California High-Speed Rail Authority

RFP No.: HSR 13-57

Request for Proposal for Design-Build Services for Construction Package 2-3

Reference Material, Part E.1
Draft Final Built Environment Treatment Plan

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

CALIFORNIA HIGH-SPEED TRAIN

Project Environmental Impact Report / Environmental Impact Statement

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

DRAFT FINAL

Fresno to Bakersfield Section

Built Environment Treatment Plan

July 2014

CALIFORNIA High-Speed Rail Authority

U.S. Department of Transportation
Federal Railroad Administration

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

DRAFT FINAL

Fresno to Bakersfield Section

Built Environment Treatment Plan

Prepared by:

California High-Speed Rail Authority

July 2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

Table of Contents

1.0 Background and Summary 1-1
1.1 Regulatory Background for High-Speed Train Project 1-1
1.2 Status of Section 106 Compliance for Built Environment Resources 1-1
2.0 Description of Undertaking and Area of Potential effect 2-1
2.1 Description of the Undertaking 2-1
2.2 Description of the Area of Potential Effect 2-2
2.2.1 Future Changes to APE 2-3
3.0 Roles, Responsibilities, and Qualifications 3-1
3.1 Signatory Parties to MOA 3-1
3.1.1 California High Speed Rail Authority 3-1
3.1.2 Federal Railroad Administration 3-1
3.1.3 Surface Transportation Board 3-1
3.1.4 U.S. Army Corps of Engineers 3-1
3.1.5 California State Historic Preservation Officer 3-2
3.1.6 Advisory Council on Historic Preservation 3-2
3.1.7 Consulting Parties to MOA 3-2
3.2 Implementing Parties for MOA and BETP 3-2
3.2.1 Authority Representative (AR) 3-2
3.2.2 Project Construction Manager (PCM) 3-3
3.2.3 Design Build Contractor (Contractor) 3-3
3.2.4 Design-Build Contractor's Cultural Resources Compliance Manager 3-4
3.2.5 Design-Build Contractor's Architectural History Principal Investigator 3-4
3.3 Qualifications of Staff Implementing the BETP 3-5
4.0 Historic Context for Historic Architectural Resources 4-1
5.0 Significance Criteria for Archaeological Resources 5-1
5.1 Federal Criteria (Section 106 of the NHPA) 5-1
5.2 State Criteria (CEQA) 5-1
5.3 CEQA-Only" Cultural Resources 5-2
6.0 Plan for Completion of the Identification Efforts with the APE 6-1
6.1 Revising and Finalizing the Area of Potential Effect 6-1
6.2 Supplemental Inventory and Evaluation Report and Effects Assessments 6-1
7.0 Treatment 7-1
7.1 Treatment for Known Historic Properties 7-1
7.1.1 South Van Ness Entrance Gate 7-1
7.1.2 Washington Irrigated Colony Rural Historic Landscape 7-2
7.1.3 Peoples Ditch 7-4
7.1.4 Lakeside Cemetery 7-5
7.1.5 Stark/Spencer Residence 7-6
7.1.6 Salón Juárez 7-6
7.2 General Avoidance and Treatment Measures 7-8
7.2.1 General Avoidance Measure #1 – Avoid Noise Effects 7-8
7.2.2 General Avoidance Measure #2 – Avoid Vibration Effects 7-9
7.2.3 General Mitigation Measure #1 – Plan for Repair of Inadvertent Damage 7-12
7.2.4 General Mitigation Measure #2 - Recordation/Documentation of Historic Properties 7-13
7.3 Standard Structural Measures 7-16
7.3.1 Stabilization and Protection 7-16
7.3.2 Relocation of Historic Properties 7-17
7.3.3 Salvage of Architectural Features 7-19
7.4 Visual Planting Screening 7-20

7.4.1 Standards and Methods 7-20
7.4.2 Qualifications 7-20
7.4.3 Timing 7-20
7.4.4 Deliverable(s) 7-20
7.5 Interpretation 7-20
7.5.1 Standards and Methods 7-21
7.5.2 Qualifications 7-21
7.5.3 Timing 7-21
7.5.4 Deliverable(s) 7-21
7.6 Other Preconstruction Measures 7-21
7.6.1 Resources Mapping for Construction 7-21
7.6.2 Cultural Resources Worker Awareness Training 7-22
7.6.3 Installation of Maintenance of Avoidance and Protection Measures 7-23
7.6.4 Safety Plan 7-24
8.0 Treatment Measures to be Implemented during Construction 8-1
8.1 Requirements for Built Environment Construction Monitoring 8-1
8.1.1 Standards and Methods 8-1
8.1.2 Qualifications 8-1
8.1.3 Timing 8-1
8.1.4 Deliverable(s) 8-1
8.2 Protocols for Unanticipated Impacts during Construction 8-1
8.2.1 Standards and Methods 8-2
8.2.2 Qualifications 8-2
8.2.3 Timing 8-2
8.2.4 Deliverable(s) 8-2
9.0 Post-Construction Measures 9-1
9.1 Post Construction Conditions Assessment 9-1
9.1.1 Standards and Methods 9-1
9.1.2 Qualifications 9-1
9.1.3 Timing 9-1
9.1.4 Deliverable(s) 9-1
10.0 BETP Deliverables: Standards, Documents, and Schedules 10-1
10.1 Standards and Requirements for BETP Deliverables 10-1
10.2 BETP Deliverables 10-1
10.2.1 Daily Logs and Weekly Reports 10-1
10.2.2 Monthly Progress Reports 10-1
10.2.3 Semi-Annual Status Reports 10-2
10.2.4 Draft and Final Safety Plans 10-2
10.2.5 Supplemental Historic Architectural Survey Reports 10-2
10.2.6 Supplemental Effects Assessments 10-2
10.2.7 Final Supplemental Treatment Plan(s) 10-2
10.2.8 Built Environment Monitoring Plan 10-3
10.2.9 Vibration Monitoring and Control Plan 10-3
10.2.10 Plan for Repair of Inadvertent Damage 10-3
10.2.11 Plan for Protection and Stabilization 10-4
10.2.12 Building/Structure Relocation Plans 10-4
10.2.13 Planting Plan 10-4
10.2.14 Interpretive Plan 10-4
10.2.15 Unanticipated Adverse Effects Memorandum 10-5
11.0 Compliance and Monitoring Commitments 10-6
11.1 Environmental Mitigation Management & Assessment (EMMA) 11-1
11.1.1 EMMA Record Forms 11-1
11.2 General BETP Deliverable Review Schedule 11-2

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

11.2.1 Treatment Compliance Schedule 11-2
12.0 Public Involvement Dissemination of Information and Public Involvement 12-1

Attachments

Attachment A Built Environmental Resources and APE

Tables

Table 1.1 Section 106 Technical Reports and Concurrence Dates 1-3
Table 11.1 Draft Treatment Implementation Schedule 11-3

Figures

Figure 1.1 California High Speed Rail Project 1-4
Figure 1.2 Fresno to Bakersfield Section of the California High Speed Rail Project 1-5
Figure 1.3 Construction Package 1C 1-6
Figure 1.4 Construction Packages 2/3 and 4 1-7
Figure 3.1 Organizational Chart for BETP Implenting Parties 3-7
Figure 7.1 Location of Salón Juárez Conditions 7-25

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

This page intentionally left blank

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

List of Abbreviated Terms

A.D.	Anno Domini
APE	Area of Potential Effects
AR	Authority Representative
ASR	Archaeological Survey Report
ATP	Archaeological Treatment Plan
Authority	California High-Speed Rail Authority
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHRIS	California Historical Resources Information System
CRHR	California Register of Historical Resources
CRCM	Cultural Resources Compliance Manager (for the Contractor)
DPR	Department of Parks and Recreation
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
ESA	Environmentally Sensitive Area
FOE	Finding Of Effect
FR	Federal Register
FRA	Federal Railroad Administration
GPS	Global Positioning System
HST	High-Speed Train
ICS	Initial Construction Segment
MOA	Memorandum of Agreement
NEPA	National Environmental Policy Act of 1969
NHPA	National Historic Preservation Act of 1966
NRHP	National Register of Historic Places
PA	Programmatic Agreement
PCM	Project Construction Manager
PI	Archaeology Principal Investigator (for the Contractor)
RE	Resident Engineer
SASR	Supplemental Archaeological Survey Report

SFOE	Supplemental Finding of Effect
SHPO	State Historic Preservation Officer
SR	State Route
USGS	U.S. Geological Survey

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

1.0 Background and Summary

1.1 Regulatory Background for High-Speed Train Project

The High-Speed Train (HST) Project consists of the construction of approximately 800 miles of new rail alignment for a statewide HST system which will connect Northern and Southern California (Figure 1.1). The purpose of this ATP is to assist the project proponent, the California High-Speed Rail Authority (Authority), and the lead federal agency, the Federal Railroad Administration (FRA), to comply with Section 106 of the National Historic Preservation Act of 1966 (Section 106). Because of the geographic scope of the HST Project, a Programmatic Agreement (PA) was developed (Authority and FRA 2011) to prescribe a process for compliance with Section 106 of the National Historic Preservation Act of 1966 (Section 106). The PA defines each of the geographic "sections" of the larger HST system as a separate undertaking for the purposes of Section 106, and requires the development of a Memorandum of Agreement (MOA) for each HST section. The chief purpose of the MOAs is to address adverse effects to known historic properties (including archaeological properties), and to address the implementation of post-review historic property identification and treatment efforts for any currently-unknown historic properties that may be encountered.

The Fresno to Bakersfield Section (FB Section) of the HST Project extends from the southeastern portion of the City of Fresno southward to the eastern part of the City of Bakersfield (Figure 1.2). A final Environmental Impact Report/Final Impact Statement for the FB Section was completed in April 2014 (Authority and FRA 2014a) and MOA was executed in May of 2014 (Authority and FRA 2014b). Stipulation V of the MOA calls for the preparation of two treatment plans: an Archaeological Treatment Plan (ATP) and a Built Environment Treatment Plan (BETP). Pursuant to that stipulation, this ATP provides detailed descriptions of treatment measures for both known and unknown archaeological resources. This ATP also addresses the treatment of any archaeological resources that would be significant under the California Environmental Quality Act (CEQA), as defined in Section 5.2.

1.2 Status of Section 106 Compliance for Built Environment Resources

Cultural resources investigations were undertaken as part of the Section 106 process and in support of the EIR/EIS for the Fresno to Bakersfield Section (Authority and FRA 2010a, 2010b, 2013a, 2013b, 2013c, 2013d, 2013e, 2014b). Table 1.1 shows the Section 106 technical reports prepared for Fresno to Bakersfield and the dates of concurrence by the California SHPO.

The entire APE for the built environment has been inventoried; however, effects have been assessed based on the current level of design. The inventory and evaluation reports, assessment of effects, MOA, and this BETP are based on this stage of design. Therefore, this BETP is designed to be flexible so that it can address project changes as they arise, and document and schedule treatment responsive to the project changes. It is also the tool by which the signatories and concurring parties to the PA and MOA are informed of the progress of the mitigation program, changes to the mitigation program, and the adequacy of the process by which decisions are made in response to changes to the Undertaking, and unanticipated effects to the built environment.

As the Design-Build process will result in further refinement and finalization of the project design, it is anticipated that modifications to the APE will be necessary. Therefore, the FRA and Authority will ensure that the APE for the Undertaking is modified, as necessary, in accordance with the PA, to reflect the final design of the project and that all post-review cultural resources investigations account for the final APE. Specifically, this BETP directs that if the APE is expanded

to include additional built environment resources, supplementary inventory and evaluation documentation and supplemental findings of effect and final supplemental treatment plan addenda will be prepared, as appropriate.

Because this Undertaking will be contracted and constructed using a Design-Build procurement process, this additional identification work will be completed by the Design-Build contractor under the direction of the Authority and in consultation with the other MOA signatories and concurring parties. As the Design-Build contractor completes the identification work and advances design to 100%, the FRA and the Authority will determine the effects to any built environmental resources that result from the completion of inventory and evaluation and the final design process, based on the Design-Build contractor's technical studies and proposed determinations. The Design-Build contractor will also to revise the treatment plans accordingly. Final supplemental treatment plans will be prepared by the Design-Build contractor for the Fresno to Bakersfield Section. This work will be phased in accordance with construction priorities.

Three construction packages (CPs) are currently proposed for the Fresno to Bakersfield Section consisting of CP 1C, CP 2/3 and CP 4 (Figures 1.3 and 1.4). The preliminary schedule to begin construction on CP 1C is late 2014 and spring/summer 2015 for construction on CP 2/3. A draft treatment schedule is provided in Table 11.1 that will be updated when the construction schedule for each construction package (or portions within), is finalized. It is anticipated that final supplemental treatment plans will be prepared for each of the construction packages at a minimum; however, it may be necessary to prepare several final supplemental treatment as design is completed to facilitate construction in certain areas or for specific activities while the design for other areas or work is finalized later.

After the Contractor completes the cultural resources identification work and advances design to 100%, the Contractor at the direction of the FRA and Authority will propose a determination of the effects of any revisions to the Undertaking and revisions to the treatment plans that result from the completion of inventory and evaluation and the final design process. Final supplemental treatment plans will be prepared by the Contractor, as appropriate, for each construction package or for areas or types of work within construction packages for the Fresno to Bakersfield Section.

Through the measures outlined in this BETP, the FRA, and the Authority, in consultation with the ACHP and SHPO and the other signatories, affected tribes, and other concurring parties to this Agreement, will continue the process of identifying presently unknown historic properties within the limits of construction, evaluate their eligibility for the National Register of Historic Places and California Register of Historic Resources (NRHP/CRHR), establish a process to address design changes and their effects on historic properties, resolve any adverse effects to such properties, and address the need to treat any previously unknown properties discovered during construction. Within each construction package, these steps will be phased in accordance with construction priorities, and will, at a minimum include consultation with the MOA signatories at the 60%, 90%, and 100% levels of design.

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

Table 1.1 Section 106 Technical Reports and Concurrence Dates

Report Title	Date	SHPO Comment Date
Historic Property Survey Report	June 2010, revised October 2011	February 6, 2012
Archaeological Survey Report	October 2011	February 6, 2012
Historic Architecture Survey Report	June 2010, revised October 2011	February 6, 2012
Supplemental Historic Property Survey Report	February 2013	April 2, 2013
Supplemental Archaeological Survey Report	February 2013	April 2, 2013
Supplemental Historic Architecture Survey Report	February 2013	April 2, 2013
Salón Juárez Traditional Cultural Property Study	September 2013	October 22, 2013
Second Supplemental Historic Property Survey Report	November 2013	December 13, 2013
Second Supplemental Historic Architecture Survey Report	November 2013	December 13, 2013
Draft Section 106 Findings of Effect	November 2013	December 13, 2013
Final FOE	February 2014	N/A
Memorandum of Agreement	May 2014	N/A

Figure 1.1 California High Speed Rail Project

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

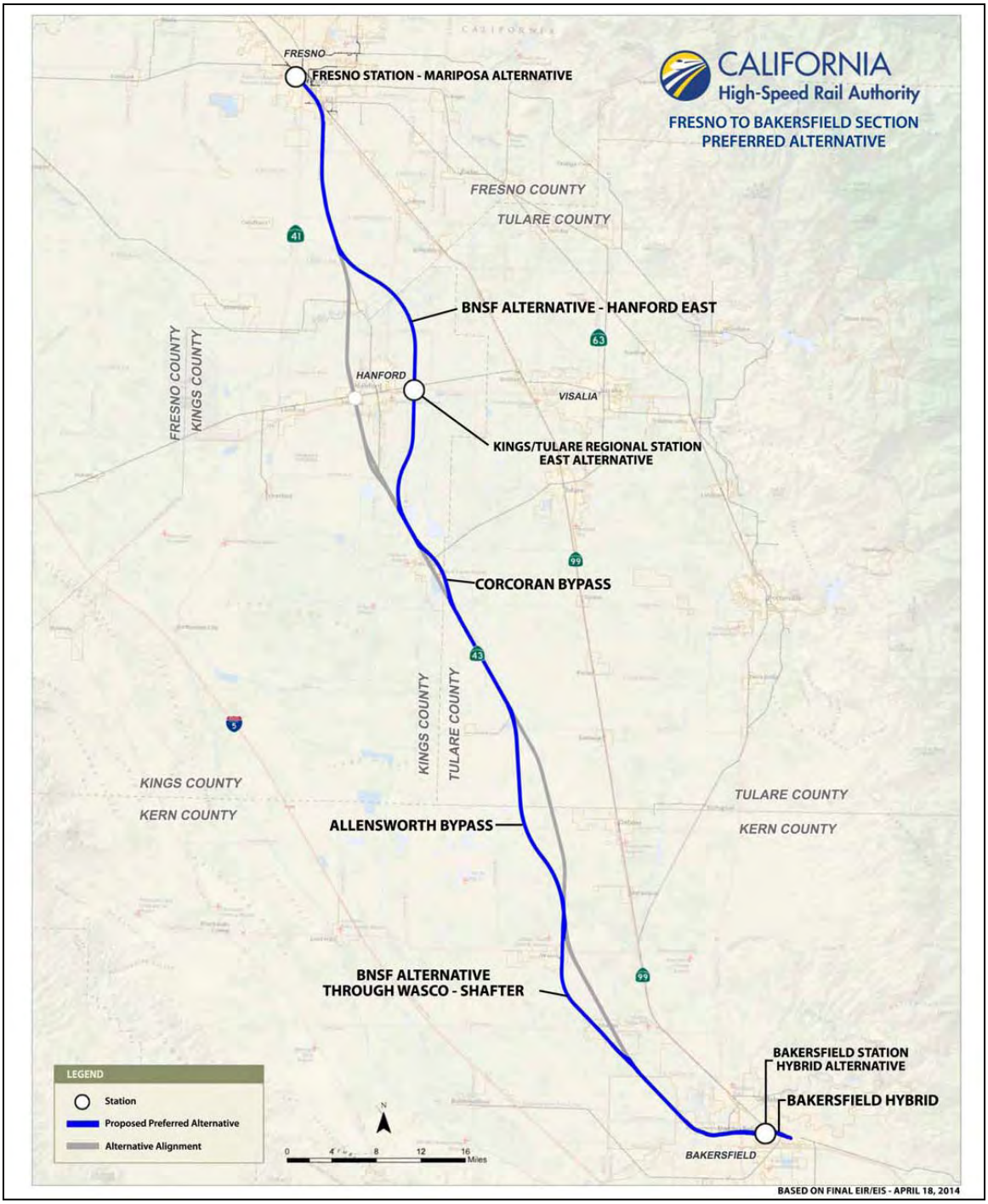


Figure 1.2 Fresno to Bakersfield Section of the California High Speed Rail Project

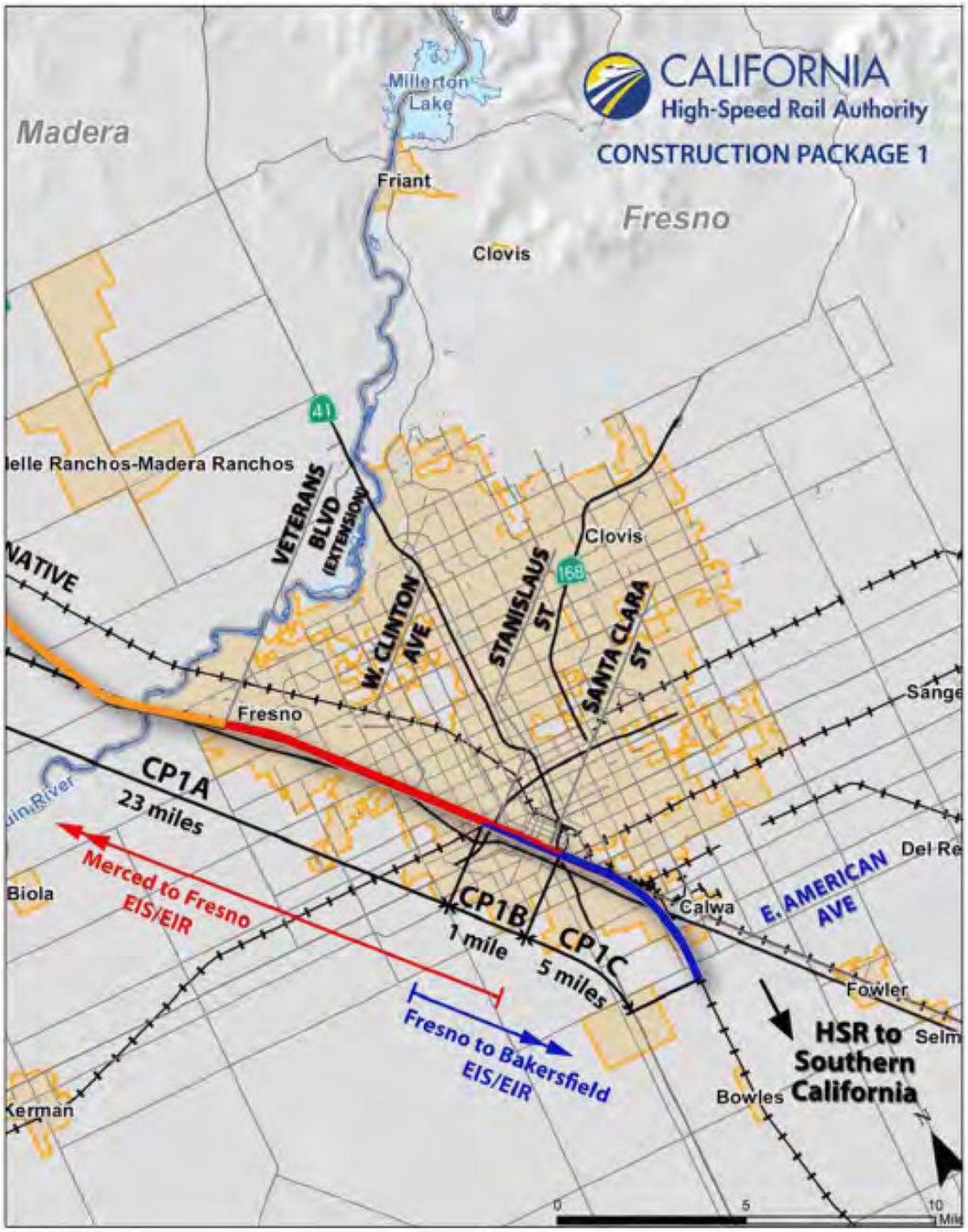


Figure 1.3 Construction Package 1C

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

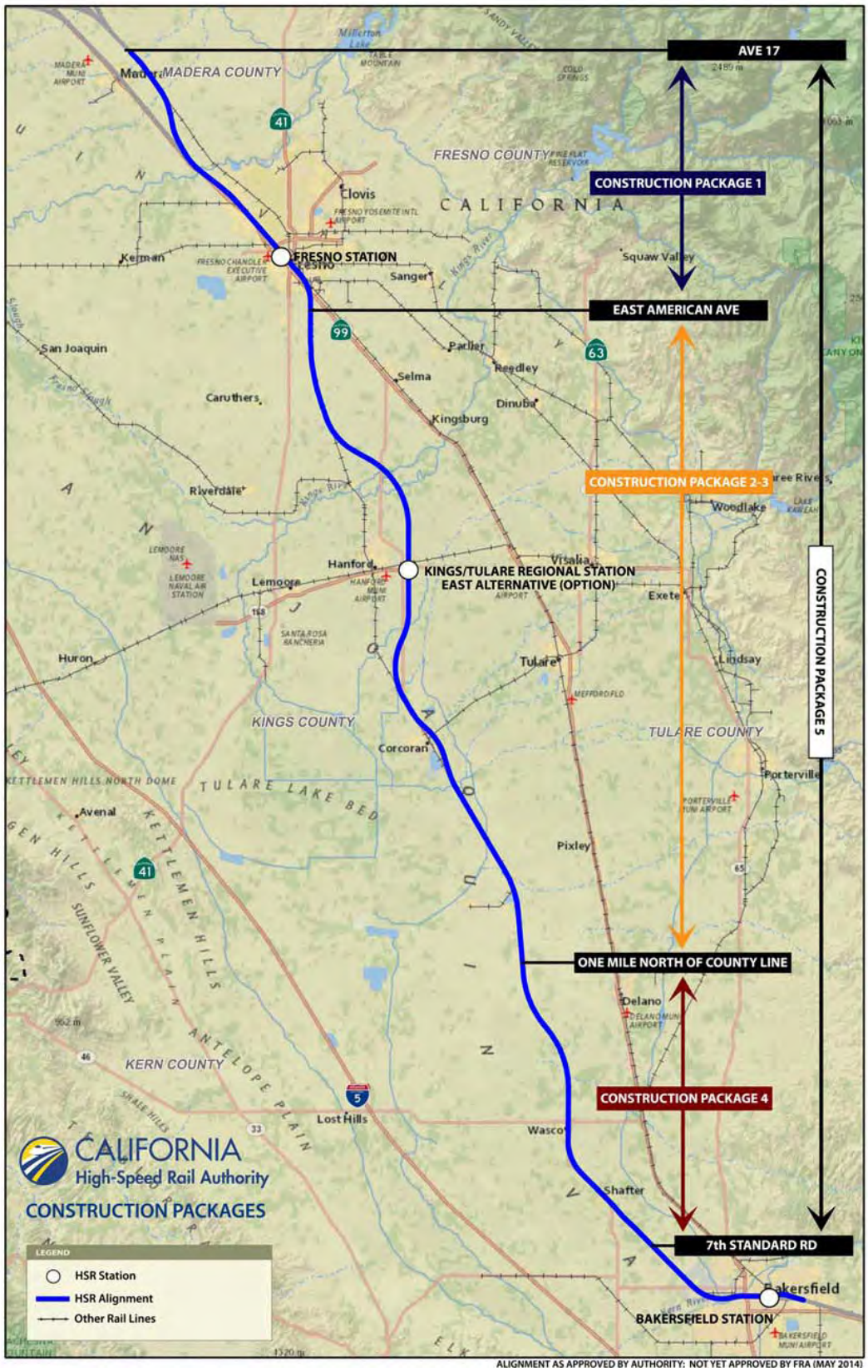


Figure 1.4 Construction Packages 2/3 and 4

This page intentionally left blank

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

2.0 Description of Undertaking and Area of Potential effect

2.1 Description of the Undertaking

The Fresno to Bakersfield Section is one of nine "sections" that were identified in the Program EIR/EISs (Authority and FRA 2005, 2008). The nine HST sections, for which individual project-level EIR/EISs are being prepared, constitute a system that would connect the major population centers of the San Francisco Bay Area with the Los Angeles metropolitan region. The California HST System is planned to be implemented in two phases. Phase 1 would connect San Francisco to Los Angeles and Anaheim via the Pacheco Pass and the Central Valley. Phase 2 would connect the Central Valley (Merced Station) to the state's capital, Sacramento, and another extension would connect Los Angeles to San Diego.

The HST System is envisioned as a state-of-the-art, electrically powered, high-speed, steel-wheel-on-steel-rail technology system that would employ the latest technology, safety, signaling, and enhanced automatic train control systems. The trains would be capable of operating at speeds of up to 220 miles per hour over fully grade-separated, dedicated tracks.

The Fresno to Bakersfield HST Section would be a critical link in the Phase 1 HST System. In the 2005 Statewide Program EIR/EIS decision document, the Authority and the FRA selected preferred alignment corridors for most of the statewide system to be studied in more detail in second-tier EIR/EISs, including the BNSF corridor between Fresno and Bakersfield and downtown stations locations in Fresno and Bakersfield. Therefore, the project-level EIR/EIS for the Fresno to Bakersfield Section focuses on alternative alignments and station locations along the general BNSF Railway corridor.

The Fresno to Bakersfield Section EIR/EIS (Authority and FRA 2014a) evaluated 10 alignment alternatives. The Preferred Alternative extends from Downtown Fresno to Downtown Bakersfield and includes portions of the BNSF Alternative in combination with the Corcoran Bypass, Allensworth Bypass, and Bakersfield Hybrid alternatives (Figure 1.2).

The Fresno to Bakersfield Section would connect to the Merced to Fresno Section at the Fresno Station in the north and to the Bakersfield to Palmdale Section at the Bakersfield Station in the south. The Fresno to Bakersfield Section may also include a heavy maintenance facility (HMF).

The infrastructure and systems for the Fresno to Bakersfield Section are composed of trains (rolling stock), tracks, grade-separated right-of-way, stations, train control, power systems, and maintenance facilities. The design includes a double-track right-of-way to accommodate planned project operational needs for uninterrupted rail movement. Also, the HST System safety criteria preclude any at-grade intersections, and therefore the system must be grade separated from any other transportation system. This requirement means that planning the HST System also requires grade-separated overcrossings or under-crossings for roadways or roadway closures.

The Fresno to Bakersfield Section would consist of a fully dedicated rail line, constructed from continuous welded steel rail. Four different track profiles would be used: 1) At-grade profile, the at-grade track would be built at ground level on compacted soil and ballast material (a thick bed of angular rock) to prevent subsidence or changes in the track surface from soil movement; 2) Retained-fill profile, the guideway would be raised off the existing ground on a retained fill platform made of reinforced walls, much like a freeway ramp; 3) Retained-cut profile, the guideway would be below the existing ground level and the earth would be retained with reinforced walls; and 4) Elevated profile, the guideway is held above ground-level by pier supports. Types of bridges that might be built include full channel spans, large box culverts, or, for some wider river crossings, limited piers within the ordinary high-water channel. When the HST elevated profile crosses over a roadway or railway on a very sharp skew (degree of

difference from the perpendicular), a straddle bent would be used to ensure that the piers are outside of the functional/operational limit of the roadway or railway. The Mariposa station location in Fresno was selected by the Merced to Fresno Section EIR/EIS decision documents. With the preferred alternative alignments carried forward, the Tulare Visalia station location for the BNSF Alignment east of Hanford and the Bakersfield station alternative situated on the Bakersfield Hybrid Alignment.

Project facilities and related features, such as HMF site(s), radio transmission towers, offsite biological mitigation sites, maintenance of infrastructure facilities, and interconnections at power substations may be addressed in future Section 106 documents developed as part of the phased historic property identification effort consistent with the PA.

2.2 Description of the Area of Potential Effect

Section 106 of the NHPA requires that an APE be defined for the project. An APE is defined in 36 CFR Part 800.16(d) as the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE is influenced by the scale and nature of an undertaking; it may be different for different kinds of effects caused by the undertaking. For the Fresno to Bakersfield Section, the archaeological APE for the preferred alternative was established in accordance with Attachment B of the PA and in consultation with project engineers and the Authority.

The APE for the built environment has been established in accordance with the PA, and modified consistent with Attachment B of the PA to respond to refinements in the project design through project development. The APE provided in Attachment A reflects the current level of design for the undertaking; however, finalization of the project design is anticipated to result in the need to modify the APE. The PA and MOA outline the review and approval process that must be followed when additions to the APE are made, when project design is finalized, or when new impacts are identified.

The built environment APE for this undertaking is defined as all legal parcels intersected by the proposed HST right-of-way, including construction of proposed ancillary features (such as grade separations or maintenance facilities) and construction staging areas. If historic architectural resources existed on a large rural parcel within 150 feet of the proposed HST right-of-way, or if it was determined that the resources on that parcel were otherwise potentially affected by the project, the entire parcel was included in the APE. If historic architectural resources on a large rural parcel were more than 150 feet away from the proposed HST at-grade right-of-way, and were otherwise not potentially affected by the project, the APE boundary was set at 150 feet from the right-of-way. In these cases, resources outside the APE on that parcel did not require further survey.

This methodology for establishing the built environment APE follows both standard practices for the discipline and Attachment B of the PA, which provides that the APE will include:

- Properties within the proposed right-of-way.
- Properties where historic materials or associated landscape features would be demolished, moved, or altered by construction.
- Properties near the undertaking where railroad materials, features, and activities have not been part of their historic setting and where the introduction of visual or audible elements may affect the use or characteristics of those properties that would be the basis for their eligibility for listing in the National Register.

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

- Properties near the undertaking that were either used by a railroad, served by a railroad, or where railroad materials, features, and activities have long been part of their historic setting, but only in such cases where the undertaking would result in a substantial change from the historic use, access, or noise and vibration levels that were present 50 years ago, or during the period of significance of a property, if different.

The environmental study areas for the Merced to Fresno Section of the HST project and the Fresno to Bakersfield section overlap in downtown Fresno between Amador Street and Los Angeles Street. Both the Merced to Fresno EIR/EIS and the Fresno to Bakersfield EIR/EIS address the impacts on historic properties in the overlap area. Analysis of effects and the associated treatment for properties in the overlap area are included in supplemental findings of effect and treatment plans for the Merced to Fresno Section (Authority and FRA 2013c) and are not duplicated here.

2.2.1 Future Changes to APE

The APE reported in this document reflects the current level of design for the Undertaking; however, as discussed above, finalization of the project design is anticipated to result in the need to modify the APE. As design proceeds, the APE provided here and shown in Attachment A will require that the APE delineation be revised and the requirements for review and approval outlined in Section 11.2 be completed.

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

This page intentionally left blank

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

3.0 Roles, Responsibilities, and Qualifications

The Authority and FRA will oversee implementation of this BETP and have the primary responsibility to ensure compliance with the terms of the PA, MOA, and this BETP. The Corps and STB are federal agencies with jurisdiction over this project; however, they have delegated the responsibility of compliance with this BETP to the FRA and Authority. The Authority may delegate some of the oversight of the work to their contracted delegates, including the Project Construction Manager (PCM), but will retain oversight responsibilities to ensure the project remains in compliance with Section 106. Implementation of the work described in this plan will be undertaken by the Contractor unless otherwise noted. The Contractor will be required to retain professional staff meeting the qualifications requirements outlined in the MOA and in Section 3.3 of this BETP to undertake the tasks outlined in this BETP.

3.1 Signatory Parties to MOA

3.1.1 California High Speed Rail Authority

The California High Speed Rail Authority (Authority) is the lead agency for the California Environmental Quality Act (CEQA) and is also a signatory to the Fresno to Bakersfield MOA. The FRA has delegated the responsibility for the implementation of this BETP and the treatment measures included herein to the Authority. As part of its role, the Authority will review and approve the deliverables as outlined in this BETP in cooperation with FRA. The Authority is responsible for submitting all deliverables required by this BETP to the SHPO. The Authority is also responsible for coordinating with consulting parties and the SHPO and circulating deliverables to and obtaining comments from the signatories and consulting parties, in accordance with the PA.

3.1.2 Federal Railroad Administration

The Federal Railroad Administration (FRA) is the federal lead agency under Section 106 of the National Historic Preservation Act (NHPA) and the National Environmental Policy Act of 1969 (NEPA). As the lead federal agency, the FRA has primary responsibility to ensure that the provisions of this BETP are carried out. As part of its role, FRA reviews and approves the deliverables outlined in this BETP in cooperation with the Authority.

3.1.3 Surface Transportation Board

The Surface Transportation Board (STB) has jurisdiction over this project and is a signatory to the Fresno to Bakersfield MOA. The STB has delegated the work necessary to comply with the MOA and treatment plans to the FRA but has retained review responsibility and authority for ensuring that deliverables prepared pursuant to this BETP meet the STB's requirements for Section 106 compliance.

3.1.4 U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers (Corps) also has jurisdiction over this project and is a signatory to the Fresno to Bakersfield MOA. Similarly, it has delegated the work necessary to comply with the MOA and treatment plans to the FRA but has retained review responsibility and authority for ensuring that deliverables prepared pursuant to this BETP meet the Corps' requirements for compliance with Section 106 of the NHPA.

3.1.5 California State Historic Preservation Officer

The California State Historic Preservation Officer (SHPO) is a signatory to the MOA and is responsible for reviewing the deliverables in this BETP and overseeing Section 106 compliance at the state level.

3.1.6 Advisory Council on Historic Preservation

In their role as a signatory to the MOA, the ACHP will be provided the opportunity to review and comment on deliverables prepared pursuant to this BETP. Both the PA and the Fresno to Bakersfield MOA provide a role for the ACHP in the resolution of disputes regarding implementation of the MOA.

3.1.7 Consulting Parties to MOA

In addition to the signatories to this MOA, there are a number of consulting parties to the MOA and BETP who are responsible for reviewing the deliverables in this BETP and providing comments within the timeframes identified. The consulting parties to this MOA include:

- California Department of Parks and Recreation
- The City of Fresno
- The City of Bakersfield
- The City of Corcoran
- City of Shafter
- Sociedad Juárez Mutualista Mexicana
- Santa Rosa Tachi Yokuts Tribe
- Table Mountain Rancheria
- Picayune Rancheria of the Chukchansi Indians
- Tule River Indian Tribe
- Kern Valley Indian Council
- Tejon Indian Tribe

The consulting party review process for the BETP deliverables is described in Section 11.2.

3.2 Implementing Parties for MOA and BETP

Implementing parties are the entities and personnel who will actually implement the terms of the MOA and BETP. Table 3.1 shows the relationship between and reporting structure of these parties.

3.2.1 Authority Representative (AR)

The Authority Representative (AR) is a professional archaeologist or architectural historian on the staff of the Authority who meets the Secretary of the Interior's Qualification Standards as outlined in 48 FR 44716, et seq. (1983). The AR has the authority to guarantee that all activities related to cultural resources are completed to the highest possible standards and in conformance to the requirements of the PA, MOA and this BETP.

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

The AR is responsible for:

- overseeing the implementation of the cultural resources commitments described in this BETP;
- ensuring that all built environment resources identified during construction activities are appropriately evaluated and treated in accordance with this BETP;
- serving as the point of contact for the FRA, SHPO, the PCM, consulting parties and the PI regarding the implementation of the commitments of this BETP;
- tracking the progress of all cultural resources commitments performed pursuant to this BETP; and
- reporting and consulting with the FRA and the SHPO on any stop-work order, the nature of the concerns or issues that prompted them, and the resolution.

3.2.2 Project Construction Manager (PCM)

The Authority will retain a Project Construction Manager (PCM) who will be responsible for the execution of construction orders, ensuring environmental compliance requirements are met, and the supervision of all contractors.

The PCM will designate an Environmental Lead who, as an agent of the Authority, is responsible for:

- coordinating with the AR and PI in the implementation of the requirements of this BETP;
- ensuring that, in the event of an unanticipated impact to a built environment resource, the AR is contacted, and that the PCM implements a stop-work order at the direction of the PI;
- serving as the primary point of contact and facilitator of communications between the PI and the AR;
- notifying the AR and the PI of the Contractor's construction schedule in locations identified for built environment monitoring;
- ensuring that the Contractor's staff receives the required Cultural Resources Worker's Environmental Awareness Training described in Section 7.6.2; and
- ensuring that the Contractor's team compiles a weekly log of built environment monitoring activities conducted onsite (this log will include the daily field reports prepared by the PI to be provided to the AR).

3.2.3 Design Build Contractor (Contractor)

While the Authority and FRA are ultimately responsible for complying with the requirements of this BETP, the Design-Build Contractor (Contractor) will be ultimately responsible for conducting the work as outlined in the Construction Package Request for Proposal and Bid Documents and Design-Build Contract Documents. The Contractor is responsible for knowing these requirements, including the timing for the completion of tasks and deliverables in relation to construction, including the required signatory and consulting parties review periods under the PA and the MOA. The Contractor will delegate actual implementation of tasks to the CRCM, as described below in Section 3.3.4.

3.2.4 Design-Build Contractor's Cultural Resources Compliance Manager

The Contractor will designate a Cultural Resources Compliance Manager (CRCM) to oversee and coordinate the cultural resources compliance program in accordance with this BETP. In accordance with PA Stipulation III, this individual must meet the qualifications of a historian, architectural historian, or archaeologist as set forth in the Secretary of the Interior's professional qualification standards and as required by the PA. The CRCM could also serve as the Archaeology Principal Investigator or the Principal Architectural Historian, as appropriate.

The CRCM is responsible for:

- generally overseeing and coordinating compliance with the ATP and BETP;
- ensuring that the requirements of the ATP and BETP are met;
- providing quality control for the technical content of each cultural resource deliverable prepared by the Contractor's team;
- ensuring that the daily logs are prepared for built environment monitoring activities and that weekly compliance reports are submitted to the PCM and Authority; and
- preparing and submitting to the PCM and Authority, for review and comment, semi-annual status reports, as required by the MOA.

3.2.5 Design-Build Contractor's Architectural History Principal Investigator

The Contractor will retain an Architectural History Principal Investigator (Architectural History PI) who meets the Secretary of the Interior's Qualifications Standards as outlined 48 FR 44716, et seq. (1983) for professional architectural historian. The Architectural History PI must have a minimum of a master's degree in history or architectural history (or a closely related field). Besides being responsible for implementing the terms of the BETP in the role of Architectural History PI, this individual could also function as the CRCM, as described in Section 3.3.4 above.

At the direction of and in consultation with the AR and the FRA, the Architectural History PI will oversee the implementation of the commitments in this BETP. Specifically, the Architectural History PI will direct all other architectural history/history support personnel and will be the point of contact for architectural history team members and monitoring professionals to report any concerns.

In this capacity, the Architectural History PI is responsible for:

- ensuring that the Contractor's staff meet minimum qualifications as required by the PA and MOA and as outlined in the Secretary of the Interior's Professional Qualification Standards (48 FR 44716, et seq. [1983];
- identifying when other experts are needed to perform the work outlined in the BETP, such as landscape architects, structural engineers, or historic/preservation architects;
- overseeing and coordinating the team of professionals such as landscape architects, structural engineers, or historic/preservation architect;
- identifying and overseeing the implementation of protection measures for built environment resources;
- coordinating the built environment monitoring requirements during construction; and

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

- issuing a stop-work order and contacting the PCM in the event of any inadvertent damage to a built environment resource that occurs or has the potential to occur, who will implement a stop-work order at the location of unanticipated impact;
- coordinate with the Contractor's site foreman and the PCM to stop work, to take corrective action, to avoid inadvertent damage, and to address treatment for damage that has already occurred as provided for in this BETP;
- contacting the PCM to resume operations once the issues that led to the stop-work order have been resolved;
- compiling for PCM who will provide to the AR a weekly log of architectural monitoring activities conducted onsite that will summarize field reports; and
- providing a Monthly Progress Report documenting the implementation of the BETP and any built environment field activities to the AR as described in Section 10.2.2. This monthly report will include the updated BETP compliance table, a preliminary version of which is provided as Table 11.1. The AR will review the report and, once finalized, submit the report to the MOA signatories for their records. If preferred by the Contractor, this Monthly Progress Report can be provided in a combined report covering both the ATP and BETP.

3.2.5.1 Architectural Monitors

Under the direction of the Architectural PI, the Architectural Monitor will be responsible for ensuring that built environment resources are protected during construction. This work will include ensuring that built environment protection measures are in place before construction begins as well as to monitor during construction to verify that protection measures are effective. The Architectural Monitor will also be responsible for periodic monitoring of built environment resources during construction. Architectural Monitors will have a minimum of a bachelor's degree in history (or a closely related field).

Each archaeological monitor will be equipped with a cell phone and camera to allow them to effectively and efficiently communicate with other team members, such as the Archaeology PI and AR.

Besides their core function of physically monitoring construction work, Architectural History monitors are also responsible for:

- issuing temporary work stoppages to permit a closer view of a potential unanticipated impact (but do not have the authority to issue a stop-work order, which is a responsibility of the Architectural History PI);
- reporting to the Architectural History PI any concerns or issues related to built environmental resources within the APE that may require further investigation; and
- documenting their activities in a daily log, which will be delivered to the Architectural History PI at the end of each work day.

3.3 Qualifications of Staff Implementing the BETP

The qualifications requirements for conducting work for the CAHST project are outlined in PA Stipulation III, which requires that all actions that involve the identification, evaluation, analysis, recording, treatment, monitoring, or disposition for historic properties, or that involve reporting or documentation of such actions in the form of reports, forms, or other records, shall be carried out by or under the direct supervision of a person or persons who meet, at a minimum, the Secretary of the Interior's Professional Qualifications Standards (48 FR 44716, et seq. [1983]) in the appropriate discipline.

MOA Stipulation VIII.A further stipulates that the Authority and FRA will ensure that professionals implementing any of the provisions in the MOA, this BETP are appropriately qualified to undertake such tasks. To ensure that these requirements are met, prior to any work being conducted, the cultural resources staff will be approved by the AR. Furthermore, prior to implementation of this BETP, a list of key individuals, their roles and their respective contact information will be prepared and distributed to all pertinent project personnel, the PCM and the AR. Alternative back-up individuals will be identified in the case that the designated individuals are not available when needed. The following are key entities for the purposes of this BETP:

- Authority Representative (AR);
- Project Construction Manager (PCM);
- Design-Build Contractor (Contractor)
- Cultural Resources Compliance Manager (CRCM) for Contractor; and
- Architectural History Principal Investigator (Architectural History PI) for Contractor.

Resumes for other cultural resources technical staff may be requested by the AR or PCM.

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

Organizational Chart for BETP Implementing Parties

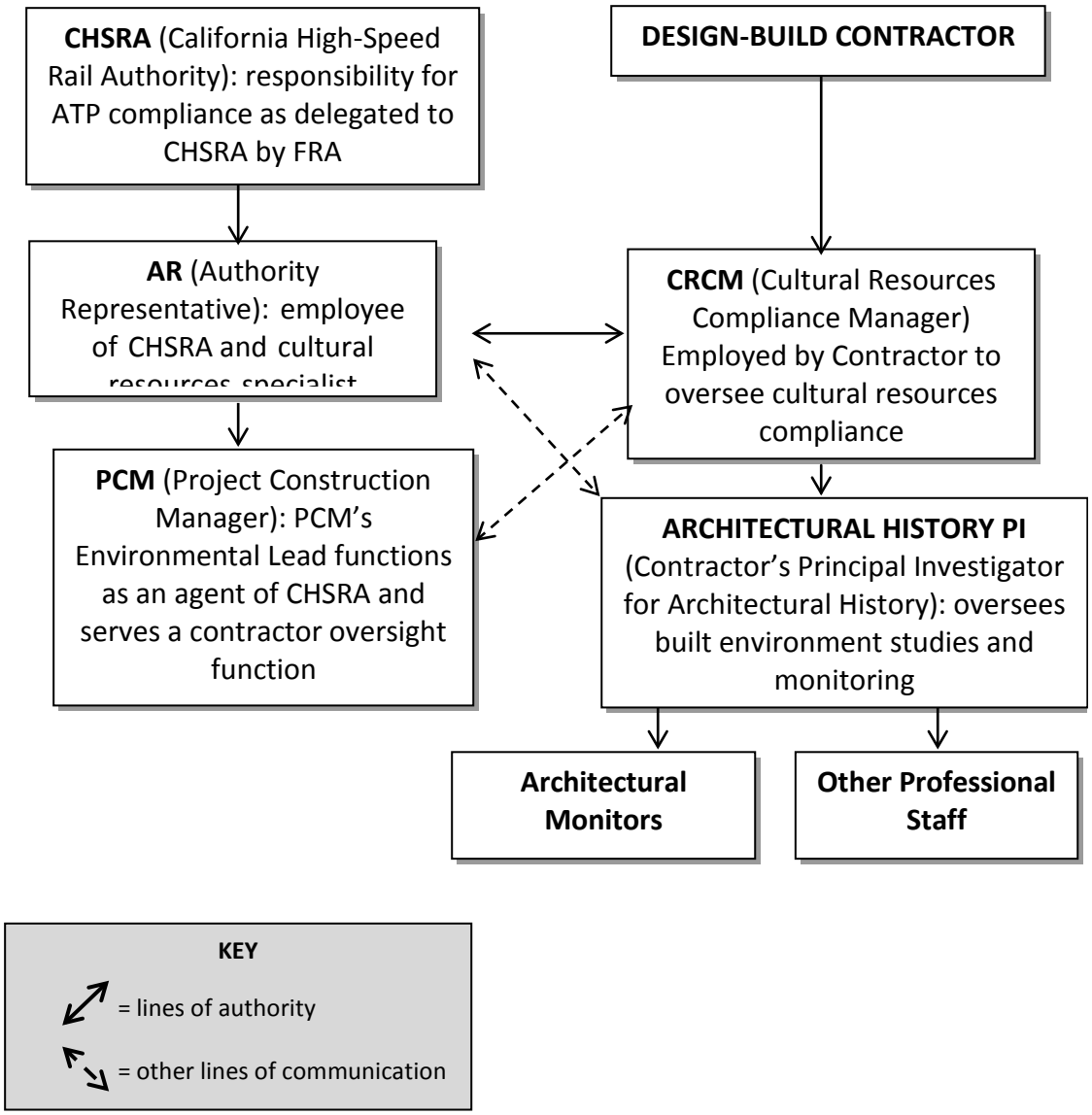


Figure 3.1 Organizational Chart for BETP Implenting Parties

This page intentionally left blank

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

4.0 Historic Context for Historic Architectural Resources

The following historic context is largely extracted from inventory, evaluation and effects assessments for the built environment that were previously prepared for Fresno to Bakersfield Section of the HST (Authority and FRA 2010a, 2010b, 2013a, 2013b, 2013c, 2013d, 2013e, 2014a, 2014b).

Historic architectural resources inventoried and evaluated for this project reflect the major historical events and trends of development within the study corridor, which stretches from downtown Fresno, through rural Kings and Tulare counties, and terminates in downtown Bakersfield. The typical historic architectural property types date from the latter part of the nineteenth century through the mid-twentieth century. Although the historic period began with a series of expeditions by Martín, Moraga, Dezalvidea, Ortega, Palomares, and others, who entered and explored parts of the northern San Joaquin Valley during the Spanish Period (1769 to 1822), none of the historic architectural resources within the APE for this project are associated with these early explorations or with the earliest immigrants who settled in this interior valley during either the Spanish or the Mexican Period (1822 to 1848). The routes of explorations and trails between early settlements formed some of the basis for future transportation routes, but did not leave extant built-environment resources in the APE.

The combination of vast expanses of irrigable land and a mild climate greatly influenced land use and development patterns in the southern San Joaquin Valley. This setting attracted pioneering irrigation and railroad systems that proved to be two major factors that drove development of the built environment in the Fresno to Bakersfield Corridor, an area that was otherwise sparsely inhabited during the historic era prior to California statehood. The Gold Rush also stimulated economic development and settlement, and it was the combined influence of irrigated agriculture (developed as early as the 1850s in the San Joaquin Valley), and the arrival of the first railroad in the 1870s that profoundly reshaped the existing, largely unpopulated valley. Subsequent events and trends beginning at the turn of the twentieth century—such as the rise of oil production in Kern County, federal-state water development projects in the Central Valley, and widespread adoption of the automobile and ensuing highway construction—amplified and extended the late-nineteenth-century built environment already existing in the Fresno to Bakersfield Corridor (Authority and FRA 2011, 2013).

The construction of the buildings, structures, and other property types of the built environment is related to these general historical patterns of development in the four counties along the Fresno to Bakersfield Corridor and intersected by the APE: Fresno, Kings, Tulare, and Kern. Some of the surveyed properties in this area are directly related to the arrival and expansion of the rail lines that parallel the APE and some are industrial, commercial, or institutional properties and resources, but most are agricultural and/or residential. The survey area covers a large region, with most of the historic architectural resources located in or near the urban areas in and around Fresno and Bakersfield. The few resources located in the rural areas are either in the unincorporated counties or in the small communities of Hanford, Corcoran, Wasco, and Shafter. Unincorporated areas in and near the corridor include Oleander, Bowles, Conejo, and Laton in Fresno County; the Mussel Slough or Lucerne area, including Grangeville and Armona, in Kings County; and Angiola and Allensworth in Tulare County.

Irrigation and railroad features represent some of the earliest history of the area and these linear systems intersect the APE at various locations throughout the Fresno to Bakersfield corridor. The irrigation structures are either the pioneering systems of the 1870s or 1880s, or are modern successors that brought reliable water sources to the largely arid region, while the rail lines of the Southern Pacific and Atchison, Topeka & Santa Fe railroads provided early transportation linkages that spurred development of both towns and agriculture in the valley.

Similarly, residential development in the APE reflects both the population growth and social evolution of the region, from the earliest farmsteads and homesteads, to urban and suburban development of the mid-twentieth century. This evolution is indicative of the increasingly urbanized towns and cities of the southern San Joaquin Valley, such as Bakersfield and Fresno, which became major population centers, but also the steady development of the smaller communities, such as Corcoran (Kings County) or Shafter (Kern County). Whether big or small, these communities spawned schools, government offices, and other public facilities to serve valley residents. The range of commercial and industrial construction also reflects the social, ethnic, and economic complexity of the region, and includes hotels, retail, industrial complexes, and agricultural processing (Authority and FRA 2010b, 2013b, 2013c).

The demographic trends of the San Joaquin Valley also reflect this complexity during the historic period, with many different groups settling the region and contributing to the built environment. Mexican, Chinese, Basque, Scandinavian, Armenian, Italian, and Portuguese farmers and business people were among those who built homes, farmsteads, and businesses all along the Fresno to Bakersfield corridor. Mexican nationals and Mexican-Americans have played a particularly important role in the development of the valley throughout the historic period in California. Many Mexicans came to the area to work on the railroads and ranches during the nineteenth century, and continued to immigrate during the oil boom in the southern San Joaquin of the early twentieth century and the expansion of agri-business across California's Central Valley. Historic properties associated with these groups within the APE include various farms, residences, businesses, churches, and community facilities (Authority and FRA 2010b, 2013a, 2013b, 2013c, 2013e).

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

5.0 Significance Criteria for Archaeological Resources

5.1 Federal Criteria (Section 106 of the NHPA)

NEPA and NHPA require federal agencies to consider the effect of their undertakings on significant resources, designated as "historic properties." The significance of an archaeological site or an architectural resource in terms of NEPA and NHPA is defined in terms of the criteria for listing in the National Register of Historic Places (NRHP). These criteria, defined in 36 CFR § 60.4, state that a resource must be at least 50 years old (unless meeting exceptional criteria) and possess the quality of significance in American history, architecture, archaeology, engineering, and culture and is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and meet one or more of the following criteria:

A. Is associated with events that have made a significant contribution to the broad patterns of history;

B. Is associated with the lives of persons significant in the past;

C. Embodies the distinctive characteristics of a type, period, or method of construction, represents the work of a master, possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction; or

D. Has yielded, or may be likely to yield, information important in prehistory or history.

E. If a particular resource meets one or more of these criteria and retains integrity, it is considered eligible for listing in the NRHP and is therefore treated as an "historic property" under Section 106 of the NHPA.

5.2 State Criteria (CEQA)

The California Environmental Quality Act (CEQA) is a statute under California state law that, among other requirements, requires state and local agencies to identify the significant environmental impacts of their actions on "historical resources" and to avoid or mitigate those impacts, if feasible. Although the criteria for significance under CEQA are broadly similar to the federal NRHP criteria, they are more inclusive, and also more complex in terms of how they define the significance of resources. Under CEQA, "historical resources" are resources that meet any of the three following criteria:

1. are listed in, or determined eligible for listing in, the California Register of Historical Resources (CRHR); or

2. are included in a local register of historic resources that meets certain standards; or

3. have been determined historically significant by a lead agency as supported by substantial evidence in light of the whole record (CCR Title 14, Section 15064.5 [a]).

The most commonly used of these three criteria for determining significance under CEQA is evaluation of resources for the CRHR. The standards for eligibility for the CRHR are modeled after the criteria for listing in the NRHP, and are as follows:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

2. Is associated with the lives of persons important in our past.

3. Embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values.

4. Has yielded, or may be likely to yield, information important in prehistory or history.

5.3 CEQA-Only" Cultural Resources

In practice, any resource that is eligible for listing in the NRHP is automatically considered eligible for listing in the CRHR and is therefore an historical resource for the purposes of CEQA. However, resources found eligible for the CRHR are not considered to be automatically eligible for NRHP listing, and frequently do not meet the more stringent standards of the NRHP criteria. In addition, resources considered to be historical resources for the purposes of CEQA occasionally do not meet any of the four criteria listed above for CRHR listing (this typically occurs in the context of building surveys undertaken for a local [city] register of historic resources). This asymmetry between the federal and state significance criteria results in a category of cultural resources eligible under CEQA, but not Section 106. For the purposes of the HST Project, these have been designated as "CEQA-only cultural resources" (Authority 2013). The Fresno to Bakersfield Section of the HST Project has several "CEQA-only" built environment resources which have to be treated under CEQA (Authority and FRA 2014b), but no "CEQA-only" archaeological resources.

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

6.0 Plan for Completion of the Identification Efforts with the APE

Finalization of design may result in additional inventory and evaluation being required to address built environment resources not previously studied. In the event that this occurs, the following steps described in this section will be completed. The timing of additional identification efforts and reporting will depend on when portions of the design are completed and will be timed to be conducted in construction with design and in accordance with construction phasing priorities.

6.1 Revising and Finalizing the Area of Potential Effect

The Contractor will be responsible for ensuring that the final project design is reflected in the APE and that the cultural resources investigations described herein are conducted accordingly. Both the PA and MOA outline the review and approval process that must be followed when APE modifications become known. Following completion of the design process, the Built Environment APE will be finalized in accordance with the requirements of Stipulation II of the MOA and Stipulation VI.A of the PA. This process could occur in phases resulting to the need to prioritize areas for each construction package. As the APE or portion thereof is finalized, maps will be produced showing the refined APE as compared with the original APE. The revised maps will be provided to the AR for circulation to the MOA signatories and concurring parties for a 15-day review. Following this review, the CRCM and the AR will determine what additional inventory or evaluation work is required and will direct that work to be completed by the Contractor.

6.2 Supplemental Inventory and Evaluation Report and Effects Assessments

The Authority and FRA will ensure that if project refinements or completion of the final design requires revision to the APE that adds parcels that contain built environment resources, additional identification efforts are completed. This effort will include built environment inventory and evaluation to identify NRHP eligible properties in the APE, obtaining SHPO concurrence on eligibility, and preparation of documentation in accordance with the requirements outlined in the PA and MOA. A supplemental Finding of Effect (sFOE) document will be produced if historic properties are identified in the revised APE. If no new historic properties are identified, a sFOE will not be required.

The sFOE will document the application of the Section 106 criteria for adverse effects as required by the PA and MOA for each new historic property identified within the APE. The sFOE may also determine if the project will cause a substantial adverse change to an historical resource under CEQA. This will include newly discovered historic properties (NRHP and CRHR eligible or listed) that were not already documented in the preceding FOE(s), as well as a determination of effects on those resources already documented in or adjacent to the APE but for which the completion of the design phase may cause previously unidentified impacts. As part of the consultation process and review of deliverables, ways to avoid and/or minimize adverse effects will be considered in consultation with the MOA signatories. Section 11.2 of this BETP describes the MOA signatory and concurring party review for the sFOE.

This page intentionally left blank

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

7.0 Treatment

This section of the BETP provides detailed descriptions of the specific conditions and treatment agreed to in the MOA and the Final EIR/EIS for known effects on the built environment. Also provided are the general avoidance and treatment measures for all known historic properties in the current APE outlined in the MOA. There are no known CEQA-only resources being affected by the project; however, if during final design it is determined that CRHR-eligible or listed properties would be effected by the project, the measure outlined in this BETP would be applicable.

As the project moves into the design finalization and pre-construction phases, design modifications and other project refinements will continue to be analyzed for their potential to affect historic properties and for the potential for previously identified and any new effects to be reduced or eliminated. As design is finalized, refinement of the measures may be required. Therefore, this section is followed by a discussion of programmatic treatment measures to be implemented when certain types of impacts are identified during final design or could inadvertently occur during construction. This section provides direction on selecting appropriate built environment treatments, as well as specific requirements for the implementation including the standards and methods to be employed, the qualifications of staff performing the work, the anticipated timing for implementation, and the expected deliverables.

In accordance with procedures established in the MOA for ongoing consultation, changes to the project will continue to be coordinated with the SHPO and concurring parties throughout the design, pre-construction, construction, and post-construction phases of the project. As a result of this consultation, it is possible that supplemental built environment treatment plans (sBETPs) will be needed to address potential effects to historic properties. Alternatively, if a sBETP cannot be prepared in a timely manner so as not to delay construction or it is determined, and the MOA signatories concur that any new effects can be minimized/mitigated/avoided by the standard conditions/treatment measures, then no supplemental treatment plan is needed before moving forward with treatment/construction at the direction of the AR and in consultation with the MOA signatories.

During the course of consultation with the MOA signatories, the measures described here may be need to refined or modified to address newly identified resources or new effects. Additionally, opportunities for creative treatments including public benefit mitigation will be considered in consultation with the MOA signatories as appropriate.

7.1 Treatment for Known Historic Properties

The Authority and FRA will ensure that the following treatments are implemented for known historic properties.

7.1.1 South Van Ness Entrance Gate

Pursuant to MOA, the South Van Ness Entrance Gate will be subject to several treatment measures as outlined below.

7.1.1.1 Relocate Van Ness Gate to Another Fresno Street

The South Van Ness Entrance Gate will be relocated to another location in the City of Fresno to avoid its destruction and minimize the direct adverse effect of physical damage or alteration. This treatment will partly mitigate the indirect adverse effect caused by the permanent closure of South Van Ness Avenue, and would avoid demolition of the structure, but the relocation would require evaluation under the criteria of adverse effect and the property may still be adversely

affected by the project. A relocation plan will be prepared prior to relocation implementation. The relocation plan will include input from concurring parties regarding relocation of the Van Ness Gate structure to provide a comprehensive and thorough approach that will best meet the needs of the parties and the property. The relocation plans for the historic property will take into account its historic site and layout, i.e., relationship to the roadway. The plan will also provide for stabilization of the structure before, during, and after the move, as well as repair of inadvertent damage caused by the relocation in accordance with the requirements outlined in Section 7.3.1.

7.1.1.2 Prepare Recordation/Documentation

Recordation/documentation of the South Van Ness Entrance Gate will be prepared, including current photographs and reproduction of historic images, to mitigate the adverse effects resulting from construction of the project. Photography will capture views of the gate at its location on S. Van Ness Avenue to document it as a structure that spans an active roadway and may be used in the relocation plan and/or the preparation of interpretive or educational materials. The fieldwork necessary for this mitigation measure (e.g., photography and reproduction of historic images), will be conducted before construction begins. See Section 7.2.4 for a more detailed description of this mitigation measure, as well as Section 11.2 for the review process required for draft and final documentation.

7.1.1.3 Prepare Interpretive or Educational Materials

The Van Ness Gate historic property will be subject to historic interpretation or preparation of educational materials regarding its history. Prior to initiating this interpretive program, an Interpretive Plan will be developed that outlines how the interpretive or educational materials will provide information regarding this specific historic property and the aspects of its significance that would be affected by the project. The plan will describe what the interpretive or educational materials will include, such as brochures, videos, websites, study guides, teaching guides, articles or reports for general publication, commemorative plaques, or exhibits. The interpretive or educational materials will utilize images, narrative history, drawings, or other material produced for the mitigation described above, including the additional recordation prepared, and/or archival sources. This plan will be subject to the review process outlined in Section 11.2 and will be approved prior to initiating any interpretive work.

The interpretive or educational materials may be advertised and will be made available to the public. The interpretive materials may be made available in physical or digital formats, at local libraries, historical societies, or public buildings. See Section 7.5 for a more detailed discussion of the requirements of this measure. Draft and final interpretive materials will be subject to the review process defined in Section 11.2 prior to finalization and/or publication.

7.1.2 Washington Irrigated Colony Rural Historic Landscape

The Washington Irrigated Colony Rural Historic Landscape is a historic property that includes four contributors that require treatment:

- Washington Colony Canal
- North Branch of Oleander Canal
- 7870 S. Maple Avenue
- 7887 S. Maple Avenue

7.1.2.1 Minimize Noise and Vibration and Plan for Inadvertent Damage

The Washington Irrigated Colony Rural Historic Landscape will be subject to General Avoidance Measures #1 and #2 to minimize noise and vibration effects, as well as General Mitigation

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

Measures #1 to mitigate adverse effects of inadvertent damage. The reduction of the noise and vibration will minimize effects on this rural historic landscape district along the project route. The plan for repair of inadvertent damage will identify specific contributing elements, such as canals, within the district that may require this treatment, and will conform to the requirements outlined in Section 7.2.3.

7.1.2.2 Recordation / Documentation

Consistent with the provisions of General Mitigation Measure #2, recordation/documentation of the entire Washington Irrigated Colony Rural Historic Landscape will be prepared to mitigate direct adverse effects to the landscape caused by construction of the project. The updated recordation of the historic landscape district will include identification, description, and photography of contributing elements, character-defining features, and other elements of the landscape district such as farmsteads, canals, and streets. This documentation will consist of preparation of recordation forms (DPR 523). Photography of a sufficient quality to adequately document the resources will be implemented to capture views of the district and its contributing elements and may be used in the preparation of interpretive or educational materials. The fieldwork necessary for this mitigation measure (e.g., photography, mapping, and reproduction of historic images) will be conducted before construction begins. The product resulting from this measure will be used to update the documentation of the landscape district historic property.

This work will be conducted by professionals meeting the Secretary of the Interior's standards for relevant subdisciplines (i.e., history, architectural history). The fieldwork necessary for this mitigation measure (e.g., photography, as-built drawings, cartography, or digital recordation) would be implemented before construction begins. Additional details for this treatment measure are provided in Section 7.2.4.

7.1.2.3 Develop Protection and Stabilization Measures

Protection and stabilization measures will be developed before project construction for any contributing elements of the Washington Irrigated Colony Rural Historic Landscape that may require protection, such as historic irrigation canals. This treatment would ensure that adverse effects on the historic property would be avoided to the extent possible. Such measures could include physical barriers or canal wall stabilization to protect historic properties from construction activities (e.g., excavation, grading, construction equipment, or laydown areas). Additional details for this treatment measure are provided in Section 7.3.1.

7.1.2.4 Plan HMF Site to Avoid Impacts / Effects

Five potential locations for the HMF site are under consideration and the ultimate location will be selected at a later date. To avoid potential direct and indirect adverse effects, and direct and indirect substantial adverse changes that could be caused to historic irrigation canals by construction of the HMF at the Fresno Works–Fresno HMF Site, if that location is selected during final design, the facility will be sited for construction north of BNSF milepost 991.6. This treatment will avoid potential direct adverse effects to the two historic canals located south of that point that could be caused by construction of the facility.

7.1.2.5 Prepare Interpretive or Education Materials

The Washington Irrigated Colony Rural Historic Landscape historic property will be subject to historic interpretation or preparation of educational materials regarding its history. Prior to initiating this program, an Interpretive Plan will be developed by a professional with expertise in developing museum exhibits or interpretive materials. This Interpretive Plan will outline how the interpretive or educational materials will provide information regarding this specific historic property and the aspects of its significance that would be affected by the project. The Plan will

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

describe what interpretive or educational materials will include, such as brochures, videos, websites, study guides, teaching guides, articles or reports for general publication, commemorative plaques, or exhibits. The interpretive or educational materials will utilize images, narrative history, drawings, or other material produced for the mitigation described above, including the additional recordation prepared, and/or archival sources.

The Plan will be developed in accordance with the requirements outlined in Section 7.5 and will be subject to the review process defined in Section 11.2. The Plan will be approved and finalized prior to initiating any interpretive work. Draft and final interpretive materials will be subject to the review process defined in Section 11.2 prior to finalization and/or publication. Interpretive materials will be developed and implemented prior to construction beginning in proximity to the landscape property. The interpretive or educational materials will be advertised, and made available to, and/or disseminated to the public. The interpretive materials may be made available in physical or digital formats at local libraries, historical societies, or public buildings.

7.1.3 Peoples Ditch

Pursuant to the MOA, protection and stabilization measures will be developed before project construction for the segments of the Peoples Ditch that will be retained adjacent to project work that alters the canal. This treatment will ensure that direct adverse effects on this historic property will be minimized to the extent possible during work that will alter a segment of the canal structure. Such mitigation measures will include, but are not necessarily limited to protection of the above ground historic canal from construction activities, specifically the demolition, re-alignment, and/or underground piping of a section of the canal. Requirements for this work are outlined in more detail in Section 7.3.1.

7.1.3.1 Recordation / Documentation

Recordation/documentation as provided in General Mitigation Measure #2 of the adversely affected portion of People's Ditch will be prepared to mitigate the adverse effect from the construction of the project. Photography of a sufficient quality to adequately document the resources will be implemented to capture views of the canal within the context of the larger historic landscape to which it contributes and may be used in the preparation of interpretive or educational materials. The fieldwork necessary for this mitigation measure (e.g., photography and reproduction of historic images) will be conducted before construction begins.

7.1.3.2 Prepare Interpretive or Education Materials

Peoples Ditch will be subject to historic interpretation or preparation of educational materials regarding its history. Prior to initiating this program, an Interpretive Plan will be developed by a professional with expertise in developing museum exhibits or interpretive materials. This Interpretive Plan will outline how the interpretive or educational materials will provide information regarding this specific historic property and the aspects of its significance that would be affected by the project. The plan will describe what interpretive or educational materials will include, such as brochures, videos, websites, study guides, teaching guides, articles or reports for general publication, commemorative plaques, or exhibits. The interpretive or educational materials will utilize images, narrative history, drawings, or other material produced for the mitigation described above, including the additional recordation prepared, and/or archival sources. See Section 7.5 for a more detailed discussion of the requirements for implementing this measure. This plan will be developed and implemented prior to construction beginning in proximity to the landscape property and be subject to the review process outlined in Section 11.2 and will be approved prior to initiating any interpretive work.

The interpretive or educational materials will be advertised, and made available to, and/or disseminated to the public. The interpretive materials may be made available in physical or digital

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

formats at local libraries, historical societies, or public buildings. Draft and final interpretive materials will be subject to the review process defined in Section 11.2 prior to finalization and/or publication.

7.1.3.3 Plan for Repair of Inadvertent Damage

A plan for repair of inadvertent damage of the Peoples Ditch, as described in General Mitigation Measure #1, will be prepared and implemented as a treatment to minimize adverse effects caused by project construction activities on the portions of the canal structure adjacent to the project. This plan would be developed before construction begins. The plan may use the preconstruction photographic documentation prepared for the photo recordation (above) as the baseline condition for assessing damage and will include the protocols for documentation of inadvertent damage (should it occur), notification, coordination, and reporting to the SHPO and to the landowners or land-owning agencies.

7.1.4 Lakeside Cemetery

In accordance with the MOA, the Lakeside Cemetery will be subject to General Avoidance Measures #1 and #2 to minimize noise and vibration effects, as well as General Mitigation Measures #1 to mitigate the adverse effects of any inadvertent damage. Details of the specifications and implementation of this mitigation measure are provided in Section 7.2.

7.1.4.1 Recordation / Documentation

Updated recordation/documentation as described in General Mitigation Measure #2 of the Lakeside Cemetery will be prepared to mitigate the indirect adverse effect from the construction of the project. Photography of a sufficient quality to adequately document the resources will be implemented to capture views of the property and its character-defining features and may be used in the preparation of protection plan. Photography will capture views of and from the cemetery to show the existing context of the property and its relationship to Kent Avenue and the surrounding area. The fieldwork necessary for this mitigation measure (e.g., photography, mapping, and reproduction of historic images) will be conducted before construction begins in proximity to the property. Details of the specifications and implementation of this mitigation measure are provided below in Section 7.2.4.

7.1.4.2 Prepare Protection and Monitoring Measures

Protection measures for the Lakeside Cemetery will be developed prior to construction of the project. This mitigation will ensure that inadvertent adverse effects on this historic property will either be avoided entirely, or minimized to the extent possible. Such treatment measures could include, but are not necessarily limited to, the following: installation of protective barriers around the historic property to prevent accidental damage from construction activities (e.g., excavation, grading, construction equipment, or laydown areas and monitoring during construction). Details of the specifications and implementation of this mitigation measure are provided below in Sections 7.6.3 and 8.1.

7.1.4.3 Visual Screening Planting

The Lakeside Cemetery will be subject to visual screening planting that will consist of the installation of trees and/or shrubs placed to minimize the view of the project from the property. A Planting Plan will be developed by a qualified historic landscape architect describing how this treatment will help reduce or minimize adverse visual effects on the historic property. Plant species will be selected on the basis of their mature size and shape, growth rate, drought tolerance, and ultimate height and width, taking into consideration compatibility with any existing and historic landscaping. No species that is listed on the Invasive Species Council of California's

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

list of invasive species will be planted. Visual screen planting may be undertaken in the form of boundary planting on the affected property, planting at affected viewpoints, and/or planting on project property as appropriate. This treatment will be developed in consultation with the landowner or land-owning agencies, as well as the SHPO and the MOA signatories per Section 11.2 of this BETP. The visual screen planting treatment will include preparation of a Planting Plan that ensures that the visual screen can be accomplished effectively.

7.1.5 Stark/Spencer Residence

7.1.5.1 Recordation/Documentation

Recordation/documentation of the Stark/Spencer Residence as described in General Mitigation Measure #2 will be prepared to mitigate the indirect adverse visual effect from the construction of the project. Photography of a sufficient quality to adequately document the resources will be implemented to capture views of and from the house and its relationship to the existing neighborhood. The documentation may include reproduction of historic views of the residence as well. The fieldwork necessary for this mitigation measure (e.g., photography, drawings, or digital recordation) will be implemented before construction begins.

7.1.5.2 Visual Screening Planting

The Stark/Spencer Residence will be subject to visual screening planting that will consist of the installation of trees and/or shrubs placed to minimize the view of the project from the property. A Planting Plan will be developed by a qualified historic landscape architect which describes how this treatment will help reduce or minimize adverse visual effects on the historic property. Plant species will be selected on the basis of their mature size and shape, growth rate, drought tolerance, and ultimate height and width for the selected species, and taking into consideration compatibility with any existing and historic landscaping. No species that is listed on the Invasive Species Council of California's list of invasive species will be planted. Visual screen planting may be undertaken in the form of boundary planting on the affected property, planting at affected viewpoints, and/or planting on project property, as appropriate. The visual screen planting treatment will include preparation of a Planting Plan that utilizes evergreen tree or shrub species that ensure that the visual screen can be accomplished effectively. This treatment will be developed in consultation with the landowner, as well as the SHPO and the MOA signatories, including the Planting Plan will be approved and finalized in accordance with the review process outlined in Section 11.2.

7.1.6 Salón Juárez

Pursuant to PA Stipulation VII.C and the MOA, potential effects to the Salón Juárez Traditional Cultural Property (TCP) in Bakersfield will be avoided through the implementation of the following conditions.

7.1.6.1 Parking and Building Access Improvements

The primary project condition for the Salón Juárez is to provide legal parking to help avoid effects from the permanent closure of East 18th Street. One of two options for parking will be implemented (Figure 4). Option A would be to acquire the four parcels directly to the east of Salón Juárez to provide for parking. This option is preferred by the Salón Juárez Board because it would increase the visibility of the Salón Juárez from the busy intersection of East 18th and Beale streets. This option will be implemented if the land to the east of the Salón can be acquired. Option B would be undertaken if the land considered under Option A could not be acquired. Option B would provide parking on three lots directly to the west of Salón Juárez that would be acquired by the project, with access to the parking lot from the creation of a cul-de-sac on King

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

Street. Overflow parking may also be established underneath and immediately north of the elevated rail platform, within HST right-of-way.

The project will provide the Salón Juárez with a new entrance on either the eastern or western side of the main Salón Juárez building to be combined with the new parking lot depending upon which of the two parking options can be implemented (Figure 4). The eastern entrance is preferred by the Salón Juárez Board because it would increase the visibility of their facility from the busy intersection of East 18th and Beale streets. This option (Option A) will be implemented if the land to the east of the Salón can be acquired. Otherwise the western parking lot and entrance will be implemented. The current front entrance at the northern end of the main building will be remain unchanged so that it can serve as additional general access and to allow for on-street hearse access for funerals.

7.1.6.2 Building Interior Improvements

A modern kitchen will be installed in the north end of the main building in order to enhance the current practice of serving food and drink in this location for functions that are integral to their existing cultural practices. The installation will include: a serving counter for food and a serving counter for a bar area; modern kitchen appliances (i.e., lighting, stove, sinks with hot and cold water, refrigerator); utility improvements (i.e., plumbing and/or electrical and/or gas) as needed to adequately operate those appliances, and other standard food-preparation equipment. It is recognized that the existing food-serving and bar areas will probably need to be reconfigured and enlarged slightly (as much as 6' in width for the whole length of the existing kitchen/bar area) to accommodate the installation of a modern kitchen in this location, and that this reconfiguration and the assorted finishing details associated with it (walls, flooring, paint, etc.) are part of this condition.

The three existing bathrooms in the main building will be renovated with modern fixtures, lighting, finishing details, and improvements to the existing electrical and plumbing systems as needed to operate the improved fixtures and lighting. The bathroom most easily accessed by handicapped individuals and most easily made ADA-compliant will be made ADA-compliant.

Additional conditions include replacing up to 12 existing windows in the main building, and as many as 3 existing double-doors and 2 existing single-doors in the main building; and establishing an outdoor children's play area in a location to be determined by the Salón Juárez Board and members (the southwest side of the main building is currently-favored location). Other conditions that may be implemented depending on the outcome of future parcel acquisition could include providing advertisement assistance for event promotion, installation of a sign at the corner of Beale and East 18th Street, and/or installation of an exterior commemorative plaque.

7.1.6.3 Improvement Plans

Draft and final plans will be prepared outlining the design for each of the proposed improvements to the Salón Juárez. This will include plans that showing the design for new parking and building access, the kitchen modifications, and the modern bathrooms including one ADA compliant restroom. These plans will be provided to the SHPO and MOA signatories for review, comment, and concurrence in accordance with the review process outlined in Section 11.2. The plans will be of sufficient detail to allow for bids to be obtained for completing the improvements.

7.1.6.4 Historic Documentation and Oral Histories

Historic documentation oral histories will be prepared for Salón Juárez as described in the MOA conditions and General Mitigation Measure #2. The written portion of the documentation will address the history of the property and its importance to the Mexican American community of Bakersfield and surrounding areas and will incorporate information from the Salón Juárez TCP

study (FRA and Authority 2013f). Photographic documentation of a sufficient quality to adequately document the resources will be implemented to include present views of the Salón Juárez and its relationship to the surrounding neighborhood, and, if they can be acquired, reproductions of historic images of the Salón Juárez as well. The documentation will be produced by a museum or interpretive professional in a format that can easily be published as a public educational booklet that can be reproduced and sold by the Salón Juárez organization.

7.2 General Avoidance and Treatment Measures

This section describes in detail two general avoidance measures and two general treatment measures that are outlined in the MOA. Some of these measures apply to the known resources that are the subject of the MOA as described above. These measures may also be implemented to address additional impacts to the built environment that may be identified as a result of final design. Additionally, through consultation with the MOA signatories, other measures could be identified as part of the consultation process. This includes standard mitigation and treatment as well as other more creative types of treatment including public benefit mitigation.

This section provides an expanded description of the general avoidance and treatment measures by providing the performance criteria for their successful implementation. This includes a discussion of the objectives of the treatment, guidance regarding which measures will be selected for what type of resource and impact, and specifies the methods for implementation to minimize the magnitude or the potential for adverse effects.

The section also provides the timing considerations that will be used to develop a critical path schedule for performing the treatment during pre-construction, construction, and post-construction phases of the Project. Also described is the phasing of measures and how certain measures demonstrate the necessity for other measures to follow or inform how they will be completed. Personnel qualifications requirements are described for each measure.

Note that not all measures listed below will be required for each resource. Some measures, including the pre-construction-conditions assessments, Historic Structures Reports (HSRs), and vibration monitoring must first be completed in order to determine if any additional measures need to be implemented. The results of these efforts will then be compared with details about proposed construction activities. Measures will then be identified to avoid or mitigate adverse effects on built environment resources. The efficacy and maintenance of those measures will be monitored during construction to ensure they are successful.

As the Contractor proceeds with the design process, the Authority will coordinate with Contractor at regular intervals to identify any additional effects. The Authority and FRA will then coordinate with the SHPO and other signatories in accordance with the PA and the MOA to develop appropriate treatments. . Together with the PCM, the AR will develop the scopes of work for performing any additional treatment and review the qualifications of individuals and (when necessary) firms who will carry out the treatments.

7.2.1 General Avoidance Measure #1 – Avoid Noise Effects

Operational noise have the potential to cause indirect adverse effects on historic properties that have an inherent quiet quality that is part of a property's historic character and significance (36 CFR 800.5[a][2][iv] and [v]).

7.2.1.1 Standards and Methods

The objective of this treatment is to develop design solutions or construction methods to minimize adverse operational noise effects on historic properties that have qualities that make

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

them sensitive noise receptors. The primary requirement of this treatment is to document the consideration of operational noise reduction methods and assess the reduction of operational noise levels associated with the alternative designs. If alternatives are deemed infeasible, or would not notably reduce noise impacts, this will be clearly explained in a technical memorandum for use in consulting with the MOA consulting parties.

Design options, including sound barriers, have been developed that would reduce operational noise impacts and follow FRA methodologies for noise abatement. Implementation of this treatment measure may require outreach to consulting parties or property owners for input on the range of solutions and the trade-offs between noise impacts and potential visual impacts of the solutions (such as sound barriers). Additional environmental studies may also be necessary to address the potential impacts of the design solution identified through this treatment measure.

7.2.1.2 Qualifications

The project team will include an architectural historian or historian who meets the requirements outlined in PA Stipulation III and the "Secretary of the Interior's Professional Qualification Standards" (48 FR 44716, et seq. [1983]), as well as project engineers, and a professional acoustician or other noise professional with at least a bachelor of science from a qualified program in acoustics engineering offered by an accredited university or college. The noise professional will have a minimum of 5 to 7 years' experience in environmental acoustics consulting. The noise professional will also be experienced in measuring and evaluating acoustics caused by operational activities consistent with the scale, equipment, and operations proposed for this undertaking. The professional will also have experience germane to determining acoustic mitigation requirements for historic properties through design and construction to the completion of a project.

7.2.1.3 Timing

The assessment of alternative designs will occur during final design development and will be completed (including consulting with MOA consulting parties) prior to the initiation of construction activities within 100 feet of the historic property adversely affected by operational noise. The draft and final assessment report on the efficacy of alternative designs to avoid noise impact will be prepared and reviewed and approved in accordance with the timeframes outlined in Section 11.2 of this BETP. Specific dates for coordination and review will be incorporated into the Treatment Implementation Schedule (Table 11.1).

7.2.1.4 Deliverable(s)

- Draft and Final Assessment Report on the Efficacy of Alternative Designs to Avoid Noise Impacts

7.2.2 General Avoidance Measure #2 – Avoid Vibration Effects

At the current level of design the project would cause no physical destruction or damage to historic properties as the result of construction or operational vibration because construction and operational vibration is not anticipated to exceed 0.12 peak particle velocity inch per second at any historic property within the examined APE. Once construction methods are known, it is possible that certain construction methods proposed in proximity to historic structures could result in vibration impact. For this reason, the MOA outlines the requirement that steps be taken to address potential adverse effects on historic properties to include developing methods to avoid construction vibration effects.

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

7.2.2.1 Standards and Methods

The primary requirement of this treatment is to analyze, consider, implement (if feasible) and document the use of alternative construction methods in to reduce the risk of damaging a historic property during construction. If construction alternatives are deemed infeasible, or would not notably reduce the risk of damage, an additional effort will be made to prepare a vibration monitoring and control plan, or other mitigation measures such as stabilization or recordation.

Several factors determine a historic property's reaction to vibration including, but not limited to the source of the vibration, the distance of the source from the historic property, the soil on which the historic property is founded, and the structural condition of the property. Furthermore, there are various aspects of the structural condition that should be considered when mitigating for vibration, including the foundation type (e.g., spread footing, piles), the mass of the building or structure, and the stiffness of the main structural elements (brick or concrete vs. wood, etc.). The condition of a historic property and its maintenance history are important factors when assessing susceptibility to vibration damage and must be taken into account when setting vibration limits (Wilson et al. 2012).

Project construction that results in significant levels of ground vibration would generally fall into two categories. The first is steady and/or continuous vibration caused by vibratory compaction of soil, vibratory pile driving, movement of large equipment, or other sources. The second is intermittent vibration that could be caused by pile driving and/or blasting.

Potential structural damage caused by construction vibration would be anticipated only from impact pile driving at very close distances to buildings. Vibration from impact pile driving during construction could to reach up to 0.12 inch/second (in/sec) peak particle velocity (PPV), or approximately 90 root mean square vibration velocity level, decibels [VdB] at 135 feet from the project centerline. This level of vibration could cause the physical destruction, damage, or alteration of historic properties within 135 feet. When 0.12 in/sec PPV is expected to be exceeded in proximity to structures vulnerable to vibration effects located within 135 feet from the project centerline, alternative construction method that would avoid adverse vibration effects on historic properties will be explored and, if feasible, implemented. Developing and implementing alternative construction methods will avoid adverse vibration effects on historic properties.

Because the various factors that influence the calculation of construction vibration levels will vary depending upon the location, construction type, and historic property type, additional study may be necessary if final design indicates that vibration effects are possible near a historic property. The goal of the additional study is compliance with this treatment to develop methods to avoid construction vibration effects. These studies will take place prior to construction and will establish baseline vibration levels and will define property-specific safe thresholds for vibration caused by construction activities. The condition of individual historic properties will be taken into consideration when establishing acceptable vibration thresholds. These historic properties will be monitored during construction to ensure that vibration remains at a safe level.

The first step in the process is to determine sensitivity and potential reaction of historic properties to vibration through pre-construction condition assessment that considers avoiding damage to character-defining features of the historic property. Next, it will be determined if standard construction methods would potentially impact the historic property. If standard construction methods would potentially impact the historic property, alternative construction methods (if available and feasible) will be identified to avoid those impacts. These methods and the anticipated efficacy will be documented in an assessment of alternative construction methods report. Alternative construction could include alternatives to pile-driving that could reduce construction vibration to acceptable levels such as cast in drill hole, oscillated pile, geojet foundations, tubex grout injections, or micropile systems. Alternative construction methods would

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

then be implemented in conjunction with construction monitoring conducted in accordance with Section 8.1. Additionally, the vibration studies will inform the level and manner of stabilization, if needed, for historic properties throughout construction as outlined in Section 7.3.1. Post construction condition assessments would then be conducted in accordance with Section 9.1.

Other mitigation treatments described in this BETP will be combined with this treatment to help achieve the objectives of reducing construction-related vibration impacts. Associated mitigation measures would include pre-construction and post-construction condition assessments, as well as vibration monitoring and any stabilization procedures deemed necessary. A pre-construction condition assessment will be used to establish a baseline of the existing condition of historic properties prior to construction activities. The post-construction condition assessments will provide verification of conditions following construction activities and can also help identify solutions for addressing inadvertent damage and informing the Inadvertent Damage Repair Plan (General Mitigation Measure #1).

7.2.2.2 Qualifications

These studies will be prepared by a team that includes a historian, architectural historian, or historical architect who meets PA Stipulation III, the "Secretary of the Interior's Professional Qualification Standards" (48 FR 44716, et seq. [1983]) in the appropriate discipline. These professionals will also be familiar with the Secretary of the Interior's Standards for the Treatment of Historic Properties. The team will also include a vibration analysis professional with at least a bachelor of science from a qualified program in engineering, physics, or geology offered by an accredited university or college and who has a minimum of 5 years of experience in vibration monitoring and control and in the measurement and evaluation of ground-borne vibration caused by construction activities consistent with the scale and construction methods proposed for in this undertaking. The professional will also have demonstrated experience in preparing and implementing construction vibration monitoring plans and analyzing vibration impacts on historic structures, including experience with the structural systems of the types of properties subject to treatment. This professional will have experience in determining vibration-mitigation requirements for historic buildings through design and construction to the completion of a project; experience in determining the potential for structural damage due to building vibration or destabilization of foundation soils; and experience with appropriate instrumentation and analysis procedures for quantifying ground and building vibration.

7.2.2.3 Timing

The assessment of the potential for construction impacts and need to implement alternative construction methods will occur during final design development and will be completed prior to the initiation of construction in proximity to vulnerable structures. Similarly, if a construction vibration monitoring and control plan is required or any other related treatment (stabilization, installation of vibration monitoring equipment), these treatments will be developed, approved and implemented sufficiently prior to construction to ensure that they are effective. The assessment and plan (if needed) will reviewed and approved in accordance with the timeframes outlined in Section 11.2 of the BETP.

7.2.2.4 Deliverable(s)

- Assessment of Alternative Construction Methods
- Construction Vibration Monitoring and Control Plan, if required

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

7.2.3 General Mitigation Measure #1 – Plan for Repair of Inadvertent Damage

Unanticipated effects and inadvertent damage could occur to historic properties located in close proximity to construction activities. Plan to respond to inadvertent damage will help mitigate adverse effects to historic properties during construction.

7.2.3.1 Standards and Methods

Prior to commencing ground disturbing activities in proximity to historic properties, an overall Plan for Repair of Inadvertent Damage will be prepared that addresses ways to avoid, minimize, respond to, and repair inadvertent damage to historic properties in the APE. . This plan will outline the steps to be followed to mitigate if any inadvertent adverse effects on historic properties inadvertently result from project construction activities.

The Plan will describe the procedures and considerations demonstrating how resources will be protected during construction. All protection measures will be included in the construction plans and specifications. The implementation of these protection measures will be described in the Built Environment Monitoring Plan outlined in Section 8.2. The Plan for Inadvertent Damage plan will use any preconstruction survey, condition assessment, photographs, or other documentation prepared for properties as a reference or baseline condition for assessing damage.

The Plan will describe the protocols for documentation of inadvertent damage (should it occur), as well as notification, coordination, and reporting to the SHPO and the owner of the historic property. Specifically, all activities will cease within 50 feet of inadvertently damaged properties, or properties that are in immediate danger of damage, in accordance with Section 8.2 to avoid and minimize harm to the property and to allow the CRCM or PI to inspect the damage. Construction will only be allowed to continue after the PCM and the AR determine that adequate avoidance or additional protective methods have been identified and implemented according to the plan. The Plan will outline emergency stabilization measures to protect damaged property from further harm. The plan will direct that inadvertent damage to historic properties will be repaired in accordance with the Secretary of the Interior's (SOI) Standards for the Treatment of Historic Properties (U.S. Department of the Interior 1995).

The Plan will also outline the process for situations where inadvertent adverse effects were not identified previously and cannot be avoided. In such cases, the PI will take photographs and field notes on details of the effects and will prepare a supplemental FOE (sFOE) memorandum that assess effects and recommends treatment measures to minimize or mitigate effects. This sFOE will be forwarded to the AR who will coordinate with the MOA signatories for expedited review and concurrence.

The Plan will also outline the process to be followed if the AR determines that the damaged property should be subject to additional treatment or maintenance or observations after construction. If necessary, the plan will then describe when temporary or permanent stabilization measures are needed to prevent further damage in accordance with Section 7.3.1, Plan for Protection and Stabilization. The PI will submit the plan for review in accordance with the review process outlined in Section 11.2.

7.2.3.2 Qualifications

The Plan for Inadvertent Damage will be prepared by the same team that prepares related treatments for the historic property, such as the HSR, pre-construction condition assessment, or plan for protection and stabilization. This would be an interdisciplinary team led by a qualified architectural historian or historian and will also include a structural engineer and preservation architect, in accordance with PA Stipulation III.

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

7.2.3.3 Timing

The Plan for Repair of Inadvertent Damage will be prepared prior to initiation of construction activities. The plan will be reviewed and approved in accordance with the timeframes outlined in Section 11.2 of the BETP.

7.2.3.4 Deliverable(s)

- Draft and Final Plan for Repair of Inadvertent Damage

7.2.4 General Mitigation Measure #2 - Recordation/Documentation of Historic Properties

Historic properties that would be physically altered, damaged, relocated, or destroyed by the project will be documented in detailed recordation that includes photography. This documentation may consist of preparing updated recordation forms (DPR 523), or it may be consistent with the Historic American Building Survey (HABS), the Historic American Engineering Record (HAER), or the Historic American Landscape Survey (HALS) programs; a Historic Structure Report; or other recordation methods established through consultation with MOA signatories. HABS is a detailed recordation of a historic building. HAER is prepared for historic engineering properties and infrastructure. A HALS is prepared to document cultural and designed or historic landscapes. Preparation of HABS/HAER/HALS documentation, or other archival recordation formats, is appropriate for buildings, structures, objects, districts, sites, or landscapes that will be adversely affected by the Project. This documentation can also be utilized by other treatments described in this BETP.

7.2.4.1 Standards and Methods

Historic property recordation/documentation will be prepared using methods established through consultation with MOA signatories. This documentation may consist of preparation of updated recordation forms (DPR 523), or an HSR, or may be consistent with the HABS/HAER/HALS guidelines and standards established by the NPS. The type and level of documentation will be determined by the Authority in consultation with MOA signatories. Recordation documents will follow the appropriate guidance for the recordation format and program selected.

The recordation will focus on the aspect of integrity and significance that would be affected by the project for each historic property subject to this treatment. For example, historic properties in an urban setting that would experience an adverse visual effect would be photographed to capture existing exterior and contextual views; interior spaces would not be subject to recordation if they would not be affected. In general, photography will capture the historic property from multiple views, and will also include reproduction of historic images.

Consultation with the SHPO and the consulting parties will be conducted for the historic architectural resources to be documented. FRA and the Authority will submit the documentation to the SHPO for review and comment. The distribution of printed and electronic copies of the photo documentation, as well as permanent archival disposition of the record, if applicable, will be determined by the Authority in consultation with SHPO and the consulting parties. The Authority may offer copies of the documentation to the local municipalities and historical societies. An electronic version of the recordation/documentation may be made available for online publication.

The Authority may identify uses for the recordation/documentation in other treatments described herein, such as in the preparation of interpretive or educational materials, or as baseline reference for responding to inadvertent damage of a historic property.

Pre-construction condition assessments are a type of recordation/documentation used to establish a baseline of existing conditions prior to construction for properties that have the potential to be damaged because of proximity to the Project. The pre-construction condition assessment also provides information to help determine the best protection measures to implement during construction.

Pre-construction condition assessments are an appropriate treatment when construction activities may cause an adverse vibration effect. For properties planned for relocation, HSRs and plans for stabilization measures will be prepared and implemented. Pre-construction condition assessments are not appropriate for buildings that are expected to be demolished as part of the project.

Pre-construction condition assessment will focus on the conditions of the historic property, particularly character-defining features and the overall structural condition of the historic property. In the case of a historic district, the assessment will focus on the district's contributing elements in the APE that will be adversely affected.

There are a range of methods that can be used to define the pre-construction condition of a historic property, and those methods will vary depending on the property type. Therefore, prior to fieldwork, existing research materials including any existing plans, previous studies, and historic images will be gathered and reviewed by the recordation/document team. A pre-construction conditions work plan will be prepared by qualified staff for each property receiving this mitigation treatment. This work plan will guide the research and field investigations and determine what specialized expertise is needed for the pre-construction condition assessment process.

Careful attention will be paid to whether pre-construction treatments are dependent upon the results of the pre-construction condition assessment. The pre-construction conditions work plan will identify whether additional conditions will be placed on initiation of construction activities (e.g., construction activities cannot begin until completion of the identified pre-construction treatment). For example, a Plan for Protection and Stabilization (see Section 7.3.1) or Plans for Repair of Inadvertent Damage (see Section 7.2.3) may need to be customized to reflect the current condition of the historic property. The pre-conditions assessment work plan will be developed and approved in accordance with review process outlined in Section 11.2. The pre-construction condition assessments will be followed by a post-construction condition assessment report, which is discussed in Section 9.1.

Pre-construction conditions assessments will require access to the exterior of the historic property, and may require access to the interior, depending upon the property type and anticipated effects. If existing architectural plans or drawings are available, measurements of the property's physical dimensions may not need to be taken as part of the fieldwork process and the detailed description can rely on written and photographic documentation. Some historic properties that do not have architectural plans or drawings, and that are large or architecturally complex properties, may require the use of three-dimensional recording equipment that can provide a more detailed visual and measured record of the property.

The pre-construction conditions assessment report will be prepared by the architectural historian or historian. This written assessment will be accompanied by digital photography, field drawings, copies of existing plans, and other data collected, as available. The report preparation will be coordinated with the Authority, SHPO, and consulting parties in accordance with the timeframes outlined in Section 11.2 of this BETP. Specific dates for coordination and review will be incorporated into the Treatment Implementation Schedule.

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

HSRs provide a more detailed baseline of information than a pre-construction condition assessment. The HSR is used as a planning document for future rehabilitation or repair projects. HSRs are required for historic properties that will be adversely affected by the Project and that may need to be relocated or rehabilitated as a result. An HSRs may also be appropriate for those properties that are not expected to be adversely affected but require detailed analysis to better assess the necessary avoidance and protection measures to prevent an adverse effect from occurring. An HSR is not recommended for those properties that will be demolished as part of the undertaking.

HSRs will be prepared in accordance with NPS Preservation Brief 43: The Preparation and Use of Historic Structure Reports. HSR documentation will include the developmental history of the property, including historical background and context, physical description, summary of the property's established significance, and a condition assessment. This will be followed by treatment recommendations specific to anticipated Project effects. The written data will include a historic narrative for the historic property that will utilize existing inventory, evaluation, and/or nomination documents to the extent possible. The reports may be accompanied by historic photographs, copies of original drawings and plans, and current views of the property as it exists today.

7.2.4.2 Qualifications

Recordation/documentation of historic properties requires an interdisciplinary team that may include a historian, architectural historian, historical architect, structural engineer, mechanical engineer, conservator, materials scientist, draftsperson, photographer, and other specialists as needed. Each professional will have demonstrable experience in preparing similar documentation and must meet the Secretary of the Interior's standards for their prescribed profession (PA Stipulation III). The selected professionals will have demonstrable experience in assessing character-defining features and historic integrity of historic properties, as well as in preparing similar format recordation documents. Structural engineers will review the buildings selected for assessment and determine the need for structural survey as part of the assessment on a case by case basis. This work will be overseen by the architectural history PI. The AR will review and approve the qualifications of the professionals required for execution of each type of recordation document.

7.2.4.3 Timing

Sufficiently prior to construction to ensure successful implementation, the Authority will initiate consultation with the SHPO and other relevant parties to the MOA to identify the appropriate type of recordation documentation. All fieldwork necessary for photographic documentation, architectural or engineering drawings, cartography, digital recordation through geographic information or global positioning systems (GIS and GPS, respectively), pre-construction condition assessments, or HSRs will be completed before project construction begins. No demolition or groundbreaking activities may occur within 300 feet of the historic property subject to documentation until fieldwork and photography and any other necessary field recordation is completed. The recordation documentation will be reviewed and approved in accordance with the timeframes outlined in Section 11.2.

7.2.4.4 Deliverable(s)

- Draft and Final Recordation Documentation, including Pre-Construction Condition Assessments, HSRs, or Other Formats

7.3 Standard Structural Measures

7.3.1 Stabilization and Protection

Stabilization and protection measures for historic properties provide a means to avoid and minimize effects by securing the property and its significant features and materials and preventing damage. Construction-related activities such as boring and pile driving have the potential to cause vibration that may affect structural members of historic properties, causing them to weaken or fail altogether. This mitigation treatment will be implemented when a historic property is altered or relocated, or is identified by recordation documentation as needing protection/stabilization.

7.3.1.1 Standards and Methods

For construction-related activities, protection and stabilization measures will be implemented for any portions of a historic property identified as requiring protection and stabilization. Such requirements may be identified when project specifics are known and consequently identified as an adverse effect (such as relocation); however, protection and stabilization may also be indicated when construction techniques are not yet known and such measures would help reduce the potential for unanticipated adverse effects. The need for protection and stabilization may also be identified during the execution of other treatments, such as vibration analysis or preparation of recordation documentation.

Prior to construction, the subject historic properties will be subject to a pre-construction conditions assessment by the interdisciplinary team to determine structural stability and to identify any character-defining elements and resources that need to be protected, as well as the extent and manner of protection necessary. If needed, a plan for protection and stabilization of historic properties will be developed to minimize adverse effects on historic properties. The plan will identify those character-defining features or unique building materials that could be impacted by construction and for which protection and/or stabilization measures are needed. To retain the historic integrity of a historic property, all stabilization designs, measures, and treatments will adhere to the Secretary of the Interior's Standards for the Treatment of Historic Resources.

For properties planned for relocation, stabilization measures will be prepared and implemented before, during, and after the move. Stabilization may include structural reinforcements and may temporarily impair the integrity of a property. Efforts will be undertaken to ensure that there will be no permanent impairment to the historic integrity of a significant property or its materials or character-defining features.

In addition to building stabilization, associated measures will be considered to avoid adverse effects, including revision of construction methods and shoring, as appropriate. Regular field checks (see Sections 7.6.3 and 8.1) will be conducted to ensure that the protective and stabilization measures are effective throughout the duration of construction.

Other mitigation treatments described in this BETP will be considered for their ability to help achieve the objectives of protecting and stabilizing an historic property. These include, but are not limited to, cordoning off portions of the properties from construction activities and shielding properties from debris. Protective measures may include fencing (chain-link, orange nylon, and plywood), signs, and/or diagonal bracing for properties, as appropriate. It may also include correcting deterioration and preserving character-defining features to help protect against potential structural failures resulting from construction activities. Where deemed necessary, historic properties will also be identified as an environmentally sensitive area (ESA) on construction drawings in accordance with Section 7.6.1 of this BETP. Provisions will be made to avoid and protect against potential fire hazards, such as smoking or cutting/welding.

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

The stabilization plan will be reviewed and approved in accordance with the timeframes outlined in Section 11.2 of the BETP.

7.3.1.2 Qualifications

The stabilization plan will require coordination of an interdisciplinary team that will be led by a qualified architectural historian or historian and will also include a structural engineer and preservation architect. The team will work with construction personnel to obtain information on the types of materials, products, or construction equipment that would be used at the construction site that may come in contact with historic properties and the proposed methods to be employed to prevent any damage. The construction personnel will identify effective or efficient methods of protection, where feasible.

Structural engineers with demonstrable experience in working with historic buildings, including unreinforced-masonry buildings, will prepare stabilization designs for specified buildings. All designs will be reviewed and approved by either an architectural historian or historical architect that is professionally qualified according to the Secretary of the Interior's standards, and will follow the Secretary of the Interior's Guidelines for the Treatment of Historic Properties. This work will be overseen by the architectural history PI. The AR will review and approve the qualifications of the professionals required for execution of the stabilization and protection plan.

The AR will also review and approve any protective measures that will be applied directly to any historic property and will also review and approve the adequacy of any necessary repairs. The Contractor will implement the stabilization design under the supervision of structural engineers in conjunction with a qualified historical architect or architectural historian.

7.3.1.3 Timing

Construction activities with the potential to harm historic structures may not commence until the stabilization plan is approved and implemented. For properties planned for relocation, stabilization measures will be prepared and implemented before, during, and after the move.

Upon completion of the project or work in vicinity of the historic property, any temporary stabilization materials will be removed and the property will be returned to its pre-construction condition. Permanent stabilization, such as repairs to weakened structural material to ensure no additional deterioration is caused by the project, will be implemented according to the Secretary of the Interior's Standards under the supervision of a qualified architectural historian or historical architect and will not be removed. All post-construction removal of stabilization materials and consequent repairs will be reviewed and approved by a qualified architectural historian or historical architect.

7.3.1.4 Deliverable(s)

- Draft and Final Plan for Protection and Stabilization of Historic Properties

7.3.2 Relocation of Historic Properties

Historic properties located within the construction footprint may be subject to demolition unless they can be relocated or a project redesign is feasible. Relocation preserves the historic property, although it severs its historic relationship with its site. Only under very limited circumstances, such as when the only other alternative is demolition, should a historic property be subjected to the physical stresses of relocation that could result in the further degradation of physical integrity and historic integrity. When relocation is selected, precautions must be taken to protect important structural and architectural character-defining features and to ensure compatibility of the historic building/structure in its new context. The proposed new location must be consistent with the Secretary of the Interior's Guidelines for the Treatment of Historic Properties to avoid

creating additional effects, such as introduction into a setting that is incompatible with the historical character of the resource or changes in use that lead to neglect or abandonment.

7.3.2.1 Standards and Methods

Several steps are involved in relocation of a historic building or structure: oversight by a qualified team to direct the relocation effort, developing a relocation plan that includes architectural plans for stabilization and relocation, coordination with the receiving site, and coordination with related mitigation measures that may be required.

A relocation plan will be developed to minimize adverse effects on historic properties. This plan will outline the process that will be implemented to stabilize, move, and rehabilitate the property in accordance with the Secretary of the Interior's Secretary of the Interior's Guidelines for the Treatment of Historic Properties.

Every effort will be made to move historic buildings or structures in one piece. If problematic structural elements exist or the relocation route conditions preclude moving a building or structure as a single unit, then partial disassembly into large sections can be an acceptable alternative. The total disassembly of a building into components is not recommended except under extreme situations. The buildings or their components will be protected from damage during the moving process through stabilization such as adding bracing, or strapping, or by temporarily infilling door and window openings for structural rigidity. This stabilization process is described in more detail in Section 7.3.1.

Other mitigation treatments described in this BETP will be considered to help achieve the objectives of relocating a historic property. An HSR (see Section 7.2.4.1) could be used to establish a baseline of existing conditions and provide a detailed discussion of the character-defining features that will be protected during the move, as well as recommendations for treatment and maintenance requirements following the move. A post-construction condition assessment (see Section 8.1) would provide a verification of its condition following relocation activities or solutions for addressing any damage that might occur during the move. The removal of the historic property from its original context and the potential for irreversible damage or loss during the course of the move may justify preparation of intensive documentation of the original site under a program such as HABS or HAER (see Section 7.2.4.1).

7.3.2.2 Qualifications

The project team for relocating historic buildings or structures will include a preservation architect who meets the SOI Standards to prepare the plan for relocation, as well as licensed professional building movers experienced with the relocation of historic buildings, and (as warranted) licensed structural engineers experienced in assessing the structural integrity of historic properties. This work will be overseen by the architectural history PI in consultation with the AR. The AR will review and approve the qualifications of the professionals required for execution of the relocation plan.

7.3.2.3 Timing

Relocation would take place after any fieldwork was completed for recordation documentation of the subject property and prior to any work that would potentially damage the building, structure, or any associated features. The building or structure could be stored for a short period of time at a secure site where it would be protected from vandalism or weather-related damage. Use of temporary storage would allow the initiation of construction activities at the original location and then placement at the selected new location following construction.

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

The relocation plan will specify the required professional staff, the timing and coordination of other treatments for the historic property, and will be reviewed and approved in accordance with the timeframes outlined in Section 11.2 of the BETP.

7.3.2.4 Deliverable(s)

- Draft and Final Plan for Relocation of Historic Properties

7.3.3 Salvage of Architectural Features

Some historic properties slated for demolition may contain features or materials that may be salvageable and usable for future projects. These materials are typically of historic value. Typical reusable features include, but are not limited to: doors, windows, fixtures, floors, siding, or signs. Future uses of salvageable materials may include repair, restoration, or rehabilitation of buildings or landscape features. Salvage features could be incorporated into new buildings and structures in the region where feasible. If no properties are demolished, a salvage program will not be implemented.

7.3.3.1 Standards and Methods

If salvage is implemented, a plan will be prepared that specifies the materials to be salvaged, the methods to be used, the schedule for performing the work, and the plan for storage or reuse of the materials, if known. The salvageable material may be temporarily placed in offsite and easily accessible storage and protected. The salvage plan will describe the process for deconstruction of a property, or the process by which a historic property is taken apart and materials are carefully removed and sorted.

The salvage plan will consider the relationship of this treatment to other treatments, such as recordation/documentation (see Section 7.2.4) or preparation of interpretive materials (see Section 7.5). Such documentation may require that features planned for removal are first documented in situ. Salvage will only occur upon completion of the recordation and prior to demolition.

The salvage plan will direct that any non-salvageable material will become the responsibility of the demolition contractor who will follow appropriate, environmentally conscious procedures for their removal and in accordance with all federal and state laws for disposal in the event that they contain lead, asbestos, or other harmful substances. A temporary staging area for the removed features will be located near the resource to assist with the sorting process for eventual possible reuse. All salvageable materials will be recorded by an architectural historian or historian. Each feature will be identified and its location on the resource will be noted. Anticipated future uses of the materials will also be discussed, if known.

7.3.3.2 Qualifications

This treatment will be performed by an interdisciplinary team led by an architectural historian or historian and will include a structural engineer and construction personnel. The architectural historian or historian will coordinate with the construction personnel and a demolition contractor regarding the removal of materials from their current location. This work will be overseen by the architectural history PI. The AR will review and approve the qualifications of the professionals required for execution of the salvage plan.

7.3.3.3 Timing

Salvage Plans will be developed sufficiently in advance of construction to allow for the plan to be reviewed and approved and for salvage to occur. The salvage process will conclude at least 30 days prior to initiation of construction activities within 100 feet of the historic property. Salvage

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

Plans will be coordinated with the Authority, SHPO, and consulting parties in accordance with the timeframes outlined in Section 11.2 of the BETP.

7.3.3.4 Deliverable(s)

- Draft and Final Salvage Plan

7.4 Visual Planting Screening

Visual planting screening is a measure that includes the installation of trees and/or shrubs placed to minimize the view between the project and a historic property and thereby reduce or minimize adverse effects.

7.4.1 Standards and Methods

A Planting Plan will be developed by a qualified historic landscape architect which describes how this treatment will help reduce or minimize adverse visual effects on the historic property. Plant species will be selected on the basis of their mature size and shape, growth rate, drought tolerance, and ultimate height and width. No species that is listed on the Invasive Species Council of California's list of invasive species will be planted. Visual screen planting may be undertaken in the form of boundary planting on the affected property, planting at affected viewpoints, and/or planting on project property as appropriate, and taking into consideration compatibility with any existing and historic landscaping. This treatment will be developed in consultation with the landowner or land-owning agencies, as well as the SHPO and the MOA signatories. The visual screen planting treatment will include preparation of a Planting Plan that ensures that the visual screen can be accomplished effectively. The Planting Plan will describe the schedule for implementation, and provide for implementation prior to construction, unless the area proposed for planting conflicts with the construction work. The Planting Plan will also include the plan for monitoring to ensure that this measure is successful.

7.4.2 Qualifications

The Planting Plan will be developed by a certified landscape architect or arborist with experience in historic landscapes and overseen by the PI. The AR will review and approve the qualifications of the professionals required for execution of the planting plan.

7.4.3 Timing

The Planting Plan will be developed and approved prior to construction in accordance with the review schedule outlined in Section 11.2. The plan will be implemented in accordance with the schedule identified in the Planting Plan.

7.4.4 Deliverable(s)

- Draft and Final Planting Plans

7.5 Interpretation

Public interpretive materials will be developed as a treatment to mitigate adverse effects on historic properties caused by the project. These materials disseminate information to the general public about the history and significance of a historic property. The goal of this treatment is to minimize or reduce the loss or impairment of the historic property by making that property's heritage available to the public at large.

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

7.5.1 Standards and Methods

An Interpretive Plan will be developed outlining the interpretive materials that will be developed for built environment properties affected by the project. Materials may include interpretive display panels, printed brochures, pamphlets, websites, or other media types to distribute to the public, as appropriate. Construction signs during project activities can also include historical information. Interpretive exhibits may use photographs, a history, plans, and other materials produced for the recordation/documentation, as well as information from previous documentation or primary research prepared for the historic property (such as the inventory and evaluation forms prepared in the identification document).

If selected as part of the treatment for a property, interpretive exhibits will be developed and installed at select local public locations, such as government offices, historical societies, or local libraries. Information will also be made readily available to the public through municipal government websites. An informative permanent display such as a metal plaque or roadside marker could also be installed at an appropriate location(s) near the site of the historic property, or a relocated property. Any approved plaques or markers will be sited to avoid disturbance of the historic property and will not be affixed to historic structural material. The landowning agency and local municipal agency would determine the appropriate and feasible location of the display. The interpretive material will provide a brief history of the property and will include a discussion of any historical design features or characteristics. The Interpretive Plan will be reviewed and approved in accordance with the schedule outlined in Section 11.2.

7.5.2 Qualifications

Preparation of an interpretive exhibit requires an interdisciplinary team led by a professionally qualified architectural historian or historian and also requires professionals who have demonstrable experience working in the media specific to the interpretive task, such as a professional with museum exhibit or interpretive design expertise, graphic designer/engineer, sign fabricator, printer, photographer, illustrator, writer, GIS practitioner, and/or computer programmer, depending on the interpretive format. This work will be overseen by the architectural history PI. The AR will review and approve the qualifications of the professionals required for execution of the interpretive materials treatment.

7.5.3 Timing

Interpretive materials can typically be prepared following the initiation of construction activities, provided that any necessary documentation of the resource in situ has been completed. Interpretive materials will be completed in accordance with the timeframes outlined in Section 11.2 of the BETP.

7.5.4 Deliverable(s)

- Draft and Final Interpretative Plan

7.6 Other Preconstruction Measures

7.6.1 Resources Mapping for Construction

For projects such as a high speed train, complete avoidance of historic properties located within the project APE is limited by the design constraints associated with achieving high speeds. For other project features, such as access areas, construction laydown areas, and utilities relocations avoidance may be feasible. Additionally, protection measures may be required to avoid inadvertent impacts to historic properties adjacent to the alignment. Where such measures

would be successful in avoiding adverse effects, avoidance and protection measures will be developed and implemented and shown on construction drawings.

7.6.1.1 Standards and Methods

All avoidance and protection measures for architectural resources will be delineated on the construction drawing/resource mapping layer. After the inventory is complete and the design is sufficiently advanced, a geospatial data layer will be produced overlaying the location of all known historic architectural resources within the APE on the construction drawings. This task will require synthesizing data provided from all records searches, inventory, and evaluation reports.

7.6.1.2 Qualifications

This effort work will be overseen by the CRCM, the qualifications of which are provided above in Section 3.3.

7.6.1.3 Timing

This task must be completed at least 30 days prior to construction in any area where cultural resources protection measures are required. It may be necessary for the Contractor to produce these maps in phases as design is finalized to meet construction priorities. Work to depict the cultural resources protection measures construction drawings can be phased in accordance with construction priorities.

7.6.1.4 Deliverable(s)

- Draft and Final Construction Drawing Sets (showing resource mapping and protection measures)

7.6.2 Cultural Resources Worker Awareness Training

All onsite construction personnel will complete training in the protection of built environment resources as well as the mandatory procedures to follow should impacts to the built environment occur during construction.

7.6.2.1 Standards and Methods

For training to be effective it must satisfy the following conditions:

- It must be simple and accessible;
- It must be universal and mandatory; and
- It must be reviewable and revisable.

Paper copies of instructional materials in English and Spanish will be kept onsite and made accessible to all employees. Updated training materials may be supplied to contractors should additional content be deemed necessary during construction.

Training materials will discuss the following topics:

- What are the different historic properties in the APE;
- Why preserving and documenting cultural resources are important;
- Why construction monitoring is necessary;
- What the sensitive built environment resources require in terms of protection;

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

- Mandatory procedures for reporting possible built environment impacts; and
- Legal framework for impacting historic properties.

Instructional materials will be presented in a straightforward jargon-free manner so that onsite construction personnel can quickly acquire the basic skills needed to identify potentially important cultural resources in real-world situations. Because the identification of potentially important cultural resources is primarily a visual exercise, the instructional presentation will be predominantly visual in focus and will include easily recognizable and detailed examples of potentially important cultural resources. To accommodate differing levels of education and literacy, instructional materials will be available in online-with-audio and print formats in English and Spanish language versions.

Because cultural materials can be difficult to identify, worker archaeological awareness training is mandatory for all onsite construction personnel to limit the possibility of irreparable damage to important undocumented resources. Onsite construction personnel include all personnel who require site access as a regular and routine part of their job duties; such personnel include but are not limited to the site supervisor, skilled and unskilled laborers, and heavy equipment operators. The Cultural Resources Worker Awareness Training will be an on-going program that continues for the duration of construction activities to ensure that new workers are trained.

7.6.2.2 Qualifications

This training will be developed and provided by the CRCM, the qualifications of which are provided above in Section 3.3.

7.6.2.3 Timing

Prior to being permitted onsite access, all construction personnel will attend a short (approximately 1 hour) instructional presentation created under the direction of the AR. After viewing the presentation, all onsite construction personnel will be required to sign an affidavit indicating that they have viewed the presentation and understand their legal and contractual responsibilities with respect to identifying and reporting potentially important cultural resources onsite.

7.6.2.4 Deliverable(s)

- Draft and Final Training Program
- Evidence of Completion of Training (to be provided in monthly progress report)

7.6.3 Installation of Maintenance of Avoidance and Protection Measures

When construction is planned in proximity to historic properties, it may be necessary to install protection measures to prevent inadvertent impacts from occurring. Such measures could include the installation of temporary fencing or more robust measures such as K-Rail or other barricades or physical protection.

7.6.3.1 Standards and Methods

The requirement for cultural resources-related avoidance and protection measures will be determined by the CRCM in cooperation with the PI and the AR. Such measures will then be delineated on construction drawings, the requirements of which are outlined in Section 7.6.1. If maintenance is required to ensure that the measures are effective in protecting cultural resources, the CRCM and/or the PI working with the PCM will establish a mutually agreed to maintenance and monitoring schedule to check the status of the protection measures. Maps and

protection measures will be updated as design plans change or become more fine-grained or as new resources or impacts are identified.

7.6.3.2 Qualifications

The CRCM, working in cooperation the PCM, will ensure that avoidance and protection measure are effective and maintained.

7.6.3.3 Timing

Prior to beginning construction within 100 feet of an historic property requiring avoidance and protection measures, any required cultural resources-related avoidance and protection measures will be identified and installed by the CRCM in cooperation with the PCM. All such measures will also be delineated on construction drawings.

7.6.3.4 Deliverables

- See deliverables for Section 7.6.1, Resource Construction Mapping, and Section 8.1, Requirements for Built Environment Construction Monitoring

7.6.4 Safety Plan

The Contractor will prepare draft and final safety plans for the implementation of this BETP. At a minimum, the safety plan will cover the following topics:

- Assignment of a safety officer for the purposes of the work;
- Safety procedures for working around heavy equipment;
- Safety procedures working adjacent to highways and an active railroad;
- Safety procedures for working in historic buildings; and
- Preventing heat-related illnesses.

7.6.4.1 Standards and Methods

The safety plan will be prepared in accordance with the Authority's Field Safety Handbook (Authority 2013).

7.6.4.2 Qualifications

Staff with expertise in safety management will prepare the safety plan.

7.6.4.3 Timing

The safety plan will be prepared prior to beginning field work to implement this BETP.

7.6.4.4 Deliverable(s)

- Draft and Final Safety Plans

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

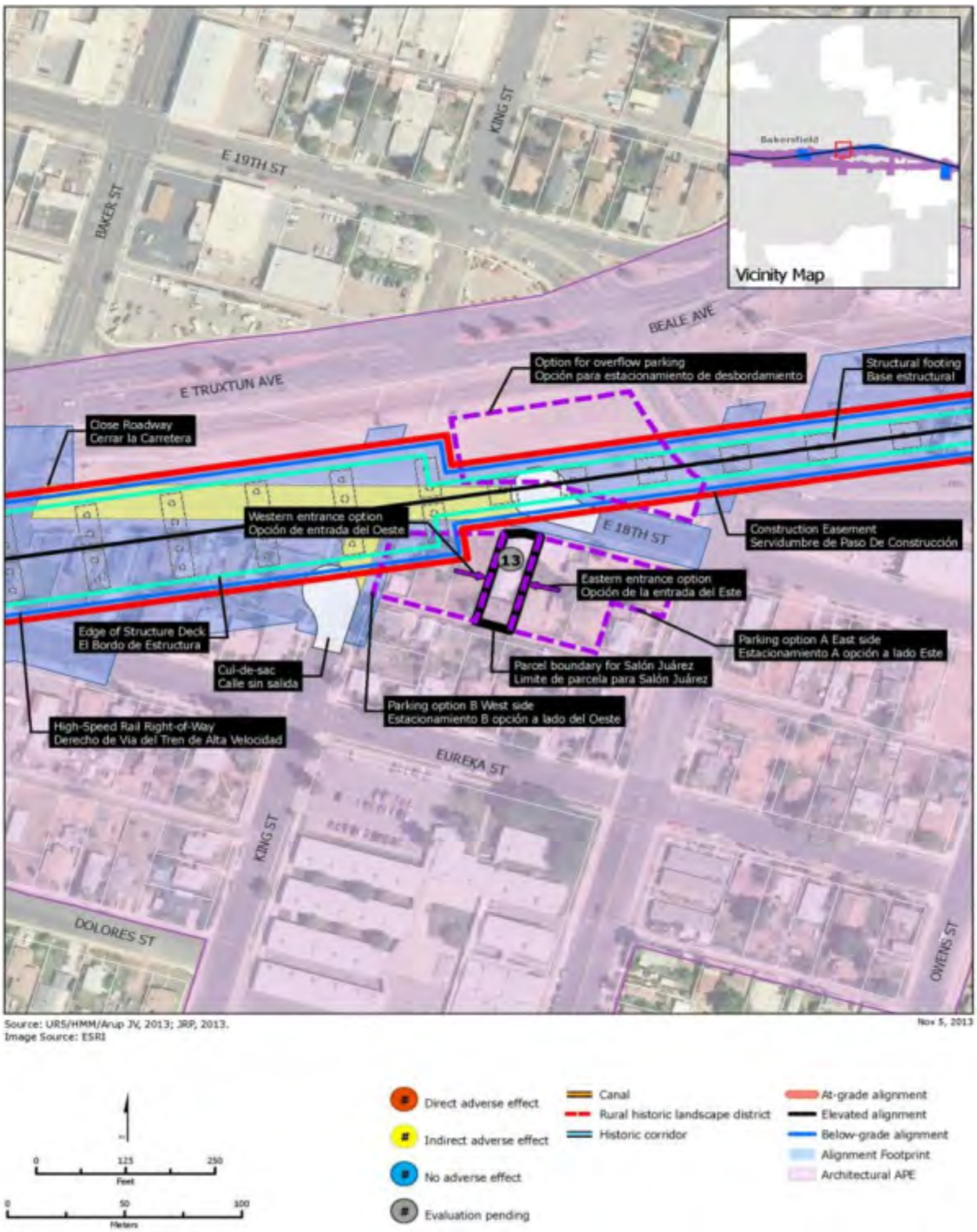


Figure 7.1 Location of Salón Juárez Conditions

This page intentionally left blank

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

8.0 Treatment Measures to be Implemented during Construction

8.1 Requirements for Built Environment Construction Monitoring

8.1.1 Standards and Methods

A built environment monitoring plan will be prepared that identifies properties that require architectural monitoring or field verification. This plan will be based on final design and will include details regarding the protocols and procedures for architectural monitoring, unanticipated impacts or the potential for unanticipated impacts, and the treatment of impacts in accordance with the requirements outlined in the PA, MOA, and this BETP.

The built environment monitoring plan will describe the required number of monitors for each construction activity and include the parameters that will influence the level of effort for monitoring, such as proximity of work to sensitive areas, types of activities that will require full time monitoring, regularly scheduled field checks, or spot checks. The number of monitors will reflect the number of properties requiring monitoring and the number of areas under construction at the same time, and the distance between them. The monitoring plan will outline the requirements for the Design-Build contractor to prepare a weekly log of architectural monitoring.

If monitoring reveals that protection measures are not effective in preventing built environment impacts, the CRCM will consult with the PCM and AR to develop and implement effective protection measures.

8.1.2 Qualifications

The built environment monitoring plan will be developed and overseen by the CRCM in consultation with the Architectural History PI, the qualifications of which are provided above in Section 3.3. All architectural monitors will meet the requirements outlined in Section 3.3 and will operate under the direction of the CRCM or PI.

8.1.3 Timing

The built environment monitoring plan will be developed and approved prior to beginning construction in accordance with the review process outlined in Section 11.2.

8.1.4 Deliverable(s)

- Draft and Final Built Environment Monitoring Plan
- Weekly Monitoring Logs

8.2 Protocols for Unanticipated Impacts during Construction

It is possible that unanticipated impacts could occur to built environment resources during the course of construction. The procedures provided here for unanticipated impacts during the construction process comply with Stipulations VIII.B and XI of the PA and are consistent with the following federal and state standards and guidelines:

- National Park Service, The Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716–42 [1983]), as amended.
- National Park Service Bulletin, Guidelines for Evaluating and Documenting Traditional Cultural Properties (National Park Service 1998).
- Guidelines for Implementation of the California Environmental Quality Act, as amended (Title 14 California Code of Regulations Chapter 3, Article 9, Sections 15120–15132).

8.2.1 Standards and Methods

If any unanticipated impacts to built environment resources are observed or appear imminent during construction, the CRCM or architectural monitor will issue a temporary work stoppage to the equipment operator to allow for a closer inspection of the situation and to assess the need for further treatment or protection measures in consultation with the AR. If a monitor is not present and unanticipated impacts to built environment resources are observed, the Contractor will immediately stop work and contact the monitor, PI, CRCM, and the PCM. In accordance with Stipulation XI.A of the PA, work will be stopped a sufficient distance to avoid or minimize harm to the property as determined by the CRCM in consultation the AR. Construction activities may continue outside that area, but the area of the property will remain undisturbed by construction activities until the CRCM or PI can complete an inspection and determine the next course of action.

In accordance with Stipulation XI.B of the PA, if an unanticipated impact has not yet occurred and the PI in consultation with the AR determines that adverse effects on the resource can be avoided, no consultation with MOA signatories and consulting parties is necessary. If the PI in consultation with the AR determines that the property has been impacted or adverse effects cannot be avoided, the PI will issue a stop-work order. At the direction of, and in consultation with the PI, the PCM will implement the stop-work order by directing the Contractor to stop work at a specified location on the construction site and for a specified work stoppage time.

The PI will prepare an Unanticipated Adverse Effect Memorandum that outlines the nature of the property, its potential NRHP or CRHR eligibility, and proposed measures to treat the effects. The Authority will provide this memorandum to the FRA, SHPO, ACHP, and concurring parties within 48 hours of verbal agreement on how treatment for the discovery should proceed. The FRA, SHPO, and concurring parties will provide review and comment within 24 hours. If no comments are received, the Authority will direct that treatment proceed in accordance with the Unanticipated Adverse Effects Memorandum. As soon as the treatment is completed, work in the area of the historic property can resume. These efforts will be documented in accordance with the requirements set forth for an Unanticipated Adverse Effects Memorandum outlined in Section 8.2.4.

8.2.2 Qualifications

These efforts will be overseen by the CRCM working in concert with the PI and the AR.

8.2.3 Timing

This work will occur during construction in accordance with time frames established above under Section 11.2.

8.2.4 Deliverable(s)

- Draft and Final Unanticipated Adverse Effect Memoranda

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

9.0 Post-Construction Measures

9.1 Post Construction Conditions Assessment

A post-construction condition assessment will be conducted for appropriate treatment to require upon completion of construction for any properties that were subject to a pre-construction condition assessment or HSR.

9.1.1 Standards and Methods

The post-construction condition assessment will incorporate procedures and considerations indicated in Section 7.2.4 of this BETP regarding the standards and methods for preparing pre-construction condition assessments. The post-construction conditions assessment will document the condition of a historic property with a focus on the overall structural conditions of the historic building, structure, site, object, or district, particularly character-defining features, following construction activities. The pre-construction condition assessment or HSR will be used as the baseline, and the post-construction condition assessment will focus on the changed conditions. The report will include follow-up digital photography and a field inventory of changed conditions. Part of the analysis will include review of the documentation prepared as part of the pre-construction condition assessment.

9.1.2 Qualifications

Pre-construction condition assessments may require an interdisciplinary team, depending on the subject historic property, to photograph and document the post construction condition of the resource. The team may include an architectural historian, historical architect, structural engineer, mechanical engineer, landscape architect, and photographer. Each professional will have demonstrable experience preparing pre-construction condition assessments and assessing character-defining features of historic properties and the integrity of those features. Project team members must meet the Secretary of the Interior's standards for their respective disciplines. If possible the team will include the same staff who prepared the pre-construction condition assessment. This work will be overseen by the architectural history PI. The AR will review and approve the qualifications of the professionals required for execution of the post construction condition assessments.

9.1.3 Timing

The post-construction condition assessment will be prepared within 60 days of completion of construction. The results of the assessment will be compiled into a post-construction condition assessment report. This report will be reviewed and approved in accordance with the timeframes outlined in Section 11.2.

9.1.4 Deliverable(s)

- Draft and Final Post-Construction Conditions Assessments

This page intentionally left blank

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

10.0 BETP Deliverables: Standards, Documents, and Schedules

10.1 Standards and Requirements for BETP Deliverables

All reports resulting from implementation of this ATP shall be consistent with the PA and the MOA for the Fresno to Bakersfield Section, and these reports must meet contemporary professional standards as specified in:

- The Secretary of the Interiors Standards for the Treatment of Historic Properties (National Park Service 1995 and updates);
- The Secretary of the Interior's Standards and Guidelines for Archaeological Documentation (National Park Service 1983 and updates);
- California Office of Historic Preservation's Archaeological Resource Management Reports (ARMR): Recommended Contents and Format (OHP 1990); and
- California Office of Historic Preservation's Guidelines for Archaeological Research Designs (OHP 1991).

The Authority and FRA will ensure that all deliverables prepared in compliance with this BETP meet the requirements outlined in the PA and Fresno to Bakersfield MOA.

10.2 BETP Deliverables

10.2.1 Daily Logs and Weekly Reports

Daily logs will be prepared documenting all built environment monitoring activities. These daily logs will included in a weekly compliance report prepared by the CRCM and provide to the PCM and Authority.

10.2.2 Monthly Progress Reports

Monthly progress reports documenting the implementation of the BETP will be prepared and submitted via EMMA using a Summary Record Form associating all relevant standard Record Forms. Upon request, the monthly report will be provided to the MOA signatories. This monthly report will include the updated BETP compliance table, a preliminary version of which is provided as Table 11.1.

The progress report can be submitted in digital form and will, at a minimum, include the following:

- Name of project segment
- Date, person, and entity or firm preparing and submitting the report
- Activities conducted since the previous progress report, including the status of all fieldwork, analysis, or document preparation
- Activities planned for the upcoming month
- Known issues or potential issues affecting the implementation of the BETP or project schedule
- BETP Compliance Schedule Table

The AR will review the report and, once finalized, submit the report to the MOA signatories for their records. If preferred by the Contractor, this Monthly Progress Report can be provided in a combined report coving both the ATP and BETP

10.2.3 Semi-Annual Status Reports

Semi-annual status reports will be prepared 30 days in advance of the schedule for semi-annual reports in the MOA. These reports will include a thorough discussion of the status of each activity outlined in this BETP and each stipulation of the MOA. This task will be completed in accordance with the schedule for submittal that is provided for in the MOA from NTP until Final Acceptance. The Authority will have thirty (30) days to review and comment on these reports. Reports will be revised by the CRCM based on comments received.

10.2.4 Draft and Final Safety Plans

Draft and final safety plans will be prepared for the implementation of this BETP.

10.2.5 Supplemental Historic Architectural Survey Reports

Draft and final sHASR(s) to the Fresno to Bakersfield Section HASR will be prepared to document the results of any additional built environment inventories that are needed for an expanded APE. Depending on construction priorities and property access/acquisition status, multiple sHASRs may be prepared for portions of the APE for which surveys were completed in advance of other portions of the APE. Completed DPR continuation sheets and newly documented site forms will be filed with the appropriate California Historical Resources Information System (CHRIS) Information Center and included as an appendix to the sHASR. Maps of the areas surveyed will be included in the sHASR. These maps will clearly delineate all NRHP properties that are identified.

10.2.6 Supplemental Effects Assessments

Upon completion of identification and evaluation-level architectural investigations, draft and final sFOE will be prepared for any newly identified historic properties identified within the expanded APE. The sFOE will document the application of the criteria for adverse effects (36 CFR 800.5) for each historic property, which includes all newly discovered properties, as well as those resources already documented in the original FOE, but which had not been fully investigated at that time. The procedures for the assessment of effects to historic properties are detailed in Section 6.2, Supplemental Inventory and Evaluation Report and Effects Assessments.

For situations where adverse effects were not identified previously and cannot be avoided while in construction, the PI will take photographs and field notes on details of the effects and will prepare a supplemental FOE (sFOE) memorandum that assess effects and recommends treatment measures to minimize or mitigate effects. This sFOE will be forwarded to the AR who will coordinate with the MOA signatories for expedited review and concurrence.

10.2.7 Final Supplemental Treatment Plan(s)

To address the Design-Build procurement process, it is anticipated that a final supplemental treatment plan will, at a minimum, be prepared for each of the construction packages; however, it may be necessary to prepare several final supplemental treatment plans to facilitate construction in certain areas or for specific activities while the design for other areas or work is finalized later.

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

The FRA and Authority shall ensure that a final supplemental ATP or final supplemental ATPs are completed. These documents will describe treatment for as-yet-unidentified adverse effects to known or unknown resources and re-examine the treatments recommended in the original treatment plans and review final design to ensure that all properties adversely affected are addressed and that treatments are appropriate for the impacts that will result from the final design.

Should the finalization of design result in an expanded APE that contains newly impacted resources or as-yet-unidentified adverse effects to known resources, it will be necessary to complete an addendum to this BETP. The final supplemental plans will include as a minimum:

- Description of any additional APE that was added as a result of final design
- Any resources contained within including graphics illustrating the changes to the APE and new resources;
- Any new or different impacts that will occur as a result of final design or identification of construction methods;
- Description of the proposed treatment; and
- Research frameworks, as necessary, to provide a context for previously; and unidentified property types.

Final supplemental plans will be provided to FRA by the Authority for a 14-day review period. Following FRA review and revision, the Authority shall provide draft final supplemental treatment plans to the MOA signatories for a 30-day review and comment period. Based on the comments received, the Authority will revise and submit the draft final supplemental treatment plans to the MOA signatories for final 30-day review. The Authority shall ensure that comments received as a result of this consultation process will be considered prior to finalizing final supplemental treatment plans.

10.2.8 Built Environment Monitoring Plan

Draft and final built environment monitoring plans will be prepared describing the properties that will require monitoring, the type of activities or resources that will require full time monitoring or spot checks, the required number of monitors required for each construction activity, the parameters that will influence the level of effort for monitoring (such as proximity of work to sensitive properties). The built environment monitoring plan will also outline the process for corrective action should the protections measure prove ineffective in preventing built environment impacts. The monitoring plan will further outline the consultation process with the AR to develop and implement effective measures and to address unanticipated impacts.

10.2.9 Vibration Monitoring and Control Plan

Draft and final vibration monitoring and control plans will be prepared when alternative construction methods are not available to reduce the risk of damaging historic property during construction. This plan will outline the requirements for vibration monitoring including the installation of vibration monitoring equipment. This plan will also indicate how the often the data from these monitoring devices will be reviewed. This plan will identify the process for that will be followed when construction activities result in vibration exceedances, including how vibration will be controlled if possible.

10.2.10 Plan for Repair of Inadvertent Damage

Draft and final plans for repair of inadvertent damage will outline the emergency stabilization measures to protect the property from further harm. The plan will require that all activities will

cease sufficiently distant to avoid or minimize harm to the property and to allow construction personnel to inspect the damage. Also outlined in the plan will be the requirement to permit construction to resume only after the PCM and AR determine adequate avoidance or additional protective methods. This plan will be subject to the review process outlined in Section 11.2 and will be approved prior to initiating any repairs.

10.2.11 Plan for Protection and Stabilization

Draft and final plans for the protection and stabilization of historic properties will identify those character-defining features or unique building materials that could be impacted by construction and for which protection and/or stabilization measures are needed. The plan will outline the efforts that will be undertaken to ensure that there will be no permanent impairment to the historic integrity of a significant property or its materials or character-defining features. To retain the historic integrity of a historic property, all stabilization designs, measures, and treatments will adhere to the Secretary of the Interior's Standards for the Treatment of Historic Resources. This plan will be subject to the review process outlined in Section 11.2 and will be approved prior to initiating any protection or stabilization work.

10.2.12 Building/Structure Relocation Plans

Draft and final plans for relocation of historic properties will outline the process to stabilize, move, rehabilitate the property in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties (36 CFR Part 68). The plans will outline the several steps that are involved in relocation of a historic building or structure, including the oversight by a qualified team to direct the relocation effort, developing architectural plans for stabilization and relocation, coordination with the receiving site, and coordination with related mitigation measures that may be required.

The plan will describe the methods to stabilize, move, store and reassemble/rehabilitate structures or buildings. The plan will also describe other mitigation treatments that will be considered for their ability to help achieve the objectives of relocating a historic property. This plan will be subject to the review process outlined in Section 11.2 and will be approved prior to initiating any building or structure relocations.

10.2.13 Planting Plan

For each property requiring visual screening plan, a Planting Plan will be developed which describes how this treatment will help reduce or minimize adverse visual effects on historic properties. The Plan will describe the species that will be selected including information about the plant's mature size and shape, growth rate, drought tolerance, and ultimate height and width for the selected species. No species that is listed on the Invasive Species Council of California's list of invasive species will be planted (California Invasive Plant Council 1996). The Planting Plan will describe the location of the planting on the affected property, planting at affected viewpoints, and/or planting on project property. The Plan will outline the process for consulting with the landowner, as well as the SHPO and the MOA signatories in the review and approval of the Plan.

10.2.14 Interpretive Plan

Prior to initiating any interpretive program, draft and final Interpretive Plans will be developed that outline how the interpretive or educational materials will provide information regarding this specific historic property and the aspects of its significance that would be affected by the project. The plan will describe what interpretive or educational materials will include, such as brochures, videos, websites, study guides, teaching guides, articles or reports for general publication, commemorative plaques, or exhibits. The interpretive or educational materials will utilize images,

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

narrative history, drawings, or other material produced for the mitigation described above, including the additional recordation prepared, and/or archival sources. This plan will be subject to the review process outlined in Section 11.2 and will be approved prior to initiating any interpretive work.

The interpretive or educational materials may be advertised and will be made available to the public. The interpretive materials may be made available in physical or digital formats, at local libraries, historical societies, or public buildings. Draft and final interpretive materials will be subject to the review process defined in Section 11.2 prior to finalization and/or publication.

10.2.15 Unanticipated Adverse Effects Memorandum

Upon agreement between the signatories to this MOA regarding the appropriate treatment for a new resource or a newly affected resource, the PI will prepare an Unanticipated Adverse Effect Memorandum that outlines the nature of the property, its potential NRHP, and proposed measures to treat the affects. The Authority will provide this memorandum to the FRA, SHPO, and concurring parties within 48 hours of verbal agreement on how treatment for the discovery should proceed. The FRA, SHPO, and concurring parties will provide review and comment within 24 hours. If no comments are received, the Authority will direct that treatment proceed in accordance with the Unanticipated Adverse Effects Memorandum. As soon as the treatment is completed, work in the area of the historic property can resume. These efforts will be documented in accordance with the requirements set forth for an Unanticipated Adverse Effects Memorandum outlined in 8.2. Draft and final memoranda will be prepared.

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

This page intentionally left blank

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

11.0 Compliance and Monitoring Commitments

11.1 Environmental Mitigation Management & Assessment (EMMA)

EMMA (Environmental Mitigation Management & Assessment) is a database created by the Authority to document compliance with mitigation measures as prescribed by the EIR/EIS and Mitigation Monitoring and Enforcement Plan (MMEP) as well as conditions of the MOA and treatment plans. The database allows users to record implementation of compliance through the use of record forms designed specifically for each discipline.

The status of each environmental commitment outlined in this BETP will be tracked in EMMA through phases of pre-initiation, in-process, and upon successful completion of each commitment, that commitment's status is noted as completed in the system. The system allows for various records documenting compliance to be aggregated into summaries showing a comprehensive record of all actions documenting compliance with commitments and ultimately, the meaningful mitigation of impacts.

While the fulfillment of most commitments occur during the construction phase of the project, EMMA is also set up to track commitments during pre-construction, post construction and operations phases of the project.

11.1.1 EMMA Record Forms

Each discipline contains a form that doubles as a monitoring log, survey log, resource record or report submittal form. Users enter general details such as author name, author role and date of the record then selects the type of activity for which they are submitting a record such as Monitoring, Survey and/or Resource Tracking. Files such as documents and photos may be uploaded to the form for additional documentation.

Upon selecting Monitoring as the type of activity for which a user is reporting, a "monitoring form" loads on the screen. This form requests details such as start and end times, construction activities observed, equipment used, locational data, any compliance concerns noted, and additional fields to note observations about monitoring. Should a user have monitored multiple locations during a single day, the option to add additional monitoring forms to a single record are provided.

Upon selecting Survey as the type of activity, a "survey form" loads on the screen. This form requests details such as start and end times, type of survey, locational data and a field to note observations made during the survey. Should a user have multiple surveys to report, the option to add additional survey forms to a single record is provided. All final sASR's will be attached to associated record or summary forms.

Upon selecting Resource Tracking as the type of activity, a "resource tracking form" loads on the screen. This form requests details such as whether the user is tracking a new discovery or tracking the ongoing status of a previous discovery, the resource's unique identification number, a description of the resource, it's context, locational data (including address or UTMs as appropriate) and whether the resource requires additional management or evaluation as well as a field to note other observations about the resource. Should multiple resources require tracking, the option to add additional resource tracking forms is provided.

Should a user need to report on an activity other than Monitoring, Survey and/or Resource Tracking, the Other activity option may be selected which provides generic fields to record the activity and a memo field to note information about the activity.

11.2 General BETP Deliverable Review Schedule

The MOA outlines the review periods for each document required to comply with the terms of that agreement. While the following discussion provides more detail on the cycles of review, nothing in this section supersedes the review requirements outlined in the MOA.

All draft documents prepared pursuant to this BETP will be submitted to the Authority's representative, the AR, for review. The AR will have a 30-day review period for all deliverables, exceptions noted below. If revisions are needed, the document will be returned to the author for a 15-day revision period. If the document is acceptable without revisions, the AR will forward the document to the FRA for a 30-review period. If revisions are needed, the document will be returned to the author for a 30-day revision period. Upon acceptance of the document acceptable without revisions, the AR will forward the document to the other MOA signatories and concurring parties for a 30-day review period. The signatories and concurring parties will have 30-days to provide comments on the draft documents. After revision and the AR's determination that all comments are adequately addressed, the documents will be finalized.

Exceptions to this review schedule are provided for in the MOA and include deliverables with expedited review periods, such as the Unanticipated Adverse Effect Memoranda described in Section 8.2.

11.2.1 Treatment Compliance Schedule

This BETP identifies the treatments for known and a range of appropriate treatments for unanticipated effects on historic properties. Table 11.1 shows which treatment measures will be implemented before, during, and after construction of the project depending on the timing requirements of the individual measures. This table is preliminary and will be updated in the final supplemental BETP(s) prepared by the Contractor.

This table will then be updated monthly as construction information is obtained and treatment measures are scheduled. Updated tables will be provided to the AR in the Monthly Progress Reports outlined in Sections 10.2.2 of this BETP.

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

Table 11.1 Draft Treatment Implementation Schedule

Treatment	Pre-Construction	During Construction	Post Construction	On-Going	Timing TBD
Verify APE	Sufficiently prior to construction to ensure all portions of new APE are identified			Throughout construction as needed	
Supplemental Inventory and Evaluation	Sufficiently prior to construction to ensure all inventory and evaluation is completed				
South Van Ness Entrance Gate Data Recovery	Recordation	Protection and Stabilization			Relocation; Interpretation
Washington Colony Rural	Recordation; Plan for Inadvertent Damage	Protection and Stabilization; Minimize Noise and Vibration			Interpretation
People Ditch	Recordation; Plan for Inadvertent Damage	Protection and Stabilization			Interpretation
Lakeside Cemetery	Recordation; Protection and Monitoring measures	Protection and Stabilization			Visual Planting Screening
Stark/Spencer Residence	Recordation				Visual Planting Screening
Salon Juarez	Improvement Plans for Interior and Exterior Improvements; Implementation of Improvements; Documentation and Oral Histories				

This page intentionally left blank

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

12.0 Public Involvement Dissemination of Information and Public Involvement

The Authority is currently developing a website to include information regarding the results of cultural resources studies conducted for the entire program. It is anticipated that as the results of the studies conducted in compliance with this BETP are finalized, non-confidential information of interest to the public will be posted on this website due to be operational by late 2014/early 2015.

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

This page intentionally left blank

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

Bibliography

California Invasive Plants Council. 1996. *Invasive Plants of California Wildlands*. Sacramento, CA.

California High Speed Rail Authority. 2013. *Field Safety Handbook for the California High Speed Rail Program.* Prepared by Parsons Brinckerhoff, Sacramento, CA.

California High-Speed Rail Authority and the Federal Railroad Administration (Authority and FRA). 2005. *Final Program Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the Proposed California High-Speed Train System*. Sacramento, CA, and Washington, DC.

California High-Speed Rail Authority and the Federal Railroad Administration (Authority and FRA). 2008. *Final Bay Area to Central Valley High-Speed Train (HST) Program Environmental Impact Report/Environmental Impact Statement (EIR/EIS).* Sacramento and Washington, DC

California High-Speed Rail Authority and Federal Railroad Administration (Authority and FRA). 2010a. *Historic Property Survey Report, Fresno to Bakersfield Section of the California High Speed Train Project*. Prepared by URS Corp. Oakland.

California High-Speed Rail Authority and Federal Railroad Administration (Authority and FRA). 2010b. *Historic Architecture Survey Report, Fresno to Bakersfield Section of the California High Speed Train Project*. Prepared by URS Corp. Oakland.

California High-Speed Rail Authority and the Federal Railroad Administration (Authority and FRA). 2011. *Section 106 Programmatic Agreement Among the Federal Railroad Administration, the Advisory Council on Historical Preservation, the California State Historic Preservation Officer, and the California High-Speed Rail Authority Regarding Compliance with Section 106 of the National Historic Preservation Act*. Sacramento, CA, and Washington DC.

California High-Speed Rail Authority and Federal Railroad Administration (Authority and FRA). 2013a. *Supplemental Historic Property Survey Report, Fresno to Bakersfield Section of the California High Speed Train Project*. Prepared by URS Corp. Oakland.

California High-Speed Rail Authority and Federal Railroad Administration (Authority and FRA). 2013b. *Supplemental Historic Architecture Survey Report, Fresno to Bakersfield Section of the California High Speed Train Project*. Prepared by URS Corp. Oakland.

California High-Speed Rail Authority and Federal Railroad Administration (Authority and FRA). 2013c. *Second Supplemental Historic Property Survey Report, Fresno to Bakersfield Section of the California High Speed Train Project*. Prepared by URS Corp. Oakland.

RFP No. 13-57 - Addendum No. 4 - 09/09/2014

California High-Speed Rail Authority and Federal Railroad Administration (Authority and FRA). 2013d. *Draft Findings of Effect, Fresno to Bakersfield Section of the California High Speed Train Project*. Prepared by URS Corp. Oakland.

California High-Speed Rail Authority and the Federal Railroad Administration (Authority and FRA). 2013e. *Salón Juárez Traditional Cultural Property Study, Fresno to Bakersfield Section of the California High Speed Train Project*. Prepared by URS Corp. Oakland.

California High-Speed Rail Authority and the Federal Railroad Administration (Authority and FRA). 2014a. *Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the Proposed California High-Speed Train System, Fresno to Bakersfield Section*. Prepared by URS. Sacramento, California, and Washington, DC.

California High-Speed Rail Authority and the Federal Railroad Administration (Authority and FRA). 2014b. Memorandum of Agreement Among the Federal Railroad Administration, the California High-Speed Rail Authority, the Surface Transportation Board, the Sacramento District of the U.S. Army Corps of Engineers, the California State Historic Preservation Officer, and the Advisory Council on Historic Preservation. Sacramento, California, and Washington, DC.

California High-Speed Rail Authority and Federal Railroad Administration (Authority and FRA). 2014b. *Final Findings of Effect, Fresno to Bakersfield Section of the California High Speed Train Project*. Prepared by URS Corp. Oakland.

National Park Service. 1996. *Guidelines for the Treatment of Cultural Landscapes.* National Center for Preservation Technology and Training. Available online at: http://ncptt.nps.gov/articles/c2a/guidelines-for-treatment-of-cultural-landscapes/

Secretary of the Interior. 1983. *Archeology and Historic Preservation*: *Secretary of the Interior's Standards and Guidelines [As Amended and Annotated].* Available online at: http://www.nps.gov/history/local-law/arch_stnds_0.htm.

Secretary of the Interior. 1983. *Professional Qualification Standards.*" 48 FR 44716, et seq. Washington, DC. Available online at: http://www.nps.gov/history/local-law/arch_stnds_9.htm

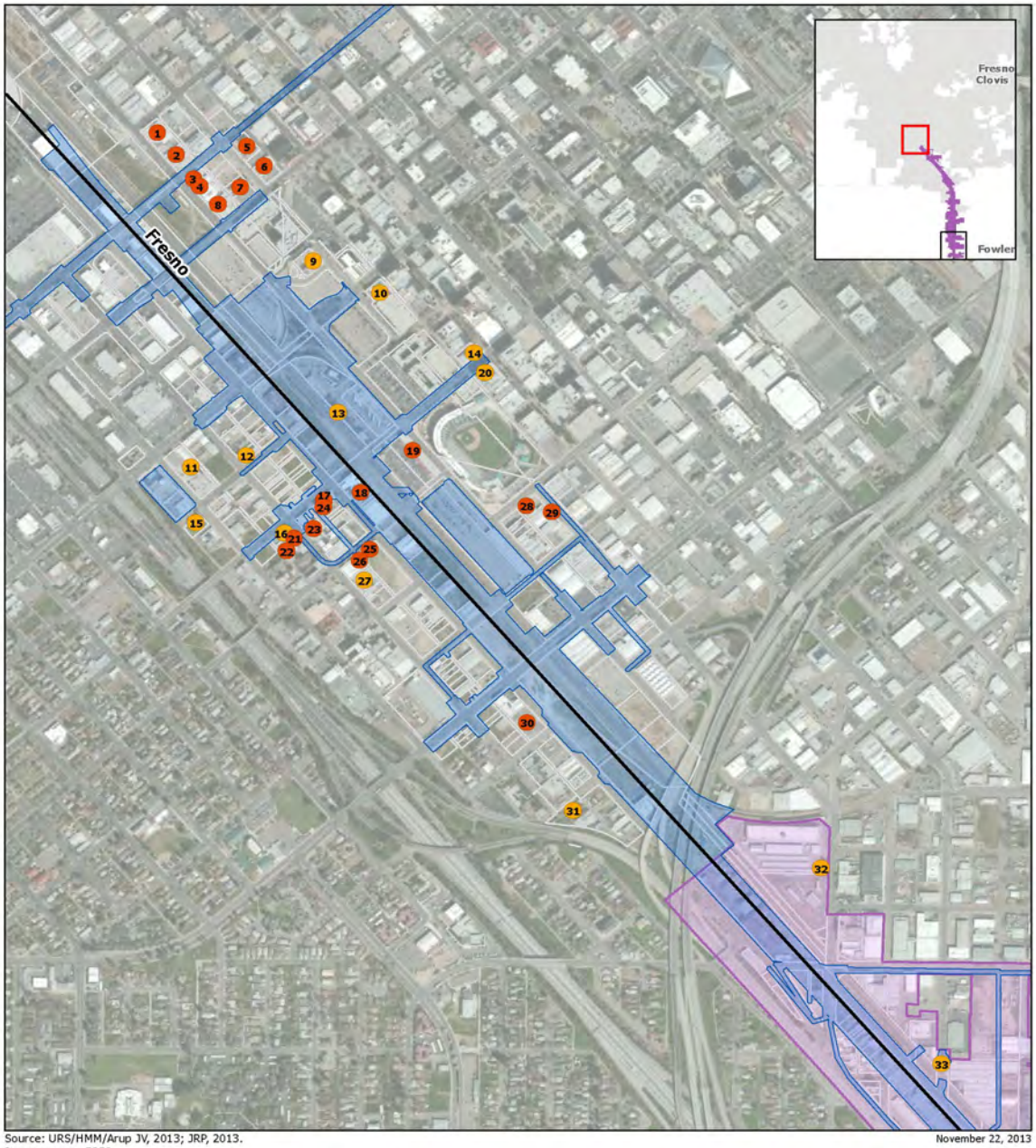
Secretary of the Interior. 1995. *Standards for the Treatment of Historic Properties.* Available online at: http://www.nps.gov/history/hps/tps/standguide/

Wilson, Ihrig & Associates, Inc, ICF International, and Simpson, Gumpertz and Heger, Inc. 2012. Construction Vibration and Potential Effects to Historic Building Adjacent to Transportation Projects. NCHRP 25-25/Task 72. Available at: http://onlinepubs.trb.org/onlinepubs/nchrp/docs/NCHRP25-25(72)_FR.pdf.

Attachment A:

Built Environment Resources and APE

RFP No. 13-57 - Addendum No. 4 - 09/09/2014



Source: URS/HMM/Arup JV, 2013; JRP, 2013.
Image source: ESRI
Note: Central Fresno contains previously surveyed historic architectural resources as part of the Merced-Fresno High Speed Rail Study.

November 22, 2013

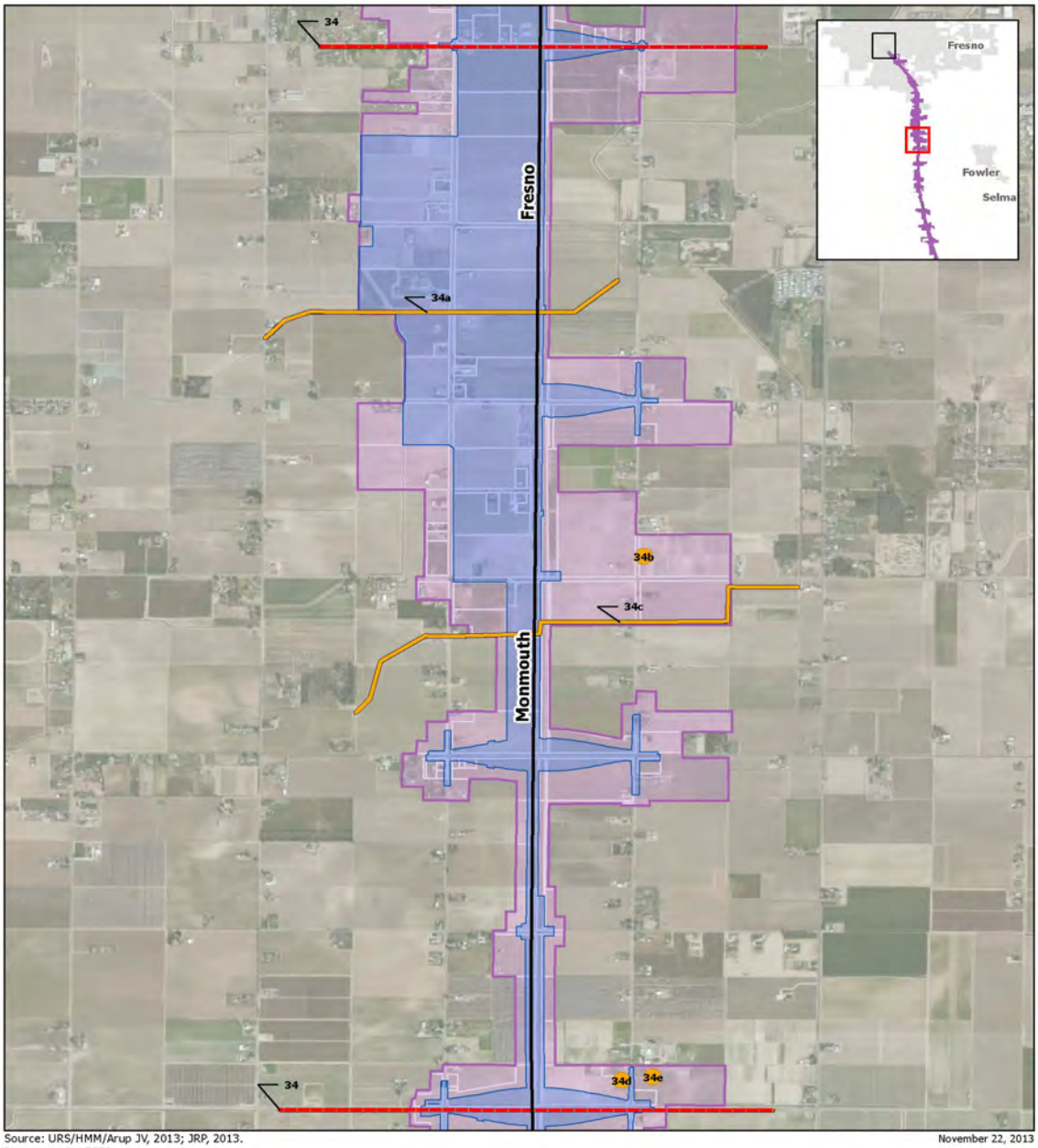
N

0 500 1,000
Feet

0 250 500
Meters

CEQA-only historical resource
Section 106 historic property
Alternative alignments
Architectural APE
Aligment footprint
Parcel

Figure A1



Source: URS/HMM/Arup JV, 2013; JRP, 2013.
Image source: ESRI

November 22, 2013

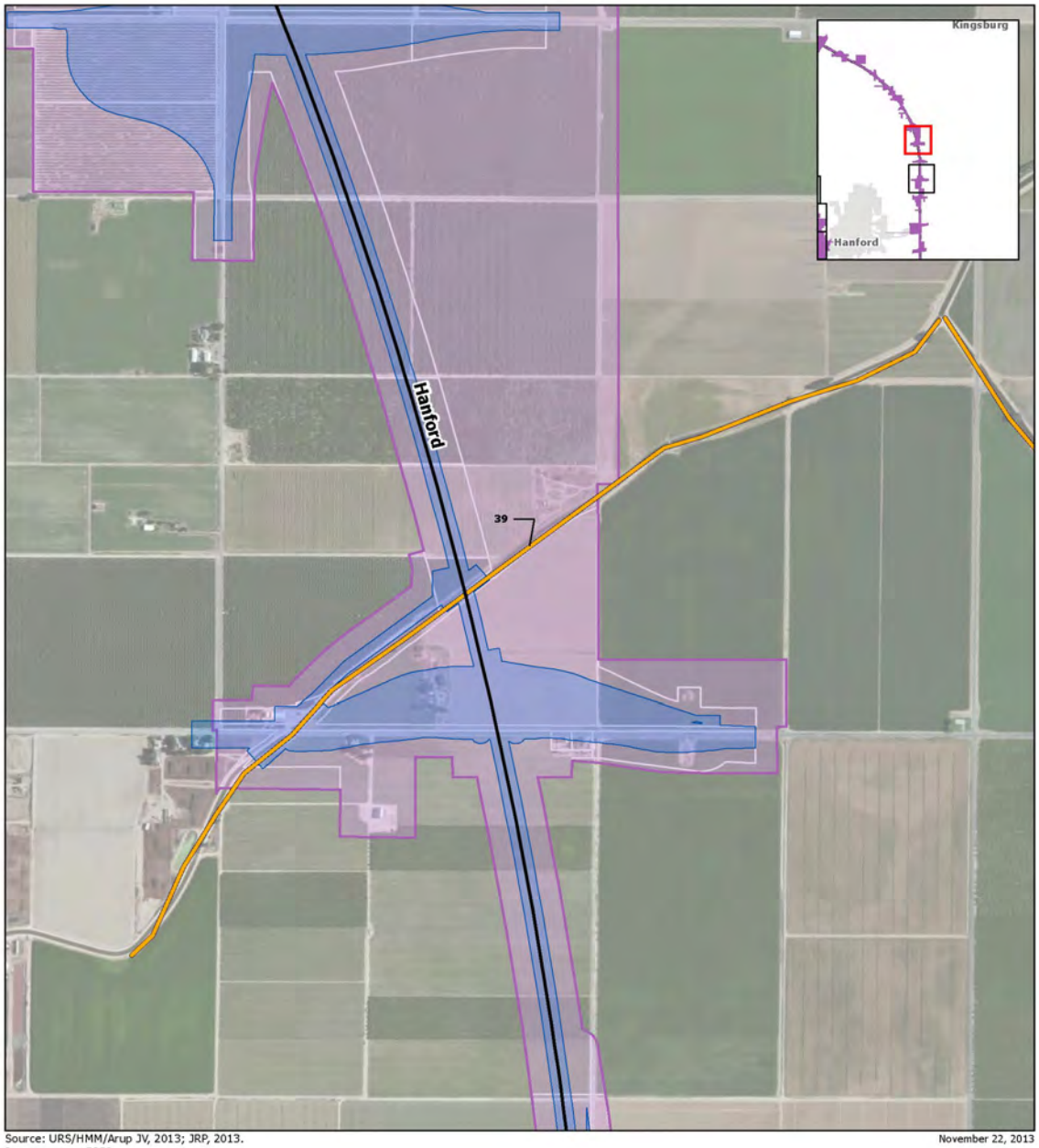
N

0 1,250 2,500
Feet

0 500 1,000
Meters

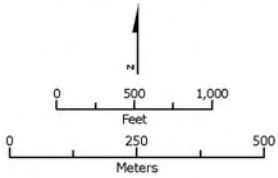
- CEQA-only historical resource
- Section 106 historic property
- Section 106 Historic Property (Rural Historic Landscape District)
- Section 106 Historic Property (canal)
- Alternative alignments
- Architectural APE
- Aligment footprint
- Parcel

Figure A2



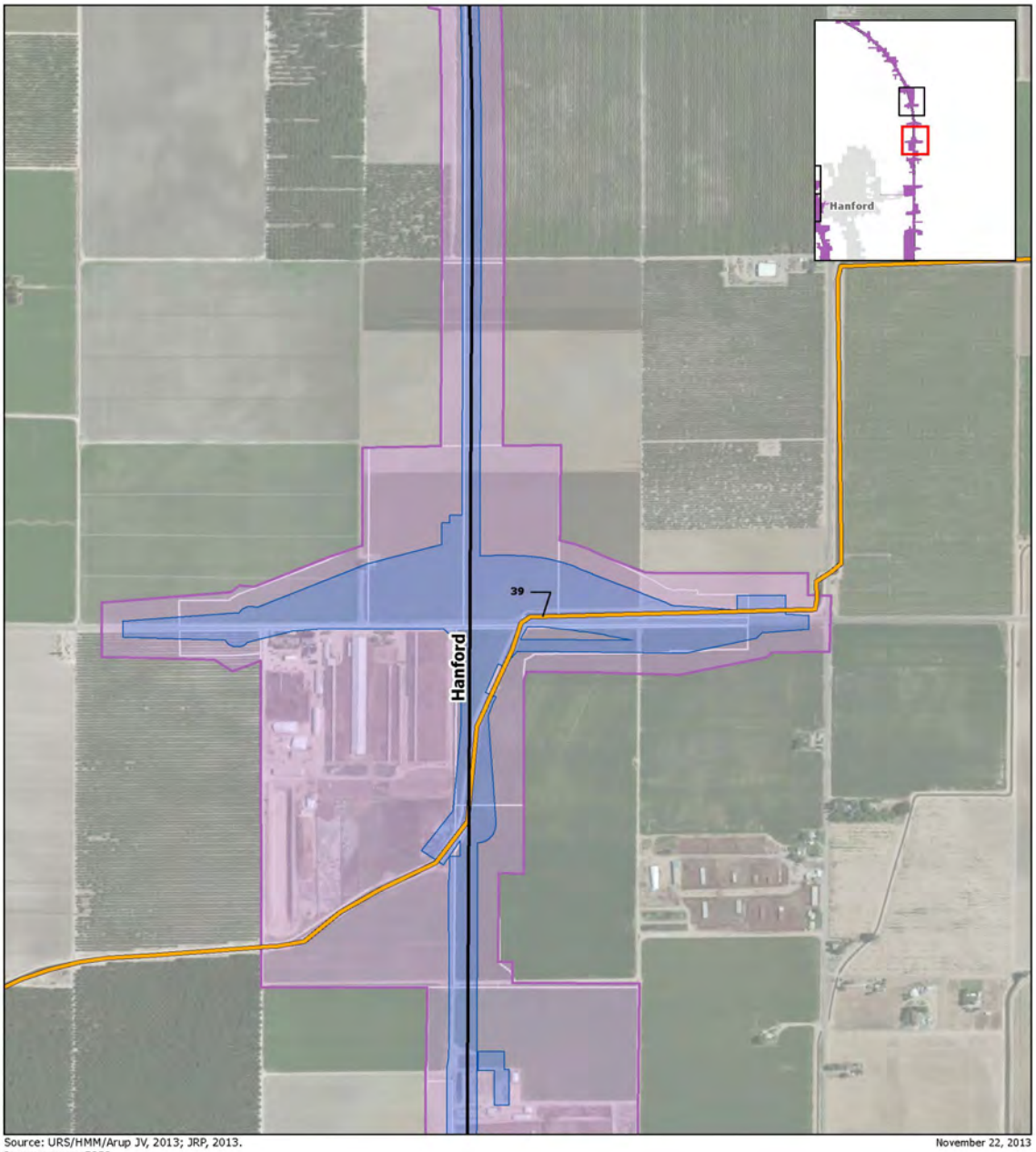
Source: URS/HMM/Arup JV, 2013; JRP, 2013.
Image source: ESRI

November 22, 2013



CEQA-only historical resource
Section 106 historic property
Section 106 Historic Property (canal)
Alternative alignments
Architectural APE
Aligment footprint
Parcel

Figure A3



Source: URS/HMM/Arup JV, 2013; JRP, 2013.
Image source: ESRI

November 22, 2013

N

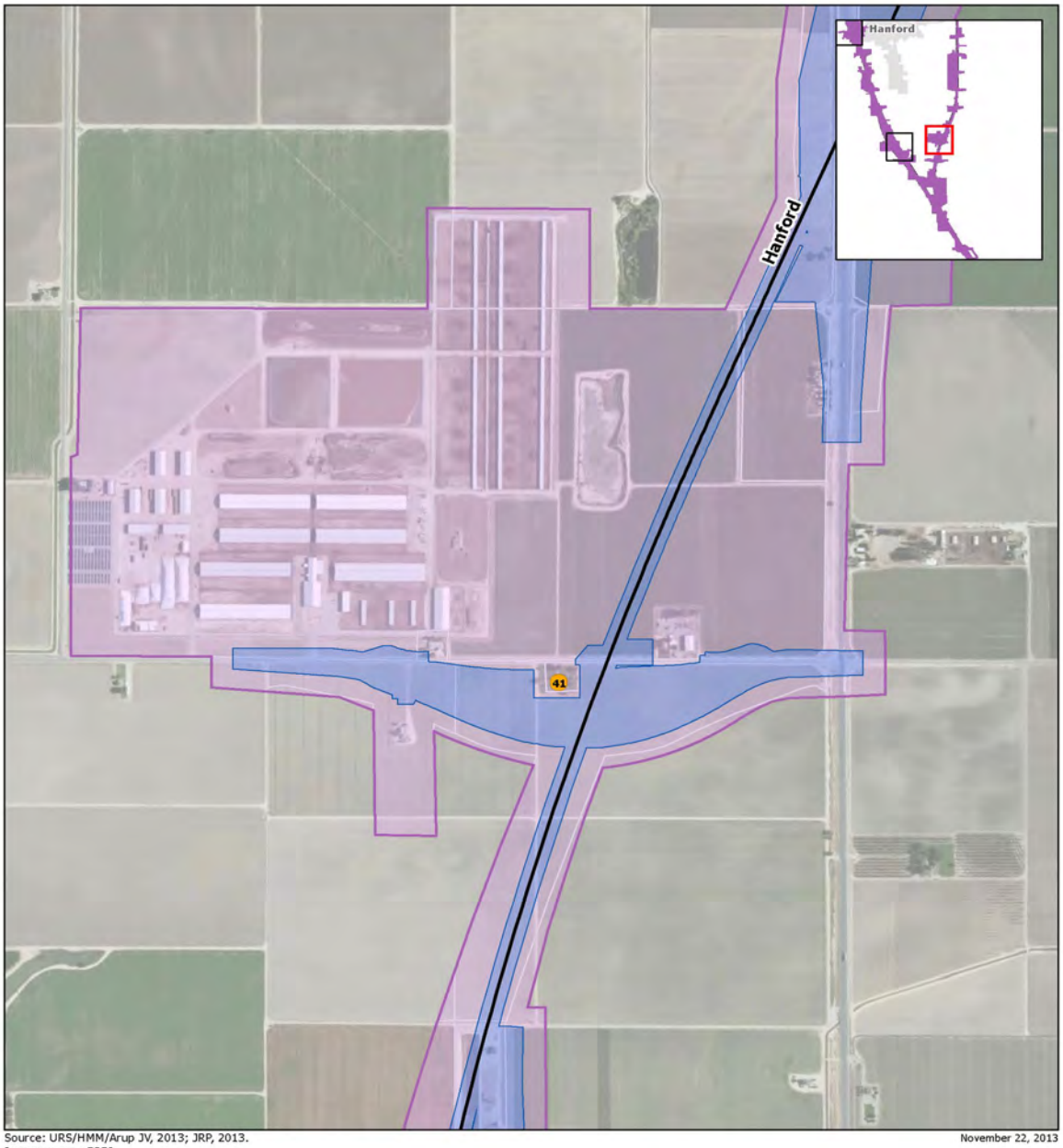
0 500 1,000
Feet

0 250 500
Meters

CEQA-only historical resource
Section 106 historic property
Section 106 Historic Property (canal)

Alternative alignments
Architectural APE
Aligment footprint
Parcel

Figure A4



Source: URS/HMM/Arup JV, 2013; JRP, 2013.
Image source: ESRI

November 22, 2013

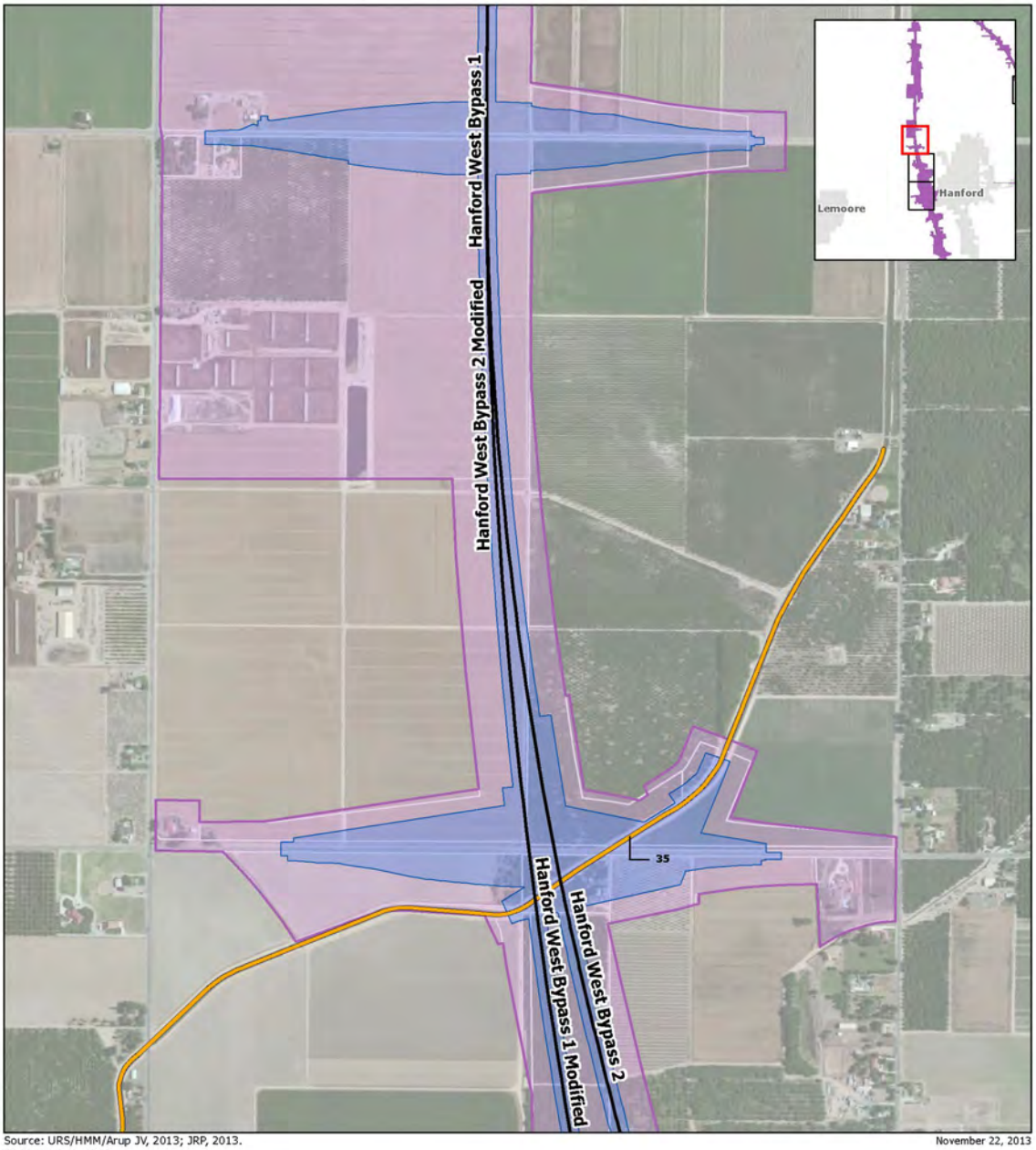
N

0 500 1,000
Feet

0 250 500
Meters

CEQA-only historical resource
Section 106 historic property
Alternative alignments
Architectural APE
Aligment footprint
Parcel

Figure A5



Source: URS/HMM/Arup JV, 2013; JRP, 2013.
Image source: ESRI

November 22, 2013

N

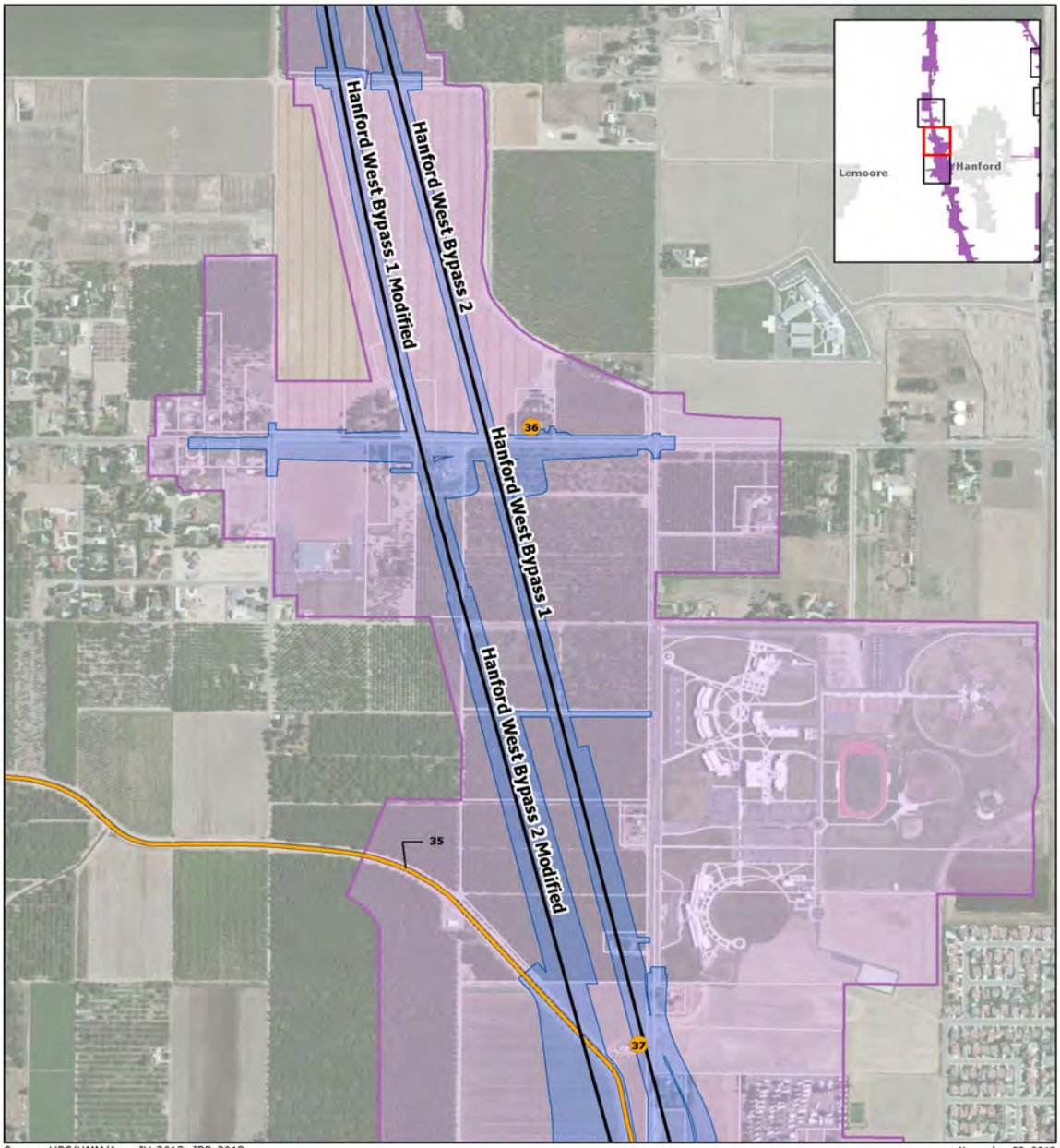
0 500 1,000
Feet

0 250 500
Meters

CEQA-only historical resource
Section 106 historic property
Section 106 Historic Property (canal)

Alternative alignments
Architectural APE
Aligment footprint
Parcel

Figure A6



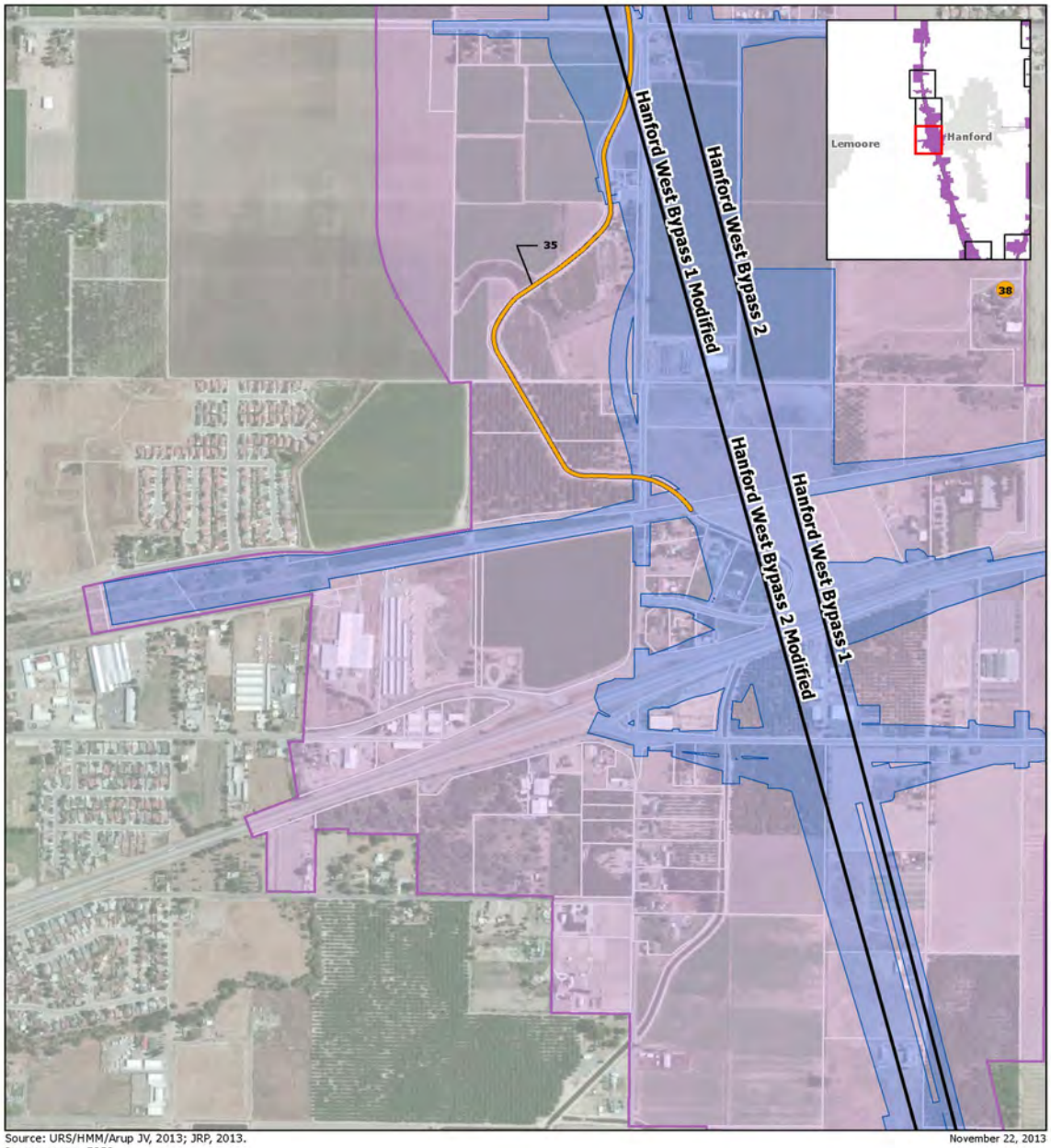
Source: URS/HMM/Arup JV, 2013; JRP, 2013.
Image source: ESRI

November 22, 2013

N
0 500 1,000
Feet
0 250 500
Meters

CEQA-only historical resource
Section 106 historic property
Section 106 Historic Property (canal)
Alternative alignments
Architectural APE
Aligment footprint
Parcel

Figure A7



Source: URS/HMM/Arup JV, 2013; JRP, 2013.
Image source: ESRI

November 22, 2013

N

0 500 1,000
Feet

0 250 500
Meters

CEQA-only historical resource
Section 106 historic property
Section 106 Historic Property (canal)

Alternative alignments
Architectural APE
Aligment footprint
Parcel

Figure A8

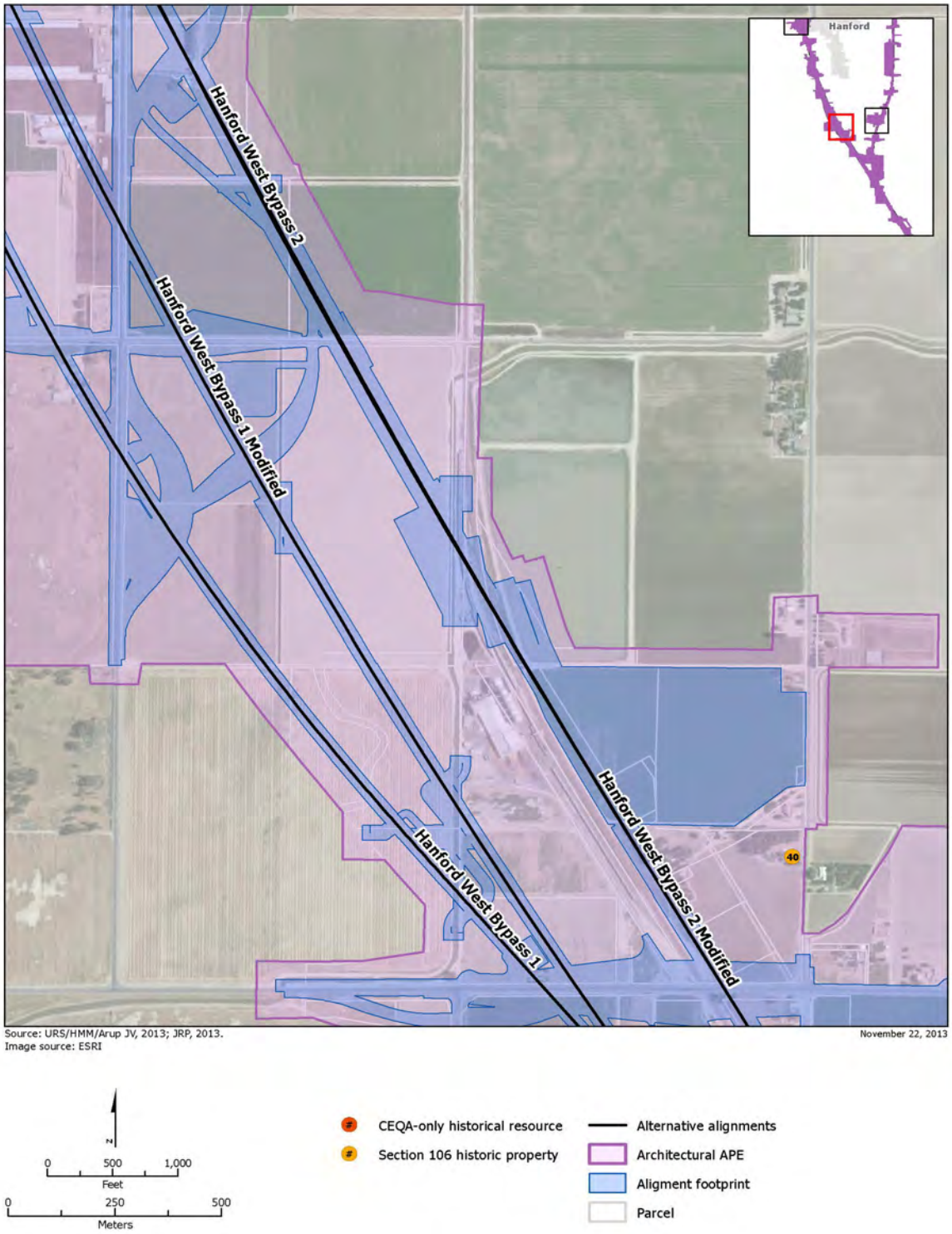
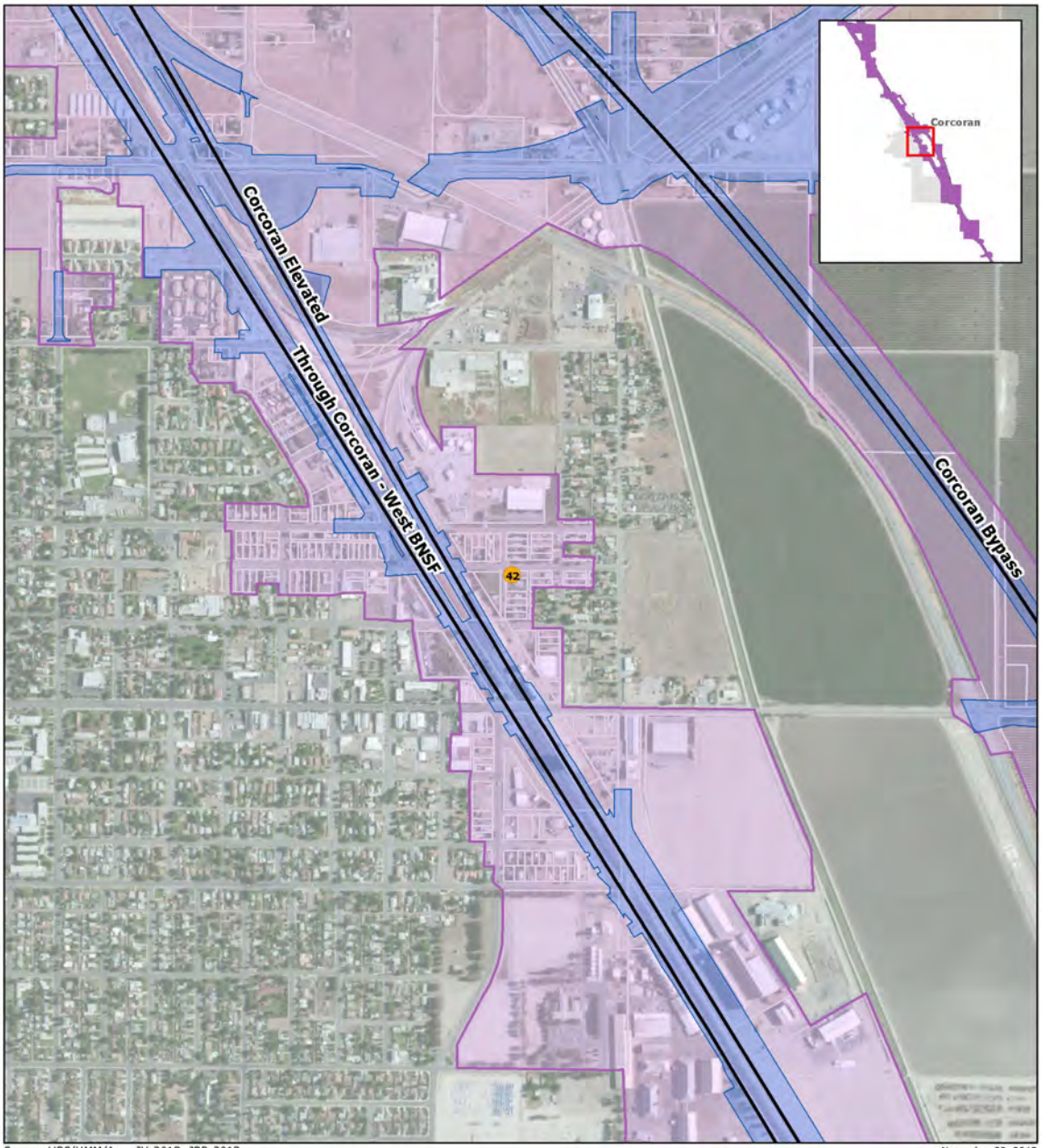

Hanford
Hanford West Bypass 2
Hanford West Bypass 1 Modified
Hanford West Bypass 2 Modified
Hanford West Bypass 1
40
Source: URS/HMM/Arup JV, 2013; JRP, 2013.
Image source: ESRI
November 22, 2013
N
0 500 1,000
Feet
0 250 500
Meters
CEQA-only historical resource
Section 106 historic property
Alternative alignments
Architectural APE
Aligment footprint
Parcel

Figure A9



Source: URS/HMM/Arup JV, 2013; JRP, 2013.
Image source: ESRI

November 22, 2013

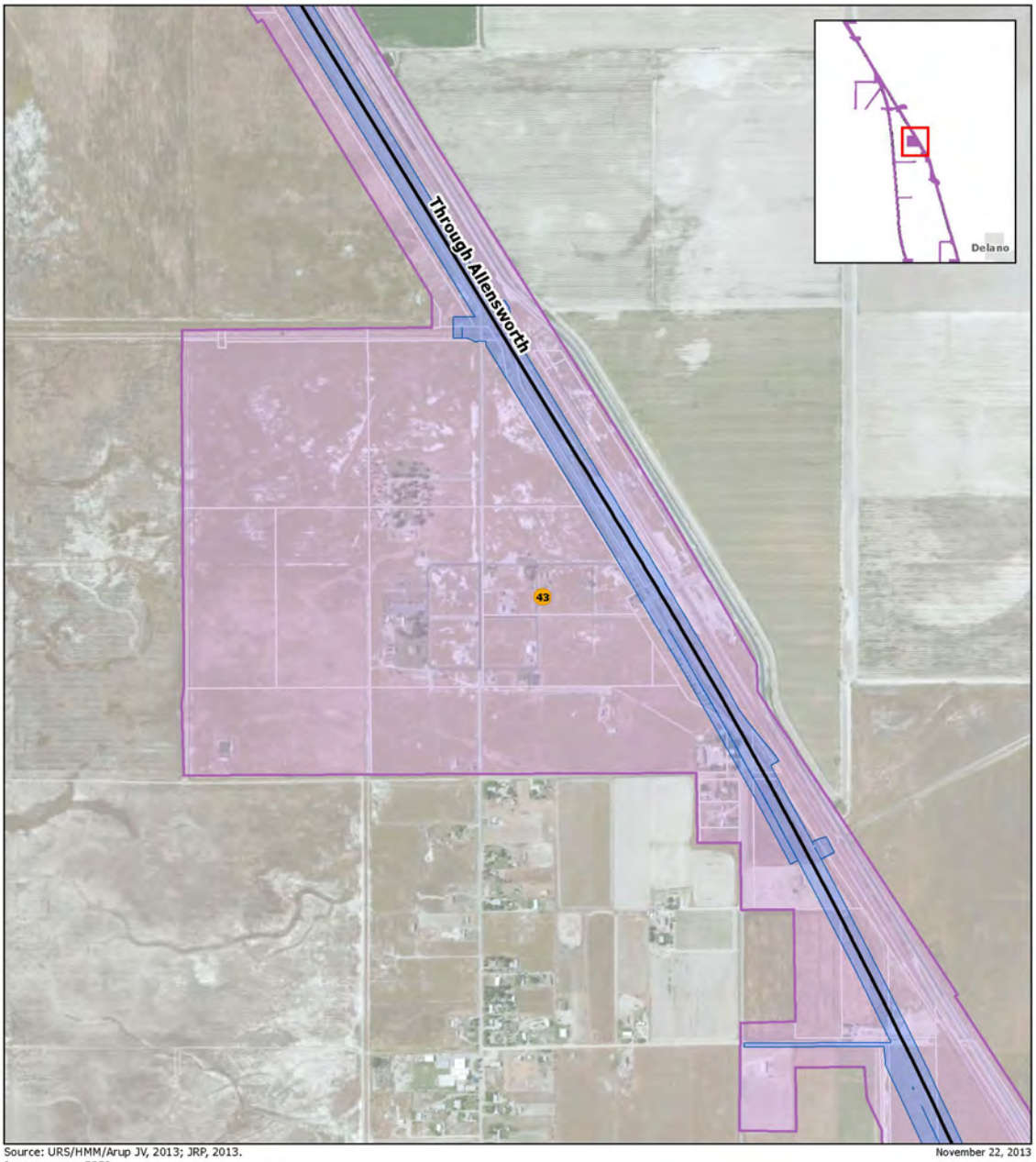
N

0 500 1,000
Feet

0 250 500
Meters

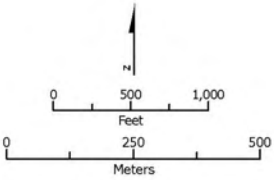
CEQA-only historical resource
Section 106 historic property
Alternative alignments
Architectural APE
Aligment footprint
Parcel

Figure A10



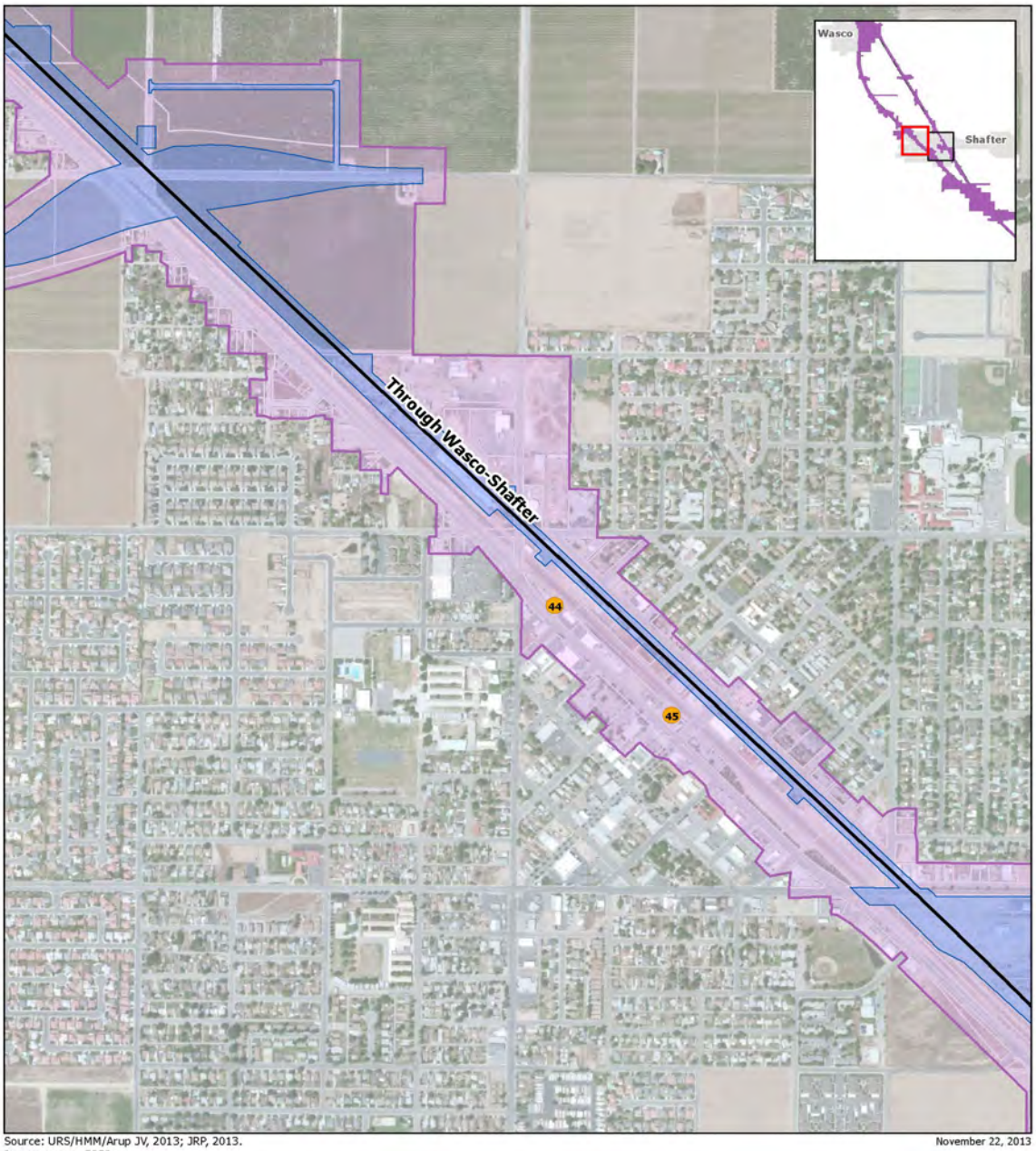
Source: URS/HMM/Arup JV, 2013; JRP, 2013.
Image source: ESRI

November 22, 2013



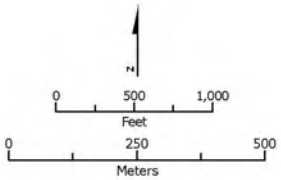
CEQA-only historical resource
Section 106 historic property
Alternative alignments
Architectural APE
Aligment footprint
Parcel

Figure A11



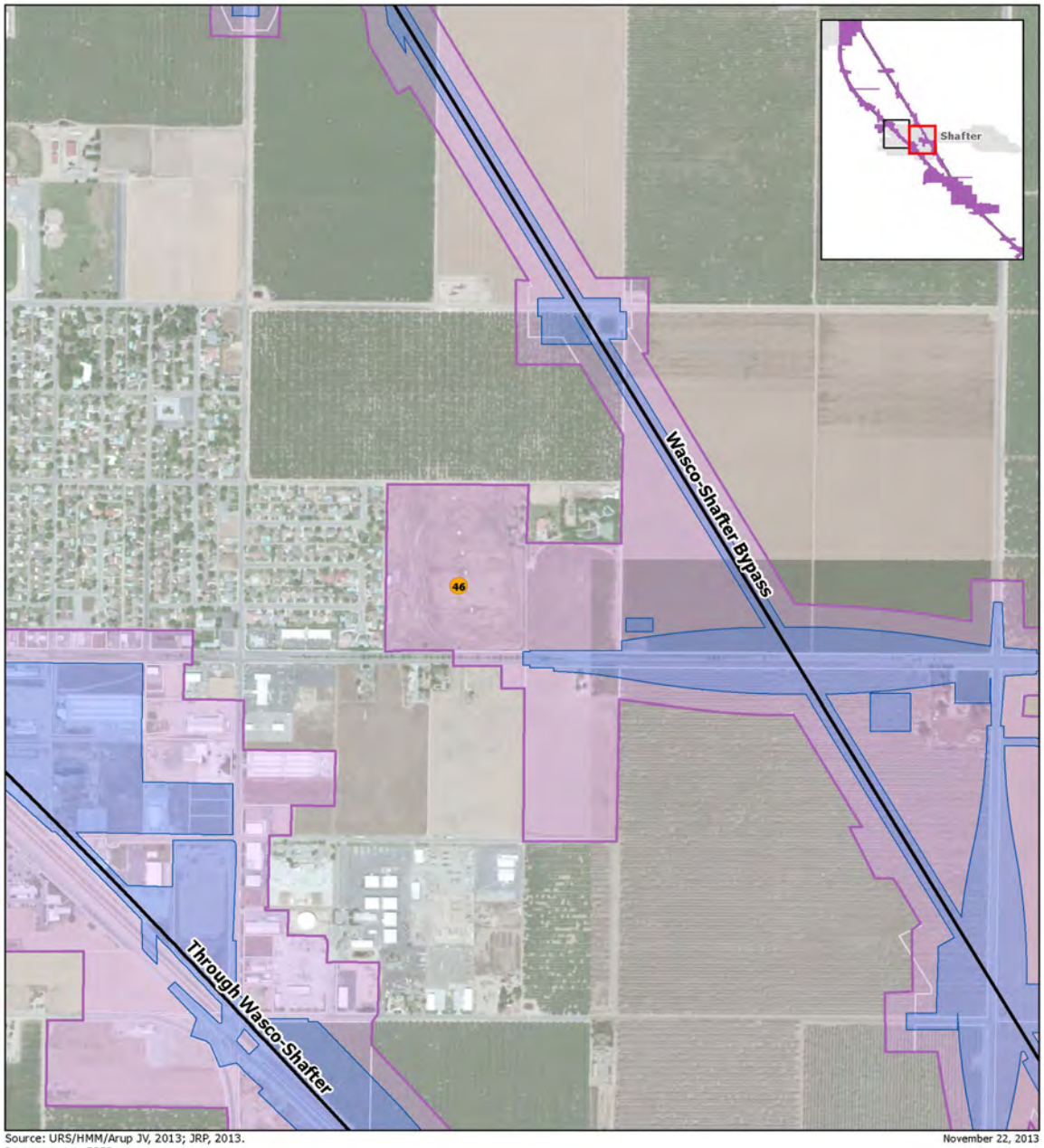
Source: URS/HMM/Arup JV, 2013; JRP, 2013.
Image source: ESRI

November 22, 2013



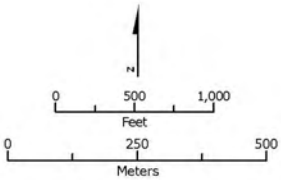
CEQA-only historical resource
Section 106 historic property
Alternative alignments
Architectural APE
Aligment footprint
Parcel

Figure A12



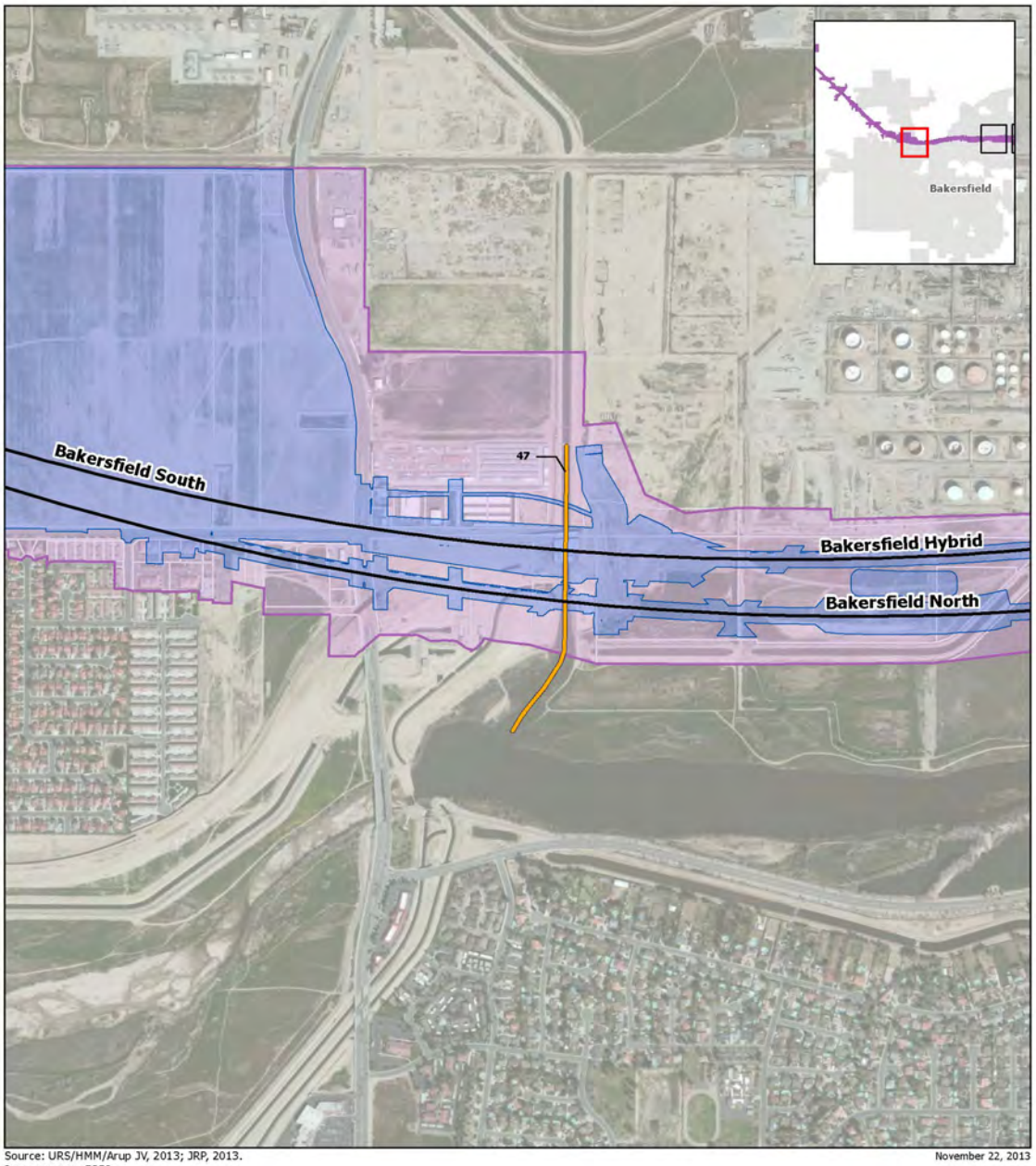
Source: URS/HMM/Arup JV, 2013; JRP, 2013.
Image source: ESRI

November 22, 2013



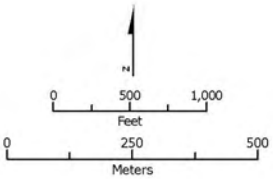
CEQA-only historical resource
Section 106 historic property
Alternative alignments
Architectural APE
Aligment footprint
Parcel

Figure A13



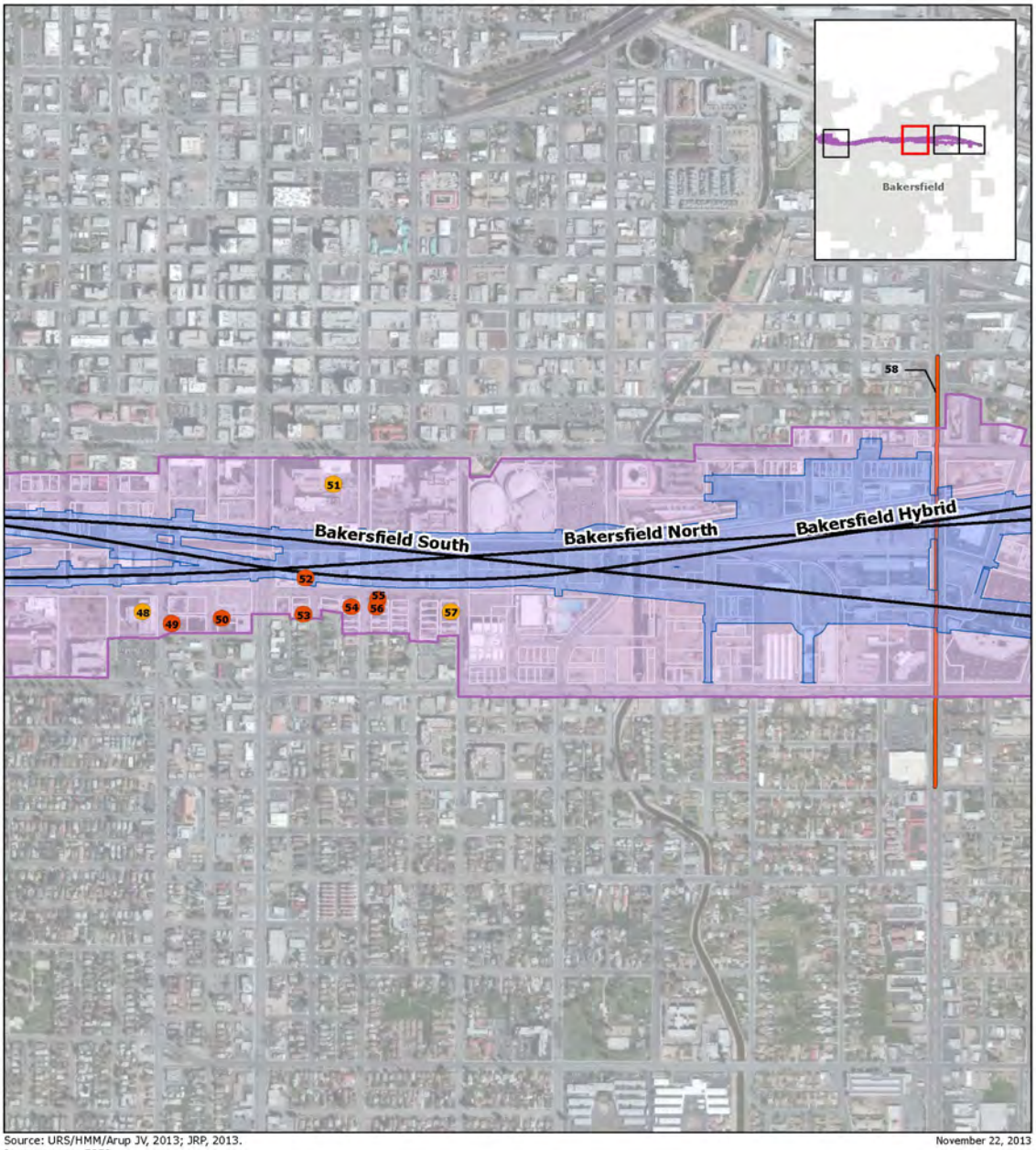
Source: URS/HMM/Arup JV, 2013; JRP, 2013.
Image source: ESRI

November 22, 2013



CEQA-only historical resource
Section 106 historic property
Section 106 Historic Property (canal)
Alternative alignments
Architectural APE
Aligment footprint
Parcel

Figure A14



Source: URS/HMM/Arup JV, 2013; JRP, 2013.
Image source: ESRI

November 22, 2013

N

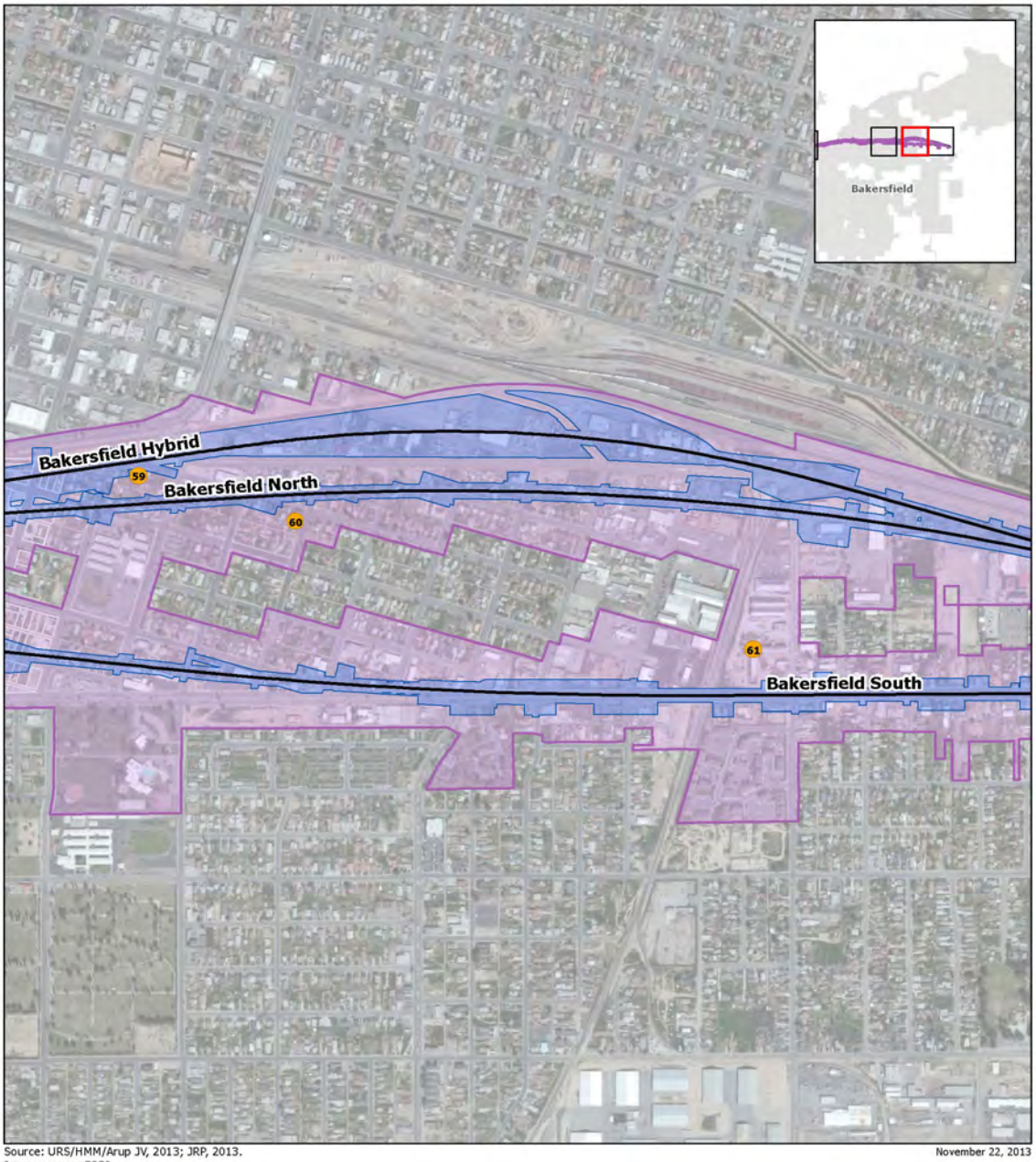
0 500 1,000
Feet

0 250 500
Meters

CEQA-only historical resource
Section 106 historic property
Section 106 Historic Property (Union Avenue Corridor)

Alternative alignments
Architectural APE
Aligment footprint
Parcel

Figure A15



Source: URS/HMM/Arup JV, 2013; JRP, 2013.
Image source: ESRI

November 22, 2013

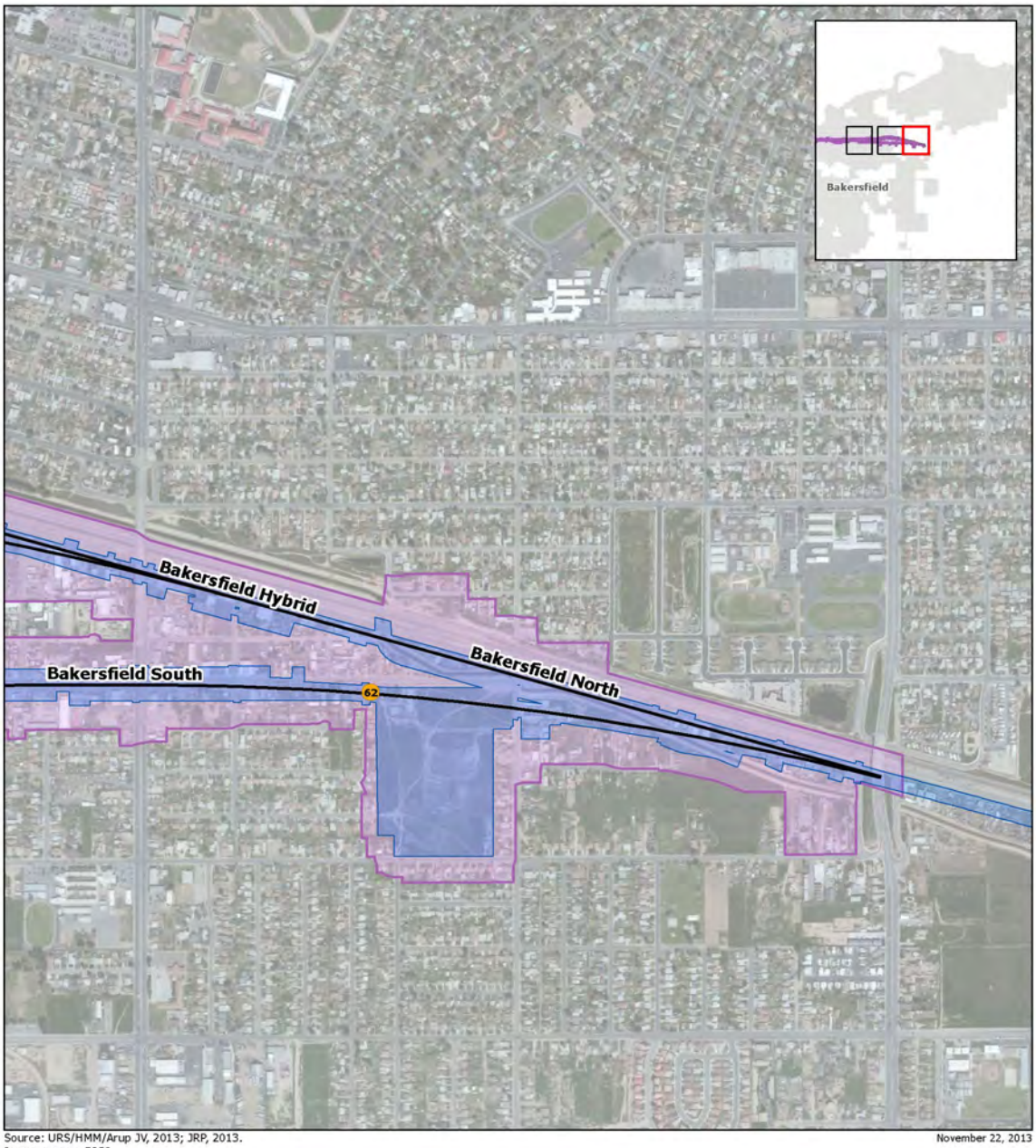
N

0 500 1,000
Feet

0 250 500
Meters

CEQA-only historical resource
Section 106 historic property
Alternative alignments
Architectural APE
Aligment footprint
Parcel

Figure A16



Source: URS/HMM/Arup JV, 2013; JRP, 2013.
Image source: ESRI

November 22, 2013

N

0 500 1,000
Feet

0 250 500
Meters

CEQA-only historical resource
Section 106 historic property
Alternative alignments
Architectural APE
Aligment footprint
Parcel

Figure A17