring program for traffic and transportation issues.

Table C.12-3 Mitigation Monitoring Program

Impact	Mitigation Measure	Location	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Roadway blockages and increased traffic congestion caused by lane closures during construction and exploratory excavations (Class II)	T-1 Restrict all lane closures or obstructions on major roadways to off-peak periods in urbanized areas. Avoid closures from 6:00 to 9:30 a.m. and 3:30 to 6:30 p.m., or as directed by the affected public agency.	All locations where pipeline construction or exploratory excavations would block or disrupt a public roadway.	Review documentation of SFPP coordination with affected public agencies (city, county, or Caltrans) indicating that traffic management plans prepared by SFPP have been approved.	If construction activities and lane closures do not result in unreasonable traffic congestion or delays, as determined by the affected public agencies, and if the resulting congestion or blockage does not create more than a five minute delay for motorist.	CPUC and local jurisdictions.	Prior to and during construction.
	T-2 Develop detailed Traffic Control Plans (TCPs) for the entire pipeline route at all locations where construction activities would interact with the existing transportation system.		Review documentation of input and approval from the responsible public agencies. Review documentation of approvals from each jurisdiction.	If construction activities and lane closures do not result in unreasonable traffic congestion or delays, as determined by the affected public agencies, and if the resulting congestion or blockage does not create more than a five minute delay for motorist.	CPUC and local jurisdictions.	Prior to construction.
Pipeline construction could block access to residences and businesses along the ROW (Class II)	T-3 Identify all land uses along the ROW with access concerns. Attempt to install the pipeline in a street location which minimizes access problems. Develop construction scheduling that minimizes impacts to larger businesses or residential areas.	Along the ROW, and all locations where access to adjacent land use is blocked.	Review documentation identifying land uses, and consultation efforts of SFPP with all affected owners and tenants.	If access and parking needs of the adjacent land uses are met.	CPUC and local jurisdictions.	Prior to finalization of construction plans.
	T-4 Advanced notification to property owners and tenants. Provide alternative access, parking, and guide signs where feasible.		Review documentation of SFPP written notification to affected property owners and tenants prior to blocking access to a property.	If access and parking needs of the adjacent land uses are met.	CPUC and local jurisdictions.	Prior to and during construction.
	T-5 Schedule construction so that at least one access driveway is left unblocked at all hours or during business hours.	Hospitals, schools, major employers, recreational areas, large parking lots.	Review SFPPs record indicating hours and dates of operation and acceptable blockage times for critical land uses whose access would be blocked at least 3 days prior to the blockage.	If access and parking needs of the adjacent land uses are met.	CPUC and local jurisdictions.	During construction.

Impact	Mitigation Measure	Location	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Construction could disrupt pedestrian/ bicycle circulation or cause increased accidents (Class II)	T-6 Provide alternative pedestrian and bicycle access routes with appropriate signs and markings, subject to approval by the affected public agency.	All locations where a designated public pedestrian route is obstructed (sidewalks, recreational paths, etc.).	Review documentation of: SFPP coordination with affected public agencies; and SFPP conformation to all required conditions.	If construction activities do not totally block or unreasonably impair pedestrian movements or safety, as determined by the affected public agencies.	CPUC and local jurisdictions.	Prior to and during construction.
Emergency response vehicles could be blocked or impeded by pipeline construction activities (Class II)	T-7 Advance notification and coordination with emergency service providers. Remain prepared to immediately provide emergency access for any property isolated by construction activities.	All locations.	Review SFPP notification and coordination with emergency service providers. Review SFPP demonstration of capability to provide immediate access across excavations, subject to approval by affected police, medical, and fire agencies.	If the construction activities do not totally preclude access to any area emergency vehicles.	CPUC and affected emergency service providers (fire, police, sheriff, CHP and ambulance services).	Prior to and during construction.
Construction worker parking and traffic congestion could result from convergence at staging areas and construction equipment traffic (Class II)	T-8 Submit the location, size, purpose, number of vehicles and construction equipment to be stored, and the duration that each staging area will be used.	To be identified by SFPP.	Review SFPP receipts of approval of the affected local jurisdictions (city or county) for the staging areas.	If construction traffic and parking demand do not create a significant traffic impact on public streets, and if on a weekly basis at least 75% of the construction workers' vehicles are parked at the s.	CPUC and affected jurisdictions.	Prior to and during construction.
	T-9 Provide shuttle buses and off-street parking areas for construction workers.	To be identified by SFPP.	Review SFPP drawing and/or written description of each shuttle bus service staging area.	If construction traffic and parking demand do not create a significant traffic impact on public streets.	CPUC and affected jurisdictions.	Prior to and during construction.
Parking of construction equipment on public roadways could limit available parking (Class III)	T-10 Provide an off-street area for the storage of construction equipment, vehicles, and materials.	To be identified by SFPP.	Review SFPP drawing and/or written description of each off-street storage area and documentation from the responsible jurisdiction (city or county) that the location has been approved by the affected jurisdictions.	If all construction equipment is stored outside the public ROW or within the protected construction zone adjacent to an active construction site, and there are no significant parking impacts associated with the equipment storage.	CPUC and affected jurisdictions.	Prior to and during construction.

Impact	Mitigation Measure	Location	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Parking of construction equipment on public roadways could limit available parking (Class III)	<p>T-11 Advanced notification and temporary replacement of parking spaces. Where existing parking spaces will be eliminated, signs will be posted and written notification to nearby residences and businesses will be provided.</p> <p>T-11a SFPP shall submit the location(s) of staging areas to the CPUC and the Appropriate local jurisdiction(s) for review and approval 30 days prior to the start of construction. These locations and truck routes used during construction shall avoid residential areas.</p>	Where the construction activities would eliminate existing parking spaces.	Review SFPP written notification to affected residences, businesses, and public agencies for locations where parking spaces will be displaced by construction activities at least 72 hours in advance.	If parking hardships are not created for adjacent residents/businesses as determined and reported by the affected public agency.	CPUC and affected jurisdictions.	Prior to and during construction.
Construction activities and vehicles could damage road surfaces (Class II)	T-12 Roads disturbed by construction activities or construction vehicles shall be properly restored to ensure long-term protection of road surfaces; road maintenance program shall be established and implemented.	Construction access roads & roads in which pipeline is buried	Review documentation that SFPP obtained permits for construction within each road ROW prior to construction; and that each affected roadway has been satisfactorily restored and/or constructed within 30 days of roadway damage.	Restoration/maintenance of roads to pre-construction conditions as determined by the affected public agency.	CPUC, affected local jurisdictions, and Caltrans	After construction is completed on each affected roadway.
Construction could affect public transit operations (Class II)	T-13 Provide advance notification and coordination with affected public transit agencies. Identify and sign alternate pick-up/drop-off zones where appropriate.	All locations where construction would block a transit route or loading area.	Review SFPP documentation of written notification to all public transit agencies; and SFPP coordination with public transit agencies to alleviate conflicts to the satisfaction of the transit operator.	If safe and efficient transit operations are maintained, subject to approval by transit operators.	CPUC and affected transit agencies	Prior to and during construction.
Construction may not conform with rail operations or safety procedures (Class III)	T-14 Coordinate construction activity with railroad and arrange to have railroad representatives on site when adjacent to active rail line.	All locations where construction is adjacent to active rail line.	Review documentation that construction along active rail lines is in accordance with appropriate railroad requirements.	If rail operations are maintained without disruption or decreased safety for trains or construction workers as reported by each railroad company.	CPUC, railroad companies, and LACMTA.	Prior to and during construction.

Impact	Mitigation Measure	Location	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
An pipeline leak or rupture could cause partial or complete closure of transportation facilities (Class I)	T-15 Deleted; text incorporated into SS-16 (see Section C.11)					
Cumulative impacts of simultaneous construction projects (Class III)	T-16 Maintain coordination with agencies responsible for encroachment permits on each affected roadway and with utility companies which have facilities along the same ROW.	All locations where construction interfaces with transportation facility or utility line.	Review documentation of SFPP coordination with each affected public agency (city, county, Caltrans) and with each affected utility regarding scheduling and routing of the pipeline construction activities; and copies of all applicable encroachment permits.	If cumulative construction impacts do not occur at any location.	CPUC, Caltrans, local agencies, and utility companies.	Prior to construction.
Construction in Alondra Boulevard would disrupt traffic adjacent to Cerritos College (Class II).	T-17 SFPP shall meet with administration officials of Cerritos College and with traffic engineers from the Cities of Cerritos and Norwalk prior to final construction planning to minimize interference with College traffic.	Alondra Boulevard adjacent to Cerritos College.	Review documentation of SFPP correspondence with Cerritos College staff and traffic engineers from the City of Cerritos and Norwalk prior to pipeline operation.	If construction on Alondra Boulevard would not disrupt traffic adjacent to Cerritos College.	CPUC, Cerritos College, City of Cerritos, and City of Norwalk	Prior to construction

C.12.12 REFERENCES

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