

1.1 Overview

The San Joaquin Regional Rail Commission (SJRRRC) is the designated owner, operator, and policy-making body for the Altamont Corridor Express (ACE) service that presently connects the northern San Joaquin County, the Tri-Valley, and the Silicon Valley by providing weekday train service from Stockton to San Jose. To enhance intercity and commuter rail service and to promote greater transit connectivity between the Central Valley and the San Francisco Bay Area (Bay Area), SJRRRC is proposing to expand ACE service to Merced.

SJRRRC has undertaken the ACE Ceres–Merced Extension Project, which is referred to as the “Project” or “ACE Ceres–Merced Extension” in this environmental impact report (EIR). The Project is the second phase of a two-phased ACE extension program to allow trains to reach Merced. The first phase of the program was the extension of ACE service from Lathrop to Ceres (currently in final design). The second phase is proposing to extend ACE service from Ceres to Merced (currently in environmental clearance and the subject of this EIR).

As part of the Project, SJRRRC proposes to construct a set of new facilities, including track upgrades, new tracks, and new bridges within the Union Pacific Railroad (UPRR) Fresno Subdivision between Ceres and Merced; three new stations; and a new layover and maintenance facility.¹ Figure 1-1 depicts the Project location. These specific set of improvements are collectively referred to as the “Proposed Project” in this document, and include the following facilities:

- Ceres to Merced Extension Alignment
- Turlock Station
- Livingston Station
- Merced Station
- Merced Layover & Maintenance Facility

This EIR analyzes the impacts associated with these facilities.

In addition, SJRRRC is considering an alternative to the Livingston Station – the Atwater Station Alternative. This EIR considers (at an equal level of detail) the potential impacts associated with the Atwater Station Alternative. Alternatives to the Merced Station and the Merced Layover & Maintenance Facility are also analyzed at a lesser level of detail in Chapter 5, *Alternatives*. Table 1-1 provides a summary of the Proposed Project facilities and the alternatives analyzed in this Draft EIR.

¹ A *subdivision* is a portion of railroad or railway that operates under a single timetable (authority for train movement in the area).

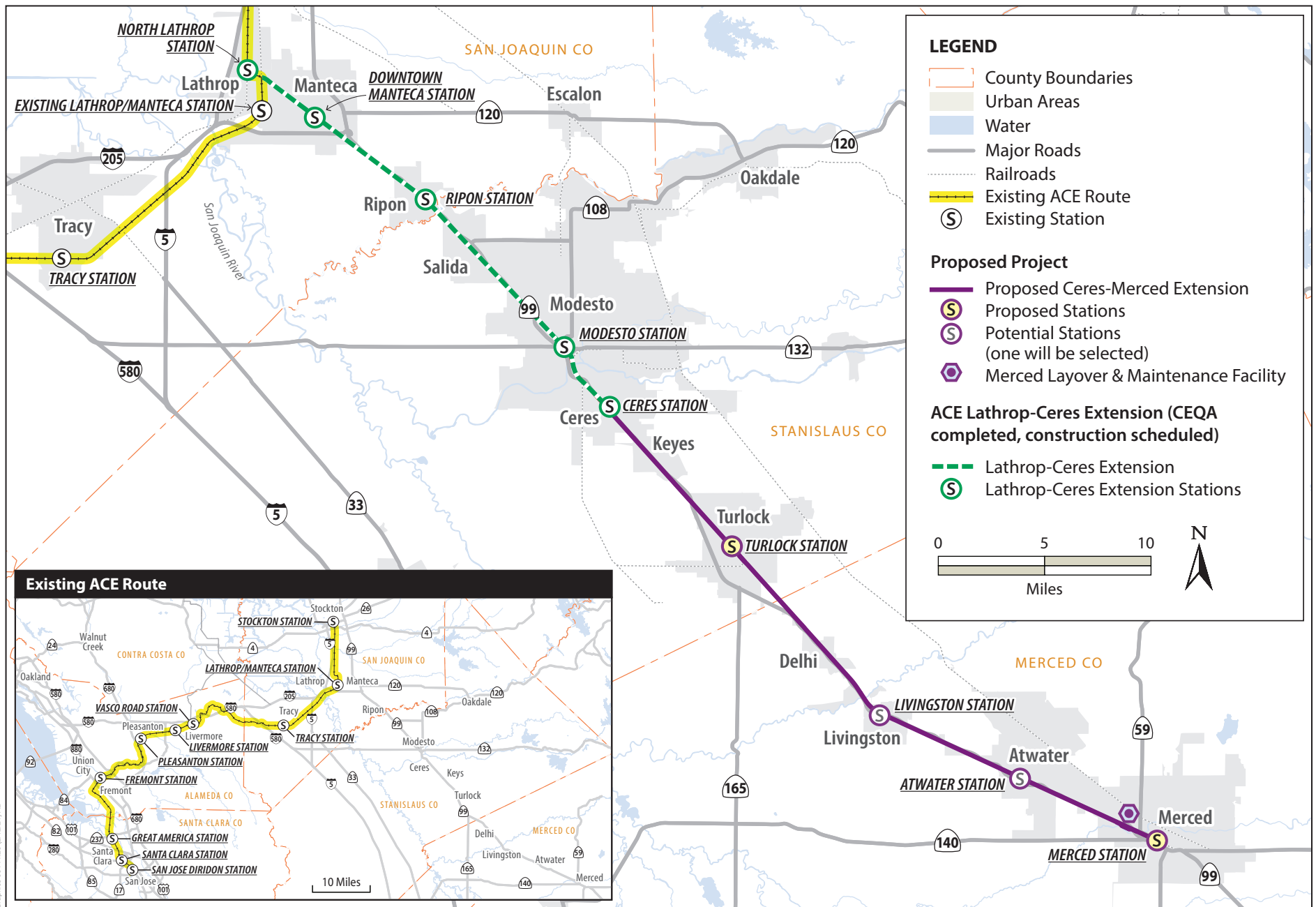


Figure 1-1
Project Location
ACE Ceres-Merced Extension Project

Table 1-1. Summary of Proposed Project and Alternatives Analyzed in this EIR

Proposed Project	Alternatives other than the No Project Alternative	Evaluation Level of Detail
Ceres to Merced Extension Alignment	Rail alignment as described for the proposed alignment, but extended 0.6 mile southward to the Merced Station Alternative	Lesser level of detail (see Section 5.3.3)
Turlock Station	None	N/A
Livingston Station	Atwater Station Alternative	Equal level of detail (see Chapters 2, 3, and 4)
Merced Station	Merced Station Alternative	Lesser level of detail (see Section 5.3.3)
Merced Layover & Maintenance Facility	Merced Layover Facility Alternative	Lesser level of detail (see Section 5.3.3)

Overall, with operation of the Project and operation of other ACE projects that have already been environmentally cleared under CEQA (i.e., the Valley Rail Sacramento Extension Project and the Lathrop to Ceres Extension Project), ACE service would include the following trains.

- One train in the morning and one train in the evening between the Merced Station and San Jose Diridon Station.
- Two trains in the morning and two trains in the evening between the Stockton Station and San Jose Diridon Station.
- One train in the morning and one train in the evening between Natomas/ Sacramento Airport Station and San Jose Diridon Station.
- Three trains in the morning and three train in the evening between the Merced Station and Natomas/Sacramento Airport Station.
- One train in the morning and one train in the evening between the Natomas/ Sacramento Airport Station and Stockton Station.

1.2 Project History

SJRRC manages and operates the ACE service, which provides commuter rail service between San Jose and Stockton. The existing 86-mile ACE service corridor passes through Santa Clara, Alameda, and San Joaquin Counties, with 10 stations along the route. At the western end of the ACE corridor, ACE operates on an approximately 4-mile segment of track between San Jose and Santa Clara, which is owned and operated by the Peninsula Corridor Joint Powers Board (PCJPB). North of the Santa Clara Station to Stockton, ACE operates on approximately 82 miles of track owned by UPRR. ACE operates on portions of UPRR's Coast, Niles, Oakland, and Fresno subdivisions.

As part of Senate Bill (SB) 132, passed in April 2017, SJRRC was awarded \$400 million for the ACE service expansion to Ceres/Merced, including associated system improvements. SJRRC prepared the *ACE Extension Lathrop to Ceres/Merced EIR* (Prior EIR) in 2017–2018. The Prior EIR analyzed the Phase I extension of ACE service from Lathrop to Ceres at a project-level detail and the Phase II extension from Ceres to Merced at a programmatic-level of detail. The Prior EIR was certified and

Phase I of the Project was approved by the SJRRC Board of Commissioners on August 3, 2018. The extension from Lathrop to Ceres is currently in the final engineering design and permitting phase and is anticipated to start construction in fall of 2021.

The ACE Ceres–Merced Extension Project, for which this EIR is being prepared, is Phase II of the Project that was analyzed in the Prior EIR. This EIR is being prepared by the SJRRC and will analyze the potential environmental impacts from expanding ACE service between Ceres and Merced at a project level of detail. Where appropriate, this EIR will incorporate analysis from the Prior EIR that is still current.

1.3 Need for the ACE Ceres–Merced Extension Project

Since its inception, SJRRC has primarily operated ACE as a weekday commuter rail service between Stockton and San Jose. ACE service began in October 1998 with two westbound morning trains from Stockton to San Jose and two eastbound afternoon trains from San Jose to Stockton on weekdays. In November 2009, a third roundtrip for ACE passengers was added, providing a third westbound morning train and a third eastbound afternoon train on weekdays. A fourth weekday roundtrip train, providing an additional westbound morning train and eastbound afternoon train, was added in September 2012. ACE provided Saturday service under a pilot program, which began on September 7, 2019; however, this service was suspended on March 21, 2020 in response to the Novel Coronavirus (COVID-19) pandemic. ACE trains consist of one diesel locomotive and five to seven bi-level passenger coaches and operate at a top speed of 79 miles per hour (mph).

Due to the current circumstances associated with the COVID-19 pandemic, ACE service was reduced. During the COVID-19 pandemic, ACE has been operating two westbound trains in the morning from Stockton to San Jose and two eastbound trains in the afternoon from San Jose to Stockton. It is anticipated that ACE service will be restored to its pre-COVID-19 levels once the pandemic is over.

The need for the ACE Ceres–Merced Extension is driven by the following considerations.

- Transportation demand driven by the economic relationships between the Bay Area, and the Sacramento area and northern San Joaquin Valley counties.
- Roadway congestion along primary routes from the northern San Joaquin Valley to the Bay Area, and the Sacramento area and limited roadway expansion options.
- Air quality issues in the northern San Joaquin Valley, the Bay Area, and the Sacramento area, and the related imperative to reduce greenhouse gas (GHG) emissions in California and globally.

Each factor contributing to the need for the ACE Ceres–Merced Extension is discussed in detail in the following sections.

1.3.1 Transportation Demand

1.3.1.1 Existing Altamont Corridor Express Service Area

The analysis of transportation demand for the Project was completed using the best available data and forecasts from prior to the Novel Coronavirus (COVID-19) health emergency. The exact long-

term impact of COVID-19 on transportation patterns and travel demand is not known and cannot be estimated without engaging in speculation. California Environmental Quality Act (CEQA) guidelines specifically prohibit the use of speculation in CEQA analyses. While the specific scale and duration of COVID-19 effects on transportation patterns and travel demand are not known at this time, it is logical to consider that travel demand will return to the northern San Joaquin Valley and San Francisco Bay Area in time, although it is possible that the exact timing and rate of population and economic growth may be slower than estimated prior to the COVID-19 health emergency. If that occurs, it is still expected that travel demands between the northern San Joaquin Valley and the Bay Area will increase over time and thus there will be increase pressures on overcapacity roadways and demand for alternatives such as the Project. The forecasts for future year ridership may ultimately occur a few years later than estimated, but the demand is still expected to be realized in time.

Between 1990 and 2013, the number of people commuting from the northern San Joaquin Valley to the Bay Area more than doubled, growing from 32,000 to nearly 65,000 commuters (Bay Area Council Economic Institute 2016). Since then, the number of people commuting from the northern San Joaquin Valley to the Bay Area has grown to 86,445 in 2017 and 93,398 in 2018 (Bay Area Council Economic Institute 2017 and 2018). In 2015, approximately 1.33 million annual riders traveled on ACE. The annual ridership (calculated between July 2018 and June 2019), prior to the COVID-19 pandemic, was calculated to be 1.50 million riders (San Joaquin Regional Rail Commission 2020a).

Due to this great demand between northern San Joaquin Valley and the Bay Area, road congestion along the I-205 and I-580 corridors resulted in substantial travel delays prior to the COVID-19 health emergency (see discussion of COVID-19 health emergency on estimates of future demand above). ACE service provides a critical alternative to travel between northern San Joaquin Valley and the Bay Area.

The need for ACE passenger rail service stems from the social and economic ties that bind together the San Joaquin Valley and the Bay Area (specifically the Tri-Valley and the Silicon Valley/South Bay regions). To-date, the most characteristic ACE trips are journeys to and from employment areas in the Bay Area during peak commute times, from riders' places of residence in the San Joaquin Valley or the Tri-Valley to riders' places of work in the Tri-Valley or Silicon Valley/South Bay.

Table 1-2 summarizes the anticipated increases in population and employment growth in the counties within the existing ACE corridor. Population growth in Santa Clara, Alameda, and San Joaquin Counties was projected to grow at a generally steady rate from 2020 to 2030, with San Joaquin County experiencing the greatest population growth among the three counties. Employment growth within the three counties was anticipated to be the highest from 2020 to 2025, with San Joaquin County also experiencing the greatest employment growth among the three counties during this time. San Joaquin County will also continue to have the greatest discrepancy in the ratio of employment opportunities to population (jobs/person ratio) compared to Santa Clara and Alameda Counties. The jobs/person ratio for Santa Clara and Alameda Counties remains stable at 1:1.6 and 1:1.3 jobs/person respectively, from 2020 to 2035. San Joaquin County has a greater discrepancy in the jobs/person ratio than in the Bay Area counties, with 1:2.9 jobs/person in 2020 and 1:2.8 jobs/person in 2025 and 2030. Although San Joaquin County was projected to have the greatest employment growth of the three counties from 2020 to 2025 and from 2025 to 2030, this would not substantially reduce the discrepancy in the county's jobs/person ratio. The primary drivers of these imbalances are the relative robust economy in the Bay Area (Santa Clara and Alameda Counties)

combined with dramatic increases in housing prices compared to historically lower employment opportunities and lower housing prices in San Joaquin County. These population and employment projections support the general characteristics of current ACE trips and contribute to the need for future increased ACE service from San Joaquin County.

Table 1-2. Projected Population and Employment Growth in the Existing ACE Service Areas

Counties	2020	2025	2030	% Change 2020–2025	% Change 2025–2030
Population					
Santa Clara County	1,967,585	2,023,194	2,094,936	2.8	3.6
Alameda County	1,685,886	1,756,709	1,832,576	4.2	4.3
San Joaquin County	782,545	832,480	879,055	6.4	5.6
Employment					
Santa Clara County	1,200,520	1,268,920	1,337,320	5.7	5.4
Alameda County	1,269,560	1,339,260	1,408,960	5.5	5.2
San Joaquin County	274,100	293,100	312,100	6.9	6.5

Source: California Department of Finance 2020; California Employment Development Department 2019a, 2019b, 2019c.

Note: 2020, 2025, and 2030 employment figures are based upon a linear interpolation of 2016 and 2026 employment estimates from the California Employment Development Department (California Employment Development Department 2019a, 2019b, 2019c).

1.3.1.2 Extended Altamont Corridor Express Service Area

SJRRC proposes to extend ACE service from Ceres to Turlock, Livingston or Atwater, and Merced. As described in the 2013 San Joaquin Council of Governments' *Interregional Multi-Modal Commute Trip Planning Study*, a large number of employed residents of San Joaquin, Stanislaus, and Merced Counties work outside the region or in a county other than their county of residence (San Joaquin Council of Governments 2013). Since the three-county region in the San Joaquin Valley has fewer jobs than workers, this imbalance leads to significant proportions of the workforce commuting out of the three-county region for work. Residents of the three-county region who work outside the county in which they reside travel mostly to the Bay Area (approximately 14 percent of all employed residents in the region) or commute within the three-county region but to a different county from their county of residence (approximately 9 percent of all employed residents in the region) (San Joaquin Council of Governments 2013). Given these travel characteristics, there is an existing and growing demand for transit services between the Bay Area and the San Joaquin Valley.

Table 1-3 summarizes the anticipated increases in population and employment in Stanislaus and Merced Counties, where the Project would be located. As shown, the anticipated populations in Stanislaus, and Merced Counties are significantly greater than the number of jobs offered in the respective counties for 2020, 2025, and 2030. This population and employment growth pattern are likely to increase the existing trend for commutes from the three-county region to the Bay Area and commutes within the three-county region.

These population and employment growth patterns contribute to the need for future increased ACE service from Stanislaus and Merced Counties.

Table 1-3. Projected Population and Employment Growth in the Extended ACE Service Areas

Counties	2020	2025	2030	% Change 2020–2025	% Change 2025–2030
Population					
Stanislaus County	562,303	584,055	606,900	3.9	3.9
Merced County	287,420	307,981	329,635	7.2	7.0
Employment					
Stanislaus County	213,460	220,240	231,540	3.2	5.1
Merced County	90,100	92,500	96,500	2.7	4.3

Source: California Department of Finance 2020; California Employment Development Department 2019d and 2019e.

Note: 2020, 2025, and 2030 employment figures are based upon a linear interpolation of 2016 and 2026 employment estimates from the California Employment Development Department (California Employment Development Department 2019d and 2019e).

This Project will allow ACE riders to travel from Merced to Sacramento. ACE service to Sacramento currently does not exist but is planned and has been environmentally cleared under CEQA as a part of the Valley Rail Sacramento Extension Project. As described in the Final EIR for the Valley Rail Sacramento Extension Project, there is a need to increase service between the San Joaquin Valley and Sacramento due to the region's unbalanced ratio of housing and jobs, which will continue to diverge, with even more people moving out of the Sacramento to find affordable housing in the San Joaquin Valley (San Joaquin Regional Rail Commission 2020b).

1.3.2 Roadway Congestion

The predominant mode of personal travel where the existing and extended ACE corridor are located is the automobile. In addition, many of the roadway corridors are influenced by truck traffic between the Central Valley, Bay Area, and the Sacramento area, particularly Interstate (I-) 205 and I-580. Economic growth and the corresponding demand for transportation services in Santa Clara, Alameda, San Joaquin, Stanislaus, and Merced Counties have exceeded the region's ability to provide the needed roadway capacity. The existing and extended ACE corridor provides transportation services in the vicinity of the following freeway segments.

- State Route (SR) 99 and I-5 from Merced to Stockton and Sacramento
- SR 152 from I-5 near Los Banos to US 101 in Gilroy and then north to San Jose
- SR 140 from SR 99 in Merced to I-5 west of Gustine
- SR 132 from SR 99 in Modesto to I-5 and I-580
- SR 120 from SR 99 to I-5
- I-5 from Stockton to Lathrop and points south
- I-205 from Lathrop to the San Joaquin County line
- I-580 from San Joaquin County line to Pleasanton
- SR 84 from Livermore to Fremont

- I-680 from Pleasanton to San Jose
- I-880 from Fremont to San Jose

The rapid increase in travel demand between the San Joaquin Valley, the Tri-Valley, the Silicon Valley/South Bay, and the Sacramento area coupled with the growth in population in the surrounding areas, has placed increasing pressures on the highways serving the region. Santa Clara and Alameda are the first and second most congested counties within the nine-county Bay Area (California Department of Transportation 2020).

The congestion experienced on the freeway segments in the Bay Area carry over onto freeway segments in the San Joaquin Valley. As it connects with I-580 near the Alameda–San Joaquin County line, I-205 serves as a major interregional connector for moving people and goods between the northern San Joaquin Valley and the Bay Area. The commute pattern on I-205 is unidirectional, with San Joaquin Valley residents commuting to jobs in the Bay Area during the morning period and returning in the afternoon period. Congestion on I-205 correlates with this travel pattern, which stems from the growing jobs and housing imbalance within the San Joaquin Valley. In the future, this commute pattern from the San Joaquin Valley to the Bay Area is expected to continue and become even more pronounced. With this pattern, congestion and bottlenecks on I-205 is anticipated to worsen. In the northern San Joaquin Valley, congestion locations occur most frequently in urban areas where the annual average daily traffic tends to be higher, exit and entry ramps or interchanges are more frequent, and the risk of crashes is more prominent. Congestion on SR 99 primarily occurs near urban centers, such as Stockton, Modesto, and Merced (Fresno Council of Governments 2017).

Congestion on freeway corridors in the vicinity of ACE are anticipated to increase to the point at which travel peak periods would spread into midday and to later in the evening, even if planned roadway improvements take place. Bottlenecks would continue to constrain movement through the corridor. As shown in Table 1-2, job growth in the Bay Area was expected to increase between 5 and 6 percent between 2020 and 2025 and between 2025 and 2030. As shown in Tables 1-2 and 1-3, population growth and job growth are expected to increase in both the Bay Area and the San Joaquin Valley. The resultant new transportation demand will lead to high levels of congestion that will take a toll on economic development by constraining goods and people movement.

As one example, between 2013 and 2040, peak hour traffic was projected to increase as follows on routes of regional significance in the Tri-Valley and adjacent areas (DKS Associates 2017).

- I-680 south of SR 84 (Sunol Grade)—52 percent increase in peak hour traffic
- I-580 east of Tassajara Road—35 percent
- I-580 east of Vasco Road—59 percent
- I-680 overall in Tri-Valley
 - 2013—a.m. peak average speeds of 56 mph (northbound) to 57 mph (southbound) and p.m. peak average speeds of 45 mph (northbound) to 58 mph (southbound)
 - 2040—a.m. peak average speeds of 46 mph (northbound) to 52 mph (southbound) and p.m. peak average speeds of 40 mph (southbound) to 46 mph (northbound)
- I-580 overall in Tri-Valley
 - 2013—a.m. peak average speeds of 35 mph (westbound) to 62 mph (eastbound) and p.m. peak average speeds of 49 mph (eastbound) to 59 mph (westbound)

- 2040—a.m. peak average speeds of 26 mph (westbound) to 51 mph (eastbound) and p.m. peak average speeds of 35 mph (eastbound) to 48 mph (westbound)

Similar increases in congestion are expected for I-880, SR 84, I-205, and SR 99.

Opportunities to improve highway capacity are constrained by a number of factors, including funding availability, the need for extensive and costly right-of-way acquisitions, and potential environmental impacts, such as displacement of residences and businesses, and impacts on natural resources and redesign of local roadways beyond the interchanges. For these reasons, substantial capacity improvements to I-880, I-680, SR 84, I-580, I-205, SR 120, I-5, and SR 99 cannot be relied upon to fully address long-term travel demands in the corridor. In this environment, ACE provides an essential and viable transportation alternative to costly highway capacity expansion. By reducing trip times and increasing transit ridership, the ACE Ceres–Merced Extension Project would help to ease congestion on the Bay Area and San Joaquin Valley freeways.

This Project will allow ACE riders to travel from Merced to Sacramento. The benefits associated with relieving traffic congestion for travelers in the San Joaquin Valley to the Sacramento area has been identified previously in the Final EIR for the Valley Rail Sacramento Extension Project (San Joaquin Regional Rail Commission 2020b). The ACE Ceres–Merced Extension Project would contribute to the overall benefit of relieving traffic congestion along I-5 and SR-99.

1.3.3 Air Quality and Greenhouse Gas Emissions

High rates of automobile ownership and increasing vehicle miles traveled (VMT) have contributed to air quality problems throughout California. Pollutants of concern include nitrogen oxides and reactive organic gases, which are precursors of ozone (also referred to as *smog*); sulfur dioxides; carbon monoxide; and particulate matter. GHGs (including carbon dioxide, nitrous oxide, methane, and other gases) are now a focus of environmental planning in California because of their role in global climate change. Motor vehicles are substantial contributors to the production of all of these pollutants.

The existing ACE corridor and the proposed extension of ACE service to Merced includes portions of two air basins: the San Francisco Bay Area Air Basin (SFBAAB), for which air quality conditions are regulated by the Bay Area Air Quality Management District (BAAQMD), and the San Joaquin Valley Air Basin (SJVAB), for which air quality conditions are regulated by the San Joaquin Valley Air Pollution Control District (SJVAPCD). While the air quality has improved in recent years, largely in response to technological improvements in motor vehicles and fuels, both air basins face substantial challenges to meet air quality standards.

The SFBAAB is designated a marginal nonattainment area for the 8-hour federal standard for ozone, a moderate nonattainment area for the federal PM_{2.5} (particulate matter smaller than 2.5 microns in diameter) standard, and a maintenance area for the federal carbon monoxide standard. With respect to the California standards, the SFBAAB is currently a serious nonattainment area for the 1-hour ozone standard and a nonattainment area for the 8-hour ozone, PM_{2.5}, and PM₁₀ (particulate matter smaller than 10 microns in diameter) standards.

The San Joaquin Valley has more challenging air quality issues than the SFBAAB. The SJVAB is designated an extreme nonattainment area for the 8-hour federal standard for ozone and a nonattainment area for the federal PM_{2.5} standard. With respect to California standards, the SJVAB

is currently a severe nonattainment area for the 1-hour ozone standard and a nonattainment area for the 8-hour ozone, PM_{2.5}, and PM₁₀ standards.

Section 3.3, *Air Quality*, provides a summary of data collected at the air quality monitoring stations nearest to the ACE corridor and a discussion of the total number of days that state and federal ambient air quality standards were exceeded.

Because transportation is the major contributor to ozone precursors, increasing auto travel threatens the area's improvement in air quality. Growing traffic generation and congestion will add to the potential problems because of increased emissions due to increased number of vehicles operating and also due to this increased traffic being subjected to increased frequency of stop-and-go traffic. Shifting commuters and other travelers to higher occupancy modes is highly desirable as a means to partially offset the effects on air quality produced by the growth in auto travel. Expanded ACE service offers the greatest potential for increased high-occupancy travel from the San Joaquin Valley to the Bay Area and the Sacramento area, including in areas with the most severe air quality problems in the corridor. Compared to the conditions without the Project, by 2040, the ACE Ceres-Merced Extension would result in reduction in emissions of up to 0.2 tons per year of ozone precursors and 9.6 tons per year of PM₁₀ in the BAAQMD and up to 6.9 tons per year of PM₁₀ in the SJVAPCD as a result of extended ACE service (see Section 3.3, *Air Quality*). The ACE Ceres-Merced Extension would also result in reductions to air pollutants in the Sacramento area.

The transportation sector is the largest source of GHG emissions in California and in most communities along the existing and extended ACE corridor (California Air Resources Board 2018). The Stanislaus Council of Governments and the Merced County Association of Governments have both adopted Regional Transportation Plans (RTP)/ Sustainable Community Strategies (SCS) to reduce GHG emissions. California has ambitious goals to reduce GHG emissions throughout the state, including Assembly Bill (AB) 32 and Senate Bill (SB) 32, which outline the state's GHG reduction goals of achieving 1990 emissions levels by 2020 and a level 40 percent below 1990 emissions levels by 2030 (see Section 3.8, *Greenhouse Gas Emission*). By reducing vehicle travel on regional roadways, the ACE Ceres-Merced Extension would also help communities along the existing ACE corridor; along the extended ACE corridor from Merced to Ceres, Ceres to Lathrop, and Lathrop Sacramento; and California as a whole to meet their goals for GHG reductions. Compared to the conditions without the Project, operations of the ACE Ceres-Merced Extension would result in a reduction of approximately 4,082 metric tons of carbon dioxide equivalent of GHG emissions by 2040 (see Section 3.8, *Greenhouse Gas Emissions*).

1.4 Project Objectives

The primary objectives of the Project are:

- To enhance commuter rail and intercity service and transit connections in the San Joaquin Valley;
- Reduce traffic congestion, improve regional air quality, and reduce greenhouse gas (GHG) emissions; and
- Promote local and regional land use and transportation sustainability goals.

Each of these objectives is discussed in detail below.

- **Enhance commuter rail and intercity service and transit connections in the San Joaquin Valley.**

Project improvements would support enhanced commuter rail and intercity passenger rail and transit access and connectivity, as well as provide additional surface passenger transportation capacity in the San Joaquin Valley. The ACE Ceres–Merced Extension Project would extend the reach of the existing commuter and intercity rail transportation network of the San Joaquin Valley. The Project would provide additional service to areas currently lacking access to passenger rail transportation as well as supplementing rail service to other areas. The Project would support transit-oriented development near proposed station locations. The Project would also provide an opportunity to connect with the future California High-Speed Rail System, which would integrate ACE service into a unified northern California rail network. These commuter and intercity rail connections are expected to stimulate additional ACE ridership.

- **Reduce traffic congestion, improve regional air quality, and reduce greenhouse gas emissions.**

An expanded and improved ACE system would provide a transportation alternative to automobile use, which would alleviate traffic congestion on corridor highway segments (along SR 99, I-205, I-580, I-680, I-5, and I-880) and result in air quality benefits and a reduction in GHG emissions. In addition, by maximizing connections with other transit services within the San Joaquin Valley, the Project would contribute to indirect benefits related to alleviating congestion and improving regional air quality. Reductions in air pollutant emissions represent long-term health benefits for ACE riders, and for residents and employees along the ACE corridor. In addition, reduction of GHG emissions would help California to meet its goals under Assembly Bill 32, the 2006 Global Warming Solutions Act (as amended by Senate Bill 32), as well as other state GHG emission reduction goals.

- **Promote local and regional land use and transportation sustainability goals.**

Metropolitan areas are implementing strategies to encourage more efficient use of land resources, improve mobility, and provide alternative transportation facilities and services in order to lower GHG emissions and to maintain air quality standards. One statewide strategy adopted in the California State Implementation Plan is the development of multi-use transportation corridors, including the addition of more transit and the expansion of rail modal options. This Project would further improve regional air quality and reduce GHG emissions, beyond reducing VMT from automobiles, by supporting regional land use and transportation planning goals under the Sustainable Communities and Climate Protection Act of 2008 (also known as SB 375) and other local, regional, and state sustainability initiatives. ACE is evaluating potential new ACE stations between Ceres and Merced. The new transit stations could act as a catalyst for smart growth in communities by revitalizing city core areas and addressing traffic congestion issues in the cities of the northern San Joaquin Valley.

1.5 Existing and Projected Ridership with the ACE Ceres–Merced Extension

SJRRC is proposing to expand ACE service to Merced. This service expansion would increase ACE ridership to meet the Project's objectives. Table 1-4 summarizes anticipated ridership in 2030 and 2040 with and without the Project.

Table 1-4. System Ridership with Operations of the Project

Year	No Project Conditions ^a	Proposed Project (with Livingston Station) ^b		Atwater Station Alternative ^b	
		Forecasted Annual Riders	Net New Annual Riders	Forecasted Annual Riders	Net New Annual Riders
2030	3,735,500	4,176,800	441,300	4,180,900	445,400
2040	4,797,100	5,364,100	567,000	5,367,500	570,400

Source: Appendix D, *ACE Extension Ridership, Revenue, and Benefits Report*.

Notes:

^a The No Project conditions include ACE service, with the addition of the approved Sacramento Extension and Ceres Extension. Service includes the following: two direct trains between Stockton and San Jose; one direct train between Ceres and San Jose with connecting bus service between Ceres and Merced; one direct train between Natomas and San Jose; one direct train between Natomas and Stockton; three trains between Ceres and Natomas via the Natomas Extension with connecting bus service between Ceres and Merced, these three trains also connect at North Lathrop to other inbound ACE trains with service to San Jose; and four buses between Ceres and Merced, connecting to the trains at Ceres.

^b Project operations would include the following ACE service: one train in the morning and one train in the evening between the Merced Station and San Jose Diridon Station; two trains in the morning and two trains in the evening between the Stockton Station and San Jose Diridon Station, one train in the morning and one train in the evening between Natomas/ Sacramento Airport Station and San Jose Diridon Station; three trains in the morning and three train in the evening between the Merced Station and Natomas/Sacramento Airport Station; and one train in the morning and one train in the evening between the Natomas/ Sacramento Airport Station and Stockton Station.

1.6 Environmental Review Process

1.6.1 California Environmental Quality Act

CEQA applies to all discretionary activities proposed to be implemented by California public agencies, including state, regional, county, and local agencies (California Public Resources Code [Public Res. Code] 21000 et seq.). CEQA requires agencies to estimate and evaluate the environmental impacts of their actions, avoid or reduce significant environmental impacts when feasible, and consider the environmental implications of their actions prior to making a decision. CEQA also requires agencies to inform the public and other relevant agencies and consider their comments in the evaluation and decision-making process. The State CEQA Guidelines are the primary source of rules and interpretations of CEQA (Public Res. Code 21000 et seq.; 14 California Code of Regulations 1500 et seq.).

1.6.2 Purpose of this Environmental Impact Report

The purpose of this EIR is to provide the information necessary for SJRRC to make an informed decision about the ACE Ceres–Merced Extension Project and to supply the information necessary to support related permit applications and review processes.

This draft EIR has been prepared in compliance with CEQA to achieve the following goals.

- Identify potential direct, indirect, and cumulative environmental impacts.
- Describe feasible mitigation measures intended to avoid or reduce potentially significant impacts to a less-than-significant level.

- Disclose the environmental analyses, including potential impacts and mitigation measures, for public and agency review and comment.
- Discuss potential alternatives to the Proposed Project that meet the purpose and need, are feasible, and would avoid or reduce identified significant impacts.

One of the purposes of CEQA is to provide an opportunity for the public and relevant agencies to review and comment on projects that might affect the environment. Scoping activities are discussed in Section 1.7, *Scope and Content of this Environmental Impact Report*. SJRRC will provide a public review period for this draft EIR 45 days from its release for comment. SJRRC will also conduct public meetings to receive comments during the comment period. Once the public review period is complete, SJRRC will prepare a final EIR that includes all the comments received on the draft EIR, responses to all comments, and any necessary revisions to the draft EIR. CEQA requires the SJRRC decision-making body, the SJRRC Board (Board), to review and consider the information in the EIR before making a decision on the ACE Ceres–Merced Extension Project.

1.7 Scope and Content of this Environmental Impact Report

Scoping refers to the process used to assist the lead agency in determining the focus and content of an EIR. Scoping solicits input on the potential topics to be addressed in the EIR, the range of alternatives, and possible mitigation measures. Scoping is also helpful in establishing methods of assessment and in selecting the environmental effects to be considered in detail.

1.7.1 Notice of Preparation and Scoping Meetings

The scoping process for this EIR was formally initiated on May 28, 2020, when SJRRC submitted an NOP to the California State Clearinghouse; federal, regional, and local elected officials; and federal, state, and local agencies, including the planning and community development directors in Stanislaus County, Merced County, and the cities where the Project would be located; and the interested public. The purpose of the NOP is to solicit participation from relevant agencies and from the public in determining the scope of an EIR. The scoping period ended July 7, 2020.

Three virtual public scoping meetings were held during the scoping period. In accordance with social distancing guidance related to the Novel Coronavirus (COVID-19), all scoping meetings for the Project were held online as webinars. Two were held on June 25, 2020, and one was held on June 30, 2020. Appendix A, *ACE Ceres-Merced Extension Scoping Memorandum*, contains the scoping report detailing the scoping process, including the notification, and scoping activities undertaken. Written comments received during the scoping process are also included in Appendix A.

1.7.2 Resource Topics

Consistent with Appendix G of the CEQA Guidelines, this draft EIR evaluates the potential impacts of the ACE Ceres–Merced Extension Project for the following resource areas.

- Aesthetics
- Agricultural resources

- 1 • Air quality
- 2 • Biological resources
- 3 • Cultural resources and tribal cultural resources
- 4 • Energy
- 5 • Geology and soils
- 6 • GHG emissions
- 7 • Hazards and hazardous materials
- 8 • Hydrology and water quality
- 9 • Land use and planning
- 10 • Noise and vibration
- 11 • Population and housing
- 12 • Public services
- 13 • Recreation
- 14 • Safety and security (including wildfire)
- 15 • Transportation
- 16 • Utilities and service systems
- 17 The following topics are also analyzed in this draft EIR.
- 18 • Cumulative impacts
- 19 • Significant and unavoidable impacts
- 20 • Significant irreversible changes in the environment
- 21 • Growth inducement
- 22 • Alternatives to the Proposed Project

23 1.8 Environmental Impact Report Organization

24 This draft EIR is organized into the following chapters and appendices.

- 25 • *Executive Summary* provides a summary of the key information and conclusions in the EIR.
- 26 • Chapter 1, *Introduction*, provides a brief overview of the ACE Ceres–Merced Extension Project
- 27 improvements; the Project objectives; an overview of the environmental review process; and
- 28 the scope, content, and organization of the draft EIR.
- 29 • Chapter 2, *Project Description*, provides a comprehensive description of the improvements
- 30 associated with the Proposed Project and the Atwater Station Alternative.
- 31 • Chapter 3, *Environmental Impact Analysis*, provides an evaluation of the Proposed Project
- 32 impacts on the environmental resource topics outlined above. Each resource-specific section
- 33 discusses the environmental setting, regulatory setting, and any impacts and mitigation

measures. The one alternative analyzed at an equal level of detail (Atwater Station Alternative) is also included in Chapter 3.

- Chapter 4, *Other CEQA-Required Analysis*, provides a discussion of cumulative impacts, significant environmental impacts that cannot be avoided, significant irreversible changes in the environment, and growth-inducing impacts.
- Chapter 5, *Alternatives*, provides a description of the No Project Alternative, an explanation of the development of alternatives, an evaluation of alternatives considered but dismissed from further consideration, and analysis of a range of alternatives to the Project. This chapter also identifies the environmentally superior alternative.
- Chapter 6, *Public and Agency Involvement*, provides a description of the outreach by SJRRC to the public, stakeholders, and agencies over the course of project definition, alternatives development, and environmental review.
- Chapter 7, *List of Preparers*, provides a list of firms and staff who contributed to the preparation of this draft EIR.
- Chapter 8, *References*, provides a list of the printed references and personal communication cited in this draft EIR.
- Appendices
 - Appendix A: *ACE Ceres–Merced Extension Scoping Memorandum*
 - Appendix B: *ACE Ceres–Merced Extension Environmental Footprint*
 - Appendix C: *ACE Ceres–Merced Extension 15% Preliminary Engineering Plans*
 - Appendix D: *ACE Ceres–Merced Extension Ridership, Revenue, and Benefits Report*
 - Appendix E: *ACE Ceres–Merced Extension Opinion of Probable Cost Report*
 - Appendix F: *ACE Ceres–Merced Extension Operations and Maintenance Cost Technical Memorandum*
 - Appendix G: *Regional Plans and Local General Plans*
 - Appendix H: *Supporting Aesthetics Information*
 - Appendix I: *Supporting Agricultural Resources Information*
 - Appendix J: *Air Quality, Greenhouse Gas, and Health Risk Assessment Supporting Documentation*
 - Appendix K: *Supporting Biological Resources Information*
 - Appendix L-1: *Historical Resources Inventory and Evaluation Report*
 - Appendix L-2: *Archaeological Inventory Report*
 - Appendix M: *Public and Agency Coordination*