3.14 Transportation

This section identifies and evaluates issues related to Transportation in the context of the Project and alternatives. It includes information about the physical and regulatory setting and identifies the criteria used to evaluate the significance of potential impacts, the methods used in evaluating these impacts, and the results of the impact assessment. The information and analysis presented in this section are based in part on data provided in **Appendix H**, *Transportation*. The County independently reviewed this and other materials prepared by or on behalf of the Applicant and determined them to be suitable for reliance on (in combination with other materials included in the formal record) in the preparation of this Draft EIR.

In response to its notice of intention to prepare this Draft EIR, the County received scoping input noting that State Route (SR) 299 is narrow, of steep grade in the Project area, and subject to commercial accidents on a regular basis. Input received also identified a road located within 100 feet of Moose Camp that provides the owner of the Lammer Ranch access to SR 299, and that has provided emergency ingress/egress for residents of Moose Camp since the 1930s; this road was described as "seldom used."

Scoping input also was provided about the potential for the Project to result in impacts to transportation during construction, operation, and maintenance. During construction, potential impacts could result from the number and size of vehicles needed to transport and deliver turbine components and gravel. Delays could adversely affect emergency vehicles trying to get through town; local users of SR 299 and adjoining roads; and commuters heading to Redding for work, entertainment or shopping. Commenters requested that the analysis consider delays during the time to repair SR 299 post-materials delivery, if required. Potential impacts during operation and maintenance were identified as being caused by members of the general public wanting to get up close to the turbines (as they do for the Hatchet Ridge Wind Project), regular traffic to/from the operation and maintenance facility and use of the main road proposed between the two substations, which abuts residential property.

All scoping input received, including regarding Transportation, is provided in Section 4.1 of the Scoping Report, a copy of which is provided in **Appendix J**, *Scoping Report*.

3.14.1 Setting

3.14.1.1 Study Area

For the purposes of the transportation analysis, the Project study area is defined as transportation facilities that would be used to transport workers and materials to/from the Project Site during construction, operation and maintenance, and decommissioning and site restoration. These include roadways located directly adjacent to the Project Site (i.e., SR 299, Moose Camp Road, and three existing, gated logging roads that would be used for Project access) as well as regional facilities that provide access to SR 299, which include Interstate 5 (I-5) approximately 35 miles west of the Project Site, and SR 139 approximately 60 miles east of the Project Site.

3.14.1.2 Environmental Setting

Existing Roadway Network

Regional Access

SR 299 is an east-west state highway that connects I-5 and Redding to the west with SR 139 to the east. In the vicinity of the Project Site, SR 299 consists of one travel lane in each direction, and paved shoulders.

I-5 is a north-south interstate highway that extends from the Mexican border to the Canadian border and provides access for goods movement, shipping, and travel. Access to the Project Site from I-5 is provided via an interchange with SR 299 on the north end of Redding. At this location, I-5 consists of two travel lanes in each direction, and paved shoulders.

SR 139 is a north-south state highway that connects Susanville to the south with the Oregon state border. Access to the Project Site is provided via an interchange with SR 299 in the town of Adin.

Local Access

Three existing access roads currently used for logging that intersect with SR 299 would provide local access to the Project Site. See Figure 2-5*, Road Network*, in Chapter 2, *Description of Project and Alternatives*). The West Access is proposed along a road called G Line, which intersects with SR 299 approximately 37 miles east of the interchange with I-5 in Redding. There is a widened shoulder at this intersection, but no turn lanes. The North Access is approximately 3 miles east of the West Access. This access is proposed along an existing and unnamed logging road that intersects SR 299 just east of Little Hatchet Creek. As with the West Access, there is a widened shoulder at this access, but no turn lanes. The East Access is approximately 2 miles east of the North Access and approximately 8 miles west of Burney. This access is proposed along an existing and unnamed logging road that provides access to the area south of SR 299. As with the other access points, there is a widened shoulder at this access, but no turn lanes.

Traffic Volumes

Annual average daily traffic (AADT) volumes and average peak-hour traffic volumes on SR 299 are shown in **Table 3.14-1**, *SR 299 Traffic Volumes – Existing Conditions*. According to the latest traffic data available from the California Department of Transportation (Caltrans), urban centers on each end of SR 299 record the highest traffic volumes, then diminish significantly in the rural and mountainous areas in between (Caltrans, 2017). Between I-5, in Redding and Plumas Street, in Burney, nine daily and peak-hour count locations are listed.

The highest existing AADT on SR 299 is 21,000 vehicles per day at I-5 in Redding, where the highway has a four-lane freeway alignment. The peak-hour volume is 2,150 vehicles per hour. On the two-lane rural section of SR 299 between Deschutes Road (on the east edge of Redding) and Elm Street (on the west edge of Burney), the peak-hour volume ranges from between 320 and 490 vehicles per hour.

TABLE 3.14-1
SR 299 TRAFFIC VOLUMES – EXISTING CONDITIONS

Location	Milepost (start – end)	Existing AADT	Existing Peak-Hour Volume
I-5 Junction (Redding)	24.8	21,000	2,150
Between I-5 and Hawley Road	24.9 - 25.5	11,600	1,150
Between Hawley Road and Old Oregon Trail	25.5 - 27.2	9,700	940
Between Old Oregon Trail and Deschutes Road	27.2 - 31.5	4,850	490
Between Deschutes Road and Terry Mill Road	31.5 - 53.3	3,650	360
Between Terry Mill Road and Big Bend Road	53.3 - 60.1	2,850	320
Between Big Bend Road and Tamarack Road	60.1 - 73.1	3,000	320
Between Tamarack Road and Elm Street	73.1 - 74.5	3,300	370
Between Elm Street and Plumas Street (Burney)	74.5 - 75.0	8,400	880

SOURCES: Appendix H; Caltrans, 2017.

The three Project access roads are located within the segment of SR 299 between Big Bend Road and Tamarack Road. The AADT and peak-hour volumes for this segment are 3,000 vehicles per day and 320 vehicles per hour, respectively. Heavy vehicle traffic constitutes a notable percentage of the background traffic on this segment of SR 299. At Mile Post 72.6, west of Burney, the heavy vehicle percentage on SR 299 was recorded in 2016 (the latest data available as 13.69 percent (Caltrans, 2016).

Level of Service

Table 3.14-2 shows the existing peak-hour level of service (LOS) for the study roadway segments on SR 299. LOS is a scale used to determine the operating quality of a roadway segment or intersection based on volume-to-capacity ratio (V/C) or average delay experienced by vehicles on the facility. The levels range from A to F, with LOS A representing free traffic flow and LOS F representing severe traffic congestion. Agencies adopt LOS standards that define the level of operations that are acceptable within their jurisdiction. Caltrans, which has jurisdiction of SR 299, has an established standard of LOS C or better (V/C of less than 0.80) for rural highways. See additional discussion in Section 3.14.3.1, *Methodology*.

According to the Highway Capacity Manual (Transportation Research Board, 2000), the base capacity of a freeway segment is 2,300 passenger cars/hour/lane; which, for a four-lane section, would equal 9,200 vehicles per hour. The base capacity of a two-lane rural roadway segment is 2,000 passenger cars/hour/lane which, for a two-lane section, would equal 4,000 vehicles per hour. The V/C was calculated using these capacities, and the 2017 average peak-hour volumes. As shown in the table, the study segments of SR 299 all currently operate with a V/C of less than 0.80, which means that they operate at LOS C or better.

TABLE 3.14-2
SR 299 PEAK-HOUR LEVEL OF SERVICE – EXISTING CONDITIONS

Location	Hourly Capacity	Existing Peak-Hour Volume	V/C	LOS C or better?
I-5 Junction (Redding)	9,200	2,150	0.23	Yes
Between I-5 and Hawley Road	9,200	1,150	0.13	Yes
Between Hawley Road and Old Oregon Trail	9,200	940	0.10	Yes
Between Old Oregon Trail and Deschutes Road	4,000	490	0.12	Yes
Between Deschutes Road and Terry Mill Road	4,000	360	0.09	Yes
Between Terry Mill Road and Big Bend Road	4,000	320	0.08	Yes
Between Big Bend Road and Tamarack Road	4,000	320	0.08	Yes
Between Tamarack Road and Elm Street	4,000	370	0.09	Yes
Between Elm Street and Plumas Street (Burney)	4,000	880	0.22	Yes

SOURCES: Transportation Research Board, 2000; Caltrans, 2017; and EIR Preparers.

Transit

The Burney Express, which is operated by the Redding Area Bus Authority, provides three weekday daily trips in each direction (three westbound, three eastbound) on SR 299. No weekend service is provided. The nearest bus stop to the Project Site is located in Montgomery Creek, approximately 6 miles west of the Project Site (RABA, 2020).

Non-Motorized Transportation

The Shasta County 2010 Bicycle Transportation Plan (Shasta County, 2010) does not identify any existing or planned bicycle facilities on SR 299 in the vicinity of the Project Site. A review of aerial imagery indicates that there are no pedestrian facilities (i.e., sidewalks, off-street trails) in the vicinity of the Project Site.

Railways

The closest railway is a single-track main line operated by Union Pacific that runs generally parallel to I-5, approximately 35 miles west of the Project Site. This line carries both passengers (via Amtrak Coast Starlight) and freight trains.

Airports

The nearest airports to the Project Site are the Fall River Mills Airport, located approximately 25 miles northeast of the site, and the Redding Municipal Airport, located approximately 35 miles southwest.

3.14.1.3 Regulatory Setting

Federal

Transportation of Hazardous Materials

The U.S. Department of Transportation (DOT) is the administering agency for the following regulations:

- Title 49 Code of Federal Regulations (CFR) Sections 171 through 177 (49 CFR §§171–177), which govern the transportation of hazardous materials, the types of materials defined as hazardous, and the marking of transportation vehicles.
- Title 49 CFR 350–399 and Appendices A through G, Federal Motor Carrier Safety Regulations, which address safety considerations for the transport of goods, materials, and substances over public highways.
- Title 49 CFR 397.9, the Hazardous Materials Transportation Act of 1974, which directs DOT to establish criteria and regulations for the safe transportation of hazardous materials.

State

California Department of Transportation

The California Department of Transportation (Caltrans) owns the rights-of-way for state highways, including any on- and off-ramps that provide access to the Project area. Any Project-related work within the state rights-of-way would require a ministerial Encroachment Permit from Caltrans. Caltrans is also the administrating agency for regulations related to traffic safety, including the licensing of drivers, oversize/overweight vehicle limitations, transportation of hazardous and combustible materials, and the safe operation of vehicles.

Local

Shasta County General Plan

The Circulation Element of the Shasta County General Plan contains the following policies applicable to analysis of transportation facilities (Shasta County, 2004):

> **Policy C-6j:** New development shall provide circulation improvements for emergency access by police, fire, and medical vehicles; and shall provide for escape by residents/occupants in accordance with the Fire Safety Standards.
>
> **Policy C-6k:** Shasta County shall adopt the following LOS standards for considering any new roads:
>
> - rural arterial and collectors—LOS C
> - urban/suburban arterial and collectors—LOS C
>
> **Policy C-6l:** New development which may result in exceeding LOS E on existing facilities shall demonstrate that all feasible methods of reducing travel demand have been attempted to reach LOS C. New development shall not be approved unless traffic impacts are adequately mitigated.

Policy C-8b: Working in conjunction with Caltrans, the County shall designate and provide signed truck routes, ensure that adequate pavement depth, lane widths, loading areas, bridge capacities, vertical height of overpasses and utility lines, and turn radii are maintained on the designated truck routes, and prohibit commercial truck traffic from non-truck routes except for deliveries.

Policy C-8c: Adequate truck access to off-street loading areas in commercial and industrial areas shall be provided in all new development applications.

Shasta County Development Standards Manual

The Shasta County Development Standards Manual also sets specific guidelines for the construction of public road improvements and private roads, including design standards addressing slopes, widths, connection to County roads, and others (Shasta County, 1997).

3.14.2 Significance Criteria

A project would result in a significant impact to Transportation if it would:

a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities;

b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3(b);

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

d) Result in inadequate emergency access.

Regarding criterion b), CEQA Guidelines Section 15064.3(b) was adopted in December 2018 by the California Natural Resources Agency. These revisions to the CEQA Guidelines criteria for determining the significance of transportation impacts focus primarily on projects within transit priority areas, and shift the focus from driver delay to reduction of greenhouse gas (GHG) emissions, creation of multimodal networks, and promotion of a mix of land uses. The revisions require lead agencies to evaluate transportation impacts based on vehicle miles traveled (VMT) beginning July 1, 2020. VMT is a measure of the total number of miles driven to or from a development and is sometimes expressed as an average per trip or per person. Shasta County has begun, but has not yet completed, consideration of transportation significance thresholds based on VMT. The County has not yet adopted or put in to practice VMT-based transportation significance thresholds. Where no VMT threshold has yet been adopted, the Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA (OPR, 2018) provides guidance. In areas not near established or incorporated cities or towns, for example, the Technical Advisory notes that "significance thresholds may be best determined on a case-by-case basis." The County, based on its consideration of the potential timing for release of the Fountain Wind Project Draft EIR, determined that a significance threshold to evaluate VMT that would be generated by this Project should be used to evaluate the potential transportation impacts of this Project. For the purposes of establishing a VMT threshold for this Project, the County considered CEQA Guidelines Sections 15064(b)(2) and 15064.7 regarding the development of thresholds of significance and has determined that a performance based threshold consistent with the analysis

of the significance of the Project's GHG emissions would be appropriate. Accordingly, for purposes of this Project, an impact to VMT would be significant if it would conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

3.14.3 Direct and Indirect Effects

3.14.3.1 Methodology

The information and analysis presented below are based in part on data provided in Appendix H, *Transportation*. Two forms of traffic analysis were conducted for the Project. Operational analyses (i.e., LOS) were conducted for study segments of SR 299 and for the three Project access road intersections for both Project construction and Project operation. In addition, total Project-generated vehicle miles traveled (VMT) was calculated for both Project construction and Project operation. A qualitative analysis of Project decommissioning impacts is provided based on its relative impact to transportation compared with Project construction, which, from a transportation perspective, represents the maximum possible impact.

Highway Level of Service

The methodology used to evaluate existing highway LOS was also used to evaluate highway LOS for the Project. To estimate peak-hour LOS conditions, a review of historical traffic volumes for the segment of SR 299 adjacent to the Project Site was conducted, which found that peak-hour volumes have not changed appreciably over the years. Therefore, it is assumed that the existing 2017 traffic volumes identified in Table 3.14-1 would remain constant during the 18- to 24-month Project construction period as well as for Project operation and decommissioning. Based on the relative sizes of, and distances to Redding and the small towns east of the Project Site, it was assumed that 60 percent of the peak-hour background traffic would be coming to and from the west, while 40 percent would be coming to and from the east on SR 299 (Appendix H). Therefore, of the 320 peak-hour vehicle trips, 192 were assumed to approach the Project Site from the west and 128 were assumed to approach the Project Site from the east.

Intersection Level of Service

The LOS analysis measures delay per vehicle and operational performance. The LOS analysis for the three Project driveways was performed using the traffic engineering industry standard software package Synchro/SimTraffic for a.m. and p.m. peak-hour conditions for periods during and after construction. Traffic volumes for SR 299 at the driveways were developed as described above, while turning movements into and out of the driveway were developed according to the trip generation and distribution methodology described below.

Level of Service Standards

LOS standards are used to evaluate the transportation impacts of long-term growth. In order to monitor roadway operations, cities and counties adopt standards by which the minimum acceptable roadway operating conditions are determined and deficiencies may be identified. Caltrans endeavors to maintain a target LOS D at the transition between LOS C and LOS D on state highways; however, Caltrans acknowledges that this may not always be feasible and

recommends that the lead agency consult with Caltrans to determine the appropriate target LOS (Caltrans, 2002). As stated above in Section 3.14.1.3, *Regulatory Setting,* the LOS standard for County roads is LOS C as set forth in Policy C-6l of the Shasta County General Plan.

Vehicle Miles Traveled

VMT was calculated by multiplying the amount of daily traffic generated by trucks and other vehicles to haul equipment, material, aggregate, turbines, concrete, water and employees on a roadway segment by the length of the segment, then summing all the segments. Then the estimated mileage that would be logged to perform these trips during the up-to 24-month construction period was calculated.

Consistent with the materials delivery assumptions relied upon in the Project-specific traffic study (Appendix H), this analysis assumes that turbine equipment and material would be delivered from the Port of Stockton, approximately 250 miles south of the Project Site. The turbine equipment pick-up location would be finalized prior to construction, upon the selection of the turbine type to be used for the Project; however, the Port of Stockton provides a feasible and realistic turbine delivery location for the purpose of assessing transportation impacts. Otherwise, the VMT estimations were limited to the City of Redding to the west and the town of Burney to the east.

Locally sourced materials such as aggregate and water would likely come from Burney, approximately 6 miles east of the Project Site, or from pits and quarries east of Burney. If the concrete is not batched on-site, there are several concrete plants in Redding about 35 miles west of the Project Site that will likely be the source. The material delivery vehicle trips would be spread out throughout the day. The maximum number of aggregate deliveries per day would be approximately 90 deliveries, constrained by the loading and unloading times. The maximum number of concrete deliveries per day would be approximately 50 deliveries (100 one-way vehicle trips), constrained by the rate that ready-mix plants can batch concrete, and the rate the contractor can unload trucks. The maximum rate of deliveries is approximately six to eight per hour, equivalent to placing a wind turbine foundation during a single work shift.

Construction Trip Generation and Distribution

Construction period trip generation was calculated based on the types of delivery, construction, operations, maintenance and worker vehicles required during the various phases of the Project. Vehicle trips into and out of the Project Site were estimated using the projected number of deliveries, the required types of equipment and material, and the projected number of employees necessary to construct the Project over the estimated construction period. These volumes of trips were calculated using a spreadsheet that lists known phases of construction with corresponding equipment, material and numbers of employees, which are then averaged over the course of the Project.

During construction, the Project would employ an estimated 400 construction workers, project management staff, equipment operators, survey staff, and delivery vehicle drivers during the peak period, with the average number of workers on-site in the range of 325 based on preliminary schedule development. The total number of trips was determined by using the number of

employees in each of the categories listed above, dividing that number by an estimated vehicle occupancy (2.0 for survey crews; 1.5 for all other categories, except for delivery vehicles with an occupancy of 1.0) and multiplying by the number of work days for each employee category.

As a result, the number of work days and total number of trips estimated for each category in the Project-specific traffic study (Appendix H) are:

- 100 days for survey (400 total trips);
- 250 days for construction trades (24,000 total trips);
- 250 days for project management staff (2,500 total trips);
- 200 days for equipment operators (6,267 total trips);
- 250 days for small equipment on flatbed trailers (1,250 total trips); and
- 230 days for deliveries (56,079 total trips).

Thus, over the estimated 24-month construction period, the total number of all trips is estimated to be approximately 93,088 trips. Additional detail related to the construction work tasks and related delivery and construction vehicles is provided in Appendix H.

Constructing the Project would require that several tasks be repeated across the Project Site. Some sequencing of tasks is required, but many tasks may overlap across the site for efficient scheduling. For example, construction of the operations and maintenance facility, substation, switching substation, and underground and overhead collection systems could overlap with other tasks, depending on scheduling and priority of precedent activities. For the purpose of determining the daily volume of traffic, construction time is estimated to take approximately two years, with construction occurring only during the spring, summer and fall (see Appendix H).

Based on the information above, inbound and outbound Project-generated vehicle trips were calculated for the a.m. and p.m. peak hours. Those numbers are shown below in **Table 3.14-3**.

TABLE 3.14-3
PEAK-HOUR PROJECT TRIP GENERATION – PROJECT CONSTRUCTION

Location	A.M. Peak Hour		P.M. Peak Hour	
	Inbound	Outbound	Inbound	Outbound
SR 299 to/from the west				
Pick-up Trucks	104	0	0	104
Heavy Trucks	156	0	0	156
SR 299 to/from the east				
Pick-up Trucks	69	0	0	69
Heavy Trucks	112	0	0	112
Total				
Pick-up Trucks	173	0	0	173
Heavy Trucks	441	0	0	441

SOURCES: Appendix H and EIR Preparers.

Operation Trip Generation and Distribution

After construction of the Project, operations and maintenance traffic would be limited to a few passenger vehicle trips per day. Up to 12 full-time employees would be required for on-site operations of the Project. Many activities would be conducted remotely and on-site personnel would access the site for routine and unscheduled maintenance and repair activities. Therefore, it was conservatively assumed a total of 12 operations and maintenance workers daily would arrive at the Project Site during the a.m. peak hour, and 12 would leave during the p.m. peak hour, traveling both westbound and eastbound on SR 299 depending on the employee's point of origin.

Based on the information above, inbound and outbound Project-generated vehicle trips were calculated for the a.m. and p.m. peak hours. Those numbers are shown below in **Table 3.14-4**.

TABLE 3.14-4
PEAK-HOUR PROJECT TRIP GENERATION – PROJECT OPERATION

Location	A.M. Peak Hour		P.M. Peak Hour	
	Inbound	Outbound	Inbound	Outbound
SR 299 to/from the west				
Pick-up Trucks	8	0	0	8
Heavy Trucks	0	0	0	0
SR 299 to/from the east				
Pick-up Trucks	4	0	0	4
Heavy Trucks	0	0	0	0
Total				
Pick-up Trucks	12	0	0	12
Heavy Trucks	0	0	0	0

SOURCES: Appendix H and EIR Preparers.

3.14.3.2 Direct and Indirect Effects of the Project

a) Whether the Project would conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

Impact 3.14-1: The Project could conflict with a program plan, ordinance or policy addressing the circulation system. (*Less-than-Significant Impact*)

Site Clearing and Construction

Highway Level of Service

Temporary increases in traffic due to Project construction have the potential to cause operating conditions (i.e., LOS) to deteriorate on SR 299. **Table 3.14-5** provides the LOS analysis results for the nine study roadway segments of SR 299 for Project construction conditions. As shown in the table, all study roadway segments would continue to operate at an acceptable LOS according to Caltrans' standard (LOS C or better) with the addition of Project construction traffic. As such, the

temporary impact of Project construction on SR 299 would be less than significant. Additional detail is provided in Appendix H.

TABLE 3.14-5
SR 299 PEAK-HOUR LEVEL OF SERVICE – PROJECT CONSTRUCTION

Location	Hourly Capacity	Existing Peak-Hour Volume	Project Construction Peak-Hour Volume	V/C	LOS C or better?
I-5 Junction (Redding)	9,200	2,150	2,670	0.29	Yes
Between I-5 and Hawley Road	9,200	1,150	1,670	0.18	Yes
Between Hawley Road and Old Oregon Trail	9,200	940	1,460	0.16	Yes
Between Old Oregon Trail and Deschutes Road	4,000	490	1,010	0.25	Yes
Between Deschutes Road and Terry Mill Road	4,000	360	880	0.22	Yes
Between Terry Mill Road and Big Bend Road	4,000	320	840	0.21	Yes
Between Big Bend Road and Tamarack Road[a]	4,000	320	840 (W) 682 (E)	0.21 (W) 0.17 (E)	Yes
Between Tamarack Road and Elm Street	4,000	370	732	0.18	Yes
Between Elm Street and Plumas Street (Burney)	4,000	880	1,242	0.31	Yes

NOTE:
[a] Two volumes and v/c are provided for this segment because the Project Site lies within it; Project construction trips would be different depending on whether they are traveling to/from the west or the east of the Project Site.

SOURCES: Transportation Research Board, 2000; Caltrans, 2017; EIR Preparers.

Intersection Level of Service

Temporary increases in traffic due to Project Site preparation (including timber harvesting) and construction have the potential to cause operating conditions (i.e., LOS) to deteriorate on SR 299 where the three Project driveways would provide access to and from the Project Site. **Table 3.14-6** provides the LOS analysis results for the three Project driveways Project construction conditions. As shown in the table, all study roadway segments would continue to operate at an acceptable LOS according to Caltrans' and Shasta County standards (LOS C or better) with the addition of Project construction traffic. As such, the temporary impact of Project construction on operations where the three proposed Project driveways intersect with SR 299 would be less than significant. Additional detail is provided in Appendix H.

TABLE 3.14-6
PEAK-HOUR PROJECT TRIP GENERATION – PROJECT OPERATION

Intersection	A.M. Peak Hour		P.M. Peak Hour	
	Delay (seconds)	LOS	Delay (seconds)	LOS
West Access and SR 299	4.8	A	2.2	A
North Access and SR 299	3.8	A	2.6	A
East Access and SR 299	7.2	A	4.4	A

SOURCES: Appendix H and EIR Preparers.

Transit, Bicycle, and Pedestrian Facilities

As described above in Section 3.14.1.2, *Environmental Setting*, there are no existing or planned bicycle or pedestrian facilities on SR 299 adjacent to the Project Site. Transit service is limited to one bus route that makes only three roundtrip runs per day SR 299 between Redding and Burney, with no bus stops adjacent to the Project Site. Due to the limited provision of alternative transportation facilities, the Project would not result in any conflicts with adopted policies, plans, or programs supporting alternative transportation. Therefore, the impact would be less than significant.

Operation and Maintenance

As shown in Table 3.14-3, the Project's operation and maintenance phase would generate considerably less traffic than the construction phase. Therefore, consistent with the determination for Project construction, the impact on operations where the three proposed Project driveways intersect with SR 299 and on the SR 299 roadway segments would be less than significant for Project operation and maintenance.

Decommissioning and Site Reclamation

Decommissioning and site reclamation impacts would be relatively similar to those identified for construction of the Project, except considerably less intensive in that no concrete batch plant(s), cable delivery, or concrete trucks would be required, and no cable trenching or similar work would occur. Moreover, existing service roads would be used; no new access roads or road widening would be required. As a result, the total number of all trips associated with decommissioning and site restoration would be less than the 93,088 trips estimated for Project construction. Thus, decommissioning of the Project would result in a less-than-significant impact with respect to LOS for roadways.

Mitigation: None required.

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b) Whether the Project would conflict or be inconsistent with CEQA Guidelines §15064.3(b).

Impact 3.14-2: The Project could conflict or be inconsistent with CEQA Guidelines Section 15064.3(b). (*Less-than-Significant Impact*)

As noted above, the California Natural Resources Agency revised CEQA Guidelines Section 15064.3(b) in December 2018 to shift the focus of transportation analyses from driver delay to reduction of GHG emissions based on an evaluation of vehicle miles traveled, or VMT. VMT is a measure of the total number of miles driven to or from a development and is sometimes expressed as an average per trip or per person. The VMT analysis prepared for the Project estimated the total VMT during the two-year construction period to be approximately 4,336,990; VMT during the two-year decommissioning period would be comparable. VMT generated during Project operation would be much less than that generated during Project construction and decommissioning. It was assumed 12 trucks per day would be utilized for operations and maintenance of the proposed project, and that each truck would travel approximately 50 miles per

day from their place of origin to the Project Site for inspection, maintenance and operation, and then travel approximately 50 miles for the return trip. Therefore, the total VMT per day during Project operation is assumed to be 600 for trucks. Per capita daily VMT for the permanent employees at the facility is estimated to be approximately 50. Additional detail on VMT assumptions and calculations for all vehicle and trip types is provided in Exhibit 3 of Appendix H.

As explained in Section 3.14.2, *Significance Criteria*, the County has not adopted VMT significance thresholds and, accordingly, has decided to rely on an established environmental standard that is protective of resources of legislative concern in mandating that lead agencies evaluate VMT, i.e., a GHG emissions threshold. The intent of SB 743 is to encourage land use and transportation planning decisions and investments to reduce VMT and thereby contribute to the reduction of GHG emissions, as required by Assembly Bill 32. Therefore, for purposes of this Project, the Project's impact to VMT would be significant if it would conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. The evaluation of Impact 3.10-2 in Section 3.10, *GHG Emissions*, concludes that the Project would result in a less-than-significant impact related to a potential conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions, and so too would result in a less-than-significant transportation impact relating to VMTs.

Mitigation: None required.

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c) Whether the Project would substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Impact 3.14-3: The Project would, unless mitigated, substantially increase safety hazards. (*Less than Significant with Mitigation Incorporated*)

The Project would not include a design feature or utilize vehicles with incompatible uses that would create a hazard on the roadways surrounding the Project Site. However, the Project could, unless mitigated, substantially increase hazards to vehicles, bicyclists, and pedestrians traveling on SR 299 due to the proposed use of oversize/overweight vehicles. During Project construction, heavy construction equipment and wind turbine components (e.g., blades, nacelles) would be delivered to (and during decommissioning would be removed from) the Project Site using area roadways, some of which may require transport by oversize/overweight vehicles. The transport of these materials would require transportation permits from Caltrans for oversize/overweight vehicles. Heavy equipment associated with these components would not be hauled to/from the site daily, but rather would be hauled in and out on an as needed basis. The County has determined that the proposed use of oversize vehicles could create a hazard to the public by limiting motorist, bicyclist, and pedestrian views on roadways and by the obstruction of space, which is considered a potentially significant impact.

The need for and number of escorts, California Highway Patrol escorts, as well as the timing of transport, would be at the discretion of Caltrans and Shasta County, and would be detailed in

respective oversize/overweight permits. The Applicant has initiated coordination with the Caltrans' Office of Transportation Permits, and has determined that any specific weight and height limitations would only be determined once a contractor has been selected and a Route Request Permit defining the origin and destination of the equipment/components is requested. Compliance with these permitting and related requirements would reduce potential Project impacts to a less-than-significant level, because they would require the construction contractor to incorporate measures targeted at limiting unnecessary delays and providing safe access through the construction zone for all roadway users (including vehicles, bicyclists, and pedestrians). In appropriate situations, a requirement that a project comply with specific laws or regulations may serve as adequate assurance that no significant impact would result. The County has determined that this is such a situation. Mitigation Measure 3.14-3 would require that all oversize/overweight vehicles used on public roadways during construction obtain required permits and obtain approval of a Construction Traffic Control Plan, as well as identify anticipated construction delivery times, vehicle travel routes, and potential conflicts with other projects generating traffic or delay on SR 299, in advance to minimize the potential hazard to the public associated with limiting motorist, bicyclist, and pedestrian views on roadways and introducing obstructions on SR 299. This would ensure that construction-related oversize/overweight vehicles are in compliance with applicable Vehicle Code sections and Street and Highway Code sections applicable to licensing, size, weight, load, and roadway encroachment of construction vehicles.

Mitigation Measure 3.14-3: Traffic Management Plan.

Prior to the issuance of construction or building permits and prior to the removal of materials from the Project Site during decommissioning, the Applicant shall:

1. Prepare and submit a Traffic Control Plan to Shasta County Public Works Department and the Caltrans offices for District 2, as appropriate, for approval. The Traffic Control Plan must be prepared in accordance with both the Caltrans Manual on Uniform Traffic Control Devices and Work Area Traffic Control Handbook and must include, but not be limited to, the following:

    a. A plan for communicating construction/decommissioning plans with Caltrans, emergency service providers, and residents located in the vicinity of the Project Site.

    b. An access and circulation plan for use by emergency vehicles when lane closures and/or detours are in effect. If lane closures occur, provide advance notice to local fire departments and sheriff's department to ensure that alternative evacuation and emergency routes are designed to maintain response times.

    c. Timing of deliveries to/removals from the Project Site of heavy equipment and building materials;

    d. Directing vehicles, pedestrians, and bicyclists on SR 299 through the construction zone with a flag person;

    e. Providing detours to route vehicular traffic, bicyclists, and pedestrians around lane or shoulder closures, if they occur;

    f. Providing adequate parking for construction trucks, equipment, and workers in the designated staging areas within the Project Site;

g. Placing temporary signage, lighting, and traffic control devices if required, including, but not limited to, appropriate signage along access routes to indicate the presence of heavy vehicles and construction/decommissioning traffic, and the placement of traffic cones to provide temporary left-turn lanes into Project driveways as needed;[1]

h. Preserving access to existing ingress/egress points for all adjacent property at all times; and,

i. Specifying both construction/decommissioning-related vehicle travel and oversize/overweight vehicle haul routes.

2. Obtain all necessary encroachment permits for the work within the road right-of-way or use of oversized/overweight vehicles that will utilize county maintained roads, which may require California Highway Patrol or a pilot car escort. Copies of the approved traffic plan and issued permits shall be submitted to the Shasta County Public Works Department and Caltrans.

3. Consult with the Shasta County Public Works Department and Caltrans to identify any substantial construction activities on SR 299 that may overlap with construction of the Project (e.g., Caltrans SR 299 resurfacing project from Milepost 60.0 to 67.8). Coordinate with the contractor(s) of any identified project(s) to ensure that overlapping construction activities do not cause unnecessary delays on SR 299 or preclude the ability of large vehicles to access the Project Site.

Significance after Mitigation: Less than significant.

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d) Whether the Project would result in inadequate emergency access.

Impact 3.14-4: The Project would, unless mitigated, result in inadequate emergency access. (*Less than Significant with Mitigation Incorporated*)

The Project Site is located in a rural area adjacent to SR 299, with the three Project driveways allowing adequate egress/ingress to the site in the event of an emergency. Additionally, as part of the Project, additional onsite access roadways (internal to the site) would be constructed. During inclement winter months, emergency access could be provided to and through the Project Site via snowcats, ATVs, or helicopter where sufficient clearance is available. Therefore, the development of the Project would not physically interfere with emergency vehicle access or personnel evacuation from the site in these respects.

The Project would not require closures of public roads, which could inhibit access by emergency vehicles. Further, as described above, the Project's proposed use of oversized vehicles during construction and decommissioning would not cause a significant adverse impact on emergency access to or near the Project Site if oversize/overweight vehicle permits and related requirements are complied with. Because Mitigation Measure 3.14-3 includes a plan for communicating

[1] A left-turn lane warrant analysis was conducted for the three Project driveways, which is provided in Appendix H. The analysis found that left-turn lanes would be warranted during Project construction at all three Project driveways during the a.m. peak hour.

construction/decommissioning plans with emergency service providers that operate in the vicinity of the Project Site, and drivers of emergency vehicles can use sirens to clear a path of travel, emergency access would be maintained and response times would be comparable to delay experienced under baseline conditions during other traffic control scenarios that occur on the highway, such as road construction, during Project construction and decommissioning.

Mitigation Measure 3.14-4: Implement the Traffic Management Plan that would be required by Mitigation Measure 3.14-3.

Significance after Mitigation: Less than significant.

3.14.3.3 PG&E Interconnection Infrastructure

As noted in Section 2.4.3, *Project Substation, Switching Station and Interconnection Facilities*, minor modifications or upgrades to the existing 230 kV line may be required to facilitate the Project's interconnection. Upgrades to PG&E facilities are anticipated to include construction and/or reconfiguration of utility line structures and transmission line circuits involving four to six new transmission poles. If required, these new poles would be constructed adjacent to the proposed substation and switching station. These improvements would be contained within the Project Site and would, in and of themselves, result in a less-than-significant impact to Transportation conditions on publicly accessible roadways.

No mitigation would be required specific to the PG&E interconnection infrastructure. As part of the Project, construction, operation, maintenance and decommissioning of the PG&E interconnection infrastructure would result in a less-than-significant impact relating to the potential for a significant conflict with a program plan, ordinance or policy addressing the circulation system and consistency with CEQA Guidelines Section 15064.3(b). If oversized deliveries for the PG&E interconnection infrastructure are required, then deliveries will be described in the Traffic Management Plan and carried forth as described under Mitigation Measures 3.14-3.

3.14.3.4 Direct and Indirect Effects of Alternatives

Alternative 1: South of SR 299

Under Alternative 1, construction activities would generate fewer vehicle trips by pick-up trucks and haul trucks than the number estimated for the Project because up to seven fewer turbines and their related infrastructure would be constructed. Similarly, the Decommissioning and Site Reclamation phase would also generate fewer vehicle trips by pick-up trucks and haul trucks than the number estimated for the Project, as the number of turbines and their related infrastructure to be removed and size of the area to be reclaimed would be less than what was identified for the Project. Operation of Alternative 1 would likely result in the same impact as that identified for the Project because no reduction in employee trips to or from the Project Site is anticipated. In sum, the impacts of Alternative 1 on Transportation conditions would be less than or the same as the impacts identified for the Project.

Despite its overall smaller size, Alternative 1 would still substantially increase safety hazards and would, therefore, be required to implement Mitigation Measure 3.14-1.

Alternative 2: Increased Setbacks

Under Alternative 2, construction activities would generate fewer vehicle trips by pick-up trucks and haul trucks than the number estimated for the Project because four fewer turbines and their related infrastructure would be constructed. Similarly, the Decommissioning and Site Reclamation phase would also generate fewer vehicle trips by pick-up trucks and haul trucks than the number estimated for the Project, as the number of turbines and their related infrastructure to be removed and size of the area to be reclaimed would be less than what was identified for the Project. Operation of Alternative 2 would likely result in the same impact as that identified for the Project because no reduction in employee trips to or from the Project Site is anticipated. In sum, the impacts of Alternative 2 on Transportation conditions would be less than or the same as the impacts identified for the Project.

Despite its overall smaller size, Alternative 2 would still substantially increase safety hazards and would, therefore, be required to implement Mitigation Measure 3.14-1.

No Project Alternative

If the No Project Alternative is implemented, none of the proposed wind project infrastructure would be delivered to the Project site or constructed, operated and maintained, or decommissioned there. No deliveries by oversize/overweight vehicles or other vehicle types and no worker vehicle trips would be made to, from, or within the Project Site relative to baseline conditions. SR 299 and roadways between the Project Site and Redding, Burney, Fall River Mills, and McArthur would not be affected by Project vehicles. The Project Site would continue to be operated as managed forest timberlands. Because there would be no change relative to baseline conditions, the No Project Alternative would create no impact related to Transportation.

The Project Site is zoned for timber production. Pursuant to regulations implementing the California Timberland Productivity Act (Government Code §51100 et seq.; 14 Cal. Code Regs. §897[a]), there is a legal presumption that "timber harvesting is expected to and will occur on such lands." The regulations further specify that timber harvesting on such lands "shall not be presumed to have a Significant Adverse Impact on the Environment" (14 Cal. Code Regs. §898). Therefore, the No Project Alternative, including anticipated timber harvesting, is not presumed to result in a significant adverse individual or cumulative effect related to Transportation. CAL FIRE would review any future timber harvesting proposal to evaluate any potential project-specific, site-specific environmental impacts.

3.14.4 Cumulative Analysis

The geographic area considered in this evaluation of potential cumulative effects is consistent with the study area identified in Section 3.14.1.1 with a particular focus on cumulative projects located within a 6-mile radius of the Project Site. This geographic area was selected based on the professional opinion of the EIR preparers that traffic generated by cumulative projects further than 6 miles from the Project Site would not have a noticeable effect on traffic conditions at study intersections or roadway segments. Potential cumulative effects could result as soon as a Project-related worker or materials delivery begins its trip to the Project Site, and as late as the last Project vehicle to leave during decommissioning and site reclamation. As described in Section 3.14.1, *Setting*, there is no existing significant adverse cumulative condition to which the Project could contribute.

The incremental impacts of the Project, when considered with the incremental impacts of other projects identified in Section 3.1.2.1, *Cumulative Scenario*, would occur primarily during construction and decommissioning, because the Project's operations and maintenance-related traffic would be minimal. Therefore, operation of the Project would result in a less-than-significant cumulative impact.

Potential cumulative construction or decommissioning impacts could result if multiple projects would be generating traffic or transportation demands in the same area at the same time as the Project.

As discussed in Section 3.1.2, *Cumulative Effects Approach*, the cumulative analysis considers a number of different types of cumulative projects, including timber management and harvesting, surface mining and reclamation projects, land use projects identified in either the Shasta County permit system, and other projects within Shasta County with lead agencies other than the County. Due to the rural nature of the Project Site, only one reasonably foreseeable cumulative project was identified within a 6-mile radius of the project site: a Caltrans roadway pavement project scheduled for construction in 2021 on approximately 7 miles of SR 299 between Milepost 60.0 and Milepost 67.8. This project is located along the study roadway segment of SR 299 between Big Bend Road and Tamarack Road (Milepost 60.1 to 73.1) and would occur directly adjacent to the Project Site. Although the precise dates of Project construction activities are unknown at this time, it is possible that the Caltrans pavement project could overlap with Project construction activities. Detailed construction information on the Caltrans project is unavailable at this time, but it would be reasonable to assume that this type of project would require temporary lane closures, which would necessitate the use of temporary traffic controls (e.g., flaggers, traffic cones, signage). These features, in combination with the increased construction traffic generated by the Project, could cause noticeable temporary traffic delays on SR 299, resulting in a potential significant cumulative impact. Furthermore, the Caltrans project could impede access to the Project Site for large trucks hauling materials, as the size of those vehicles may make maneuvers through temporary traffic controls difficult or impossible.

Mitigation Measure 3.14-1 includes a provision that the Applicant and their contractor would coordinate construction plans with any nearby projects with overlapping construction schedules/activities, which would include the Caltrans project described above. With

implementation of Mitigation Measure 3.14-1, the Project's cumulative impact would not be cumulatively considerable.

> **Mitigation Measure 3.14-3:** Implement Mitigation Measure 3.14-1 (Traffic Management Plan).
>
> **Significance after Mitigation:** Less than significant.

3.14.5 References

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