Appendix O Traffic Impact Assessment

DRAFT

Transportation Impact Analysis

International Park of Commerce – Phase 2

Prepared for:
Prologis and San Joaquin County

September 2024

WC20-3703.03

FEHR PEERS

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Executive Summary

Study Purpose

This study summarizes the transportation analysis prepared for the International Park of Commerce (IPC) Specific Plan Phase 2 (the "Project"). The scope of the CEQA transportation analysis for the International Park of Commerce (IPC) Specific Plan Phase 2 is based on the need to answer California Environmental Quality Act (CEQA) Appendix G checklist questions for Transportation Impacts. It focuses on the project's impacts to the transportation system based on vehicle miles traveled (VMT). It also evaluates impacts to bicycle/pedestrian facilities, transit facilities and services, emergency vehicle access, and roadway safety-related impacts including nonstandard design features. The VMT assessment evaluates total project VMT and home-based work VMT per employee. Automobile, medium truck, and heavy truck VMT are calculated and reported for use in the project's environmental documentation. The study's assessment of VMT is consistent with the methodology and thresholds established in the *Final Report for the San Joaquin County VMT Thresholds Study* (GHD, 2020).

In addition to responding to CEQA Appendix G checklist questions, an informational non-CEQA level of service intersection congestion analysis has also been prepared. Automobile delay and level of service (LOS) is no longer used as a performance measure to determine the transportation impacts of proposed land developments and transportation projects under CEQA. Despite this, LOS results are presented here to understand how the surrounding roadway system may be affected by the project, to determine needed infrastructure upgrades, and to evaluate consistency with applicable General Plan policies related to LOS. The scope of work for the congestion analysis was developed considering the *San Joaquin County Traffic Impact Study Guidelines,* November 2008.

Project Description

The project is envisioned to be developed with industrial warehouse, distribution, and manufacturing buildings totaling approximately 5.36 million square feet and will include interior site circulation and the required vehicle, truck, and trailer spaces. The Specific Plan Area zoning designation of General Industrial includes permitted uses to include warehouse, distribution, manufacturing and assembly, storage, industrial flex, and distribution related uses. Development flexibility is created through a wide range of permitted and conditionally permitted uses, which anticipate the current and future development market, and development standards which guide the design of buildings to meet the requirements of users with a commitment to sustainability and quality architecture. **Figure 1** shows the regional setting and location of the International Park of Commerce Specific Plan Phase 2 Project. **Figure 2** shows the project site plan. The project would be accessed via several roadways including:

- Schulte Road
- Promontory Parkway
- Pavilion Parkway

Study Overview

This study analyzes project effects at 22 study intersections located on various roadway facilities under the jurisdiction of San Joaquin County, City of Tracy, and Caltrans.

The following scenarios are analyzed in this report:

- Existing Conditions
- Existing Conditions plus Project
- Existing plus Approved Projects
- Existing plus Approved Projects plus Project
- Cumulative (Year 2042) – with Eleventh Street / I-205 Interchange and Pavilion Parkway Overcrossing
- Cumulative plus Project Conditions with Eleventh Street / I-205 Interchange and Pavilion Parkway Overcrossing
- Cumulative (Year 2042) – without Eleventh Street / I-205 Interchange and Pavilion Parkway Overcrossing

Intersections in all jurisdictions are analyzed for weekday AM and PM peak hour conditions, though it is noted that City of Tracy has General Plan policies pertaining to LOS goals both within the Urban Service Boundary and beyond it. In contrast, Caltrans and San Joaquin County are transitioning away from LOS thresholds to identify degraded conditions, instead focusing on more holistic transportation reviews that consider all modes of travel, excess queuing, and other transportation policies (e.g., VMT reduction).

Project Travel Characteristics

The project is estimated to generate about 14,698 daily weekday trips, 1,721 AM peak hour trips, and 1,790 PM peak hour trips using ITE trip generation rates. These estimates include both truck and passenger vehicles. **Table 1** presents the anticipated total project trip generation.

Table 1: Weekday Project Vehicular Trip Generation

AM Peak			PM Peak			Daily Trips
In	Out	Total	In	Out	Total	
1,398	323	1,721	702	1,088	1,790	14,698

Source: Fehr & Peers, 2024; *Trip Generation Manual*, 11th Edition (Institute of Transportation Engineers, 2021).

Vehicle Miles Traveled

The project's effects on vehicle miles traveled (VMT) were assessed using the methodology, thresholds, and criteria described in the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (OPR, 2018) and *Final Report for the San Joaquin County VMT Thresholds Study* (GHD, 2020). The amount of VMT anticipated to be generated by the project on a per capita basis and as a whole was assessed using the San Joaquin Council of Governments (SJCOG) travel demand model, and other off-model data as appropriate.

The project's weekday VMT per employee is forecast to be 41.5, which is above the unincorporated Countywide average of 38.6 and the relevant threshold of 85 percent of the unincorporated Countywide average of 32.8 This is a significant adverse environmental impact per the County's thresholds.

Multimodal Transportation Assessment

As part of the project, improvements will be made to the existing bicycle and pedestrian network throughout the Specific Plan area. The Specific Plan aims to encourage bicycle and pedestrian usage by including Class I bicycle paths on all major circulation streets within the project area, including West Schulte Road, Pavilion Parkway, and Promontory Parkway. Sidewalks would be provided along project frontages and connect to the surrounding public pedestrian network. In addition, large canopy trees will shade the sidewalks and improvements to pedestrian crossings at signalized intersections will be made.

No transit routes currently operate within the Specific Plan area. However, the Specific Plan roadway system will accommodate the implementation of future public transportation service by providing bus pull outs and shelters for passengers offering shade and protection during winter weather. Such improvements shall be implemented through the site approval process required for each phase.

Significant adverse impacts related to the pedestrian, bicycle, or transit networks were not identified.

Intersection Levels of Service

While intersection levels of service are no longer considered relevant within CEQA, they have been assessed in this study to provide information to local decision-makers and help to size the area's roadway network to accommodate future traffic levels. The analysis makes use of the current level of service guidelines of an intersection's governing jurisdiction—San Joaquin County, the City of Tracy, or Caltrans (generally LOS D). The project would result in an operational deficiency at a study intersection if it would degrade operations from an acceptable to unacceptable LOS or increase average delay at an intersection that is operating at an unacceptable LOS.

In the Existing plus Project Conditions scenario, project buildout trips were assigned to study roadways and intersections on the existing roadway system. The project is anticipated to result in deficient intersection operations at the following intersections in this scenario, two of which are currently operating at a deficient level:

- Mountain House Parkway/I-205 WB Ramps
- International Parkway/Schulte Road
- International Parkway/I-580 NB Ramps
- International Parkway/I-580 SB Ramps
- Lammers Road/Byron Road
- Lammers Road/Schulte Road

The Existing with Approved Projects with Project scenario includes traffic associated with all currently approved but not yet developed or occupied development projects as well as approved but not yet constructed roadway network improvements. Lists of approved projects were obtained from the City of Tracy and San Joaquin County. The most impactful approved project would likely be the unconstructed portions of the Cordes Ranch/IPC Phase 1 Project which neighbors the IPC Phase 2 Specific Plan site. Nine intersections would operate at a deficient LOS considered in this scenario. The project would worsen already deficient operations at five intersections and cause an additional four intersections to degrade to deficient conditions.

Cumulative (Year 2042) conditions with and without development of the proposed project were evaluated using the refined City of Tracy travel demand model. Two cumulative scenarios were assessed—Cumulative (Year 2042) – with a new Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing, and Cumulative (Year 2042) – without a new Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing. The intent of the second analysis is to model the localized traffic effects if these improvements are not funded and implemented.

In the Cumulative with Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing Plus Project scenario 15 intersections would operate deficiently. The project would worsen already deficient operations at 13 intersections and cause two additional intersections to degrade to deficient conditions.

In the Cumulative without Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing Plus Project scenario 17 intersections would operate deficiently. The project would worsen already deficient operations at 15 intersections and cause two additional intersections to degrade to deficient conditions.

Recommended Improvements

For locations where deficient operations were identified due to levels of service not meeting local standards, improvement recommendations were developed and assessed. Intersection operational modifications and physical changes were identified for each of the study's four "with project" scenarios. In the Existing plus Project scenario, the following improvements were developed which would allow all study intersections to function at appropriate service levels.

- International Parkway/Schulte Road: Add overlap signal for northbound right-turn movement.
- International Parkway/I-580 NB Ramps: Implement the programmed interchange improvement at the International Parkway/I-580 interchange.

- International Parkway/I-580 SB Ramps: Implement the programmed interchange improvement at the International Parkway/I-580 interchange.
- Lammers Road/Byron Road: Construct eastbound right-turn pocket.
- Lammers Road/Schulte Road: Construct southbound right-turn pocket.

Each of the physical improvements described above would be accompanied by traffic signal timing modifications and optimization to increase intersection capacity. The results of the intersection operations analysis indicate that the remaining study intersections would continue to operate at LOS D or better with the addition of project trips under existing conditions.

In the other three "with project" analysis scenarios that reflect project buildout traffic, improvement measures have been developed for study intersections that are expected to operate deficiently.

Impacts and Mitigations Summary

The project's potential environmental impacts related to transportation were evaluated based on the methodology and criteria of San Joaquin County and the CEQA Appendix G checklist. Potential impacts related to VMT, bicycle facilities, pedestrian facilities, transit facilities, hazards, emergency vehicle access, and cumulative conditions were assessed. For potentially significant adverse impacts, mitigation measures were developed and proposed.

The project was found to have a significant adverse impact relative to VMT. Project VMT was assessed using the SJCOG travel demand model. The project's weekday daily baseline VMT per employee was found to be 41.5, which is approximately 26.5 percent above the relevant threshold of 32.8 (85 percent of the unincorporated countywide average). A mitigation measure was developed which includes the preparation and implementation of a robust Transportation Demand Management (TDM) Plan; however, the mitigation measure was not found to fully mitigate the project's VMT impact. Therefore, the impact associated with VMT is **significant and unavoidable**.

Significant adverse project impacts were also identified relative to transit facilities, emergency vehicle access, and cumulative conditions (VMT). Mitigation measures to reduce the project's impacts related to transit facilities and emergency vehicle access to less than significant levels were identified. The project's cumulative impacts related to VMT were identified as significant and unavoidable. The project was found to have less than significant impact related to bicycle facilities, pedestrian facilities, and hazards.

1. Introduction

This chapter describes the study purpose, provides an overview of the proposed project, presents the study area, analysis scenarios, and methods, and lists applicable transportation-related policies that may pertain to the proposed project.

Report Purpose

This study summarizes the transportation analysis prepared for the International Park of Commerce (IPC) Specific Plan Phase 2 (the "Project"). The scope of the CEQA transportation analysis for the International Park of Commerce (IPC) Specific Plan Phase 2 is based on the need to answer CEQA Appendix G checklist questions for Transportation Impacts. It focuses on the project's impacts to the transportation system based on vehicle miles traveled (VMT). It also evaluates impacts to bicycle/pedestrian facilities, transit facilities and services, emergency vehicle access, and roadway safety-related impacts including nonstandard design features. The VMT assessment evaluates total project VMT and home-based work VMT per employee. Automobile, medium truck, and heavy truck VMT are calculated and reported for use in the project's environmental documentation. The study's assessment of VMT is consistent with the methodology and thresholds established in the *Final Report for the San Joaquin County VMT Thresholds Study* (GHD, 2020).

In addition to responding to CEQA Appendix G checklist questions, an informational non-CEQA level of service intersection congestion analysis has also been prepared. Automobile delay and level of service (LOS) is no longer used as a performance measure to determine the transportation impacts of proposed land developments and transportation projects under CEQA. Despite this, LOS results are presented here to understand how the surrounding roadway system may be affected by the project, to determine needed infrastructure upgrades, and to evaluate consistency with applicable General Plan policies related to LOS. The scope of work for the congestion analysis was developed considering the *San Joaquin County Traffic Impact Study Guidelines,* November 2008.

Project Overview

The International Park of Commerce Specific Plan Phase 2 Project ("Project") would be situated on approximately 277.6 acres northeast of Interstate 580 (I-580) and south of Interstate 205 (I-205) in unincorporated San Joaquin County. **Figure 1** shows the location of the project and study intersections; **Figure 2** illustrates the project site plan.

Figure 1: Project Site Vicinity and Study Locations

Figure 2: Project Site Plan

Applicable Transportation-Related Policies

This section presents applicable federal, state, regional, and local regulatory requirements applicable to the project.

Pursuant to Senate Bill (SB) 743, Public Resources Code (PRC) Section 21099, and California Code of Regulations (CCR) Section 15064.3, VMT has replaced congestion as the metric for determining transportation impacts under CEQA. Section 15064.3 of the CEQA Guidelines states that VMT is the "most appropriate measure of transportation impacts" and mandates analysis of VMT impacts effective July 1, 2020. A project's effect on automobile delay is no longer a consideration when identifying a significant impact; therefore, the impact of the project on delay-based traffic operations is not addressed in this EIR.

Federal

Depending on the types of off-site improvements needed, policies of the Federal Highway Administration (FHWA) may be applicable. This is particularly the case for interstate freeways such as I-5 and I-580.

State

The State of California has enacted several pieces of legislation that outline the state's commitment to encourage land use and transportation planning decisions and investments that reduce VMT and contribute to reductions in greenhouse gas (GHG) emissions in line with state climate goals. Other recent state policies pertain to roadway safety.

Senate Bill 743

SB 743, passed in 2013, required the California Governor's Office of Planning and Research (OPR) to develop new guidelines that address transportation metrics under CEQA. Enacted as part of SB 743 (2013), PRC section 21099, subdivision (b)(1), directed the OPR to prepare, develop, and transmit to the Secretary of the Natural Resources Agency for certification and adoption proposed CEQA Guidelines addressing "criteria for determining the significance of transportation impacts of projects within transit priority areas. Those criteria shall promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. In developing the criteria, [OPR] shall recommend potential metrics to measure transportation impacts that may include, but are not limited to, vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated."

Subdivision (b)(2) of PRC section 21099 further provides that "[u]pon certification of the guidelines by the Secretary of the Natural Resources Agency pursuant to this section, automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to [CEQA], except in locations specifically identified in the guidelines, if any."

OPR published its proposal for the comprehensive updates to the CEQA Guidelines in November 2017 which included proposed updates related to analyzing transportation impacts pursuant to SB 743. The

updated CEQA Guidelines were adopted on December 28, 2018; and according to the new CEQA Guidelines Section 15064.3, VMT replaced congestion as the metric for determining transportation impacts. The guidelines state that "lead agencies may elect to be governed by these provisions of this section immediately. Beginning July 1, 2020, the provisions of this section shall apply statewide."

To provide guidance to agencies implementing the new CEQA requirements, OPR published the *Technical Advisory on Evaluating Transportation Impacts in CEQA* ("Technical Advisory") in December 2018.

Technical Advisory on Evaluating Transportation Impacts in CEQA

The *Technical Advisory* provides advice and recommendations to CEQA lead agencies on how to implement SB 743 changes. This includes technical recommendations regarding the assessment of VMT, thresholds of significance, VMT mitigation measures, and screening thresholds for certain land use projects. Lead agencies may consider and use these recommendations at their discretion and with the provision of substantial evidence to support alternative approaches. The *Technical Advisory* describes considerations agencies may use in selecting VMT metrics, calculation methodologies, and significance thresholds. The *Technical Advisory* does not mandate the use of specific metrics, methodologies, or significance thresholds, because agencies have discretion to select those that are appropriate for the local land use and transportation context.

The *Technical Advisory* identifies "screening thresholds" to quickly identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study. The *Technical Advisory* suggests that projects meeting one or more of the following criteria should be expected to have a less-than-significant impact on VMT.

- Small projects – projects consistent with Sustainable Communities Strategies (SCS) and local general plans that generate or attract fewer than 110 trips per day.
- Projects near major transit stops – certain projects (residential, retail, office, or a mix of these uses) proposed within one half-mile of an existing major transit stop or an existing stop along a high-quality transit corridor.
- Affordable residential development – a project consisting of a high percentage of affordable housing may be a basis to find a less-than-significant impact on VMT.
- Local-serving retail – local-serving retail development tends to shorten trips and reduce VMT. The *Technical Advisory* encourages lead agencies to decide when a project will likely be local-serving, but generally acknowledges that retail development including stores larger than 50,000 square feet might be considered regional-serving. The *Technical Advisory* suggests lead agencies analyze whether regional-serving retail would increase or decrease VMT (i.e., not presume a less-than-significant outcome).
- Projects in low VMT areas – residential and office projects that incorporate similar features (i.e., density, mix of uses, transit accessibility) as existing development in areas with low VMT will tend to exhibit similarly low VMT.

The *Technical Advisory* also identifies recommended numeric VMT thresholds for office and retail projects.

- Office projects that would generate vehicle travel exceeding 15 percent below (i.e., greater than 85 percent of) existing regional VMT per employee may indicate a significant transportation impact.
- Retail projects (and other non-residential/non-office projects) that result in a net increase in total VMT may indicate a significant transportation impact.

The *Technical Advisory* offers guidance regarding the above project types because "they tend to have the greatest influence on VMT" (OPR 2018: 17). The document recommends that local agencies develop their own specific thresholds for other land use types, while keeping Public Resource Code 21099 in mind.

The *Technical Advisory* also provides guidance on impacts to transit. Specifically, the *Technical Advisory* suggests that lead agencies generally should not treat the addition of new transit users as an adverse impact. As an example, the *Technical Advisory* suggests that "an infill development may add riders to transit systems and the additional boarding and alighting may slow transit vehicles, but it also adds destinations, improving proximity and accessibility. Such development also improves regional vehicle flow by adding less vehicle travel onto the regional network." (OPR 2018).

Regarding trucks, the *Technical Advisory* points out that CEQA Section 15064 refers to automobiles when referencing VMT. The document then offers a definition that automobiles consist of on-road passenger vehicles, including cars and light duty trucks. It further states that "Heavy-duty truck VMT could be included for modeling convenience and ease of calculation." No further guidance is provided relating to how to address travel impacts of trucks, though Appendix 1 (Considerations about which VMT to Count) and Appendix 2 (Induced Travel: Mechanisms, Research, and Additional Assessment Approaches) repeatedly refer to automobiles (and do not mention trucks) when describing these topics.

Caltrans is responsible for planning, designing, constructing, operating, and maintaining the State Highway System (SHS). Any improvements or modifications to the SHS within the study area would need to be approved by Caltrans. The following Caltrans planning documents emphasize the State of California's focus on transportation infrastructure that supports mobility choice through multimodal options, smart growth, and efficient development:

- Smart Mobility Framework (Caltrans 2010),
- Complete Streets Implementation Action Plan (Caltrans 2010),
- California Transportation Plan 2040 (Caltrans 2016),
- Strategic Management Plan 2015-2020 – 2019 Update (Caltrans 2019),
- State Highway System Management Plan (Caltrans 2019),
- VMT-Focused Transportation Impact Study Guide (Caltrans 2020), and
- *Caltrans 2020–2024 Strategic Plan* (Caltrans 2021).

Among these various reports, the following three documents are particularly applicable to the project.

VMT-Focused Transportation Impact Study Guide (2020)

On May 20, 2020, Caltrans adopted the *VMT-Focused Transportation Impact Study Guide (TISG)*. The TISG provides guidance on how Caltrans will review land use projects, with a focus on VMT analysis and supporting state land use goals, state planning priorities, and GHG emission reduction goals; as well as identifying land use projects' possible transportation impacts to the State Highway System and potential non-capacity increasing mitigation measures. The *TISG* indicates that Caltrans intends to "transition away from requesting LOS or other vehicle operations analyses of land use projects," instead placing the focus on VMT and safety.

The TISG emphasizes that VMT analysis is Caltrans' primary review focus and references the OPR *Technical Advisory* as a basis for the guidance in the TISG. Notably, the TISG recommends the use of the recommended thresholds in the *Technical Advisory* for land use projects. The TISG also references the *Technical Advisory* for screening thresholds that would identify projects and areas presumed to have a less-than-significant transportation impact. Caltrans supports streamlining for projects that meet these screening thresholds because they help achieve VMT reduction and mode shift goals.

Interim Land Development and Intergovernmental Review Safety Review Practitioners Guidance (2020)

In December 2020, Caltrans released the *Interim Land Development and Intergovernmental Review Safety Review Practitioners Guidance (202b)*. The purpose of the guidance is to provide instructions for conducting safety impact analysis for proposed land use projects and plans in compliance with CEQA. The guidance is focused on potential safety impacts affecting the State Highway System and sets expectations for Caltrans staff and lead agencies about what information and factors to consider in safety impact analysis. Caltrans recommends lead agencies use a similar approach, specifically local roadway safety plans (LRSPs) and systemic safety analysis reports (SSARs), as a model for safety analysis of the local transportation network. This guidance supports implementation of SB 743 and complements the current TISG. The new guidance has two main parts:

- Reactive: a review by Caltrans of its safety monitoring program data to see what known safety issues may be affected by the project; and
- Systemic: a review of LRSPs, SSARs, and other available plans and assessments to see what safety patterns and improvements may be applicable to Caltrans facilities in the study area.

Caltrans 2020–2024 Strategic Plan

The *Caltrans 2020–2024 Strategic Plan* lists "Safety First" as its top goal through 2024 (Caltrans 2021). The 2020 Caltrans Annual Accomplishments Report describes the *Four Pillars of Traffic Safety*, which will help guide the department toward the ultimate goal of zero deaths or severe injuries on California roads by 2050. The Four Pillars of Traffic Study include the following:

- Double Down on What Works
- Accelerate Advanced Technology

- Lead Safety Culture Change
- Integrate Equity

Regional

San Joaquin Council of Governments (SJCOG) 2022 RTP/SCS

The San Joaquin Council of Governments (SJCOG) is comprised of the County of San Joaquin and the cities of Stockton, Lodi, Manteca, Tracy, Ripon, Escalon, and Lathrop. SJCOG serves as the regional transportation planning agency and as a technical and informational resource for these jurisdictions.

In August 2022, the SJCOG Board voted to adopt the *2022 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) ("2022 RTP/SCS)*. This document serves as the region's long-range transportation plan and provides guidance for decisions about transportation spending priorities. It includes a list of planned and funded transportation improvements utilized in this report. Chapter 3 includes several policies and strategies that may be relevant to this study including the following:

Policy: Enhance the Environment for Existing and Future Generations and Conserve Energy

- Strategy No. 4: Improve air quality by reducing transportation-related emissions.

Policy: Maximize Mobility and Accessibility

- Strategy No. 5: Optimize the public transportation system to provide efficient and convenient access for users of all income levels.
- Strategy No. 7: Provide transportation improvements to facilitate nonmotorized travel, including incorporation of complete streets elements as appropriate.
- Strategy No. 8: Improve freight access to key strategic economic centers.
- Strategy No. 9: Promote safe and efficient strategies to improve the movement of goods by air, water, rail, and roadway.

Policy: Increase Safety and Security

- Strategy No. 10: Facilitate projects that reduce the number and severity of traffic incidents.
- Strategy No. 11: Support local and state efforts for transportation network resiliency, reliability, and climate adaptation.

Policy: Preserve the Efficiency of the Existing Transportation System

- Strategy No. 12: Prioritize projects that make more efficient use of the existing road network.
- Strategy No. 13: Support the continued maintenance and preservation of the existing transportation system.
- Strategy No. 14: Promote electric power, alternative fuels and autonomous technologies for freight and agriculture.

- Strategy No. 15: Manage the adoption of electric vehicles and private connected and autonomous vehicles.
- Strategy No. 16: Promote electric power, alternative fuels, and autonomous technologies for public transit.

Policy: Support Economic Vitality

- Strategy No. 17: Support transportation improvements that improve economic competitiveness, revitalize commercial corridors and strategic economic centers, and enhance travel and tourism opportunities.

Policy: Promote Interagency Coordination and Public Participation for Transportation Decision-Making and Planning Efforts

- Strategy No. 21: Provide equitable access to transportation planning.

Policy: Maximize Cost-Effectiveness

- Strategy No. 25: Support the use of state and federal grants to supplement local funding and pursue discretionary grant funding opportunities from outside the region.
- Strategy No. 27: Maximize funding of existing transportation options.

Policy: Improve the Quality of Life for Residents

- Strategy No. 30: Enhance public health through active transportation projects.

Chapter 5 of the *2022 RTP/SCS* establishes a VMT per capita (i.e., resident) target for the SJCOG region. However, metrics related to VMT per employee were not provided. Appendix M1 indicates that SJCOG region employees had an average travel distance to work of 11.86 miles.

Per the *2022 RTP/SCS Draft Programmatic Environmental Impact Report* (Rincon Consultants, 2022), a baseline VMT per capita of 23.2 miles is reported. That value is derived by dividing the region's daily VMT (17 million) by its 732,000 residents. The region's VMT estimate was derived from the SJCOG travel demand model and per page 4.14-20, considers automobile and light duty truck travel (heavy trucks are excluded).

San Joaquin County Regional Congestion Management Program (RCMP)

The Federal Congestion Management Process requires metropolitan planning organizations such as SJCOG to develop and implement a Regional Congestion Management Program (RCMP) to fulfill its requirements as a metropolitan area with a population exceeding 200,000. In addition, there is an opportunity to integrate performance-based planning and programming (PBPP) performance metrics and provide information of interest to our jurisdictions. Its focus is on reducing single occupant vehicle (SOV) travel while minimizing the need for increasing roadway capacity. It also provides additional resources for the development and deployment of new congestion management technologies.

The *SJCOG Regional Congestion Management Program 2022 Monitoring Report* (Kimley Horn, 2023) measures regional congestion and multimodal performance measures through ongoing systematic monitoring. Performance measures serve to gauge system performance and track progress toward achieving congestion management objectives. However, the CMP no longer includes roadway or intersection operations targets such as LOS C. Instead, it focuses on multimodal performance metrics for bicycling, walking, and transit as well as VMT, travel reliability, pavement management, and safety.

San Joaquin Valley Air Pollution Control District (SJVAPD) Rule 9410

San Joaquin Valley Air Pollution Control District (SJVAPD) Rule 9410 requires major employers (with 100 or more employees) in the region to develop and implement TDM strategies. Adopted in 2009, the Employer Trip Reduction Implementation Plan (eTRIP) encourages employees to reduce single-occupancy vehicle trips, thus reducing pollutant emissions associated with work commutes. These strategies can include employee shuttles, staggered work hours, telecommuting options, transit subsidies, carpool/vanpool programs, and many other strategies. More information on this program can be found at 4681 thru 4802 (valleyair.org).

Measure K Sales Tax

Measure K is a ½ cent sales tax that helps fund transportation improvements in San Joaquin County. The program is operated by SJCOG. Measure K was originally approved by voters in 1990. It was renewed by a 2006 vote, which will extend the sales tax through 2041. Major improvements target San Joaquin County freeways, streets and roads, public transit networks, pedestrian, and bicycle friendly programs. According to the Measure K interactive project map,[1] a passenger rail station (to support expansion of ACE service) is to be built near the Linne Road/Tracy Boulevard intersection. In addition, the program includes the construction of four lane extension of Schulte Road between west of Corral Hollow Road and Lammers Road, including median and sidewalk.

SJCOG Regional Bicycle, Pedestrian, and Safe Routes to School Master Plan (2012)

The *SJCOG Regional Bicycle, Pedestrian, and Safe Routes to School Master Plan* (Alta, 2012) was developed to identify bikeways and pedestrian projects of regional significance to prioritize funding and facilitate project implementation. The plan's vision is to the meet the needs for people of all ages and abilities in San Joaquin County by improving and enhancing the existing bicycle and pedestrian network. Its goals are to increase bicycle and pedestrian travel throughout the county, improve bicycle, pedestrian, and school access safety, and increase education and awareness of bicycling and walking in San Joaquin County. Its objectives are to increase the mileage of bicycle and pedestrian facilities in San Joaquin County by 20 percent between 2012 and 2022 and increase the competitiveness of local jurisdictions for grant funding for bicycle, pedestrian, and Safe Routes to School improvements.

[1] Interactive project Map | San Joaquin Council of Governments, CA (sjcog.org)

San Joaquin County Regional Transportation Impact Fee

For the purpose of creating a countywide, multi-jurisdictional multimodal capital improvement funding program for San Joaquin County, SJCOG, as the agency responsible for regional planning and programming, established the Regional Transportation Impact Fee (RTIF) program in October 2005. In April 2006, SJCOG entered into the RTIF Operating Agreement with its eight member jurisdictions to administer the RTIF program. The first full fiscal year of the RTIF program was 2006-2007. A revised Operating Agreement was adopted April 2015 and fully executed during the 2015-2016 fiscal-year.

The RTIF program's objective is to generate funding from new development projects that impact the Regional Transportation Network and integrate these funds with federal, state, and other local funding to make transportation improvements identified in the RTIF Program. Since its inception, approximately $51 million of RTIF funding has been generated. After all expenditures and fund allocations, the cumulative net retained RTIF funds is approximately $35.1 million as of fiscal-year 2015-2016.

Every five years, per Section 66001(d)(1) of the Mitigation Fee Act (MFA), impact fee programs are required to undergo a comprehensive review to ensure the nexus analysis and fee schedule reflect current assumptions for growth projections, analysis tools, transportation system impacts, project costs, and anticipated funding sources. The RTIF program completed its 10th year of implementation as of June 30, 2016. The RTIF capital project list contained on RTD's website does not show any planned, fully funded transportation improvements within the study area. Partial funding is included for the following projects within the study area:

- I-205 Widening/HOV (I-580 to Eleventh Street)
- I-205 at Lammers/Eleventh Street
- I-205 at Grant Line Road
- I-205 at Mountain House Parkway
- I-580 at International Parkway/Patterson Pass Road
- Eleventh Street (Tracy City Limits to I-5)

San Joaquin Regional Transit District Short-Range Transit Plan

The *San Joaquin Regional Transit District Short-Range Transit Plan (SRTP)* for fiscal years (FY) 2018-2019 to 2027-2028 serves as a guide for the development of the goals, objectives, and policies for future transit services in the Stockton Metropolitan Area (SMA) and unincorporated San Joaquin County over the next 10 years. Official RTD boundaries do not include the incorporated San Joaquin County cities of Lodi, Lathrop, Manteca, Escalon, Ripon, and Tracy. The SRTP proposes strategies that will guide transit development while containing costs within available revenues. Stakeholder discussions helped shape the design and strategies contained in the SRTP, which aims to accomplish the following:

- Develop strategic services and capital programs to provide transit services in a manner that balances the diverse needs of the traveling public, meets the community's transit needs, and competes effectively with single-occupant vehicles.

- Maintain sound financial management by implementing system efficiency standards and diversifying RTD's revenue streams.
- Coordinate with local agencies at all levels to ensure transit competes as a viable mode and that all transportation system investments are strategic and socially and economically equitable.
- Help reduce traffic congestion and air pollution in the San Joaquin Valley in order to meet regional air quality goals.

The SRTP outlines over $20 million in operating improvements and an additional $200 million in capital improvements to benefit San Joaquin County and its citizens. It identifies various service objectives to "provide the highest level of transit service to the greatest number of people within RTD's financial means." That includes enhanced service within the Stockton area, improved mobility for persons with disabilities, improved quality of intercity commuter service, and coordination with local jurisdictions and developers to incorporate transit services and amenities within land use planning to establish transit-oriented development. The SRTP does not explicitly cite any planned transit system improvements within the project vicinity.

Local

Goals, policies, and objectives from various planning documents published by San Joaquin County are relevant to the project. After this information is presented, planning documents and potentially applicable policies of the City of Tracy are presented given its proximity to the project site.

San Joaquin County General Plan (2016)

The Community Design component of Chapter 3.1 (Community Development Element) of the *San Joaquin County General Plan* (2016) includes the following goals and policies:

- Goal LU-3: Preserve and enhance the character and scale of San Joaquin County's communities and rural areas, including their architectural heritage and historic character.
- Policy LU-3.4 [Walkable and Bikeable Streets]: The County shall encourage new streets within Urban and Rural Communities and City Fringe Areas to be designed and constructed to not only accommodate auto and truck traffic, but also serve as comfortable pedestrian and cyclist environments and reflect public health goals by encouraging physical activity. These should include, but not be limited to:
    - Street tree planting adjacent to curbs and between the street and sidewalk to provide a buffer between pedestrians and automobiles, where appropriate,
    - Minimize curb cuts along streets, sidewalks on both sides of streets, and
    - Bike lanes and walking paths, where feasible on collectors and arterials, and traffic calming devices such as roundabouts, bulb-outs at intersections, and traffic tables. (RDR/PSP).
- Goal LU-5: Promote the development of regional and locally serving commercial uses in communities and other areas of the unincorporated County.

- Policy LU-5.5 [Bicycle Access and Parking]: The County shall require new commercial development within Urban Communities and City Fringe areas to include bicycle access and secure parking racks. (RDR).

The Transportation and Mobility component of Chapter 3.2 (Public Facilities and Services Element) of the *San Joaquin County General Plan* (2016) includes the following goals and policies:

- Goal TM-1: To maintain a comprehensive and coordinated multimodal transportation system that enhances the mobility of people, improves the environment, and is safe, efficient, and cost effective.
- Policy TM-1.1 [Transportation System Safety]: The County shall manage the transportation system to ensure safe operating conditions. (PSP).
- Policy TM-1.3 [Multimodal System]: The County shall encourage, where appropriate, development of an integrated multimodal transportation system that offers attractive choices among modes including pedestrian ways, public transportation, roadways, bikeways, rail, waterways, and aviation, and reduces air pollution and greenhouse gas emissions. (RDR/PSP).
- Policy TM-1.4 [Regional Transportation Facilities]: The County shall work with Caltrans, SJCOG, and the cities in the County where appropriate to plan, develop, and maintain regional transportation facilities, and to identify existing and future transportation corridors that should be linked across jurisdictional boundaries so that sufficient right-of-way may be preserved. (PSP/IGC).
- Policy TM-1.5 [Regional Transportation Plan Development]; The County shall provide input into the development of the San Joaquin Council of Governments Regional Transportation Plan as appropriate to ensure County roads and facilities are adequately addressed. (PSP/IGC).
- Policy TM-1.6 [Automobile Dependency Alternatives]: The County shall support public and private efforts where appropriate to provide alternative choices to single occupant driving. (IGC/JP).
- Policy TM-1.7 [Energy Conservation]: The County shall develop the transportation system to reduce vehicle miles traveled, conserve energy resources, minimize air pollution, and reduce greenhouse gas emissions. (RDR/PSP).
- Policy TM-1.8 [Multimodal Congestion Management]: The County shall support, as appropriate, SJCOG efforts to monitor multimodal corridors within the County as part of the Regional Congestion Management Program. The County shall also encourage the consideration of additional multimodal corridors, where appropriate, as part of future updates to the Regional Congestion Management Program. (PSP/IGC).
- Policy TM-1.10 [Eliminate Gaps]: The County shall strive to eliminate "gaps" in roadways, bikeways, and pedestrian networks by planning and seeking funding to construct grade-separated crossings of rail lines, canals, creeks, and other barriers to improve connectivity and encourage construction of new bikeways and pedestrian-ways in and between existing communities where appropriate. (RDR/PSP/FB).
- Policy TM-1.11 [Transportation System Improvements]: The County shall require new development to provide transportation system improvements necessary to serve the development. (RDR/FB).

- Policy TM-1.12 [Transportation and Land Use]: The County shall ensure that transportation system investments and improvements support existing and future sustainable land use patterns.
- Policy TM-1.13 [Smart Growth]: The County shall encourage "smart growth" and sustainable planning principles where appropriate, including the development of high-density and commercial development near inter-modal transit facilities. (RDR/PSP).
- Policy TM-1.16 [Transportation Capacity and Development]: The County shall schedule transportation improvements to coordinate with land use development and transportation demand. Transportation investments and service capacity shall be planned to correspond to the development and travel demand identified by plans of local communities. (RDR/PSP).
- Policy TM-1.18 [Capital Improvement Program]: The County shall maintain a Transportation Capital Improvement Program consistent and commensurate with developer fees established as part of the County's AB 1600 compliant traffic impact mitigation fee program. (PSP/FB).
- Goal TM-2: To improve County roadways to include pedestrian, bicycle, and transit facilities to better serve people who use these active transportation modes.
- Policy TM-2.1 [Urban Complete Streets]: The County shall require new streets within Urban Communities to be designed and constructed to serve all users, including pedestrians, bicyclists, and transit passengers, of all ages and abilities. This includes:
    - Creating multimodal street connections in order to establish a comprehensive, integrated, and connected transportation network for all modes of travel;
    - Minimizing curb cuts along non-local streets to improve safety and capacity;
    - Planting street trees adjacent to curbs and between the street and sidewalk to provide a buffer between pedestrians and vehicular traffic, where appropriate;
    - Constructing sidewalks and bike lanes on both sides of streets, where feasible;
    - Including parking options to provide a buffer between pedestrians and vehicular traffic, where appropriate;
    - Coordinating with local jurisdictions and SJCOG to ensure multimodal connections are established and maintained between jurisdictions; and
    - Incorporating traffic-calming devices such as roundabouts, bulb-outs at intersections, and traffic tables into the transportation system where appropriate to improve safety and encourage travel by active transportation modes. (RDR/PSP)
- Policy TM-2.2 [Reconstructed Urban Complete Streets]: The County may require, based on community support and financial feasibility, reconstructed streets in Urban Communities to accommodate pedestrians and bicyclists, except where pedestrian or bicycle facility improvements are not feasible or determined to be cost prohibitive. New and reconstructed streets in Urban Communities shall be designed to create an environment that provides opportunities for pedestrian and bicycle activity and complementary development and land uses. (RDR/PSP).

- Policy TM-2.3 [Land Use Patterns]: The County shall encourage the development of uses in Urban Communities that support the use of public transit, bicycling, walking, and other alternatives to the automobile. (PSP)
- Policy TM-2.4 [Rural Complete Streets]: The County shall strive to serve all users on rural roadways in the County and shall design and construct rural roadways to serve safely bicyclists, transit passengers, and agricultural machinery operators. This includes:
    - Constructing wide shoulders to provide a safe space for bicyclists, and agricultural machinery vehicles;
    - Removing visual barriers along rural roads, particularly near intersections, to improve the visibility of bicyclists; and
    - Coordinating with local jurisdictions and SJCOG to ensure multimodal connections are established and maintained between jurisdictions. (RDR/PSP)
- Policy TM-2.5 [Reconstructed Rural Complete Streets]: The County may require, based on community support and feasibility and the County's Bicycle Master Plan, reconstructed streets in rural areas to accommodate bicyclists and agricultural machinery, except where facility improvements are determined to be cost prohibitive. (RDR/PSP).
- Policy TM-2.6 [Funding for Complete Streets]: The County shall support efforts to fund transit agencies and improvements for public transit systems, bicycle and pedestrian routes, and other alternative modes of transportation (PSP).
- Policy TM-2.7 [New Development]: The County shall require all new developments to provide their fair share of roadway facilities for alternative transportation modes to reduce automobile demand. (RDR).
- Policy TM-2.8 [Private Complete Streets]: The County shall encourage large private developments (e.g., office parks, apartment complexes, retail centers) to provide internal complete streets that connect to the existing roadway system. (RDR).
- Goal TM-3: Maintain a safe, efficient, and cost-effective roadway system for the movement of people and goods.
- Policy TM-3.2 [Urban Roadways]: The County shall require, where feasible, new development in Urban Communities to construct roadways to County standards and complete streets principles, including curb, gutter, and sidewalks. Bike lanes shall be required, where feasible, for improvements identified in the San Joaquin County Bicycle Master Plan. (RDR).
- TM-3.3 [Onsite Circulation Systems]: The County shall require new development to design on-site circulation systems and parking facilities to minimize backup on County roadways. (RDR).
- TM-3.4 [Roadway Plan Coordination]: The County shall coordinate roadway improvements with regional plans, such as the countywide Regional Transportation Plan and Regional Transportation Improvement Plan Program, the Congestion Management Program, and the Measure K Strategic Plan funding program. (PSP/IGC).
- TM-3.5 [Variations in Roadway Alignment]: The County shall consider variations in the alignment of designated roadways to be in conformity with the General Plan if the alignment does not result

in traffic safety problems or reductions in needed capacity; does not constrain the proper development of contiguous properties, and does not conflict with or preempt other General Plan-specificized uses or facilities; or if the alignment is in conformance with an adopted special purpose plan or specific plan. (RDR/PSP).

- TM-3.6 [Right-of-Way Preservation]: The County shall strive to preserve road rights-of-way necessary to implement the circulation system included in the General Plan using Special Purpose Plans or other means, where appropriate. (PSP).
- TM-3.7 [Frontage Standards]: For developments that are located adjacent to a County roadway, the County shall require access onto County roads. (RDR).
- TM-3.10 [Rural Road Traffic]: The County should monitor the use of rural roads by commuters as bypass routes from gridlocked arterials to gather data for use in any future traffic studies or plans designed to reduce the traffic impact on the operation of agricultural machinery. (PSP/PSR).
- TM-3.11 [Rural Traffic Management Areas]: The County shall mitigate excessive commuter diversion traffic through the development and adoption of rural traffic management plans. Where applicable, the County shall prepare a rural traffic management plan when public concerns are raised about excessive traffic or the County identifies issue areas, County Public Works Director confirms that a defined rural area is experiencing excessive commuter traffic due to diversion, and a survey of an area's property owners, with at least 33 percent responding, shows at least 50 percent are in support of a plan. (PSP).
- VM-3.12 [Development Rights-of-Way]: The County shall require dedication and improvement of necessary on and off-site rights-of-way at the time of new development, in accordance with the County's Functional Classification, Standard Drawings, and Level of Service Standards. (RDR).
- TM-3.13 [HOV Lanes and Ramp Metering]: The County shall coordinate with Caltrans to ensure installation of HOV lanes and ramp metering devices along congested commuter corridors, as identified by SJCOG's Northern San Joaquin Valley Regional Ramp Metering and HOV Master Plan, do not negatively impact County roads. (PSP/IGC).
- TM-3.14 [Reduced Parking Requirements]: The County may reduce automobile parking area requirements for new developments in exchange for owner-supplied amenities or facilities (e.g., transit facilities, secure bicycle storage facilities) or in-lieu fee payments for public transit. (RDR).
- Goal TM-4: To maintain and expand a safe, continuous, and convenient bicycle system and pedestrian network.
- TM-4.1 [Pedestrian and Bicycle Network Continuity]: The County shall strive to eliminate gaps in the rural bicycle network by constructing or designating new bike facilities, where appropriate, and in accordance with the San Joaquin County Bicycle Master Plan.
- TM-4.2 [Speed Management Policies]: The County shall strive to implement current CVC codes for uses as speed management policies that support driving speeds on all streets within Urban and Rural Communities and City Fringe Areas that are safe for pedestrians and bicyclist. (RDR).
- TM-4.1 [Pedestrian and Bicycle Network Continuity]: The County shall strive to eliminate gaps in the rural bicycle network by constructing or designating new bike facilities, where appropriate, and in accordance with the San Joaquin County Bicycle Master Plan.

San Joaquin County VMT Thresholds Study (2020)

The *Final Report for the San Joaquin County VMT Thresholds Study* (GHD, 2020) describes how San Joaquin County will implement Senate Bill 743. The report describes how, in large part, the County is endorsing the majority of the recommendations from the *Technical Advisory*. However, it provides a County-specific VMT analysis for screening and threshold setting for average VMT per capita and employee metrics. This report contains the following conclusions that are applicable to this study:

- Employment Projects (Work-based VMT) – Establish baseline VMT and threshold on a per employee basis. When assessing an office or manufacturing project, the project's VMT is divided by the number of employees expected to occupy the project to determine the VMT per employee of the project. "Work" uses include, but are not limited to, offices, office parks, business parks, industrial, warehousing, processing, and manufacturing where the predominant VMT is employee-based.
- Retail Projects (Net VMT) – Measure total change in VMT within the region's boundary (the difference in total VMT in the area affected with and without the project), and determine the threshold based on net change in total VMT. "Retail" uses or projects appropriate for Net VMT analysis include, but are not limited to, supermarkets, restaurants, gas stations, wineries, agriculture tourism, hotels, and religious facilities. Public and recreational uses such as parks, private schools, hospitals, libraries, and public services may also be assessed in this way, if needed. The predominant VMT for these use types is generated by visitors or patrons, rather than employment.
- Truck VMT: Although heavy-duty truck VMT is generally excluded from the *Technical Advisory*, the County may elect to include an assessment of truck VMT if it is reasonable to assume that the project would result in a significant change in the pattern, frequency, or length of truck trips. Truck VMT would be assessed in terms of net change in total truck VMT. This does not preclude the need to assess VMT per employee. This would mainly apply to projects such as industrial, warehousing, processing, and manufacturing uses.
- Specific Plans: Their analysis may employ the same thresholds described above for individual land use types.
- Transportation Projects: Transportation impacts of a transportation project should be calculated based on the net change in total VMT. If a project would likely lead to a substantial or measurable increase in vehicle travel, the County should conduct an analysis to assess the amount of induced travel.

With regard to methodology, the report states the following:

- The Report recommends using the SJCOG model to calculate and establish Baseline VMT. This model was used to estimate trip-based VMT for the region and for the unincorporated areas of the County. The recently updated model has a base year of 2015 and a forecast year of 2045. The model produces trips by different trip purposes and modes, and outputs VMT throughout the County. To estimate trips associated with Work VMT, only Home-Base-Work (HBW) vehicular trips were selected for evaluation.
- The County has elected to use the Unincorporated Regional Average, as its ability to influence land development decisions is directly correlated to this geographic boundary. Using a single unincorporated County average VMT baseline would provide a consistent and streamlined approach for VMT analysis under CEQA. The Unincorporated Regional Average baseline VMT rate is 19.05 VMT per employee.

With regard to screening and projects presumed to have less than significant impacts, the report states the following:

- The report endorses the *Technical Advisory* definition of screening of Small Projects.
- The report endorses the uses of map-based screening for residential and office projects located in low VMT areas,
- The report endorses the *Technical Advisory* definition related to transit proximity.
- The report endorses the *Technical Advisory* definition retailed to local-serving retail (i.e., 50,000 square feet or less).

With regard to significance thresholds, the report states the following:

- The County has decided to utilize a 15% reduction in baseline VMT per employee as the threshold of significance for work projects.
- The County has decided to utilize a no net increase in total VMT for retail projects.
- 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.

These VMT thresholds are recommended based on the most recent guidance on VMT thresholds from OPR and State of California climate goals. The VMT analysis completed for this study serves as substantial evidence for the validity of the VMT thresholds, and subsequent screening criteria, recommended for the County of San Joaquin. Specifically defining terms and parameters used in the VMT thresholds, such as local-serving retail, ensures that the VMT thresholds remain defensible under CEQA.

This information is used as part of the VMT analysis methodologies and thresholds applied in this study.

San Joaquin County Code of Municipal Ordinances

San Joaquin County has a Transportation Systems Management (TSM) program, the purpose of which is to develop an integrated and cooperative approach between the City and the business community to promote alternative transportation options, reduce traffic congestion, and improve air quality in the San Joaquin County. The TSM program applies to businesses or common work locations (such as office building/complex, commercial/retail center, or industrial building/park) with 50 or more employees. The County's TSM requirements are located in Title 10 of the San Joaquin County Municipal Code.

Typical measures included in a TSM include the provision of bicycle lockers and on-site showering facilities, workplace ride-share programs, and employee education and incentive programs to use alternative transportation.

San Joaquin County Bicycle Master Plan Update (2020)

The Bicycle Master Plan is intended to provide a blueprint for creating a safe, comfortable, and efficient bicycle network and bicycling experience for the County's residents and visitors. The plan presents policies, bicycle infrastructure projects, programs, and action plans to support the improvement and expansion of the County's bicycling network. The Bicycle Master Plan is developed in context of the Public Facilities and Services Element of the County General Plan (GP), which includes goals and policies to develop a balanced transportation system for automobiles, transit, bicycles, and pedestrians.

The 2020 Bicycle Master Plan Update includes recommended modifications to the General Plan Public Facilities and Services Element to reflect recommended changes to policies, programs, and development standards. The overarching bikeway goals of the General Plan, as amended, are listed below:

- Goal TM-4.1: The County shall strive to eliminate gaps in the rural bicycle network by constructing or designating new bike facilities, where appropriate, and in accordance with the San Joaquin County Bicycle Master Plan.
- Goal TM-4.3: The County shall support bicycle safety programs for children and commuters in the County.
- Goal TM-4.6: The County shall encourage bicycle facilities and routes in unincorporated areas to interface with city bicycle routes and provide for inter- and intra-county bicycle circulation.
- Goal TM-4.7: The County shall support developments of the bicycle system to connect residential areas with commercial areas, employment centers, educational facilities, local and regional recreational facilities, and other major attractions.
- Goal TM-4.8: The County shall ensure County roads planned as part of the regional bicycle route network are constructed to have adequate width.

The 2020 Bicycle Plan Update proposes the following bikeways in the study area:

- Class I bicycle path on Corral Hollow Road from Canal at Ponderosa Drive to Ellis Town Drive, Parkside Drive to Midway Drive, and Linne Road to Delta Mendota Canal

- Class I bicycle path on Mountain House Parkway from Byron Road to the West Side Irrigation Canal
- Class II bicycle lane on Valpico Road from Lammers Road to Corral Hollow Road
- Class II bicycle lane on Lammers Road from Schulte Road to Tracy city limits
- Class III bicycle route on Corral Hollow Road from Lammers Road to the Tracy city limits
- Class III bicycle route on Hansen Road from Grant Line Road to Schulte Road

San Joaquin County Bicycle Master Plan Update (2010)

The San Joaquin County Bicycle Master Plan Update provides a blueprint for making bicycling an integral part of daily life in San Joaquin County. It provides for an updated system of bike lanes, bike routes, and bike paths; identifies necessary support facilities such as bicycle parking; and recommends a variety of programs to allow for safe, efficient, and convenient bicycle travel within San Joaquin County and connecting to regional destinations. This Plan was developed by San Joaquin County Public Works Department staff and guided by extensive input from the community.

- Goal 1 [Provide safe and efficient bikeways in San Joaquin County]: Construct bikeways identified in the San Joaquin County Bicycle Master Plan and provide for the maintenance of both existing and new facilities.
- Policy Action 1.1: Prepare and maintain a bikeway plan that identifies existing and future needs, and provide specific recommendations for facilities and programs, including provisions for bicycle use and bikeways in all new developments.
- Policy Action 1.2: Create a bikeway system that is cost-effective to construct and maintain; respects landowners, utilities, and special districts' property rights; and minimizes the potential for conflicts with other types of vehicles and users.
- Policy Action 1.3: Require all bikeways to conform to design standards contained in the California Highway Design Manual, Chapter 1000: Bikeway Planning and Design, unless otherwise established by San Joaquin County.
- Policy Action 1.4: Update local roadway design standards, if necessary, to include sufficient pavement sections and adequate rail height to accommodate bikeway facilities.
- Policy Action 1.5: Consider a proposed route's importance in providing access to regional bikeway facilities when recommending local routes for implementation.
- Policy Action 1.6: Coordinate with agencies such as Caltrans, Alameda County, Amador County, Calaveras County, Sacramento County, Solano County, Stanislaus County, and the cities of Escalon, Lathrop, Lodi, Manteca, Ripon, Stockton, and Tracy regarding the implementation of the proposed system.
- Policy Action 1.7: Provide connections to the proposed system from all existing and future transit facilities, stations, and terminals in San Joaquin County where feasible.
- Goal 2 [Ensure that the transportation network within future development areas is accessible by bicycles and connects to routes identified in the proposed system]: Include bikeway facilities in all

appropriate future development projects to facilitate on-site circulation for bicycle travel, on-site bicycle parking, and connections to the proposed system.

- Policy Action 2.1: Require future development to construct bikeways as a condition of development along appropriate roadways included in the Plan's proposed system.
- Policy Action 2.2: Condition future, large-scale development to provide support facilities such as bicycle racks, personal lockers, and showers at appropriate locations such as parks, major recreational destinations, park-and-ride facilities, employment centers, schools, and commercial centers.
- Policy Action 2.3: Consider landowner concerns when planning and acquiring off-street bikeway easements.
- Policy Action 2.4: Meet the requirements of the Americans with Disabilities Act when constructing facilities contained in the proposed system, where applicable.
- Policy Action 2.5: Whenever feasible, require future development to incorporate parks and schools as important destinations for bicyclists when designing circulation plans for subdivisions and other developments.
- Goal 3 [Improve the safety of bicyclists and promote bicycling skills through education and encouragement programs]: Develop and implement education and encouragement programs aimed at youth, adult cyclists, and motorists. Increase public awareness of bicycling, available resources, and facilities.
- Policy Action 3.1: Incorporate standard signing and traffic controls, as established by Caltrans, to ensure a high level of safety for the bicyclist and motorist.
- Policy Action 3.2: Use the California Statewide Integrated Traffic Records System (SWITRS) accident data to monitor bicycle-related accident levels annually and target a 10 percent reduction on per capita basis over the next 20 years.
- Policy Action 3.3: Work with local law enforcement agencies and local school districts to cooperatively develop a comprehensive bicycle education program that is taught to all school children in San Joaquin County.
- Policy Action 3.4: Develop adult and youth bicycle education, encouragement, and safety programs.
- Policy Action 3.5: Publicize the health benefits of bicycling.
- Goal 4 [Avoid adverse environmental impacts associated with the implementation of the proposed bicycle system.]: Mitigate potentially significant impacts to a level of less than significant.
- Policy Action 4.1: Conduct environmental review of individual projects as they advance to the implementation stage of development.
- Policy Action 4.2: Avoid areas of sensitive habitats for plants and wildlife when constructing facilities contained in the proposed system.
- Policy Action 4.3: Solicit and consider community input in the design and location of bikeway facilities.

- Policy Action 4.4: Consider the effect on other transportation facilities such as travel lane widths, turn lanes, and on-street parking when planning and designing on-street bikeways.
- Goal 5 [Ensure the timely funding and construction of the bicycle improvements described in this Plan]: The County should work to fund construction of the bicycle improvements in this plan and maximize the amount of local, state, and federal funding for bikeway facilities that can be received by agencies in San Joaquin County.
- Policy Action 5.1: Maintain current information regarding regional, state, and federal funding programs for bikeway facilities along specific funding requirements and deadlines.
- Policy Action 5.2: Prepare joint grant applications with other local and regional agencies for state and federal funds, as appropriate.

San Joaquin Council of Governments Regional Bicycle, Pedestrian, and Safe Routes to School Master Plan (2012)

This Bicycle, Pedestrian and Safe Routes to School (BP~SRtS) Plan provides recommended bicycle and pedestrian projects for San Joaquin County and its seven cities. The San Joaquin Council of Governments (SJCOG) is a Joint Powers Authority comprised of the County of San Joaquin and the cities of Stockton, Lodi, Manteca, Tracy, Ripon, Escalon, and Lathrop. SJCOG serves as the regional transportation planning agency and a technical and informational resource for these jurisdictions.

SJCOG, in coordination with member agencies, developed this Plan to identify bikeways and pedestrian projects of regional significance in order to prioritize funding and facilitate project implementation. This plan also helps set Measure K funding priorities. In November 2006, the voters of San Joaquin County approved the use of Measure K funds to expand and enhance pedestrian and bicycle safety and facilities within San Joaquin County. The goal of the Bike, Pedestrian, and Safe Routes to Schools Program Guidelines is to ensure that Measure K funds (Competitive / Non-Competitive) are expeditiously utilized to deliver projects that are valued throughout the region.

One of the important uses of the Plan is to support a local / regional project's value when applying and competing for other local, state, and federal funding opportunities. To clarify, the only compelling condition when a member agency would need to individually adopt the Regional BP~SRtS Master Plan is when the Plan is solely used to support an application during the State Bicycle Transportation Account (BTA) competitive process. Jurisdictions also have the option of using locally approved bike plans (certified by SJCOG as compliant) when pursuing BTA funding. For any other grant processes, simply referencing that the project is also supported in the regional master Plan will provide additional support for the project to be considered for funding.

The Plan also provides each of the region's jurisdictions with the standard elements of the Bicycle Transportation Account Compliant Plan, availing them of important external funding sources for nonmotorized transportation planning.

1.1.1. Vision: The following statement articulates the vision for this Plan: The BP~SRtS Plan builds upon current successes to meet the mobility needs for people of all ages and abilities in San Joaquin County by

improving and enhancing the existing bicycle and pedestrian network. Improving and enhancing the bicycle and pedestrian network is realized through better connectivity, accessibility, and safety measures between specific origins and destinations referred to as Community Activity Centers (CACs).

1.1.2. Goals: The following goals are components of the vision that the recommendations in this plan can help to achieve: increase bicycle and pedestrian mobility throughout San Joaquin County; improve bicycle, pedestrian, and school access safety; increase the number of commute, recreation, and utilitarian bicycle and pedestrian trips; increase education and awareness of bicycling and walking in San Joaquin County; and address congestion near schools and on the regional Congestion Management Program network.

1.1.3. Objectives: Objectives are specific, measurable steps that work toward achieving the Plan's goals and help to evaluate the progress of implementation such as increasing the mileage of bicycle and pedestrian facilities in San Joaquin County by 10 percent in the next five years and 20 percent in the next ten years and increasing the competitiveness of local jurisdictions for grant funding for bicycle, pedestrian, and Safe Routes to School improvements.

San Joaquin Regional Transit District Short-Range Transit Plan 2018–2028

The San Joaquin Regional Transit District Short-Range Transit Plan (SRTP) for fiscal years (FY) 2018-2019 to 2027-2028 serves as a guide for the development of the goals, objectives, and policies for future transit services in the Stockton Metropolitan Area (SMA) and unincorporated San Joaquin County over the next 10 years. The plan is developed within the context of the regional planning process, which will implement San Joaquin Council of Governments' (SJCOG) Regional Transportation Plan & Sustainable Communities Strategy (RTP/SCS) (2018) and the Regional Transit Systems Plan (2017).

Developing and updating the SRTP is a critical step in the ongoing efforts of the RTD Board of Directors and staff in fulfilling its mission and vision. The SRTP proposes strategies that will guide transit development while containing costs within available revenues. Stakeholder discussions helped shape the design and strategies contained in the SRTP, which aims to accomplish the following:

- Develop strategic services and capital programs to provide transit services in a manner that balances the diverse needs of the traveling public, meets the community's transit needs, and competes effectively with single-occupant vehicles.
- Maintain sound financial management by implementing system efficiency standards and diversifying RTD's revenue streams.
- Coordinate with local agencies at all levels to ensure transit competes as a viable mode and that all transportation system investments are strategic and socially and economically equitable.
- Help reduce traffic congestion and air pollution in the San Joaquin Valley in order to meet regional air quality goals.

This SRTP outlines RTD's plans based upon three main goals:

- Accessibility: Through a robust network of new BRT and Mobility Management services, RTD can meet the needs of today's residents who do not have access to service and improve access with higher frequency service to current users. Improved accessibility also increases the attractiveness of RTD's services, encouraging new riders to experience public transit.
- Sustainability: By being a public transit provider, RTD reduces millions of tons of carbon emissions every year. In addition, many millions more tons of carbon emissions will be reduced through RTD's plan for renewable energy through solar power and electric and hybrid transit vehicles.
- Resilience: RTD continues to focus on improving existing transit services and the quality of life of its passengers. Through new technology and partnerships, RTD's passengers will be more informed and be better able to use RTD's services. Using new technology, RTD will improve on-time performance, be better equipped to manage disruptions and delays, and continue to provide outstanding customer service.

In all, this SRTP outlines over $20 million in operating improvements and an additional $200 million in capital improvements to benefit San Joaquin County and its citizens.

Accordingly, the SRTP identifies the following service objectives to provide the highest level of transit service to the greatest number of people within RTD's financial means:

- Enhancing Stockton Metropolitan Area (SMA) service by:
    - Improving BRT service and connectivity.
    - Restoring midday, off-peak, and night frequency.
    - Restoring weekend service frequency.
- Improving the quality of mobility services while reducing the cost of providing Americans with Disabilities Act (ADA) Dial-A-Ride (DAR) service.
- Improving the quality of Intercity and Commuter service.
    - Improving Hopper deviated fixed-route service levels.
    - Improving administrative management through technology and training.
    - Coordinating with local jurisdictions, San Joaquin County, and local developers to incorporate transit services and amenities within land use planning to establish transit-oriented development.
    - Coordinating a transit consolidation study of the transit systems in the region to improve efficiency, reduce overhead, and increase transit service countywide.

To prevent duplication, RTD could coordinate with ACE to provide additional bus trips in between ACE trains and shuttle services to ACE stations in San Joaquin County, especially since the implementation of Saturday service in FY 19.

San Joaquin County Improvement Standards

The purpose of the San Joaquin County Improvement Standards (2014) is to establish minimum design standards and standard plans for the construction of subdivisions, commercial, and other types of development projects.

San Joaquin County Traffic Impact Study Guidelines (2008)

This document provides guidance on a variety of relevant topics including study area selection, analysis methods, significance thresholds, identification of improvements to address deficient operations, and report documentation. The specific "word-for-word" guidance from this document is first provided by topic area, followed immediately (in italics) by an assessment of how that guidance is addressed in this study. As the County's *TIA Guidelines* (2008) are now 15 years old, some aspects of it have been superseded by changes in best practices, state laws, technology and available data, and other considerations.

Study Area

1. The area to be covered by traffic impact studies will be determined on a case-by-case basis and shall be sufficient in size to include all existing and planned adjacent and regional facilities determined to be impacted by the development project. The scope of the traffic impact study, including the study area, shall be reviewed and approved by County staff prior to preparation of the study.
2. A list of locations where traffic counts will be taken shall be submitted (within the proposed scope of work) to the San Joaquin County Department of Public Works for approval. In general, the peak hour volumes to be analyzed will include both the A.M. and P.M. peak periods; however, these peak periods may be modified or other periods may also be required, as necessary, for complete analysis. The days on which peak hour volumes are to be analyzed will be determined on a case-by-case basis.

Analysis Methods

3. "*Trip Generation*," Eighth Edition, or latest edition, by the Institute of Transportation Engineers, shall be used to determine traffic projections for required traffic studies. Special traffic generators (schools, hospitals, etc.) shall be considered when determining traffic projections.
4. Traffic projections shall include the scenarios, as listed in Section IV-C of the "San Joaquin County Traffic Study Guidelines Report Outline." These scenarios are existing conditions, existing plus the project, existing plus approved projects, existing plus approved projects plus the project, cumulative 2042 (without project), cumulative 2042 plus the project. No reductions are to be taken for TSM programs or for senior housing. Pass-by and diverted link trips shall be approved by County staff.

Significance Thresholds

5. If the LOS for a Plus Project condition exceeds the County's LOS standards, then mitigation measures that would improve the LOS to an acceptable level must be identified. LOS must be

expressed in terms of delay in seconds for intersections, and vehicles per hour for roadway segments, in addition to the corresponding letter (A – F) designation.

6. If the LOS for conditions at a given location is already at an unacceptable LOS, then the impacts must be assessed in terms of 'v/c ratio' (for roadway segments) or 'delay' (for intersection approaches). If the 'v/c ratio' for a roadway segment, under 'existing plus approved and significant pending plus project' conditions, exceeds the v/c ratio for the same roadway segment under 'existing' conditions then mitigation measures that would return the 'v/c' ratio to the 'existing' level must be identified. Similarly, if the 'delay' at a given intersection approach under 'existing plus approved and significant pending plus project' conditions exceeds the 'delay' for the same intersection approach under 'existing' conditions, then mitigation measures that would return the 'delay' to the 'existing' level must be identified.
7. A potential impact to a study intersection shall not be automatically considered "not significant" if it does not meet the peak hour signal warrant. If a signal is not warranted, other methods of mitigation (channelization, roundabout, etc.) shall be investigated and discussed with County staff. The impact will only be considered "not significant" after approval of County staff. In addition, the County does not use the "five second rule;" any increase in delay at an intersection must be addressed.

Identification of Operational Improvements for Deficient Operations

8. For project impact analysis and identification of mitigation measures, the traffic impact study must consider all existing applicable legislation and all forms and modes of transportation (including bicycle and pedestrian) and improvements (including roundabouts). In addition to identifying mitigation measures, the report should also determine the project's fair share responsibility at study locations in the cumulative plus project scenario. The project's fair share responsibility should be determined by dividing the number of 'project generated trips' at a location by the difference of cumulative trips minus existing plus approved project trips. The project's fair share responsibility must be expressed in terms of both percentage (%) and dollar ($) amount. If both AM and PM peak hour impacts are identified, the fair share shall be the average of the two.

Documentation

9. Traffic Impact Studies shall follow the format of the attached "San Joaquin County Traffic Impact Study Guidelines Report Outline." The report shall be prepared under the direction of a Registered Engineer and shall contain that Engineer's Stamp and signature.

City of Tracy General Plan (2011)

The *City of Tracy General Plan* (2011) is the principal policy and planning document for guiding future conservation, enhancement, and development in the City. It represents the basic policy direction of the Tracy City Council on basic community values, ideals, and aspirations to govern a shared environment through 2025. The General Plan addresses all aspects of development including land use, transportation, housing, economic development, public facilities, infrastructure, and open spaces, among other topics.

The Circulation Element of the General Plan contains the following relevant goals, policies, objectives, and actions that may be related to the proposed project's transportation impacts:

Goal CIR-1 A roadway system that provides access and mobility for all of Tracy's residents and businesses while maintaining the quality of life in the community.

- *CIR-1.1 Implement a hierarchical street system in which each street serves a specific, primary function and is sensitive to the context of the land uses served.*
    - Policy P2. The City shall preserve rights-of-way needed for future roadway and freeway interchange improvements through dedication or acquisition as adjacent properties develop or redevelop.
    - Policy P3. The City shall continue to apply traffic mitigation fee programs to fund transportation infrastructure, based on a fair share of facility use.
    - Policy P4. The City should continue to pursue regional, County and State funding to fund roadway projects. These potential funding sources may include Measure K sales tax revenues, a regional or countywide transportation impact fee, and other existing and future revenue sources.
    - Policy P5. The City shall continue to participate in regional transportation funding decisions, including Measure K reauthorization, regional or countywide transportation fees, and prioritization of State funded projects.
    - Policy P6. The Roadway Master Plan update shall identify necessary improvements to various intersections on I-205 and I-580 based on land use designations and with particular attention to Terminal Access Routes in accordance with Surface Transportation Assistance Act of 1982 (STAA).
        - Action A3. Consult with San Joaquin County and the City of Lathrop to ensure that adequate rights-of-way are preserved in the City's Sphere of Influence.
- *Objective CIR-1.3 Adopt and enforce LOS standards that provide a high level of mobility and accessibility, for all modes, for residents and workers.*
    - Policy P1. To the extent feasible, the City shall strive for LOS D on all streets and intersections, with the LOS standard for each facility to be defined in the Transportation Master Plan in accordance with the opportunities and constraints identified through the traffic projections and analysis performed for that plan. The following exceptions to the LOS D standard may be allowed:
        - LOS E or lower shall be allowed on streets and at intersections within one-quarter (1/4) mile of any freeway. This lower standard is intended to discourage inter-regional traffic from using Tracy streets.
        - LOS E or lower shall be allowed in the Downtown and Bowtie area of Tracy, in order to create a pedestrian-friendly urban design character and densities necessary to support transit, bicycling, and walking.

    - Policy P2. The City may allow individual locations to fall below the City's LOS standards in instances where the construction of physical improvements would be infeasible, prohibitively expensive, significantly impact adjacent properties or the environment, or have a significant adverse effect on the character of the community, including pedestrian mobility, crossing times, and comfort/convenience.

- *Objective CIR-1.4 Protect residential areas from commercial truck traffic.*
    - Policy P1. Significant new truck traffic generating uses shall be limited to locations along designated truck routes, in industrial areas or within ¼-mile of freeways.
    - Policy P2. The City shall enforce designated truck routes based on the existing City ordinance.
        - Action A1. Update the truck route designations periodically as needed.
        - Action A2. Maintain a map of truck routes in the City.
- *Objective CIR-1.5 Protect residential areas from through traffic and high travel speeds by facilitating free flow of traffic on major streets.*
    - Policy P1. Use of local residential streets by non-local and commercial traffic shall be discouraged. The City may consider techniques such as route signs and route maps. This policy should not restrict the ability of local vehicle and nonmotorized transportation to utilize residential collectors as an effort to encourage higher levels of roadway connectivity.

City of Tracy Draft Infrastructure Master Plan Impact Fee Nexus Study (2023)

This plan, which is currently in draft form, would update impact fees for new development within the City of Tracy. The plan identifies $665 million in transportation improvements that would be funded by the plan. The traffic fee would be $7,312 per thousand square feet of industrial space. The following improvements within the study area are included in this program:

- New interchange at I-205/Lammers ($52.8 million)
- Replace interchange at I-580/International Parkway ($23.2 million)
- New 4-lane railroad crossing bridge on Hansen Road ($5.8 million)
- New 6-lane railroad crossing bridge on Pavilion Parkway ($7.5 million)
- International Parkway/I-205 Westbound Ramps improvements
- International Parkway/I-205 Eastbound Ramps improvements
- Hansen Road/Capital Park Drive improvements ($5.2 million)
- Hansen Road/Promontory Parkway improvements
- Hansen Road/Old Schulte Road improvements ($2.4 million)
- Pavilion Parkway/Capital Park Drive improvements ($6 million)
- Pavilion Parkway/Promontory Parkway improvements ($4.5 million)
- Pavilion Parkway/Old Schulte Road improvements ($5 million)

- Pavilion Parkway/Hansen Road improvements ($3.6 million)
- Hansen Road/Valpico Road improvements ($3.6 million)
- Pavilion Parkway/Grant Line Road improvements ($3.6 million)
- Lammers Road Extension/Pavilion Parkway improvements ($5 million)
- Lammers Road Extension/Grant Line Road improvements ($5 million)
- Grant Line Road/Pavilion Parkway improvements ($4.1 million)
- Byron Road/Grant Line Road improvements
- Lammers Road/Pavilion Parkway improvements ($4.1 million)
- Grant Line Road/Lammers Road improvements ($3.3 million)
- Lammers Road/Capital Park Drive improvements ($0.5 million)
- Lammers Road/Promontory Parkway improvements ($5.6 million)
- Lammers Road/Old Schulte Road improvements ($3.4 million)
- Lammers Road/Valpico Road improvements ($5.5 million)
- Corral Hollow Road/Eleventh Street improvements ($0.8 million)
- Corral Hollow Road/Valpico Road improvements ($4.8 million)
- Corral Hollow Road/Lammers Road improvements
- Widen International Parkway from I-205 EB to Capital Park Drive ($5.5 million)
- Widen International Parkway from Promontory Parkway to Old Schulte Road ($4.7 million)
- Widen Hansen Road from I-205 to Capital Park Drive ($3 million)
- Widen Hansen Road from Capital Park Drive to Promontory Parkway
- Widen Hansen Road from Promontory Parkway to Old Schulte Road
- New 2-lane divided arterial on Pavilion Parkway from Power Road to Lammers Road ($5.2 million)
- New 2-lane divided arterial on Pavilion Parkway from Lammers Road to Grant Line Road ($8.4 million)
- New 2-lane divided arterial on Pavilion Parkway from Grant Line Road to Lammers Extension ($3.5 million)
- New 2-lane divided arterial on Pavilion Parkway from Lammers Extension to Grant Line Road ($1.6 million)
- New 2-lane divided arterial on Pavilion Parkway from Grant Line Road to Von Sosten Road ($6.2 million)
- New 2-lane divided arterial on Pavilion Parkway from Van Sosten Road to Capital Park Drive ($15.9 million)
- New 2-lane divided arterial on Pavilion Parkway from Capital Park Drive to Promontory Parkway ($6.5 million)
- New 2-lane divided arterial on Pavilion Parkway from Promontory Parkway to Old Schulte Road ($7.4 million)

- New 2-lane divided arterial on Pavilion Parkway from Old Schulte Road to Hansen Road ($9.7 million)
- New 2-lane major arterial on Lammers Extension from Pavilion Parkway to Byron Road ($3.6 million)
- New 2-lane major arterial on Lammers Extension from Byron Road to Von Sosten Road ($2.6 million)
- New 2-lane major arterial on Lammers Extension from Von Sosten Road to I-205 WB ($3.5 million)
- New 8-lane major arterial on Lammers Extension from I-205 EB to Commerce Way ($0.9 million)
- New 8-lane major arterial on Lammers Extension from Commerce Way to Road M ($3.1 million)
- New 8-lane major arterial on Lammers Extension from Road M to Eleventh Street ($4 million)
- Widen Corral Hollow Road from Schulte Road to Valpico Road ($12.7 million)
- Widen Grant Line Road from Byron Road to Lammers Road ($1.4 million)
- New 4-lane divided arterial on Capital Park Drive from International Parkway to Hansen Road ($12.3 million)
- New 4-lane divided arterial on Capital Park Drive from Hansen Road to Pavilion Parkway ($12.3 million)
- New 4-lane divided arterial on Capital Park Drive from Pavilion Parkway to Commerce Way ($3.1 million)
- New 4-lane divided arterial on Capital Park Drive from Commerce Way to Road M ($4.6 million)
- New 6-lane divided arterial on Capital Park Drive from Road M to Lammers Road ($3.5 million)
- New 4-lane divided arterial on Promontory Parkway from Road H to Pavilion Parkway ($11.4 million)
- New 4-lane divided arterial from Pavilion Parkway to Lammers Road ($3.3 million)
- New 4-lane divided arterial on Schulte Road from Lammers Road to Crossroads Drive ($11.7 million)
- New 4-lane divided arterial from Crossroads Drive to Mabel Josephine Drive ($6.4 million)
- New 2-lane divided arterial on Crossroads Drive from Lammers Road to Schulte Road ($12.9 million)
- Widen Old Schulte Road from International Parkway to Hansen Road ($2.5 million)
- Widen Old Schulte Road from Hansen Road to Pavilion Parkway ($12.8 million)
- Widen Old Schulte Road from Pavilion Parkway to Lammers Road ($16.2 million)
- New 2-lane divided arterial on Hansen Road from Old Schulte Road to Pavilion Parkway ($20.7 million)
- New 2-lane divided arterial on Hansen Road from Pavilion Parkway to Valpico Road ($2.9 million)
- New 2-lane divided arterial on Hansen Road from Valpico Road to Lammers Road ($15.6 million)
- New 2-lane divided arterial on Valpico Road from Hansen Road to Lammers Road ($12.3 million)
- Widen Valpico Road from Lammers Road to Corral Hollow Road ($10.9 million)

City of Tracy Citywide Roadway and Transportation Master Plan ("TMP") (2022)

The *City of Tracy TMP* (2022) is a comprehensive document that describes existing and projected travel conditions in the City of Tracy. Besides including a detailed description of the City of Tracy travel demand model, it also describes specific planned roadway improvements, costs, and other factors.

City of Tracy Truck Routes Map (2022)

The City of Tracy website includes a link (11x17 Portrait (cityoftracy.org) to its current truck route map (dated October 2022). That map indicates the following truck routes in the project vicinity:

- Eleventh Street is a through truck route from I-205 to Lammers Road and a local truck route from Lammers Road to Tracy Boulevard
- Lammers Road is a through truck route from Byron Road to Eleventh Street and a local truck route from Eleventh Street to Promontory Parkway
- Grant Line Road is a through truck route from Byron Road to Corral Hollow Road

The map specifies that only California legal trucks (and not STAA trucks) are permitted on through truck routes.

City of Tracy Bikeways Master Plan (2005)

The *City of Tracy Bikeways Master Plan* (2005) displays existing bikeways (as of 2005) and planned bikeway facilities including proposed bike segments and a long-range bikeways plan. Proposed bikeways address bikeway system inconsistencies and gaps. The proposed bikeways in the study area include the following:

- Class I bike path on the south side of Byron Road from I-205 to Corral Hollow Road
- Class II bike lanes on Valpico Road from Schulte Road to Corral Hollow Road
- Class II bike lanes on Schulte Road from Lammers Road to Barcelona Drive

Environmental Thresholds of Significance

The following thresholds of significance are used to determine whether implementing the proposed project would result in a significant environmental impact. The thresholds are based on guidance from Appendix G of the CEQA Guidelines, and policies of San Joaquin County and other responsible agencies listed previously.

Vehicle Miles Traveled

VMT is assessed based on the methodology and criteria established in the *Final Report for the San Joaquin County VMT Thresholds Study* (GHD, 2020), which describes how San Joaquin County will implement Senate Bill 743. The SJCOG model is used to calculate and establish VMT.

For project land use components whose VMT impacts are otherwise not presumed to be less-than-significant based on San Joaquin County VMT thresholds, exceed the applicable VMT threshold as follows:

- Average VMT per employee exceeds 32.8 miles (i.e., 85% of the unincorporated countywide average of 38.6 VMT per employee) forecast by the SJCOG model.

Bicycle and Pedestrian Network

- Disrupt existing or planned bicycle or pedestrian facilities.
- Conflict with adopted policies, plans, or programs regarding bicycle or pedestrian facilities.
- Create a demand for bicycle or pedestrian facilities that is currently unmet.

Transit Services and Facilities

- Disrupt existing or planned transit facilities.
- Conflict with adopted policies, plans, or programs regarding transit facilities or service.
- Create a demand for transit that is currently unmet.

Hazards

- Substantially increase hazards due to geometric design features (e.g., sharp curves or dangerous intersections) or incompatible uses.
- Cause the 95th percentile queue length at a freeway off-ramp to extend beyond the gore point onto the mainline (or exacerbate a current or future deficient condition by increasing the 95th percentile queue by one or more vehicles).

Emergency Vehicle Response

- Adversely affects emergency vehicle response times.

Intersection LOS Operational Deficiency Criteria

The following thresholds are used to determine whether implementing the proposed project would result in an operational deficiency at a study intersection or exacerbate operations at a facility currently or projected to operate deficiently. These thresholds of significance are derived from the above policies, particularly the County's *TIA Guidelines* (2008).

The thresholds below utilize the term 'operational deficiencies' versus 'significant impacts' to describe unacceptable intersection or roadway operations because implementation of SB 743 mandated that intersection LOS cannot be used in CEQA documents to analyze a project's environmental effects on the roadway network.

The project would cause deficient operations at an intersection (or roundabout) if meets any of the following criteria:

- Degrade existing intersection operations from an acceptable to unacceptable LOS;
- Increase average delay at an intersection that is currently operating at an unacceptable LOS;

- Degrade cumulative intersection operations from an acceptable to unacceptable LOS; or
- Increase average delay to an intersection that is projected under cumulative conditions to operate at an unacceptable LOS.

For signalized intersections, roundabouts, and all-way stop intersections, the reported delay is the weighted average of all approaches. At side-street stop control intersections, both the movement with the greatest delay and the overall intersection delay is reported. For purposes of determining deficient operations, the side-street greatest delay movement is used.

San Joaquin County

The Transportation and Mobility component of Chapter 3.2 (Public Facilities and Services Element) of the *San Joaquin County General Plan* (2016) includes the following goals and policies:

> Goal TM-3: Maintain a safe, efficient, and cost-effective roadway system for the movement of people and goods.
>
> *Policy TM-3.1* Roadway Provision

- The County LOS standard for intersections is LOS D or better on Minor Arterials and roadways of higher classification and LOS "C" or better on all other non-CMP designated County roadways and intersections.
- For roadways within a city's sphere of influence the standard is LOS D, or the city planned operating standard for that facility.

The County uses a functional classification of expressways, principal arterials, minor arterials, major/minor collectors, and local residential/commercial/industrial streets. An LOS D standard applies to arterials, while LOS C applies for collector streets and local streets. There are no existing expressways in the study area. San Joaquin County Department of Public Works staff further clarified that an LOS D standard applies for any intersection with at least one leg classified as an Arterial.

City of Tracy

The *City of Tracy General Plan* (2011) contains the following transportation objective and supporting policies related to traffic conditions:

> Objective CIR-1.3 Adopt and enforce LOS standards that provide a high level of mobility and accessibility, for all modes, for residents and workers.
>
> Policy P1. To the extent feasible, the City shall strive for LOS D on all streets and intersections, with the LOS standard for each facility to be defined in the Transportation Master Plan in accordance with the opportunities and constraints identified through the traffic projections and analysis performed for that Plan. The following exceptions to the LOS D standard may be allowed:

- LOS E or lower shall be allowed on streets and at intersections within one-quarter mile of any freeway. This lower standard is intended to discourage inter-regional traffic from using Tracy streets.
- LOS E or lower shall be allowed in the Downtown and Bowtie area of Tracy, in order to create a pedestrian-friendly urban design character and densities necessary to support transit, bicycling and walking.

Policy P2. The City may allow individual locations to fall below the City's LOS standards in instances where the construction of physical improvements would be infeasible, prohibitively expensive, significantly impact adjacent properties or the environment, or have a significant adverse effect on the character of the community, including pedestrian mobility, crossing times, and comfort/convenience.

San Joaquin County Regional Congestion Management Program (RCMP)

The *San Joaquin County Regional Congestion Management Program* (RCMP) (DKS, July 2021) identifies the following roadway segments within the study area as part of its RCMP:

- West Grant Line Road from Byron Road to Corral Hollow Road
- Eleventh Street from Mountain House Parkway/International Parkway to Corral Hollow Road
- Mountain House Parkway/International Parkway from West Grant Line Road to I-580
- Lammers Road from I-205 to Valpico Road
- Corral Hollow Road from West Grant Line Road to Valpico Road

The RCMP establishes a LOS D standard for intersections and roadways within its RCMP.

Caltrans

In May 2020, the California Department of Transportation (Caltrans) published the *Vehicle Miles Traveled-Focused Transportation Impact Study Guide (TISG)*, which replaced its *Guide for the Preparation of Traffic Impact Studies* (2002). The TISG indicates that Caltrans intends to "transition away from requesting LOS or other vehicle operations analyses of land use projects," instead placing the focus on VMT and safety. For this reason, the study area does not include traffic operations analysis of freeway facilities. However, as noted previously, four interchanges and three at-grade intersections within the State Highway System are analyzed.

Per the Caltrans' *TISG*, which emphasizes use of VMT over LOS, a specific LOS threshold is not used to evaluate adequacy of operations at state highway intersections. However, a review of various planning documents and studies conducted in the area (e.g., Tracy Hills Specific Plan DEIR in 2015) indicates that a LOS D standard has been used. The *Interim Local Land Development and Intergovernmental Review (LDIGR) Safety Review Practitioners Guidance* (Caltrans, 2020) provides guidance for evaluating adverse queuing impacts on the state highway system, though it stops short of including specific thresholds of

significance. Appendix A of that document provides practitioners with specific guidance on analysis of project effects on freeway off-ramp queuing. That information, along with supplemental explanations provided by Caltrans staff in a webinar on January 20, 2021, was used to develop the queuing deficiency thresholds described above.

Study Area

This study analyzes various roadway facilities under the jurisdiction of San Joaquin County, City of Tracy, and Caltrans. An extensive study area was chosen based on the project's size, type of land uses, and susceptibility of specific facilities being adversely affected. The study area is bounded by I-205 to the north, Corral Hollow Road to the east, Valpico Road and West Schulte Road to the south, and International Parkway to the west. The study area includes three freeway interchanges. At each interchange, operations at each ramp terminal intersection are evaluated.

Preliminary cumulative year (2042) plus project model runs informed assumptions around the daily project distribution pattern under cumulative year (2042) conditions with build out of the project as well as build out of the planned development projects such as Westside, Cordes Ranch, Tracy Hills, and others. Planned infrastructure improvements consistent with the Draft 2022 Tracy Transportation Master Plan, such as the I-205/Eleventh Street/Lammers Road and I-580/Lammers Road interchanges were also included. A second cumulative model run was performed without the inclusion of the Lammers Road/ I-205 interchange and Pavilion Parkway overcrossing of I-205. Project traffic was forecast to primarily utilize West Schulte Road, Lammers Road, and the planned Pavilion Parkway. Project study intersections were selected based on this project distribution pattern.

Figure 1 illustrates the 22 study intersections (existing and planned) selected for analysis. As shown, most of the study facilities are within the City of Tracy. Several are situated on the border between the City of Tracy and San Joaquin County. Some are wholly within unincorporated San Joaquin County.

Analysis Scenarios

The study includes an assessment of traffic conditions under the following scenarios:

- Existing Conditions represent conditions in 2023
- Existing plus Project
- Existing plus Approved Projects
- Existing plus Approved Projects plus Project
- Cumulative (Year 2042) – with Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing
- Cumulative (Year 2042) plus Project – with Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing
- Cumulative (Year 2042) – without Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing

- Cumulative (Year 2042) plus Project – without Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing

Intersection Analysis Methods

This section presents the various analysis methods used to quantify operations at study intersections and roadways.

Intersection Operations Analysis

This study analyzes traffic operations using delay and LOS as the primary measure of performance. Automobile LOS is a qualitative description of traffic flow from the perspective of motorists. The *Highway Capacity Manual* (HCM), 6th Edition (Transportation Research Board) defines six levels of service from LOS A, representing the least congested traffic conditions, to LOS F, representing the most congested traffic conditions. These grades represent the perspective of drivers and are an indication of the comfort and convenience associated with driving, as well as speed, travel time, traffic interruptions, and freedom to maneuver.

Intersection LOS at signalized and all-way stop-controlled intersections is based on the weighted average control delay measured in seconds per vehicle for all motorists traveling through the intersection. For side-street stop-controlled intersections, this study reports the average control delay for the lane group or movement with the greatest delay, and for the intersection as a whole.

Table 2 presents the control delay range for each LOS for signalized and unsignalized intersections. As shown, the delay ranges for signalized intersections are different from unsignalized intersections. The HCM anticipates that motorists expect signalized intersections to carry higher traffic volume that result in greater delay than an unsignalized intersection and roundabout. Unsignalized intersections are associated with more uncertainty as delays are less predictable, which can reduce users' delay tolerance.

Table 2: Levels of Service Definitions – Intersections

Level of Service	Average Control Delay[1]	
	Signalized Intersections	Unsignalized Intersections and Roundabouts
A	≤ 10	≤ 10
B	>10 to 20	>10 to 15
C	>20 to 35	>15 to 25
D	>35 to 55	>25 to 35
E	>55 to 80	>35 to 50
F	>80	>50

Notes:
1. Average control delay presented in seconds per vehicle. Delay values are rounded to the nearest second and evaluated for LOS based on the above thresholds (i.e., 10 seconds per vehicle = LOS A)

Source: *Highway Capacity Manual* 6th Edition, Transportation Research Board.

Study intersections are analyzed using the Synchro software program to apply the methodologies presented in the HCM. Synchro considers traffic volumes, lane configurations, signal timings, and other parameters.

When intersection operations are considered oversaturated (i.e., volume to capacity exceeds 1.0), this report will either not report a delay value if the software program is incapable of reporting that value or report a delay value 'as-is' despite it not being reasonable. Under both sets of conditions, the volume and lane configuration inputs are exceeding the range of reasonable values the software program can utilize to generate a reasonable estimate of delay. By showing unreasonably high delay values (e.g., over 5 minutes of delay per vehicle), the report allows for relative comparisons of change in delay between scenarios.

2. Existing Conditions

This chapter describes the existing transportation system and traffic conditions within the study area, including traffic operations at study intersections. The project site and surrounding roadway network is illustrated in Figure 1.

Roadway System

The roadway system in the project vicinity consists of a series of freeways and surface streets. I-580 and I-205 are freeways that serve the project regionally. South Lammers Road, International Parkway, Grant Line Road, West Schulte Road, Promontory Parkway, Hansen Road, and Byron Road are arterial streets that connect the project locally.

Interstate 580 is a four-lane freeway that terminates at US 101 in San Rafael and I-5 south of Tracy. It connects to East Bay cities including Pleasanton, Castro Valley, Oakland, and Richmond. The posted speed limit is 70 mph near the City of Tracy and the project site.

Interstate 205 is a six-lane freeway that goes through the northern part of the City of Tracy and connects to I-580 in the west and I-5 in the east. The posted speed limit is 65 mph west of Tracy's eastern city limits and 70 mph east of Tracy's city limits.

South Lammers Road is a major arterial that changes from two to six lanes and terminates at Byron Road in the north and Tracy Hills Drive in the South. The posted speed limit generally ranges from 40 mph to 50 mph. There are unsigned portions of the roadway in unincorporated San Joaquin County that operate with a 55-mph speed limit.

International Parkway is a four-lane major arterial that connects to I-205 in the north and I-580 in the south. The posted speed limit is 45 mph.

Grant Line Road is a major arterial that changes from two to six lanes and connects to Byron Road in the west and Eleventh Street in the east. It runs through the north end of town and shares an interchange with I-205. The posted speed limit is 40 mph west of North MacArthur Drive and 45 mph east of North MacArthur Drive.

West Schulte Road is a minor arterial that changes from two to six lanes and terminates at International Parkway in the west and South Lammers Road in the east. It runs through the project site area. The posted speed limit is 45 mph west of Hansen Road and 50 mph east of Hansen Road. There are unsigned portions of the roadway in unincorporated San Joaquin County that operate with a 55-mph speed limit.

Promontory Parkway is a four-lane minor arterial that currently terminates past International Parkway in the west and past Hansen Road in the east. Once the project is built the western end of Promontory Parkway will be extended to Coral Hollow Road, and the road will run north of the project site area.

Hansen Road is a two-lane minor arterial that connects to Byron Road in the north and terminates south of West Schulte Road. It has a posted speed limit of 45 mph.

Byron Road is a two-lane minor arterial that terminates at Coral Hollow Road in the east and turns into Byron Highway in the west. It connects the City of Tracy to an outlying residential neighborhood. The posted speed limit ranges from 45 mph to 55 mph.

Existing Traffic Volumes

Study Locations

Intersections are generally the critical capacity-controlling elements of roadway networks. Therefore, the operations of critical intersections surrounding the project site are used as indicators of the adequacy of the vehicular circulation system. The following intersections, also shown on Figure 1, were selected in coordination with the City of Tracy and San Joaquin County as those most likely affected by the project and thus warrant analysis:

1. Mountain House Parkway/I-205 WB Ramps
2. International Parkway/I-205 EB Ramps
3. International Parkway/Promontory Parkway
4. International Parkway/Schulte Road
5. International Parkway/I-580 NB Ramps
6. International Parkway/I-580 SB Ramps
7. Hansen Road/Promontory Parkway
8. Hansen Road/Schulte Road
9. Naglee Road/I-205 WB Ramps/Grant Line Road
10. Lammers Road/Byron Road
11. Lammers Road/Eleventh Street
12. Lammers Road/Capital Park Drive
13. Lammers Road/Schulte Road
14. Lammers Road/Valpico Road
15. Corral Hollow Road/Eleventh Street
16. Byron Road/Grant Line Road
17. Pavilion Parkway/Schulte Road (Planned)
18. Lammers Road/Promontory Parkway (Planned)
19. Pavilion Parkway/Promontory Parkway (Planned)
20. Pavilion Parkway/Capital Park Drive (Planned)
21. Lammers Road/I-205 WB Ramps (Planned)
22. Lammers Road/I-205 EB Ramps (Planned)

Data Collection and Field Observations

Morning and evening peak hour traffic counts were collected in the summer and fall of 2023. The weather was clear, and no unusual traffic conditions were noted during the counts. For counts collected in the

summer of 2023, appropriate adjustments were made to adjust to the fall conditions when local schools are in session using fall 203 counts and StreetLight Big Data. Fall counts were used exclusively for study intersections on the eastern side of the study area where John C. Kimball High School has a major effect on local traffic volumes. The intersection counts included vehicles (including trucks), bicycles, and pedestrians. **Appendix A** includes a summary of the weekday count data.

Signal timing data was collected from the City of Tracy and Caltrans. Field observations took place to confirm existing signal timing, traffic patterns, queue lengths, lane geometries, bicycle facilities, and pedestrian facilities at the study intersections to inform the existing baseline conditions.

Figure 3 displays the existing AM and PM peak hour traffic volumes, lane configurations, and traffic control devices at the study intersections. As shown, 15 of the 16 existing study intersections are signalized, and one is controlled by stop signs.

Truck Traffic

Table 3 shows the existing truck volumes on all study roadways, summed for both directions. The volumes are significantly greater on Surface Transportation Assistance Act (STAA) routes, with portions of International Parkway and West Schulte Road carrying over 3,000 and 2,000 trucks per day, respectively.

Table 3: Existing Truck Traffic on Study Roadways

Segment[1]	Number of Trucks Per Day[1]
International Parkway south of West Schulte Road	3,150
West Schulte Road east of International Parkway	2,250
Promontory Parkway east of International Parkway	1,000
Hansen Road south of Promontory Parkway	450
Eleventh Street east of South Lammers Road	400
South Lammers Road south of Eleventh Street	250

Notes:
1. Volumes are for both directions and are rounded to the nearest 50 trucks based on counts.
Source: Fehr & Peers, 2024.

Figure 4 displays the location of existing truck routes in the study area. As shown, International Parkway, West Schulte Road, Promontory Parkway, and Hansen Road are STAA routes. STAA routes allow large trucks to operate on the interstate freeway system and certain primary routes. These trucks, referred to as STAA trucks, are longer than California legal trucks. There are also several local or through truck routes.

Figure 3: Peak Hour Traffic Volumes and Lane Configurations – Existing Conditions

Figure 4: Existing Truck Routes

Intersection Operations

The field-observed peak hour factor was applied at all study intersections. For all signalized intersections, current signal timings were used. Other model inputs included the proportion of trucks during each peak hour,[2] traffic controls, posted speed limits, and other conditions.

Table 4 shows the average delay and LOS at all existing study intersections for AM and PM peak hour conditions. This table also shows the agency to which each intersection belongs. In the few instances in which the facility overlaps with both the City of Tracy and San Joaquin County, the County was shown as the lead agency given that the County is processing the proposed project. A review of the LOS results from this table reveals that all study intersections currently operate acceptably except for the following two intersections that operate deficiently:

- International Parkway / I-580 NB Ramps (PM peak hour)
- Lammers Road / Byron Road (PM peak hour)

Field observations of weekday peak hour intersection operations were performed during the summer and fall of 2023 to confirm the delays and levels of service presented in Table 4.

[2] The proportion of heavy vehicles can substantially affect the average delay at an intersection due to their greater acceleration and deceleration characteristics. The following illustrates how the percent heavy vehicles (HVs) affects the average delay for a hypothetical signalized 4-way intersection with moderate levels of traffic on all approaches. The average delay and LOS are shown for three different percentages of HVs, holding all else constant (e.g., volumes, signal timings, lanes, etc.)

Table 4: Intersection Level of Service – Existing

	Intersection	Traffic Control[1]	Agency	AM Peak		PM Peak	
				Delay[2]	LOS	Delay[2]	LOS
1	Mountain House Pkwy/I-205 WB Ramps	Signal	Caltrans	34.3	C	12.3	B
2	International Pkwy/I-205 EB Ramps	Signal	Caltrans	7.2	A	5.9	A
3	International Pkwy/Promontory Pkwy	Signal	City of Tracy	25.8	C	12.7	B
4	International Pkwy/Schulte Rd	Signal	City of Tracy	39.5	D	29.0	C
5	International Pkwy/I-580 NB Ramps	Signal	Caltrans	49.4	D	**55.9**	**E**
6	International Pkwy/I-580 SB Ramps	Signal	Caltrans	34.3	C	47.6	D
7	Hansen Road/Promontory Pkwy	Signal	City of Tracy	14.3	B	12.0	B
8	Hansen Rd/Schulte Rd	Signal	City of Tracy	17.6	B	20.3	C
9	Naglee Rd/I-205 WB Ramps/Grant Line Rd	Signal	Caltrans	11.6	B	17.8	B
10	Lammers Rd/Byron Rd	Signal	City of Tracy	9.7	A	**67.4**	**E**
11	Lammers Rd/Eleventh St	Signal	City of Tracy	20.9	C	21.4	C
12	Lammers Rd/Capital Park Dr	Signal	City of Tracy	28.2	C	12.9	B
13	Lammers Rd/Schulte Rd	Signal	City of Tracy	20.6	C	11.9	B
14	Lammers Rd/ Valpico Rd	SSSC	San Joaquin County	8.0 (11.7)	A (B)	7.0 (10.9)	A (B)
15	Corral Hollow Rd/Eleventh St	Signal	City of Tracy	25.9	C	30.3	D
16	Byron Rd/Grant Line Rd	Signal	San Joaquin County	17.8	B	21.7	C

Notes:
1. SSSC = Side-Street Stop-Controlled; Signal = Signalized
2. Whole intersection average delay reported for signalized intersections. Side-street stop-controlled delay presented as Whole Intersection Average Delay (Worst Approach Delay). Delay calculated per HCM 6th Edition Methodologies.
3. The LOS standard for all intersections is LOS D. Values in **bold** indicate operations below the LOS standard.

Source: Fehr & Peers, 2024.

Bicycle and Pedestrian System

As the project site and adjacent areas are rural, featuring primarily agricultural uses, there are few existing bicycle facilities in the study area. There is an existing Class III bicycle route on West Schulte Road from International Parkway to South Lammers Road. Other bike paths, lanes, and routes are currently provided on streets closer to the central part of Tracy, such as Eleventh Street and Coral Hollow Road. **Figure 5** displays the existing planned bicycle network in the study area. An extensive network of bicycle and pedestrian facilities are planned within the study area, particularly to the west of the project site that will be implemented by the IPC Phase 1 project.

Many streets in the study area have sidewalks and crosswalks for pedestrians. Hansen Road has continuous sidewalks on both sides of the street from north of Promontory Parkway to West Schule Road. International Parkway has sidewalks on one or both sides of the street from the I-205 eastbound ramps to

West Schulte Road. West Schulte Road and Hopkins Road have discontinuous sidewalks on one or both sides of the street.

Transit System

Transit service in the project vicinity is provided by San Joaquin Regional Transit District (RTD) and TRACER Bus Service, the City of Tracy's transit service. However, no bus stops or transit lines operate along the project's frontage or near the project site. Similar to the location of existing bicycle facilities, transit lines are located closer to the central part of Tracy. TRACER Routes A, B, C, and the Commuter Route connect the rest of the city to stops on streets within the study area, such as Eleventh Street, Coral Hollow Road, and Grant Line Road. San Joaquin RTD's Route 90 provides regional access from the study area to Stockton and has stops on Grant Line Road. **Figure 6** illustrates the existing transit network in the study area.

Figure 5: Existing Bicycle Network

Figure 6: Existing Transit Network

3. Project Travel Characteristics

This chapter presents the proposed project's proposed land uses and roadway network. It then analyzes its expected travel characteristics.

Project Description

The International Park of Commerce Phase 2 Specific Plan establishes the zoning, land uses, development standards and regulations for an approximately 277.6-acre area of land located in the southwest region of San Joaquin County and adjacent to the city limits of Tracy. The Specific Plan Area is at the crossroads of two major transportation corridors, making it ideal for businesses which require large parcels for use as warehousing, manufacturing, research, and development. It is bordered by the extension of Promontory Parkway to the north, Pavilion Parkway to the west, with Schulte Road bisecting the site with development extending south of the road, and vacant property to the east. The Specific Plan Area zoning designation of General Industrial includes permitted uses to include warehouse, distribution, manufacturing and assembly, storage, industrial flex, and distribution related uses. The project is envisioned to be developed with industrial warehouse, distribution, and manufacturing buildings totaling approximately 5.36 million square feet and will include interior site circulation and the required vehicle and truck and trailer spaces. **Figure 7** shows the allowable land uses from the Specific Plan.

The Specific Plan identifies several improvements to the existing road network, including the extension of Pavilion and Promontory Parkway and improvements to existing Schulte Road. Promontory Parkway and Schulte Road both extend west and connect at International Parkway to provide access to the freeways. The project will also include improvement to Schulte Road east from Pavilion Parkway, the improvement of the half street section of Pavilion Parkway, and the extension and improvement of the half street section of Promontory Parkway along the northern project boundary. The Specific Plan proposes the following roadway cross sections:

- Pavilion Parkway – 4-Lane Major Arterial – Two travel lanes in each direction, landscaped median with turn pockets at intersections, Class I bikeway, sidewalks.
- Promontory Parkway – 6-Lane Major Arterial – Three travel lanes in each direction, landscaped median with turn pockets at intersections, Class I bikeway, sidewalks.
- Schulte Road – 4-Lane Parkway – Two travel lanes in each direction, landscaped median with turn pockets at intersections, Class I bikeway, sidewalks.
- Internal Circulation Roadways – 40-foot wide roadway cross section with curb and gutter.

The network of internal Specific Plan roads will provide for multiple users including pedestrians, bicycles, vehicles, trucks, and public transportation. Pedestrian improvements include sidewalks on both sides of all streets, and accessible pedestrian crossings at signals. Class I bicycle paths have been included on all major circulation streets within the Specific Plan to encourage and allow for alternatives to motor vehicles

and to connect with the Phase 1 of International Park of Commerce existing bicycle path network. The Specific Plan roadway system will also facilitate use of public transportation facilities by providing bus pull outs and shelters for passengers, offering shade and protection during winter weather. Such improvements shall be implemented through the site approval process required for each phase.

Figure 7: Allowable Uses Per Specific Plan

Land Use Matrix	
Use Types	**I-G/SP-1 Zone [2]**
Automotive Related Services	
Automotive Repairs, Light	I [5]
Parking and Storage	P
Building Maintenance Services	P [4,5]
Gas Station	I
Truck Related Services	
Parking and Storage	P
Cleaning	P [5]
Stops	U
Repairs	I [4, 5]
Sales	P [4, 5]
Truck and Trailer Storage Yard	P
Utility Services	
Minor	P
Major	I
Water Storage	P
Industrial, Warehouse & Distribution [1]	
General Warehousing	P [2,3,6]
High-Cube Warehouse	P [2, 3, 6]
Cold Storage Warehouse	P [2,3,6]
Fullfillment Center	P [2,3,6]
Parcel Hub	P [2,3,6]
Automated Sorting Center	P [2,3,6]
Distribution and Logistics Facility	P [2,3,6]
Transload Facility	P [2,3,6]
General Manufacturing	P [2,3,6]
Office	P [4, 5]

Legend:
P - Permitted Use, Except as Specified by Note
I - Use Permitted Subject to Improvement Plan Approval
U - Permitted Use, Except as Specified by Note
Notes: (1) See Sections 9-505.5(c), (d); 9-505.6(g); 9-505.9(d); and 905.10 for Special Use Regulations in an Industrial Zone.* See Section 9-505.5(d) for Special Use regulations. See Table 3.2 for definitions of Industrial, warehouse, and distribution uses.
(2) Any change in an existing use to a new use allowed within the respective zoning areas defined in Table 3.1 which requires a Site Approval shall be permitted without the need to process a subsequent Site Approval. A Use Permit will still be required for those uses as defind in the above table unless the subsequent use, as determined by the Review Authority, is consistent with prior use for which the original use permitted was granted.
(3) May include Uses as further defined in Table 3.2
(4) Allowed use only which is incidental and subordinate to the principal use of the lands on which it is located.
(5) Use must be conducted wholly within a building, including storage.
commercial uses which is incidental and subordinate to the principal use of the lands on which it is located.

Table 3.1, Permitted and Conditionally Permitted Uses

Project Trip Generation

The project's trip generation was estimated using both published trip rates from the most recent version of the *Trip Generation Manual*, 11th Edition (Institute of Transportation Engineers, 2021) and locally collected data for warehouse/logistics operations in San Joaquin County.

As the exact nature of the land uses that would ultimately develop on site are currently unknown, estimates of the sizes and types of uses were made to forecast site generated traffic. Based on the project's allowable land uses per the Specific Plan, the 5.36 million square feet of total space was distributed per the percentages presented in **Table 5**.

Table 5: Vehicle Trip Generation Summary

ITE Land Use	ITE Code	Percent of Project	KSF	Daily Trips	AM Peak			PM Peak		
					In	Out	Total	In	Out	Total
High Cube Transload and Short-Term Storage Warehouse	154	10%	536	751	33	10	43	15	39	54
High-Cube Fulfillment Center Warehouse – Sort	155	5%	268	1,726	189	45	234	125	197	322
General Light Industrial	110	10%	536	2,611	349	48	397	48	301	349
High-Cube Parcel Hub Warehouse	156	10%	536	2,482	304	72	376	278	66	344
High-Cube Cold Storage Warehouse	157	10%	536	1,137	47	12	59	25	40	65
Warehousing	150	25%	1,340	2,292	175	53	228	67	175	242
High-Cube Fulfillment Center Warehouse – Non-Sort	155	25%	1,340	2,426	162	39	201	83	132	215
Manufacturing	140	5%	268	1,273	139	44	183	61	138	199
Total New Vehicle Trips				**14,698**	**1,398**	**323**	**1,721**	**702**	**1,088**	**1,790**

Notes:
ITE 154 (High Cube Transload and Short-Term Storage Warehouse) Trip Generation Calculations:
Daily: T = 1.40(X)
AM Peak Hour: T = 0.08(X) (77% in, 23% out)
PM Peak Hour: T = 0.10(X) (28% in, 72% out)
ITE 155 (High-Cube Fulfillment Center Warehouse – Sort) Trip Generation Calculations:
Daily: T = 6.44(X)
AM Peak Hour: T = 0.74(X) (81% in, 19% out)
PM Peak Hour: T = 1.20(X) (39% in, 61% out)
ITE 110 (General Light Industrial) Trip Generation Calculations:
Daily: T = 4.87(X)
AM Peak Hour: T = 0.74(X) (88% in, 12% out)
PM Peak Hour: T = 0.65(X) (14% in, 86% out)
ITE 156 (High-Cube Parcel Hub Warehouse) Trip Generation Calculations:
Daily: T = 4.63(X)
AM Peak Hour: T = 0.70(X) (81% in, 19% out)
PM Peak Hour: T = 0.64(X) (81% in, 19% out)
ITE 157 (High-Cube Cold Storage Warehouse) Trip Generation Calculations:
Daily: T = 2.12(X)
AM Peak Hour: T = 0.11(X) (81% in, 19% out)
PM Peak Hour: T = 0.12(X) (39% in, 61% out)
ITE 150 (Warehousing) Trip Generation Calculations:
Daily: T = 1.71(X)
AM Peak Hour: T = 0.17(X) (77% in, 23% out)
PM Peak Hour: T = 0.18(X) (28% in, 72% out)
ITE 155 (High-Cube Fulfillment Center Warehouse – Non-Sort) Trip Generation Calculations:
Daily: T = 1.81(X)
AM Peak Hour: T = 0.15(X) (81% in, 19% out)
PM Peak Hour: T = 0.16(X) (39% in, 61% out)
ITE 140 (Manufacturing) Trip Generation Calculations:
Daily: T = 4.75(X)
AM Peak Hour: T = 0.68(X) (76% in, 24% out)
PM Peak Hour: T = 0.74(X) (31% in, 69% out)
Source: Fehr & Peers, 2024; Institute of Transportation Engineers, *Trip Generation, 11th Edition*; Institute of Transportation Engineers,

The project is estimated to generate about 14,698 daily weekday trips, 1,721 AM peak hour trips, and 1,790 PM peak hour trips. It should be noted that the results of the trip generation analysis can vary substantially based on the assumed distribution of land use types. The various land uses under consideration have trip generation rates which are quite different: in particular, ITE Land Use Code 155 "High Cube Fulfillment Center Warehouse – Sort" has a trip generation rate which is considerably larger than the other land uses under consideration.

It should be noted that the results in the table above are total trip, including both truck and passenger cars. To estimate the effects of truck trips on the transportation network within the transportation assessment, truck trips were converted to a passenger car equivalent (PCE) using a factor of 2.0. A PCE of 2.0 was identified based on the anticipated mix of trucks associated with the land use and trip generation characteristics presented in Table 5 and Table 6 (this is also the default factor recommended in the Transportation Research Board's *Highway Capacity Manual*). Converting truck trips to PCEs better accounts for the additional strain that truck trips place on the operations of the circulation system. The project's wastewater treatment facility would produce up to 100 cubic yards of brine per year, resulting in fourteen additional truck trips per year. These trips are also included in the assessment.

Table 6 presents the medium and heavy truck percentages used in the study. This data was taken from the *High-Cube Warehouse Vehicle Trip Generation Analysis* (Institute of Transportation Engineers, Washington, DC, October 2016) reference.

Table 6: Heavy Vehicle Percentages

Land Use (Applicable ITE Codes)	Medium Trucks	Heavy Trucks	Autos
Transload and Short-Term Storage (154, 110, 150, 140)	15.2%	16.0%	68.8%
Cold Storage (157)	4.1%	35.4%	60.5%
Fulfillment Center (155)	5.8%	3.0%	91.2%
Parcel Hub (156)	28.4%	9.2%	62.3%

Source: Fehr & Peers, 2024; *High-Cube Warehouse Vehicle Trip Generation Analysis*, Institute of Transportation Engineers, Washington, DC, October 2016.

Local Trip Generation Data

The *San Joaquin Countywide Warehousing Data Collection and Travel Behavior Study* (Fehr & Peers, June 2021) collected 72 hours of driveway vehicle classification count data at 39 warehousing buildings across San Joaquin County in June 2021. The data collection was performed by National Data & Surveying Services (NDS) using cameras to count and classify vehicles entering and exiting the individual building driveways. The 39 warehousing buildings totaled over 25.7 million square feet, representing roughly 28 percent of all warehousing building space in San Joaquin County based on Colliers 21Q1 estimates. This data was used to develop average trip generation rates per thousand square feet (KSF) for warehousing uses in San Joaquin County including within the cities of Tracy, Stockton, Lathrop, Manteca, and Lodi. The

39 warehousing buildings, including their occupying tenant, type of warehouse, and square footage, are shown in **Table 7** below.

Table 7: San Joaquin Countywide Warehousing Data Collection

City	Tenant	Address	Driveways	Building Type	Square Feet
Lathrop	California Logistics	11900/11940/1196011980 S. Harlan Rd, Lathrop, CA 95330	3	Warehouse	1,235,000
Lathrop	Tesla, Inc.	701 D'Arcy Pkwy, Lathrop, CA 95330	1	Manufacturing	92,747
Manteca	Ford Motor Company	1260 Phoenix Dr, Manteca, CA 95336	2	Warehouse	608,860
Stockton	Innovel Solutions	2115 Sinclair Ave, Stockton, CA 95215	2	Warehouse	780,393
Tracy	UPS Supply Chain	1150 West Arbor Ave, Tracy, CA 95304	2	Warehouse	795,732
Stockton	Pratt Corrugated Holdings	4727 Fite Ct, Stockton, CA 95215	2	Warehouse	350,892
Stockton	HJ Heinz	1111 Runway Dr, Stockton, CA 95206	2	Warehouse	500,199
Stockton	Prism Team Services, Inc.	1030 Runway Dr, Stockton, CA 95206	3	Warehouse	443,640
Tracy	Leggett & Platt	2015 N. MacArthur Dr, Tracy, CA 95376	1	Warehouse	158,065
Tracy	Orchard Supply Company	2020 N. MacArthur Dr, Tracy, CA 95376	2	Warehouse	346,524
Stockton	Fox Head, Inc	4611 Newcastle Rd, Stockton, CA 95215	2	Warehouse	388,000
Stockton	Amazon.com Services, Inc.	4718 Newcastle Rd, Stockton, CA 95215	2	Warehouse	735,980
Stockton	Pitney Bowes	4601 Newcastle Rd, Stockton, CA 95215	2	Warehouse	388,183
Stockton	Niagara Bottling, LLC	4733 Newcastle Rd, Stockton, CA 95215	2	Warehouse	186,944
Stockton	Homesite Services, Inc.	811 Zephyr St, Stockton, CA 95206	1	Warehouse	512,000
Stockton	Masonite Corporation	2516 Station Dr # A, Stockton, CA 95215	1	Warehouse	39,200
Stockton	Kraft Foods Group, Inc.	3632 Petersen Rd #150, Stockton, CA 95215	2	Warehouse	180,000
Stockton	Coastal Pacific Food	4512 Frontier Way, Stockton, CA 95215	1	Warehouse	351,788
Tracy	Restoration Hardware	1015 Performance Dr, Stockton, CA 95206	1	Warehouse	500,004
Tracy	Best Buy	2900 N. MacArthur Dr, Tracy, CA 95376	4	Warehouse	283,712
Lathrop	Wayfair	6653 Hopkins Rd, Tracy, CA 95377	5	Warehouse	641,364
Lathrop	Home Depot	5120 Glacier Street, Lathrop, CA 95330	2	Warehouse	1,167,000

City	Tenant	Address	Driveways	Building Type	Square Feet
Lodi	Pacific Coast Producers	18300 S Harlan Rd, Lathrop, CA 95330	1	Distribution Center	953,000
Lodi	Dart Container	650 S Guild Ave, Lodi, CA 95240	4	Warehouse	1,500,000
Manteca	Lowes	1400 E Victor Rd, Lodi, CA 95240	2	Warehouse	340,000
Stockton	Dollar Tree	2226 Roth Rd, Manteca, CA 95336	3	Warehouse	570,000
Manteca	UPS	1122 Runway Dr, Stockton, CA 95206	1	Warehouse	855,000
Manteca	Cargill Food	600 Spreckels Ave, Manteca, CA 95336	2	Warehouse	560,000
Stockton	KeHE Distributors	730 Spreckels Ave, Manteca, CA 95336	2	Warehouse	350,000
Tracy	International Paper	4650 Newcastle Rd. Stockton. CA 95215	2	Warehouse	770,000
Tracy	Zinus	400 Valpico Rd, Tracy, CA 95376	1	Warehouse	375,000
Tracy	Medline	5731 Promontory Pkwy, Tracy, CA 95377	2	Warehouse	664,333
Tracy	Smuckers	24550 Hansen Rd, Tracy, CA 95377	3	Warehouse	1,005,500
Tracy	Amazon	6140 Promontory Pkwy, Tracy, CA 95377	3	Warehouse	403,560
Tracy	Costco	188 S Mountain House Pkwy, Tracy, CA 95377	4	Warehouse	1,001,449
Tracy	Safeway	25501 Gateway Blvd, Tracy, CA 95377	2	Warehouse	1,161,306
Tracy	Amazon	16900 W Schulte Rd, Tracy, CA 95377	4	Warehouse	2,200,000
Tracy	Crate & Barrel	1555 N Chrisman Rd, Tracy, CA 95376	3	Fulfillment	1,124,921

Source: Fehr & Peers, data collected in June 2021.

The average trip generation rates per KSF of building space from the June 2021 San Joaquin Countywide Warehousing Data Collection effort, stratified by autos, medium-duty trucks, and heavy-duty trucks, are provided in **Table 8**.

Table 8: San Joaquin County Warehousing Trip Generation Rates per KSF

Warehouse Data	AM Peak Hour				PM Peak Hour				Daily			
	Autos	Medium Trucks	Heavy Trucks	Total	Autos	Medium Trucks	Heavy Trucks	Total	Autos	Medium Trucks	Heavy Trucks	Total
Total Trip Generation	3,784	185	717	4,685	4,702	121	630	5,453	25,625	2,020	11,503	39,148
Total Area (KSF)	25,746											
Trip Generation Rate (Trips per KSF)	0.147	0.007	0.028	0.18	0.183	0.005	0.024	0.21	0.995	0.078	0.447	1.52

Notes:
1. Trucks refer to heavy-duty (i.e., three or more axle-vehicles only) vehicles. Medium-duty trucks (e.g., two-axle box trucks) are included in the auto category because they, like autos, are not affected by vehicle weight restrictions on certain study roadways. Medium-duty trucks are also not classified as "heavy vehicles" by the HCM.

Source: Fehr & Peers, data collected in June 2021.

As shown above, the average daily trip generation per KSF of building space for all 39 warehousing buildings in San Joaquin County was 0.078 medium-duty truck trips, 0.447 heavy-duty truck trips, and 0.995 auto trips. The average total daily rate was 1.52 trips per KSF with the average AM peak hour rate being 018 trips per 1,000 KSF, and the average PM peak hour rate being 0.21 trips per 1,000 KSF.

If these rates were applied to the project's proposed 5.36 million square feet of use, estimates of total AM peak hour trip generation would be 965 trips, with PM peak hour trip generation being 1,126 trips. These estimates were substantially below the results presented in Table 5 using the ITE methodology. As a result, this study applied ITE rates as a conservative methodology for measuring the potential impacts of the proposed project on the local and regional transportation networks.

Project Trip Distribution/Assignment

Given the unique nature of warehousing land uses and the lack of available data on the travel patterns of users of these facilities, trip distribution and average trip length data was collected from mobile device data purchased from StreetLight. The origin-destination data provided by StreetLight was combined with the driveway count data described above to identify and quantify vehicle travel demands, the origin-destination and demographic characteristics of vehicle travelers in the Central Valley Gateway, and the roadways their users were utilizing. This information was used to inform the City of Tracy travel demand model and produce trip distribution patterns for the proposed project.

A zone system was developed that included a separate zone for each of the existing 39 warehousing buildings where driveway classification counts were collected. The analysis tracked all trips starting or ending at one of these 39 warehousing buildings. The start of trips coming to the zones and end of trips leaving the zones were tagged to the national census block group system, allowing for aggregation to any desired geography such as the city of county level.

StreetLight data was obtained for the following data periods:

- Year: 2021
- Month: June
- Day Type: average weekday (average of Tuesday, Wednesday, and Thursday) and average weekend (average of Saturday and Sunday)
- Day Part: All day (12am-12am), Early AM (12am-6am), Peak AM (6am-10am), Mid-Day (10am-3pm), Peak PM (3pm-7pm), Late PM (7pm-12am)

The following location-based services data products were purchased from StreetLight to provide sample origin-destination data:

- Cuebiq-based origin and destination data for each of the 39 building zones
- Cuebiq-based home and workplace distribution for each of the 39 building zones

Premium trip and traveler metrics were also obtained for the Cuebiq-based data, providing trip length, trip time, trip purpose, and demographic data based on 2010 American Community Survey (ACS) data. The data obtained from StreetLight included over 20,000 personal device data samples and 9,000 commercial vehicle data samples for the June 2021 data period. The StreetLight trip tables do not provide the total number of trips that occur on a daily basis but provide the relative relationship of trips from each zone to every other zone in the geographic layer. The origin-destination data was combined with the driveway vehicle classification count data to scale "relative" travel patterns to an "absolute" measure of vehicle trips and their distribution patterns/trip lengths.

Figure 8 presents the project trip distribution pattern for automobiles and trucks, under existing conditions with the exiting plus proposed project roadway network. **Figure 9** and **Figure 10** present the project trip assignment for automobiles and trucks, respectively.

Figure 8: Existing Conditions Project Trip Distribution

Figure 9: Existing Conditions Automobile Project Trip Assignment

Figure 10: Existing Conditions Truck Project Trip Assignment

4. VMT Analysis

This section describes the different methods used to calculate the proposed project's VMT under baseline and cumulative conditions. It then presents VMT results for the project (total project VMT for both automobiles and trucks) and the daily VMT per employee, which is used to assess environmental significance.

Analysis Methodology

The following two documents are the most influential in how the VMT analysis was performed:

- *Technical Advisory on Evaluating Transportation Impacts in CEQA* (OPR, 2018)
- *Final Report for the San Joaquin County VMT Thresholds Study* (GHD, 2020)

Both documents were discussed at length in Section 1. As noted previously, the *San Joaquin County VMT Thresholds Study* adopts many of the recommended technical approaches and guidance contained in the *Technical Advisory*.

The *Final Report for the San Joaquin County VMT Thresholds Study* (GHD, 2020) recommends that the SJCOG model be used to estimate the project's VMT. It should be noted that this report was published in November 2020, with much of the analysis occurring well before then (e.g., COVID-19 is not referenced anywhere within it). The *Technical Advisory* defines "automobiles" as on-road passenger vehicles, specifically cars and light trucks (but excluding heavy trucks).

This study utilizes the SJCOG model to estimate the weekday project VMT per employee under baseline conditions, per the methodology and requirements of the *San Joaquin County VMT Thresholds Study*. This figure is then compared to the unincorporated countywide average VMT per employee and the relevant environmental significance threshold of 85 percent of the unincorporated countywide average VMT per employee.

Total project generated VMT is also assessed using the SJCOG model and other tools. As the SJCOG model does not explicitly model or evaluate truck traffic, off-model data relative to truck traffic (generation and trip lengths) is used to assess total weekday daily truck VMT. This data is discussed in further detail below.

VMT Defined

VMT is defined as one mile of travel driven by a vehicle regardless of the number of occupants or type of engine (e.g., internal combustion engine versus electric). Per the *Technical Advisory*, VMT is expressed on a daily (weekday) basis. VMT totals are not truncated at agency boundaries; rather, they represent the entire distance of the trip.

VMT, in and of itself, is not a measure of traffic congestion. It is used as an input in various other EIR technical areas. It can also be used to compare the relative efficiency of multiple land use-transportation planning scenarios. All VMT calculations are "project-generated," not "project effect" VMT. project-generated refers to the amount of travel its users would generate. In contrast, project effect refers to how the VMT of an entire area would change if a project were approved and constructed. Project effect on VMT is mentioned prominently in the *Technical Advisory*, but only raised in the *San Joaquin County VMT Thresholds Study* in the context of adding retail. Since evaluation of VMT using County thresholds does not require analysis of project effects on VMT, no such analysis was performed.

Truck VMT

As the SJCOG model does not explicitly model or evaluate truck traffic, other data relative to truck traffic (trip generation and trip lengths) was used to assess weekday daily truck VMT. The *San Joaquin Countywide Warehousing Data Collection and Travel Behavior Study* (June 2021), described in Section 3, was used to better understand the travel behavior of truck movements at existing warehousing buildings across San Joaquin County. It was prepared in response to a review of local and regional planning efforts, which had revealed a lack of data and understanding of the travel characteristics of these types of facilities. This data was used to estimate the length of truck trips associated with the project.

The *San Joaquin Countywide Warehousing Data Collection and Travel Behavior Study* included the purchase of multiple Big Data datasets from StreetLight Data, Inc. for the warehousing sites. These data sources are derived from location-based services (LBS) data and complex machine learning algorithms to understand travel behavior across the country.[3] Mobile device data was obtained for warehouses located within and near the City of Tracy (i.e., consisting of International Park of Commerce (IPC), Patterson Pass, and the Northeast Industrial Area collectively referred to as the "Central Valley Gateway"). By studying where mobile devices are located over the course of the day (i.e., during overnight vs. daytime hours), it was possible to determine which devices were associated with employee trips versus visitor trips versus truck trips. Global Positioning System (GPS)-based freight metrics for medium- to heavy-duty commercial trucks were also obtained to understand the origin-destination and length of commercial vehicle trips. Trip origins and destinations were then tracked at a Census Block Group level.

[3] StreetLight Data, Inc. processes approximately 40 billion anonymized location records per month from smart phones and navigation devices in connected cars and trucks and uses machine learning to transform these records into aggregated and normalized route-based travel patterns. Data is validated using permanent traffic counters and embedded sensors, and normalized with multiple data sources, including parcel data, digital road network data, and census information.

Total Project VMT

Table 9 shows the calculations of total project generated VMT for both baseline and cumulative conditions. VMT for both automobiles and trucks are presented separately. Daily automobile and truck trip generation is based on the calculations presented earlier in Section 3 and presented in Table 5 and Table 6. Average trip length for automobile trips was obtained from the SJCOG travel demand model for baseline and cumulative conditions while the average trip length for truck trips was obtained from the *San Joaquin Countywide Warehousing Data Collection and Travel Behavior Study* discussed above.

Table 9: Project Total Daily VMT

Scenario	Measure	Daily Trips [1]	Average Trip Length[2]	VMT Generated
Baseline plus Project	Automobile VMT	10,787	25.29	272,803
	Truck VMT	3,911	41.8	163,480
Cumulative plus Project	Automobile VMT	10,787	19.9	214,661
	Truck VMT	3,911	41.8	163,480

1. Calculated based on trip generation estimates presented in Table 5 and Table 6.
2. Automobile trip lengths from the SJCOG model, truck trip lengths from the *San Joaquin Countywide Warehousing Data Collection and Travel Behavior Study*.

Source: Fehr & Peers, 2024.

Table 10 shows the unincorporated countywide average VMT per employee under baseline and cumulative conditions. It also shows values representing 85 percent of those totals, which represent the VMT significance thresholds applied in this study. Finally, the table shows the project's daily home-based work VMT per employee under baseline and cumulative conditions as calculated by the SJCOG model.

Table 10: Daily VMT Per Employee

Scenario	HBW Auto VMT per Employee [1]
Unincorporated Countywide Average – Baseline	38.6 VMT per employee
85% of Unincorporated Countywide Average – Baseline	32.8 VMT per employee
Project VMT, Baseline Conditions	41.5 VMT per employee
Unincorporated Countywide Average – Cumulative	31.1 VMT per employee
85% of Unincorporated Countywide Average – Cumulative	26.5 VMT per employee
Project VMT, Cumulative Conditions	33.8 VMT per employee

1. Calculated using the 2016 SJCOG travel demand model. VMT shown is only associated with employee travel between the project and home.

5. Multimodal Transportation

Internal Circulation

Implementation of the Specific Plan Project would make improvements to the adjacent roadway network and construct the site's internal roadway network. On the western side of the project site, Pavilion Parkway would be extended, and two additional lanes would be added to the existing two-lane facility to create a four-lane roadway. On the northern side of the site, Promontory Parkway would be extended, and two additional lanes would be added to the existing four-lane road to create a six-lane facility. West Schulte Road on the south side of the project site would be widened from the current two-lane roadway to a four-lane facility with a median. These three project-adjacent roads would all be designed to STAA standards to allow for truck traffic. The proposed cross sections for Schulte Road, Pavilion Parkway, and Promontory Parkway from the Specific Plan are presented below.

Access to and within the project site would be provided by internal driveways from Promontory Parkway, Pavilion Parkway, and Schulte Road. The driveways will be 40 feet wide and allow for both vehicle and truck access. The project will ensure safe on-site circulation of trucks and vehicles by designing driveways to meet STAA standards.

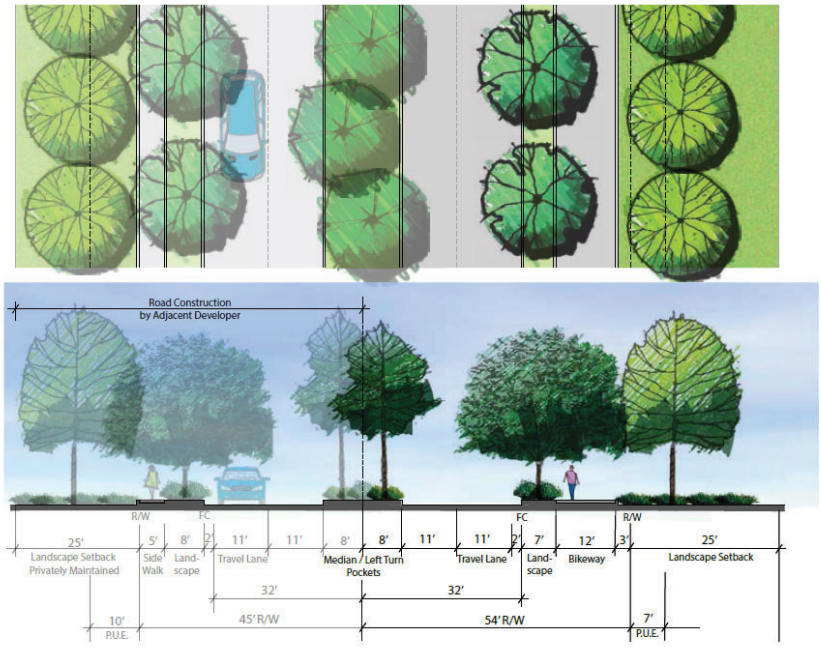

Figure 6.3, Conceptual 4-Lane Parkway, Section B-B

Schulte Road – Proposed Cross Section

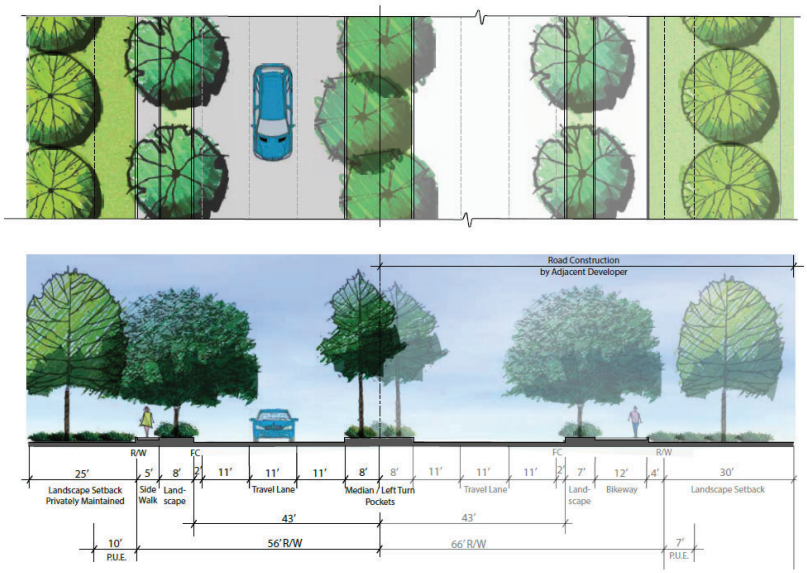

Figure 6.5, Conceptual 6-Lane Parkway, Section C-C

Promontory Parkway – Proposed Cross Section

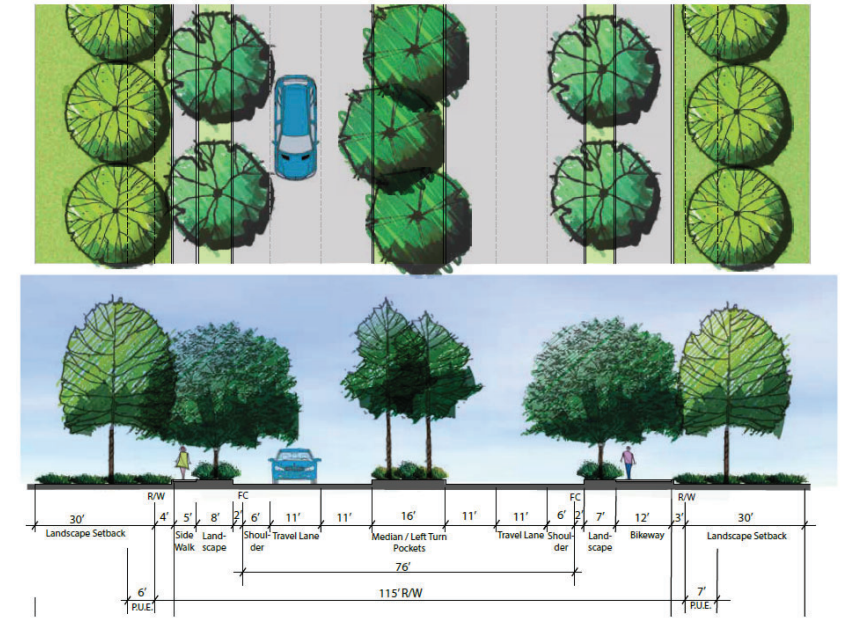

Figure 6.8, Conceptual 4-Lane Parkway, Section A2-A2

Pavilion Parkway – Proposed Cross Section

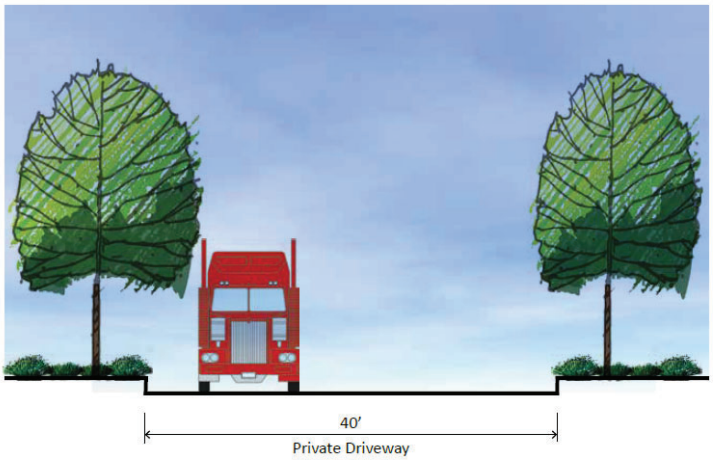

Figure 6.10, Internal Private Road Section

Internal Roadways – Proposed Cross Section

Bicycle and Pedestrian Network

The project plans to make improvements to the existing bicycle and pedestrian network in the study area. It aims to encourage bicycle and pedestrian usage by including Class I bicycle paths on all major circulation streets within the project area, including West Schulte Road, Pavilion Parkway, and Promontory Parkway. Sidewalks would be provided along project frontages and connect to the surrounding public pedestrian network. In addition, large canopy trees will shade the sidewalks and improvements to pedestrian crossings at signalized intersections will be made.

Transit System

No transit routes currently operate within the Specific Plan area. However, the Specific Plan roadway system accommodates future public transportation service by providing bus pull outs and shelters for passengers offering shade and protection during winter weather. Such improvements shall be implemented through the site approval process required for each phase.

6. Intersection Levels of Service

Existing Plus Project Buildout

This section analyzes the effects of project buildout on the existing roadway system.

Traffic Forecasts

Project buildout trips were assigned to the study roadways and intersections in accordance with the trip generation, distribution, and assignment procedures described previously. Figure 8 illustrates the macro-overall network trip distribution of project trips on the study area roadway network assuming the existing roadway network. Different trip distributions are used for automobile and truck trips, considering truck traffic restrictions on the local roadway network, as predicted by the City of Tracy travel demand model. Figure 9 presents the assignment of automobile trips to the study intersections and Figure 10 presents the assignment of truck trips to the study intersections. **Figure 11** presents the total Existing plus Project peak hour traffic volumes including existing traffic counts and buildout of the project.

Intersection Operations

Table 11 shows the AM and PM peak hour average delay and LOS at study intersections under Existing Plus Project Buildout conditions. As shown, the project would worsen already deficient operations at two intersections (International Parkway/I-580 NB Ramps and Lammers Road/Byron Road). It would cause an additional four intersections to degrade to deficient conditions. Of the 16 total existing study intersections, the project would cause the number operating deficiently to worsen from two to six.

Figure 11: Peak Hour Traffic Volumes and Lane Configurations – Existing Plus Project Buildout Conditions

Table 11: Intersection Level of Service – Existing Plus Project Buildout

	Intersection	Traffic Control[1]	Agency	Existing				Existing Plus Project Buildout			
				AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
1	Mountain House Pkwy/I-205 WB Ramps	Signal	Caltrans	34.3	C	12.3	B	**90.0**	**F**	14.4	B
2	International Pkwy/I-205 EB Ramps	Signal	Caltrans	7.2	A	5.9	A	10.9	B	6.4	A
3	International Pkwy/Promontory Pkwy	Signal	City of Tracy	25.8	C	12.7	B	43.6	D	14.7	B
4	International Pkwy/Schulte Rd	Signal	City of Tracy	39.5	D	29.0	C	**78.6**	**E**	39.6	D
5	International Pkwy/I-580 NB Ramps	Signal	Caltrans	49.4	D	**55.9**	**E**	**>180**	**F**	**106.0**	**F**
6	International Pkwy/I-580 SB Ramps	Signal	Caltrans	34.3	C	47.6	D	**>180**	**F**	**>180**	**F**
7	Hansen Road/Promontory Pkwy	Signal	City of Tracy	14.3	B	12.0	B	15.3	B	12.1	B
8	Hansen Rd/Schulte Rd	Signal	City of Tracy	17.6	B	20.3	C	43.8	D	36.5	D
9	Naglee Rd/I-205 WB Ramps/Grant Line Rd	Signal	Caltrans	11.6	B	17.8	B	11.8	B	18.3	B
10	Lammers Rd/Byron Rd	Signal	City of Tracy	9.7	B	**67.4**	**E**	15.6	B	**168.3**	**F**
11	Lammers Rd/Eleventh St	Signal	City of Tracy	20.9	C	21.4	C	29.4	C	24.4	C
12	Lammers Rd/Capital Park Dr	Signal	City of Tracy	28.2	C	12.9	B	25.4	C	13.5	B
13	Lammers Rd/Schulte Rd	Signal	City of Tracy	20.6	C	11.9	B	**132.6**	**F**	28.4	C
14	Lammers Rd / Valpico Rd	SSSC	San Joaquin County	8.0 (11.7)	A (B)	7.0 (10.9)	A (B)	12.5 (17.6)	B (C)	9.0 (13.8)	A (B)
15	Corral Hollow Rd/Eleventh St	Signal	City of Tracy	25.9	C	30.3	D	28.0	C	35.3	D
16	Byron Rd/Grant Line Rd	Signal	San Joaquin County	17.8	B	21.7	C	34.2	C	31.2	C

Notes:

1. SSSC = Side-Street Stop-Controlled; Signal = Signalized
2. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
3. Whole intersection average delay reported for signalized intersections and all-way stop-controlled intersections. Side-street stop-controlled delay presented as Whole Intersection Average Delay (Worst Approach Delay). Delay calculated per HCM 6th Edition methodologies.
4. LOS designation per HCM 6th Edition.
5. The LOS standard for all intersections is LOS D. Values in **bold** indicate operations below the LOS standard.

Source: Fehr & Peers, 2024.

Existing Plus Approved Projects

The Existing plus Approved Projects future baseline scenario includes traffic associated with all currently approved but not yet developed or occupied projects. Lists of development projects that have been approved but not yet occupied that could materially affect traffic conditions in the study area were obtained from the City of Tracy and San Joaquin County. These approved projects are summarized in **Table 12** below. The approved projects include a wide range of large and small commercial, retail, residential and warehousing/logistics projects planned in the area. Likely the most impactful would be the approved but not yet constructed portions of Cordes Ranch/IPC Phase 1 which neighbors the Specific Plan site.

Approved Projects Roadway Network Assumptions

The analysis of the Existing plus Approved Projects scenario includes not only traffic associated with all approved but not yet constructed development projects, it also includes approved but not yet constructed roadway network improvements. This includes all the on- and off-site roadway network improvements to be constructed by IPC Phase 1, which are illustrated in **Figure 12**. It also includes programmed improvements to the International Parkway/Interstate 205 and International Parkway/Interstate 580 interchanges. These improvements are summarized at this site – I-205 and I-580 International Parkway (205and580interchanges.com). Finally, the scenario reflects the installation of a traffic signal with the addition of turn lane pockets on all three approaches at the Lammers Road and Valpico Road intersection. This improvement is currently in process and is expected to be completed in the near-term horizon.

Traffic Forecasts

Trips associated with all approved projects were assigned to the intersections in accordance with their respective trip generation, distribution, and assignment procedures, using the City of Tracy travel demand model. Figure 8 illustrates the macro-overall network trip distribution of project trips on the study area roadway network used in the Existing plus Approved Projects. Different trip distributions are used for automobile and truck trips, considering truck traffic restrictions on the local roadway network, as predicted by the City of Tracy travel demand model. Figure 9 presents the assignment of automobile trips to the study intersections and Figure 10 presents the assignment of truck trips to the study intersections. **Figure 13** presents the total Existing plus Approved Projects peak hour traffic volumes including existing traffic counts and buildout of the approved projects. **Figure 14** presents the total Existing plus Approved Projects plus Project peak hour traffic volumes including existing traffic counts, buildout of the approved projects and buildout of the proposed project.

Table 12: List of Approved Projects

	Lead Agency	Project Name	Project Address	Description	Status
1	City of Tracy	4-Story Hotel (Extended Stay America Premier Suites)	N Side of Joe Pombo Pkwy, N of Grant Line Road	54,902 sf of hotel use	Approved
2	City of Tracy	Avenues	12650 W. Valpico Road	480 residential units on 95.83 acres	Approved
3	City of Tracy	Byron Apartments	2660 Byron Road	60 residential units	Approved
4	City of Tracy	Commercial Building Shell	Auto Plaza Dr. west of Naglee Road	27,336 sf commercial use	Approved
5	City of Tracy	Convenience Store and Gas Station (Edgewood Commercial Center)	SEC Corral Hollow/ Middlefield Drive	3,884 sf commercial use and gas station	Under Construction
6	City of Tracy	Cordes Ranch Development	International Pkwy/I-205	18,147,338 sf of mixed commercial space	Approved
7	City of Tracy	Ellis Phase 2	Ellis Town Drive	106-acre neighborhood development park of larger Ellis Specific Plan	Under Construction
8	City of Tracy	Ellis Phase 3	4260 Lammers Road	74-acre neighborhood development part of larger Ellis Specific Plan	Under Construction
9	City of Tracy	Ellis RE Lots/Limited Use Area	SE area of Ellis SP	41.87-acre mixed- use development part of larger Ellis Specific Plan	Approved
10	City of Tracy	Seefried – 3 New Industrial Buildings	7191 W. Grant Line Road	1,035,500 sf industrial development	Under Construction
11	City of Tracy	Tracy Assisted Living & Memory Care	South of Grant Line, west of Corral Hollow	87,107 sf assisted living and residential use	Approved
12	City of Tracy	Tracy Hills KT Project (Hillview)	Tracy Hills Drive east of Corral Hollow	36-acre mixed residential development	Under Construction
13	City of Tracy	Tracy Hills Phase 1A (includes revision to 7C)	Tracy Hills Drive west of Corral Hollow	367-acre mixed residential development	Under Construction
14	City of Tracy	Tracy Hills Phase 1B	Tracy Hills Drive west of Phase 1A	434 mixed residential units part of Tracy Hill Specific Plan	Under Construction
15	City of Tracy	Tracy Hills Phase 2	Tracy Hills south of I-580	1,517 mixed residential units part of Tracy Hill Specific Plan	Approved
16	City of Tracy	Tracy Village	SEC Valpico Rd. & Corral Hollow Road	135 acre residential and shared use development	Under Construction
17	City of Tracy	Triad One Story Medical Office Building	Orchard Pkwy. & Grant Line Road	10,000 sf medical office development	Approved
18	City of Tracy	Warehouse with Office	1850 N. Chrisman Road	90,000 sf mixed office and industrial space	Approved

	Lead Agency	Project Name	Project Address	Description	Status
19	San Joaquin County	PA-0600207	12100 W. Valpico Road, Tracy, 95377	48,349 sf regional church and K-8 school	Under Construction
20	San Joaquin County	PA-0600630	11770 W. Clover Road, Tracy, 95304	A religious assembly (having a total maximum seating capacity of 249 people); conversion of an existing 1,770 sq. ft. single family residence to a prayer hall (seating capacity 90), addition of four restrooms, and 30 parking spaces. phase two to be completed within two years and to consist of a proposed 19,600 sq. ft. two-story assembly hall, and 46 additional parking spaces.	Under Construction
21	San Joaquin County	PA-1300003	26666 S. Hansen Road, Tracy, 95377	Construction of a 6,200 sf canine boarding and care facility	Under Construction
22	San Joaquin County	PA-1400084	26955 S. Hansen Road, Tracy, 95377	27,240 sf Industrial and commercial use trucking facility	Under Construction
23	San Joaquin County	PA-1800159	18201 W. Grant Line Road, Mountain House, 95391	21,683 sf commercial mixed use	Under Construction
24	San Joaquin County	PA-1800305	26106 S. Patterson Pass Road, Tracy, 95377	60,870 sf nursery sales and services – landscaping services	Under Construction
25	San Joaquin County	PA-1900127	16151 W. Grant Line Road, Tracy, 95304	60,233 sf regional religious assembly space	Under Construction
26	San Joaquin County	PA-2000003	54 W Conejo Court, Mountain House, 95391	3-acre parcel multi-use; educational services, recreation, and medical services	Under Construction
27	San Joaquin County	PA-2000065	17400 W. Bethany Road, Tracy, 95391	12,000 sf Construction services (heavy operation) facility	Under Construction
28	San Joaquin County	PA-2000083	26603 S. Hansen Road, Tracy, 95377	8,973 sf multi-use parcel; residential, automotive sales and services; and vehicle storage	Under Construction
29	San Joaquin County	PA-2000221	505 E. Arnaudo Blvd, Mountain House, 95391	304 dwelling unit multi-family residential space	Under Construction

	Lead Agency	Project Name	Project Address	Description	Status
30	San Joaquin County	PA-2100154	North side of E. Arnaudo Avenue, located between S. Tradition Street and S. Providence Street, Mountain House, 95391	176 dwelling unit multi-family residential apartments	Under Construction
31	San Joaquin County	PA-2100207	26901 S. Hansen Road, Tracy, 95377	439 space trailer parking and storage facility	Under Construction
32	San Joaquin County	PA-2100287	North side of E. Arnaudo Avenue, located between S. Tradition Street and S. Providence Street, Mountain House, 95391	176 dwelling unit multi-family residential homes	Under Construction
33	San Joaquin County	PA-2200047	270 E. Central Pkwy, Mountain House, 95391	336 dwelling unit multi-family residential homes	Under Construction

Source: International Park of Commerce Phase 2 Project Environmental Impact Report – Cumulative Approach Memo, Stantec, June 23, 2023.

Figure 12: IPC Phase 1 Roadway Improvements

Figure 13: Peak Hour Traffic Volumes and Lane Configurations – Existing Plus Approved Projects

Intersection Operations

Table 13 shows the average delay and LOS at all study intersections under Existing plus Approved Projects conditions for the weekday AM and PM peak hours. This table indicates that the following five study intersections would operate deficiently under this scenario.

- Hansen Road/Schulte Road
- Lammers Road/Byron Road
- Lammers Road/Schulte Road
- Byron Road/Grant Line Road
- Pavilion Parkway/Capital Park Drive

It should be noted that conditions at some intersections improve in this scenario relative to existing baseline conditions. This occurs due to the planned roadway improvements described above.

Table 13: Intersection Level of Service – Existing Plus Approved Projects Conditions

Intersection		Traffic Control[1]	Agency	AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS
1	Mountain House Pkwy/I-205 WB Ramps	Signal	Caltrans	12.2	B	11.8	B
2	International Pkwy/I-205 EB Ramps	Signal	Caltrans	6.9	A	7.5	A
3	International Pkwy/Promontory Pkwy	Signal	City of Tracy	53.2	D	52.8	D
4	International Pkwy/Schulte Rd	Signal	City of Tracy	38.0	D	31.5	C
5	International Pkwy/I-580 NB Ramps	Signal	Caltrans	12.3	B	13.7	B
6	International Pkwy/I-580 SB Ramps	Signal	Caltrans	11.8	B	14.4	B
7	Hansen Road/Promontory Pkwy	Signal	City of Tracy	16.0	B	41.6	D
8	Hansen Rd/Schulte Rd	Signal	City of Tracy	29.5	C	**65.4**	**E**
9	Naglee Rd/I-205 WB Ramps/Grant Line Rd	Signal	Caltrans	12.1	B	24.9	C
10	Lammers Rd/Byron Rd	Signal	City of Tracy	15.9	B	**58.5**	**E**
11	Lammers Rd/Eleventh St	Signal	City of Tracy	51.7	D	45.5	D
12	Lammers Rd/Capital Park Dr	Signal	City of Tracy	29.4	C	38.6	D
13	Lammers Rd/Schulte Rd	Signal	City of Tracy	25.3	C	**59.8**	**E**
14	Lammers Rd/Valpico Rd	Signal	City San Joaquin County	31.2	C	39.2	D
15	Corral Hollow Rd/Eleventh St	Signal	City of Tracy	29.9	C	40.7	D
16	Byron Rd/Grant Line Rd	Signal	San Joaquin County	22.9	C	**88.3**	**F**
17	Pavilion Pkwy/Schulte Rd	Signal	City of Tracy	25.2	C	7.1	A
18	Lammers Rd/Promontory Pkwy	Signal	San Joaquin County	10.6	B	26.8	C
19	Pavilion Pkwy/Promontory Pkwy	Roundabout	City of Tracy	6.4	A	10.3	B
20	Pavilion Pkwy/Capital Park Dr	AWSC	City of Tracy	**115.1 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**
21	Lammers Rd/I-205 WB Ramps	N/A	Caltrans	*Does not exist in scenario*			
22	Lammers Rd/I-205 EB Ramps	N/A	Caltrans	*Does not exist in scenario*			

Notes:
1. SSSC = Side-Street Stop-Controlled; Signal = Signalized; AWSC = All-Way Stop-Controlled
2. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
3. Whole intersection average delay reported for signalized intersections and all-way stop-controlled intersections. Side-street stop-controlled delay presented as Whole Intersection Average Delay (Worst Approach Delay). Delay calculated per HCM 6th Edition methodologies.
4. LOS designation per HCM 6th Edition.
5. The LOS standard for all intersections is LOS D. Values in **bold** indicate operations below the LOS standard.

Source: Fehr & Peers, 2024.

Existing Plus Approved Projects Plus Project

This section analyzes the effects of project buildout in combination with the traffic and roadway network improvements associated with all approved but not yet occupied projects.

Traffic Forecasts

Project buildout trips were assigned to the study roadways and intersections in accordance with the trip generation, distribution, and assignment procedures described previously. Figure 8 illustrates the macro-overall network trip distribution of project trips on the study area roadway network assuming the existing roadway plus approved project roadway network. Different trip distributions are used for automobile and truck trips, considering truck traffic restrictions on the local roadway network, as predicted by the City of Tracy travel demand model. Figure 9 presents the assignment of automobile trips to the study intersections and Figure 10 presents the assignment of truck trips to the study intersections. Figure 14 presents the total Existing plus Approved Projects plus Project peak hour traffic volumes including existing traffic counts, approved projects, and buildout of the project.

Intersection Operations

Table 14 shows the AM and PM peak hour average delay and LOS at study intersections under Existing plus Approved Projects plus Project conditions. As shown, the project would worsen already deficient operations at five intersections:

- Hansen Road/Schulte Road
- Lammers Road/Byron Road
- Lammers Road/Schulte Road
- Byron Road/Grant Line Road
- Pavilion Parkway/Capital Park Drive

It would cause an additional four intersections to degrade to deficient conditions:

- International Parkway/Promontory Parkway
- International Parkway/Schulte Road
- Lammers Road/Eleventh Street
- Lammers Road/Promontory Parkway

Of the total 22 study intersections, the project would cause the number operating deficiently to increase from five to nine.

Figure 14: Peak Hour Traffic Volumes and Lane Configurations – Existing Plus Approved Projects Plus Project

Table 14: Intersection Level of Service – Existing Plus Approved Projects Plus Project

Intersection		Traffic Control[1]	Agency	Existing Plus Approved Projects				Existing Plus Approved Projects Plus Project			
				AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
1	Mountain House Pkwy/I-205 WB Ramps	Signal	Caltrans	12.2	B	11.8	B	13.7	B	12.2	B
2	International Pkwy/I-205 EB Ramps	Signal	Caltrans	6.9	A	7.5	A	7.3	A	7.5	A
3	International Pkwy/Promontory Pkwy	Signal	City of Tracy	53.2	D	52.8	D	**>180**	**F**	**78.5**	**E**
4	International Pkwy/Schulte Rd	Signal	City of Tracy	38.0	D	31.5	C	**55.8**	**E**	38.6	D
5	International Pkwy/I-580 NB Ramps	Signal	Caltrans	12.3	B	13.7	B	39.5	D	21.2	C
6	International Pkwy/I-580 SB Ramps	Signal	Caltrans	11.8	B	14.4	B	13.5	B	18	B
7	Hansen Road/Promontory Pkwy	Signal	City of Tracy	16.0	B	41.6	D	16.8	B	44	D
8	Hansen Rd/Schulte Rd	Signal	City of Tracy	29.5	C	**65.4**	**E**	**89.8**	**F**	**232.3**	**F**
9	Naglee Rd/I-205 WB Ramps/Grant Line Rd	Signal	Caltrans	12.1	B	24.9	C	20.1	C	33.9	C
10	Lammers Rd/Byron Rd	Signal	City of Tracy	15.9	B	**58.5**	**E**	53.3	D	**134.5**	**F**
11	Lammers Rd/Eleventh St	Signal	City of Tracy	51.7	D	45.5	D	**116.3**	**F**	**99.7**	**F**
12	Lammers Rd/Capital Park Dr	Signal	City of Tracy	29.4	C	38.6	D	30.2	C	45.8	D
13	Lammers Rd/Schulte Rd	Signal	City of Tracy	25.3	C	**59.8**	**E**	46.2	D	**118.4**	**F**
14	Lammers Rd/Valpico Rd	Signal	San Joaquin County	31.2	C	39.2	D	53.6	D	43.8	D
15	Corral Hollow Rd/Eleventh St	Signal	City of Tracy	29.9	C	40.7	D	30.8	C	41	D
16	Byron Rd/Grant Line Rd	Signal	San Joaquin County	22.9	C	**88.3**	**F**	47.1	D	**101.1**	**F**
17	Pavilion Pkwy/Schulte Rd	Signal	City of Tracy	25.2	C	7.1	A	53.3	D	15.9	B
18	Lammers Rd/Promontory Pkwy	Signal	San Joaquin County	10.6	B	26.8	C	**60.4**	**E**	42.2	D
19	Pavilion Pkwy/Promontory Pkwy	Roundabout	City of Tracy	6.4	A	10.3	B	8	A	3	A
20	Pavilion Pkwy/Capital Park Dr	AWSC	City of Tracy	**115.1 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**

Intersection		Traffic Control[1]	Agency	Existing Plus Approved Projects				Existing Plus Approved Projects Plus Project			
				AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
21	Lammers Rd/I-205 WB Ramps	N/A	Caltrans	*Does not exist in scenario*							
22	Lammers Rd/I-205 EB Ramps	N/A	Caltrans	*Does not exist in scenario*							

Notes:
1. SSSC = Side-Street Stop-Controlled; Signal = Signalized; AWSC = All-Way Stop-Controlled
2. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
3. Whole intersection average delay reported for signalized intersections and all-way stop-controlled intersections. Side-street stop-controlled delay presented as Whole Intersection Average Delay (Worst Approach Delay). Delay calculated per HCM 6th Edition methodologies.
4. LOS designation per HCM 6th Edition.
5. The LOS standard for all intersections is LOS D. Values in **bold** indicate operations below the LOS standard.

Source: Fehr & Peers, 2024.

Cumulative with Eleventh St / I-205 Interchange and Pavilion Parkway Overcrossing

This section describes anticipated transportation conditions under cumulative conditions assuming the project site remains vacant (i.e., the "no project" scenario). The cumulative setting corresponds to the Year 2042, which is the horizon year of the City of Tracy travel demand model.

Traffic Forecasts

This study used a travel model to forecast CEQA VMT efficiency metrics for the project, as well as roadway segment and intersection turning movement forecasts for the informational non-CEQA level of service intersection congestion analysis. The overall approach to developing traffic demand forecasts for the project is to make use of analytical tools that are appropriate to answer the questions being raised. This study addressed auto and truck traffic patterns between three important sub-regions of California (the San Joaquin Valley, the Bay Area, and the Sacramento Valley), as well as more localized patterns of travel within the Tri-Valley area itself.

The primary travel demand model for this geographic area is the Three County Model, which is maintained by the San Joaquin Council of Governments (SJCOG). The benefits of the Three County Model are that it includes the most up to date regional land use forecasts and a truck component. However, the model does not include specific trip generation rates for warehousing uses and lacks detail in the project study area. Additionally, the model validated poorly in the project study during initial model evaluation as shown in **Table 15**. Green shading indicates the threshold was met; orange shading indicates the threshold was not met.

Table 15: 2019 Three County Model Validation

Validation Measure	AM Peak Hour	PM Peak Hour	Daily	Threshold
Volume-to-Count Ratio	1.88	1.34	0.92	+/- 10%
Percent of Links Within Deviation Allowance	35.4%	33.8%	59.3%	At least 75%
Percent Root Mean Square Error	275.8%	104.9%	32.1%	Below 40%
Correlation Coefficient	0.98	0.94	0.96	At least 0.88
Number of Validation Locations	133	133	77	

Source: Fehr & Peers, 2024.

As part of the traffic analysis process for the Tracy Hills Project and other recent development projects in the City of Tracy, the Three County Model has been progressively modified and supplemental detail has been added within the Tracy area and nearby counties. This model is referred to as the City of Tracy Model. The benefits of the City of Tracy Model are it includes significantly greater detail in the project study area and includes the Bay Area, two very important aspects given the project's location. The City of Tracy model also validated significantly better in the project study area during initial model evaluation as shown in **Table 16**. Green shading indicates the threshold was met; orange shading indicates the threshold was not met.

Table 16: 2019 City of Tracy Model Validation

Validation Measure	AM Peak Hour	PM Peak Hour	Daily	Threshold
Volume-to-Count Ratio	0.74	0.87	0.76	+/- 10%
Percent of Links Within Deviation Allowance	24.6%	32.3%	37.0%	At least 75%
Percent Root Mean Square Error	59.6%	44.3%	29.2%	Below 40%
Correlation Coefficient	0.91	0.96	0.99	At least 0.88
Number of Validation Locations	133	133	77	

Source: Fehr & Peers, 2024.

The City of Tracy Model also has some key limitations, such as also not including specific trip generation rates or friction factor curves for warehousing uses like the Three County Model and it lacks a truck component. However, it was determined that these limitations could more easily be mitigated than those of the three County Model which would require the addition of the Bay Area and significant levels of detail added in the project study area. Truck trip tables from the Three County Model for non-Central Valley Gateway land uses could easily be integrated into the City of Tracy Model, while Central Valley Gateway-generated trucks trips could be input based on the driveway count and mobile device data analysis discussed in the previous section. A review of the structure of both models indicated the City of

Tracy Model provided a more appropriate framework for the inclusion of warehousing trip generation and trip distribution patterns through hard-coded special generator trip tables.

City of Tracy Model Refinement

A locally validated subarea model for the Central Valley Gateway was meant for testing infrastructure projects with greater sensitivity to labor and freight movements to and from the Central Valley Gateway. The Tracy Hills version of the City of Tracy Model served as the starting point for the subarea model, which was then refined using empirical data collected from driveway counts and location-enabled mobile devices. A traffic analysis zone (TAZ) was added for each Central Valley Gateway building and the corresponding observed trip generation from driveway counts and factored origin-destination patterns from mobile device data were hard coded. The model was statically validated to assess the mode's predictive capabilities before it was updated to produce near term (2030) and cumulative year (2042) forecasts. The validation process compared traffic volume outputs from the base year (2019) model to observed 2019/Pre-Covid 2020 traffic count data to determine if model outputs fell within an acceptable range of error.

The California Transportation Commission established guidelines for determining whether a model is valid and acceptable for forecasting future year traffic volumes. **Table 17** presents a comparison of 2019 weekday model volumes to weekday traffic count data using the validation thresholds discussed in 2017 California Regional Transportation Plan Guidelines (California Transportation Commission, January 18, 2017) for AM peak hour, PM peak hour, and daily conditions. For this study, a target validation criterion of plus or minus 10 percent for any categories not included in the Commission guidelines was used. Green shading indicates the threshold was met.

Table 17: 2019 Refined City of Tracy Model Validation

Validation Measure	AM Peak Hour	PM Peak Hour	Daily	Threshold
Volume-to-Count Ratio	0.97	1.10	0.99	+/- 10%
Percent of Links Within Deviation Allowance	75.4%	83.1%	100.0%	At least 75%
Percent Root Mean Square Error	33.8%	31.4%	10.6%	Below 40%
Correlation Coefficient	0.91	0.96	0.99	At least 0.88
Number of Validation Locations	133	133	77	

Source: Fehr & Peers, 2024.

As shown in Table 17, the 2019 Refined City of Tracy Model highway volumes meet all 2017 California RTP model validation standards for AM peak hour, PM peak hour, and daily conditions, a critical step in ensuring a high level of confidence in the resulting traffic forecasts.

Table 18 provides the 2019 Refined City of Tracy Model validation for key freeway segments within the project study area. As shown below, the two-way 2019 model forecasts for all four freeway segments are within 10 percent of the 2019 traffic count and meet the Caltrans deviation allowance.

Table 18: 2019 Refined City of Tracy Model Validation – Key Freeway Segments

Freeway Mainline	2019 Traffic Count	2019 Model Volume	Model minus Count	Model Deviation	Meet Criteria?
I-580 (West of I-205)	161,673	158,054	-3,619	-2%	Yes
I-205 (East of I-580)	111,039	112,332	1,293	1%	Yes
I-580 (West of International Parkway)	50,634	45,723	-4,911	-10%	Yes
I-580 (East of International Parkway)	54,578	53,565	-1,013	-2%	Yes

Source: Fehr & Peers, 2024.

Table 19 provides the 2019 Refined City of Tracy Model validation for the suggested freeway validation criteria listed in the 1992 Caltrans Travel Forecasting Guidelines. As shown below, the model meets the suggested freeway validation criteria listed in the 1992 Caltrans Travel Forecasting Guidelines for all three model time periods.

Table 19: 2019 Refined City of Tracy Model Validation – 1992 Caltrans Travel Forecasting Guidelines Functional Classification Percent Error

Functional Classification	AM Peak Hour	PM Peak Hour	Daily	Threshold
Freeways	3%	-2%	-5%	7%

Source: Fehr & Peers, 2024.

Cumulative Year Travel Model Development

Once the base year (2019) Refined City of Tracy Model was validated, the 2042 land use growth, infrastructure improvements, and truck traffic forecasts from the Three County Model were incorporated to ensure consistency with the regional model projections. In order to account for the additional planned development of roughly 18.5 million square feet of warehousing development within the Central Valley Gateway by 2025, TAZs were added for each planned building within the Central Valley Gateway. Trip generation rates derived from driveway counts at existing uses were used to forecast traffic volumes generated by each planned warehousing development. Origin-destination patterns for the planned warehousing developments were derived based on a combination of existing patterns from the StreetLight analysis and on-residential land use growth patterns from the Three County Model. The origin-destination patterns were factored to match the forecasted trip generation and hard coded in the model similar to how trip generation and trip distribution for existing warehousing facilities were coded in the model.

Traffic volume forecasts were then developed for a near term (2030) scenario and a cumulative year (2042) scenario, consistent with the latest regional planning baselines.

Forecasting Procedure

Through the model evaluation and model refinement process it was determined that the Refined City of Tracy Model is the most suitable for the project. The Refined City of Tracy Model will be validated to base year (2022) conditions using the criteria in the 1992 Caltrans Forecasting Guidelines. Traffic volumes will then be forecasted using the difference method to post-process raw model volumes to generate final traffic volume forecasts.

The following ongoing regional infrastructure improvements are assumed in the refined City of Tracy Model runs. Modifications can be made per input from County staff.

1. I-205 / International Parkway interchange improvements
2. I-580 / International Parkway interchange improvements
3. I-205 / Lammers Road interchange
4. I-580 / Lammers Road interchange
5. I-580 / Hansen Road interchange
6. I-205 Managed Lanes Project
7. Schulte Road extension
8. Capital Park Drive extension
9. Promontory Parkway extension
10. Pavilion Parkway extension

The refined City of Tracy Model was also modified to include the proposed Valley Link passenger rail line, consistent with station location, ridership forecasts, and mode of access assumptions from the Final Environmental Impact Report (EIR) for Valley Link dated April 2021. The near term (2030) scenario assumes the initial operating segment (IOS) with 2,636 average weekday boardings at the Mountain House station. The cumulative year (2042) scenario assumes the full project implementation with 1,231 boardings at the Mountain House station. Both scenarios assume the Mountain House station alternative location west of Hansen Road south of Safeway, which is currently the preferred alternative.

For these reasons, the local intersection forecasts were developed using the refined City of Tracy travel demand model. This tool was found to be the most appropriate for the development of intersection turning movement forecasts under the various scenarios being evaluated in this study. Project VMT is assessed using the SJCOG travel demand model as required by the County's guidelines. The SJCOG travel demand model is an appropriate tool for assessing project VMT and provides an "apples to apples" comparison to the approved standards of significance relative to VMT.

Cumulative Scenarios

To provide information to local decision-makers, two cumulative scenarios have been evaluated, as follows:

- Cumulative (Year 2042) – with Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing
- Cumulative (Year 2042) – without Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing

Both cumulative scenarios are assessed with and without the proposed project. The first cumulative scenario includes all the improvements and modeling assumptions described above. In the second scenario, the new interchange at Eleventh Street/I-205 and the extension of Pavilion Parkway over I-205 are not included. The intent of the second analysis is to model the localized traffic effects if these improvements are not funded and implemented. **Figure 15** presents the AM and PM peak hour traffic volumes under the Cumulative with Eleventh Street/-205 and the extension of Pavilion Parkway over I-205 scenario.

Figure 15: Peak Hour Traffic Volumes and Lane Configurations – Cumulative with Eleventh St / I-205 Interchange and Pavilion Parkway Overcrossing

Intersection Operations

Table 20 shows the average delay and LOS at study intersections under the Cumulative with Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing scenario for the AM and PM peak hours. This table indicates that 13 study intersections would operate deficiently under this condition based on the applicable level of service standards.

- International Parkway/Promontory Parkway
- Hansen Road/Promontory Parkway
- Hansen Road/Schulte Road
- Lammers Road/Byron Road
- Lammers Road/Eleventh Street
- Lammers Road/Capital Park Drive
- Lammers Road/Schulte Road
- Lammers Road/Valpico Road
- Corral Hollow Road/Eleventh Street
- Pavilion Parkway/Schulte Road
- Lammers Road/Promontory Parkway
- Pavilion Parkway/Promontory Parkway
- Pavilion Parkway/Capital Park Drive

Table 20: Intersection Level of Service – Cumulative with Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing

	Intersection	Traffic Control[1]	Agency	AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS
1	Mountain House Pkwy/I-205 WB Ramps	Signal	Caltrans	22.7	C	29.6	C
2	International Pkwy/I-205 EB Ramps	Signal	Caltrans	8.9	A	10.0	B
3	International Pkwy/Promontory Pkwy	Signal	City of Tracy	48.2	D	**93.9**	**F**
4	International Pkwy/Schulte Rd	Signal	City of Tracy	48.2	D	38.9	D
5	International Pkwy/I-580 NB Ramps	Signal	Caltrans	19.1	B	39.6	C
6	International Pkwy/I-580 SB Ramps	Signal	Caltrans	17.6	B	18.6	B
7	Hansen Road/Promontory Pkwy	Signal	City of Tracy	19.4	B	**>180**	**F**
8	Hansen Rd/Schulte Rd	Signal	City of Tracy	**139.0**	**F**	**>180**	**F**
9	Naglee Rd/I-205 WB Ramps/Grant Line Rd	Signal	Caltrans	14.8	B	48.4	D
10	Lammers Rd/Byron Rd	Signal	City of Tracy	13.5	B	**>180**	**F**
11	Lammers Rd/Eleventh St	Signal	City of Tracy	33.6	C	**64.2**	**E**
12	Lammers Rd/Capital Park Dr	Signal	City of Tracy	30.2	C	**60.5**	**E**
13	Lammers Rd/Schulte Rd	Signal	City of Tracy	**73.2**	**E**	**>180**	**F**
14	Lammers Rd / Valpico Rd	Signal	San Joaquin County	**90.6**	**F**	**137.0**	**F**
15	Corral Hollow Rd/Eleventh St	Signal	City of Tracy	36.1	D	**71.6**	**E**
16	Byron Rd/Grant Line Rd	N/A	San Joaquin County	*Does not exist in scenario*			
17	Pavilion Pkwy/Schulte Rd	Signal	City of Tracy	**>180**	**F**	**>180**	**F**
18	Lammers Rd/Promontory Pkwy	Signal	San Joaquin County	22.3	C	**61.7**	**E**
19	Pavilion Pkwy/Promontory Pkwy	SSSC	City of Tracy	32.7	D	**>180**	**F**
20	Pavilion Pkwy/Capital Park Dr	AWSC	City of Tracy	**>180 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**
21	Lammers Rd/I-205 WB Ramps	Signal	Caltrans	31.3	C	41.2	D
22	Lammers Rd/I-205 EB Ramps	Signal	Caltrans	2.3	A	21.3	C

Notes:

1. SSSC = Side-Street Stop-Controlled; Signal = Signalized; AWSC = All-Way Stop-Controlled
2. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
3. Whole intersection average delay reported for signalized intersections and all-way stop-controlled intersections. Side-street stop-controlled delay presented as Whole Intersection Average Delay (Worst Approach Delay). Delay calculated per HCM 6th Edition methodologies.
4. LOS designation per HCM 6th Edition.
5. The LOS standard for all intersections is LOS D. Values in **bold** indicate operations below the LOS standard.

Source: Fehr & Peers, 2024.

Cumulative Plus Project with Eleventh St / I-205 Interchange and Pavilion Parkway Overcrossing

This section analyzes the effects of project buildout along with all cumulative development and roadway improvements, including the Eleventh Street/I-205 Interchange and the Pavilion Parkway overcrossing of I-205.

Traffic Forecasts

Figure 16 illustrates the project trip distribution under Cumulative year (2042) conditions with the Eleventh Street/I-205 Interchange and the Pavilion Parkway overcrossing. Project traffic is forecasted to primarily use West Schulte Road, Lammers Road, and the planned Pavilion Parkway in this scenario. Different trip distributions are used for automobile and truck trips, considering truck traffic restrictions on the local roadway network, as predicted by the City of Tracy travel demand model. **Figure 17** presents the assignment of automobile trips to the study intersections and **Figure 18** presents the assignment of truck trips to the study intersections. **Figure 19** presents the total Cumulative year (2042) conditions with the Eleventh Street/I-205 Interchange and the Pavilion Parkway overcrossing peak hour traffic volumes.

Intersection Operations

Table 21 shows the AM and PM peak hour average delay and LOS at study intersections under Cumulative plus Project with Eleventh Street/I-205 Interchange and Pavilion Parkway overcrossing. As shown, the project would worsen already deficient PM peak hour operations at 13 intersections:

- International Parkway/Promontory Parkway
- Hansen Road/Promontory Parkway
- Hansen Road/Schulte Road
- Lammers Road/Byron Road
- Lammers Road/Eleventh Street
- Lammers Road/Capital Park Drive
- Lammers Road/Schulte Road
- Lammers Road/Valpico Road
- Corral Hollow Road/Eleventh Street
- Pavilion Parkway/Schulte Road
- Lammers Road/Promontory Parkway
- Pavilion Parkway/Promontory Parkway
- Pavilion Parkway/Capital Park Drive

It would additionally cause the intersections at International Parkway/Schulte Road and Lammers Road/I-205 WB Ramps to degrade to deficient conditions.

Of the 21 total study intersections, the project would cause the number operating deficiently to worsen from 13 to 15.

Figure 16: Cumulative Year (2042) with Eleventh St / I-205 Interchange and Pavilion Parkway Overcrossing Project Trip Distribution

Figure 17: Cumulative with Eleventh St / I-205 Interchange and Pavilion Parkway Overcrossing Automobile Project Trip Assignment

Figure 18: Cumulative with Eleventh St / I-205 Interchange and Pavilion Parkway Overcrossing Truck Project Trip Assignment

Figure 19: Peak Hour Traffic Volumes and Lane Configurations – Cumulative Plus Project with Eleventh St / I-205 Interchange and Pavilion Parkway Overcrossing

Table 21: Intersection Level of Service – Cumulative Plus Project with Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing

	Intersection	Traffic Control[1]	Agency	Cumulative with Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing				Cumulative plus Project with Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing			
				AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
1	Mountain House Pkwy/I-205 WB Ramps	Signal	Caltrans	22.7	C	29.6	D	22.8	C	41.1	D
2	International Pkwy/I-205 EB Ramps	Signal	Caltrans	8.9	A	10.0	B	9.4	A	10.6	B
3	International Pkwy/Promontory Pkwy	Signal	City of Tracy	48.2	D	**93.9**	**F**	51.8	D	**98.1**	**F**
4	International Pkwy/Schulte Rd	Signal	City of Tracy	48.2	D	38.9	D	**57.0**	**E**	51.0	
5	International Pkwy/I-580 NB Ramps	Signal	Caltrans	19.1	B	39.6	C	34.0	C	53.3	D
6	International Pkwy/I-580 SB Ramps	Signal	Caltrans	17.6	B	18.6	B	12.9	B	19.3	B
7	Hansen Road/Promontory Pkwy	Signal	City of Tracy	19.4	B	**>180**	**F**	19.7	B	**>180**	**F**
8	Hansen Rd/Schulte Rd	Signal	City of Tracy	**139.0**	**F**	**>180**	**F**	**179.2**	**F**	**>180**	**F**
9	Naglee Rd/I-205 WB Ramps/Grant Line Rd	Signal	Caltrans	14.8	B	48.4	D	14.8	B	48.4	D
10	Lammers Rd/Byron Rd	Signal	City of Tracy	13.5	B	**>180**	**F**	13.5	C	**>180**	**F**
11	Lammers Rd/Eleventh St	Signal	City of Tracy	33.6	C	**64.2**	**E**	35.6	D	**79.4**	**E**
12	Lammers Rd/Capital Park Dr	Signal	City of Tracy	30.2	C	**60.5**	**E**	30.4	C	**71.4**	**E**
13	Lammers Rd/Schulte Rd	Signal	City of Tracy	**73.2**	**E**	**>180**	**F**	**112.5**	**F**	**>180**	**F**
14	Lammers Rd / Valpico Rd	Signal	San Joaquin County	**90.6**	**F**	**137.0**	**F**	**104.6**	**F**	**146.0**	**F**
15	Corral Hollow Rd/Eleventh St	Signal	City of Tracy	36.1	D	**71.6**	**E**	36.4	D	**72.0**	**E**
16	Byron Rd/Grant Line Rd	N/A	San Joaquin County	*Does not exist in scenario*							

	Intersection	Traffic Control[1]	Agency	Cumulative with Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing				Cumulative plus Project with Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing			
				AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
17	Pavilion Pkwy/Schulte Rd	Signal	City of Tracy	**>180**	**F**	**>180**	**F**	**>180**	**F**	**>180**	**F**
18	Lammers Rd/Promontory Pkwy	Signal	San Joaquin County	22.3	C	**61.7**	**E**	33.0	C	**67.9**	**E**
19	Pavilion Pkwy/Promontory Pkwy	SSSC	City of Tracy	32.7	D	**>180**	**F**	**152.0**	**F**	**>180**	**F**
20	Pavilion Pkwy/Capital Park Dr	AWSC	City of Tracy	**>180 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**
21	Lammers Rd/I-205 WB Ramps	Signal	Caltrans	31.3	C	41.2	D	35.0	D	**63.4**	**F**
22	Lammers Rd/I-205 EB Ramps	Signal	Caltrans	2.3	A	21.3	C	2.0	A	20.2	C

Notes:
1. SSSC = Side-Street Stop-Controlled; Signal = Signalized; AWSC = All-Way Stop-Controlled
2. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
3. Whole intersection average delay reported for signalized intersections and all-way stop-controlled intersections. Side-street stop-controlled delay presented as Whole Intersection Average Delay (Worst Approach Delay). Delay calculated per HCM 6th Edition methodologies.
4. LOS designation per HCM 6th Edition.
5. The LOS standard for all intersections is LOS D. Values in **bold** indicate operations below the LOS standard.

Source: Fehr & Peers, 2024.

Cumulative without Eleventh St / I-205 Interchange and Pavilion Parkway Overcrossing

This section describes anticipated transportation conditions under Cumulative year 2042 conditions assuming the project site remains vacant (i.e., a "no build" scenario). However, unlike the prior scenario, this assessment does not assume the following improvements:

- Eleventh Street/I-205 Interchange: The Eleventh Street/I-205 Interchange will remain as the existing partial interchange in the cumulative scenario.
- Pavilion Parkway Overcrossing: Pavilion Parkway would not extend northward to cross over I-205.

The intent of this scenario is to model the localized cumulative traffic effects if these improvements are not funded and implemented. **Figure 20** illustrates the peak hour traffic volumes and lane configurations for the scenario.

Figure 20: Peak Hour Traffic Volumes and Lane Configurations – Cumulative without Eleventh St / I-205 Interchange and Pavilion Parkway Overcrossing

Intersection Operations

Table 22 shows the average delay and LOS at all study intersections under Cumulative No Project conditions without the Eleventh Street/I-205 Interchange and Pavilion Parkway overcrossing for the AM and PM peak hours. This table indicates that 15 study intersections would operate deficiently under this scenario:

- International Parkway/Promontory Parkway
- Hansen Road/Promontory Parkway
- Hansen Road/Schulte Road
- Naglee Road/I-205 WB Ramps/Grant Line Road
- Lammers Road/Byron Road
- Lammers Road/Eleventh Street
- Lammers Road/Capital Park Drive
- Lammers Road/Schulte Road
- Lammers Road/Valpico Road
- Corral Hollow Road/Eleventh Street
- Byron Road/Grant Line Road
- Pavilion Parkway/Schulte Road
- Lammers Road/Promontory Parkway
- Pavilion Parkway/Promontory Parkway
- Pavilion Parkway/Capital Park Drive

Table 22: Intersection Level of Service – Cumulative without Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing

	Intersection	Traffic Control[1]	Agency	AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS
1	Mountain House Pkwy/I-205 WB Ramps	Signal	Caltrans	30.7	C	50.7	D
2	International Pkwy/I-205 EB Ramps	Signal	Caltrans	9.2	A	14.6	B
3	International Pkwy/Promontory Pkwy	Signal	City of Tracy	36.3	D	**126.9**	**F**
4	International Pkwy/Schulte Rd	Signal	City of Tracy	51.5	D	37.7	D
5	International Pkwy/I-580 NB Ramps	Signal	Caltrans	19.1	B	29.6	C
6	International Pkwy/I-580 SB Ramps	Signal	Caltrans	17.6	B	18.7	B
7	Hansen Road/Promontory Pkwy	Signal	City of Tracy	16.8	B	**>180**	**F**
8	Hansen Rd/Schulte Rd	Signal	City of Tracy	**100.7**	**F**	**>180**	**F**
9	Naglee Rd/I-205 WB Ramps/Grant Line Rd	Signal	Caltrans	16.0	B	**65.9**	**E**
10	Lammers Rd/Byron Rd	Signal	City of Tracy	**58.9**	**E**	**>180**	**F**
11	Lammers Rd/ Eleventh St	Signal	City of Tracy	50.6	D	**74.1**	**E**
12	Lammers Rd/Capital Park Dr	Signal	City of Tracy	32.1	C	**70.4**	**F**
13	Lammers Rd/Schulte Rd	Signal	City of Tracy	**77.1**	**E**	**>180**	**F**
14	Lammers Rd / Valpico Rd	Signal	San Joaquin County	**90.6**	**F**	**134.7**	**F**
15	Corral Hollow Rd/ Eleventh St	Signal	City of Tracy	49.0	D	**91.8**	**F**
16	Byron Rd/Grant Line Rd	Signal	San Joaquin County	**>180**	**F**	**>180**	**F**
17	Pavilion Pkwy/Schulte Rd	Signal	City of Tracy	**135.9**	**F**	34.1	C
18	Lammers Rd/Promontory Pkwy	Signal	San Joaquin County	28.7	C	**70.8**	**E**
19	Pavilion Pkwy/Promontory Pkwy	SSSC	City of Tracy	**66.1**	**F**	**>180**	**F**
20	Pavilion Pkwy/Capital Park Dr	AWSC	City of Tracy	**>180 (>180)**	**F**	**>180 (>180)**	**F**
21	Lammers Rd/I-205 WB Ramps	Signal	Caltrans	*Does not exist in scenario*			
22	Lammers Rd/I-205 EB Ramps	Signal	Caltrans	*Does not exist in scenario*			

Notes:
1. SSSC = Side-Street Stop-Controlled; Signal = Signalized; AWSC = All-Way Stop-Controlled
2. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
3. Whole intersection average delay reported for signalized intersections and all-way stop-controlled intersections. Side-street stop-controlled delay presented as Whole Intersection Average Delay (Worst Approach Delay). Delay calculated per HCM 6th Edition methodologies.
4. LOS designation per HCM 6th Edition.
5. The LOS standard for all intersections is LOS D. Values in **bold** indicate operations below the LOS standard.

Source: Fehr & Peers, 2024.

Cumulative Plus Project without Eleventh St / I-205 Interchange and Pavilion Parkway Overcrossing

This section analyzes the effects of project buildout along with all cumulative development and roadway improvements, without the Eleventh Street/I-205 Interchange and the Pavilion Parkway overcrossing of I-205.

Traffic Forecasts

Figure 21 illustrates the project trip distribution under Cumulative year (2042) conditions without the Eleventh Street/I-205 Interchange and the Pavilion Parkway overcrossing. Different trip distributions are used for automobile and truck trips, considering truck traffic restrictions on the local roadway network, as predicted by the City of Tracy travel demand model. **Figure 22** presents the assignment of automobile trips to the study intersections and **Figure 23** presents the assignment of truck trips to the study intersections. **Figure 24** presents the total Cumulative year (2042) conditions without the Eleventh Street/I-205 Interchange and the Pavilion Parkway overcrossing peak hour traffic volumes.

Figure 21: Cumulative (2042) without Eleventh St / I-205 Interchange and Pavilion Parkway Overcrossing Project Trip Distribution

Figure 22: Cumulative without Eleventh St / I-205 Interchange and Pavilion Parkway Overcrossing Project Vehicle Trip Assignment

Figure 23: Cumulative without Eleventh St / I-205 Interchange and Pavilion Parkway Overcrossing Project Truck Trip Assignment

Figure 24: Peak Hour Traffic Volumes and Lane Configurations – Cumulative Plus Project without Eleventh St / I-205 Interchange and Pavilion Parkway Overcrossing

Intersection Operations

Table 23 shows the AM and PM peak hour average delay and LOS at study intersections under Cumulative plus Project without Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing. As shown, the project would worsen already deficient peak hour operations at 15 intersections:

- International Parkway/Promontory Parkway
- Hansen Road/Promontory Parkway
- Hansen Road/Schulte Road
- Naglee Road/I-205 WB Ramps/Grant Line Road
- Lammers Road/Byron Road
- Lammers Road/Eleventh Street
- Lammers Road/Capital Park Drive
- Lammers Road/Schulte Road
- Lammers Road/Valpico Road
- Corral Hollow Road/Eleventh Street
- Byron Road/Grant Line Road
- Pavilion Parkway/Schulte Road
- Lammers Road/Promontory Parkway
- Pavilion Parkway/Promontory Parkway
- Pavilion Parkway/Capital Park Drive

It would additionally cause the intersections at International Parkway/Schulte Road and International Parkway/I-580 NB Ramps to degrade to deficient conditions. Of the 22 total study intersections, the project would cause the number operating deficiently to worsen from 15 to 17.

Table 23: Intersection Level of Service – Cumulative Plus Project without Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing

	Intersection	Traffic Control[1]	Agency	Cumulative without Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing				Cumulative plus Project without Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing			
				AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
1	Mountain House Pkwy/I-205 WB Ramps	Signal	Caltrans	30.7	C	50.7	D	40	D	52.9	D
2	International Pkwy/I-205 EB Ramps	Signal	Caltrans	9.2	A	14.6	B	10	B	17.5	B
3	International Pkwy/Promontory Pkwy	Signal	City of Tracy	36.3	D	**126.9**	**F**	**72.2**	**E**	**157.0**	**F**
4	International Pkwy/Schulte Rd	Signal	City of Tracy	51.5	D	37.7	D	**73.1**	**E**	**61.0**	**E**
5	International Pkwy/I-580 NB Ramps	Signal	Caltrans	19.1	B	29.6	C	34	C	**56.6**	**E**
6	International Pkwy/I-580 SB Ramps	Signal	Caltrans	17.6	B	18.7	B	12.9	B	19.6	B
7	Hansen Road/Promontory Pkwy	Signal	City of Tracy	16.8	B	**170.1**	**F**	17.7	B	**174.0**	**F**
8	Hansen Rd/Schulte Rd	Signal	City of Tracy	**100.7**	**F**	**>180**	**F**	**>180**	**F**	**>180**	**F**
9	Naglee Rd/I-205 WB Ramps/Grant Line Rd	Signal	Caltrans	16.0	B	**65.9**	**E**	23.4	C	**84.9**	**F**
10	Lammers Rd/Byron Rd	Signal	City of Tracy	**58.9**	**E**	**>180**	**F**	**134.7**	**F**	**>180**	**F**
11	Lammers Rd/ Eleventh St	Signal	City of Tracy	50.6	D	**74.1**	**E**	**72.1**	**E**	**83.6**	**F**
12	Lammers Rd/Capital Park Dr	Signal	City of Tracy	32.1	C	**70.4**	**F**	28.8	C	**102.1**	**F**
13	Lammers Rd/Schulte Rd	Signal	City of Tracy	**77.1**	**E**	**>180**	**F**	**101.5**	**F**	**>180**	**F**
14	Lammers Rd / Valpico Rd	SSSC	San Joaquin County	**90.6**	**F**	**134.7**	**F**	**107.2**	**F**	**145.7**	**F**
15	Corral Hollow Rd/ Eleventh St	Signal	City of Tracy	49.0	D	**91.8**	**F**	41.0	D	**92.1**	**F**
16	Byron Rd/Grant Line Rd	Signal	San Joaquin County	**>180**	**F**	**>180**	**F**	**>180**	**F**	**>180**	**F**

	Intersection	Traffic Control[1]	Agency	Cumulative without Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing				Cumulative plus Project without Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing			
				AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
17	Pavilion Pkwy/Schulte Rd	Signal	City of Tracy	**135.9**	**F**	34.1	C	**153.2**	**F**	**>180**	**F**
18	Lammers Rd/Promontory Pkwy	Signal	San Joaquin County	28.7	C	**70.8**	**E**	37.6	D	**85.0**	**F**
19	Pavilion Pkwy/Promontory Pkwy	SSSC	City of Tracy	**66.1**	**F**	**>180**	**F**	**70.4**	**F**	**>180**	**F**
20	Pavilion Pkwy/Capital Park Dr	AWSC	City of Tracy	**>180**	**F**	**>180**	**F**	**>180**	**F**	**>180**	**F**
21	Lammers Rd/I-205 WB Ramps	Signal	Caltrans	*Does not exist in scenario*							
22	Lammers Rd/I-205 EB Ramps	Signal	Caltrans	*Does not exist in scenario*							

Notes:
1. SSSC = Side-Street Stop-Controlled; Signal = Signalized; AWSC = All-Way Stop-Controlled
2. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
3. Whole intersection average delay reported for signalized intersections and all-way stop-controlled intersections. Side-street stop-controlled delay presented as Whole Intersection Average Delay (Worst Approach Delay). Delay calculated per HCM 6th Edition methodologies.
4. LOS designation per HCM 6th Edition.
5. The LOS standard for all intersections is LOS D. Values in **bold** indicate operations below the LOS standard.

Source: Fehr & Peers, 2024.

Vehicle Queues

Vehicle queuing is analyzed for freeway off-ramps that could potentially be adversely affected by the project. Traffic volumes, lane configurations, vehicle fleet mix, traffic controls, and other inputs were evaluated within the intersection operations analysis, which then reports the 95th percentile queues for critical movements. This queue, which is often used for design purposes (along with the need for deceleration) represents the length of queued traffic for which there is a five percent or less chance that the actual queue would be greater. Because trucks represent a considerable portion of the vehicle fleet mix in the project vicinity, the proportion of trucks and average lengths are reflected in the analysis. This methodology is consistent with procedures described in the *Highway Capacity Manual (HCM*) (Transportation Research Board, 2022).

Table 24 illustrates the anticipated 95th percentile queue lengths at the study freeway off-ramps for Existing and Existing plus Project conditions. While the project would increase queue lengths at some locations, no queue was found to spill back into the freeway mainline.

Table 24: Existing plus Project – 95th Percentile Queue Lengths – Freeway Off-Ramps

Intersection		Movement	Storage	Existing Conditions		Existing plus Project	
				AM Peak[1]	PM Peak[1]	AM Peak[1]	PM Peak[1]
1	I-205 Westbound Off Ramp	WBL	700	825	225	1,075	300
		WBT					
		WBR	1,500	50	50	50	50
2	I-205 Eastbound Off-Ramp	EBL	1,580	25	25	25	50
		EBT					
		EBR	460	50	75	75	25
5	I-580 Eastbound Off-Ramp at Patterson Pass / International Parkway	EBL	1,000	575	50	575	50
		EBT					
		EBR	350	100	125	150	275
6	I-580 Westbound Off-Ramp at Patterson Pass / International Parkway	WBL	1,100	200	250	800	750
		WBT					
		WBR	70	100	100	25	100

Notes:
1. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
Source: Fehr & Peers, 2024.

Table 25 illustrates the anticipated 95th percentile queue lengths at the study freeway off-ramps for Existing plus Approved Projects and Existing plus Approved Projects plus Project conditions. While the project would increase queue lengths at some locations, no queue was found to spill back into the freeway mainline.

Table 25: Existing plus Approved Projects plus Project – 95th Percentile Queue Lengths – Freeway Off-Ramps

Intersection		Movement	Storage	Existing plus Approved Projects Conditions		Existing plus Approved Projects plus Project	
				AM Peak[1]	PM Peak[1]	AM Peak[1]	PM Peak[1]
1	I-205 Westbound Off Ramp	WBL	720	250	175	300	225
		WBT	1,800	300	200	375	250
		WBR	1,800	100	225	100	250
2	I-205 Eastbound Off-Ramp	EBL	1,580	50	125	50	125
		EBT		75	125	125	125
		EBR	460	75	100	125	100
5	I-580 Eastbound Off-Ramp at Patterson Pass / International Parkway	EBL	1,000	25	25	25	25
		EBR	450	25	25	25	25
6	I-580 Westbound Off-Ramp at Patterson Pass / International Parkway	WBL	1,100	25	25	25	25
		WBR	600	50	100	175	100

Notes:
1. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
Source: Fehr & Peers, 2024.

Table 26 illustrates the anticipated 95th percentile queue lengths at the study freeway off-ramps for the Cumulative with Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing scenario and Cumulative with Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing plus Project scenario. While the project would increase queue lengths at some locations, no queue was found to spill back into the freeway mainline.

Table 26: Cumulative with Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing – 95th Percentile Queue Lengths – Freeway Off-Ramps

Intersection		Movement	Storage	Cumulative with Eleventh St/I-205 Interchange Conditions		Cumulative with Eleventh St/I-205 Interchange plus Project	
				AM Peak[1]	PM Peak[1]	AM Peak[1]	PM Peak[1]
1	I-205 Westbound Off Ramp	WBL	720	375	250	375	250
		WBT	1,800	450	275	450	275
		WBR	1,800	475	500	475	500
2	I-205 Eastbound Off-Ramp	EBL	1,580	75	150	75	150
		EBT		125	150	125	150
		EBR	460	125	125	125	125
5	I-580 Eastbound Off-Ramp at Patterson Pass / International Parkway	EBL	1,000	25	25	25	25
		EBR	450	125	175	200	200
6	I-580 Westbound Off-Ramp at Patterson Pass / International Parkway	WBL	1,100	25	25	25	25
		WBR	600	25	50	25	50

Notes:
1. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
Source: Fehr & Peers, 2024.

Table 27 illustrates the anticipated 95th percentile queue lengths at the study freeway off-ramps for the Cumulative without Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing scenario and Cumulative without Eleventh Street/I-205 Interchange and Pavilion Parkway Overcrossing plus Project scenario. While the project would increase queue lengths at some locations, no queue was found to spill back into the freeway mainline.

Table 27: Cumulative without Eleventh St/I-205 Interchange and Pavilion Parkway Overcrossing – 95th Percentile Queue Lengths – Freeway Off-Ramps

Intersection		Movement	Storage	Cumulative without Eleventh St/I-205 Interchange Conditions		Cumulative without Eleventh St/I-205 Interchange plus Project	
				AM Peak[1]	PM Peak[1]	AM Peak[1]	PM Peak[1]
1	I-205 Westbound Off Ramp	WBL	720	600	275	725	300
		WBT	1,800	700	300	875	350
		WBR	1,800	475	575	475	575
2	I-205 Eastbound Off-Ramp	EBL	1,580	75	175	75	175
		EBT		125	175	150	175
		EBR	460	125	150	125	150
5	I-580 Eastbound Off-Ramp at Patterson Pass / International Parkway	EBL	1,000	25	50	25	50
		EBR	450	125	125	205	225
6	I-580 Westbound Off-Ramp at Patterson Pass / International Parkway	WBL	1,100	25	25	25	25
		WBR	600	25	25	25	25

Notes:
1. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
Source: Fehr & Peers, 2024.

7. Intersection Improvement Recommendations

The prior section of this report described the results of the intersection analysis conducted to evaluate the transportation related effects of the proposed project on the local roadway network. Deficient operations were identified at locations wherein levels of service were found to not meet local standards. In this section, the intersection improvements required to bring intersection operations into compliance with those standards are described. The sections below identify the needed improvements under each of the four "with project" scenarios evaluated in this study.

Existing Plus Project Recommended Improvements

Table 28 displays the recommended roadway improvements necessary to restore operations to an acceptable LOS D under Existing plus Project conditions. **Table 29** illustrates the operational effectiveness of these improvements to deficient intersections.

Table 28: Recommended Improvements to Address Operational Deficiencies – Existing Plus Project Buildout Conditions

	Facility	Lead Agency	Description of Improvement(s)
1	Mountain House Pkwy/I-205 WB Ramps	Caltrans	Modify existing signal timing splits.
4	International Pkwy/Schulte Rd	City of Tracy	Modify existing signal timing splits. Add overlap signal for northbound right-turn movement.
5	International Pkwy/I-580 NB Ramps	Caltrans	Implement the programmed interchange improvement (DDI)
6	International Pkwy/I-580 SB Ramps	Caltrans	Implement the programmed interchange improvement (DDI)
10	Lammers Rd/Byron Rd	City of Tracy	Construct eastbound right-turn pocket. Modify existing signal timing splits.
13	Lammers Rd/Schulte Rd	City of Tracy	Construct southbound right-turn pocket. Modify existing signal timing splits.

Source: Fehr & Peers, 2024.

Table 29: Intersection Operational Improvements – Existing Plus Project Buildout Conditions

	Intersection	Traffic Control[1]	Agency	Existing Conditions				Existing Plus Project Conditions							
								Without Improvements				With Improvements[4]			
				AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
1	Mountain House Pkwy/I-205 WB Ramps	Signal	Caltrans	34.3	C	12.3	B	**90**	**F**	14.4	B	42.1	D		
4	International Pkwy/Schulte Rd	Signal	City of Tracy	39.5	D	29.0	C	**78.6**	**E**	39.6	D	43.9	D	33.6	C
5	International Pkwy/I-580 NB Ramps	Signal	Caltrans	49.4	D	**55.9**	**E**	**>180**	**F**	**106.0**	**F**	15.4	B	17.8	B
6	International Pkwy/I-580 SB Ramps	Signal	Caltrans	34.3	C	47.6	D	**>180**	**F**	**>180**	**F**	22.1	C	38.7	D
10	Lammers Rd/Byron Rd	Signal	City of Tracy	9.7	B	**67.4**	**E**	15.6	B	**168.3**	**F**	11.9	B	18.5	B
13	Lammers Rd/Schulte Rd	Signal	City of Tracy	20.6	C	11.9	B	**132.6**	**F**	28.4	C	33.5	C	19.2	B

Notes:
1. Signal = Signalized
2. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
3. The overall average intersection control delay is reported in seconds per vehicle for signalized intersections. For side-street stop controlled intersections, the average control delay/for the movement with the greatest delay is shown in parentheses, while the average delay/for the entire intersection is shown not in parentheses.
4. The LOS standard for all intersections is LOS D. Values in **bold** indicate operations below the LOS standard.

Source: Fehr & Peers, 2024.

Existing Plus Approved Projects Plus Project Recommended Improvements

Table 30 displays the recommended roadway improvements necessary to restore operations to acceptable levels under Existing plus Approved Projects plus Project conditions. **Table 31** shows the operational effectiveness of these improvements on deficient intersections.

Table 30: Recommended Improvements to Address Operational Deficiencies – Existing Plus Approved Projects Plus Project Conditions

	Facility	Lead Agency	Description of Improvement(s)
3	International Pkwy/Promontory Pkwy	City of Tracy	Construct a second southbound left-turn lane. Modify existing signal timing cycle length.
4	International Pkwy/Schulte Rd	City of Tracy	Modify existing signal timing splits. Add overlap signal for northbound right-turn movement.
8	Hansen Rd/Schulte Rd	City of Tracy	Construct following geometries: • Second eastbound left-turn lane • Second westbound left-turn lane • Second westbound through lane • Second southbound left-turn lane • Northbound right-turn pocket Modify existing signal timing splits and cycle length. Add overlap signal for northbound right-turn movement.
10	Lammers Rd/Byron Rd	City of Tracy	Construct eastbound right-turn pocket. Modify existing signal timing splits.
13	Lammers Rd/Schulte Rd	City of Tracy	Construct southbound right-turn pocket and second southbound through lane. Modify existing signal timing splits and cycle length.
16	Byron Rd/Grant Line Rd	San Joaquin County	Construct second southbound left-turn pocket. Modify existing signal timing splits and cycle length.
18	Lammers Rd/Promontory Pkwy	San Joaquin County	Construct northbound left-turn pocket and southbound right-turn pocket. Modify existing signal timing splits and cycle length.
20	Pavilion Pkwy/Capital Park Dr	City of Tracy	Install signal. Construct following geometries: • Northbound right-turn pocket • Eastbound right-turn pocket • Westbound left-turn pocket

Source: Fehr & Peers, 2024.

Table 31: Intersection Operational Improvements – Existing Plus Approved Projects Plus Project Buildout Conditions

	Intersection	Traffic Control[1]	Agency	Existing No Project Conditions				Existing Plus Approved Projects Plus Project Conditions							
								Without Improvements				With Improvements[4]			
				AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[2]	LOS
3	International Pkwy/ Promontory Pkwy	Signal	City of Tracy	53.2	D	52.8	D	**>180**	**F**	**78.5**	**E**	29.2	C	49.2	D
4	International Pkwy/ Schulte Rd	Signal	City of Tracy	38.0	D	31.5	C	**55.8**	**E**	38.6	D	52.6	D	36.3	D
8	Hansen Rd/Schulte Rd	Signal	City of Tracy	29.5	C	**65.4**	**E**	**89.8**	**F**	**>180**	**F**	34.3	C	37.9	D
10	Lammers Rd/Byron Rd	Signal	City of Tracy	15.9	B	**58.5**	**E**	46.2	D	118.4	F	12.9	B	29.8	C
13	Lammers Rd/Schulte Rd	Signal	City of Tracy	25.3	C	**59.8**	**E**	46.2	D	**118.4**	**F**	12.9	B	31.6	C
16	Byron Rd/Grant Line Rd	Signal	San Joaquin County	22.9	C	**88.3**	**F**	47.1	D	**101.1**	**F**			41.7	D
18	Lammers Rd/ Promontory Pkwy	Signal	San Joaquin County	10.6	B	26.8	C	**60.4**	**E**	42.4	D	13.9	B	48.5	D
20	Pavilion Pkwy/Capital Park Dr	AWSC	City of Tracy	**115.1 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**	20.5	C	42.7	D

Notes:

1. SSSC = Side-Street Stop-Controlled; Signal = Signalized; AWSC = All-Street Stop-Controlled
2. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
3. The overall average intersection control delay is reported in seconds per vehicle for signalized intersections. For side-street stop controlled intersections, the average control delay/for the movement with the greatest delay is shown in parentheses, while the average delay/for the entire intersection is shown not in parentheses.'
4. The LOS standard for all intersections is LOS D. Values in **bold** indicate operations below the LOS standard.

Source: Fehr & Peers, 2024.

Cumulative with Eleventh St/I-205 Interchange and Pavilion Parkway Plus Project Recommended Improvements

Table 32 displays the recommended roadway improvements necessary to restore operations to an acceptable level under the Cumulative with Eleventh Street/I-205 Interchange and Pavilion Parkway plus Project scenario. **Table 33** shows the operational effectiveness of these improvements on deficient intersections.

Table 32: Recommended Improvements to Address Operational Deficiencies – Cumulative with Eleventh St/I-205 Interchange and Pavilion Parkway Plus Project Conditions

Facility		Lead Agency	Description of Improvement(s)
3	International Pkwy/Promontory Pkwy	City of Tracy	Construct a second southbound left-turn pocket and a second westbound left-turn lane. Modify existing signal timing and cycle length.
7	Hansen Rd/Promontory Pkwy	City of Tracy	Construct following geometries: • Second southbound left-turn pocket • Second eastbound left-turn pocket • One eastbound shared through-left lane. Add overlap signal for westbound right-turn. Modify eastbound and eastbound signal timing phase to split phases. Modify existing signal timing splits and cycle length.
8	Hansen Rd/Schulte Rd	City of Tracy	Construct following geometries: • Northbound right-turn pocket • Convert existing northbound shared through-right lane to a through lane • Second northbound through lane • Second eastbound through lane • Second Eastbound left-turn pocket • Second westbound through lane • Westbound left-turn pocket • Second southbound through lane • Southbound left-turn pocket Modify existing signal timing splits and cycle length.
10	Lammers Rd/Byron Rd	City of Tracy	Construct eastbound right-turn pocket and northbound right-turn pocket. Modify existing signal timing splits and cycle length.
11	Lammers Rd/ Eleventh St	City of Tracy	Construct third northbound left-turn pocket. Modify existing signal timing splits and cycle length.
12	Lammers Rd/Capital Park Dr	City of Tracy	Add overlap signal for eastbound right-turn. Modify existing signal timing splits and cycle length.

	Facility	Lead Agency	Description of Improvement(s)
13	Lammers Rd/Schulte Rd	City of Tracy	Construct following geometries: • Southbound right-turn pocket • Convert existing southbound shared through-right lane to through lane • Second southbound through lane • Second northbound through lane Modify existing signal timing splits.
14	Lammers Rd/Valpico Rd	San Joaquin County	Construct second southbound through lane and second northbound through lane. Modify existing signal timing splits and cycle length. •
15	Corral Hollow Rd/Eleventh St	City of Tracy	Construct third southbound through lane, eastbound left-turn pocket. Add overlap signal for westbound right-turn. Modify existing signal timing splits and cycle length.

17	Pavilion Parkway/Schulte Rd	City of Tracy	Construct following geometries:
			• Northbound
			  ○ One left-turn pocket
			  ○ Two through lanes
			  ○ One right-turn pocket
			• Southbound
			  ○ Two left-turn pockets
			  ○ One through lane
			  ○ One right-turn pocket
			• Eastbound
			  ○ One left-turn pocket
			  ○ One through lane
			  ○ One shared through-right lane
			• Westbound
			  ○ One left-turn pocket
			  ○ One through lane
			  ○ One shared through-right lane
			Modify signal timing and cycle lengths.

18	Lammers Rd/Promontory Pkwy	San Joaquin County	Construct second westbound through lane. Modify signal timing and cycle lengths.

	Facility	Lead Agency	Description of Improvement(s)

19	Pavilion Pkwy/Promontory Pkwy	City of Tracy	Install signal. Construct following geometries:
			• Northbound
			  ○ One left-turn pocket
			  ○ One shared through-right lane
			• Southbound
			  ○ Two left-turn pockets
			  ○ One shared through-right lane
			• Eastbound
			  ○ One left-turn pocket
			  ○ Two through lanes
			  ○ One right-turn pocket
			• Westbound
			  ○ One left-turn pocket
			  ○ Two through lanes
			  ○ One right-turn pocket

20	Pavilion Parkway/Capital Park Dr	City of Tracy	Install signal. Construct following geometries:
			• Northbound
			  ○ Two left-turn pockets
			  ○ Two through lanes
			  ○ One right-turn pocket
			• Southbound
			  ○ Two left-turn pockets
			  ○ Two through lanes
			  ○ One right-turn pocket
			• Eastbound
			  ○ One left-turn pocket
			  ○ Three through lanes
			  ○ Two right-turn pockets
			• Westbound
			  ○ Two left-turn pockets
			  ○ Two through lanes
			  ○ One right-turn pocket
			Add overlap signal for eastbound and westbound right-turn.

Source: Fehr & Peers, 2024.

Table 33: Intersection Operational Improvements – Cumulative with Eleventh St/I-205 Interchange and Pavilion Parkway Plus Project Conditions

	Intersection	Traffic Control[1]	Agency	Cumulative No Project Conditions				Cumulative Plus Project Conditions							
								Without Improvements				With Improvements[4]			
				AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
3	International Pkwy/ Promontory Pkwy	Signal	City of Tracy	48.2	D	**93.9**	**F**	51.8	D	**98.1**	**F**			52.9	D
7	Hansen Rd/Promontory Pkwy	Signal	City of Tracy	19.4	B	**>180**	**F**	57.0	E	51.0	D	50.8	D		
8	Hansen Rd/Schulte Rd	Signal	City of Tracy	**139.0**	**F**	**>180**	**F**	**179.2**	**F**	**>180**	**F**	39.1	D	53.5	D
10	Lammers Rd/Byron Rd	Signal	City of Tracy	13.5	B	**>180**	**F**	13.5	B	**218.2**	**F**			52.0	D
11	Lammers Rd/ Eleventh St	Signal	City of Tracy	33.6	C	**64.2**	**E**	35.6	D	**79.4**	**E**			53.5	D
12	Lammers Rd/Capital Park Dr	Signal	City of Tracy	30.2	C	**60.5**	**E**	30.4	C	**71.4**	**E**			51.7	D
13	Lammers Rd/Schulte Rd	Signal	City of Tracy	**73.2**	**E**	**>180**	**F**	**112.5**	**F**	**>180**	**F**	17.3	B	51.2	D
14	Lammers Rd/Valpico Rd	SSSC	San Joaquin County	**90.6**	**F**	**137.0**	**F**	**104.6**	**F**	**146.0**	**F**	27.5	C	31.2	C
17	Pavilion Parkway/Schulte Rd	Signal	City of Tracy	**>180**	**F**	**>180**	**F**	**>180**	**F**	**>180**	**F**	53.2	D	47.4	D
18	Lammers Rd/Promontory Pkwy	Signal	San Joaquin County	27.8	C	**61.7=**	**E**	33.0	C	**67.9**	**E**			47.4	D
19	Pavilion Pkwy/Promontory Pkwy	SSSC	City of Tracy	32.7	D	**>180**	**F**	**152.0**	**F**	**>180**	**F**	23.6	C	51.9	D
20	Pavilion Parkway/Capital Park Dr	AWSC	City of Tracy	**>180 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**	**>180 (>180)**	**F (F)**	49.2	D	53.1	D

Notes:

1. SSSC = Side-Street Stop-Controlled; Signal = Signalized; AWSC = All-Street Stop-Controlled
2. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.
3. The overall average intersection control delay is reported in seconds per vehicle for signalized intersections. For side-street stop-controlled intersections, the average control delay/for the movement with the greatest delay is shown in parentheses, while the average delay/for the entire intersection is shown not in parentheses.
4. The LOS standard for all intersections is LOS D. Values in **bold** indicate operations below the LOS standard.

Source: Fehr & Peers, 2024.

Cumulative without Eleventh St/I-205 Interchange and Pavilion Parkway Plus Project (Buildout) Recommended Improvements

Table 34 displays the recommended roadway improvements necessary to restore operations to an acceptable level under the Cumulative without Eleventh Street/I-205 Interchange and Pavilion Parkway overcrossing Plus Project scenario. **Table 35** shows the operational effectiveness of these improvements on deficient intersections.

Table 34: Recommended Improvements to Address Operational Deficiencies – Cumulative without Eleventh St/I-205 Interchange and Pavilion Parkway Plus Project Conditions

Facility		Lead Agency	Description of Improvement(s)
3	International Pkwy/Promontory Pkwy	Caltrans	Construct second southbound left-turn pocket and third northbound through lane. Convert one westbound right-turn pocket to second southbound left-turn pocket.
4	International Pkwy/Schulte Rd	City of Tracy	Modify existing signal timing splits and cycle length. Add overlap signal for northbound and westbound right-turn.
5	International Pkwy/I-580 NB Ramps	Caltrans	Modify existing signal timing splits.
7	Hansen Rd/Promontory Pkwy	City of Tracy	Construct second southbound left-turn and second eastbound left-turn pockets. Add overlap signal for westbound right-turn. Modify existing signal timing splits and cycle length.
8	Hansen Rd/Schulte Rd	City of Tracy	Construct following geometries: • Northbound right-turn pocket • Convert existing northbound shared through-right lane to through lane • Third northbound through lane • Second southbound through lane • Second southbound left-turn lane • Second eastbound through lane • Second eastbound left-turn lane • Second westbound through lane • Second westbound left-turn lane
9	Naglee Rd/I-205 WB Ramps/Grant Line Rd	Caltrans	Construct third eastbound through lane.
10	Lammers Rd/Byron Rd	City of Tracy	Construct eastbound right-turn pocket and northbound left-turn pocket. Modify existing signal timing splits and cycle length.
11	Lammers Rd/ Eleventh St	City of Tracy	Construct third northbound left-turn pocket, third southbound through lane, and third westbound left-turn pocket. Modify existing signal timing splits and cycle length.

	Facility	Lead Agency	Description of Improvement(s)
12	Lammers Rd/Capital Park Dr	City of Tracy	Construct westbound right-turn pocket and second eastbound right-turn pocket. Add overlap signal for southbound and eastbound right-turn.
13	Lammers Rd/Schulte Rd	City of Tracy	Construct second southbound through lane, second eastbound left-turn pocket, and eastbound right-turn lane. Modify existing signal timing splits and cycle length.
14	Lammers Rd/Valpico Rd	San Joaquin County	Construct second southbound through lane and second northbound through lane. Modify existing signal timing splits and cycle length. •
15	Corral Hollow Rd/Eleventh St	City of Tracy	Construct third southbound through lane, third southbound left-turn pocket, and third eastbound left-turn pocket. Modify existing signal timing splits and cycle length.
16	Byron Rd/Grant Line Rd	San Joaquin County	Construct northbound shared through-right lane, second southbound left-turn pocket, second westbound right-turn pocket, second westbound left-turn pocket. Modify existing signal timing splits and cycle length.

17	Pavilion Parkway/Schulte Rd	City of Tracy	Construct following geometries:
			• Northbound
			  ○ One left-turn pocket
			  ○ One shared through-right lane
			• Southbound
			  ○ One left-turn pocket
			  ○ One through lane
			  ○ One right-turn pocket
			• Eastbound
			  ○ One left-turn pocket
			  ○ One through lane
			  ○ One shared through-right lane
			• Westbound
			  ○ One left-turn pocket
			  ○ One through lane
			  ○ One shared through-right lane
			Modify signal timing and cycle lengths.

18	Lammers Rd/Promontory Pkwy	San Joaquin County	Construct second westbound through lane and third westbound through lane. Modify signal timing and cycle lengths.

	Facility	Lead Agency	Description of Improvement(s)

19	Pavilion Pkwy/Promontory Pkwy	City of Tracy	Install signal. Construct following geometries:
			• Northbound
			  ○ One left-turn pocket
			  ○ One shared through-right lane
			• Southbound
			  ○ Three left-turn pockets
			  ○ One through lane
			  ○ One shared through-right lane
			• Eastbound
			  ○ One left-turn pocket
			  ○ Two through lanes
			  ○ One right-turn pocket
			• Westbound
			  ○ One left-turn pocket
			  ○ Two through lanes
			  ○ One right-turn pocket

20	Pavilion Parkway/Capital Park Dr	City of Tracy	Install signal. Construct following geometries:
			• Northbound
			  ○ Two left-turn pockets
			  ○ One right-turn pocket
			• Eastbound
			  ○ Two through lanes
			  ○ Two right-turn pockets
			• Westbound
			  ○ One left-turn pocket
			  ○ Two through lanes

Source: Fehr & Peers, 2024.

Table 35: Intersection Operational Improvements – Cumulative without Eleventh St/I-205 Interchange and Pavilion Parkway Plus Project Conditions

	Intersection	Traffic Control[1]	Agency	Cumulative No Project Conditions				Cumulative Plus Project Conditions							
								Without Improvements				With Improvements[3]			
				AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
				Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
3	International Pkwy/Promontory Pkwy	Signal	Caltrans	36.3	D	**126.9**	**F**	**72.2**	**E**	**157**	**F**	28.2	C	50.2	D
4	International Pkwy/Schulte Rd	Signal	City of Tracy	51.5	D	37.7	D	**73.1**	**E**	**61**	**E**	52.0	D	53.9	D
5	International Pkwy/I-580 NB Ramps	Signal	Caltrans	19.1	B	29.6	C	34	C	**56.6**	**E**			37.7	D
7	Hansen Rd/Promontory Pkwy	Signal	City of Tracy	16.8	B	**170.1**	**F**	17.7	B	**174**	**F**			52.5	D
8	Hansen Rd/Schulte Rd	Signal	City of Tracy	**100.7**	**F**	**>180**	**F**	**>180**	**F**	**>180**	**F**	52.1	D	52.1	D
9	Naglee Rd/I-205 WB Ramps/Grant Line Rd	Signal	Caltrans	16.0	B	**59.8**	**E**	23.4	C	**84.9**	**F**			46.4	D
10	Lammers Rd/Byron Rd	Signal	City of Tracy	**58.9**	**E**	**>180**	**F**	**134.7**	**F**	**>180**	**F**	11.4	B	25.1	C
11	Lammers Rd/ Eleventh St	Signal	City of Tracy	50.6	D	**74.1**	**E**	**72.1**	**E**	**83.6**	**F**	37.2	D	48.0	D
12	Lammers Rd/Capital Park Dr	Signal	City of Tracy	32.1	C	**70.4**	**F**	28.8	C	**102.1**	**F**			52.3	D
13	Lammers Rd/Schulte Rd	Signal	City of Tracy	**77.1**	**E**	**>180**	**F**	**101.5**	**F**	**>180**	**F**	29.5	C	31.0	D
14	Lammers Rd/Valpico Rd	SSSC	San Joaquin County	**90.6**	**F**	**134.7**	**F**	**107.2**	**F**	**145.7**	**F**	26.0	C	31.0	D
15	Corral Hollow Rd/Eleventh St	Signal	City of Tracy	49.0	D	**9.18**	**F**	41.0	D	**92.1**	**F**			52.9	D
16	Byron Rd/Grant Line Rd	Signal	San Joaquin County	**>180**	**F**	**>180**	**F**	**>180**	**F**	**<180**	**F**	20.7	C	53.7	D
17	Pavilion Parkway/Schulte Rd	Signal	City of Tracy	**135.9**	**F**	34.1	C	**153.2**	**F**	**>180**	**F**	51.3	D	54.4	D
18	Lammers Rd/Promontory Pkwy	Signal	San Joaquin County	28.7	C	**70.8**	**E**	37.6	D	**85.0**	**F**			51.2	D
19	Pavilion Pkwy/Promontory Pkwy	SSSC	City of Tracy	**66.1**	**F**	**>180**	**F**	**70.4**	**F**	**>180**	**F**	29.5	C	44.2	D
20	Pavilion Parkway/Capital Park Dr	Signal	City of Tracy	**>180**	**F**	**>180**	**F**	**>180**	**F**	**>180**	**F**	17.7	B	53.2	D

Notes:
1. Signal = Signalized, SSSC = Side-Street Stop-Controlled
2. The AM peak hour is 7:00 AM to 9:00 AM and the PM peak hour is 4:00 PM to 6:00 PM.

3. The overall average intersection control delay is reported in seconds per vehicle for signalized intersections. For side-street stop-controlled intersections, the average control delay/for the movement with the greatest delay is shown in parentheses, while the average delay/for the entire intersection is shown not in parentheses.
4. The LOS standard for all intersections is LOS D. Values in **bold** indicate operations below the LOS standard.

Source: Fehr & Peers, 2024.

8. Impacts and Mitigation Measures

This chapter summarizes the CEQA related environmental impacts of the proposed project related to transportation. For each identified significant impact, a mitigation measure is proposed.

Vehicle Miles Traveled

Impact TR-1: Significant Adverse VMT Impacts

As shown in **Table 36**, the project's daily VMT per employee is substantial above the unincorporated countywide average VMT per employee under baseline conditions. The project's baseline VMT per employee of 41.5 is approximately 26.5 percent above the relevant threshold of 32.8 (85 percent of the unincorporated countywide average. This impact is a **significant adverse impact** according to the County's standards.

Table 36: Baseline Daily VMT Per Employee

Scenario	HBW Auto VMT per Employee [1]
Unincorporated Countywide Average – Baseline	38.6 VMT per employee
85% of Unincorporated Countywide Average – Baseline	32.8 VMT per employee
Project VMT, Baseline Conditions	41.5 VMT per employee

1. Calculated using the 2016 SJCOG travel demand model. VMT shown is only associated with employee travel between the project and home.

Mitigation TR-1: *The project applicant shall implement transportation demand management (TDM) strategies that are considered feasible and will have a material effect on reducing VMT.*

The project applicant shall develop a TDM Plan for the proposed project, including any anticipated phasing, and shall submit the TDM Plan to the County for review and approval. The TDM Plan shall identify trip reduction strategies as well as mechanisms for funding and overseeing the delivery of trip reduction programs and strategies. The TDM Plan shall be designed to achieve the maximum feasible trip reduction. The TDM Plan shall describe which measures apply to the entire site and which, if any, apply on a parcel-by-parcel basis.

The TDM plan shall indicate the estimated vehicle trip reduction (VTR) for each strategy proposed based on published research or guidelines. For TDM measures containing ongoing operational VTR strategies, the Plan shall include an ongoing monitoring and enforcement program to ensure the Plan is implemented on an ongoing basis during project operation. For VTR strategies involving physical improvements, the project shall obtain the necessary permits/approvals from the County and install the improvements prior to the completion of the project. Applicant will resubmit TDM Plan if there is a

material adverse impact resulting from a change from the permitted uses (i.e., unit count, use type, phasing).

Mitigation Measure Effectiveness

Transportation Demand Management strategies work best when they are applied at a city or regional scale and when the travel characteristics of the users or tenants of a site are known. The literature documenting the effectiveness of land use project-level TDM strategies is generally related to suburban and urban areas. Studies[4] show the maximum VMT reduction associated with the implementation of TDM strategies that can be expected for a warehousing and logistics project of the kind proposed in this type of environment is 5 to 10 percent. CEQA requires that feasible mitigation measures be implemented to reduce a project's level of impact. Sufficient TDM reduction strategies do not exist to reduce the project's daily VMT per employee by 26.5 percent as required to mitigate the impact.

VMT forecasts presented in this assessment do not consider some foreseeable travel changes, including increased use of transportation network companies, such as Uber and Lyft, nor the potential for autonomous vehicles. Although the technology for autonomous vehicles is expected to be available over the planning horizon, the federal and state legal and policy frameworks are uncertain. Initial modeling of an autonomous future indicates that with automated and connected vehicles, the capacity of the existing transportation system would increase as vehicles can travel closer together; however, these efficiencies are only realized when a high percentage of vehicles on the roadway are automated and connected. There is also the potential for vehicle travel to increase with zero-occupancy vehicles on the roadway. Additionally, the VMT forecasts are based on a model that was developed using data reflecting travel conditions before COVID-19; the effects of COVID-19 may be a near-term suppression in travel activity based on reduced economic output and permanently modified travel habits.

Mitigation Monitoring

The TDM Plan shall require regular periodic evaluation of the program to determine if the program goals in reducing automobile travel are satisfied and to assess the effectiveness of the various strategies implemented. Site management shall conduct annual travel surveys and driveway counts to monitor the amount of automobile travel generated by the project. The goal of the TDM Plan and programs shall be to reduce the project's daily VMT per employee by five percent. Based on the results of the surveys, the TDM programs shall be increased if these requirements are not met. Annual travel surveys and driveway counts (TDM program monitoring) shall be conducted for the first two years following project occupancy. The results of the monitoring program and travel surveys shall be submitted to the County for review and approval. If the program VMT reduction goals are met in the first two years, annual monitoring and surveys shall be suspended. If the program's VMT reduction goals are not satisfied, site management shall prepare and submit for County approval a corrective action plan. The corrective action plan shall detail the additional TDM measures to be implemented on site and their expected travel/mode split reduction.

[4] *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity* (CAPCOA), California Air Pollution Control Officers Association, 2021.

Additional annual travel surveys and driveway counts shall be conducted for the two years following the implementation of the corrective action plan to determine if the program's VMT reduction goals are satisfied.

Significance after Mitigation: Significant and Unavoidable

Bicycle and Pedestrian Facilities

Impact TR-2: Bicycle and Pedestrian Facilities – Disrupt Facilities, Conflict with Policies, or Generate Unmet Demand

The project would make improvements to the existing bicycle and pedestrian network in the study area. It would install Class I shared use paths on all major circulation streets within the project area, including West Schulte Road, Pavilion Parkway, and Promontory Parkway. Sidewalks would be provided along project frontages and connect to the surrounding public pedestrian network.

The project would not eliminate or adversely affect an existing or planned bikeway or pedestrian facility in a way that would discourage its use. It would also not conflict with any adopted policies, plans, or programs regarding bicycle or pedestrian facilities. The project would not create a demand for bicycle or pedestrian facilities that would be unmet by available facilities. This impact would be considered **less than significant**.

Mitigation TR-2: *None Required*

Transit Services and Facilities

Impact TR-3: Inadequate Transit Service to Meet Demand

The project would not eliminate or adversely affect existing transit access as no service is currently provided in the immediate project vicinity. It would also not conflict with any adopted policies, plans, or programs regarding transit facilities. The lack of any existing or planned fixed-route bus service to the area would lead to an unmet demand for transit service. This impact would be considered **significant**.

Mitigation TR-3: *Implement the following mitigation measures:*

- *TR-3 work with San Joaquin RTD to extend fixed-route bus service to the project site.*

Significance after Mitigation: Less than Significant

Roadway Safety / Design Standards:

Impact TR-4: Increased Hazards due to Geometric Design Features

The project would not substantially increase hazards due to geometric design features (e.g., sharp curves or dangerous intersections) or incompatible uses. The project proposes no features that would be

hazardous; all internal streets, bicycle facilities, pedestrian facilities, and transit amenities would be constructed in accordance with County design standards. No uses are proposed that would be incompatible with the surrounding transportation network. The project would not result in 95th percentile vehicle queues at Caltrans off-ramp facilities to extend into the freeway mainline. This impact is considered **less than significant**.

Mitigation TR-4: *None Required*

Emergency Vehicle Access

Impact TR-5: Adequate Emergency Vehicle Access

Emergency vehicles access to the project site would be accommodated through multiple roadways, including West Schulte Road, Promontory Parkway, and Pavilion Parkway. The project site is served by the South San Joaquin County Fire Authority and incorporates the current California Fire and Building Codes with some Municipal Code amendments, Title 19 – California Code of Regulations and national standards. Internal streets are proposed in alignment with South San Joaquin County Fire Authority requirements. The nearest fire station to the proposed project site is located at 16502 West Schulte Road (Station 94), less than a mile west of the project site.

Mitigation TR-5: *In accordance with South San Joaquin County Fire Authority requirements and design standards, provide even surface pavement, appropriate signage, delineation, and other features at all emergency access points and internal roadways to accommodate emergency vehicles. As part of the project's final design and permitting process seek and obtain approval of the South San Joaquin County Fire Authority.*

Implementing the South San Joaquin County Fire Authority requirements and design standards would ensure that the street(s) used by emergency vehicles to access the project site are in good condition and include features to facilitate the safe movement of emergency vehicles. The review and approval of the South San Joaquin County Fire Authority would confirm adequate emergency vehicle access to each parcel and building proposed as part of the project.

Significance after Mitigation: Less than significant.

Cumulative Impacts

As shown in **Table 37** the project's cumulative daily VMT per employee is substantially above the unincorporated countywide cumulative average VMT per employee under these conditions. The project's cumulative VMT per employee of 33.8 is approximately 27.5 percent above the relevant threshold of 26.5 (85 percent of the unincorporated countywide average. This impact is a **significant adverse impact** according to the County's standards.

Table 37: Cumulative Daily VMT Per Employee

Scenario	HBW Auto VMT per Employee [1]
Unincorporated Countywide Average – Cumulative	31.1 VMT per employee
85% of Unincorporated Countywide Average – Cumulative	26.5 VMT per employee
Project VMT, Cumulative Conditions	33.8 VMT per employee

1. Calculated using the 2016 SJCOG travel demand model. VMT shown is only associated with employee travel between the project and home.

Mitigation TR-6: *Implement Mitigation Measure TR-1*

The implementation of the TDM Plan described in Mitigation Measure TR-1 is expected to yield a 5 to 10 percent reduction in project VMT. CEQA requires that feasible mitigation measures be implemented to reduce a project level of impact. Sufficient TDM reduction strategies do not exist to reduce the project's cumulative daily VMT per employee by 26.5 percent as required to mitigate the impact.

Significance after Mitigation: Significant and Unavoidable

9. Potential Limitations of Travel Demand Forecasts

This chapter describes how there are certain limitations in the accuracy of the travel demand forecasts presented in this report, particularly under the cumulative scenario.

Potential Uncertainties in Travel Demand Forecasts

The Cumulative plus Project Buildout scenario arguably provides the best snapshot for understanding travel conditions in 20 years assuming the project is developed. Yet, it is acknowledged that the forecast travel demands for this horizon have a great deal of uncertainty. Following are some of those areas of uncertainty:

- A number of state laws have been enacted over the last several years intended to address California's housing supply and affordability crisis. Examples include AB 2011, SB 6, and SB 330. Other bills are currently under consideration. The net effect of these laws is a strong potential for new dwelling units to be built in areas not currently assumed by the travel demand model. This, in turn, will affect the volume of background traffic growth as well as the residence locations of project employees.
- Uncertainty also exists in the cumulative background traffic forecasts due to the lingering effects of the COVID-19 pandemic. Changes in how consumers acquire goods and services, and how employees work, are altering travel trends in the following ways:
    - substitution of some personal shopping or meal-related travel for Internet shopping and home food delivery (i.e., DoorDash),
    - work-from-home flexibility offered by many employers and preferences by many employees,
    - new modes of travel such as transportation network companies (TNCs), car share, bike share, scooter share, and on-demand micro transit (and eventually autonomous vehicles).

California state laws and policies are also focused on converting heavy-duty trucks to zero emission vehicles. In April 2023, the California Air Resources Board (CARB) adopted a regulation to phase out the sales of medium- and heavy-duty combustion trucks in California by 2036. This is intended to place the state on a path toward accomplishing Governor Newsom's goal of fully transitioning the medium- and heavy-duty trucks that travel California roads to zero-emissions technology by 2045.[5] There are several travel behavior uncertainties associated with the fleet operator and individual truck driver response to these changes including the following:

[5] Source: California Approves World's First Regulation to Phase Out Dirty Combustion Trucks and Protect Public Health | California Governor

- Ability of the electrical grid to meet electricity demand during peak periods in hot summer months,
- Adequacy of supplied electric truck charging locations,
- Lesser loads caused by heavy truck battery weights, and
- More driver time spent waiting for trucks to charge (and necessarily doing so sometimes overnight when they would prefer to be driving), which could shift more truck travel to daytime hours and require more drivers.

Like nearly all travel demand models, the City of Tracy model and the SJCOG model do not consider any of the above limitations. Further, many of these topics are still evolving (e.g., work from home preferences) or are not sufficiently well understood to even enable quantitative modeling of their effects.

Appendix A.
Data Collection

Appendix B.
Level of Service (LOS) Technical Calculations

Appendix C.
Signal Warrants