

## 4.11 Transportation and Traffic

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### **SIGNIFICANCE CRITERIA**

The project would be considered to have a significant effect on the environment if it would cause an increase in traffic that is substantial in relation to the existing traffic volumes and or exceed the design capacity of the affected road network. The project may also have a significant effect on the environment if project traffic or access would conflict with established land uses in the area. The project would also be considered to have a significant effect on the environment if it were to increase traffic to a degree that would degrade the integrity or structural condition of any roads during construction or operation.

### **METHODOLOGY**

The transportation analysis in this section is based on current operating conditions of project area roadways, as well as anticipated traffic volumes that would be generated by the proposed project. Anticipated project traffic volumes are based on estimates of maximum daily vehicle trips that would occur during construction and operation of the proposed project. The projected trip generation was developed by I'SOT based on construction and project operation provided in Chapter 2.

The measurement of traffic/circulation impacts typically is accomplished at signalized intersections by estimating level of service (LOS) and volume/capacity (V/C) ratios. Since the project is in a rural area with very low traffic volumes, projected traffic is compared to the latest average daily traffic (ADT) from counts taken by Caltrans and Modoc County.

### **IMPACT OVERVIEW**

The traffic would be insignificant in volume and short in duration during the construction phase. Construction workers would be hired locally and are expected to drive from their homes in the Canby area using private vehicles. Workers would access the sites by using Highway 299E, County Road 203, County Road 161, and County Road 83. Construction activities for the new buildings and pipelines would be expected to generate a maximum of 30 round trips per day. Given the currently low level of use of the roads in the vicinity and the short-term nature of the proposed construction activities, the additional trips generated by construction of the proposed action are not expected to result in an adverse impact on circulation in the area.

The operation phase would generate one additional trip per day above pre-construction levels. One I'SOT employee is expected to make a daily, one-hour system maintenance visit to the mechanical room during operations. The proposed project would not substantially increase traffic on regional roadways or cause roadway capacities to be exceeded.

### **EFFECTS OF PROPOSED ACTION –ALTERNATIVE A**

#### **Projected Traffic Volume**

The proposed action would result in the generation of 20 trips per day during construction and 1 trip per day during projection operation. The proposed action would result in minimal increases in traffic. The following construction-related vehicles would be used during project construction:

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- 1 backhoe or excavator for trenching distribution and discharge pipelines and to prepare the sites for the 2 buildings to be constructed
- 1 twenty cubic yard dump truck to haul bedding for trenches, hauling approximately 3 loads per day
- 1 concrete truck to pour foundations at both buildings
- 1 water truck to minimize dust during construction
- Between 6-10 construction worker vehicles to be parked at Building 3, then carpooled to work sites
- 1 portable toilet for worker's use during construction

Equipment would be left at the construction site after work is completed for the day. On non-construction days the equipment would be stored wherever the task ended last. The listed construction equipment is anticipated to be in operation five days a week for approximately 60-70 days. Average daily traffic is expected to be approximately 20 trips per day during construction activities for construction workers. In addition to these vehicles, it is estimated that no more than 53 tractor-trailer loads of construction materials would be required during project construction. It is estimated that the water truck would generate 4 trips per day.

Construction workers' parking would be in the lot at Building Group A in front of Building 3 along County Road 203 (see Figure 2.2-4). The empty lot located to the west of the Building Group A would be the drop-off site for the project materials as it is convenient and centrally located to all construction sites. Materials would be stored at this Central Site (CS) until they are picked up and installed. The total daily trips from construction workers, construction equipment, and transfer of construction materials are estimated to be 30 trips per day maximum. Construction activities, and thus construction-related traffic, would take place during daylight hours from March to May, typically from 7 a.m. until 8 p.m.

#### **Effects on Road Traffic**

Highway 299 and the county roads are designed to adequately accommodate the estimated increase in traffic volumes during construction and operation of the proposed project. The additional trips generated by construction of the proposed action would not be expected to adversely affect traffic volumes or traffic conditions along these roads. The state and County conducted estimates of traffic on roadways that would be affected by the proposed project; the estimates are shown in Table 4.2-1.

As shown in Table 3.11-1, State Route 299 has maximum traffic of 180 vehicles per day. State Route 139 north of the junction with 29, has peak traffic of 150 vehicles per day. As shown in Table 3.11-2, County Road 161 has Average Annual Daily Traffic (AADT) of 98 vehicles per day and County Roads 54, 82, and 83 have an average AADT of 300 to 400 vehicles. The County conducted traffic counts for a typical week volume when no special events were occurring in and around Canby.

The Modoc County General Plan does not establish levels of service for County roads. The goal in the Circulation Element of the General Plan is for circulation is to maintain an efficient, safe, and environmentally sound comprehensive circulation and transportation system (Mintier Harnish 1988b). Due to the short duration of construction activities and the addition of one vehicle trip per day during operation, traffic associated with the proposed action would not be significant.

**Table 4.11-1:** AADT Traffic for State and County Roads\* and Project Traffic

<b>Mile Description</b>	<b>Average Annual Daily Traffic</b>	<b>Estimated Maximum Project Traffic</b>
State Route 299		
21.75Jct. Rte. 139 Northwest	1400	30
40.28Alturas, Juniper Street	2900	30
State Route 139		
0.23North Jct. Rte. 299; Canby West	970	30
County Road 82	640	30
Junction of 83		
County Road 82	300	30
North/South by RR tracks		
County Road 83	378	30
P.O. by 82		
County Road 161	98	30
North end of 82		
County Road 54	240	30
South of Canby by second bridge		

Notes: The above figures for State Routes represent *Ahead* AADT. Ahead is defined as the number of vehicles after a count station. AADT for County Roads are the most recent counts.

SOURCE: Caltrans, Morris, and MHA 2002

Construction of the proposed project would require the installation of the pipeline underneath the existing Highway 299. The proposed pipeline is to be installed using the "bore and jack" method, which equates to drilling a horizontal hole underneath the roadway from one side to the other, and slipping the pipe through the bored hole. The majority of the bore and jack process occurs along the roadway's shoulders. There is a possibility that during the process traffic along the roadway may be slowed or may be controlled for one-way movement with the aid of signage, and a flagman. The duration of the bore and jack process combined with the relatively minimal traffic volume along highway 299 is not expected to result in a significant degradation of traffic movement.

### **Effects on Structural Integrity of Project Area Roads**

Highway 299 and the county roads are designed to adequately accommodate the estimated increased traffic volumes during project construction and operation. The roads were designed to accommodate heavy vehicle traffic for logging operations. A logging truck is considered the legal load limit (80,000 lbs.) that triggers the county requirement for a Special Use Permit (Morris 2002b). The concrete truck maximum loaded weight would be 58,000 lbs. and the 3,000-gallon water truck maximum weight would be 46,440 lbs. These would be the heaviest and most frequently used trucks during construction. The heaviest load of materials would be the distribution piping at approximately 26,000 lbs. on one semi load. The gross vehicle weights for the backhoe, dump truck, and water truck would not exceed the 80,000 lb. weight limit; therefore, the proposed project would not have a significant effect on the structural integrity of these roads.

In 2001, Modoc County re-paved county roads 54, 82, 83, and the paved portion of 161 in Canby. I'SOT worked with the County Road Department to install 10" culverts underneath County Roads 161 and 83

during the September 2001 repair and repaving of those roadways. The project pipelines would be slipped through those existing conduits, thereby negating the need for bore and jack processes at those locations. (Merrick 2002d). These existing culverts eliminate the prospect of damage to the affected roadways that could result from the bore and jack process.

Boring under Highway 299 could have the potential to damage roadways due to vehicle loads or construction activities. Caltrans would review construction documents prior to initiation of the horizontal directional drilling (HDD) process. If Caltrans determines that there exists a potential for roadway damage a surety bond may be required to be posted with Caltrans. The purpose of the bond would be to ensure adequate funding to repair any damage to the roadway in the event that the applicant does not correct any damage. A determination of roadway conditions prior to construction would be documented through the making of a videotape record of all roadway surfaces, shoulders, signage, and other features in the vicinity of construction activities and along the local route of delivery vehicles.

### **MITIGATION MEASURES**

#### **Mitigation Measure 4.11-1**

I'SOT will ensure that construction activities comply with all conditions of the Caltrans Encroachment Permit. These measures would minimize the chance of roadway damage during the jack and bore (HDD) process and would include the following:

- a. All equipment used on the paved surface of the State highway shall be rubber tired or rubber tracked, and meets the weight requirements for operation on a State highway.
- b. Any trench or excavation within 15 ft of the edge of the traveled way or 10 ft from the edge of pavement, whichever is greater, shall be closed.
- c. All work authorized herein shall be performed during daylight hours only. No work shall be performed during inclement weather.
- d. The minimum depth of cover over the bore casing within the State's right-of-way shall be 7.5 ft for high-risk uncased gas mains or 6 ft and 5 ft below any drainage facility.
- e. No open cutting of the roadway prism is permitted.
- f. Trenches and boring pits outside of the highway prism shall be backfilled with material approved by State's representative.
- g. HDD operators are required to have basic training on HDD rigs via the dealerships – Vermeer, Ditch Witch, American Auger, etc., and have proof of training in their possession.

I'SOT will make a videotape before and after HDD operations to document roadway integrity has been unchanged or to determine if permittee is liable for damages to the State highway caused by his operation. I'SOT will repair any damage caused by the construction, as required by Caltrans.

#### **Mitigation Measure 4.11-2**

I'SOT will ensure that no vehicle used in construction or material delivery shall exceed the design load limit of the various roadways that may be used during construction.

**Mitigation Measure 4.11-3**

I'SOT will ensure that no construction equipment that utilizes tractor treads shall travel upon any public roadway.

**Mitigation Measure 4.11-4**

I'SOT will ensure that no construction equipment shall operate or park within 5-feet of either edge of a pavement edge.

**EFFECTS OF NO ACTION ALTERNATIVE**

If the project were not constructed due to lack of DOE funding, there would be no adverse traffic effects from Alternative B, the "No Action" alternative; however, the project could proceed without DOE funding contingent upon alternative funding, with effects from Alternative A potentially worse without DOE participation because no mitigation would be required (except NPDES required items). The following measures would not be implemented without DOE involvement: 4.11-1, 4.11-2, 4.11-3 and 4.11-4. Without funding by DOE, I'SOT would not be reimbursed for costs resulting from permitting efforts, engineering consultation, and system installation costs. No data gathering system would be installed for DOE research and development (R&D) purposes.

