Chapter 1
Introduction

1.1 Overview

The San Joaquin Regional Rail Commission (SJRRC) is the designated owner, operator, and policy-making body for the Altamont Corridor Express (ACE) service that presently focuses on connecting northern San Joaquin County, the Tri-Valley, and the Silicon Valley by providing daily 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), SJRRC is proposing to expand ACE service to Ceres and to Merced. The ACE Extension Lathrop to Ceres/Merced (referred to as the ACE Extension) contains both Phase I and Phase II improvements that are analyzed in this environmental impact report (EIR). Phase I improvements would support the ACE service extension to Ceres possibly as soon as 2020, no later than 2023. Phase II improvements would support the ACE service extension to Merced, with service commencing as soon as 2025. Detailed descriptions of the Phase I and Phase II improvements and alternatives are presented in Chapter 2, *Description of Phase I Improvements*, and Chapter 3, *Description of Phase II Improvements*, respectively. Figure 1-1 depicts the locations of Phase I and Phase II improvements.

1.2 Project History

In 2013, SJRRC identified and developed a suite of improvements, known as the ACE*forward* plan, to modernize the existing ACE service that would result in faster intercity and commuter train services and could expand the connections between the San Joaquin Valley and San Jose within the next 10 years. A Notice of Preparation (NOP) was issued in June 2013 to initiate the environmental process for ACE*forward* (State Clearinghouse #2013062059). In May 2017, SJRRC released the ACE*forward* draft EIR, that analyzed the environmental impacts associated with the phased improvement plan to increase service reliability and frequency, enhance passenger facilities, reduce travel times along the existing ACE service corridor from San Jose to Stockton, and to extend ACE service to Manteca, Ripon, Modesto, Ceres, Turlock, Livingston or Atwater, and Merced.

Through the ACE*forward* project development and environmental review, substantial financial, environmental, and logistical challenges were identified with some of the improvements necessary to increase ACE service levels to San Jose. Those improvements also required coordinated timing with other regional rail services in the corridor. The analysis also has shown that expansion to Ceres and Merced would provide substantial increases in ACE ridership without the financial, logistical, and environmental challenges necessary to increase service levels to San Jose. As a result, the near-term feasible and fundable extension of service in the Central Valley is now the focus of ACE expansion. Given the new focus on the fundable project, SJRRC rescinded the prior ACE*forward* NOP and draft EIR and is preparing a new EIR for this ACE Extension project. This is a new environmental process for a newly defined project. This ACE Extension project is consistent with the California High-Speed Rail Authority Draft 2018 Business Plan in relation to providing an opportunity to

connect existing intercity and commuter rail services to future high-speed rail (HSR) service (California High-Speed Rail Authority 2018).

1.3 Need for the ACE Extension

Since its inception, ACE remains 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 currently does not operate on the weekend, but does provide extra service for special events such as San Francisco 49er football games. ACE trains presently 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).

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

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

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

1.3.1 Transportation Demand

1.3.1.1 Existing Altamont Corridor Express Service Area

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). Approximately 45 percent of existing ACE riders travel between Stockton/Tracy and San Jose, 30 percent travel between the Tri-Valley[1] and San Jose, 16 percent travel between Stockton/Tracy and the Tri-Valley, and internal trips within the South Bay and Tri-Valley consisted of 6 and 3 percent, respectively. Within the last 5 years, ACE ridership has roughly doubled. In 2015, approximately 1.33 million annual riders traveled on ACE.

The existing need for ACE passenger rail intercity and commuter service stems from the social and economic ties that bind together the San Joaquin Valley, the Tri-Valley, and the South Bay. The most characteristic ACE trips are journeys to and from employment areas 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 the South Bay.

[1] The Tri-Valley is located in the eastern Bay Area and includes Pleasanton, Livermore, Dublin, San Ramon, and Danville as well as the unincorporated Alameda County communities near these cities.

Table 1-1 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 is anticipated to grow at a generally steady rate from 2015 to 2025, with San Joaquin County experiencing the greatest population growth among the three counties. Employment growth within the three counties is anticipated to be the highest from 2015 to 2020, 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 1:1.7 and 1:1.4 jobs/person, respectively, from 2015 to 2025. San Joaquin County has a greater discrepancy in the jobs/person ratio than in the Bay Area counties, with 1:3.0 jobs/person in 2015 and 1:2.9 jobs/person in 2020 and 2025. Although San Joaquin County is projected to have the greatest employment growth of the three counties from 2015 to 2020 and from 2020 to 2025, this will 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 trends are not expected to change. 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 1-1. Projected Population and Employment Growth in the Existing ACE Service Areas

Counties	2015	2020	2025	% Change 2015–2020	% Change 2020–2025
Population					
Santa Clara County	1,915,102	2,018,257	2,124,780	5.4%	5.3%
Alameda County	1,619,679	1,708,594	1,795,390	5.5%	5.1%
San Joaquin County	727,547	783,572	839,665	7.7%	7.2%
Employment					
Santa Clara County	1,087,190	1,159,640	1,232,090	6.7%	6.2%
Alameda County	1,152,080	1,231,980	1,311,880	6.9%	6.5%
San Joaquin County	246,580	269,980	293,380	9.5%	8.7%

Source: California Department of Finance 2017; California Employment Development Department 2016a, 2016c, 2016d

Note: 2015, 2020, and 2025 employment figures are based upon a linear interpolation of 2014 and 2024 employment estimates from the California Employment Development Department (California Employment Development Department 2016a, 2016c, 2016d)

1.3.1.2 Extended Altamont Corridor Express Service Area

SJRRC proposes to extend ACE service from Manteca to Modesto, Ceres, Turlock, and Merced, from San Joaquin to Stanislaus and Merced Counties. 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). Because the three-county region 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). Given these travel characteristics, there is an existing and growing demand for transit services between the Bay Area and the San Joaquin Valley within the extended ACE corridor.

Table 1-2 summarizes the anticipated increases in population and employment in the counties within the extended ACE corridor. As shown, the anticipated populations in San Joaquin, Stanislaus, and Merced Counties are significantly greater than the number of jobs offered in the respective counties for 2015, 2020, and 2025. This population and employment growth pattern is likely to increase the existing trend for commutes from the three-county region to the Bay Area and commutes within the three-county region.

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

Counties	2015	2020	2025	% Change 2015–2020	% Change 2020–2025
Population					
San Joaquin County	727,547	783,572	839,665	7.7%	7.2%
Stanislaus County	538,372	572,155	605,618	6.3%	5.8%
Merced County	269,729	286,397	305,794	6.2%	6.8%
Employment					
San Joaquin County	246,580	269,980	293,380	9.5%	8.7%
Stanislaus County	192,250	208,000	223,750	8.2%	7.6%
Merced County	82,670	88,520	94,370	7.1%	6.6%

Sources: California Department of Finance 2017; California Employment Development Department 2016a, 2016b, 2017

Note: 2015, 2020, and 2025 employment figures are based upon a linear interpolation of 2014 and 2024 employment estimates from the California Employment Development Department (California Employment Development Department 2016a, 2016b, 2017).

1.3.2 Roadway Congestion

The predominant mode of personal travel where the existing and extended ACE corridors are located is the automobile. In addition, many of the roadway corridors are influenced by truck traffic between the Central Valley and the Port of Oakland, 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 from Merced to Stockton
- SR 120 from SR 99 to I-5
- I-5 from Stockton to Lathrop
- 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, and the South Bay, coupled with the growth in population in the surrounding areas, has placed increasing pressures on the highways serving the region. Alameda and Santa Clara are the first and second most congested counties within the nine-county Bay Area (California Department of Transportation 2016). In the Bay Area, three freeway segments near the existing ACE corridor are identified as the second, sixth, and eighth locations with the most delay during the commute hour in the Bay Area (Metropolitan Transportation Commission 2015).

- Southbound I-880 from San Leandro to Milpitas during the morning period is the second most congested freeway segment in the Bay Area with 7,300 daily (weekday) vehicle hours of delay.
- Northbound I-680 from southern Fremont over the Sunol Grade to SR 84 during the afternoon period is the sixth most congested freeway segment in the Bay Area with 3,940 daily (weekday) vehicle hours of delay.
- Westbound I-580 from the San Joaquin County line over the Altamont Pass to Dublin and Pleasanton during the morning period is the eighth most congested commute with 3,800 daily (weekday) vehicle hours of delay.

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 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. I-205 experiences congestion in the morning peak hours with 192 daily (weekday) vehicle hours of delay and heavy return traffic in the afternoon peak hours with 902 daily (weekday) vehicle hours of delay (California Department of Transportation and San Joaquin Council of Governments 2010). In the future, this out-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 bottlenecking 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 2016).

Without future roadway improvements, 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. Bottlenecks would continue to constrain movement through the corridor. The California Employment Development Department and the California Department of Finance projections indicate that job growth in the Bay Area is expected to increase approximately 14 percent between 2015 and 2025, with population in the Bay Area increasing approximately 11 percent in the same timeframe. In addition, populations in San Joaquin, Stanislaus, and Merced Counties are expected to increase 14 percent between 2015 and 2025, with job growth in these

counties increasing approximately 17 percent in the same timeframe. 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 is expected to increase as follows on routes of regional significance in the Tri-Valley and adjacent areas (DKS Associates 2015).

- 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 ROW 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 Extension would help to ease congestion on the Bay Area and San Joaquin Valley freeways.

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 and 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 and extended ACE corridor 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 nonattainment area for the federal PM2.5 (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, PM2.5, 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 PM2.5 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, PM2.5, and PM10 standards.

Section 4.3, *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 congestion will add to the potential problems because of increased emissions of vehicles operating in 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 including in areas with the most severe air quality problems in the corridor. Compared to existing conditions, by 2040, the ACE Extension would result in reduction in emissions of up to 21 tons per year of ozone precursors and 25 tons per year of PM10 in the BAAQMD and up to 8 tons per year of ozone precursors and 26 tons per year of PM10 in the SJVAPCD as a result of extended ACE service (see Section 4.3).

Transportation is the largest source of GHG emissions in California and in most communities along the existing and extended ACE corridor. Most of the communities in the ACE corridor have adopted climate action plans to lower their community contributions of GHG emissions, with all seeking to lower transportation emissions. California has ambitious goals to reduce GHG emissions throughout the state. By reducing vehicle travel on regional roadways, the ACE Extension would also help communities along the ACE corridor and California as a whole to meet their goals for GHG reductions. Compared to the 2020 No Project Alternative, Phase I operations of the ACE Extension would result in a reduction of approximately 4,200, metric tons of carbon dioxide equivalent of GHG emissions. Phase II operations of the ACE Extension would result in a reduction of additional GHG emissions beyond Phase I operations (see Section 4.8, *Greenhouse Gas Emissions*).

1.4 Purpose of the ACE Extension

The primary purposes of the ACE Extension is to enhance intercity service and transit connectivity in the Central Valley; reduce traffic congestion, improve regional air quality, and reduce GHG emissions; and to promote local and regional land use and transportation sustainability goals. Each of these objectives is discussed in detail in this section.

- **Enhance intercity service and transit connections in the Central Valley.** Project improvements would support enhanced intercity transit connectivity and provide additional surface passenger transportation capacity in the Central Valley. The ACE Extension would service the existing intercity and commuter transportation needs of the Central Valley, and would support transit-oriented development in the downtown parts of cities with potential or proposed service. Modesto Max (City of Modesto bus transit) currently run buses to meet each ACE train at the existing Lathrop/Manteca Station. The extension to Merced would also provide a future opportunity to connect with the California HSR System which would integrate ACE into a unified Northern California rail system. These intercity transit connections are expected to stimulate additional ACE ridership.
- **Reduce traffic congestion, improve regional air quality, and reduce GHG 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, 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 Central Valley, the ACE Extension 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 meet its goals under Assembly Bill 32, the 2006 Global Warming Solutions Act, as well as post-2020 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 as a means 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 in Lathrop and downtown areas between Manteca 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 Central Valley.

1.5 Existing and Projected Ridership with the ACE Extension

SJRRC is proposing to expand ACE service to Ceres in Phase I and to Merced in Phase II. Phase I improvements would support the ACE service extension to Ceres, and a possible interim bus bridge service between Ceres and Merced. Phase II improvements would support the ACE service extension to Merced. This service expansion would increase ACE ridership to meet the ACE Extension's purpose and need. Tables 1-3 summarize existing and anticipated ridership with Phase I operations.

Table 1-3. ACE Extension—System Ridership with Phase I Operations

	Annual Riders				
Ridership Scenarios	**2015**	**2020**	**% Increase from 2015**	**2040**	**% Increase from 2015**
No Project Alternative[a]	1,285,200	1,511,700	18%	2,186,800	70%
Scenarios with Ceres Extension, 4 trains to San Jose					
Phase I Operational Scenario A[b]	--	1,946,500	51%	2,807,800	118%
Phase I Operational Scenario B[c]	--	1,947,500	52%	2,809,300	119%

Source: Appendix D-2, *ACE Extension Ridership, Revenue, and Benefits Report*.

Notes:

[a] No Project Alternative consists of four roundtrip trains per weekday between Stockton and San Jose.

[b] Operational Scenario A would include 4 trains from Stockton to San Jose, 4 train shuttles between Ceres and Lathrop, and 4 bus shuttles from Merced to Ceres.

[c] Operational Scenario B would include 3 trains from Stockton to San Jose, 1 train from Ceres to San Jose, 3 train shuttles between Ceres and Lathrop, and 4 bus shuttles from Merced to Ceres.

The ACE system ridership with Phase II operations have not been determined. Specific details regarding Phase II ridership would be identified and disclosed in future project-level environmental analyses for the Phase II improvements.

1.6 Environmental Review Process

1.6.1 California Environmental Quality Act

The 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 the SJRRC to make an informed decision about the Phase I and Phase II improvements under the ACE Extension, 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 associated with the Phase I and Phase II improvements
- 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 Phase I and Phase II improvements 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*. The SJRRC will provide a public review period for this draft EIR of 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, the 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 Extension.

1.6.3 Project-Level versus Program-Level Evaluation

This EIR serves as both a project EIR and a program EIR. Chapter 2 describes the Phase I improvements evaluated at a project level of detail, and Chapter 3 describes the Phase II improvements evaluated at a program level of detail. The differences between the level of analysis for a project EIR and program EIR are described in this section.

The advantage of this approach is to allow for earlier and more comprehensive evaluation of all Phase I and Phase II improvements for the ACE Extension, even though implementation of the Phase II improvements may depend upon a number of factors that cannot be assessed with certainty at this time. By including the Phase II improvements along with the Phase I improvements in this EIR, SJRRC is providing the public and the Board with an opportunity to review and consider the reasonably foreseeable environmental impacts of the ACE Extension as a whole, prior to Board decisions on any portion of the program. In doing so, SJRRC is fulfilling two important goals of the CEQA process.

- Providing for environmental review and longer-range planning disclosure at the earliest feasible time.
- Avoiding "piecemeal" review that could underestimate the environmental impacts of a project as large and complex as the ACE Extension.

SJRRC is also identifying issues of concern to agencies and other interested persons early in the review process to help scope subsequent environmental documentation on Phase II improvements. This is consistent with CEQA Guidelines Section 15168, which allows for a lead agency to prepare a program EIR on a series or group of actions that are carried out in this manner. SJRRC's intent is to present to the public, as early in the planning process as possible, a comprehensive understanding of how individual improvements fit into SJRRC's overall vision and long-term plans for ACE. This is consistent with both the spirit and letter of CEQA, which calls for EIRs to "be prepared as early as feasible in the planning process" to consider the "whole of the action," and to provide a "good faith effort at full disclosure" (CEQA Guidelines 15004(b) and 15003(h) through (i)).

1.6.3.1 Project Environmental Impact Report

A project EIR is the most common type of EIR and applies to projects that have been sufficiently developed to a level of certainty that is ready for detailed environmental impacts analysis. Under CEQA, a project EIR is prepared for a construction-ready project, and should focus primarily on the changes in the environment that would result from development of the project. A project-level analysis examines the impacts associated with all phases of the project including planning, construction, and operation. The specific sites, implementation (including construction activities), and operational details for the ACE Extension's Phase I improvements have been defined and, thus, a project-level analysis for these improvements' environmental impacts is appropriate. This EIR evaluates at a greater level of detail (compared to Phase II improvements) the environmental impacts of the Phase I improvements for which implementation is presently being considered and for which SJRRC anticipates that no further environmental document will be required under CEQA. Following certification of this EIR by the Board and necessary regulatory approvals, the Phase I improvements would be ready for implementation.

1.6.3.2 Program Environmental Impact Report

A program EIR is prepared for projects that are larger in scale, will be developed over a longer period of time, or include multiple components. The ACE Extension's Phase II improvements are potential future actions that may or may not be necessary depending on future circumstances. These improvements could be completed as soon as 2025 and have not yet been developed enough to permit a comprehensive detailed evaluation. Consequently, the Phase II improvements are more conceptual and evaluated in a more general manner. Until it is known whether or how SJRRC would proceed with these improvements, project-level review is inappropriate and would be speculative.

SJRRC will undertake further environmental review pursuant to CEQA as the need arises to design and implement these Phase II improvements and as further details about the specific location and construction characteristics of those improvements are known. When SJRRC undertakes subsequent environmental review for these improvements to be evaluated at a project level of detail, the information contained in this EIR will be revisited to determine the accuracy and adequacy of these evaluations.

The programmatic analysis of the Phase II improvements in this EIR will allow subsequent project-level clearance of individual Phase II improvements. This will allow prioritization and phasing of Phase II improvements.

This EIR serves as the first-tier environmental analysis of the Phase II improvements and subsequent environmental analysis can be tiered[2] from this EIR. Tiering allows the environmental analysis for projects to be conducted closer in time to the actual construction phase, or as funds for construction become available. In accordance with criteria set forth in CEQA, this EIR can provide the following support.

- Provide the basis for determining whether a specific Phase II improvement may have significant impacts.
- Be incorporated by reference to deal with regional influences, secondary effects, cumulative impacts, alternatives, and other factors that apply to the ACE Extension as a whole.
- Focus subsequent environmental review to permit discussion solely of new effects or more adverse effects than those considered in this EIR.
- Support selection of a preferred corridor, alignments, or station locations for advancement into subsequent project-level analysis of Phase II improvements.

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 January 10, 2018, when the 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 San Joaquin, Stanislaus, and Merced Counties; 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 February 9, 2018.

A public scoping meeting was held on January 29, 2018 in Ceres to provide the public with an opportunity to be informed about the alternatives under consideration and to comment on environmental issues of concern.

Appendix A, *ACE Extension Scoping Memorandum*, contains the scoping report detailing the scoping process, including the notification and scoping activities undertaken. Written and oral comments received during the scoping process are also included in Appendix A.

[2] A program EIR provides the framework for *tiering*, which allows for the streamlining of future environmental analyses; more specific analysis of individual projects would be tiered off the more general analysis in the program EIR.

1.7.2 Resource Topics

Consistent with Appendix G and Appendix F of the State CEQA Guidelines, this draft EIR evaluates the potential impacts of the Phase I and Phase II improvements for the following resource areas.

- Aesthetics
- Agricultural resources
- Air quality
- Biological resources
- Cultural resources
- Energy
- Geology and soils
- GHG emissions
- Hazards and hazardous materials
- Hydrology and water quality
- Land use and planning
- Noise and vibration
- Population and housing
- Public services
- Recreation
- Safety and security
- Transportation and traffic
- Utilities and service systems

The following topics are also analyzed in this draft EIR.

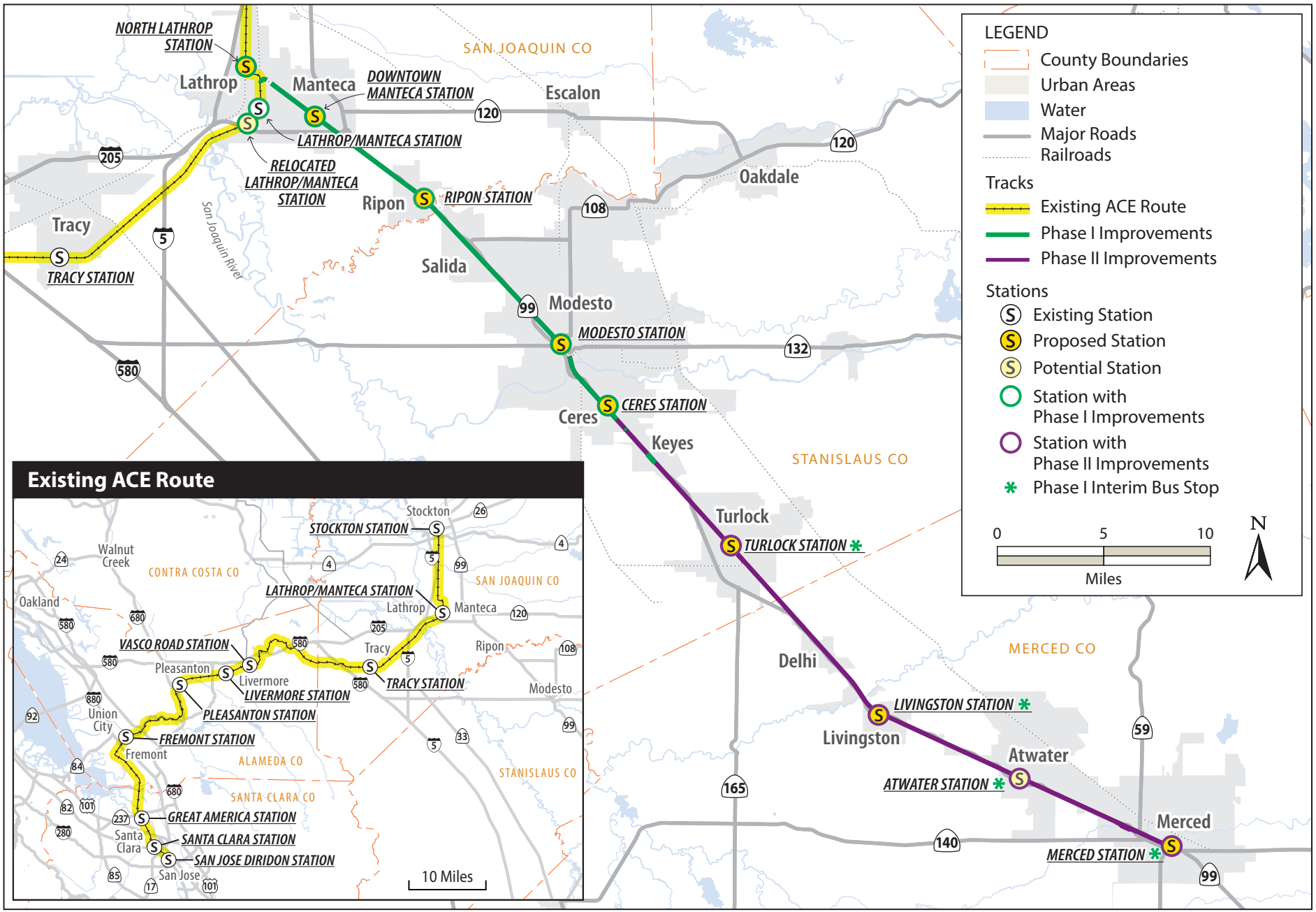
- Cumulative impacts
- Significant and unavoidable impacts
- Significant irreversible changes in the environment
- Growth inducement
- Alternatives to Phase I and Phase II improvements

1.8 Environmental Impact Report Organization

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

- *Executive Summary* provides a summary of the key information and conclusions in the EIR.
- Chapter 1, *Introduction*, provides a brief overview of the ACE Extension improvements; the project purpose and need; an overview of the environmental review process; and the scope, content, and organization of the draft EIR.
- Chapter 2, *Description of Phase I Improvements*, provides a comprehensive description of the Phase I improvements for the ACE Extension.
- Chapter 3, *Description of Phase II Improvements*, provides a comprehensive description of the Phase II improvements for the ACE Extension.
- Chapter 4, *Environmental Impact Analysis*, provides an evaluation of project impacts on the environmental resource topics outlined above. Each resource-specific section discusses the environmental setting, regulatory setting, and any impacts and mitigation measures.
- Chapter 5, *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 6, *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 7, *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 8, *List of Preparers*, provides a list of firms and staff who contributed to the preparation of this draft EIR.
- Chapter 9, *References*, provides a list of the printed references and personal communication cited in this draft EIR.
- Appendices
    - Appendix A: *ACE Extension Scoping Memorandum*
    - Appendix B: *ACE Extension Environmental Footprint*
    - Appendix C: *ACE Extension 15% Preliminary Engineering Plans*
    - Appendix D-1: *ACE Extension Core Capacity Memorandum*
    - Appendix D-2: *ACE Extension Ridership, Revenue, and Benefits Report*
    - Appendix E: *ACE Extension Opinion of Probable Cost Report*
    - Appendix F: *ACE Extension Operating 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: *ACE Extension Archeological Inventory Report*
- Appendix L-2: *ACE Extension Historical Resources Inventory and Evaluation Report*
- Appendix M: *Geology, Soils, and Seismicity Maps*
- Appendix N: *Dam Inundation Maps*
- Appendix O: *Supporting Transportation and Traffic Information*
- Appendix P: *Public and Agency Coordination*



ACE
ALTAMONT CORRIDOR EXPRESS

Figure 1-1
Locations of Phase I and Phase II Improvements
ACE Extension Lathrop to Ceres/Merced