

4.16. TRANSPORTATION

This section includes the following discussion and analysis related to transportation: environmental and regulatory setting; criteria and methodology for evaluating impacts; and the results of the impact assessment, including identification of potentially significant impacts and corresponding mitigation measures to avoid or substantially lessen such impacts to the extent feasible. The following discussion is based on the Traffic Study prepared for the PEIR by Peters Engineering Group in July 2025 (Traffic Study), which is incorporated into this PEIR by reference, as provided under CEQA Guidelines section 15150. The Traffic Study is contained in Appendix E of this PEIR, and its findings are summarized below.

PEIR Scoping Comments

During the PEIR scoping process, the District received one letter containing comments related to transportation. The comment submitted is quoted below (see PEIR Scoping Report in Appendix A of this document).

Leadership Counsel for Justice and Accountability

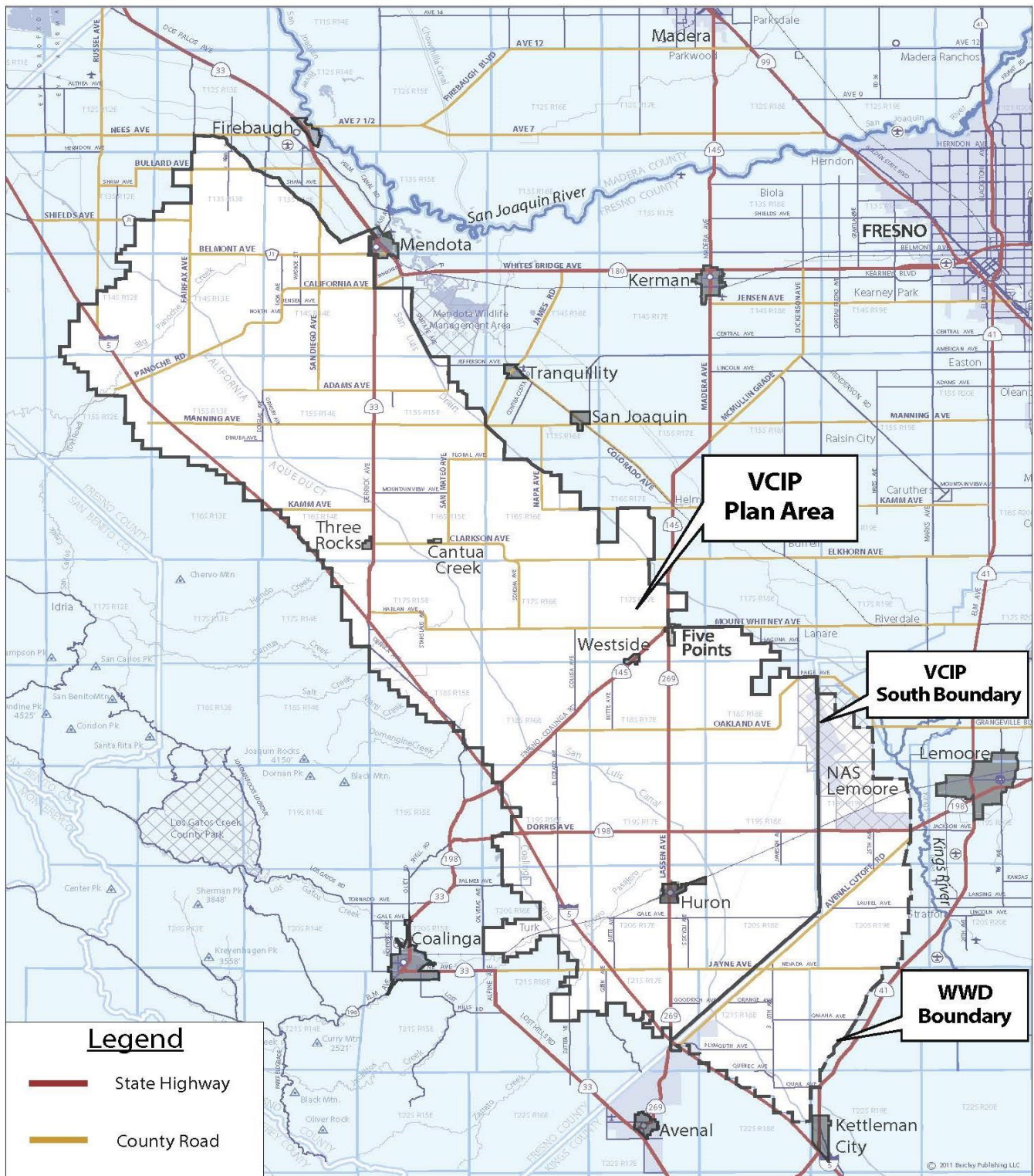
“This implementation of the VCIP will likely have significant and unavoidable traffic impacts due construction of large-scale solar farms. Therefore, the EIR must analyze and provide estimated vehicle miles traveled (VMT) generated by a project of this size and scale and include all feasible mitigation measures which reduce VMTs. Some of those mitigation measures must include, but not be limited to: public transportation stops at and near the VCIP projects, connective trails and bike lanes throughout the VCIP project, electric car and bike charging stations, local hiring provisions for the commercial development, a walk/ride to school program for the additional schools that will be added to the Project site, and a community rideshare program. The EIR should also include safety features for pedestrians and bicyclists. These measures would include, but not be limited to: HAWK Systems, adequate sidewalks, protected bike lanes, adequate pedestrian safety signage, and school crossing guards.”

[Note: Potential impacts associated with VMT are addressed below in Section 4.16.3. *Environmental Impact Analysis* under Impacts TR-1 through TR-4.]

4.15.1. Environmental Setting

The VCIP Plan Area is located entirely within the unincorporated area of western Fresno County (County). The Plan Area is generally bounded on the west by the foothills of the Coastal Ranges, on the north by West Nees Avenue, on the east by Fresno Slough, and the south by the Fresno/Kings County boundary. The roadway network providing access to the Plan Area is described below. To establish existing traffic conditions, Peters Engineering Group conducted twenty-four-hour traffic counts and twenty-four-hour turning-movement counts in July and September 2024 on the area roadways and intersections that potential traffic generated by the VCIP would likely use. The traffic counts provided the basis for determining existing traffic conditions (i.e., existing daily traffic flow volumes or levels of service (LOS)) on state highways and county roads providing access to and within the Plan Area (see Appendix E, p. 6).

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Roads and Highways
 Figure 4.15-1

State Highways

State highways provide primary transportation access throughout the Plan Area and to regional population centers and beyond. These highways include Interstate 5 (I-5), State Route (SR)-33, SR-145, SR-180, SR-198, and SR-269 (see Figure 4.16-1).

Levels of Service range from “A” to “F,” with “A” representing the highest level of service and “F” representing the lowest and unacceptable level of service. (See Section 4.16.3. *Environmental Impact Analysis* for definitions of Levels of Service.) All state highways in the rural areas of the Plan Area and vicinity currently operate at acceptable levels of service (i.e., LOS B or C). Some urban segments of state highways along the travel routes to the Plan Area operate at unacceptable LOS D, as discussed below.

County and Local Roads

The Plan Area includes several Fresno County roads including W. Nees, N. Russell, W. Fairfax, W. Shields, Belmont, N. Panoche, W. California, W. Manning, W. Kamm, W. Mount Whitney, and W. Oakland Avenues, among others (see Figure 4.16-1). The potential VCIP projects would also be served by Madera County roads including Avenues 7, 7½, and 12, and Firebaugh Boulevard. Almost all county roads in the Plan Area and vicinity operate at acceptable LOS C or better under existing conditions. The exceptions are the segment of W. California Avenue east of N. San Diego Avenue, and the segment of Belmont Avenue east of N. San Diego Avenue, both of which operate at unacceptable LOS D during the PM peak period that typically occurs between the hours of 4:00 and 6:00 PM.

Traffic generated by the potential VCIP projects would also use local roads in the cities of Firebaugh (12th and 13th Streets, and N Street [SR-33]), Mendota (Oller Street [SR-180]), and Kerman (Whitesbridge Road [SR-180] and Madera Avenue [SR-145]). Most of these urban road segments operate at acceptable LOS C or better under existing conditions, except the segment of 12th Street west of SR-33 in Firebaugh which operates at unacceptable LOS D during the AM and PM peak periods. Regarding potentially affected road intersections, the urban intersections that would be affected by VCIP traffic were all found to be operating at acceptable LOS C or better during the AM and PM peak periods.

Public Transit

The Fresno County Rural Transit Agency (FCRTA) is the primary provider of public transit services in the rural areas of Fresno County. Service is provided through several transit subsystems that operate throughout the rural areas of the County. The Plan Area is served by five transit systems which provide service to all unincorporated communities in the Plan Area as well as nearby cities and the Fresno metropolitan area, connecting residents to employment and service centers in the region (Fresno County 2024b). In 2023, FCRTA completed a comprehensive systemwide analysis with a view to increasing transit access in the region. The results are contained in FCRTA’s “Short Range Transit Plan for the Rural Fresno County Area 2024-2028. The pertinent recommendations of the study included the following: 1) Expand Transit Service Area Boundaries to transport rural residents in close proximity to existing communities served; 2) Introduce additional marketing in this service area; 3) Use of microgrid (solar) and EV technology for transit routes. The study also focused on unresolved needs and issues such as facilitating greater acceptance of home-to-work commuter transportation services through subsidized carpooling, commuter vanpooling, and farm labor vanpooling. The study noted that commercial vanpooling providers have provided more than 450 vehicles in the south San Joaquin Valley, including Fresno County (FCRTA 2023).

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Non-Motorized Transportation

Currently, there are no designated bicycle routes or recreational trails within the Plan Area. The Fresno County Bicycle and Regional Trails Master Plan includes one planned Class II Bikeway within the Plan Area. The planned Class II Bikeway extends west from Mendota along Belmont Avenue to Fairfax Avenue, where it turns north and extends to Shields Avenue, where it turns west and continues to (I-5). There are no existing or planned pedestrian facilities or recreational trails within the Plan Area (Fresno County 2024b).

Airports

There are four general aviation airports in the Plan Area and vicinity. These include the Robert William Johnston Municipal Airport in Mendota, the New Coalinga Municipal Airport, Harris Ranch Airport, and the Firebaugh Airport. The military airfield at Naval Air Station (NAS) Lemoore is located adjacent to the southeastern boundary of the Plan Area in Kings County. There are also six private airstrips distributed throughout the Plan Area, and another five airstrips within five miles of the Plan Area. These are described in more detail in Section 4.9. *Hazards & Hazardous Materials*.

4.15.2. Regulatory Context

State

California Vehicle Code

Various sections of the California Vehicle Code (CVC) and regulations promulgated by the California Department of Transportation (Caltrans) would apply to the potential VCIP energy and infrastructure projects. CVC section 35550 imposes weight guidelines and restrictions upon vehicles traveling on state freeways and highways. Pursuant to CVC section 35780 and California Code of Regulations title 21 section 1411.2, haulers of oversized or excessive loads over state highways must obtain a “Single-Trip Transportation Permit” from Caltrans following the procedures outlined in its Transportation Permits Manual prior to delivery of any oversized load (Caltrans 2025b). Oversize/overweight permits are considered on a case-by-case basis but may include requirements such as California Highway Patrol escort, special speed limits, and other restrictions. The CVC also contains various requirements governing the transportation of hazardous materials on state highways (see Section 4.9. *Hazards and Hazardous Materials* for additional discussion).

California Streets and Highways Code

Section 117 of the California Streets and Highways Code requires that permits be obtained from Caltrans for placement within the state right-of-way of any structures or fixtures such as utility poles, pipes, ditches, drains, sewers, or other above-ground or underground structures. Other sections of the Streets and Highways Code require the issuance of encroachment permits for work within the rights-of-way of state or county roadways.

Senate Bill 743

California Senate Bill (SB) 743, which went into effect in January 2014, states that “[n]ew methodologies under the California Environmental Quality Act are needed for evaluating transportation impacts that are better able to promote the state’s goals of reducing greenhouse gas emissions and traffic-related air pollution, promoting the development of a multimodal transportation system, and providing clean, efficient access to destinations.” Under {00080666.1}

SB 743, the focus of transportation analysis shifts from driver delay, which is typically measured by traffic LOS, to a new measurement – vehicle miles traveled (VMT). This change in metrics is intended to further the state’s long-term greenhouse gas reduction goals by reducing fuel consumption in the transportation sector, specifically through reductions in per capita VMT associated with new land use projects, and thereby promoting compact, mixed-use development patterns (Senate Bill No. 743).

To implement SB 743, the Natural Resources Agency adopted revisions to the CEQA Guidelines which became effective on December 28, 2018. The revised CEQA Guidelines eliminated the application of LOS-related metrics for determining the significance of transportation impacts associated with development projects, land use plans, and transportation infrastructure projects. Under the CEQA Guidelines, VMT-related metric(s) are required to evaluate the significance of transportation-related impacts under CEQA. (The specific requirements of the CEQA Guidelines revisions under SB 743 are discussed under Impact TR-2 below.) SB 743 does not preclude the use of LOS-related metrics as set forth in local general plan policies, zoning codes, conditions of approval, or any other planning requirements that require evaluation of LOS, but these metrics may no longer constitute the basis for determining the significance of transportation impacts under CEQA.

Under SB 743, local land use agencies were required to establish VMT significance thresholds to be applied in CEQA analyses of proposed land use projects by July 1, 2020. Fresno County adopted a VMT threshold as part of its General Plan update, adopted in February 2024. General Plan Policy TR-A.25, which is recited in full below, establishes a VMT threshold of significance for new development projects of 87 percent of the countywide average VMT. Any individual project resulting in VMT that exceeds 87 percent of the countywide average must implement project-specific mitigation measures. Regarding projects in rural areas, the Technical Advisory provides: “In rural areas of non-MPO counties (i.e., areas not near established or incorporated cities or towns), fewer options may be available for reducing VMT, and significance thresholds may be best determined on a case-by-case basis.” Further guidance on conducting VMT evaluations is provided in the Fresno COG’s “Fresno County SB 743 Implementation Regional Guidelines,” described below.

Fresno County

Fresno County General Plan

The Fresno County General Plan (Fresno County 2024b) contains the following goals and policies related to transportation facilities which are relevant to the VCIP.

Transportation and Circulation Element

A. Streets and Highways

Goal TR-A To plan and provide a unified, multi-modal, coordinated, and cost-efficient countywide street and highway system that ensures the safe, orderly, and efficient movement of people and goods, including travel by walking, bicycle, or transit.

Policy TR-A.2 Vehicle Miles Traveled (VMT) Standards and CEQA Evaluation

The County shall require evaluation of County General Plan land use designation changes, zone changes, and discretionary development for their individual (i.e., project-specific) and cumulative transportation impacts based on Vehicle Miles Traveled (VMT) under the California

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Environmental Quality Act (CEQA) pursuant to the methodology and thresholds of significance criteria established by the County.

Policy TR-A.3 Level of Service

The County shall plan and design its roadway system in a manner that strives to meet Level of Service (LOS) D on urban roadways within the spheres of influence of the cities of Fresno and Clovis and LOS C on all other roadways in the county.

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In no case should the County plan for worse than LOS D on rural County roadways, worse than LOS E on urban roadways within the spheres of influence of the cities of Fresno and Clovis, or in cooperation with Caltrans and the Fresno Council of Governments, plan for worse than LOS E on State Routes in the county.

Policy TR-A.4 Roadway Access

The County shall require that new or modified access to property abutting a roadway and to intersecting roads conform to access specifications in the Circulation Diagram and Standards section. Exceptions to the access standards may be permitted in the manner and form prescribed in the Fresno County Zoning and Subdivision Ordinances, provided that the designed safety and operational characteristics of the existing and planned roadway facility will not be substantially diminished.

Policy TR-A.6 Rights-of-Way Dedications

The County shall require dedication of right-of-way or dedication and construction of planned road facilities as a condition of land development and require an analysis of impacts of traffic from all land development projects including impacts from truck traffic. Each such project shall construct or fund improvements necessary to mitigate the effects of traffic from the project. The County may allow a project to fund a fair share of improvements that provide significant benefit to others through traffic impact fees.

Policy TR-A.9 Development Impact Fees

The County shall assess fees on new development sufficient to cover the fair share portion of that development's impacts on the local and regional transportation system.

Policy TR-A.10 Roadway Improvements

The County shall ensure that land development that affects roadway use or operation or requires roadway access to plan, dedicate, and construct required improvements consistent with the criteria in the Circulation Diagram and Standards section of this element.

Policy TR-A.25 Vehicle Miles Traveled (VMT) Threshold

Projects that would generate or attract more than 110 daily vehicle trips shall be evaluated for a transportation VMT impact on an individual basis. The threshold of significance shall be 87 percent [of] the countywide average rate of VMT. Any individual project resulting in VMT that exceeds 87 percent of the countywide average shall be required to implement project specific mitigation measures aimed at reducing VMT generated by the project.

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Fresno County SB 743 Implementation Regional Guidelines (Regional Guidelines)

In January 2021, the Fresno Council of Governments (Fresno COG) published the Regional Guidelines, which contain recommended thresholds for the purposes of evaluating VMT impacts of projects in Fresno County. The Regional Guidelines “provides a guide and substantial evidence for Fresno [COG] and its member jurisdictions in setting thresholds of significance for CEQA transportation studies.” In analyzing VMT, jurisdictions located in Fresno County “can take the recommendations in the [R]egional [G]uidelines as appropriate based on their individual circumstances.” The Regional Guidelines include specific recommended screening criteria, thresholds, and guidelines for VMT analysis that may be used for land use development projects, transportation projects, and land use plans within each jurisdiction in Fresno County, including the unincorporated County (Fresno COG 2021). Specifically, Chapter 3 and 4 of the Regional Guidelines concern project screening and recommended threshold and VMT analysis for land use development projects. Chapter 6 of the Regional Guidelines, “Threshold Recommendations for Land Use Plans,” provides guidance and substantial evidence to support Fresno COG’s threshold recommendation for land use plans and CEQA transportation analyses within Fresno County. Furthermore, the Regional Guidelines include a variety of potential mitigation measures for land use development projects, transportation projects, and community/general plans that could be incorporated into individual projects to reduce project-related increases in VMT. Regarding potential mitigation, the Regional Guidelines are “intended as a guide” and recognize that “it is generally the practitioner who identifies mitigation measures to offset the specific project related impacts identified” in the applicable environmental document.

Fresno County Regional Transportation Plan/Sustainable Communities Strategy

The Fresno County 2022 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) was prepared and adopted by Fresno COG. The RTP is a blueprint that establishes a set of regional transportation goals, policies, and actions intended to guide development of the planned multi-modal transportation systems in Fresno County. It was developed through a continuing, comprehensive, and cooperative planning process, and provides for effective coordination between local, regional, state, and federal agencies. Additionally, the RTP establishes a basis on which funding applications are evaluated. Use of any state or federal transportation funds by local governments must conform to the RTP, the State Implementation Plan for air quality improvements, and the Federal Transportation Improvement Programs. Since 2018 the RTP has included the SCS, mandated by SB 375, which is intended to show how integrated land use and transportation planning can lead to lower greenhouse gas (GHG) emissions from automobiles and light trucks (Fresno COG 2022a). A 2026 update to the RTP/SCS is currently underway.

Fresno County Regional Active Transportation Plan

The Fresno COG adopted the Fresno County Regional Active Transportation Plan in February 2018, and adopted the updated plan in May 2024. The Active Transportation Plan is a comprehensive guide outlining the vision for biking, walking, and other human-powered transportation in Fresno County and a road map for achieving that vision. The Active Transportation Plan proposes a comprehensive network of countywide bikeways, trails, and sidewalks; crossing improvements at key intersections; and locations for recommended bicycle parking (Fresno COG 2025).

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4.16.3. Environmental Impact Analysis

METHODOLOGY

This section analyzes the potential for implementation of the VCIP to result in significant environmental impacts related to transportation based on the Traffic Impact Study prepared by Peters Engineering Group in April 2025, contained in Appendix E of this PEIR. Peters Engineering Group conducted twenty-four-hour traffic counts and twenty-four-hour turning-movement counts in July and September 2024 on the area roadways and intersections that potential traffic generated by the VCIP would likely use. The traffic counts provided the basis for determining existing traffic conditions (i.e., LOS) on state highways and county roads providing access to and within the Plan Area. The traffic volumes that would be generated by VCIP projects were added to baseline traffic volumes to determine the locations and extent of potential congestion associated with VCIP implementation, which provided the basis for determining mitigation measures.

SIGNIFICANCE CRITERIA

Based on Appendix G of the state CEQA Guidelines, implementation of the proposed VCIP would be considered to result in a significant transportation impact 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 State CEQA Guidelines section 15064.3, subdivision (b).
- c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment).
- d. Result in inadequate emergency access.

4.16.3.1. DIRECT AND INDIRECT EFFECTS

Impact TR-1. Conflict with a Transportation Program, Plan, Ordinance or Policy

Implementation of the VCIP Energy Resource and Infrastructure Plans would potentially result in temporary conflicts with Level of Service policies applicable to area highways and roads during VCIP project construction; however, traffic management measures would reduce the potential impacts to less than significant. (*Less-than-Significant Impact with Mitigation*)

Traffic

Pursuant to CEQA Guidelines section 15064.3(a), “a project’s effect on automobile delay shall not constitute a significant environmental impact.” Instead, “[v]ehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact.” (CEQA Guidelines, section 15064.3(b)(1).) The analysis of traffic impacts based on VMT, as required under the CEQA Guidelines, is presented under Impact TR-2 below.)

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Although traffic congestion is no longer recognized as a significant impact under CEQA, the general plans of counties and cities typically require a minimum LOS on roadways and at intersections. The following analysis is focused on the potential for VCIP implementation to result in exceedances of local LOS policies for traffic. This analysis is based on the Traffic Study prepared by Peters Engineering Group in June 2025, which is contained in Appendix E of this PEIR.

Methodology

The Traffic Study analyzes potential traffic impacts expected from VCIP buildout. The intention is to identify the places and times when VCIP traffic generation would likely result in traffic issues on the roadway network, and to identify feasible mitigation strategies which could be further refined and applied at the project level. Detailed traffic impact studies would be required at the project level, based on the details of the construction and operations plans for each potential VCIP project, which would identify project-specific impacts and, if required, feasible mitigation measures during project-level review and approval.

Traffic studies do not typically focus on construction traffic, which is usually temporary and less substantial than operational traffic for most types of projects. For solar and battery energy storage system (BESS) projects, the opposite is the case, with construction traffic being temporary but substantial, and operational traffic being very light. Given the anticipated large scale and long duration of potential VCIP implementation, different areas within the Development Focus Areas (DFAs) would be under construction at different times and therefore subject to peak traffic volumes in different years. Thus, the analysis of traffic impacts is closely tied to the planned phasing for VCIP development over the contemplated 10-year buildout period.

The phasing of VCIP buildout of solar and BESS projects would depend on the phasing of the backbone infrastructure consisting of collection substations and connecting transmission lines. It is anticipated that these facilities would be constructed progressively from north to south through the Plan Area, with the five collection substations and their connecting transmission lines constructed during the first five years of VCIP implementation. It is expected that the Newpoint substation (Substation 1) would be completed in 2029, which would facilitate development of the first 2,300 megawatts (MW) of solar/BESS around that substation during 2029. The other four collection substations would be completed sequentially from 2030-2033, which would facilitate 2,300 MW of solar/BESS development around each of those substations, respectively, in each of those successive years. In subsequent construction years (2034-2038), the backbone infrastructure for the VCIP would be complete, so solar/BESS development would be more evenly distributed as the remaining capacity of all five collections substations is utilized from 2034-2038. Therefore, the VCIP construction activities would be most geographically concentrated in the first five years, and much less geographically concentrated in the final five buildout years. Therefore, based upon the contemplated construction schedule, the greatest potential traffic impacts would occur during the first five years of VCIP implementation.

The Traffic Study focused on the early peak construction years of 2029, 2031, and 2033 when the most intense construction activity would occur around VCIP collection Substations 1, 3, and 5. The Traffic Study did not focus on traffic conditions in 2030 and 2032, since the conditions on the affected roadways would not vary substantially from the prior and following years that were studied (e.g., 2029, 2031, 2033) (see Appendix E, p. 8). Thus, the three study years of 2029, 2031, and 2033 represent the greatest extent of the VCIP's reasonably foreseeable impacts related to traffic conditions that would occur in the northern, central, and southern sections of the Plan Area. In the subsequent construction years of 2034-2038, potential VCIP project development would be more evenly distributed, which would result in much lower traffic volumes on any given roadway used as a construction access route in those latter buildout years. Since impacts related to traffic conditions in those latter buildout years

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would not approximate the conditions anticipated in the early development years, it is not necessary to evaluate the VCIP-wide traffic impacts for those years to identify VCIP-level measures which would provide feasible LOS mitigation for all potential VCIP projects. In addition, each VCIP project would be subject to its own project-level traffic study which would provide a location and time-specific analysis of project traffic impacts as well as refined mitigation measures tailored to the unique circumstances of each project.

Significance Criteria

The Transportation Research Board *Highway Capacity Manual, 7th Edition*, (HCM) defines LOS as, “a quantitative stratification of a performance measure or measures representing quality of service. The measures used to determine LOS for transportation system elements are called *service measures*. The HCM defines six levels of service, ranging from A to F, for each service measure or combination of service measures. LOS A represents the best operating conditions from the traveler’s perspective and LOS F the worst.” (See Appendix E, p. 4)(TRB 2022). The LOS characteristics for road segments are presented in Table 4.16-1.

**TABLE 4.16-1
LEVEL OF SERVICE CHARACTERISTICS FOR ROAD SEGMENTS**

Level of Service	Description
A	Free-flow operations. High operating speeds with a small amount of platooning.
B	Reasonably free-flow operations. Speed reductions are present and platooning becomes noticeable.
C	Most vehicles traveling in platoons and freedom to maneuver noticeably restricted.
D	Platooning increases significantly and speeds begin to decline.
E	Demand approaching capacity. Speeds seriously curtailed.
F	Demand exceeds capacity and heavy congestion exists. Unstable flow.

Source: Peters Engineering Group

Based on the level of service policies of the agencies whose roadways would be subject to potential VCIP project traffic, the following significance criteria were identified by Peters Engineering Group:

For purposes of the Traffic Study, a traffic issue may be identified on State highways and roadways in Fresno County, the City of Firebaugh, the City of Mendota, and the City of Kerman if the addition of the traffic generated by the VCIP implementation results in any one of the following:

- Triggers an intersection operating at acceptable LOS (A, B, or C) to operate at unacceptable levels of service (D, E, or F);
- Increases the average delay for a study intersection that is already operating at unacceptable LOS (D, E, or F) by 5.0 seconds or more.

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For purposes of the Traffic Study, a traffic issue may be identified on Madera County roadways if the addition of the traffic generated by VCIP implementation results in any one of the following:

- Triggers an intersection operating at acceptable LOS (A, B, C, or D) to operate at unacceptable levels of service (E or F);
- Increases the average delay for a study intersection that is already operating at unacceptable LOS (E or F) by 5.0 seconds or more.

The highest traffic volumes would be generated during the construction and decommissioning phases of the potential VCIP projects, and very low traffic volumes would be generated during the operation of VCIP facilities. Therefore, the Traffic Study focused on construction traffic. As such, any level of service standards that would not be temporarily met during construction would be addressed by temporary measures to mitigate temporary impacts.

Construction Traffic

Baseline Conditions

The analysis of traffic impacts was based on traffic counts conducted in 2024 on the affected roadway segments, and at key intersections, with traffic data collected at 15-minute intervals for 24 hours at each location. To establish future baseline conditions for the construction years, the counted traffic volumes were increased by one percent per year up to the specific construction year under study based on regional growth projections (see Appendix E). The estimated worker commute volumes and truck deliveries generated during project construction were added to the baseline volumes to determine traffic conditions with project construction traffic added.

Trip Generation and Distribution

During the peak construction years of 2029-2033, there will be a maximum of approximately 6,000 construction workers and supervisors commuting to the potential VCIP project sites. This number includes construction workers on all VCIP projects including solar and BESS facilities, gen-tie lines, collection substations, and connecting transmission line segments. Based on experience with the construction of similar solar projects in the region, it is expected that at least 25 percent of workers will carpool to the work sites. Deliveries will primarily arrive from the Port of Oakland for solar components, with other materials and equipment originating from various California ports, as well as the cities of Fresno and Sacramento. Aggregate and concrete are expected to be delivered from the Los Banos area or the Coalinga Area, depending on the location of the specific VCIP project within the Plan Area.

Road Segment Analysis

Detailed road segment analyses were conducted for the peak construction years 2029, 2031, and 2033. Given the concentrated development patterns anticipated for these years, traffic impacts during these years were considered representative of the most impacted traffic conditions for the northern, central, and southern sections of the Plan Area that would be reasonably foreseeable during the 10-year VCIP buildout period.

Table 4.16-2 shows LOS for the most affected roadways providing construction access to the northern VCIP Plan Area under baseline conditions in 2029, along with LOS conditions with peak daily VCIP construction traffic added.

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TABLE 4.16-2
2029 ROAD SEGMENT ANALYSIS SUMMARY – VCIP CONSTRUCTION TRAFFIC
(NORTHERN SECTION OF VCIP PLAN AREA)

Road	Road Segment and Direction of Travel	Peak Travel Period	Target LOS	Baseline LOS (2029) ¹	LOS with VCIP Projects ²	No. of 15-Minute Periods Impacted by VCIP ³
Whitesbridge Rd (SR-180), Kerman	E. of Madera Ave (SR-145), WB	AM	C	C	E/F ⁴	1 ⁵
Whitesbridge Rd (SR-180), Kerman	E. of Madera Ave (SR-145), EB	PM	C	C	D, E/F	2 ⁵
Whitesbridge Rd (SR-180), Kerman	W. of Madera Av (SR-145), WB	AM	C	C	E/F	1
Whitesbridge Rd (SR-180), Kerman	W. of Madera Ave (SR-145), EB	PM	C	C	E/F	1
Oller St (SR-180), Mendota	N. of Belmont Ave, NB	AM	C	C	E/F	1
Oller St (SR-180), Mendota	N. of Belmont Ave, SB	PM	C	C	E/F	2
Belmont Ave, Mendota	W. of Oller St, WB	AM	C	C	E/F	1
Belmont Ave, Mendota	W. of Oller St, EB	PM	C	C	E/F	1
12 th St, Firebaugh	W. of SR-33, WB	AM	C	C, D	D, E/F	8
12 th St, Firebaugh	W. of SR-33, EB	PM	C	C, D	D, E/F	5
13 th St, Firebaugh	E. of SR-33, WB	AM	C	B	D, E, F	4
13 th St, Firebaugh	E. of SR-33, EB	PM	C	B, C	D, E, F	4
N St, Firebaugh	N. 13 th St, NB	AM	C	B	D, E/F	2
N St, Firebaugh	N. 13 th St, SB	PM	C	B	D, E/F	2
Ave 7, Madera County	E. of Firebaugh Blvd, WB	AM	D	B, C	E, F	2
Ave 7, Madera County	E. of Firebaugh Blvd, EB	PM	D	B	E, F	3
Ave 7½, Madera County	W. of Firebaugh Blvd, WB	AM	D	C	E, F	3
Ave 7½, Madera County	W. of Firebaugh Blvd, EB	PM	D	C	E, F	3
Dickenson Ave, Fresno County	S. of Jensen Ave, SB	AM	C	D	D	0 ⁶
Nees Ave, Fresno County	W. of Russell Ave, EB	AM	C	B	D	1
Nees Ave, Fresno County	W. of Russell Ave, WB	PM	C	B	D	1
Bullard Ave, Fresno County	E. of Washoe Ave, WB	AM	C	B	D, F	2
Bullard Ave, Fresno County	E. of Washoe Ave, EB	PM	C	B	D, E	3
Belmont Ave, Fresno County	E. of San Diego Ave, WB	AM	C	B, D	D, F	2
Belmont Ave, Fresno County	E. of San Diego Ave, EB	PM	C	B	D, E	3
California Ave, Fresno County	E. of San Diego Ave, WB	AM	C	D	D	0 ⁶
Panoche Rd, Fresno County	E. of I-5, EB	AM	C	B	E	1
Panoche Rd, Fresno County	E. of I-5, EB	PM	C	B	E	1

¹ Traffic conditions were analyzed in 15-minute increments during the peak VCIP commute periods of 5:00–7:00 AM and 3:30–6:00 PM. While each 15-minute period had its own LOS, the table shows only the range of LOS for each AM and PM period.

² **Bold** font indicates where LOS standard is not met during at least one 15-minute period.

³ Number of Periods where VCIP traffic results in LOS target not being met.

⁴ LOS “E/F” indicates traffic conditions are on the boundary between LOS E and F.

⁵ In AM peak, there are eight 15-min. periods; in PM peak, there are ten 15-min. periods.

⁶ Roadway where Baseline LOS is D, but VCIP projects add no traffic to the roadway.

Source: Peters Engineering Group

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The table only includes road segments where the target LOS is not met during at least one 15-minute period during peak AM or PM commute periods. The majority of study roadway segments within the Plan Area and vicinity would continue to operate at acceptable service levels in 2029 with VCIP construction traffic added.

As shown in Table 4.16-2, the LOS on 12 roadway segments would decrease from acceptable LOS C or better to LOS D or worse, typically during both the AM and PM peak periods, because of VCIP project construction traffic in 2029. Most LOS decreases would occur from 6:00 to 6:30 AM and 4:30 to 5:00 PM, coinciding with the times that the majority (70%) of VCIP workers are expected to arrive for work in the morning and depart in the afternoon. Few if any workers would arrive after 7:00 AM, and relatively few would depart after 5:00 PM. Along most roadway segments, the unacceptable LOS (D, E, or F) would occur during three or fewer 15-minute segments during the AM or PM peak period, reflecting the concentrated nature of construction worker travel to and from the work sites. Along most of the affected roadway segments, LOS F would occur during one 15-minute period during the AM and PM peak periods, indicating heavy congestion, with the preceding and/or following 15-minute time periods typically subject to LOS E or D where travel speeds would be reduced but with less congestion.

Table 4.16-3, below, shows LOS for the most affected roadways providing construction access to the central VCIP Plan Area under baseline conditions in 2031, along with LOS conditions with peak daily VCIP project construction traffic added. As shown in the table, in 2031 the LOS on 13 roadway segments would decrease from acceptable LOS C or better to LOS D or worse (or baseline LOS D conditions are worsened by project traffic), typically during both the AM and PM peak periods, because of VCIP project construction traffic. Most LOS decreases would occur from 6:00 to 6:30 AM and 4:30 to 5:00 PM, coinciding with the times that the majority (70%) of VCIP workers are expected to arrive for work in the morning and depart in the afternoon. Along most roadways, the unacceptable LOS (D, E, or F) would occur during three or fewer 15-minute segments during the AM or PM peak period, reflecting the concentrated nature of construction worker travel to and from the work sites. Along half of the affected roadway segments, LOS F would occur during one or two 15-minute periods during the AM and/or PM peak periods, indicating heavy congestion, with the preceding and/or following 15-minute time periods typically subject to LOS E or D where travel speeds would be reduced but with less congestion.

Table 4.16-4, below, shows LOS for the most affected roadways providing construction access to the southern VCIP Plan Area under baseline conditions in 2033, along with LOS conditions with peak daily VCIP project construction traffic added. As shown in the table, in 2033 the LOS on five roadway segments would decrease from acceptable LOS C or better to LOS D or worse (or a roadway with baseline LOS D is subject to increased traffic from VCIP projects), typically during both the AM and PM peak periods, as a result of VCIP project construction traffic. The most substantial LOS decreases occur from 6:00 to 6:30 AM and 4:30 to 5:00 PM, coinciding with the times that the majority (70%) of VCIP workers are expected to arrive for work in the morning and depart in the afternoon. Along most roadways, the unacceptable LOS (D, E, or F) would occur during four or five 15-minute segments during the AM or PM peak period. Along four of the affected roadway segments, LOS F would occur during four 15-minute periods during the AM and/or PM peak periods, indicating heavy congestion, with the preceding and/or following 15-minute time periods typically subject to LOS E or D where travel speeds would be reduced but with less congestion.

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TABLE 4.16-3
2031 ROAD SEGMENT ANALYSIS SUMMARY – VCIP CONSTRUCTION TRAFFIC
(CENTRAL SECTION OF VCIP PLAN AREA)

Road	Road Segment and Direction of Travel	Peak Travel Period	Target LOS	Baseline LOS (2031) ¹	LOS with VCIP Projects ²	No. of 15-Minute Periods Impacted by VCIP ³
Dickenson Ave	S. of Jensen Ave, SB	AM	C	B, C, D	D, E, F	4 ⁴
Dickenson Ave	S. of Jensen Ave, NB	PM	C	B, C	E, F	4 ⁴
McMullin Grade,	W. of Madera Ave (SR-145), WB	AM	C	C	D, E, F	6
McMullin Grade	W. of Madera Ave (SR-145), EB	PM	C	B, C	E, F	4
Manning Ave	West of James Ave, EB	AM	C	B	D, F	2
Manning Ave	West of James Ave, WB	PM	C	B	D, E	3
12 th St, Firebaugh	W. of SR-33, WB	AM	C	D	D	4
12 th St, Firebaugh	W. of SR-33, EB	PM	C	D	D	0 ⁵
Belmont Ave	E. of San Diego Ave, WB	AM	C	D	D	1
California Ave	E. of San Diego Ave, WB	AM	C	D	D	0 ⁵
Derrick Ave (SR-33)	North of Adams Ave, SB	AM	C	B	E	1
Derrick Ave (SR-33)	North of Adams Ave, NB	PM	C	B	E	1
Manning Ave	East of Derrick Ave, EB	AM	C	B	D, F	2
Manning Ave	East of Derrick Ave, WB	PM	C	B	D, E	2
Manning Ave	East of I-5, EB	AM	C	B	D	1
Manning Ave	East of I-5, WB	PM	C	B	D	1
Kamm Ave	East of Napa Ave, WB	AM	C	B	D, E, F	5
Kamm Ave	East of Napa Ave, EB	PM	C	B	D, F	4
San Mateo Ave	North of Clarkson Ave, NB	AM	C	B	D, F	2
		PM	C	B	D, F	3
San Mateo Ave	North of Clarkson Ave, SB	AM	C	B	D, F	2
		PM	C	B	D, F	3
Clarkson Ave	West of San Mateo, WB	AM	C	B	E	1
Clarkson Ave	West of San Mateo, EB	PM	C	B	E, D	2
Clarkson Ave	East of Santa Clara Ave, WB	AM	C	B	E	1
Clarkson Ave	East of Santa Clara Ave, EB	PM	C	B	D, E	2
Elkhorn Ave	East of Lassen Ave, WB	AM	C	B	E	1
Elkhorn Ave	East of Lassen Ave, EB	PM	C	B	E	1
Lassen Ave (SR-269)	South of Elkhorn Ave, NB	AM	C	B	D	1
Lassen Ave (SR-269)	South of Elkhorn Ave, SB	PM	C	B	D	1
Lassen Ave (SR-269)	North of SR 198, NB	AM	C	B	D	1
Lassen Ave (SR-269)	North of SR 198, SB	PM	C	B	D	1

¹ Traffic conditions were analyzed in 15-minute increments during the peak VCIP commute periods of 5:00–7:00 AM and 3:30– 6:00 PM. While each 15-minute period had its own LOS, the table shows only the range of LOS for each AM and PM period.

² **Bold** font indicates where LOS standard is not met during at least one 15-minute period.

³ Number of Periods where VCIP traffic results in LOS target not being met.

⁴ In AM peak, there are eight 15-min. periods; in PM peak, there are ten 15-min. periods.

⁵ Roadway where Baseline LOS is D, but VCIP projects add no traffic to the roadway.

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TABLE 4.16-4
2033 ROAD SEGMENT ANALYSIS SUMMARY
(SOUTHERN SECTION OF VCIP PLAN AREA)

Road	Road Segment and Direction of Travel	Peak Travel Period	Target LOS	Baseline LOS (2031) ¹	LOS with VCIP Projects ²	No. of 15-Minute Periods Impacted by VCIP ³
Dickenson Ave	S. of Jensen Ave, SB	AM	C	B, C, D	D, E, F	4 ⁴
Dickenson Ave	S. of Jensen Ave, NB	PM	C	B, C	E, F	4 ⁴
McMullin Grade,	W. of Madera Ave (SR-145), WB	AM	C	C	D, E, F	5
McMullin Grade	W. of Madera Ave (SR-145), EB	PM	C	B, C, D	D, E, F	4
Madera Ave (SR-145)	S. of Whitesbridge (SR-180), SB	AM	C	C	E/F ⁵	1
Madera Ave (SR-145)	S. of Whitesbridge (SR-180), SB	PM	C	C	E/F ⁵	1
12 th St, Firebaugh	W. of SR-33, WB	AM	C	D	D	0 ⁶
12 th St, Firebaugh	W. of SR-33, EB	PM	C	D	D	0 ⁶
Belmont Ave	E. of San Diego Ave, WB	AM	C	D	D	0 ⁶
California Ave	E. of San Diego Ave, WB	AM	C	D	D	0 ⁶
Lassen Ave (SR-269)	South of Elkhorn Ave, NB	AM	C	C	D, E, F	5
Lassen Ave (SR-269)	South of Elkhorn Ave, SB	PM	C	C	E, F	4
Lassen Ave (SR-269)	North of SR 198, SB	AM	C	B	D, E, F	5
Lassen Ave (SR-269)	North of SR 198, NB	PM	C	B	D, F	4

¹ Traffic conditions were analyzed in 15-minute increments during the peak VCIP commute periods of 5:00–7:00 AM and 3:30–6:00 PM. While each 15-minute period had its own LOS, the table shows only the range of LOS for each AM and PM period.

² **Bold** font indicates where LOS standard is not met during at least one 15-minute period.

³ Number of 15-minute periods where VCIP traffic results in LOS target not being met.

⁴ In AM peak, there are eight 15-min. periods; in PM peak, there are ten 15-min. periods.

⁵ LOS “E/F” indicates traffic conditions are on the boundary between LOS E and F.

⁶ Roadway where Baseline LOS is D, but VCIP projects add no traffic to the roadway.

Source: Peters Engineering Group

As discussed under “Methodology” above, the Traffic Study did not focus on traffic conditions in 2030 and 2032, since the conditions on the affected roadways in these years would not vary substantially from the prior and following years that were studied (i.e., 2029, 2031, and 2033). Thus, the three study years are considered representative of the most impacted traffic conditions that would occur in the northern, central, and southern portions of the Plan Area. In the subsequent construction years of 2034-2038, VCIP project development would be more evenly distributed throughout the Plan Area, which would result in much lower traffic volumes on any given roadway used as a construction access route in those latter buildout years. Few road segments are expected to degrade to unacceptable service levels during those years because of VCIP project construction traffic. Since traffic conditions in those latter buildout years would be less impacted than the conditions anticipated in the early development years, it is not necessary to evaluate the VCIP plan-wide traffic impacts for those years. The mitigation measures identified to address the relatively greater traffic impacts associated with the early construction years would apply to the latter years. Moreover, each potential VCIP project would be subject to its own project-level traffic study which would provide a location and time-specific analysis of project traffic impacts as well as refined mitigation measures tailored to the unique circumstances of each project.

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Intersection Analysis

Based on the results of the road segment analysis for 2029, key intersections along the travel routes for potential VCIP construction traffic were identified for detailed analysis. The selected intersections represent the main signalized intersections in the cities of Firebaugh, Mendota, and Kerman which would be subject to substantial construction traffic from potential VCIP projects in 2029. While the road segment analysis identified the potential impacts of VCIP project construction on traffic flow for each segment, the more detailed intersection analysis illustrates specific traffic constraints at each signalized intersection. This analysis enables evaluation of traffic conditions for 12 distinct through-traffic and turning movements at each location, and the most affected movement can be identified (see Appendix G, Intersection Analysis to Appendix E of this PEIR). This quantification of direction-specific worst-case traffic impacts (delay and congestion) at each intersection facilitates the detailed identification of corresponding mitigation measures.

Table 4.16-5 shows the results of the intersection analysis for 2029. As shown in the table, the LOS at each selected intersection degrades from acceptable LOS C or better under 2029 baseline conditions, to LOS F in both the AM and PM peak periods, with the addition of VCIP construction traffic. This indicates that long queues would occur in the critical movements at the affected intersections during the AM and PM commute periods. Unless mitigated, the unacceptable LOS resulting from VCIP implementation would conflict with the LOS policies of the County of Fresno, Caltrans, and the affected cities, which would represent a *significant impact*.

TABLE 4.16-5
2029 INTERSECTION ANALYSIS SUMMARY
(NORTHERN SECTION OF VCIP PLAN AREA)

Intersection	Time Period	Level of Service	
		2029 Baseline	2029 with VCIP Projects
N St (SR 33) / 12 th St, Firebaugh	6:15 – 6:30 a.m.	B	F
	4:30 – 4:45 p.m.	C	F
N St (SR 33) / 13 th St, Firebaugh	6:15 – 6:30 a.m.	A	F
	4:30 – 4:45 p.m.	A	F
Oller St (SR 180) / Belmont Ave (one-way stop), Mendota	6:00 – 6:15 a.m.	B	F
	4:45 – 5:00 p.m.	C	F
Whitesbridge Rd (SR 180) / Madera Ave (SR 145), Kerman	6:00 – 6:15 a.m.	B	F
	4:45 – 5:00 p.m.	B	F

Source: Peters Engineering Group

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It is noted that the intersection analysis was only performed for the 2029 construction year. This is because several factors indicate that the impacts to the selected intersections in 2029 would represent the most impacted traffic conditions during VCIP implementation. First, 2029 would be one of the years planned for the most VCIP development with the largest number of construction workers and truck deliveries. Second, the northern-most portion of the Plan Area would be developed in 2029, which is where the roadway links between the construction sites and the Fresno area population centers (i.e., labor pools) are the fewest, compared to roadway links to the central and southern portions of the Plan Area. This relative lack of roadway links would thereby limit commuting workers to two direct travel routes (i.e., SR-180 west through Kerman and Mendota; and Avenue 7 west through Firebaugh). Third, these travel routes to the northern portion of the Plan Area pass through three urban centers with signalized intersections, which would likely cause congestion at those locations. In contrast, traffic added to the central and southern portions of the Plan Area would be more dispersed and would not pass through urban centers with signalized intersections. Also, because travel patterns are subject to change over time, complex vehicle movements at intersections become less predictable over time. As such, the accuracy of intersection analyses based on conditions measured at 15-minute intervals would degrade to the point of being unusable over an extended span of time, like that associated with potential VCIP implementation. Therefore, evaluating potential intersection impacts up to 15 years in the future would have limited validity. Moreover, the objective of this analysis is to provide guidance as to the magnitude of reasonably foreseeable impacts that may be expected when any project-specific traffic analyses are conducted. The roadway segment analysis provides sufficient guidance as to the general level of traffic impacts that can be expected in future development years, and the intersection analysis provides sufficient plan level guidance regarding the level of mitigation measures that would be required at the project level.

Mitigation Measure TR-1: Traffic LOS Mitigation for Project Construction and Decommissioning

To reduce potential construction traffic LOS impacts resulting from VCIP implementation, the following traffic mitigation measures are identified for application at the project stage, with applicability depending on the individual circumstances of each project, as follows:

- 1) **Prior to the start of construction (and decommissioning), the project proponent shall submit a Construction Traffic Management Plan (Plan) to the approving agency for review and approval. The Plan shall be supported by a Traffic Impact and Mitigation Report (Report) which demonstrates that the measures proposed in the Plan would maintain the Level of Service (LOS) on all roadways and intersections affected by project construction/decommissioning traffic to LOS C or better. The mitigation measures in the Plan shall include the following measures.**
 - a. **Provide shuttle bus service for commuting construction/decommissioning workers from population centers (e.g., Fresno metro area) to and from VCIP construction sites.**

Mitigation shall consist solely of shuttle bus service, as specified in ‘a’, since shuttle bus service would demonstrably mitigate LOS impacts. However, if additional mitigations, such as those listed ‘b’ through ‘e’ below, can be quantitatively demonstrated to achieve the applicable LOS standards, then consideration can be given to implementation of a combination of mitigation measures, consisting of ‘a,’ at a minimum, and some combination of ‘b’ through ‘e’ below, or their functional equivalents.

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- b. **Provide ridesharing information and matching service to facilitate carpooling or vanpooling, particularly for construction/decommissioning workers commuting from more remote areas where shuttle bus service may not be made available.**
 - c. **Schedule daily construction/decommissioning activity so that start and finish times are staggered to reduce concentration of worker traffic particularly during the peak periods of existing traffic on affected roadways.**
 - d. **Actively encourage the use of mobile phone applications that provide information on real-time traffic conditions to identify alternative travel routes for construction/decommissioning workers and delivery trucks to reduce traffic volumes on the main travel routes to the VCIP project sites.**
 - e. **Limit truck deliveries of equipment and materials to non-peak traffic periods (e.g., avoid unnecessary travel from 5 to 8 AM and 3 to 6 PM).**
- 2) **In cases where other VCIP projects are planned to be constructed/decommissioned in the vicinity of the proposed project, and whose construction/decommissioning schedules overlap with the proposed project construction/decommissioning schedule, the Report shall include a report on coordination of traffic mitigation efforts by the proponents of the concurrent projects, and shall include analysis which demonstrates that the combined construction/decommissioning traffic impacts on any affected roadways and intersections would be fully mitigated so as not to result in collective degradation of service levels below LOS C. The Report shall also include a detailed summary of specific fair share mitigation measures to be implemented by each concurrent project (e.g., number of shuttle buses required for each project). Alternative approaches for implementing mitigations for collective traffic LOS impacts may be partially substituted for the recommended approach provided that it is quantitatively demonstrated in project-specific documents approved by the approving agency that the alternative approach results in maintenance of LOS C or better on all affected roadways. To coordinate the traffic studies involving multiple projects, the District or its designee shall establish a management entity to provide such coordination as needed, and to monitor the effectiveness of the planned mitigation measures.**

Effectiveness of Mitigation

A combination of the above mitigation measures could be applied to feasibly maintain roadway and intersection LOS at acceptable levels during construction and decommissioning of potential VCIP projects. The specific measures applied to each individual VCIP project would be determined by the traffic studies conducted at the project stage of review. The required traffic mitigations (which must be achieved by the mitigation measures identified above or their functional equivalents) would be achievable and feasible for implementation at the project level. Peters Engineering Group calculated the number of trips that must be removed at each intersection to restore LOS to acceptable levels. The results are shown in Table 4.16-5, which indicates that 15 to 25 shuttle buses for workers would be required to maintain service levels at acceptable LOS B or C, depending on the intersection.

Therefore, it can be concluded that the use of buses would fully mitigate the LOS impact at all affected intersections. Since intersection operations typically govern LOS as compared to road segment operations, the number of buses required for each intersection is also expected to improve road segment LOS to acceptable levels. Although the use of shuttle buses would demonstrably mitigate LOS impacts, a combination of mitigation measures, including shuttle bus service at a minimum, would be acceptable if their combined efficacy in providing full mitigation is demonstrated at the project level.

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TABLE 4.16-5
2029 INTERSECTION ANALYSIS – MITIGATED CASE WITH BUSES

Intersection	Time Period	Number of Buses Needed	Level of Service
N St (SR 33) / 12 th St	6:15 – 6:30 a.m.	25	C
	4:30 – 4:45 p.m.	23	C
N St (SR 33) / 13 th St	6:15 – 6:30 a.m.	25	B
	4:30 – 4:45 p.m.	23	B
Oller St (SR 180) / Belmont Ave	6:00 – 6:15 a.m.	22	C
	4:45 – 5:00 p.m.	20	C
Whitesbridge Rd (SR 180) / Madera Ave (SR 145)	6:00 – 6:15 a.m.	15	B
	4:45 – 5:00 p.m.	15	C

Source: Peters Engineering Group

At the project level, a combination of mitigation measures could be employed, which may or may not include 15 to 25 buses as indicated above. However, it would be the responsibility of the project proponents to demonstrate, through the completion of traffic impact studies, that any proposed combination of mitigation measures would achieve the level of mitigation required to maintain acceptable service levels on the affected roadways and intersections.

The above analysis of LOS impacts is based on the planned development of 2,300 MW of solar/BESS on 15,000 acres, plus supporting infrastructure, in the northern portion of the Plan Area in a single year (2029). It is anticipated that this would involve multiple projects of varying sizes with several project proponents (i.e., 2,300 MW of solar/BESS construction could be divided among nine typical-sized projects of ~250 MW each). This rate of construction would be anticipated for all ten years of VCIP buildout. Thus, all projects to be constructed concurrently within a given area would need to coordinate and implement collective mitigation measures required to maintain acceptable LOS on the affected construction travel routes. This would require a determination on the number of shuttle buses, or combination of traffic mitigations needed to maintain acceptable LOS and mitigate the collective impact. This would require the establishment of a management entity to provide the coordination needed, and to monitor implementation of mitigations for effectiveness, and also to adjust as needed. This would likely involve a cooperative arrangement between the District and the master developer of the VCIP. In summary, the LOS impacts from construction traffic generated by the VCIP projects would be *less than significant with mitigation*.

Operational Traffic

Traffic generated during potential VCIP project operations would be very light, given the small number of workers who would travel to the VCIP facilities. For example, a typical 250-MW solar/BESS facility would have up to ten permanent operations staff, plus an average of five maintenance workers who would visit the site periodically for panel cleaning and vegetation management. Thus, about 15 workers would be onsite on

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any given day, resulting in a total of 30 daily trips to and from a typical facility. The VCIP solar/BESS facilities would be distributed over the entire 50-mile length of the Plan Area, resulting in a highly dispersed travel pattern for operational workers. Thus, traffic volumes on any travel route would be negligible, and the LOS on any given roadway or intersection would not degrade to unacceptable LOS due to operational traffic from VCIP solar/BESS facilities. Therefore, the LOS impacts from operational traffic generated by the VCIP projects would be *less than significant*.

Decommissioning Traffic

Decommissioning activity would follow the same overall phasing pattern as construction activity, although actual decommissioning likely would not follow such a rigid schedule or geographic concentration in a given year. The intensity of activity during decommissioning of each VCIP facility is assumed to be the same as construction, although it would likely be substantially less given the lower intensity of activity involved due to generally less equipment use and fewer haul trips. Assuming traffic volumes generated during decommissioning would be similar to those associated with construction, the resulting LOS impacts would be approximately the same as reported above for the construction period. However, due to the methodologies used to calculate traffic impacts, which rely on detailed twenty-four-hour traffic and turning-movement counts, any attempt to estimate traffic impacts that would occur 40 to 50 years in the future would be speculative. Moreover, the decommissioning of each VCIP facility would be subject to the measures identified in MM TRA-1, which would ensure that overall trip generation would be reduced to levels where acceptable LOS conditions are maintained on all affected roadways and intersections. Therefore, traffic LOS impacts resulting from decommissioning of VCIP facilities would be *less-than-significant with mitigation*.

Public Transit

The FCRTA is the primary provider of public transit services in the rural areas of Fresno County. Service is provided through several transit subsystems that operate throughout the rural areas of the County. The Plan Area is served by five transit systems which provide service to all unincorporated communities in the Plan Area as well as nearby cities and the Fresno metropolitan area, connecting residents to employment and service centers in the region. During the VCIP buildout period, construction workers and trucks would utilize area roadways to travel to and from the various project sites. The travel routes used by construction traffic would include portions of the transit routes used by FCRTA transit services. However, all transit schedules begin at 7 AM or later (i.e., after the peak commute periods for VCIP construction workers). During the PM peak period, transit services and VCIP worker commutes would overlap. The traffic added by potential VCIP project construction may cause minor reductions in speed along some transit route segments. Some DFAs are also located along transit route segments, and slow-moving trucks or worker traffic at construction entrances may result in slight transit delays. Any slowdowns or delays in transit service resulting from VCIP construction would be temporary and would not permanently affect transit service in the Plan Area or beyond. In 2023, FCRTA completed a comprehensive systemwide analysis with a view to increasing transit access in the region. The study contained a number of recommendations for improving transit service, and noted the need to facilitate greater acceptance of home to work commuter transportation services through subsidized carpooling, commuter vanpooling, and farm labor vanpooling. The study noted that commercial vanpooling providers have provided more than 450 vehicles in the south San Joaquin Valley, including Fresno County (FCRTA 2023). In summary, VCIP implementation would not conflict with plans or policies for regional transit service and the impact would be *less than significant*.

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Non-Motorized Transportation

Currently, there are no existing designated bicycle routes within the Plan Area. The Fresno County Bicycle and Regional Trails Master Plan includes one planned Class II Bikeway within the Plan Area. A Class II Bikeway is an on-road bike lane up to six feet wide alongside the vehicle travel lane and separated from the vehicle lane by a painted solid wide stripe. The planned Class II Bikeway extends west from Mendota along Belmont Avenue to Fairfax Avenue where it turns north and extends to Shields Avenue, where it turns west and continues to I-5. The VCIP includes three DFAs that front onto this planned bikeway along portions of Belmont, Fairfax, and Shields Avenues. The development of the adjacent DFAs with solar/BESS facilities would not include physical alterations within the road rights-of-way apart from driveway entrances. The VCIP development would not interfere with future roadway improvements for the planned bikeway. As such, VCIP implementation would not conflict with regional bikeway plans and the impact would be *less than significant*.

There are no existing or planned recreational trails or pedestrian facilities within the Plan Area. Therefore, VCIP implementation would not conflict with plans for pedestrian access and mobility and the impact would be *less than significant*.

Impact TR-2. Conflict with CEQA Guidelines Section 15064.3, Subdivision (b) (VMT)

Implementation of the VCIP Energy Resource and Infrastructure Plans would not conflict with the applicable VMT reduction requirements established under CEQA Guidelines section 15064.3(b). (*Less-than-Significant Impact with Mitigation*)

As discussed in Section 4.16-2. *Regulatory Context* above, section 15064.3 of the CEQA Guidelines was included in the comprehensive amendments to the state CEQA Guidelines which took effect on December 28, 2018. CEQA Guidelines Section 15064.3, the implementing regulation for SB 743, sets forth revised criteria for analyzing transportation impacts of proposed projects. For land use projects, this section states that “[v]ehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact.” The purpose in applying VMT as the analytical metric is to further the state’s long-term GHG reduction goals by reducing fuel consumption in the transportation sector, specifically through reductions in per capita VMT associated with new land use projects (Pub. Resources Code, section 21099(b)(1)). Each public agency then has discretion to develop thresholds of significance used to determine the significance of impacts related to VMT (*Id.* at section 21099, subs. (b)(4) &(e); CEQA Guidelines, sections 15064.7). As mentioned, Fresno County has adopted a VMT threshold of 87 percent of the County-wide average VMT (i.e., new development projects must generate operational VMT that is 13 percent below the County average VMT).

To provide guidance for implementing SB 743, the Governor’s Office of Planning and Research (OPR) (now referred to as the Governor’s Office of Land Use and Climate Innovation) issued a Technical Advisory in 2018 (Technical Advisory). To address transportation impacts from small projects, the Technical Advisory recommends the application of “screening thresholds” to identify when a project would be expected result in a less-than-significant transportation impact without conducting a detailed study. The Technical Advisory states that, in general, projects that generate fewer than 110 trips per day may be assumed to cause a less-than-significant transportation impact (OPR 2018, p. 12). This same screening threshold is included in Fresno County General Plan Policy TR-A.25, which provides: “projects that would generate or attract more than 110 daily vehicle trips shall be

evaluated for a transportation VMT impact on an individual basis.” Regarding land use plans, the Technical Advisory further recommends that “agencies should analyze VMT outcomes of land use plans across the full area over which the plan may substantively affect travel patterns, including beyond the boundary of the plan or the jurisdiction’s geography.” (OPR 2018, p. 18.) It further provides that a land use plan may have a significant impact on transportation if proposed new uses would in the aggregate exceed the respective thresholds. (*Ibid.*)

According to Fresno COG’s Regional Guidelines, this recommendation regarding land use plans contained in the Technical Advisory “refers to a to a threshold of exceeding 13 percent below the existing regional average, for residential and office uses and no net gain for retail land uses.” In other words, the threshold of significance for land use plans is 87 percent of the countywide average rate of VMT. Under the Regional Guidelines, the recommended methodology for conducting VMT assessments for land use plans is to compare the existing VMT per capita and/or VMT per employee for the region with the expected horizon year VMT per capita and/or VMT per employee for the land use plan of the jurisdiction.” Fresno County, in the PEIR associated with its 2024 General Plan, used the thresholds recommended by the Regional Guidelines and interpreted them as follows:

- a) Generate VMT per capita that exceeds 87 percent of the Countywide average rate of VMT per capita; or
- b) Generate VMT per employee that exceeds 87 percent of the Countywide average rate of VMT per employee.

Because all VMT associated with implementation of the proposed VCIP would be due to workforce trips, the above threshold regarding per employee VMT is used to evaluate operational VMT in this analysis. This threshold is 22.4 VMT per employee, which is already established for the Plan Area and was applied by Fresno County in the PEIR it prepared for the 2024 Fresno County General Plan (Fresno County 2023c). Using this threshold is therefore consistent with the Technical Advisory, the Regional Guidelines, and the Fresno County General Plan.

It is important to note that the Regional Guidelines provided further refinement of screening thresholds contained in OPR’s technical advisory. In a detailed analysis that correlated VMT with a common GHG threshold of 3,000 MTCO_{2e}/yr, the Regional Guidelines established a higher screening threshold of 500 daily trips as the level below which projects may be presumed to create a less-than-significant impact (Fresno COG 2021).

Regarding potential VMT related to construction, both the CEQA Guidelines and the Technical Advisory are focused on a project’s operational contribution to VMT, and do not provide specific guidance for determining construction impacts. However, CEQA Guidelines section 15064.3(b)(3) states: “For many projects, a qualitative analysis of construction traffic may be appropriate.” The Technical Advisory further provides: “Generally, qualitative analysis should only be conducted when methods do not exist for undertaking a quantitative analysis.” (OPR 2018, p. 7, footnote 12.) To date, Fresno County has not provided guidance on specific models or methods to estimate VMT or corresponding thresholds of significance for construction traffic. In other counties which have established analytical procedures for determining project VMT impacts, such as San Diego County, quantitative VMT analysis for construction traffic is not required. Therefore, the following analysis provides a qualitative discussion of construction VMT. This approach is consistent with the Regional Guidelines, which provide: “If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project’s vehicle miles traveled qualitatively. . . . For many projects, a qualitative analysis of construction traffic may be appropriate.”

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Construction and Decommissioning

The overall construction VCIP energy and infrastructure projects would be expected to occur over a 10-year period. The construction of each typical 250 MW solar/BESS project would be completed in one year or less. During the peak years of VCIP construction (2029-2033), approximately 6,000 construction workers would commute to and from the work sites each day. It is expected that at least 25 percent of workers would voluntarily carpool which is consistent with observations at similar utility-scale solar projects in the region. Thus, the construction of VCIP projects would generate 4,500 commute round trips each day with an average round trip length of 95 miles. On this basis, it is estimated that the average daily VMT generated by all worker trips during the peak years of VCIP project construction (2029-33) would be approximately 427,500 miles per day (i.e., 4,500 round trips X 95 miles).¹

It is assumed that decommissioning VMT would be similar but would likely be substantially less given the lower intensity of activity involved due to generally less equipment use and fewer haul trips. In comparison, the average VMT for Fresno County in 2019 (the most recent year for which VMT data is available) was 16,267,198 miles per day (Fresno County 2023b, TIS Appendix). Thus, the daily VMT generated during peak construction years of the VCIP energy and infrastructure projects would be equivalent to about 2.9 percent of average daily VMT in Fresno County in 2019. Individual VCIP projects would generate substantially less construction VMT. For example, the typical 250 MW solar/BESS project would generate approximately 34,200 VMT, or 0.2 percent of the countywide total. These temporary increases in VMT would occur only during the one-year construction period for each individual VCIP project. (It is noted that a substantial portion of the estimated construction VMT would occur on roadways outside Fresno County, since some workers would be drawn from surrounding counties.) While there is not an available model to demonstrate whether this construction-related VMT would exceed the Fresno County's significance threshold, construction activities associated with the VCIP would temporarily increase VMT in the Plan Area compared to existing conditions. However, temporary construction traffic in rural areas cannot be measured against employee or per capita VMT thresholds which are designed specifically to apply to operational traffic from permanent land use projects in urban areas. It is noted that a substantial reduction in worker trips would be required to reduce VCIP construction traffic volumes to levels where County LOS standards would be met. The Traffic Study determined that worker commute trips would need to be reduced from 4,500 daily trips to 3,550 daily trips to maintain acceptable LOS on area roadways, which is the trip reduction required in MM TR-1. The total trip reduction from an unmitigated trip generation of 4,500 daily trips (including 1,500 workers who are carpooling) to a 950 trip reduction in trip generation, with mitigation, represents a reduction of 21 percent and an equivalent reduction in VMT. Therefore, it is qualitatively noted for informational purposes only, that the mitigation measures for construction traffic identified in this PEIR would result in a 21 percent reduction in daily construction worker trips compared to unmitigated construction traffic generation by the VCIP.

Construction-related VMT would end after the 10-year buildout period, and then temporarily resume during the future decommissioning period (i.e., upon completion of each project's 35-year operating life). As discussed under Impact TR-1 above, the roadways that would be affected by VCIP project construction traffic would mostly continue to operate within their design capacities (as indicated by the applicable LOS standards), although trip reduction measures (as identified in MM TR-1) would be required to maintain acceptable traffic flow during the peak periods. It is estimated that the required trip reduction measures in MM TR-1 would result in a 21 percent reduction in overall construction and decommissioning traffic VMT from potential VCIP projects. The short-term

¹ Annual VMT reflects total miles traveled by construction workers. It is anticipated that construction workers would primarily be drawn from the surrounding communities and would have an average roundtrip commute of about 95 miles (see Chapter 2. *Project Description*).

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greenhouse gas emissions from VCIP project construction and decommissioning would be relatively small when viewed against the substantial GHG emissions avoided by operations of completed VCIP facilities, which would greatly offset emissions from a fossil-fueled generating plant of equivalent capacity. This would result in a substantial net benefit in terms of GHG emissions over the long term, which is a key objective of SB 743 (see Section 4.8. *Greenhouse Gas Emissions*). Each VCIP project would be required to substantially reduce construction VMT through trip reduction measures. With the implementation of MM TR-1, the construction of each VCIP project would result in a *less than significant impact* regarding conflict with CEQA Guidelines section 15064.3, subdivision (b).

Operations

As discussed under Impact TR-1 above, traffic generated during operation of potential VCIP projects would be very light. A small number of permanent staff would be stationed at each solar and BESS facility, and contractors would occasionally visit the facilities to perform maintenance activities such as panel washing. Operational trips associated with the gen-tie lines, collection substations, and connecting transmission lines would consist of inspection, maintenance, and repair trips which would occur as needed and would generate negligible traffic. On average, it is estimated that the typical 250 MW solar/BESS facility would generate an average of 15 daily round trips (i.e., 30 trip-ends or trips) by the workers on any given day, for an average daily VMT of 1,425 miles (based on average one-way commute trips of 47.5 miles), or 5.7 miles per MW. On a VCIP plan-wide basis, it is estimated that this operational traffic would generate an average daily VMT of about 119,700 miles, based VCIP buildout of 21,000 MW.

For purposes of evaluating plan-wide VMT impacts, both the Technical Advisory and Fresno COG's Regional Guidelines state: "A general plan, area plan, or community plan may have a significant impact on transportation if proposed new residential, office or retail land uses would in aggregate exceed the respective thresholds recommended above" (Fresno COG 2021). In the case of Fresno County, the applicable threshold is exceeded if a project would exceed 13 percent below the existing regional average for residential and office uses, and no net gain for retail land uses. Since the VCIP is an infrastructure plan to guide implementation of the facilities proposed by the District, and is not a land use plan by a local land use agency, it is not clear if the Technical Advisory and Fresno COG's Regional Guidelines apply to the proposed VCIP.

At the plan-wide level, the estimated 468,095 daily VMT would exceed the County's 500 VMT screening criteria for analysis of VMT impacts for individual projects (there is no screening criteria for land use plans). As noted above, the average daily round-trip commute (i.e., VMT) by operational staff at VCIP facilities would be 95 miles, which reflects the remote locations of the VCIP facilities relative to population centers in the region where most workers would reside. This exceeds the County's VMT significance threshold of 22.4 VMT per employee. This threshold reflects a relatively low one-way work trip of 11.2 miles, which illustrates the fact that the threshold is intended to apply to urban areas which is consistent with the purpose of SB 743 to limit urban sprawl by shortening urban work trips through infill development. This threshold is not intended to apply to rural contexts which by definition consist of large areas where trips to work are unavoidably much longer than urban work trips, and because these trips bear no relation to urban sprawl. This is recognized in the Technical Advisory, which states: "In rural areas of non-MPO counties (i.e., areas not near established or incorporated cities or towns), fewer options may be available for reducing VMT, and significance thresholds may be best determined on a case-by-case basis" (OPR 2018). Considering that VCIP projects would be required to reduce their construction and decommissioning traffic generation by 21 percent under MM TR-1, and given that the VCIP renewable energy generation would substantially contribute to the state's greenhouse gas reduction goals, VCIP implementation would thus significantly advance the underlying purpose of SB 743. Therefore, with the implementation of MM TR-1 in

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conjunction with each VCIP project, the plan-wide implementation of the VCIP would result in a *less than significant impact* regarding conflict with CEQA Guidelines section 15064.3, subdivision (b).

On an individual project basis, the 30 trips (one-way) generated by each potential project would be substantially below the screening threshold of 110 trips (one way) per day for individual projects recommended by both the Technical Advisory and Fresno County General Plan Policy TR-A.25, and far below the 500 trip screening threshold set forth in the Regional Guidelines. As such, at the project level, this volume of daily trips (i.e., 30 trips) is “presumed to have a less-than-significant transportation impact” and therefore will not require an evaluation of “VMT impact on an individual basis” (Fresno County 2024b). The low VMT generated by these employees during VCIP project operations would have a negligible effect on transportation. Therefore, the operation of the individual VCIP solar/BESS facilities would not conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). In addition, given the widely dispersed nature of the VCIP solar/BESS facilities throughout the Plan Area, the overall effect of operational traffic on service levels at full VCIP buildout would also be negligible, as discussed under Impact TR-1.

In summary, the generation of construction VMT during VCIP buildout and decommissioning would end after a period of years and would not represent a permanent increase in VMT. In any event, the traffic mitigations identified in MM TR-1 would result in a 21 percent reduction in construction VMT. Traffic generated by operation of VCIP facilities would be very light and daily trip generation would be well below the applicable screening threshold for individual projects set forth in Fresno County General Plan policy and state guidance. At the plan-wide level, VCIP implementation would substantially contribute to the state’s greenhouse gas reduction goals, and would thus significantly advance the underlying purpose of SB 743. In summary, with the implementation of MM TR-1, during construction and decommissioning of each potential VCIP project, the impact of the VCIP implementation regarding potential conflict with CEQA Guidelines section 15064.3, subdivision (b) would be *less than significant with mitigation*.

Mitigation Measures: Implement MM TR-1.

Impact TR-3. Substantially Increase Transportation Hazards

Implementation of the VCIP Energy Resource and Infrastructure Plans would potentially result in traffic hazards during project construction and decommissioning; however, traffic hazards would be reduced to less-than-significant through specified traffic safety measures to be applied at the project level. (*Less-than-Significant Impact with Mitigation*)

The VCIP energy and infrastructure projects would include driveway entrances on the adjacent state highways and County roads. The new entrances would result in turning movements in and out of the project sites which would increase the potential for interaction with traffic along these highways and roads. However, the potential project entrances would be designed in accordance with the *Fresno County Improvement Standards*, and would be subject to prior design review and approval by the Fresno County Public Works Department (Fresno Co. 1966). Project egress would be controlled by stop signs. Sightlines would generally be very good in all directions given the flat terrain, absence of visual obstructions, and linear alignment of most of the affected highways and roads. Access

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to the gen-tie lines and internal transmission lines would be provided by the paved roadways and extensive system of farm roads throughout the Plan Area.

The volume of traffic generated by the potential VCIP projects would be greatest during the construction and decommissioning phases. This would include regular deliveries of materials and equipment by large trucks. Slow moving trucks could result in temporary congestion near the project entrances, and could pose a safety concern due to abrupt changes in the speed of traffic flow, or due to slow turning movements across on-coming lanes of traffic. Delivery truck traffic could also interact with the slow-moving farm equipment and vehicles utilizing the roadway. This is a potentially significant traffic safety impact.

The construction of gen-tie lines and connecting transmission lines would also involve instances where transmission lines would cross over public roadways. These activities would generally occur at night to allow temporary road closures during the stringing of conductors across the roadways. These operations would be subject to detailed safety plans including temporary H-frames and netting for protection from falling conductors, and would require permits from Caltrans and/or Fresno County as applicable.

During operation of VCIP facilities, traffic generation would be very light. Considering also that ambient traffic volumes on Plan Area roads are generally very low, the potential for traffic hazards during VCIP facility operation would be low. Thus, potential traffic safety impacts during VCIP facility operations would be less than significant.

An additional safety issue is potential deterioration of surface pavement on area roadways due to heavy-duty trucks providing deliveries of construction equipment and materials to the VCIP project sites. Depending on the volume of delivery truck traffic on a given roadway segment, roadway deterioration can result in shortening the period of acceptable pavement condition relative to its design life, thus requiring greater and more frequent repair and maintenance measures than planned and budgeted for. Fresno County requires projects to mitigate pavement damage from temporary construction truck delivery volumes that would result in greater wear and tear than would be expected from normal traffic volumes (Fresno Co. 2012). However, the extent of wear and tear on access roads, and which roads would be subject to pavement damage from a specific project can only be evaluated at the time of detailed engineering project design when the types of trucks and delivery volumes, and the truck routes to be followed, are determined. The County would require that a Traffic Index (TI) analysis be conducted for each individual VCIP project, based on Caltrans' methodology, which is a measure of the deteriorating effects of truck traffic on asphalt concrete pavement (Caltrans 2025a). The analysis compares pre-project road conditions with predicted post-construction conditions to determine the degree of pavement damage, if any, would occur on affected roadway segments. The results of the TI analysis are used to determine the specific pavement repairs to be made by the project proponent, or to determine a fair share portion of the cost of mitigation attributable to the project.

In summary, the traffic hazards resulting from VCIP project construction and decommissioning would potentially be significant, while the traffic hazard from VCIP facility operations would be less than significant. Implementation of the Mitigation Measures TR-2 and TR-3 below would reduce any potential impacts related to safety hazards due to construction and decommissioning traffic associated with the VCIP projects to *less than significant*.

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Mitigation Measure TR-2: Traffic Safety Measures for VCIP Project Construction and Decommissioning

To reduce potential construction traffic safety impacts during the construction and decommissioning phases of VCIP implementation, the following traffic safety measures are identified for application at the project stage, with applicability depending on the individual circumstances of each project, as follows:

- 1) Prior to the issuance of construction or building permits and the issuance decommissioning authorizations, the project proponent shall submit a Traffic Safety Plan to the approving agency and Caltrans District 6 for review and approval. The Traffic Safety Plan shall be prepared in accordance with both the Caltrans Manual on Uniform Traffic Control Devices and Caltrans Construction Manual and must include, but not be limited to, the following elements:
 - a. Prepare Temporary Traffic Control (TTC) plan that addresses traffic safety and control through the work zone, including during temporary lane closures (if needed) to accommodate materials delivery, transmission line stringing activities, or any other utility connections;
 - b. Identify the timing of deliveries of heavy equipment and building materials;
 - c. Designate construction staff to be assigned as flaggers to direct traffic into and/or through temporary traffic control zones, as needed;
 - d. Place temporary signage, lighting, and traffic control devices, including, but not limited to, appropriate signage along access routes to indicate the presence of heavy vehicles and construction traffic;
 - e. Ensure access for emergency vehicles to the project site;
 - f. Maintain access to adjacent properties;
 - g. Identify approved truck routes for the transport of all construction equipment and materials, and avoid truck travel through residential areas (e.g., Cantua Creek), to the extent feasible;
 - h. Obtain all necessary encroachment permits from Fresno County and Caltrans for the work within the road rights-of-way;
 - i. Obtain permits from Fresno County and Caltrans for oversized/overweight vehicles which may require California Highway Patrol or a pilot car escort.

Due to the proposed VCIP's conceptual nature, the precise details and timing of construction and decommissioning activities that may require the traffic safety measures set forth in Mitigation Measure TR-2 cannot be predicted. The details of the traffic safety mitigations would be determined by the County Public Works Department when any activities that require mitigation are scheduled and the applicant's construction contractor requests consultation regarding such activities.

Significance after Mitigation: Less than Significant Impact.

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Mitigation Measure TR-3: Road Condition Survey and Repair Requirements.

To address any pavement damage resulting from heavy truck traffic during construction and decommissioning of potential VCIP projects, the following mitigation measures are identified for application at the project stage, with applicability depending on the individual circumstances of each project, as follows:

- 1) **Road Condition Survey.** Prior to the issuance of permits and authorizations for project construction and decommissioning, respectively, a preconstruction report and a pre-decommissioning report shall be prepared by a qualified registered engineer, retained by the project proponent, to include a detailed analysis of road suitability to accommodate haul trucks during project construction and decommissioning. The reports shall be submitted to the Fresno County Department of Public Works and Planning. Prior to initiating the preconstruction or pre-decommissioning report, the proposed methodology shall be presented to the Fresno County Department of Public Works and Planning for review and approval. Based on the findings of the reports, the project may be required to make improvements to existing roads prior to construction and/or decommissioning.
- 2) **Road Repair Agreement.** Prior to the issuance of permits and authorizations for project construction and decommissioning, the project proponent shall enter into a secured agreement with Fresno County to ensure that the project contributes its fair-share portion toward repairs of County roads and/or State highways that are demonstrably damaged by the project. The extent of roadway impacts shall be determined in consultation with Fresno County and/or Caltrans District 6, as applicable. Subject to the discretion of the County of Fresno and Caltrans District 6, roadway impacts shall be mitigated either by construction of an overlay, reconstruction of the pavement section, or by participating financially for the costs of the mitigation to the extent of the project's fair share.

Significance after Mitigation: Less than Significant Impact.

Impact TR-4. Result in Inadequate Emergency Access

Implementation of the VCIP Energy Resource and Infrastructure Plans would not result in inadequate emergency access. (*Less-than-Significant Impact*)

As shown in Figure 4.16-1, the Plan Area is served by a comprehensive regional roadway network that includes several state highways and multiple county roads. These roadways are generally lightly traveled and in good physical condition, and thus provide efficient routes for emergency transport and evacuation. This roadway network would facilitate accessibility to VCIP energy and infrastructure facilities in the event of an emergency. These routes would remain open throughout construction, and emergency access would not be limited or impeded by construction traffic. Travel speeds on some area roadways may be reduced during peak worker commute periods and by slow moving delivery trucks. However, any reduced travel speeds would not significantly affect emergency access or related services (see Section 4.15. *Public Services*). Deliveries would be spaced out during each day and would not block passage by emergency vehicles. In addition, traffic safety plans required under MM TR-2 would ensure that construction traffic is managed to minimize obstructions, congestion, and safety hazards on public roadways.

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To provide adequate emergency access within VCIP facilities, each solar/BESS facility would include system of internal driveways designed and constructed to accommodate emergency vehicles and equipment. All project plans would be reviewed by the appropriate County departments for conformance with all applicable fire-safety code and ordinance requirements for emergency access. Therefore, implementation of the VCIP Energy Resource and Infrastructure Plans would result in *a less-than-significant impact* with respect to adequacy of emergency access.

Mitigation Measures: No mitigation is required.

4.15.3.2. TRANSMISSION CORRIDORS OUTSIDE THE VCIP

The transmission corridors for delivery of solar generation from potential VCIP projects to urban electricity markets in northern and southern California have been identified at a conceptual level in this PEIR to allow a general discussion of environmental impacts associated with transmission line development for informational purposes. These transmission delivery corridors extend far beyond the District's boundaries and are not part of the proposed VCIP. Planning and approval of these outside transmission lines are under the jurisdiction of the state and federal energy regulatory agencies, and public utilities. The following discussion provides an overview of potential impacts of the outside transmission lines with respect to transportation.

Construction of the outside transmission lines would generally involve the following steps: clearing of right-of-way and staging areas; installation of tower footings and structures; and conductor stringing. The construction activities would proceed in a stepwise fashion from one end of each corridor to the other, and as such the duration of construction at any given location would be relatively brief. The construction of transmission lines would involve about 50 construction workers and 50 pieces of construction equipment. The work would be organized in several crews who would perform specialized tasks (site clearing, tower construction, conductor stringing) at successive tower sites as the work proceeds along the corridor. The transmission corridors would be located in rural areas and each work site would be accessed primarily by rural roads. The construction workers would commute from their homes in the region or from temporary lodging near the worksites. The workers would generate about 100 trips per day, with the temporary travel routes varying almost daily. The construction equipment would be moved short distances every few days as the work progressed.

Given the low volumes and dispersed nature of the worker trip generation, and the low ambient traffic volumes on the affected rural roads, the potential that roadway and intersection LOS in any of the affected counties would temporarily fall below acceptable levels due to the construction of the outside transmission lines is negligible.

During transmission line construction, there is potential for traffic hazards at the locations where transmission lines would cross over public roads or highways, or due to potential conflicts with slow moving construction vehicles. To minimize safety hazards during transmission line construction, it is anticipated that the approving agencies would require the preparation and implementation of traffic safety plans, like that identified in MM TR-2, which is a standard requirement for transmission line construction.

Transmission line construction would require road closures at locations where conductors would span public roadways. However, these closures would occur at night and would be completed relatively quickly. Given the

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rural and remote areas traversed by the outside transmission corridors, and the fact that roadway closures would not be needed, the impact to emergency vehicle access would be negligible.

During the operation of the outside transmission lines, minimal traffic would be generated by occasional visits by utility workers in the performance of inspection and maintenance tasks.

In summary, the construction and operation of the outside transmission lines would generate very low volumes of traffic and would not result in LOS dropping below acceptable levels. Potential traffic hazards posed by construction would be minimized through implementation of traffic safety plans, as required. Emergency vehicles would not be impeded by transmission construction or operation, and evacuation routes would not be affected. Therefore, the construction and operation of outside transmission lines is unlikely to result in adverse transportation impacts.

4.15.3.3. CUMULATIVE IMPACTS

As discussed under Impact TR-1, implementation of the VCIP Energy Resource and Infrastructure Plans would not conflict with a program, plan, ordinance or policy addressing the circulation system. Regarding applicable level of service policies, the construction of VCIP projects would result in generation of high traffic volumes by commuting workers, but LOS on affected roadways and intersections would be maintained at acceptable levels through trip reduction measures required under MM TR-1. Within the Plan Area and vicinity, there are 12 approved and pending projects that may generate construction and operational traffic affecting the same roadways as the VCIP projects. Nine of these are solar and/or BESS projects, two are pistachio plants, and one is a regional substation (Manning). It is anticipated that all these projects would be constructed before 2029 when the first substantial VCIP energy and infrastructure projects would be planned to begin construction. By that time, these completed projects are expected to generate relatively low volumes of operational traffic which would be dispersed over a wide area. These operational trips from the other cumulative projects would result in a negligible increase in traffic volumes on roadways utilized by VCIP project construction traffic, and would not result in a cumulative degradation of LOS below acceptable levels on any affected roadways or intersection (assuming implementation of trip reduction measures identified in MM TR-1). Since there would not be a substantial contribution to cumulative traffic from other projects, the *cumulative impact to LOS targets would be less than significant*, and the *project contribution would not be considerable*.

Regarding Vehicle Miles Traveled, the traffic generated by VCIP construction projects would be temporary and would be substantially reduced by MM TR-1, which would require a 21 percent reduction in trip generation to maintain acceptable LOS on affected roadways and intersections, which would result in an equivalent reduction in VMT. In the absence of established thresholds for solar projects, particularly those located in remote rural areas, this represents a substantial reduction in VMT from baseline levels. The operational traffic generated by individual VCIP solar/BESS projects would be very low and would be under applicable screening thresholds for potential VMT impacts at the project level. At the plan-wide level, the remoteness of VCIP solar/BESS projects relative to population centers results in 95 daily VMT for operational staffs which exceeds the county's VMT significance threshold of 22.4 VMT per employee, although this threshold is intended to apply to urban areas and not far-flung rural development. Additionally, the renewable energy projects under the proposed VCIP would substantially advance the underlying intent of SB 743 in reducing greenhouse gas emissions. The approved and pending projects in the VCIP Plan Area consist predominantly of solar/BESS projects in Fresno and Kings counties (i.e., 98% of all cumulative projects by acreage). Most of these cumulative projects have already been completed, and the

remaining projects would likely be completed prior to construction of any VCIP projects. The construction traffic generated by these projects would also be temporary, and the operational traffic from these projects would be negligible.

The remaining cumulative projects consist of pistachio plants, small commercial projects, a regional substation in unincorporated Fresno County, and three residential subdivisions and two industrial facilities in the City of Lemoore. These projects would be subject to Fresno County’s requirement to reduce VMT by 13 percent below the countywide average, and the City of Lemoore’s requirement to reduce VMT by 13 percent below the regional average, which would be implemented in both jurisdictions through VMT mitigation programs, to the extent they are established by the time these projects are approved. Thus, all cumulative projects would either fall below screening thresholds for VMT or would be subject to VMT mitigation requirements, as applicable. Therefore, the cumulative VMT impact would be *less than significant* and the project *contribution would not be considerable*.

With respect to traffic safety hazards, there is a potential for creation of hazardous driving conditions during the construction periods for the cumulative projects, including the VCIP projects. Large slow-moving trucks could result in temporary congestion near the project entrances, and could pose a safety concern due to abrupt changes in the speed of traffic flow, or due to slow turning movements across on-coming lanes of traffic. However, as discussed previously, the other large solar projects planned in the vicinity of VCIP projects (i.e., Luna Valley, Sonrisa, Heartland) are all anticipated to be completed before the construction of VCIP solar/BESS projects in their vicinity is planned to commence in 2029, and there are no other substantial foreseeable projects that would be constructed in the area during the VCIP buildout period. Additionally, to minimize potential traffic safety hazards, all the cumulative projects, including the potential VCIP projects, would implement traffic control measures similar to those identified in MM TR-2 above. These measures would reduce the potential traffic safety impacts at each cumulative project site to less than significant. Further, the entrances for each cumulative project would be far apart, so that even in the unlikely event that their construction schedules overlap, the areas subject to traffic safety measures would not overlap. Therefore, potential traffic safety hazards resulting from collective truck traffic at the cumulative projects would be *less than cumulatively significant*, and the project *contribution would not be considerable*.

4.15.4. References – Transportation

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