

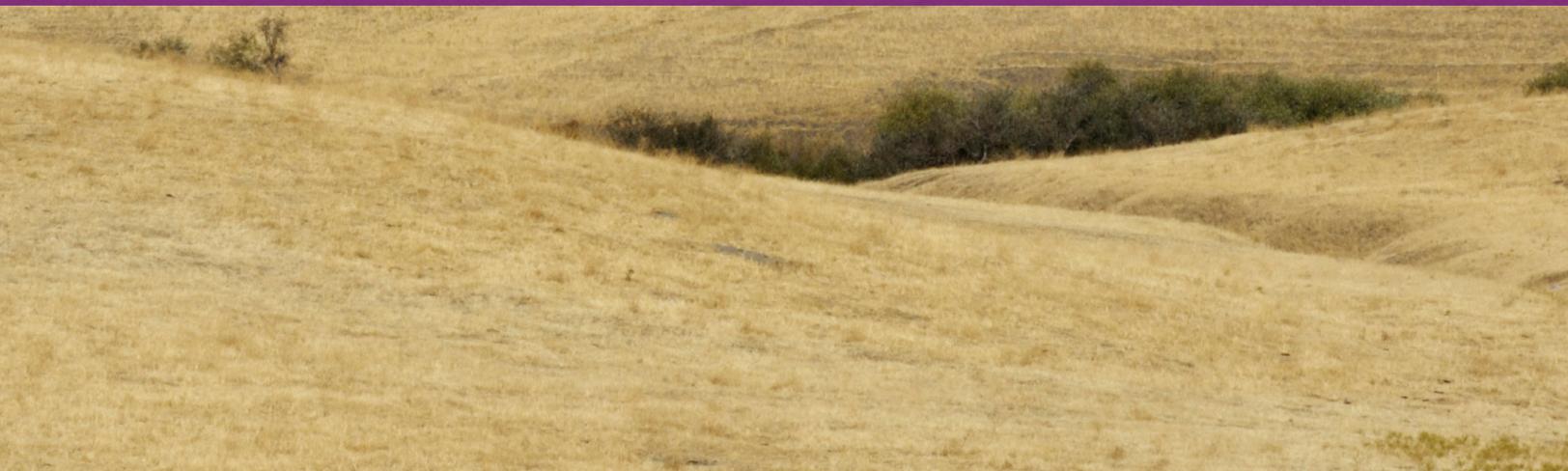


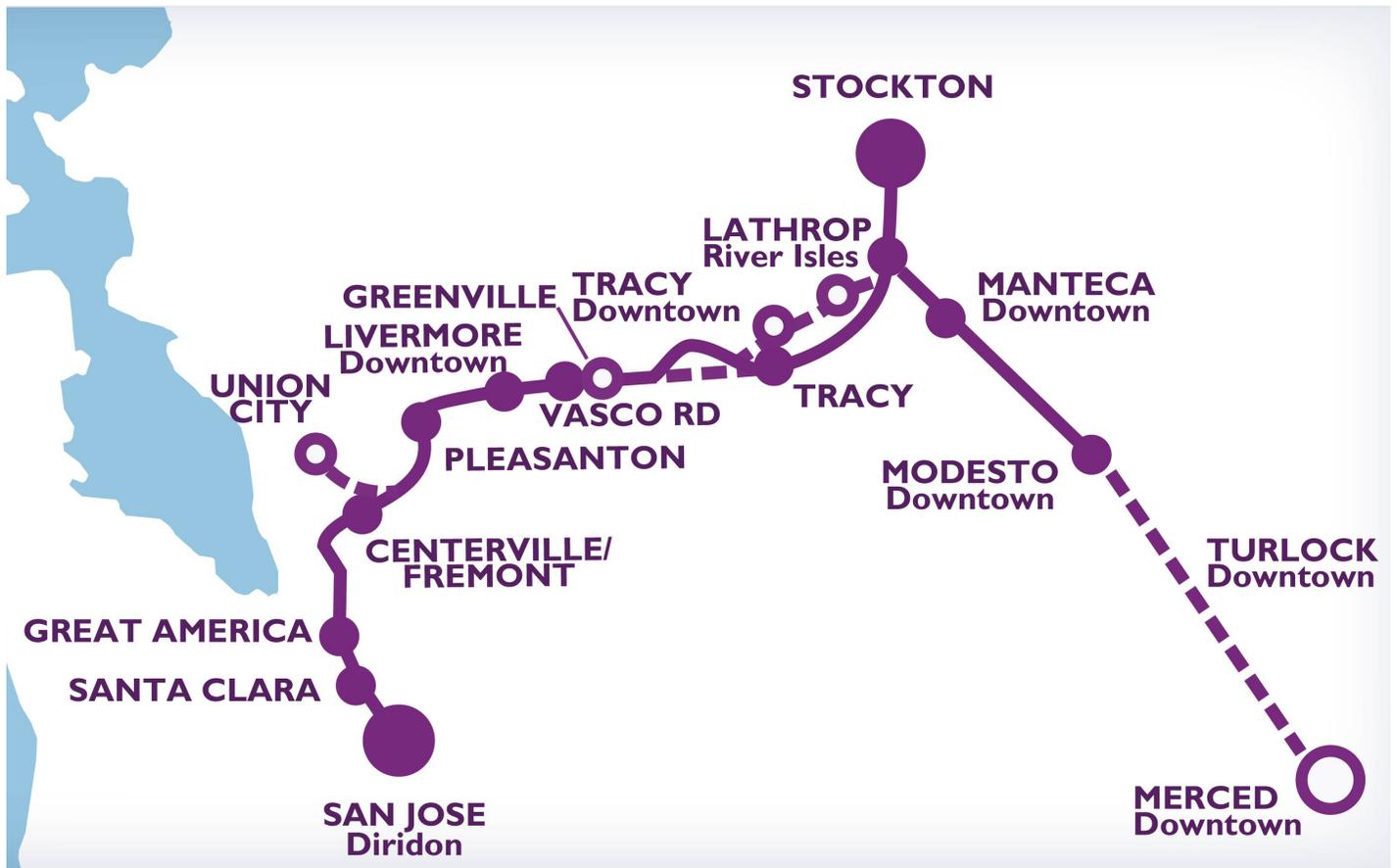
ACEforward Program Work Plan



San Joaquin Regional Rail Commission, 1810 E. Hazelton Avenue, P.O. Box 1810, Stockton, CA 95201

05.10.13





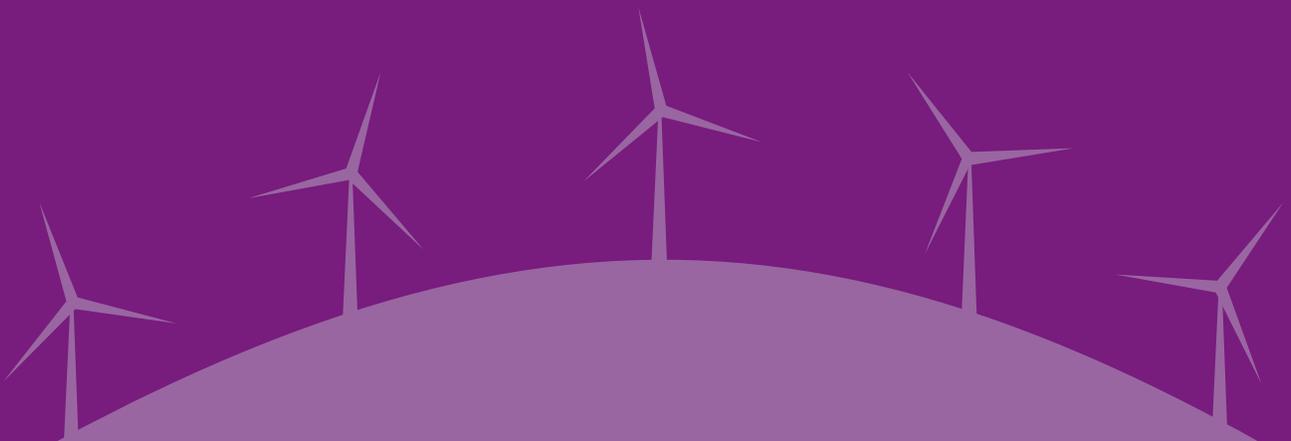
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01

Background



01

Background

There is a unique opportunity for the San Joaquin Regional Rail Commission (SJRRRC) and various partners to improve and expand ACE service in the near future. The ACE Forward initiative will respond to the need for enhanced intercity rail services in the northern San Joaquin valley as a result of the State's decision to begin development of the High-Speed Rail (HSR) project with the construction of the first leg of the Initial Operating Section (IOS). The initiative will leverage the existing commuter and intercity services to extend towards and connect with the HSR line at Merced. ACE Forward is an aggressive, forward thinking, phased development program capable of attracting potential state and federal funding to support cost-effective service expansions. ACE Forward will demonstrate that ACE will play a significant role in the Northern California Unified Rail Service described in the April 2012 Revised Business Plan prepared by the High-Speed Rail Authority. In pursuit of this goal, SJRRRC will engage the support of stakeholders and partners while addressing the concerns and interests of the communities it serves now and desires to serve in the future when developing and implementing this vision.

The SJRRRC is interested in furthering intercity rail service with a near-term focus on improving the existing ACE service between the Bay Area and northern Central Valley as well as extending service to additional Central Valley communities. An expanded and improved ACE can provide a mobility alternative to the automobile that will lower greenhouse gas emissions, improve air quality, furthering regional land use/transportation planning goals under SB 375 and other local, regional, and state sustainability initiatives. In addition to the environmental and mobility benefits of expanded intercity rail service with downtown stations, it also can 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.

The Union Pacific Railroad (UPRR) is the "host" railroad for the existing ACE services. UPRR and SJRRRC are parties to a July 11, 2012 Memorandum of Understanding (MOU) which acknowledges opportunities to expand passenger operations over the UPRR network subject to implementation of rail infrastructure improvements currently under study by UPRR which would provide for:

- Operation of a 5th and 6th round trip between Stockton and San Jose (by 2018);
- Operation of 10 round trips between Stockton and San Jose (by 2022); and,
- Operation of 6 round trips between Stockton and Merced/Fresno (by 2022).

Beginning in 2013, SJRRRC will conduct operational planning, engineering design, environmental analysis and public and stakeholder involvement and consultation necessary to identify and prepare for construction of a program of specific near-term improvement projects to reduce travel time and extend the reach of the Altamont Corridor Express (ACE) rail system to Modesto by 2018 and to connect with the California High-Speed Rail System in Merced by 2022. SJRRRC will also identify and evaluate projects

that will further improve and expand ACE service in the foreseeable future. These goals are summarized below:

- Goal #1: Explain the ACE Forward initiative and the transition of the project from the California High-Speed Rail Authority to the SJRRRC to all Altamont Corridor stakeholders and the public.
- Goal #2: Deliver near-term operational improvements and extend service to Downtown Modesto and enable operation of 6 daily round-trips by 2018, coincident with completion of the first leg of the HSR system.

- Goal #3: Extend service to meet and connect to the HSR system in Downtown Merced and deliver improvements needed to enable 10 daily round-trips by 2022, timed to complement the initiation of HSR service between Merced and San Fernando Valley.
- Goal #4: Develop other improvements to the existing ACE line and connecting services which may be more substantial in nature than the early improvements built by 2018 and which will require future Project environmental clearance.
- Goal #5: Obtain Program environmental clearance for longer term improvements (beyond 2018) which will bring clarity to the vision for an expanded northern California intercity rail network which includes the ACE line as a core element.

Achieving these goals will require system planning, engineering studies, environmental review and outreach activities along with program-wide management including project controls, project delivery strategies and funding. Key elements of system planning, engineering and project delivery, environmental review and public outreach and stakeholder engagement are as follows.

System Planning

- Service Planning and Rail Operations: Identifying the rail development strategy and infrastructure requirements needed to extend the coverage and increase frequency of service in manageable projects that can be implemented by 2018, 2022, and 2030. The companion rail development strategy needs to balance a desire for near-term results with SJRRC's long-term goal of owning and controlling dedicated passenger track.
- Ridership and revenue: Identifying the ridership that can be generated by near-term and long-term investments. Service expansion consistent with market, and maintenance and operations costs. Perform cost-benefit analyses to position project for federal funds and quantify emissions reductions and air quality benefits to qualify the project for Cap & Trade and other state funds.
- Funding: Develop a funding strategy for all phases; aggressively pursue funding with grant writing and position for funding which may become available.

Engineering and Project Delivery

- Engineering: Conceptual engineering to support the program-level environmental review. Preliminary engineering as necessary for project-level environmental clearance, permitting and right-of-way acquisition.
- Right of Way: Identifying the near-term and long-term right of way needs, developing an acquisition strategy, and implementing right of way acquisition to further program needs.
- Project Acquisition Strategy: Identifying project delivery methods (design-bid, design-bid-build, etc.)
- Cost Estimating: to support near-term and long-term funding, program development, state and federal funding applications, program-level costs, and project-level costs.

Environmental Review

- Small Scale, Short Term Projects: Low impact improvements for near term projects will be cleared through stand-alone project environmental review and permitting. These projects will be mainly within existing rights of way and/or related to safety, can be processed via stand-alone environmental processes utilizing Statutory Exemptions, Categorical Exemptions, or Negative Declarations to satisfy the California Environmental Quality Act (CEQA) and Categorical Exclusions and Environmental Assessments/Finding of No Significant Impacts (EA/FONSI) to satisfy the National Environmental Policy Act (NEPA) as necessary.
- Near and Mid-Term Service Expansions: Projects which require extensive construction outside of existing rail rights-of-way will be cleared through project-level analysis in a Combined Program and Project EIR/EIS. Project level environmental clearance and permitting will be done for a service expansion to Modesto and 6 daily round trips for Stockton to San Jose by 2018. Program level clearance will be done for further service expansion to Merced and 10 daily round trips for Stockton to San Jose by 2022.
- Long Term "Vision" Improvements: Longer term improvements (planning horizon beyond 2030) will be evaluated in the corridor phasing plan but will not be analyzed in the Combined Program and Project EIR/EIS. Consideration will be given to demonstrating the independent utility of the specified near and mid-term improvements and to assure that such improvements do not preclude the implementation of Vision projects.

Public Outreach and Stakeholder Engagement

- Outreach: Communities served by ACE presently or planned to be served in the future need to be involved in program development and to understand the advantages of ACE Forward. Outreach needs to target both existing and future riders and motivate their involvement and support.
- Stakeholder Engagement: Interested parties throughout the served corridors need to be engaged to understand their interests and concerns in order to articulate a program that can best address those concerns, manage expectations and minimize controversy by leveraging common interests to foster support wherever possible.
- Decision-Maker Engagement: City Councils, Boards of Supervisors, and decision-makers at transportation funding agencies need to be involved early and often in program development.

Phased Improvement Program

ACE Forward will define a phased implementation plan for the Altamont Corridor which will allow it to maximize investments in service improvement and expansion by pursuing multiple projects in parallel:

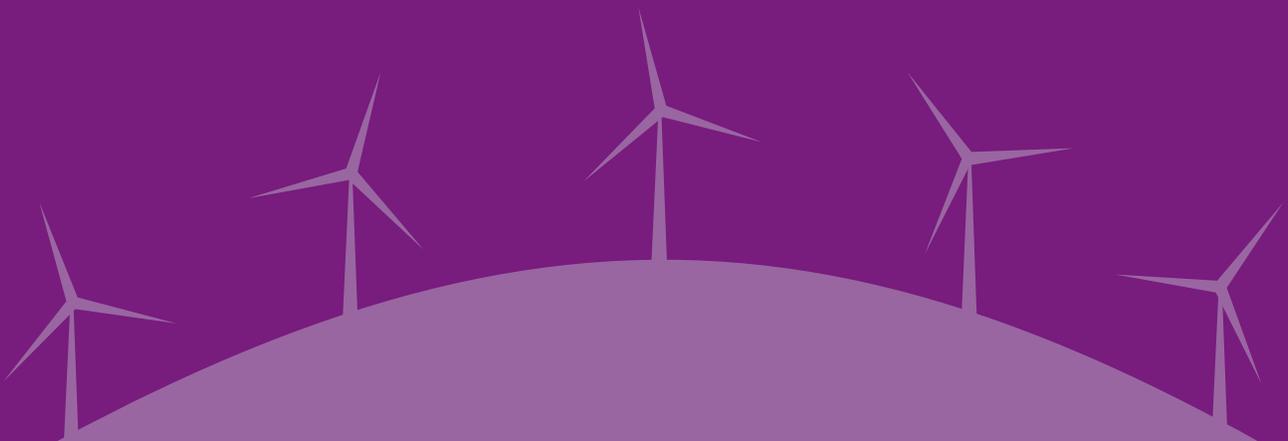
- A near term service extension to Modesto with a further extension to Merced planned to coincide with construction of the first leg of the HSR system and the potential initial operation of high-speed train service.
- Along the existing corridor between Stockton and San Jose, improvements within the existing railroad right-of-way could deliver near-term travel time improvements. Additional sections of corridor outside of the existing rail line could be developed subsequently to deliver substantially higher benefit.
- A comprehensive program of grade crossing improvements could provide near-term safety benefits. Subsequent development of grade separations could reduce conflicts with traffic in the near term while potentially making higher top speeds possible in the longer term.
- In the joint corridor west of Niles Junction shared with Capitol Corridor trains, SJRRC could partner with interested parties to pursue near-term stand-alone projects such as double-tracking at Great America within the existing railroad corridor and longer range initiatives to address known bottlenecks in locations such as the Alviso Wetlands.

A robust environmental clearance strategy will mirror the phased improvement program to accelerate selected projects while minimizing risk by developing separate documents for various elements:

- A limited number of short-term safety and operational improvements, such as grade crossing improvements and sidings within the existing right of way could be cleared with methods that do not require preparation of a full EIR/EIS.
- Grade separation projects are spot improvements which are eligible for expedited environmental process and could also be done separately.
- Programmatic analysis in a Combined Program and Project EIR/EIS would present the phased development plan of the near- and mid-term improvements to conventional rail services. This document would provide programmatic clearance for new corridors across the Altamont Pass, through downtown Tracy, and for the extension to Modesto and Merced including improvements necessary to enable 10 daily round trips by 2022.
- Project analysis in a Combined Program and Project EIR/EIS would provide project-level clearance for the Manteca to Modesto extension and would be developed to enable construction of this new section of line. Project analysis would also include improvements along the existing Stockton to San Jose route to facilitate 6 daily round-trips by 2018. Additional project analysis may be included depending on available resources.

02

Fiscal Year 2013/2014 Scope of Work



02

Fiscal Year 2013/2014 Scope of Work

Introduction

This scope describes the work effort required to take the first steps to implement the ACEforward vision, covering the time period representing fiscal year 2013/2014 from July 1, 2013 through June 30, 2014. The level of detail portrayed in this scope of work is that which is sufficient to prepare a detailed estimate of budget and schedule for the year and to determine specific deliverable products.

As discussed in the Vision provided above, ACEforward will identify a series of improvements that can be made to the existing Altamont Corridor Express passenger rail service to improve operations, reduce travel time, and expand the coverage of the system to new communities. The ACEforward vision includes a program of improvements to be implemented within the foreseeable future including expansion of ACE service to Modesto and other specific improvements required within the existing corridor between Stockton and San Jose to allow for a total of six (6) passenger trains as identified in the Northern California Unified Service projects list. For the purposes of this scope and the associated costs estimate, these projects are assumed to include:

- Gold Street Double Track & Great America Station Improvements
- Fremont Full Platform Extension on Track 2
- Midway & Altamont Siding Extensions (Altamont Pass)
- Wyche Siding Extension (between Tracy & Lathrop on existing route)
- Radum Siding Upgrade (in Tri Valley)
- Track Realignment/Eliminate Shoo Fly (on Altamont Pass)
- Connection from UPRR Fresno Sub to Oakland Sub (at Lathrop – on existing route)

The extension to Modesto and the projects mentioned above will all need to be cleared at the project-level of analysis in the EIR/EIS planned to begin during FY 13/14. The EIR/EIS will also analyze longer-term improvements such as extension of ACE service to Merced and a series of projects required in order to allow a total of ten (10) passenger trains. These longer-term improvements will be analyzed at the program level of detail in the EIR/EIS.

The project team will conduct management, planning, outreach, engineering design, environmental analysis and documentation, permitting and right of way work to position projects for future construction and operation in accordance with the understanding of phasing at this time.

List of Services/Scope Outline

Task I: Project Management

I.1 Project Management/PM Plan/Meetings/Coordination

I.1.1 Project Management Plan/Project Work Plans

Prepare a project management plan for FY 13/14. The plan will cover all aspects of project management and focus on issues important to the success of the project. The plan will reference the annual work plan and include scope, schedule, budget, and project organization.

Each year the team will prepare a work plan to address specific tasks to be accomplished in the following fiscal year. The work plan will include a scope of work, budget, schedule and organization chart.

1.1.2 Coordination

Conduct monthly project management/status meetings with SJRRC to provide progress updates and resolve outstanding issues.

Coordinate with the CHSRA Regional Manager on an as-needed basis to provide informational updates, establish protocols for areas of overlapping outreach and agency coordination and manage other overlapping issues as needed.

1.1.3 Altamont Task Manager Coordination

Coordinate with team on weekly basis with team meetings as needed, but at a minimum every two weeks.

Key Assumptions:

- None

Task 1.1 Deliverables		Schedule
1.1.1	Project Management Plan	July '13
1.1.2	FY 14/15 Project Work Plan	May '14
1.1.3	Prepare Monthly Team Meeting notes	Monthly

1.2 Quality Assurance/Quality Control/Safety/Risk

Conduct quality management in accordance with AECOM quality procedures. Review all work products before submitting to the SJRRC. Provide quality reviews for all formal deliverables. Perform quality audits in accordance with AECOM procedures.

At the direction of the SJRRC, the AECOM team will identify and log project risks which are identified as a result of the PE/EIS process and will participate in a review of project risks and mitigations as directed. The project risk log will be updated as directed by SJRRC.

The AECOM team will develop and implement a project safety plan as required to satisfy AECOM and SJRRC requirements. The project safety plan will be updated each fiscal year.

Key Assumptions:

- None

Task 1.2 Deliverables		Schedule
1.2.1	Quality Control/Quality Assurance Documentation	By Deliverable
1.2.2	Project Risk Log	As Directed by SJRRC
1.2.3	Project Safety Plan	July '13 (if required)

1.3 Document Control

Maintain document control log, project files, and correspondence; transmit work products to SJRRC; maintain work products and key relevant documents AECOM Oakland office server.

Key Assumptions:

- None

Task 1.3 Deliverables		Schedule
1.3.1	Document Control Log	Updated Monthly
1.3.2	Project Files	Updated Monthly
1.3.3	Project Correspondence	Updated Monthly

1.4 Schedule, Budget and Progress Reporting

Maintain project schedule; provide monthly updates and detailed look-ahead as requested by SJRRC. Monitor project budget. Prepare monthly progress report including cash flow and look-ahead. Prepare and submit monthly invoices.

Key Assumptions:

- None

Task 1.3 Deliverables		Schedule
1.3.1	Document Control Log	Updated Monthly
1.3.2	Project Files	Updated Monthly
1.3.3	Project Correspondence	Updated Monthly

Task 2 Public Participation/Outreach

The public engagement process initiated during work on the Altamont Corridor Rail Project will continue, building upon activities conducted during the previous fiscal years. Activities planned for FY 13/14 include completion of scoping meetings, refinement of the outreach strategy, project image and messaging, direct coordination with area stakeholders, and development of strategic outreach materials.

Briefings for elected officials, presentations to community organizations, and ongoing public information updates via the ACEforward website, direct mail/e-mail, and media outreach will all be part of the public outreach program during FY 13/14.

The outreach will continue to focus on the Altamont Corridor Partnership Working Group (ACPWG), but will also include other groups and stakeholders as necessary and identified in the Public Participation Plan (PPP).

2.1 Public Participation Plan Update

Update the existing plan for public and agency participation throughout the course of the project. Include identification of outreach techniques to be utilized, collateral materials to be prepared, small and large group meeting formats and frequency, and planned agency coordination contacts.

Key Assumptions:

- None

Task 2.1 Deliverables		Schedule
2.1.1	Public Participation Plan Update	July '13

2.2 Outreach Strategy, Project Image, Messaging, and Meeting Management

Develop, conduct, and oversee the outreach strategy and its execution through development of appropriate materials and scheduling and conducting meetings. Meet with the management team to confirm strategy, project image to portray, and messaging. Then arrange to meet with stakeholders, elected officials, agency representatives and members of the public.

Key Assumptions:

- None

2.3 Maintain Stakeholder Database

Update and maintain the project database to include all stakeholders including appropriate agency representatives for the EIR/EIS effort. The outreach team will ensure that the names of all meeting participants are included in the project database. The database will be provided in appropriate formats (e.g. labels, electronic file, etc.) for distribution of materials and notifications.

Key Assumptions:

- None

Task 2.3 Deliverables		Schedule
2.3.1	Updated Stakeholder Database	Monthly

2.4 Memoranda of Understanding (MOUs)

The team will continue to coordinate and facilitate work with all the designated federal, state and local agencies. Additional MOUs will be developed as necessary throughout the 13/14 fiscal year. The team will provide MOU assistance and coordination with SJRRC as necessary to address the future blended service operations with freight railroads in the Altamont corridor.

Key Assumptions:

- Assume team coordination for input on one MOU for blended service operation

Task 2.4 Deliverables		Schedule
2.4.1	Input to MOUs with regional / private organizations	As Requested by SJRRC

2.5 Stakeholder Meetings and Briefings

The team will use a number of interactive outreach techniques to keep stakeholders, agency staff and policy makers informed of project progress. Outreach will include periodic briefings to local and regional elected bodies, stakeholder groups and other interest groups on a periodic basis (every three to six months). Additionally, project information pieces and e-updates will also be utilized to keep people informed and aware the project's status. Activities in this task will keep critical individuals and groups informed of the environmental review process, the development of near-term improvements, and project

phasing and encourage feedback from the community on the way the process is being received, what the concerns are, and what potential opportunities exist to advance the goals of the ACEforward.

Services within this task will include but not be limited to:

- Preparation of specific meeting plans
- Preparation for meetings
- Notifications
- Agendas
- Presentations
- Other information materials
- Provide meeting facilitation and note taking (if needed)
- Documentation and follow-up

The AECOM outreach team will also include coordination with the Sacramento to Fresno project teams as necessary between Sacramento and Merced.

Key Assumptions:

- Small group meetings will average approximately three (3) per month, as needed

Task 2.5 Deliverables		Schedule
2.5.1	Small group/one-on-one meetings	3 / Month Throughout

2.6 Outreach

The AECOM Team will continue to conduct outreach with key stakeholders, agencies, and the public in accordance with the Public Participation Plan developed under 2.1. Presentations will be made to outside entities to inform the public and policy makers. Task includes allowance for quarterly project-specific presentations to the SJRRC and/or CHSRA boards.

The team will continue to use the Facebook page created for the Altamont Corridor Rail Project in FY 10/11, though substantial update will be necessary to reflect the ACEforward branding. Press-releases will also be utilized for dissemination to local media as a way to quickly share project information to the outreach area.

Key Assumptions:

- None

Task 2.6 Deliverables		Schedule
2.6.1	Outreach to stakeholders, agencies and the public (includes quarterly presentations to SJRRC and Authority Board)	Throughout
2.6.2	Support SJRRC and Authority Board Meeting Presentations in regard to ACEforward	Quarterly

2.7 Create and Distribute Media/ Newsletters

In coordination with SJRRC, the team will create and distribute collateral providing project updates, current and future events to individuals included in the stakeholder database. Materials will be primarily distributed through electronic means, but some will also be available as a hardcopy and mailed out as such. Content updates will be posted to the Project web site quarterly or in conjunction with key project milestones. Additionally, newsletters, fact sheets, press releases, and e-updates will also be utilized to keep people informed.

Key Assumptions:

- None

Task 2.7 Deliverables		Schedule
2.6.1	Milestone or public information collateral updates	At Milestones
2.6.2	Web updates	Throughout

Task 3 Project Definition/Alternatives Analysis

Task 3 activities will include completion of project scoping, refinement to the project purpose and need, service planning, ridership and revenue analysis, and development of a complete project description including finalization of the corridor phasing plan initiated during FY 12/13.

3.1 Notice of Intent and Notice of Preparation

A new NOI/NOP will be produced during FY 12/13. Therefore, this work will be complete prior to the beginning of FY 13/14.

3.2 Project Scoping

The scoping effort conducted in conjunction with the new NOI/NOP prepared during FY 12/13 will be completed during FY 13/14 with the production of a scoping report.

Key Assumptions:

- Scoping meetings are concluded during FY 12/13.

Task 3.2 Deliverables		Schedule
3.2.1	Draft Scoping Report	July '13
3.2.1	Revised Scoping Report	August '13

3.3 Refine Project Purpose and Need

Based on coordination with state and federal lead agencies and input from the public received during scoping meetings, refine the project purpose and need and prepare an EIR/EIS-ready statement of the need for and purpose of the project and obtain concurrence from USEPA and USACE and other resource agencies. Include justification of all interim projects based on their anticipated utility and benefit to the corridor.

The effort also includes defining purpose and need for independent utility projects that won't be processed through the Program EIR/EIS. Development of purpose and need for these projects will continue beyond the end of FY 13/14.

Key Assumptions:

- A single purpose and need will be produced for the Program EIR/EIS during FY 13/14.

- Purpose and need may be analyzed for independent utility projects, but no environmental documentation will be completed for these projects during FY 13/14.

Task 3.3 Deliverables		Schedule
3.3.1	Refined Draft Project Purpose and Need	November '13
3.3.2	Independent Utility Projects Purpose and Need(s)	Throughout

3.4 Corridor Phasing Plan

Based on the long-term vision prepared during FY 12/13 for the ACEforward project and the results of the project scoping process, prepare a corridor phasing plan that identifies the timing of specific improvements and describes a preliminary implementation strategy for the Altamont corridor. The plan will focus on projects to be constructed by the 2018 target date including the extension to Modesto and descriptions of all specific projects necessary for the implementation of 6 daily round trips across the Altamont Corridor.

Additional discussion of projects to be constructed by the 2022 target date for the extension to Merced and descriptions of all specific projects necessary for the implementation of 10 daily round trips across the Altamont will also be included to the extent that they are well defined at the time.

Key Assumptions:

- The ability of the team to determine phasing of projects required for operation of 10 daily round trips across the Altamont Corridor is based upon receipt of project list as determined by Union Pacific Railroad

3.5 Alternatives Analysis

Based on the long-term vision prepared during FY 12/13 for the ACEforward project and the results of the project scoping process, prepare an alternatives analysis to evaluate all alternatives potentially part of the ACEforward project. Evaluations will include assessment of the ability of each project to meet the purpose and need, improvements in travel time, expansion of the reach of the ACE system, project cost, potential environmental effects and other specific issues as determined necessary to evaluate alternatives for inclusion in the Draft EIR/EIS. Obtain concurrence on the range of alternatives from USEPA and USACE and other resource agencies.

Key Assumptions:

- Ability of the team to evaluate projects required for operation of 10 daily round trips across the Altamont Corridor is based upon receipt of project list as determined by Union Pacific Railroad.

Task 3.5 Deliverables		Schedule
3.5.1	Draft Alternatives Analysis	December '13
3.5.2	Revised Alternatives Analysis	February '14
3.5.3	Resource Agency Concurrence	April '14

3.6 Service Planning

Conduct rail operations and simulation analysis to evaluate effects of proposed corridor improvements and to improve the understanding of benefits to be realized based on phasing of improvements. Conduct analysis of a range of scheduling possibilities based on available train slots and additional capacity realized by proposed improvements. Prepare Service Development Plan (SDP) or portions of an SDP for implementation of expanded ACE, San Joaquin, or Northern California Unified Rail services for submittal to FRA to position corridors for federal funding.

Key Assumptions:

- Rail operations and simulation analysis will be conducted for up to two (2) alternative alignments for the extension to Modesto.
- Operations and simulation analysis will be conducted for up the seven (7) projects required for six (6) trains travelling between Stockton and San Jose.

- Operations and simulation analysis will include additional independent utility interim improvements as necessary.

Task 3.6 Deliverables		Schedule
3.6.1	Rail Operations and Simulation Analysis	March '14
3.6.2	Draft Service Development Plan	March '14
3.6.3	Revised Service Development Plan	April '14

3.7 Ridership and Revenue and Benefits Analysis

Conduct analysis of the level of ridership and fare box recovery anticipated with expanded service possible with proposed corridor improvements. The analyses will include an assessment of costs and benefits as well as air quality emission reduction expectations with and without proposed improvements. The team will utilize information from ridership analysis to further refine alternatives to maximize the pool of users.

Key Assumptions:

- Ridership and revenue analysis will be conducted for the alternative alignments carried forward for the extension to Modesto. This analysis will include sensitivity analysis (fares, travel times, growth assumptions, etc.)
- Ridership and revenue analysis will be conducted for the projects required for six (6) trains travelling between Stockton and San Jose.
- Ridership and revenue analysis will include additional independent utility interim improvements as necessary.
- Benefits analysis will include qualitative and quantitative factors as identified to be necessary for potential grants and to identify regional and local improvements to environmental and socioeconomic conditions.

TASK 3.7 DELIVERABLES Schedule

Task 3.7 Deliverables		Schedule
3.7.1	Ridership and Revenue Analysis	March '14
3.7.2	Benefits Report	May '14

3.8 Prepare Project Description

Based on information in the corridor phasing plan and alternatives analysis, coordination with state and federal lead agencies and input from the public received during scoping meetings, refine the project description and prepare a written description suitable for use in the EIR/EIS. Identify the entire program of projects proposed ranging from improvements to be implemented in the near-term (till the end of 2018) to those possible in the longer-term (by 2030) with considerable funding.

Conduct conceptual engineering necessary to define the footprint of interim projects, the extension to Modesto, the extension to Merced, and all other elements of the project description. A set of assumptions has been developed for all engineering work in order to prepare cost estimates. The full assumptions, sheet count, hours per sheet, and total hours estimated for the conceptual engineering phase are provided in Attachment A to this scope of work.

Initiate development of project descriptions for independent utility projects not being processed in the EIR/EIS. Development of project descriptions for these projects will continue beyond the end of FY 13/14.

Key Assumptions:

- Project descriptions may be initiated for independent utility projects, but no environmental documentation will be completed for these projects during FY 13/14.

Task 3.8 Deliverables		Schedule
3.8.1	Conceptual Engineering and Footprint Definition for all Project Elements	March '14
3.8.2	Project Description for Combined Program and Project EIR/EIS	April '14

Task 4 Preliminary Engineering

Preliminary engineering (PE) advances the conceptual design for all improvements to be cleared at the project level in the EIR/EIS to a 15-percent design level in accordance with SJRRC Preliminary Engineering guidelines. Conceptual and advanced conceptual engineering will be the focus of efforts during FY 13/14. The 15-percent design process is anticipated to begin in June of 2014 and continue to completion during FY 14/15.

Projects to be cleared at the program level of detail in the EIR/EIS will not be advanced beyond conceptual engineering level of detail during. It is anticipated that the team will advance at least two alignment alternatives for the extension to Modesto to the 15-percent design level for further analysis.

The team will initiate the 15-percent PE by preparing composite plan sheets for all alignment alternatives. The horizontal alignment will be identified on planimetric base sheets cut from readily-available purchased aerial base mapping. In conjunction with establishment of an approximate horizontal alignment, right-of-way data will be obtained from tax assessor records and GIS files will be fitted to the base sheets using readily-identifiable topographic features to provide an initial indication of potentially affected parcels. (This information will be tabulated to support property owner notifications.) The composite sheets will indicate key features such as potential modifications to adjacent and conflicting roadway facilities (initial conceptual designs), as well as initial cross sectional concept by segment showing approximate locations of at-grade, aerial, and below grade sections along with transition sections.

A set of assumptions has been developed for the engineering work in order to prepare cost estimates. The full assumptions, sheet counts, hours per sheet, and total hours estimated are provided in Attachment A to this scope of work.

4.1 Infrastructure

Prepare designs at a level of detail appropriate to inform the development of environmental documentation and independent project reviews. Design detail will be conceptual for the corridor-wide document which is predominately made up of elements of the program that are longer-term (beyond 2018) and to be cleared at a program level in the EIR/EIS. Much greater detail will be necessary to

clear near-term “Project” elements intended for immediate implementation by 2018 (such as the extension to Modesto). Near-term elements will ultimately be designed at a level of detail of 30-percent or more, but only 15-percent design will be initiated late in FY 13/14. Most of the design deliverables will be completed during FY 14/15.

Designs will include the following infrastructure elements:

- Alignment (plan and profile)
- Temporary Construction Facilities
- Stations
- Bridges and Elevated Structures
- Tunnels
- Buildings
- Grading/Earthwork and Borrow Sites
- Hydrology/Hydraulics/Drainage
- Utilities
- Geotechnical
- Right of Way
- Roadway Plans

4.1.1 Survey and Mapping

The AECOM Team has purchased available aerial photography for use in delineating the alternatives that survive the AA process. Aerials will be loaded into a GIS database where additional mapping elements including assessor parcel data will be added based on availability and/or field review.

Key Assumptions:

- None.

4.1.2 Alignment (Plan and Profile)

Refine horizontal guideway alignment (center line of track) and develop top of rail profiles. Prepare horizontal and vertical drawings of guideway at a horizontal scale of 1” = 100’. Prepare design standards for all future 15-percent design elements.

Develop typical sections for anticipated section types including clearances to structures, emergency access, wayside equipment, and other key facilities. Develop typical station sections (if applicable) for each anticipated section type, identify station locations and limits of at-grade, elevated, and subterranean guideway configurations.

Identify and refine alternative station locations as concurrent element of guideway alignment and profile refinement, taking into consideration station planning requirements and constraints.

Define right of way footprint for the guideway and other required facilities such as communications and other wayside systems.

Conduct profile studies as necessary in the Central Valley, between Tracy and Union City/Fremont and the Altamont crossing.

Conduct site visits as necessary to verify design site concepts and determine limits of at-grade, aerial, below-grade, and major waterway crossings.

Prepare alternative alignments at areas where existing railroad or other right of way will not be sufficient for operating requirements.

Plans shall include identification of highway and water crossings, major utilities (overhead power), freight rail crossings, and land use along the corridor as shown on the aerial base.

Key Assumptions:

- See Attachment A for quantities assumed to develop cost estimate.

Task 4.1 Deliverables		Schedule
4.1.1	Mapping in GIS Database with Parcel Data and Conceptual Alignments	March '14
4.1.2	Design Standards Memorandum	April '14
4.1.3	Typical Sections for Siding Improvements and Extension to Modesto	May '14

Task 5 EIR/EIS Analysis

Task 5 activities include environmental task management, development of baseline data, and technical reports for specific environmental topics.

5.1 Environmental Task Management

The Environmental Lead will initiate environmental analysis as directed and continue until the development of the Final EIR/EIS. The Environmental lead will manage team members, attend internal and external meetings, and perform weekly and monthly budget and project administration activities. Meetings include technical working group (TWG), Altamont Partnership Working Group (Working Group) and resource agency meetings as well as regional environmental coordination conference calls and coordination conference calls with other members of the AECOM Team.

Key assumptions:

- The environmental management task will be initiated with the beginning of the alternatives analysis process to manage limited, high-level environmental analysis in support of that process.
- Environmental management of data collection and field investigation in support of the Draft EIR/EIS will begin after completion of the alternatives analysis, anticipated in February 2014.

5.2 Technical Studies

The Environmental Lead and supporting staff will review existing methodologies to determine if any changes will be needed during completion of technical studies. The Environmental Lead and supporting staff will also coordinate with resource agencies to confirm that existing field survey methods and study area boundaries are appropriate. Finally the team will begin the preparation of a series of baseline technical reports and studies to address critical environmental factors. Determination of the need for a technical report versus a technical study will be made by the environmental leader in coordination with the SJRRC and resource agencies responsible for the resource in question. Each technical report or study will include description of the baseline environmental conditions with a focus on areas of the corridor where project-level analysis will be required in the EIR/EIS.

Technical reports/studies will be developed for the following resources during FY 13/14 to support the EIS/EIR analysis according to standard industry methodologies:

- Transportation analysis
- Air quality
- Noise and vibration
- Community impact assessment
- Aesthetic and visual quality

Key assumptions:

- Technical studies will begin following the completion of the alternatives analysis, anticipated in February 2014.
- Additional technical studies will be prepared during FY 14/15. Those studies are identified in the scope of work for the remainder of the ACEforward program.

Task 5.2 Deliverables		Schedule
5.2.1	Revised Environmental Methodologies	May '14
5.2.2	Baseline Transportation Description	June '14
5.2.3	Baseline Air Quality Description	June '14
5.2.4	Baseline Noise and Vibration Description	June '14
5.2.5	Baseline Communities Description	June '14
5.2.6	Baseline Aesthetic and Visual Quality Description	June '14

Task 6 Station Area Planning

The station analysis to be conducted is described below.

6.1 Define Stations & Needs Assessment

New station location and stations requiring improvement are identified conceptually during Task 3 activities that define the project description. As part of the advanced conceptual and 15-percent design effort, and in advance of Task 4.1.4, "Stations", the following efforts will occur.

6.1.1 Outline Issues, Opportunities, and Constraints

Stations will be analyzed in terms of issues, opportunities, and constraints that would properly influence each station’s proposed architectural design program and its specific site within the proposed site alternatives. The most critical factors (both positive and negative) relate to the surrounding municipalities, including current land use planning, city development objectives, urban context (e.g. residential, commercial, industrial, etc.), land assemblies, land values, local transit connectivity, and site conditions (e.g., environmental “hot spots”, historic and cultural resources, utility conflicts, etc.).

The bulk of this information is gathered through the station-related activities in Task 3 and 4 and Task 6.2.1. The information is then arranged as issues, opportunities, and constraints for the purpose of comparing and fine-tuning station site alternatives.

6.1.2 City Review of Issues, Opportunities, and Constraints

Cities will review and offer comments on the issues, opportunities and constraints associated with each potential station location.

6.1.3 Revised Issues, Opportunities, and Constraints

Following city review, the issues, opportunities, and constraints comparison and recommendations are further revised, as required. Completion of this task is scheduled to support refinement of the initial Station Area Plan prior to the Public Workshops in Task 6.2.5.

Key assumptions:

- Conceptual station design will be conducted for potential changes at up to two (2) existing stations.
- Up to three (3) new stations will be designed at a 15-percent level of detail.
- See Attachment A for quantities assumed to develop cost estimate.

Task 6.1 Deliverables		Schedule
6.1.1	Documentation of the comparison process and recommendations as part of the station program and station layout prototype	January ‘14
6.1.2	Revisions based on city reviews of issues, opportunities and constraints	January ‘14
6.1.3	Station footprints and conceptual layouts	February ‘14

6.2 Station Area Development Plan

Based on the needs assessment conducted in Task 6.1, the team will prepare station area development plans. This effort will include:

- Coordination with cities for station area development plans
- Data collection on existing conditions
- Limited market assessment including:
 - Collection of real estate and land use data
 - Examination of population and employment trends
 - Consideration of public policy variables
- Preparation of preliminary station area plans
- Conduct public workshop(s)
- Preparation of revised station area plans

Key assumptions:

- Conceptual station design will be conducted for potential changes at up to two (2) existing stations.
- Up to three (3) new stations will be designed at an advance conceptual level of detail.
- See Attachment A for quantities assumed to develop cost estimate.

Task 6.2 Deliverables		Schedule
6.2.1	Base Map of Selected Station Locations	February ‘14
6.2.2	Initial Station Area Plan(s)	May ‘14
6.2.3	Revised Station Area Plans	June ‘14

Task 7 Draft and Final EIR/EIS

The AECOM Team will prepare an Administrative Draft Combined Program and Project EIR/EIS as part of this work program. The Administrative Draft document will be initiated during FY 14/15. No deliverables will be produced for Task 7 during FY 13/14.

Task 8 Certification of EIR/EIS and ROD

There will be no activity on this task during FY 13/14.

Task 9 ROW Preservation and Acquisition

There will be no activity on this task during FY 13/14.

Task 10 Permitting

Some limited activity in the form of agency meetings to advance the permitting process will occur during FY 13/14. No other deliverables will be produced during FY 13/14.

10.1 Advanced Agency Coordination

Conduct agency meetings throughout the environmental processes to receive input on future permitting requirements and details on preparation of permitting applications. Agency meetings will focus on improvement projects analyzed at the project-level of detail and the permitting requirements for implementation of these projects.

Key assumptions:

- None.

Task 10.1 Deliverables		Schedule
10.1.1	Agency meetings to advance permitting process	Throughout

10.2 Prepare Permit Applications and Submittals

There will be no activity on this task during FY 13/14.

10.3 Obtain Permits

There will be no activity on this task during FY 13/14.

Task II Bid Process Support/Project Delivery Services

11.1 Environmental Strategy for Determining Methods of Environmental Clearance

Based on the list of candidate improvements, develop environmental clearance strategies. Identify all improvements that must be included in the Combined Program and Project EIR/ES as well as projects that can be cleared with a lower level of environmental review. Identify specific clearance methods for lower level review improvements including a schedule and anticipated construction date for each.

Key assumptions:

- Independent utility projects are anticipated to consist of grade crossing improvements, grade separations, and some additional track or improved track within existing rights of way, and station improvements.
- Up to twelve (20) grade crossing improvements may be processed.
- Up to three (3) grade separation improvements may be processed.
- Up to two (2) track improvements within existing rights of way may be processed.
- One (1) station improvement may be processed.

Task 11.1 Deliverables		Schedule
11.1.1	Environmental strategy recommendations	Throughout

11.2 Funding Strategy and Funding Plan

In consultation with SJRRC, begin development of a plan to fund improvements based on urgency. Identify specific funding sources for near-term improvements, potential funding sources for mid-term improvements, and strategies to seek funding for longer-term improvements. Future activities will include completion of the funding plan and assisting SJRRC in the writing of grants to access funding for specific improvement projects, e.g., safety projects such as grade separations that might be eligible for specific pots of money based on increased public safety.

Key assumptions:

- Funding strategy and funding plan will be initiated during FY 13/14. A memorandum on the proposed strategy will be completed during FY 13/14, but the complete funding plan will be finalized early in FY 14/15.
- Assistance with grant writing will begin during FY 13/14 and continue beyond FY 13/14.

Task 11.2 Deliverables		Schedule
11.2.1	Funding Strategy Memorandum	June '14

11.3 Procurement and Construction Strategy

There will be no activity on this task during FY 13/14.

Task 12 Project Administration

12.1 Project Controls

There will be no activity on this task during FY 13/14.

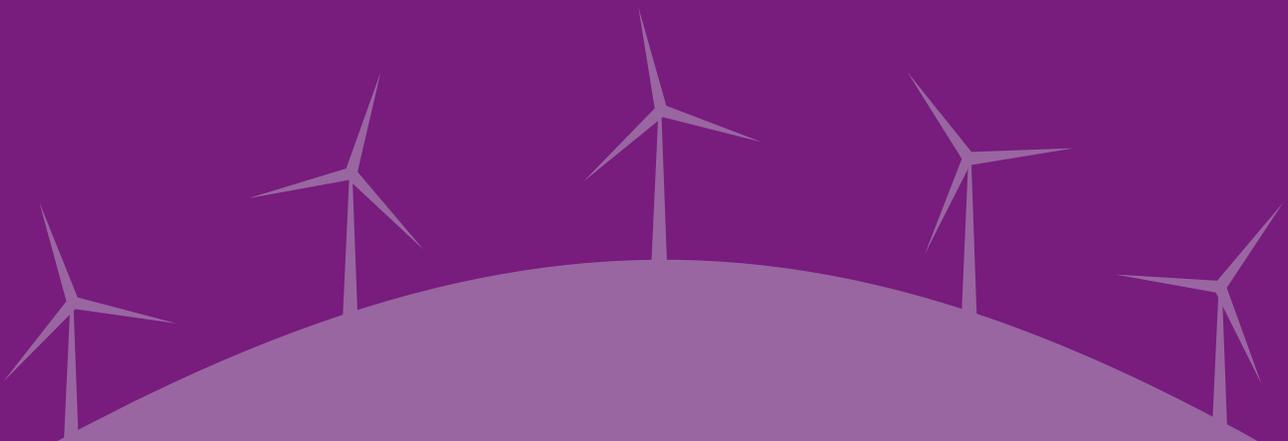
12.2 Other Program Administrative Requirements

There will be no activity on this task during FY 13/14



03

Fiscal Year 2013/2014 Budget Summary



03

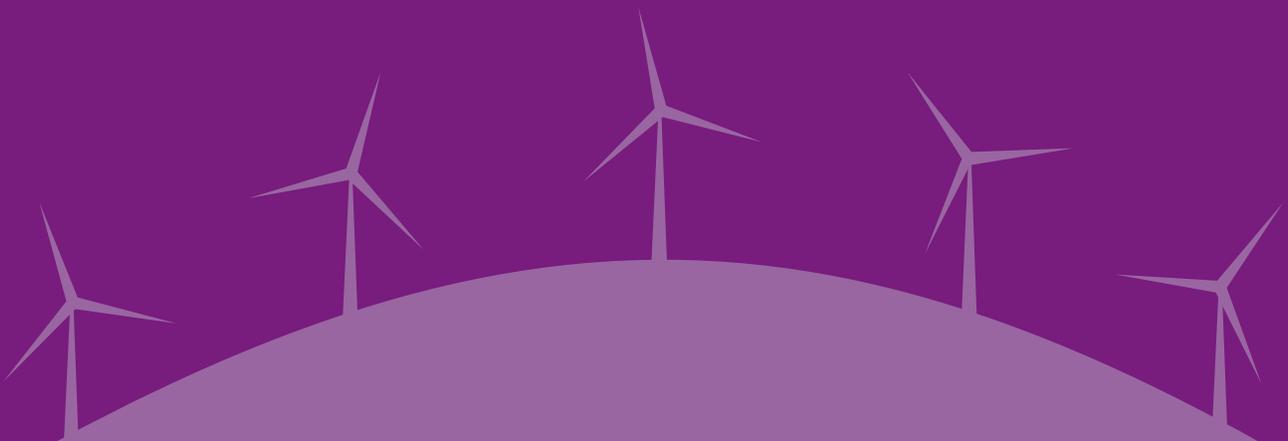
Fiscal Year 2013/2014 Budget Summary

		% of Effort	Total
Task 1: Project Management	Labor Hours		1,956
	Labor Amount	9.89%	\$395,575
Task 2: Public/Agency Participation	Labor Hours		2,353
	Labor Amount	9.06%	\$362,211
Task 3: Project Definition	Labor Hours		10,874
	Labor Amount	46.80%	\$1,872,101
Task 4: Preliminary Engineering	Labor Hours		1,582
	Labor Amount	6.96%	\$278,304
Task 5: EIR/EIS Analysis	Labor Hours		3,325
	Labor Amount	12.87%	\$514,671
Task 6: Station Area Planning	Labor Hours		1,268
	Labor Amount	5.87%	\$234,696
Task 7: Environmental Documentation	Labor Hours		44
	Labor Amount	0.58%	\$23,000
Task 8: Certification of EIR/EIS and NOD/ROD	Labor Hours		0
	Labor Amount	0.00%	\$0
Task 9: Right of Way Preservation and Acquisition	Labor Hours		0
	Labor Amount	0.00%	\$0
Task 10: Permitting	Labor Hours		134
	Labor Amount	0.69%	\$27,745
Task 11: Bid Process Support/Project Delivery Services	Labor Hours		524
	Labor Amount	3.26%	\$130,469
Task 12: Project Administration	Labor Hours		0
	Labor Amount	0.00%	\$0
Total Labor Hours			22,060
Total Labor Amount			\$3,838,771
ODCs			\$161,063
Grand Total			\$3,999,833



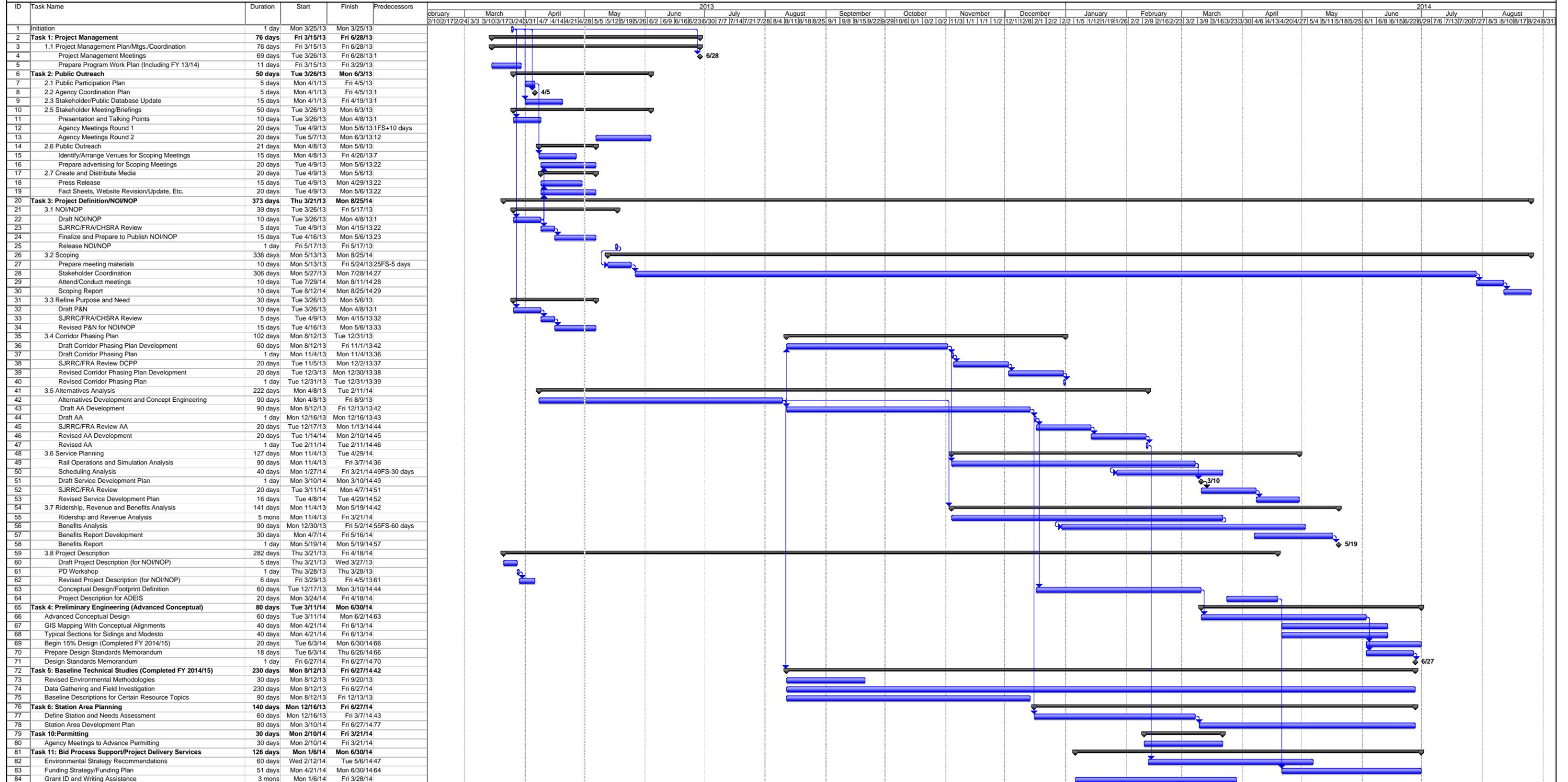
04

Fiscal Year 2013/2014 Schedule



04

Fiscal Year 2013/2014 Schedule

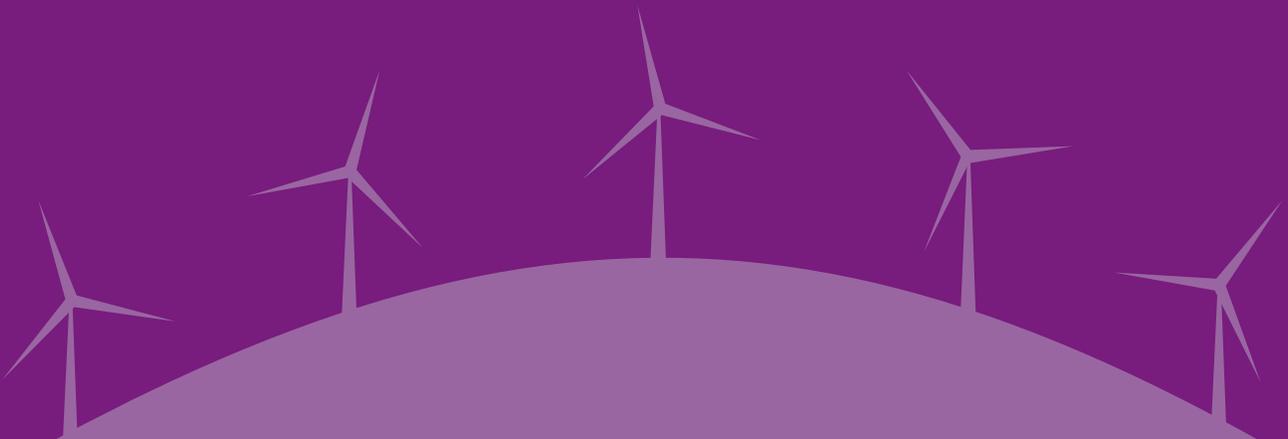




Past public outreach meetings for the Altamont Corridor Rail Project

05

2014 / 2014 - 2017 / 2018 Scope of Work



05

2014 / 2015 - 2017 / 2018 Scope of Work

Introduction

This scope describes the work effort required to take future steps to implement the ACEforward vision, covering the time period representing fiscal years 2014/2015 through 2017/2018 from July 1, 2014 through June 30, 2018. The level of detail portrayed in this scope of work is currently lower than that provided for FY 13/14, but greater detail on the scope of work to be accomplished each year will be provided in subsequent ACEforward work plans to be submitted prior to the beginning of each fiscal year.

As mentioned previously, the extension to Modesto and the projects required for six trains will be cleared at the project-level of analysis in the EIR/EIS planned to begin during FY 13/14. Further expansion of the ACE system to Merced and certain improvements to the Stockton to San Jose corridor to allow 10 trains will be analysed at a program-level of detail in the EIR/EIS.

The project team will conduct management, planning, outreach, engineering design, environmental analysis and documentation, permitting, right of way, bid process support, and project administration work to position projects for construction and operation in accordance with the understanding of phasing at this time.

Scope of Work

Task I Project Management

I.1 Project Management/PM Plan/Meetings/Coordination

I.1.1 Project Management Plan/Project Work Plans

Prepare project management plan updates for each fiscal year of work. The plans cover all aspects of project management and focus on issues important to the success of the project. The plans will reference each year's annual work plan and include scope, schedule, budget, and project organization.

I.1.2 Coordination

Conduct monthly project management/status meetings with SJRRC to provide progress updates and resolve outstanding issues.

Coordinate with the CHSRA Regional Manager on an as-needed basis to provide informational updates, establish protocols for areas of overlapping outreach and agency coordination and manage other overlapping issues as needed.

I.1.3 Altamont Task Manager Coordination

Coordinate with team on weekly basis with team meetings as needed, but at a minimum every two weeks.

Key Assumptions:

- None

Task 1.1 Deliverables		Schedule
1.1.1	Updated Project Management Plan FY14/15	July '14
	Updated Project Management Plan FY 15/16	July '15
	Updated Project Management Plan FY 16/17	July '16
	Updated Project Management Plan FY 17/18	July '17
1.1.2	Annual Work Plan FY 15/16	May '15
	Annual Work Plan FY 16/17	May '16
	Annual Work Plan FY 17/18	May '17
1.1.3	Prepare Monthly Team Meeting notes	Monthly

1.2 Quality Assurance/Quality Control/Safety/Risk

Conduct quality management in accordance with AECOM quality procedures. Review all work products before submitting to the Authority. Provide quality reviews for all formal deliverables. Perform quality audits in accordance with AECOM procedures.

At the direction of the SJRRC, the AECOM team will identify and log project risks which are identified as a result of the PE/EIS process and will participate in a review of project risks and mitigations as directed. The project risk log will be updated as directed by SJRRC.

The AECOM team will develop and implement a project safety plan as required to satisfy AECOM and SJRRC requirements. The project safety plan will be updated each fiscal year.

Key Assumptions:

- None

Task 1.2 Deliverables		Schedule
1.2.1	Quality Control/Quality Assurance Documentation	By Deliverable
1.2.2	Project Risk Log Updates	As Directed by SJRRC
1.2.3	Project Safety Plan Updates	Annually (if required)

1.3 Document Control

Maintain document control log, project files, and correspondence; transmit work products to SJRRC; maintain work products and key relevant documents AECOM Oakland office server.

Key Assumptions:

- None

1.4 Schedule, Budget and Progress Reporting

Maintain project schedule; provide monthly updates and detailed look-ahead as requested by SJRRC. Monitor project budget. Prepare monthly progress report including cash flow and look-ahead. Prepare and submit monthly invoices.

Key Assumptions:

- None

Task 1.4 Deliverables		Schedule
1.4.1	Project Schedule Updates	Monthly
1.4.2	Progress Reports	Monthly

Task 2 Public Participation/Outreach

The public participation and outreach components for the work plan period July 2013 to June 2018 (FY 13/14 through FY 17/18) will build on the work accomplished during the previous years, updating the Public Participation Plan (PPP), developing and distributing project information materials, conducting outreach in the form of Public Information Meetings (PIM), Technical Working Group Meetings (TWG), and public hearings, and providing focused stakeholder and community engagement.

Briefings for elected officials, presentations to community organizations, and ongoing public information updates via the ACEforward website, direct mail/e-mail, and media outreach will all be part of the public outreach program.

The outreach will continue to focus on the Altamont Corridor Partnership Working Group (ACPWG), but will also include other groups and stakeholders as necessary and identified in the Public Participation Plan (PPP).

2.1 Public Participation Plan

Update the existing plan for public and agency participation throughout the course of the project. Include identification of outreach techniques to be utilized, collateral materials to be prepared, small and large group meeting formats and frequency, and planned agency coordination contacts.

Key Assumptions:

- None

Task 2.1 Deliverables		Schedule
2.1.1	Update PPP FY 14/15	July '14
	Update PPP FY 15/16	July '15
	Update PPP FY 16/17	July '16
	Update PPP FY 17/18	July '17

2.2 Outreach Strategy, Project Image, Messaging, and Meeting Management

Develop, conduct, and oversee the outreach strategy and its execution through development of appropriate materials and scheduling and conducting meetings. Meet with the management team at the beginning of each new fiscal year to confirm strategy, project image to portray, and messaging. Then arrange to meet with stakeholders, elected officials, agency representatives and members of the public.

Key Assumptions:

- None

2.3 Maintain Stakeholder Database

Update and maintain the project database to include all stakeholders including appropriate agency representatives for the EIR/EIS effort. The outreach team will ensure that the names of all meeting participants are included in the project database. The database will be provided in appropriate formats (e.g. labels, electronic file, etc.) for distribution of materials and notifications.

Key Assumptions:

- None

Task 2.1 Deliverables		Schedule
2.3.1	Updated Stakeholder Database	Monthly

2.4 Memoranda of Understanding (MOUs)

The team will continue to coordinate and facilitate work with all the designated federal, state and local agencies. Additional MOUs will be developed as necessary throughout the program. The team will provide MOU assistance and coordination with SJRRC as necessary to address the future blended service operations with freight railroads in the Altamont corridor.

Key Assumptions:

- Assume team coordination for input on one MOU each year

Task 2.1 Deliverables		Schedule
2.4.1	Input to MOUs with regional/private organizations	Annually (if necessary)

2.5 Stakeholder Meetings and Briefings

The team will use a number of interactive outreach techniques to keep stakeholders, agency staff and policy makers informed of project progress. Outreach will include periodic briefings to local and regional elected bodies, stakeholder groups and other interest groups on a periodic basis (every three to six months). Additionally, project information pieces and e-updates will also be utilized to keep people informed and aware the project's status. Activities in this task will keep critical individuals and groups informed of the environmental review process, the development of and preparation of construction for improvements, and project phasing and encourage feedback from the community on the way the process is being received, what the concerns are, and what potential opportunities exist to advance the goals of the ACEforward.

Services within this task will include but not be limited to:

- Preparation of specific meeting plans
- Preparation for meetings
- Notifications
- Agendas
- Presentations

- Other information materials
- Provide meeting facilitation and note taking (if needed)
- Documentation and follow-up

The AECOM outreach team will also include coordination with the Sacramento to Fresno project teams as necessary between Sacramento and Merced.

Key Assumptions:

- Small group meetings will average approximately three (3) per month around major project milestones and one (1) per month during other periods between FY 13/14 and FY 15/16.
- Small group and other stakeholder meetings will average one (1) every two months between FY 16/17 and FY 17/18.

Task 2.5 Deliverables		Schedule
2.5.1	Small group/one-on-one meetings	Throughout

2.6 Outreach

The AECOM Team will continue to conduct outreach with key stakeholders, agencies, and the public in accordance with the Public Participation Plan developed under 2.1. Presentations will be made to outside entities to inform the public and policy makers. Task includes allowance for quarterly project-specific presentations to SJRRC and/or CHSRA Authority board.

The AECOM Team will also conduct public hearings in association with the release of the Draft EIR/EIS document in FY 14/15. The hearings will be conducted in accordance with SJRRC procedures for public hearings. Hearings will be conducted in three to four locations throughout the project area, in a fashion similar to the scoping meeting locations previously conducted.

Key Assumptions:

- None.

Task 1.2 Deliverables		Schedule
2.6.1	Outreach to stakeholders, agencies and the public (includes quarterly presentations to Authority Board)	Throughout
2.6.2	Support CHSRA & SJRRC Board Meeting Presentations in regard to ACEforward	Quarterly
2.6.3	Three to four public hearings in support of release of Draft EIR/EIS in November 2014	April '15

2.7 Create and Distribute Media/ Newsletters

In coordination with SJRRC, the team will create and distribute collateral providing project updates, current and future events to individuals included in the stakeholder database. Materials will be primarily distributed through electronic means, but some will also be available as a hardcopy and mailed out as such. Content updates will be posted to the Project web site quarterly or in conjunction with key project milestones. Additionally, newsletters, fact sheets, press releases, and e-updates will also be utilized to keep people informed.

Key Assumptions:

- None.

Task 2.7 Deliverables		Schedule
2.7.1	Milestone or public information collateral updates	At Milestones
2.7.2	Web updates	Throughout

Task 3 Project Definition/Alternatives Analysis

Task 3 activities include completion of project scoping, refinement to the project purpose and need, service planning, ridership, revenue and benefits analysis, alternatives analysis, a corridor phasing plan, and development of a complete project description. All work on Task 3 is anticipated to be completed by the end of FY 13/14 therefore no Task 3 work is included in the scope of work.

Task 4 Preliminary Engineering

Preliminary engineering advances the conceptual design for all improvements to be cleared at the project level in the EIR/EIS to a 15-percent design level during FY 14/15 and to a 30-percent level during FY 15/16 in accordance with SJRRC Preliminary Engineering guidelines. Projects to be cleared at the program level of detail in the EIR/EIS will not be advanced beyond conceptual engineering level of detail. It is anticipated that the team will advance at least two alignment alternatives for the extension to Modesto to the 15-percent design level for further analysis. At the 30-percent design level, it is assumed that plans would be prepared for a single alignment.

The team will initiate the 15-percent PE by preparing composite plan sheets for all alignment alternatives. The horizontal alignment will be identified on planimetric base sheets cut from readily-available purchased aerial base mapping. In conjunction with establishment of an approximate horizontal alignment, right-of-way data will be obtained from tax assessor records and GIS files will be fitted to the base sheets using readily-identifiable topographic features to provide an initial indication of potentially affected parcels. (This information will be tabulated to support property owner notifications.) The composite sheets will indicate key features such as potential modifications to adjacent and conflicting roadway facilities (initial conceptual designs), as well as initial cross sectional concept by segment showing approximate locations of at-grade, aerial, and below grade sections along with transition sections.

For 30-percent design the team may conduct field surveys to establish ground control for aerial mapping and will prepare topographic base maps. Base maps will be prepared with

sufficient accuracy and contour interval to support the 30-percent engineering design.

A set of assumptions has been developed for the engineering work in order to prepare cost estimates. The full assumptions, sheet count, hours per sheet, and total hours estimated are provided in Attachment A to this scope of work.

4.1 Infrastructure

Prepare designs at a level of detail appropriate to inform the development of environmental documentation and independent project reviews. Design detail will be conceptual for the corridor-wide document which is predominately made up of elements of the program that are longer-term (beyond 2018) and to be cleared at a program level in the EIR/EIS (such as extension to Merced). Much greater detail will be necessary to clear near-term "Project" elements intended for implementation by 2018 (such as the extension to Modesto). Near-term improvements will be designed at a 30-percent level of detail.

Designs will include the following infrastructure elements:

- Alignment (plan and profile)
- Temporary Construction Facilities
- Stations
- Bridges and Elevated Structures
- Tunnels
- Buildings
- Grading/Earthwork and Borrow Sites
- Hydrology/Hydraulics/Drainage
- Utilities
- Geotechnical
- Right of Way
- Roadway Plans

4.1.1 Survey and Mapping

The AECOM Team has purchased available aerial photography for use in delineating the alternatives for 15-percent design. Aerials will be loaded into a GIS database where additional mapping elements including assessor parcel data will be added based on availability and/or field review. The team may conduct field surveys to establish

ground control for aerial mapping as part of the 30-percent design effort.

Key Assumptions:

- None.

4.1.2 Alignment (Plan and Profile)

15-percent Design

For 15-percent design, the team will refine horizontal guideway alignment (center line of track) from conceptual engineering designs and develop top of rail profiles. Prepare horizontal and vertical drawings of guideway at a horizontal scale of 1" = 100'.

Develop typical sections for anticipated section types including clearances to structures, emergency access, wayside equipment, and other key facilities. Develop typical station sections (if applicable) for each anticipated section type, identify station locations and limits of at-grade, elevated, and subterranean guideway configurations.

Identify and refine alternative station locations as concurrent element of guideway alignment and profile refinement, taking into consideration station planning requirements and constraints.

Define right of way footprint for the guideway and other required facilities such as communications and other wayside systems.

Conduct profile studies as necessary in the Central Valley, between Tracy and Union City/Fremont and the Altamont crossing.

Conduct site visits as necessary to verify design site concepts and determine limits of at-grade, aerial, below-grade, and major waterway crossings.

Prepare alternative alignments at areas where existing railroad or other right of way will not be sufficient for operating requirements.

Plans shall include identification of highway and water crossings, major utilities (overhead power), freight rail crossings, and land use along the corridor as shown on the aerial base.

30-percent Design

For 30-percent design the team will further refine horizontal and vertical guideway alignment in conjunction with environmental studies to minimize impacts. Prepare revised plan/profile drawings (11" by 17") of guideway at a scale of 1"=100'.

Develop further refined typical sections for section types (at-grade, aerial, bridge) including overhead and lateral clearances to structures, emergency access, wayside equipment, and other key facilities. Identify station platforms and adjacent facilities including roads, highways, and railroad rights of way.

Key Assumptions:

- For 15-percent design two (2) alternative alignments will be analysed over Altamont Pass, between I-580 and Lathrop, and for the extension to Modesto.
- For 30-percent design one (1) alignment will be prepared over Altamont Pass, between I-580 and Lathrop and for the extension to Modesto.

Task 4.1.2 Deliverables		Schedule
4.1.2.1	In-Progress 15-percent Plans	August '14
4.1.2.2	Revised 15-percent Plans	October '14
4.1.2.3	In-Progress 30-percent Plans	July '15
4.1.2.4	Revised 30-percent Plans	August '15

4.1.3 Temporary Construction Facilities

15-percent Design

Identify potential staging, laydown and access requirements for construction activities. Assess these locations for the purpose of required analysis in the Draft EIR/EIS and cost estimating.

30-percent Design

Refine plans identifying potential staging, lay-down and access requirements for construction activities. Determine temporary construction easements and areas where roadway/highway traffic detours will be required.

Key Assumptions:

- For 15-percent design, two (2) alternative alignments will be analysed over Altamont Pass, between I-580 and Lathrop, and for the extension to Modesto.
- For 30-percent design, one (1) alignment will be prepared over Altamont Pass, between I-580 and Lathrop, and for the extension to Modesto.

Task 4.1.3 Deliverables		Schedule
4.1.3.1	In-Progress 15-percent Temporary Construction Plans	August '14
4.1.3.2	Revised 15-percent Temporary Construction Plans	October '14
4.1.3.3	In-Progress 30-percent Temporary Construction Plans	July '15
4.1.3.4	Revised 30-percent Temporary Construction Plans	August '15

4.1.4 Stations

The purpose of all work under this task is to identify station locations, basic station “profiles” (based on alignment profiles at station locations) and approximate land areas (“extents”) required by stations, including the station platform, parking and access, and ancillary structures. Under this task, a station “prototype” will also be developed.

15-percent Design

Further effort will be to develop the architectural and engineering plans for proposed stations to the 15-percent design level. Design at this level of detail, consistent with design being completed for the alignment structures and other facilities, will demonstrate the functional vertical and horizontal design of each station, its location along the alignment, its property requirements (land area and configuration), and its conceptual architectural appearance.

The 15-percent station design is based on the station prototype described above. Products include plan sheets, elevations and cross-sections (limited as required to describe key vertical design elements), and conceptual architectural renderings.

Work in this task is closely associated with work in Task 6, “Station Area Planning” (in particular Task 6.2.6, “station Area Plan”) and both tasks combine to produce a cohesive vision of the station and its environs. To ensure this level of integration, agency and public stakeholder outreach activities for both tasks will be merged as a single, coordinated effort.

The 15-percent station design will be vetted for discussion, comment, and public input through “town hall” – style community workshops. These workshops, which also cover Station Area Planning, would be followed by presentations to city councils as necessary.

The 15-percent design of all stations will then be revised and re-submitted, in coordination with the refinement and final submittal of the Station Area Plan (Task 6.2.6).

30-percent Design

Develop 30-percent architectural drawings, including structure plans for stations. Include interface with station platforms and station access structures. Coordinate design of support structures with station architect. Plans will include size and shape of support columns, retaining walls (for below grade stations), major girders, and track support guideway. Interfaces with station building and ancillary facilities will be included.

Key Assumptions:

- Conceptual and 15-percent station design will be conducted for potential changes at up to two (2) existing stations.
- Up to three (3) new stations will be designed at a 15-percent and 30-percent level of detail.

Task 4.1.4 Deliverables		Schedule
4.1.4.1	In-Progress 15-percent Preliminary architectural plans (platform layout plan and other drawings as required, scales to be determined)	August '14
4.1.4.2	Preliminary architectural concept "sketch" renderings	August '14
4.1.4.3	Presentation materials (content to be determined) coordinated with deliverables for Tasks 6.2.5.1 and 6.2.5.2, notes covering workshop inputs as part of Task 6.2.5 deliverables	August '14
4.1.4.4	Refined 15-percent architectural plans (platform layout plan and other drawings as required, scales to be determined)	October '14
4.1.4.5	In-Progress 30-percent Preliminary architectural plans (platform-layout plan and other drawings as required) – assume (scales to be determined)	July '15
4.1.4.6	Refined 30-percent architectural plans (platform -layout plan and other drawings as required) – assume (scales to be determined)	August '15

range of costs. Identify transition structures such as at-grade to bridge and at-grade to tunnel including retaining walls and other structures. Identify need for scour protection.

Identify existing at-grade crossings within the corridor. Determine if crossings can be closed or consolidated with other crossings to minimize the construction of grade separations. Prepare one general plan sheet for each crossing including plan, profile and typical section.

30-percent Design

Update aerial-guideway and water-crossing structure plans and details. Water-crossing structures will include long- and short-span bridges as well as box culverts as appropriate.

Updated aerial-guideway plans will include refined span arrangements based on location of adjacent infrastructure as well as avoidance of major environmental impacts. Plans will include abutment types and preliminary column/bent size and configurations for special circumstances.

Prepare updated plans and details for roadway and UPRR crossings. Plans will include span arrangements, location of columns and straddle bents, and type and size of major girders.

Updated water-crossing plans will include refined span arrangements based on input from regulatory and other agencies as well as avoidance of major environmental impacts. Plans will include abutment types and preliminary column/bent size and configuration. Specific scour-protection measures will be identified.

Design transition structures for at-grade to aerial guideway configuration including cross section, length, height, and profile of retaining and/or MSE walls.

4.1.5 Bridges and Elevated Structures

For the conceptual analysis, potential bridge or elevated structure segments will be identified along with approximate touch down locations consistent with the level of detail of the composite alignment delineations.

15-percent Design

For the 15-percent design effort the team will develop approximate length, width, height and depth of stream crossing structures based on alignment studies. Identify types of structures that might be considered and determine

Key Assumptions:

- None.

Task 4.1.5 Deliverables		Schedule
4.1.5.1	In-Progress 15-percent Structure Design & Tech Memo which includes: <ul style="list-style-type: none"> • Preliminary bridge plans including alignment, typical section and elevation. • Grade crossing consolidation report • Identification of proposed grade separations on alignment plans 	August '14
4.1.5.2	Revised 15-percent Structure Design & Tech Memo	October '14
4.1.5.3	In-Progress 30-percent Structure Design & Tech Memo which includes: <ul style="list-style-type: none"> • Revised Mainline aerial-guideway plans and details. • Revised highway aerial-guideway crossing plans and details. • Revised railroad aerial-guideway crossing plans and details. • Revised major and minor water-crossing plans and details • Canal-crossing culvert plans and details • Transition-structure plans and details 	July '15
4.1.5.4	Revised 30-percent Plans	August '15

4.1.6 Tunnels

Potential tunnel or retained cut segments will be identified along with approximate portal locations consistent with the level of detail of the composite alignment. If tunnel sections are identified and recommended for project-level clearance in the EIR/EIS, an In-Progress technical memorandum will be developed addressing potential tunnel length, candidate types of construction, and preliminary requirements for ventilation and access.

15-percent Design

The 15-percent tunnel drawings will identify typical tunnel sections and their lengths as well as the site design of ventilation shaft locations for the purpose of environmental evaluation.

30-percent Design

The 30-percent drawings will focus on the identification of tunnel location, length, typical section, construction type and the site plans for ventilation structures.

Key Assumptions:

- None.

Task 4.1.6 Deliverables		Schedule
4.1.6.1	In-Progress 15-percent Tunnel Plans	August '14
4.1.6.2	Revised 15-percent Tunnel Plans	October '14
4.1.6.3	In-Progress 30-percent Tunnel Plans	July '15
4.1.6.4	Revised 30-percent Tunnel Plans	August '15

15-percent Design

Footprints of any ancillary buildings will be determined and provided for environmental clearance purposes.

30-percent Design

Footprints of ancillary buildings will be further refined from those identified during the 15-percent design effort. The footprints will be delineated and included in 30-percent design plans.

Key Assumptions:

- None

Task 4.1.7 Deliverables		Schedule
4.1.7.1	In-Progress 15-percent Building Plans	August '14
4.1.7.2	Revised 15-percent Building Plans	October '14
4.1.7.3	In-Progress 30-percent Building Plans	July '15
4.1.7.4	Revised 30-percent Building Plans	August '15

4.1.8 Grading/Earthwork

Initial work will include a conceptual assessment in areas where tunnelling or embankment may be a preferred construction option.

15-percent Design

An assessment will be made of the amount of earthwork necessary in order to construct. Determine cut and fill slope limits based on 2:1 side slopes. Identify retaining structures as required to reduce ROW requirements and/or mitigate impacts.

Determine retaining wall type, locations, lengths and heights. Identify temporary construction requirements.

30-percent Design

Prepare refined grading plans for revised at-grade alignments. Grading plans will be prepared using digital-terrain model developed for 30-percent topographic mapping. Revised cut and fill slope limits and identification of retaining structures will be identified.

Key Assumptions:

- None

Task 4.1.8 Deliverables		Schedule
4.1.8.1	In-Progress 15-percent Preliminary Grading Plans indicating grading limits and retaining walls	August '14
4.1.8.2	Revised Grading Requirements/15-percent Plans	October '14
4.1.8.3	In-Progress 30-percent Grading Plans	July '15
4.1.8.4	Revised 30-percent Grading Plans	August '15

4.1.9 Hydrology/Hydraulics/Drainage

15-percent Design

Prepare Hydrology and Hydraulic studies required for environmental impact studies. Identify type, location and cost of major drainage facilities that impact project footprint or construction costs. Perform Floodplain Impacts assessment (i.e. Location Hydraulic Study).

30-percent Design

Prepare drainage plans based on information identified in the hydrology and hydraulic studies including flood control feature necessary to resolve any issues identified in the Floodplain Impacts assessment.

Key Assumptions:

- None

Task 4.1.9 Deliverables		Schedule
4.1.9.1	Draft Floodplain impacts report	August '14
4.1.9.2	Draft Stormwater Management Report	August '14
4.1.9.3	Draft Hydrology/Hydraulics report	August '14
4.1.9.4	Revised Hydrology/ Hydraulics, Floodplain & Stormwater Management Reports	September '14
4.1.9.5	In-Progress 30-percent Preliminary Drainage Plans and Details	July '15
4.1.9.6	Revised 30-percent Drainage Plans and Details	August '15

4.1.10 Utilities

15-percent Design

Contact utility companies for data collection. Identify conflicts, ownership and rights for major utilities affected by the alignment. Identify potential relocation/mitigation options. Prepare utility plans.

30-percent Design

Prepare final utility plans including details for relocation of major utilities that are impacted by the guideway.

Key Assumptions:

- None

Task 4.1.10 Deliverables		Schedule
4.1.10.1	In-Progress 15-percent Utilities Plans	August '14
4.1.10.2	Revised 15-percent Utilities Plans	October '14
4.1.10.3	In-Progress 30-percent Preliminary Utility Plans and Relocation Details	July '15
4.1.10.4	Revised 30-percent Utility Plans and Relocation Details	August '15

Task 4.1.11 Deliverables		Schedule
4.1.11.1	Geotechnical design report including Geotechnical Investigation Plan recommendations	July '14
4.1.11.2	Revised Geotechnical Investigation Plan	August '14
4.1.11.3	Geotechnical field investigation	July '15
4.1.11.4	Geotechnical design report including recommendations for structure footings and guideway embankments	August '15

4.1.11 Geotechnical

15-percent Design

Conduct geotechnical analysis within the study area focusing on areas where 15-percent design plans will be prepared and where independent utility projects are evaluated. Prepare geotechnical design recommendations based on geotechnical data.

30-percent Design

Conduct a geotechnical exploration program that includes borings at 3 mile intervals (up to 20 total) with an average depth of 100 feet. Adjustments will be made as necessary for specific areas where there are concerns regarding soil conditions and where complex long span structures may be required. Spacing of borings will be adjusted as necessary to coincide with the location of water-crossing abutments.

Drill borings at proposed highway and UPRR overcrossings. One boring will be drilled at each highway overcrossing.

A geotechnical report will be prepared to provide recommendations for structure footings, abutments, retaining walls and HST embankments. Suitability of existing in-place soil will be assessed for use as subgrade for the at-grade sections.

Key Assumptions:

- Geotechnical areas of specific analysis will include the extension to Modesto, and other areas where improvements will be analysed at a project-level of detail in the EIR/EIS.

4.1.12 Right-of-Way

15-percent Design

Analyze and map property ownership along corridor segments and identify adjacent parcels, potential UPRR/ BNSF conflicts, and database for property owner notifications as necessary.

Further efforts will include identifying affected parcels and ownership within the alignment corridors. Identification of affected parcels and estimated areas for:

- Full and partial takes
- Permanent easements
- Construction areas
- Temporary staging areas

30-percent Design

Prepare draft final right of way acquisition plans for the guideway and other facilities including maintenance-of-way and storage facilities, and other buildings or project features as necessary.

Prepare draft final temporary and permanent easement plans for construction and accommodation of the guideway and other facilities.

Key Assumptions:

- None

Task 4.1.12 Deliverables		Schedule
4.1.12.1	In-Progress 15-percent Right of Way Plans	August '14
4.1.12.2	Revised 15-percent Right of Way Plans	October '14
4.1.12.3	In-Progress 30-percent Right of Way acquisition and easement plans	July '15
4.1.12.4	Revised 30-percent Right of Way acquisition and easement plans	August '15

Task 4.1.13 Deliverables		Schedule
4.1.13.1	In-Progress 15-percent Roadway Plans	August '14
4.1.13.2	Revised 15-percent Roadway Plans	October '14
4.1.13.3	In-Progress 30-percent Preliminary Roadway Plans <ul style="list-style-type: none"> • Updated highway interchange and overcrossing plans • Updated roadway relocation plans • Updated grade-separation plans 	July '15
4.1.13.4	Revised 30-percent Roadway Plans	August '15

4.1.13 Roadway Plans

15-percent Design

Analysis of roadways will include identification of locations where roadways will be relocated or modified and identification of roadway grade separations with profile studies to determine the impact zone. Work will also include the roadway plans associated with the grade separated road crossing and the relocation of existing roadways impacted by the trackway.

30-percent Design

Revise highway interchange and overcrossing modification plans per review and comment by Caltrans and other local agencies. Plans include modifications to bridge approaches and access ramps, relocated intersections, and replacement bridges where necessary for State Highway and UPRR rights of way.

Revise roadway-relocation plans per review and comment by local agencies. Revise intersection plans as applicable.

Revise grade-separation plans per review and comment by Caltrans and other local agencies.

Roadway plan modifications will include modification to planned and existing city roads

Key Assumptions:

- None

4.2 Systems

15-percent Design

Identify system changes necessary for implementation of all project-level improvements to be cleared in the EIR/EIS and independent elements. System improvements should be limited since the improvements will not include detailed analysis of electrification of the Altamont Corridor. System improvements to be investigated should include:

- PUC/Connections (at grade crossing locations and for signals)
- Communications
- Wayside Systems
- Signaling/PTC
- Train Control Center

30-percent Design

Refine systems plans based on conclusions of the environmental document and prepare 30-percent designs to accommodate all necessary system elements.

Key Assumptions:

- None

Task 4.2 Deliverables		Schedule
4.2.1	In-Progress Systems 15-percent Plans	August '14
4.2.2	Revised Systems 15-percent Plans	October '14
4.2.3	In-Progress Systems 30-percent Plans	July '15
4.2.4	Revised Systems 30-percent Plans	August '15

4.3 Rolling Stock

15-percent Design

In coordination with SJRRC, and the FRA, identify potential technology changes to ACE rolling stock to be implemented. In the event that changes to rolling stock are anticipated, identify and draft an initial plan for acquisition and fleet management including estimates of capital cost necessary for acquisition.

30-percent Design

Revise and finalize the fleet acquisition and fleet management plan based on the environmental analysis and any SJRRC decision for changes to the ACE fleet.

Key Assumptions:

- ACE rolling stock will continue to be diesel locomotive-based for the foreseeable future.
- The team will coordinate with SJRRC on future changes to rolling stock as needed.

Task 4.3 Deliverables		Schedule
4.3.1	Initial Acquisition and Fleet Management Plan	September '14
4.3.2	Final Acquisition and Fleet Management Plan	September '15

4.4 Operations and Maintenance

15-percent Design

Prepare an operations and maintenance plan that takes into consideration infrastructure changes, rolling stock changes, schedule changes, and facility requirements to accommodate changes. Based on the proposed operating scenarios develop a range of operating costs and analyze methods for reducing costs where appropriate and practicable. Include in the plan analysis of costs associated with necessary maintenance facility improvements.

30-percent Design

Finalize operations and maintenance plan based on conclusions of the environmental process regarding infrastructure changes, rolling stock changes, schedule changes and facility requirements to accommodate the changes. Update operating costs and the analysis of methods for reducing costs where practicable.

Key Assumptions:

- ACE rolling stock will continue to be diesel locomotive-based for the foreseeable future.
- Maintenance will occur at the ACE maintenance facility currently under construction or at other existing ACE maintenance facility.

Task 4.4 Deliverables		Schedule
4.4.1	Draft Operations and Maintenance Plan	September '14
4.4.2	Final Operations and Maintenance Plan	September '15

4.5 Capital Cost Estimates

15-percent Design

Prepare detailed cost estimates for all infrastructure, system, and rolling stock improvement elements identified for project-level clearance in the EIR/EIS or through separate environmental review. Prepare conceptual capital cost estimates for the corridor-wide program-level EIR/EIS.

30-percent Design

Revise detailed cost estimates for all infrastructure, system, and rolling stock improvement elements identified for project-level clearance in the EIR/EIS or through separate environmental review based on conclusions reached in the environmental process. Review and revise conceptual cost estimates for program level improvements.

Key assumptions:

- None

Task 4.5 Deliverables		Schedule
4.5.1	In-Progress 15-percent Capital Cost Estimates	August '14
4.5.2	Revised 15-percent Capital Cost Estimates	October '14
4.5.3	In-Progress 30-percent Capital Cost Estimates	July '15
4.5.4	Revised 30-percent Capital Cost Estimates	August '15

4.6 Design Submittals

15-percent Design

Submit In-Progress design documents for alignment and typical sections, Structures, Viaducts & Tunnels, Stations, Maintenance Facilities & Storage Track, Utility Relocation, Maintenance of Way, Trackside Access, Draft Design Submittal Full Package, and Revised Design Submittal Full Package.

30-percent Design

Prepare In-Progress and revised 30-percent design submittals for all key engineering elements.

Key assumptions:

- None

Task 4.6 Deliverables		Schedule
4.6.1	In-Progress Alignment & Typical Section plans	August '14
4.6.2	In-Progress Structure, Viaduct & Tunnel plans	August '14
4.6.3	In-Progress Station, Maintenance Facilities & Storage Track plans	August '14
4.6.4	In-Progress Traction Power plans	August '14
4.6.5	In-Progress Utility Relocation, MOW Facilities, Trackside Access plans	August '14
4.6.6	In-Progress 15-percent Design Full Package	October '14
4.6.7	In-Progress 30-percent Design Full Package	July '15
4.6.8	Revised 30-percent Design Full Package	August '15

Task 5 EIR/EIS Analysis

Task 5 activities include environmental task management, development of baseline data, and technical reports for specific environmental topics.

5.1 Environmental Task Management

The Environmental Lead will initiate environmental analysis during FY 13/14 and continue until the development of the Final EIR/EIS. The Environmental lead will manage team members, attend internal and external meetings, and perform weekly and monthly budget and project administration activities. Meetings include technical working group (TWG), Altamont Partnership Working Group (Working Group) and resource agency meetings as well as regional environmental coordination conference calls and coordination conference calls with other members of the AECOM Team.

Key assumptions:

- None

5.2 Technical Studies and Reports

The Environmental Lead and supporting staff will review existing methodology to ensure no changes will be needed during completion of technical studies. The Environmental Lead and supporting staff will also coordinate with resource agencies to confirm that existing field survey methods and study area boundaries are appropriate. Finally a series of baseline technical studies and reports will be prepared to address critical environmental factors. Each document will include description of the baseline environmental conditions with a focus on areas of the corridor where project-level analysis will be required in the EIR/EIS.

Technical reports not completed during FY 13/14 will be developed during FY 14/15 for the following resources to support the EIS/EIR analysis according to standard industry methodologies:

- Biological resources and wetlands
- Hydrology and water resources
- Geology, soils and seismicity
- Hazardous materials and wastes
- Relocation Impact Statement
- Cultural resources

Key assumptions:

- None

Task 5.2 Deliverables		Schedule
5.2.1	Biological Resources and Wetlands Technical Report	September '14
5.2.2	Hydrology and Water Resources Technical Report	September '14
5.2.3	Geology, Soils, and Seismicity Technical Report	September '14
5.2.4	Hazardous Materials and Wastes Technical Report	September '14
5.2.5	Relocation Impact Statement Technical Report	September '14
5.2.6	Cultural Resources Technical Report	September '14

Task 6 Station Area Planning

The station area planning effort will be completed during FY 13/14. Additional work in station design will be conducted in Task 4.1.4 as described above.

Task 7 Draft and Final EIR/EIS

The AECOM Team will prepare an Administrative Draft Combined Program and Project EIR/EIS as part of this work program.

7.1 Prepare Environmental Documentation for Near-Term Independent Utility Projects

The team will begin the preparation of necessary environmental clearance for near-term projects that have independent utility and can be processed outside of the program of improvements. These clearances are anticipated to consist of preparation of Statutory and/or Categorical Exemptions and Negative Declarations to satisfy CEQA and Categorical Exclusions and/or Environmental Assessments/ Findings of No Significant Impact (FONSI) for NEPA.

Based on the project descriptions prepared as part of Task 3.6, and in coordination with the SJRRC and FRA as appropriate, identify and conduct an appropriate level of environmental documentation necessary for up to thirty (30) grade crossing improvements, two (2) track siding improvement projects within existing rights of way, three (3) grade separation projects, and one (1) station improvement project.

Up to five (5) environmental documents are assumed to be necessary to clear the independent utility projects. At this time, it cannot be determined exactly what kind of NEPA and CEQA documentation will actually be necessary, but this work plan and associated budget assumes that environmental documentation will consist of NEPA Environmental Assessments or Categorical Exclusions while CEQA documentation is anticipated to include only Negative Declarations or Categorical/Statutory Exemptions. For the purposes of budget estimating only, the following assumptions are made:

- Three (3) Environmental Assessments/Mitigated Negative Declarations
- Two (2) Categorical Exclusions/Categorical Exemptions

No technical reports are assumed to be necessary in support of these environmental efforts, however, technical analysis and preparation of specific sections of environmental documents will be necessary. The team will complete the following for up to seven (7) infrastructure projects:

- Project Description, including mapping exhibits
- Purpose and Need
- Identification of NEPA and CEQA documentation needed
- Identification of necessary permits
- Initial screening of key impacts
- Baseline data collection
- Environmental Analysis

Key assumptions:

- Independent utility projects are anticipated to consist of grade crossing improvements, grade separations, and some additional track or improved track within existing rights of way, and station improvements.
- This task includes the preparation, printing and distribution of 200 copies of the environmental documents to key stakeholders and public points of access.
- Additional environmental documentation as identified above.

Task 7.1 Deliverables		Schedule
7.1.1	Four (4) EA/FONSI/Mitigated Negative Declarations	May '15
7.1.2	Two (2) Categorical Exclusions/Categorical Exemptions	October '14

7.2 Prepare Administrative Draft Combined Program and Project EIR/EIS

The team will prepare the Administrative Draft Combined Program and Project EIR/EIS in accordance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). The EIR/EIS will include figures, maps and/or exhibits to illustrate no-project and with-project conditions relative to each resource topic. It will include chapters as described in sub sections 7.1.1 through 7.1.13.

7.2.1 Summary

This chapter will summarize the project description, purpose and need for the project, all alternatives considered and the impacts of all alternatives.

7.2.2 Purpose and Need

This chapter will be based on the Refined Purpose and Need document prepared as part of Task 3.3 and will elaborate on the transportation problems the project will address and document the needs for the project based on socioeconomic and transportation data.

7.2.3 Alternatives

This chapter will provide a summary of the alternatives analysis process including descriptions of alternatives considered but dismissed. It will also provide detailed descriptions of the alternatives under consideration in the environmental document.

7.2.4 Affected Environment, Environmental Consequences & Mitigation

This chapter will provide information on the environmental characteristics of the project area, the potential effects project alternatives would have on environmental conditions, and identify potential mitigation measures that could be implemented to reduce the level of impact on resources.

This chapter will include assessment of the following topics:

- Transportation
- Air Quality
- Noise and Vibration
- EMI/EMF
- Public Utilities and Energy
- Biological Resources and Wetlands
- Hydrology and Water Resources
- Geology, Soils, and Seismicity
- Hazardous Materials and Wastes
- Safety and Security
- Communities and Environmental Justice
- Local Growth, Station Planning, and Land Use
- Agricultural Land
- Parks, Recreation, and Open Space
- Aesthetics and Visual Quality

- Cultural Resources
- Construction Methods and Impacts
- Cumulative Impacts

7.2.5 Section 4(f) and Section 6(f) Evaluations

This chapter will identify potential alternative's impacts on resources protected under Section 4(f) and 6(f) of the US Department of Transportation Act. It will also report on coordination conducted with affected resource owners and on alternatives investigated in order to avoid impacts.

7.2.6 Costs & Operations

This section will identify capital and operating costs for alternatives and identify plans for operating the ACEforward.

7.2.7 Unavoidable Adverse Impacts

This section will identify unavoidable adverse impacts in accordance with the California Environmental Quality Act (CEQA). It will also describe mitigation measures available to reduce impact levels for the resources impacted.

7.2.8 Public & Agency Involvement

This section will describe the public and agency outreach conducted throughout the course of the project, but particularly since the kick-off of the CEQA/NEPA process and the initiation of scoping. Agency and public meetings will be catalogued and described and references to specific reports will be provided that document comments received throughout the process.

7.2.9 List of Recipients

All intended recipients of the Draft EIR/EIS will be listed.

7.2.10 List of Preparers

All professional and technical staff involved in the preparation of the DEIR/DEIS will be listed along with their professional credentials and years of experience.

7.2.11 Reference

A set of references contained in the Administrative Draft EIR/EIS will be provided.

7.2.12 Glossary

A glossary of terms will be provided.

7.2.13 Appendices

Technical appendices will be provided as necessary.

Key assumptions:

- The Draft EIR/EIS will include program-level analysis of the entire project corridor including the extension to Merced as well as projects necessary for the operation of ten (10) trains per day.

Task 7.2 Deliverables		Schedule
7.2.1	Administrative Draft EIR/EIS	November '14

- Project-level analysis will be limited to the extension to Modesto and other projects necessary for the operation of six (6) trains per day.

7.3 Prepare Draft EIR/EIS

This task includes preparing the Draft Combined Program and Project EIR/EIS, public hearings participation, and environmental documentation projects with independent utility.

7.3.1 Draft EIR/EIS

Based on comments received from SJRRC and FRA on the Administrative Draft EIR/EIS, revise chapters and prepare

Task 7.3 Deliverables		Schedule
7.3.1	Draft EIR/EIS	April '15
7.3.2	Public Hearings participation	May '15

the Draft EIR/EIS for release to the public.

7.3.2 Public Hearings Participation

The project team will participate in public hearings associated with the release of the Draft EIR/EIS.

7.4 Prepare Administrative Draft Final EIR/EIS

Following the public comment period, the team will record, categorize, and summarize the comments received. The team will assemble and categorize the comments into a suitable report format and prepare responses to comments for review by SJRRC, outside legal counsel, and FRA.

The team will prepare an Administrative Draft Final Combined Program and Project EIS/EIR for SJRRC, outside legal counsel, and FRA review that presents the following: (1) a discussion of key issues and response to comments; (2) comment letters received during the public review period; and (3) changes, corrections, or modifications to the Draft

Task 7.4 Deliverables		Schedule
7.4.1	Compiling comments and responses	August '15
7.4.2	Administrative Draft Final Combined Program and Project EIR/EIS	October '15

EIS/EIR resulting from the comments received.

Key assumptions:

- A total of 2500 professional staff hours will be needed to prepare the appropriate responses to comments.
- One draft review from the SJRRC, outside legal counsel, and the FRA before the Final EIR/EIS is produced and distributed.

Task 7.5 Deliverables		Schedule
7.5.1	Summary Presentation Materials to support LEDPA	December '15

7.5 Identify Least Environmentally Damaging Practicable Alternative

The team will support SJRRC with preparation of a presentation and materials summarizing documentation prepared under other tasks (e.g, 404 permit application, cultural resources reports submitted to SHPO) in order for SJRRC to make a decision on the Least Environmentally Damaging Practicable Alternative. The budget for this task is included in Task 10 – permitting.

Key assumptions:

- None

7.6 California Department of Fish & Game Permitting

Should the CDFG decide that a permit is required under Section 2081 of the Fish & Game Act, the team will address their permit requirements as part of the permit process identified in Task 10.

Key assumptions:

- None

Task 7.7 Deliverables		Schedule
7.6.1	Final EIR/EIS	February '16
7.6.2	Notification for the availability of the FEIS	February '16

7.7 Final EIR/EIS

The SJRRC, having reviewed the comments, will select a preferred alternative to revise the FEIS as deemed necessary to address the comments. During this time, the team will develop a FEIR using the response to comments to finalize documentation for the CEQA environmental review documentation. For the NEPA process, the FEIS will incorporate comments received from the public comment period, revisions to the alternatives and minor re-evaluation of analysis based on comments received.

Key assumptions:

- Printing and distribution of 200 copies of the Final EIR/EIS to key stakeholders, commenters who have requested the Final EIR/EIS and public points of access.
- Publication of a Notice of Availability with release of the Final EIS.

Task 8 Certification of EIR/EIS and ROD

8.1 Findings & Statement of Overriding Considerations

The team will draft Findings for SJRRC/outside legal counsel/FRA review. Based on the review, the team will prepare, if needed, a Draft Statement of Overriding Considerations for SJRRC/outside legal counsel/FRA. The final Findings and a final Revised Statement of Overriding Considerations will be prepared following this review.

Task 8.1 key assumptions:

- None

Task 8.1 Deliverables		Schedule
8.1.1	Findings & Statement of Overriding Considerations	April '16

8.2 Record of Decision/Notice of Determination

Following acceptance of the Final EIS, the team will draft a Record of Decision (ROD) document. The ROD document will indicate what action has been selected, will explain why the selected action was picked, what impacts are expected, and what construction, operation, and mitigation commitments are being made. The ROD will be submitted for SJRRC/outside legal counsel/FRA review. Comments will be reconciled and submitted to the SJRRC and FRA for final approval and signature. The ROD will then be distributed to interested parties. There is a 30 day wait period before any action is allowed.

The team will draft a CEQA Notice of Determination (NOD) for SJRRC/outside legal counsel review and a revised version for SJRRC Board Certification of the EIR and filing with the State Clearinghouse.

Task 8.2 key assumptions:

- The FRA will submit the ROD for publication in the Federal Register.

Task 8.1 Deliverables		Schedule
8.1.1	Findings & Statement of Overriding Considerations	April '16

8.3 Mitigation Monitoring & Reporting Plan

The team will prepare a Mitigation Monitoring & Reporting Plan. This document will include a description of any mitigation measures in the EIS/EIR to be adopted as part of the project, and will identify responsible parties for mitigation implementation, monitoring, and approval.

The AECOM team will prepare a Draft MMRP for SJRRC/outside legal counsel/FRA review and a revised version for SJRRC Board Certification of the EIR after FRA Clearance and Signature.

Task 8.3 key assumptions:

- None

Task 8.1 Deliverables		Schedule
8.1.1	Findings & Statement of Overriding Considerations	April '16

Task 9 ROW Preservation and Acquisition

9.1 Identify Segments at Risk of Development

The team will conduct an analysis of properties along the alternative alignments that are at risk of development or which may not be feasible for acquisition based on the detail available in the 15-percent and 30-percent preliminary engineering. The team will compile a table that identifies properties based field investigations and coordination with local agencies. Properties deemed to be at risk of development or potentially unavailable due to existing and/or projected transportation need (e.g. highway facilities and rail facilities) and anticipated to be required as part of any alternatives will be identified on aerial maps and provided to the SJRRC.

Key assumptions:

- None

Task 9.1 Deliverables		Schedule
9.1.1	List of properties at risk of development (15-percent design)	October '14
9.1.2	Revised list of properties at risk of development (30-percent design)	August '15

9.2 Advance Acquisition Recommendations

Based upon the database developed as part of Task 9.1, the AECOM Team will make recommendations to the SJRRC on any properties that might be considered for advanced acquisition or which may contribute to project schedule risk based upon unavailability based on the 15-percent engineering studies. These will be refined as engineering studies progress to the 30-percent level of detail.

Key assumptions:

- None

Task 9.2 Deliverables		Schedule
9.2.1	Advance Acquisition Recommendations Memo (15-percent design)	November '14
9.2.2	Revised Advance Acquisition Recommendations Memo (30-percent design)	September '15

9.3 Right of Way Surveys

Conduct survey and engineering necessary to define the required amount of right of way to be acquired for all near-term projects (constructed through 2018). In general, the Team will provide preliminary title reports, boundary surveying/ mapping, ROW engineering, and will perform preliminary right of way activities, including but not limited to appraisal data collection, and after designation of the preferred alignment, completed appraisals.

Key assumptions:

- None

Task 9.3 Deliverables		Schedule
8.1.1	Findings & Statement of Overriding Considerations	April '16

9.4 Right of Way Strategy

Coordinate with SJRRC to develop a strategy to address outreach to property owners in cases of willing seller versus the need to use eminent domain.

Key assumptions:

- None.

9.5 Outreach to Property Holders

As directed by SJRRC, the team will conduct outreach with property owners of land identified for right of way acquisition to identify their willingness to negotiate land sale versus likelihood of resistance.

Key assumptions:

- None

9.6 Independent Appraisals

Prior to the selection of the designated preferred alignment, the team will begin preliminary appraisal activities, including but not limited to collection of appraisal data and area field reviews.

After the designation of the preferred alignment, the team will contact the impacted property owners and complete the appraisal process. The team will provide and coordinate the appraisals to federal and state Uniform Act Standards and USPAP. The team will also provide complete independent review certifications to federal and state Uniform Act Standards and USPAP for each appraisal. All agricultural appraisals will include crop damage/agricultural damage analysis.

This task includes appraisal oversight and quality control of any additional consultant appraisers to assure consistency throughout the project appraisals. This task also includes a limited amount of specialty appraisals such as mitigation parcels; goodwill valuations; furniture, fixture, and equipment appraisals; any dual appraisals; and appraisal updates for up to 10-percent of the appraisals completed.

Key assumptions:

- None

Task 9.6 Deliverables		Schedule
9.6.1	Final appraisals for a number of parcels to be determined, including mitigation parcels to be determined	November '16
9.6.2	Final appraisal review certifications for a number of parcels to be determined, including mitigation parcels to be determined	November '16
9.6.3	Goodwill valuations for a number of parcels to be determined	November '16
9.6.4	FFE appraisals for a number of parcels to be determined	November '16
9.6.5	Dual appraisals for a number of parcels to be determined	November '16
9.6.6	Appraisal updates for a number of parcels to be determined	November '16

9.7 Right of Way Negotiations

The Team will provide, as required, a broad range of right of way/real estate services to assist in early acquisition of HST ROW, including but not limited to appraisals and negotiations. All right of way services and recommended strategies will be in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (42 USC 4601 et seq.) and implementing regulation, 49 CFR Part 24; California Government Code Section 7267 et seq.; California Code of Civil Procedure Sections 1263.010 to 1263.620 and 1255.010 to 1255.060; Housing and Community Development Title 25; SJRRC established policies and procedures; and the State of California, Department of Transportation’s Right of way Manual, as applicable, until such time as the SJRRC has a Right of Way Manual approved for use by FRA.

Task 10 Permitting

10.1 Advanced Agency Coordination

Conduct agency meetings throughout the environmental processes to receive input on future permitting requirements and details on preparation of permitting applications. Agency meetings will focus on improvement projects analyzed at the project-level of detail and the permitting requirements for implementation of these projects.

Key assumptions:

- None

Task 10.1 Deliverables		Schedule
10.1.1	Agency meetings to advance permitting process	Throughout

10.2 Prepare Permit Applications and Submittals

A number of permits will likely be necessary before any construction can begin on near-term improvements. The team will prepare submittals transmitting design and environmental analysis and support the negotiation and definition of mitigation measures. Detail on permits likely to be required and the process leading to application and issuance is provided in the following sections.

10.2.1 Identifying the LEDPA through the 404 (b) (1) Alternatives Analysis Process

Prior to issuing the Draft EIR/EIS to the public, the team will prepare the 404 Application. This will involve meeting with USACE to identify and verify delineation methods and inviting the USACE to perform field review. The team will propose to conduct a Wetlands Delineation but that a complete jurisdictional wetland determination would not be required prior to selecting the LEDPA. The wetlands report will include wetlands impacts and conceptual mitigation measures including BMPs. Once the report has been reviewed by SJRRC/outside legal counsel/FRA, it will be sent to the USACE to verify the delineation and the proposed mitigation.

Once the USACE is comfortable, the USACE will prepare a public notice which would ideally coordinate with the Draft EIR/EIS public hearing period. Subsequently, the team will

conduct the final 404(b)1 Alternatives Analysis report, and submit it with the Final EIR/EIS and ROD to USACE (including the biological opinions). USACE will prepare and issue the final permit.

10.2.2 RWQCB - 401 Certification

As part of the Biological coordination, the team will include coordination with RWQCB(s)/SWRCB. Once the Draft EIR and Biological tech reports are available and reviewed by the SJRRC/outside legal counsel/FRA, the team will prepare the RWQCB Application along with the Draft EIR and the Biological Assessments. Once the RWQCB(s)/SWRCB deems the application complete, the team will provide the RWQCB(s)/SWRCB the Final EIR/EIS and NOD. The RWQCB(s)/SWRCB would then be able to issue a permit.

10.2.3 USFWS - Section 7 Consultation

As part of Task 5, biological surveys per the agreed methodology will be performed on lands where access was granted. The methodology is limited to plant surveys only. These methods have been reviewed and commented upon by the USFWS. From the Technical reports, the team will prepare the Section 7 Biological Assessment. It is anticipated that the team will be submitting two biological assessments, one to the USFWS for terrestrial plants and animals and one to the NMFS for the San Joaquin River Crossings.

10.2.4 CDFW - 1602 Agreement and Section 2080 CESA Permitting

As part of Task 5, biological surveys per the agreed methodology will be performed on lands where access was granted. The methodology is limited to plant surveys only. These methods have been reviewed and commented upon by the CDFW. From the Technical reports, the team will prepare the CDFW Threatened and Endangered species occurrence forms. The CDFW typically will adopt the USFWS Biological opinions for federal T&E species, but for other state T&E species, they will require issuing permits for Fish & Wildlife Code 2080.

Additionally, the biological team will be assessing impacts along the streams for the State Stream Alteration Permit which is needed for a project that will substantially divert or obstruct the natural flow or substantially change the bed, bank or channel of any stream, river or use material from the streambed. Permits will be prepared, reviewed by SJRRC/outside legal counsel and then submitted. The team will respond to requests for additional Information and when the

CDFW deems the application(s) complete, the team will submit the Final EIR/EIS and NOD with the final application for the CDFW to issue the permit.

10.2.5 SHPO Section 106 Consultation

The cultural team will track and follow protocol in coordinating with tribes, the SHPO and local historic societies in order to uphold section 106 requirements. If unavoidable effects are determined to occur based on the evaluation in the cultural resource technical studies, the team will coordinate with the SHPO in determining the MOA best suited for the effects of the project, including but not limited to pre-construction surveys. Coordination with the ACHP will be conducted as part of the MOA process. There is potential to use the Section 106 Programmatic Agreement developed by the Authority or a similar form to streamline the 106 process.

10.2.6 Other Permits

Example permits that will be tracked and monitored during FY 13/14 and FY 14/15:

- Department of Conservation - the SJRRC must notify property owners of interest to remove lands from the Williamson Act and mitigation by identifying lands that can remain in permanent agricultural preserve.
- State Reclamation permits - the SJRRC must identify lands owned by the state, such as lands associated with the natural high water line along streams and rivers. The SJRRC must apply to lease these lands for encroachment purposes.
- BCDC Conditional Use permit – the SJRRC must identify lands under the control of the San Francisco Bay Conservation and Development Commission and apply for a conditional use permit for encroachment purposes.
- CVFPB 208 and USACE 408 – the Hydraulic and Hydrology report will address the requirements of CVFPB 208 for the preferred alternative.

This scope and budget includes advancing the permit applications that are part of the NEPA process in parallel to preparing the EIS/EIR and preparing materials to address permitting requirements. This task will begin with the preparation of a plan for meetings by permit with targeted dates and meeting objectives. The team will identify and record processes for obtaining other local and regional permits, but this scope and budget does not include additional permits not listed herein.

Key assumptions:

- Only includes permits listed above.

Task 10.2 Deliverables		Schedule
10.2.1	USACE – 404 and LEDPA	March '17
10.2.2	RWQCB – 401 Cert	March '17
10.2.3	USFWS – Section 7 Consultation	March '17
10.2.4	CDFW – 1602 Agreement and Section 2080 CESA permit	March '17
10.2.5	SHPO – Section 106 Consultation	March '17
10.2.4	Other permits – State reclamation, BCDC Conditional Use, 208/408	March '17

Task II Bid Process Support/Project Delivery Services

II.1 Environmental Strategy for Determining Methods of Environmental Clearance

Based on the list of candidate improvements, develop environmental clearance strategies. Identify all improvements that must be included in the Combined Program and Project EIR/ES as well as projects that can be cleared with a lower level of environmental review. Identify specific clearance methods for lower level review improvements including a schedule and anticipated construction date for each.

Key assumptions:

- Independent utility projects are anticipated to consist of grade crossing improvements, grade separations, and some additional track or improved track within existing rights of way, and station improvements.
- Up to 30 (30) grade crossing improvements will be processed – assumed as a single set of improvements processed in a single environmental action.
- Up to three (3) grade separation improvements will be processed.
- Up to two (2) track improvements within existing rights of way will be processed.
- One (1) station improvement will be processed.

Task 11.1 Deliverables		Schedule
11.1.1	Environmental strategy recommendations	Throughout

II.2 Funding Strategy and Funding Plan

In consultation with SJRRC, develop a plan to fund improvements based on urgency. Identify specific funding sources for near-term improvements, potential funding sources for mid-term improvements, and strategies to seek funding for longer-term improvements. Assist SJRRC in the writing of grants to access funding for specific improvement projects, e.g., safety projects such as grade separations that might be eligible for specific pots of money based on increased public safety.

Key assumptions:

- None

Task 11.2 Deliverables		Schedule
11.2.1	Funding Plan	September '14
11.2.2	Grant Writing Assistance	Throughout

II.3 Procurement and Construction Strategy

It is anticipated that freight railroad right of way owners will require that some of the intended improvements, particularly those completely within an existing freight right of way, be constructed by railroad construction crews. The team will coordinate with freight railroad owners to identify which improvements will fall into this category and which improvements can be constructed by a contractor working directly for SJRRC. The team will also provide analysis and recommendations relating to the most advantageous project delivery method for each improvement project to be contracted by SJRRC. Project delivery methods to be considered include:

- Traditional design-bid-build
- Design/build
- CM at risk

The team will also provide construction management oversight services during the construction period as directed by SJRRC.

Key assumptions:

- None

Task 11.3 Deliverables		Schedule
11.3.1	Identification of Projects to be Constructed by Railroad Crews	December '16
11.3.2	Recommendations on Project Delivery	December '16

Task 12.2 Deliverables		Schedule
12.1.1	Master Schedules and Schedule Management	March '17 – June '18
12.1.2	Project Budget and Budget Management	March '17 – June '18
12.1.3	Project Monitoring and Reporting	March '17 – June '18

Task 12 Project Administration

12.1 Project Controls

The team will provide project control oversight throughout the implementation of the program. Project control oversight will include:

- Development of master schedule and schedule management
- Identification of project budget and budget management
- Project monitoring and reporting
- Contracts management

Key assumptions:

- SJRRC requests assistance with project controls once environmental processes and 30-percent design are complete.

Task 12.1 Deliverables		Schedule
11.2.1	Funding Plan	September '14
11.2.2	Grant Writing Assistance	Throughout

12.2 Other Program Administrative Requirements

The team will provide additional administrative support as necessary throughout the implementation of the program of improvements. Such support could include:

- Support for safety certification
- Operating permit procurement
- Mitigation monitoring

Key assumptions:

- SJRRC requests assistance with other administrative requirements once environmental processes and 30-percent design are complete.



Past public outreach meetings for the Altamont Corridor Rail Project

06

Program Budget



06

Program Budget

ACEforward Program (FY 2013/2014 through FY 2017/2018) Estimated Cost and Cash Flow*

Cash Flow with \$4 Million Budget FY 13/14

Low Range Estimate

	FY 13/14		FY 14/15		FY 15/16		FY 16/17		FY 17/18		Total
	1st Half	2nd Half									
Task 1: Project Management	\$0.20	\$0.20	\$0.19	\$0.19	\$0.19	\$0.19	\$0.18	\$0.18	\$0.16	\$0.03	\$1.71
Task 2: Public/Agency Participation	\$0.15	\$0.23	\$0.20	\$0.25	\$0.40	\$0.25	\$0.13	\$0.10	\$0.10	\$0.08	\$1.88
Task 3: Project Definition	\$0.94	\$0.94	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1.88
Task 4: Preliminary Engineering	\$0.00	\$0.28	\$1.50	\$1.75	\$1.80	\$1.50	\$0.35	\$0.18	\$0.00	\$0.00	\$7.35
Task 5: EIR/EIS Analysis	\$0.00	\$0.51	\$1.00	\$1.00	\$0.10	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2.61
Task 6: Station Area Planning	\$0.00	\$0.23	\$0.33	\$0.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.96
Task 7: Environmental Documentation	\$0.00	\$0.02	\$0.28	\$0.90	\$1.50	\$0.25	\$0.00	\$0.00	\$0.00	\$0.00	\$2.95
Task 8: Certification of EIR/EIS, NOD/ROD	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.23	\$0.45	\$0.00	\$0.00	\$0.00	\$0.68
Task 9: Right of Way Preservation and Acquisition	\$0.00	\$0.00	\$0.08	\$0.18	\$0.20	\$0.35	\$2.25	\$3.00	\$1.00	\$0.40	\$7.45
Task 10: Permitting	\$0.01	\$0.02	\$0.13	\$0.15	\$0.35	\$0.50	\$0.65	\$0.35	\$0.13	\$0.08	\$2.36
Task 11: Bid Process Support/Project Delivery	\$0.04	\$0.09	\$0.05	\$0.05	\$0.05	\$0.05	\$0.08	\$0.10	\$0.15	\$0.13	\$0.78
Task 12: Project Administration	\$0.00	\$0.00	\$0.00	\$0.00	\$0.08	\$0.13	\$0.23	\$0.45	\$0.45	\$0.18	\$1.50
ODCs	\$0.07	\$0.07	\$0.08	\$0.08	\$0.13	\$0.13	\$0.10	\$0.10	\$0.10	\$0.08	\$0.92
Total	\$1.41	\$2.60	\$3.82	\$4.94	\$4.67	\$3.57	\$4.41	\$4.46	\$2.09	\$0.95	\$32.88
	FY 13/14	\$4.00	FY 14/15	\$8.75	FY 15/16	\$8.23	FY 16/17	\$8.86	FY 17/18	\$3.04	

High Range Estimate

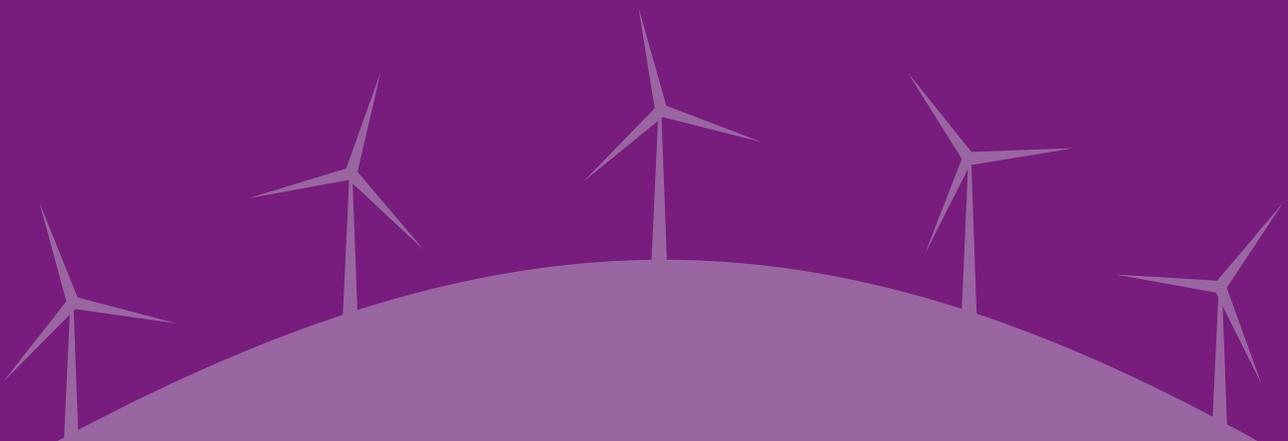
	FY 13/14		FY 14/15		FY 15/16		FY 16/17		FY 17/18		Total
	1st Half	2nd Half									
Task 1: Project Management	\$0.20	\$0.20	\$0.20	\$0.20	\$0.20	\$0.20	\$0.19	\$0.19	\$0.17	\$0.03	\$1.78
Task 2: Public/Agency Participation	\$0.15	\$0.23	\$0.25	\$0.28	\$0.40	\$0.30	\$0.15	\$0.12	\$0.08	\$0.05	\$2.00
Task 3: Project Definition	\$0.94	\$0.98	\$0.05	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1.96
Task 4: Preliminary Engineering	\$0.00	\$0.28	\$1.50	\$1.80	\$1.90	\$1.50	\$0.50	\$0.20	\$0.00	\$0.00	\$7.68
Task 5: EIR/EIS Analysis	\$0.00	\$0.51	\$1.10	\$1.00	\$0.15	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2.76
Task 6: Station Area Planning	\$0.00	\$0.23	\$0.35	\$0.48	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1.07
Task 7: Environmental Documentation	\$0.00	\$0.02	\$0.28	\$1.00	\$1.50	\$0.30	\$0.00	\$0.00	\$0.00	\$0.00	\$3.10
Task 8: Certification of EIR/EIS, NOD/ROD	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.25	\$0.50	\$0.00	\$0.00	\$0.00	\$0.75
Task 9: Right of Way Preservation and Acquisition	\$0.00	\$0.00	\$0.08	\$0.20	\$0.23	\$0.47	\$2.25	\$3.00	\$1.00	\$0.50	\$7.73
Task 10: Permitting	\$0.01	\$0.02	\$0.13	\$0.25	\$0.40	\$0.60	\$0.65	\$0.35	\$0.13	\$0.08	\$2.61
Task 11: Bid Process Support/Project Delivery	\$0.03	\$0.07	\$0.05	\$0.05	\$0.05	\$0.05	\$0.08	\$0.10	\$0.18	\$0.15	\$0.79
Task 12: Project Administration	\$0.00	\$0.00	\$0.00	\$0.00	\$0.08	\$0.13	\$0.25	\$0.45	\$0.45	\$0.18	\$1.53
ODCs	\$0.07	\$0.07	\$0.08	\$0.08	\$0.15	\$0.15	\$0.13	\$0.13	\$0.10	\$0.06	\$1.00
Total	\$1.39	\$2.61	\$4.05	\$5.33	\$4.91	\$3.95	\$4.69	\$4.54	\$2.10	\$1.04	\$34.60
	FY 13/14	\$4.00	FY 14/15	\$9.38	FY 15/16	\$8.85	FY 16/17	\$9.23	FY 17/18	\$3.14	

*Numbers in millions.



07

Program Schedule



07

Program Schedule



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