

SUPPLEMENTAL HISTORIC PROPERTY SURVEY REPORT

1. UNDERTAKING DESCRIPTION AND LOCATION

District	County	Route (Local Agency)	Local Assistance Project Prefix	Post Miles (Project No.)	Charge Unit (Agreement)	Expenditure Authorization (Location)
03	Sac	City of Sacramento		N/A		03-965100 3ENVR

Project Description:

The City proposes to expand the existing Station to meet current needs and to establish a state-of-the-art regional transportation center to meet future needs of rail and bus transit passengers and service operators in the Sacramento region through the year 2025 and beyond. Developed in phases, the Sacramento Intermodal Transportation Facility (SITF) (proposed project) would encompass a realignment of existing mainline rail tracks (Phase 1), improvements to the existing Station (Phase 2), and eventual transformation of the Station into a multimodal transportation center (Phase 3).

The proposed undertaking would provide a centralized transfer point for regional passenger rail, light rail, and bus services (Figure 1 of Attachment A). In the near term, the City proposes to implement Phase 1, relocating the existing rail and passenger tracks and facilities. In subsequent phases, the City proposes to improve the existing Station, expand the facility, and provide new uses to meet projected service levels and passenger growth.

The proposed undertaking encompasses approximately 33 acres (ac), including the existing Station facilities that are owned by the City. The City is in the process of acquiring land for the project immediately north of the Station, which contains the approximately 3,300-foot (ft.)-long Union Pacific Railroad (UPRR) rail corridor (current alignment and proposed realignment) (Figures 2 and 3 of Attachment A).

The remainder of this project description presents newly added components of the proposed undertaking, all of which are proposed under Phase 1 of the undertaking. The reader is referred to the original project HPSR for additional project description. The bulleted list below lists the new or modified project components.

- Constructing a new passenger platform tunnel under the relocated tracks.
- Constructing a pedestrian/bicycle walkway from the passenger platform tunnel to the Depot building on the south side of the rail corridor.
- Constructing the pedestrian ramp and staircase from the passenger platform tunnel to the north side of the rail corridor opening into the north side of the rail corridor.
- Construction of two underground tunnels (West Pedestrian Tunnel and West Service Tunnel) in the western portion of the APE.

2. AREA OF POTENTIAL EFFECTS

The Area of Potential Effects (APE) for the project was established in consultation with Gail St. John, Principal Architectural Historian, and Steve Propst, District Local Assistance Engineer, on _____. The APE maps are located in Figure 3 of Attachment A in this Historic Property Survey Report.

The APE is depicted in Figure 3 of Attachment A. The APE for this undertaking was established by Caltrans in accordance with Stipulations VI.B.7 and VIII.A of the PA. Figure 3 of Attachment A also depicts the changed and new components of the proposed undertaking. The direct APE follows the maximum possible area of direct impact resulting from the proposed project, including all new construction, easements, and staging areas. An area of direct impact (ADI) is also defined for the new and changed components of the undertaking. The horizontal and vertical limits of the ADI for the new and changed components of the undertaking were defined in consultation with TranSystems, the project engineering firm, and via examination of 30-percent design plans. The indirect APE is unchanged from that presented in the original project HPSR.

For the federal undertaking described in Part 1: To minimize redundancy and paperwork for the California Department of Transportation and the State Historic Preservation Officer, and in the spirit intended under the federal Paperwork Reduction Act (U.S.C. 44 Chapter 35), this document also satisfies consideration under California Environmental Quality Act Guidelines Section §15064.5(a) and, as appropriate, Public Resources Code §5024 (a)(b) and (d).

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3. CONSULTING PARTIES / PUBLIC PARTICIPATION

- Local Government (*Head of local government, Preservation Office / Planning Department*)
 - May 21, 2008, meeting among staff members from the City of Sacramento Planning Department, Caltrans, the FHWA, and the Office of Historic Preservation. Meeting topics included establishing the APE and the scope of cultural resource identification efforts. The meeting also included a field review of the project.
- Native American Tribes, Groups and Individuals
 - On August 27, 2008, ICF Jones & Stokes mailed letters, with project maps, describing the proposed undertaking and requesting direct communication about cultural resources information and project concerns. Follow-up telephone calls were placed on September 24, 2008. The letters and phone calls were placed to the following: Ms. Rose Enos (Maidu/Washoe), Mr. Kenneth Council (Miwok/Maidu), Mr. John Tayaba (Vice Chairperson, Shingle Springs Band of Miwok Indians), and the Tribal Preservation Committee of the United Auburn Indian Community of the Auburn Rancheria. No responses to the letters or phone calls have been received to date. See Appendix C of Attachment D in the original project HPSR.
- Native American Heritage Commission
 - On May 23, 2008, ICF Jones & Stokes requested (via electronic mail) a search of the Sacred Lands File and a list of local Native American contacts from the Native American Heritage Commission (NAHC). ICF Jones & Stokes followed up with a facsimile request on August 19, 2008, because no response had been received by that time. The NAHC responded by facsimile on August 20, 2008, indicating that the Sacred Lands File contained no record of Native American cultural resources in the APE. The NAHC also provided contact information for four individuals and one organization to correspond with concerning cultural resources. See Appendix C of Attachment D in the original HPSR.
- Local Historical Society / Historic Preservation Group (*also if applicable, city archives, etc.*)
 - California State Railroad Museum
 - Center for California Studies
 - Sacramento Old City Association
 - Sacramento Archives and Museum Collection Center
 - Sacramento County Historical Society
 - *(See Appendix C of Attachment C in the original project HPSR)*

4. SUMMARY OF IDENTIFICATION EFFORTS

- | | |
|---|---|
| <input checked="" type="checkbox"/> National Register of Historic Places | Month & Year: April 24, 2008 |
| <input checked="" type="checkbox"/> California Register of Historical Resources | Year: 2008 |
| <input checked="" type="checkbox"/> California Inventory of Historic Resources | Year: 1976 |
| <input checked="" type="checkbox"/> California Historical Landmarks | Year: 1996 & supplemental information to date |
| <input checked="" type="checkbox"/> California Points of Historical Interest | Year: 1992 & supplemental information to date |
| <input type="checkbox"/> State Historic Resources Commission | Year: 1980-present, minutes from quarterly meetings |
| <input checked="" type="checkbox"/> Caltrans Historic Highway Bridge Inventory | Year: 2006 & supplemental information to date |
| <input checked="" type="checkbox"/> Archaeological Site Records [<i>List names of Institutions & date below</i>] | |
| <ul style="list-style-type: none"> • Records search at the North Central Information Center of the California Historical Resources Information System on May 28, 2008. | |

For the federal undertaking described in Part 1: To minimize redundancy and paperwork for the California Department of Transportation and the State Historic Preservation Officer, and in the spirit intended under the federal Paperwork Reduction Act (U.S.C. 44 Chapter 35), this document also satisfies consideration under California Environmental Quality Act Guidelines Section §15064.5(a) and, as appropriate, Public Resources Code §5024 (a)(b) and (d).

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- Other sources consulted [e.g., historical societies, city archives, etc. List names and dates below]
 - Sanborn Insurance Company maps, online database, Los Angeles Public Library.
- Results: (provide a brief summary of records search and research results, as well as inventory findings)
 - The records search indicated that 40 previous cultural resource studies had been conducted in and adjacent to the APE. The studies resulted in complete coverage of the APE. The records search also indicated that previously recorded cultural resources are located in the APE, including Transcontinental Railroad (CA-SAC-478-H), Southern Pacific Depot/Sacramento Valley Station and REA Building (P-34-1004), Jibboom Street Overhead (P-34-1374), I Street Viaduct (P-34-1375), 7th Street Historic-Era Refuse Deposit (P-34-1563/CA-SAC-942-H), 7th Street Railroad Trestle Bents (P-34-1562/CA-SAC-941-H), 6th Street Levee (P-34-1561/CA-SAC-940-H), West Sutter Lake-01 (archaeological resource), and Southern Pacific Railyards/Central Shops Historic District. See Attachments C and D in the original project HPSR for citations.
 - The only previously recorded cultural resource identified in the modified portion of the APE is the Southern Car Shops Slab Foundations (see Attachment B; also Attachment D in the original project HPSR).

5. PROPERTIES IDENTIFIED

- As assigned by FHWA, Caltrans has **determined** the following properties within the Project APE are **not eligible** for inclusion in the National Register of Historic Places:
 - The Southern Car Shops Slab Foundations (see Attachment B; also original project HPSR).

6. LIST OF ATTACHED DOCUMENTATION

- Project Vicinity, Location, and APE Maps (Attachment A)
- Supplemental Archaeological Survey Report (Supplemental ASR)
 - ICF Jones & Stokes, December 2008, prepared by Gabriel Roark; peer-reviewed by Daryl Noble, Caltrans (Attachment B)

7. HPSR to File

- Not applicable.
- **No properties requiring evaluation** are present within the Project APE.
- Properties **previously determined not eligible** for inclusion in the National Register of Historic Places, in consultation with the SHPO, or formally determined not eligible for inclusion in the National Register of Historic Places by the Keeper of the National Register are present within the Project APE. Copy of SHPO/Keeper correspondence is attached.
- Properties **previously determined eligible** for inclusion in the National Register of Historic Places, in consultation with the SHPO, or formally determined eligible for inclusion in the National Register of Historic Places by the Keeper of the National Register are present within the Project APE, but **will not be affected** by the undertaking. Copy of SHPO/Keeper correspondence is attached.
- As assigned by FHWA, Caltrans has determined a Finding of **No Historic Properties Affected**, according to Section 106 PA Stipulation IX.A and 36 CFR 800.4(d)(1), is appropriate for this undertaking.

8. HPSR to SHPO

- As assigned by FHWA, Caltrans has determined that there are properties evaluated as a result of the project that are **not eligible** for inclusion in the National Register of Historic Places within the Project APE. Under Section 106 PA Stipulation VIII.C, Caltrans requests SHPO's concurrence in this determination.

9. Findings for State-Owned Properties

- Not applicable; project does not involve Caltrans right-of-way or Caltrans-owned property.

SUPPLEMENTAL HISTORIC PROPERTY SURVEY REPORT

10. CEQA IMPACT FINDINGS

Not applicable; Caltrans is not the lead agency under CEQA.

11. SUPPLEMENTAL HPSR PREPARATION AND DEPARTMENT APPROVAL

Prepared by: *(sign on line)*

Consultant / discipline:

Gabriel Roark, Archaeologist

Date

Affiliation

ICF Jones & Stokes, Sacramento, CA

Reviewed for approval by: *(sign on line)*

District 3 Caltrans PQS
discipline/level:

Daryl Noble
PQS: PI—Prehistoric Archaeology

Date

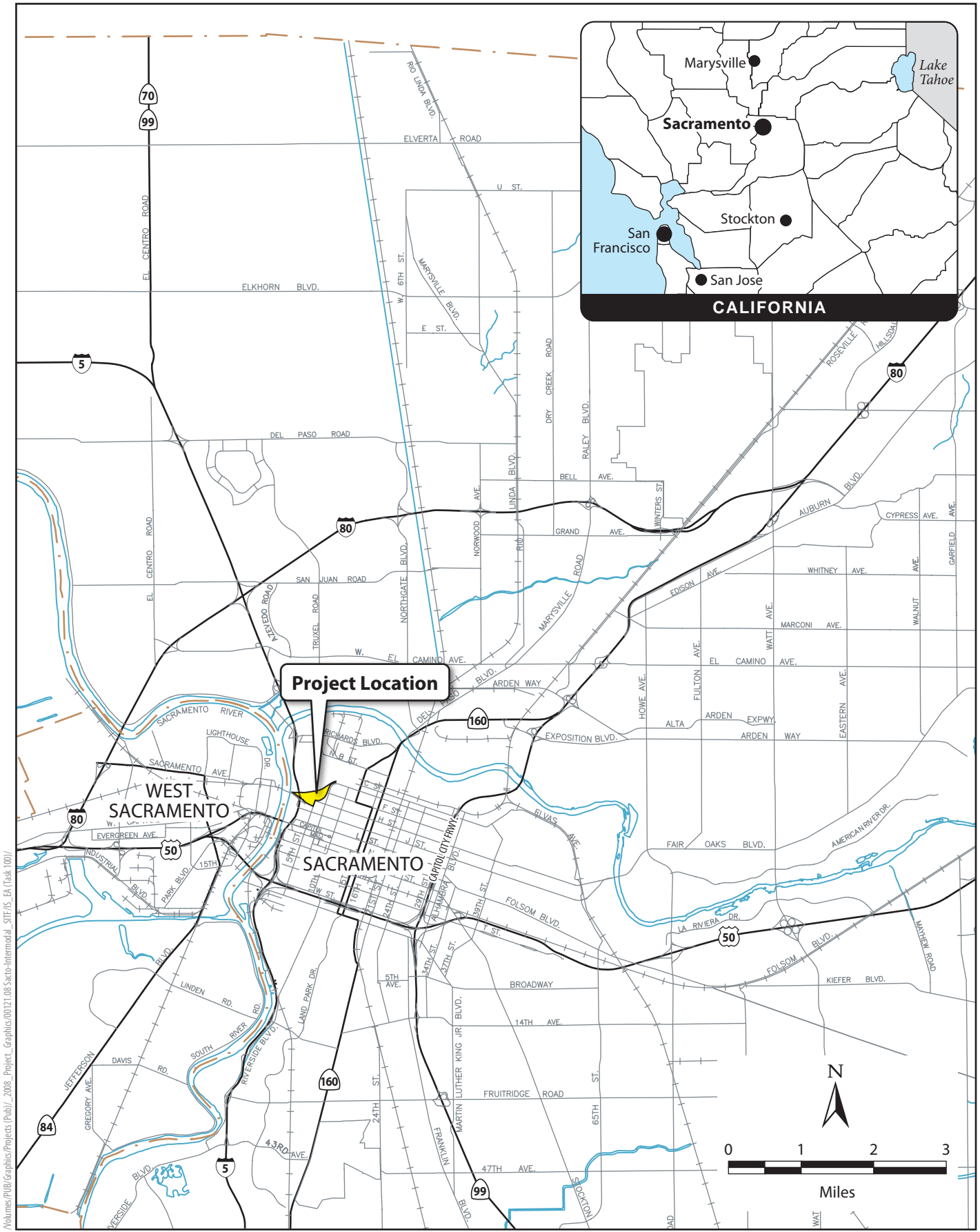
Approved by: *(sign on line)*

District 3 EBC:

Susan D. Bauer, Chief
Office of Environmental Management, M1

Date

Attachment A. Project Vicinity, Location, and APE Maps



Volume/PUB/Graphics/Projects (Pub)/_2008_Project_Graphics/01021_08_Sacro-Intermodal_STE/IS_EA (Task 1001/

Figure 1
Project Vicinity

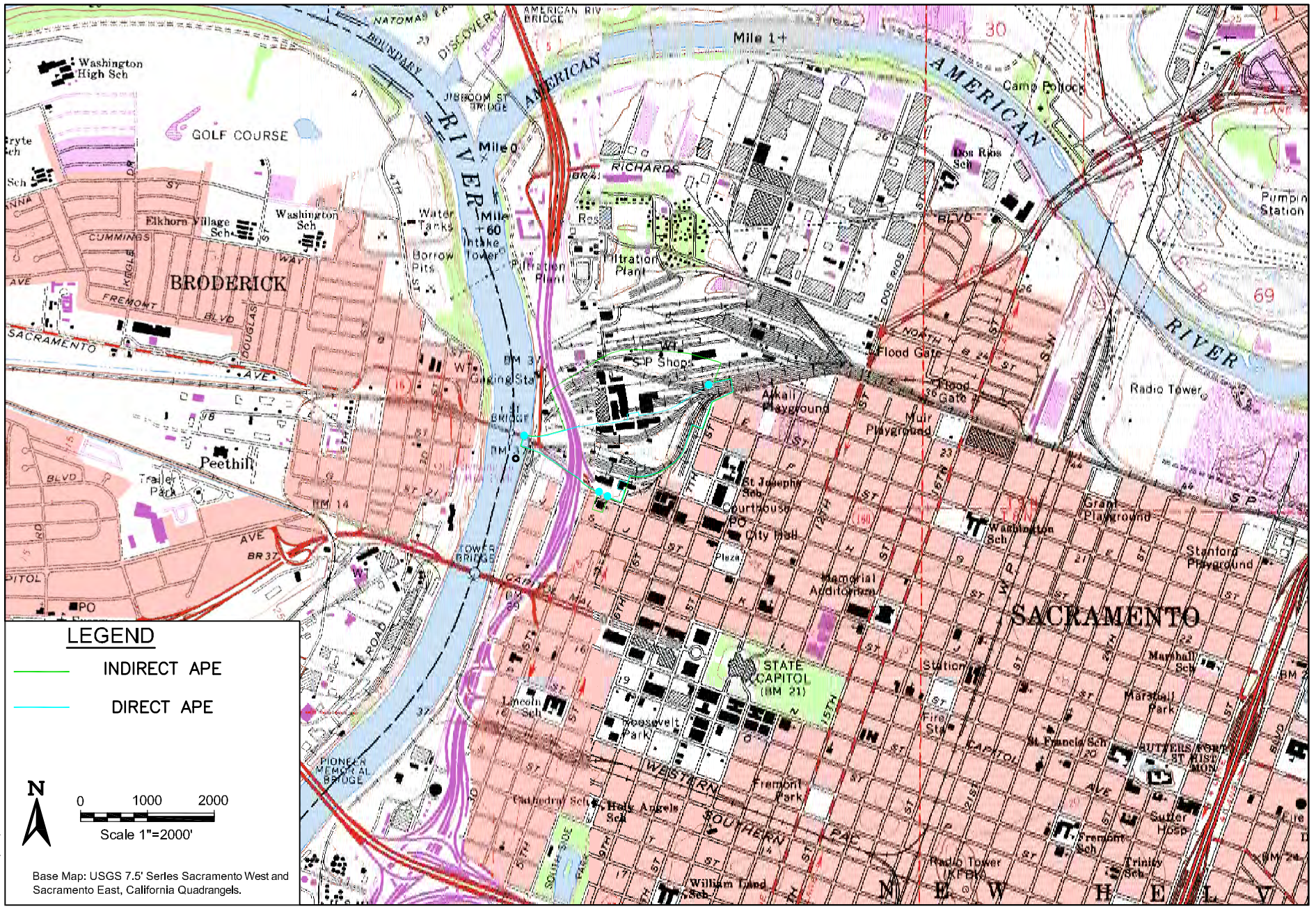
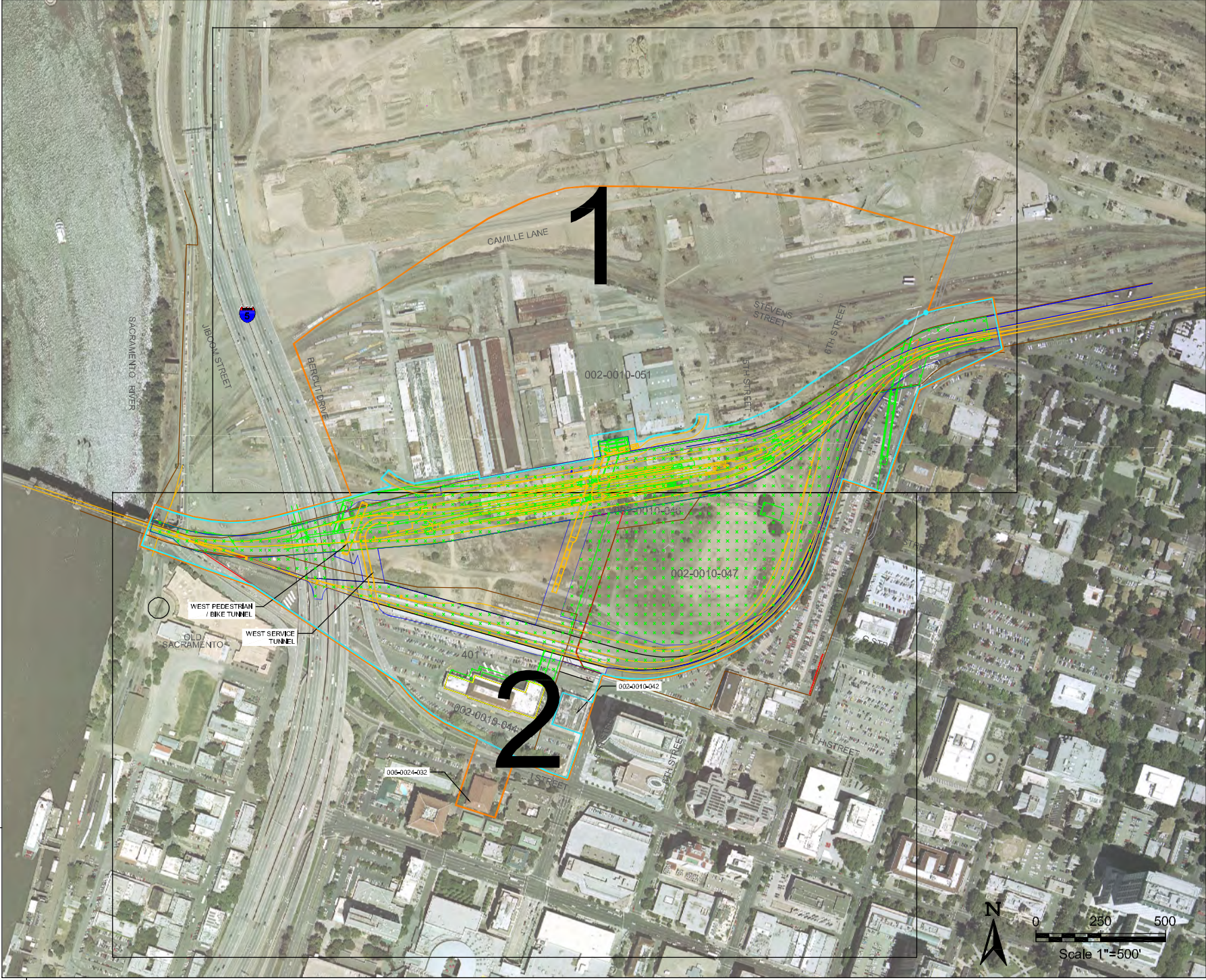


Figure 2
Project Location

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Supplemental Area of Potential Effects Sacramento Intermodal Transit Facility and Track Relocation Project



LEGEND

- + + + + + PHASE 1
- DIRECT APE
- INDIRECT APE
- PARCEL LINE
- AREA OF DIRECT IMPACT

AREA OF POTENTIAL EFFECTS

Approved by: _____ Date _____
 Gail St. John
 PQS level: Principal Architectural Historian
 Caltrans, District 3
 North Region Office of Environmental Support

 Steve Propst
 District Local Assistance Engineer
 Caltrans, District 3

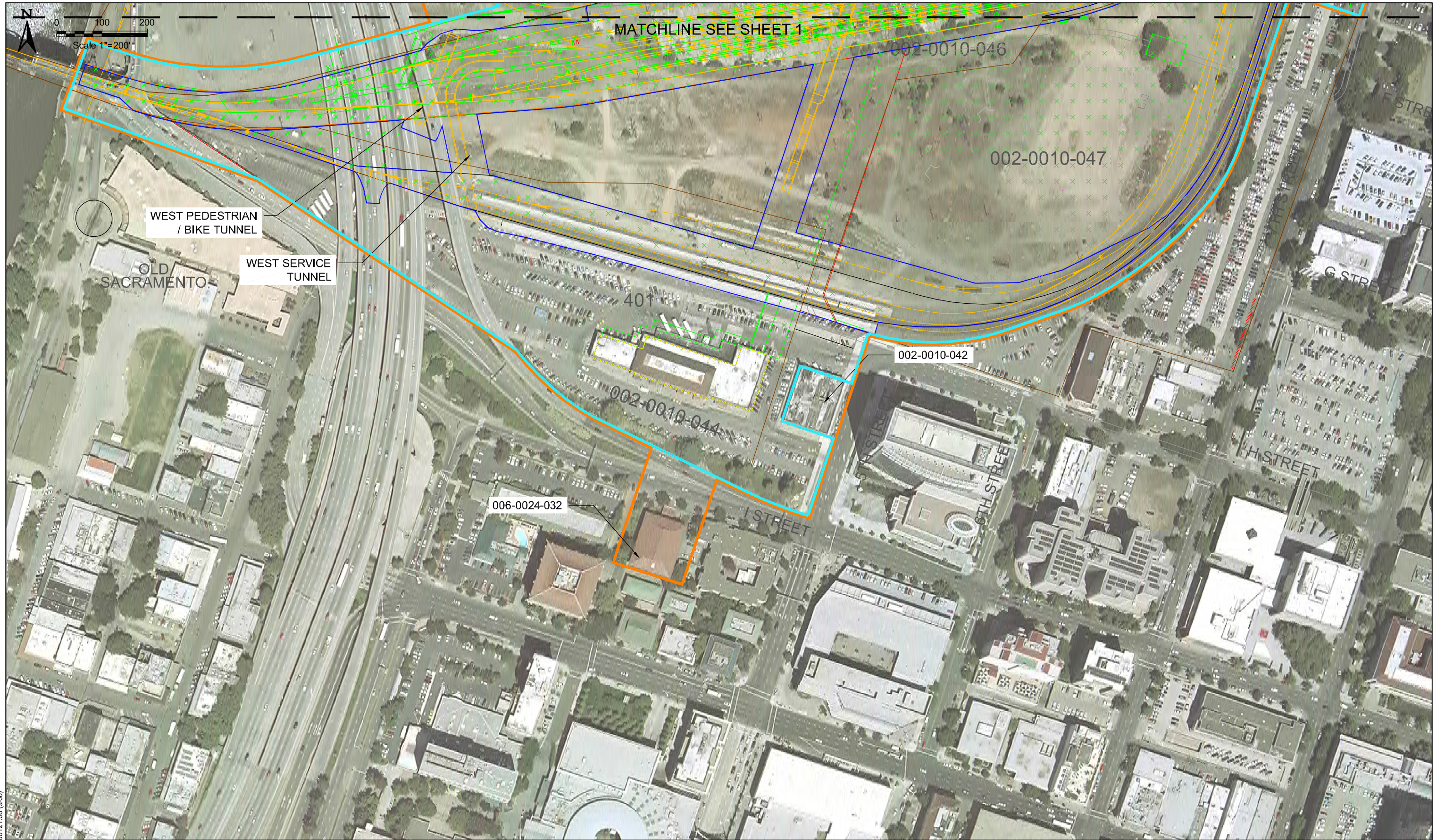
00121.08 (9/08)

Figure 3a
Supplemental Area of Potential Effects
Sacramento Intermodal Transit Facility and Track Relocation Project



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Figure 3b
Supplemental Area of Potential Effects
Sacramento Intermodal Transit Facility and Track Relocation Project



00121.08 (9/08)

Figure 3c
Supplemental Area of Potential Effects
Sacramento Intermodal Transit Facility and Track Relocation Project

Attachment B. Supplemental Archaeological Survey Report

First Supplemental Archaeological Survey Report for the Sacramento Intermodal Transportation Facility,
City of Sacramento, Sacramento County, California

03-Sac-00
PM
EA 03-965100 3ENVR
Sacramento Intermodal Transportation Facility

USGS 7.5-minute Quadrangle: Sacramento East, CA (PR1980); Sacramento West, CA (PR1980)

Size of Study Area is approximately 33 acres

Keywords: T 9 N, R 4 E, M.D.B.M.; City of Sacramento; Sacramento County; archaeological survey; P-34-1563/CA-SAC-942-H (7th Street Historic-Era Refuse Deposit); P-34-1562/CA-SAC-941-H (7th Street Railroad Trestle Bents); P-34-1561/CA-SAC-940-H (6th Street Levee); CA-SAC-478-H (Transcontinental Railroad); Ancillary Train Shed Curbs; Train Shed Curbs; Casting Shop Kilns; Pattern Storage Shop Slab Foundations; SPRR Foundry Loading Ramp; Southern Car Shops Slab Foundations; West Sutter Lake-01

Prepared by:

Gabriel Roark, B.A., Archaeologist
ICF Jones & Stokes
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Sacramento, CA 95814

Reviewed by:

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PQS Principal Investigator—Prehistoric Archaeology
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Approved by:

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California Department of Transportation, District 3
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December 2008

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Acronyms and Abbreviations

ac	acres
ADI	Area of Direct Impact
APE	area of potential effects
Caltrans	and the California Department of Transportation
CHRIS	California Historical Resources Information System
City	City of Sacramento
FHWA	Federal Highway Administration
FSTIP	Federal Statewide Transportation Improvement Program
ft.	foot
NAHC	Native American Heritage Commission
NCIC	North Central information Center
NCIC	North Central Information Center
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
PA	January 1, 2004 <i>Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation</i>
PDF	portable document file
SACOG	Sacramento Area Council of Government
SITF	Sacramento Intermodal Transportation Facility
SPRR	Southern Pacific Railroad
Station	Sacramento Valley Station
supplemental ASR	supplemental archaeological survey report
UPRR	Union Pacific Railroad

Chapter 1. Summary of Findings

The Federal Highway Administration (FHWA) and the California Department of Transportation (Caltrans), in conjunction with the City of Sacramento (City), propose to expand the existing Sacramento Valley Station (Station) to meet current needs and to establish a state-of-the-art regional transportation center to meet future needs of rail and bus transit passengers and service operators in the Sacramento region through the year 2025 and beyond. The proposed undertaking requires federal funding from the FHWA and possibly the Federal Transit Administration and Federal Railroad Administration. The proposed undertaking consists of three phases, two of which (Phases 1 and 2) have been inventoried for the presence of historic properties (ICF Jones & Stokes 2008a, 2008b, 2008c). Phase 1 of the proposed undertaking includes the construction of a pedestrian tunnel between the Central Shops Historic District and the Station in addition to the relocation of the Union Pacific Railroad (UPRR) tracks and other improvements. Since submittal of the project Historic Property Survey Report to the State Historic Preservation Officer in November 2008, the City amended the design of the Phase 1 pedestrian tunnel and added two new tunnels (West Pedestrian Tunnel and West Service Tunnel) to the proposed undertaking. The City also provided additional design information for the Central Tunnel that changes the Area of Direct Impact (ADI) for construction of that element of the proposed undertaking. The purpose of this study is to evaluate the potential for the new and redesigned features of the undertaking to affect archaeological sites eligible for listing in the National Register of Historic Places (NRHP). This supplemental archaeological survey report (supplemental ASR) is intended to document compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, whose regulations pertain to federally funded undertakings and their impacts on historic properties. More specifically, this report was prepared in accordance with the January 1, 2004, *Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and the California Department of Transportation (PA)*. This report documents the results of a review of an archaeological records search previously conducted at the North Central Information Center (NCIC) of the California Historical Resources Information System (CHRIS) and a review of soil remediation and geotechnical documents pertinent to the modified portions of the Phase 1 area of potential effects (APE). No new archaeological survey was conducted because the area was surveyed on June 27, 2008, by ICF Jones & Stokes professional archaeologist Gabriel Roark. No new archaeological resources were identified as a result of the literature review documented in this supplemental ASR.

It is Caltrans' policy to avoid cultural resources whenever possible. If cultural resources cannot be avoided, additional work may be necessary. If buried cultural materials are encountered during construction, it is Caltrans' policy that work in that area must halt until a qualified archaeologist can evaluate the nature and significance of the find (California Department of Transportation 2001). Additional archaeological survey will be needed if the project limits are extended beyond the present survey limits.

Chapter 2. Introduction

PROJECT DESCRIPTION AND LOCATION

The City proposes to expand the existing Station to meet current needs and to establish a state-of-the-art regional transportation center to meet future needs of rail and bus transit passengers and service operators in the Sacramento region through the year 2025 and beyond. Developed in phases, the Sacramento Intermodal Transportation Facility (SITF) (proposed project) would encompass a realignment of existing mainline rail tracks (Phase 1), improvements to the existing Station (Phase 2), and eventual transformation of the Station into a multimodal transportation center (Phase 3).

The proposed undertaking would provide a centralized transfer point for regional passenger rail, light rail, and bus services (Figure 1). In the near term, the City proposes to implement Phase 1, relocating the existing rail and passenger tracks and facilities. In subsequent phases, the City proposes to improve the existing Station, expand the facility, and provide new uses to meet projected service levels and passenger growth.

The proposed undertaking encompasses approximately 33 acres (ac), including the existing Station facilities that are owned by the City. The City is in the process of acquiring land for the project immediately north of the Station, which contains the approximately 3,300-foot (ft.)-long Union Pacific Railroad (UPRR) rail corridor (current alignment and proposed realignment) (Figures 2 and 3a–3c).

For passenger rail and freight rail service, Phase 1 of the project would upgrade existing track and related facilities, eliminate a bottleneck, and reduce conflicts among transportation modes to result in increased capacity, more operational flexibility, and service improvements. In Phase 2, the City would implement minor improvements to the existing Station. Phase 3 would encompass further facility expansion and new uses to meet projected service levels and passenger growth.

Funding for the SITF project is included in the fiscal year 2007 Federal Statewide Transportation Improvement Program (FSTIP). This project also is included in the Sacramento Area Council of Government's (SACOG's) 2005/07 Metropolitan Transportation Improvement Program and *2006 Metropolitan Transportation Plan* (I.D. SAC20350).

The remainder of this description of the undertaking presents newly added components of the proposed undertaking, all of which are proposed under Phase 1 of the undertaking. Following the descriptive information, the report defines the ADI for the new components of the undertaking.

Phase 1—Track Relocation

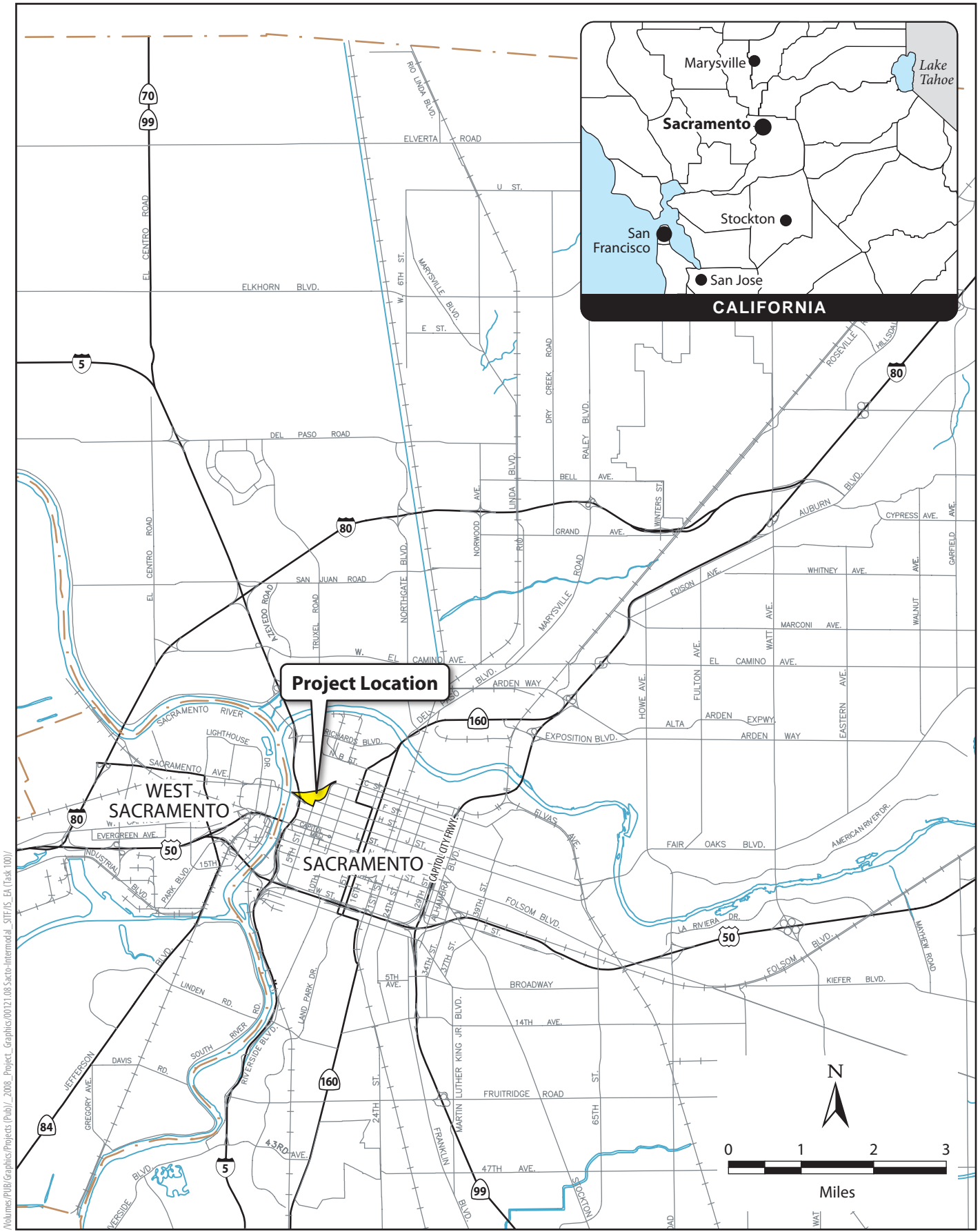
Phase 1 consists of the following components, which are identical for both build alternatives (Figures 3a–3c). The list below identifies all Phase 1 components of the proposed undertaking; components marked in underline text have been changed since submittal of the SITF HPSR or added to the undertaking (ICF Jones & Stokes 2008a, 2008b, 2008c). Only new and changed components of the undertaking are described in detail, as the remaining components are adequately described in ICF Jones & Stokes (2008a, 2008b, 2008c).

- Preparing the new alignment for relocation of the existing mainline freight and passenger tracks.
- Installing new freight tracks, new passenger tracks, and associated equipment within the platform area.
- Constructing new double-sided passenger platforms.
- Constructing a new passenger platform tunnel (Central Tunnel) under the relocated tracks.
- Constructing a pedestrian/bicycle walkway from the passenger platform tunnel to the Depot building on the south side of the rail corridor.
- Constructing the pedestrian ramp and staircase from the passenger platform tunnel to the north side of the rail corridor opening into the north side of the rail corridor.
- Constructing a service access pathway from the Depot to the proposed new passenger tracks, consisting of an at-grade crossing of the tracks on the west side of the platforms, the service roadway between the platforms, and the paved drive between the Depot and the at-grade crossing.
- Removing the existing mainline tracks and passenger platforms behind the Depot once the new track alignment is operational. The ramps to the platform that are part of the existing pedestrian tunnel at the Depot would be subsequently connected to the new at-grade walkway.
- Construction of two underground tunnels (West Pedestrian/Bicycle Tunnel and West Service Tunnel) in the western portion of the APE.

New Platforms and Passenger Platform Tunnel Connections

On the north side of the proposed rail corridor, a new passenger tunnel would connect to grade in the adjacent Railyards development with stairs, an elevator, and possibly a future escalator. On the south side, a ramp would connect to grade and to a pedestrian walkway leading to the Depot. The tunnel, ramps, and pedestrian walkway would comply with the ADA. The asphalt walkway is not planned to have cover or landscaping as part of Phase 1.

Baggage service between the Depot and the new platforms would be by carts that travel at grade from the Depot and cross the tracks along the west side of the site. Baggage carts also may use the pedestrian tunnel. Amtrak prefers to have both options for its baggage service;



Volume/PUB/Graphics/Projects (Pub)/_2008_Project_Graphics/01021_08_Sacro-Intermodal_STE/IS_EA (Task 1001/

Figure 1
Project Vicinity

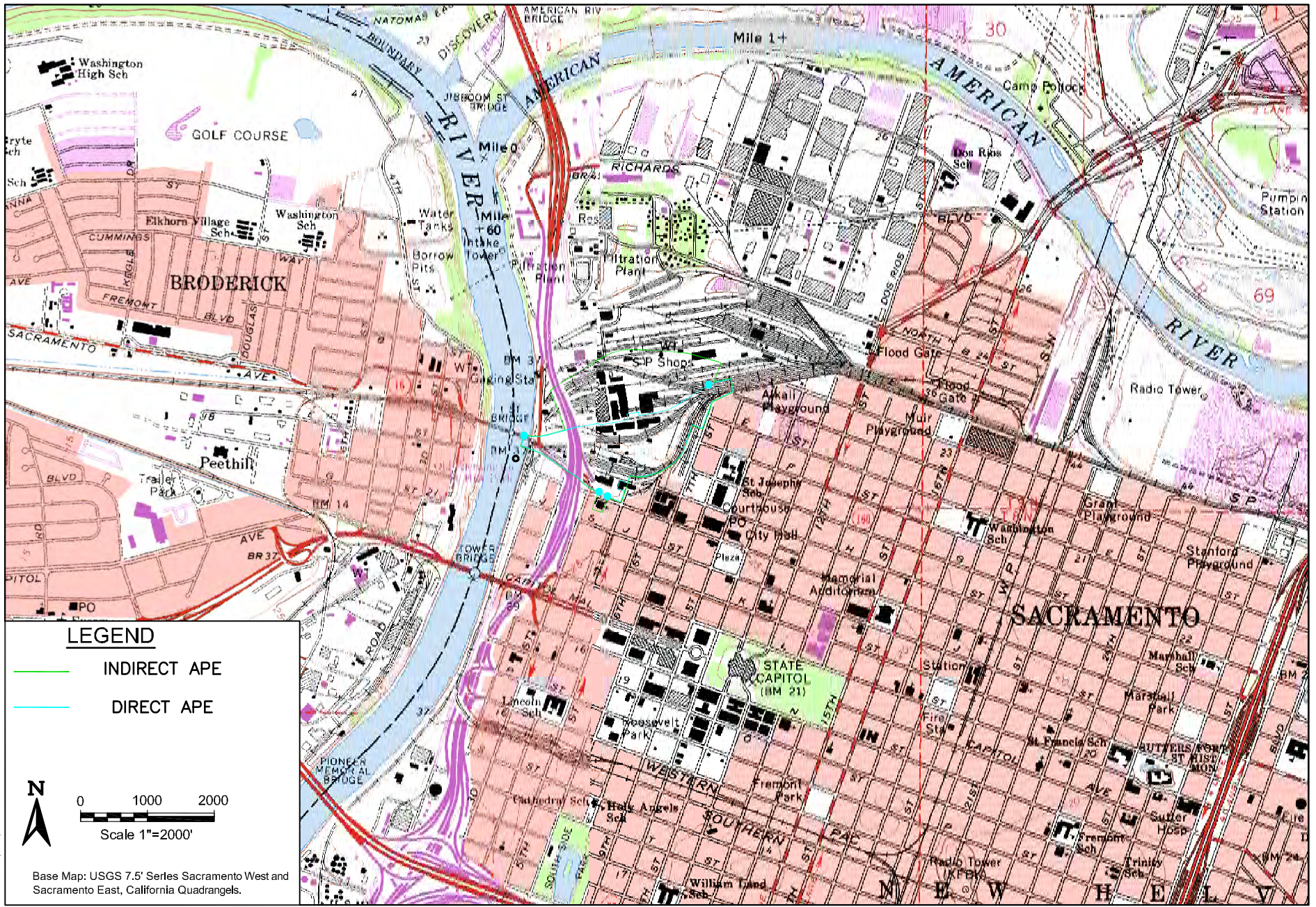
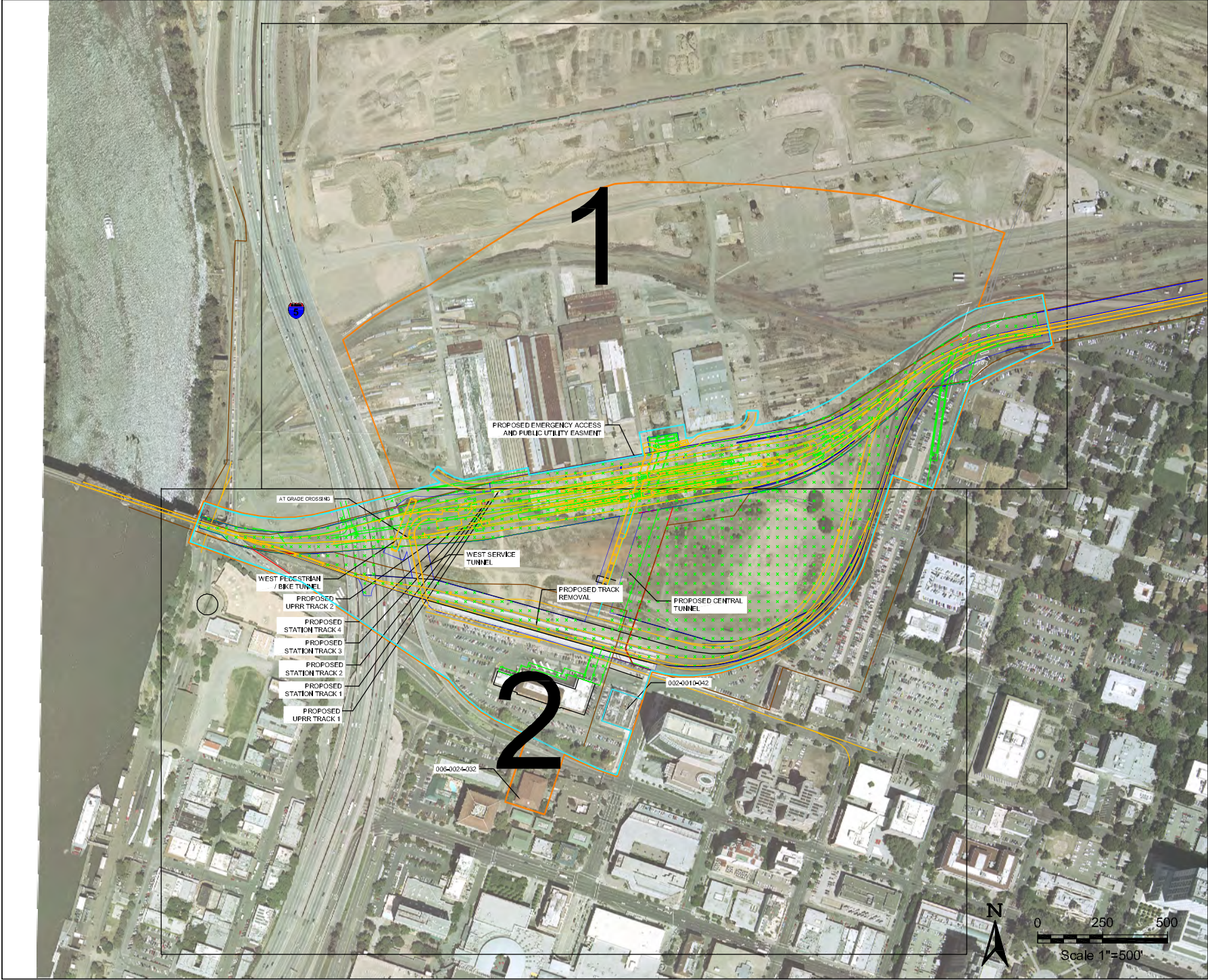







Figure 2
Project Location

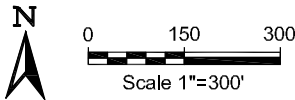
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Sacramento Intermodal Transit Facility and Track Relocation Project



LEGEND

-  PHASE 1
-  NEW PROJECT COMPONENTS
-  DIRECT APE
-  INDIRECT APE
-  AREA OF DIRECT IMPACT



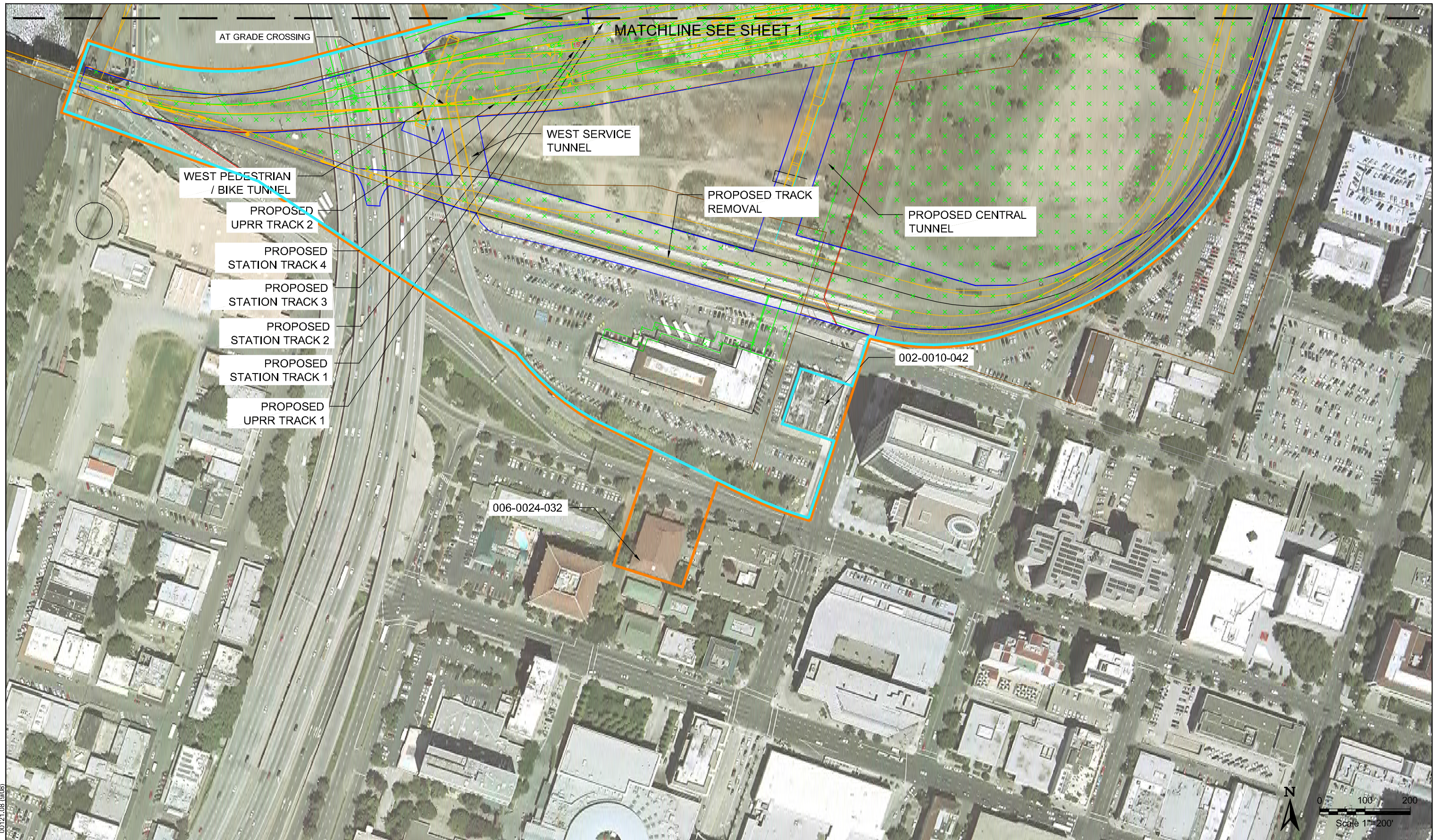
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Figure 3a
Archaeological Survey Coverage Map



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Figure 3b
Archaeological Survey Coverage Map



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Figure 3c
Archaeological Survey Coverage Map

therefore, the new passenger platform tunnel ramps may be configured to accommodate baggage carts. This baggage access from the central tunnel to the ramps would be equivalent to the existing tunnel and could only accommodate carts with a maximum of two trailers. Consistent with current operations, similar carts, providing what is known as Red-Cap Service, would also carry disabled passengers who are unable to walk to the passenger platforms, using either the west side crossing or the passenger platform tunnel.

The Central Tunnel would extend from its northern terminus at the Central Shops to a point approximately 323 ft. south, at which point the tunnel would merge to a ramp extending to the existing ground service, about approximately 200 ft. from the end of the tunnel. The Central Tunnel ramp will comply with ADA requirements, which include intermittent landings and handrails. The West Pedestrian/Bicycle Tunnel will be located under I-5 and the I-5 ramp and will extend to the proposed railroad right-of-way, where it will be blocked off for future expansion. The West Service Tunnel will be constructed along the outer edge of Caltrans' I-5 right-of-way, cross under the tracks, and tie into a proposed vehicle service road located between the tracks. Excavation for all tunnel construction will be limited to 25 ft. below present grade within 80-ft.-wide corridors.

AREA OF POTENTIAL EFFECTS

The APE is depicted in Figure 3a–3c. The APE for this undertaking was established by Caltrans in accordance with Stipulations VI.B.7 and VIII.A of the PA. Figure 3a–3c also depicts the changed and new components of the proposed undertaking. The direct APE follows the maximum possible area of direct impact resulting from the proposed project, including all new construction, easements, and staging areas. An ADI is also defined for the new and changed components of the undertaking.

The horizontal and vertical limits of the ADI for the new and changed components of the undertaking were defined in consultation with TranSystems, the project engineering firm, and via examination of 30-percent design plans (TranSystems 2008). The horizontal limits are depicted in Figures 3a–3c, whereas the vertical limits of the ADI are described below.

- Central Tunnel construction: Excavation would be 20 ft. below present grade within a 40-ft.-wide corridor. The tunnel would extend from its northern terminus at the Central Shops to a point 323 ft. south, at which point excavation would not exceed 3 ft. in depth to accommodate the Depot–tunnel pedestrian walkway. Construction of the Central Tunnel would be accomplished via open-cut excavation with 1:1 side slopes, necessitating an initial swath of excavation measuring 80 ft. wide that tapers with increasing depth. An 80-ft. wide excavation corridor is assumed for the tunnel.
- Central Tunnel Ramp construction: The Central Tunnel ramp connecting the tunnel to the depot will commence at the bottom elevation of the Central Tunnel and slope upward at a 1:12 slope ratio on a southerly bearing. At a point 200 ft. south of the tunnel's southern terminus, the ramp would reach the ground surface, connecting with a walking path to the Depot. The walking path would require no more than 3 ft. of

vertical excavation to build. An 80-ft. wide excavation corridor is assumed for the Central Tunnel Ramp.

- West Pedestrian/Bicycle Tunnel and West Service Tunnel: These tunnels will be excavated to a maximum depth of 25 ft. below present grade within corridors not to exceed 80 ft. in width to allow for 1:1 side slopes.

The new and changed components of the proposed undertaking all constitute at-grade and subgrade features. They therefore do not impose any change to the indirect APE identified in ICF Jones & Stokes (2008a, 2008b, 2008c).

Chapter 3. Sources Consulted

The identification efforts conducted for the new additions and changes to Phase 1 of the proposed undertaking consisted of a review of the SITF records search, as well as geotechnical and soil remediation reports relevant to the proposed undertaking.

RECORDS SEARCH AND LITERATURE REVIEW

ICF Jones & Stokes reviewed the records search results obtained on May 28, 2008 from the North Central Information Center (NCIC) of the California Historical Resources Information System (Record Search Number SAC-08-73; see ICF Jones & Stokes 2008c:Appendix B). The records search was conducted for the APE as well as a 0.25-mi buffer surrounding the APE. Sources consulted included base maps marked with the locations of previous cultural resource studies and known cultural resources and a detailed description of the results are provided in ICF Jones & Stokes (2008b, 2008c) and will not be reproduced here.

In addition to the records search, ICF Jones & Stokes consulted historic maps, photographs, and lithographs of the APE and vicinity (Baker 1854; Elliott 1890; Fire Department of the City of Sacramento 1857; Koch 1870; Ray 1873; Sanborn Map Co. 1915:Sheets 3–6, Sanborn Map Co. 1951; Sanborn-Perris Map Co. 1895:Sheets 4a–6b; Southern Pacific 1920).

The records search indicates that the entire APE has been previously surveyed for the presence of archaeological resources, the ICF Jones & Stokes (2008a, 2008b, 2008c) inventory and evaluation notwithstanding.

The records search, literature review, and archaeological reconnaissance of the direct APE resulted in the identification of 16 cultural resources, 12 of which constitute archaeological resources (ICF Jones & Stokes 2008a, 2008b, 2008c). The archaeological resources are:

- 7th Street Historic-Era Refuse Deposit (P-34-1563/CA-SAC-942-H),
- 7th Street Railroad Trestle Bents (P-34-1562/CA-SAC-941-H),
- 6th Street Levee (P-34-1561/CA-SAC-940-H),
- West Sutter Lake-01 (historic artifacts, railroad refuse, and prehistoric isolate),
- Transcontinental Railroad (CA-SAC-478-H),
- Ancillary Train Shed Curbs,
- Train Shed Curbs,
- Casting Shop Kilns,
- Pattern Storage Shop Slab Foundations,
- SPRR Foundry Loading Ramp,

- Redwood Railroad Ties, and
- Southern Car Shops Slab Foundations.

A detailed description of these resources is presented in ICF Jones & Stokes (2008b, 2008c). Of these previously recorded cultural resources, only the Southern Car Shops Slab Foundations are located in the modified portion of the APE. It has been evaluated and determined not to constitute a historic property on its own merits or as a contributor to the Central Shops Historic District (ICF Jones & Stokes 2008a, 2008b).

In addition, five prehistoric archaeological sites have been recorded in downtown Sacramento: CA-SAC-34, CA-SAC-36, CA-SAC-37, CA-SAC-38, and an unnumbered site at 5th and H streets (Gross 2000:Figure 4; Walker et al. 2006:G-6). The discovery of CA-SAC-38 is especially consequential to an assessment of the prehistoric archaeological sensitivity of the APE. Both sites were identified beneath 9–10 ft. of historic fill (that is, 9–10 ft. below the present street surface). CA-SAC-38, once recorded as occupying the Cesar Chavez Plaza block, was found to extend north to the northern edge of H Street during excavation for the new city hall building and parking garage. Clearly, the APE has the potential to contain prehistoric archaeological deposits below the historic-period fill covering the area. High historic archaeological sensitivity for the APE is indicated, with numerous historic archaeological deposits and building foundations having been identified in the Railyards. Historic archaeological deposits and structural remnants in the Railyards are located beneath and within historic fill layers (Gross 2004; Jones & Stokes 2007a, 2007b; Tremaine & Associates 2008; Tremaine and Nelson 2006; Kim Tremaine, personal communication 2008).

NATIVE AMERICAN CONTACTS

On May 23, 2008, ICF Jones & Stokes requested (via electronic mail) a search of the Sacred Lands File and a list of local Native American contacts from the Native American Heritage Commission (NAHC). The NAHC responded by facsimile on August 20, 2008, indicating that the Sacred Lands File contained no record of Native American cultural resources in the APE. The NAHC also provided contact information for four individuals and one organization to correspond with concerning cultural resources. On August 27, 2008, ICF Jones & Stokes mailed letters, with project maps, describing the proposed undertaking and requesting direct communication about cultural resources information and project concerns. Follow-up telephone calls were placed on September 24, 2008. No responses to the letters or phone calls have been received to date. (ICF Jones & Stokes 2008c:Appendix C.)

HISTORICAL SOCIETY CONTACTS

On July 28, 2008, ICF Jones & Stokes sent letters to the California State Railroad Museum, the Center for California Studies, the Sacramento Archives and Museum Collection Center, and the Sacramento County Historical Society, describing the proposed project and requesting any information on potential cultural resources in the APE. (ICF Jones & Stokes 2008b: Appendix D.)

REVIEW OF GEOTECHNICAL AND SOIL REMEDIATION LITERATURE

ICF Jones & Stokes examined, in conjunction with historic maps, geotechnical and soil remediation reports that covered those portions of the APE that contain the new or changed project elements (Blackburn 1994; ENGEO 2008; ERM 2002; ERM-West n.d., 1994, 2004, 2006a, 2006b; Woodward-Clyde Consultants 1991). The purpose of this document review was to determine, for the newly added and changed components of the undertaking, at what depth(s) native soils are expected to occur and whether mapped, historic features no longer present on the ground surface are likely to be affected by construction activities. To aid this assessment, computer-aided design engineering specifications for the undertaking were overlain on portable document file (PDF) and JPEG scans of Sanborn fire insurance maps covering the APE. The overlays were georeferenced to reconcile the differing scales of the maps and design data. The assessment proceeded by checking each overlay for the presence of historic features within the changed and new portions of the Phase 1 ADI. Geotechnical and soil remediation reports were then examined to determine the extent of cut and fill in the vicinity of the identified historic features. Boring and excavation logs in these reports were examined for mention of artifact types consistent with the features identified.

Chapter 4. Investigative Resume

ICF Jones & Stokes archaeologist Gabriel Roark prepared this ASR. Mr. Roark holds a B.A. in anthropology (archaeological emphasis) from California State University, Sacramento, and has 9 years of professional experience in California archaeology and cultural resources management. Mr. Roark conducted an archaeological reconnaissance of the direct APE on June 27, 2008. Mr. Roark meets Caltrans' criteria for lead archaeological surveyor.

The *Depositional Environment of the APE* was written by ICF Jones & Stokes geomorphologist Jeff Peters, with assistance from the principal author. Mr. Peters holds an M.A. in geography from the University of Oregon and a B.A. in geology from Colby College. Mr. Peters has assisted ICF Jones & Stokes archaeologists with geomorphologic and geoarchaeological investigations in the Central Valley.

Chapter 5. Setting

The Prehistoric, Ethnographic, and Historical contexts for the APE, as well as a portion of the Environmental Context, are presented in ICF Jones & Stokes (2008a, 2008b) and will not be repeated in this supplemental ASR. The *Depositional Environment of the APE*, however, is reproduced herein, however, because it is important for later discussions in this report.

DEPOSITIONAL ENVIRONMENT OF THE APE

Prehistoric Geomorphic Setting (pre-1860s)

The APE is located at the confluence of the Sacramento and American rivers. Both of these rivers had different geographic positions relative to their current positions—the ancestral Sacramento River was generally situated in its present position, although it was considerably wider; the ancestral American River was positioned farther south (immediately north of the Central Shops) (ERM 2002:Figure 1-5; Ray 1873). Prior to being filled, the APE contained two water bodies, specifically oxbow lakes. The northern lake was known as Willow Lake, and the southern was referred to as Sutter Lake, Sutter Slough, or China Lake. These lakes, their edges, and their associated adjacent marshlands made up what is now the APE. (Baker 1854; Elliott 1890; Fire Department of the City of Sacramento 1857; Koch 1870; Sacramento Archives and Museum Collection Center 2002; Sanborn-Perris Map Co. 1895:Sheets 4 and 5.)

In prehistoric times and the early historic period, both lakes were connected to the Sacramento and American rivers by narrow channels through which floodwaters flowed, creating lakes during high water periods and marsh-like conditions during lower water periods (Walker et al. 2006). Sutter Lake's channels to the Sacramento and American rivers were breaches in the natural levees along the rivers' banks (Walker et al. 2007). Low-lying marshes bordered Sutter Lake to the north, while woodlands encompassed the lakes on all other sides (Baker 1854; Elliott 1890; Fire Department of the City of Sacramento 1857; Koch 1870; Sacramento Archives and Museum Collection Center 2002; Ray 1873; Sanborn-Perris Map Co. 1895:Sheets 4 and 5). An area of high ground, which in the early historic period became Slater's Addition or the American Fork Addition, projected into the west side of Sutter Lake (Baker 1854; Fire Department of the City of Sacramento 1857; Koch 1870; Ray 1873).

According to the Rosgen Level I valley classification, the APE in prehistoric times was located in a Type X (10) valley system (Rosgen 1996). A Type X valley system indicates a very wide, alluvium-dominated river environment with an extensive floodplain containing lacustrine deposits, alluvial flats, or wetlands (or all three). Since the Last Glacial Maximum, stream gradients most likely decreased (relative to the previous glacial period) as the Sacramento and American rivers adjusted to an influx of glacial melt-water sediments (Shlemon and Begg 1975). Channel form most likely consisted of meandering and anabranching (meandering with stable island formation) rivers with slightly sinuous to sinuous planform. Based on general geomorphic principles relating to floodplain sedimentation (Schumm 1981), floodplain development in the

project vicinity most likely consisted of lateral accretion of sediments on the edges of the rivers and vertical accretion of sediments farther out onto the floodplain.

As mentioned previously, in the prehistoric and early historic periods, Sutter and Willow lakes were connected to the Sacramento and American rivers by narrow channels through which floodwaters flowed, creating lakes during high water periods and marsh-like conditions during lower water periods (Walker et al. 2006). In general, inflowing channels control the physical sedimentation in lakes. Deposition of most of the sediment load is near the entry point of a lake in the form of deltas or fans. Bedload deposits are near the entry point and carry suspended load for varying distances into the lake. Although sediments fine outward into the lake, they coarsen upward as the lake fills (Davis 1983). In brief, the finest materials usually occur in the center of a lake, where the energy of deposition is lowest (Daniels and Hammer 1992). During high flow events, scour of the narrow channels and lakes would have been more pronounced. As floodwaters receded, sedimentation would have become the dominant geomorphic process.

Historic Geomorphic Setting (post-1860s)

Presently, the land surface in the APE is highly disturbed compared with prehistoric conditions. Rendering the area suitable for the Railyards and its associated buildings entailed the gradual filling of both Willow and Sutter lakes and the surrounding marshland. An impressive corpus of geotechnical tests and test logs numbering into the hundreds of individual tests for a portion of this work) reveals that the depth of fill deposits throughout the APE varies from 0.5 to 13 ft below ground surface.

Levees were constructed in phases starting as early as the 1850s. In 1862, the American River was rechanneled to meet the Sacramento River about 0.5 mi north of the Railyards property; the levees were strengthened; and, south and west of Sutter Lake, a decade-long effort of street-raising commenced. In some places, the streets were raised as much as 10 ft (Itogawa 1976:220–222; Lagomarsino 1976:199). Since the levee construction, the APE and surrounding area has still been subject to flooding. Flooding events have been marked primarily by deposition of overbank materials. Since 1905, the river has experienced several floods exceeding 90,000 cubic feet per second. These include flood events during the winter of 1927–1928, February 1986, and January 1997 (Redmond 2008).

Historic geomorphic river valley conditions were similar to those of prehistoric American River and Sacramento River geomorphology (Type X valley system). However, as Sutter and Willow lakes were filled, more levees were built and strengthened, and the American River was relocated to the north, the extensive floodplain sedimentation that dominated throughout the Holocene Epoch abruptly came to a halt. The APE and its surroundings became (and remain) a dry floodplain dominated by anthropogenic, not geomorphic, processes. Channel form now consists of meandering, channelized rivers with slightly sinuous planform with levees confining the channel in its position.

Topography and Surficial Geology

The alluvial deposits within the APE consist primarily of weathered and transported sedimentary, metamorphic, volcanic, and plutonic material derived from the Sierra Nevada mountain range to the east. The modern Sacramento and American rivers are incised into Pleistocene alluvium and terraces. Underlying these terraces and alluvial fans are several distinct gravel-filled channels laid down by ancestors of the present American River during the Pleistocene Epoch. (Shlemon 1972.)

The present-day, virtually flat topography of the APE is the product of land reclamation and early flood control efforts focused on Sutter Lake and the Sacramento and American rivers (Walker et al. 2007). The APE is located in one distinct geologic unit as identified by published geologic maps: Quaternary alluvium (Helley and Harwood 1985; Wagner et al. 1987).

Quaternary alluvial deposits are composed of loose to medium dense, unweathered gravel, sand, silt, and clay. These deposits form levees and floodplains east of the Sacramento River and south of the American River, respectively. It is estimated that these sediments were continuously deposited between 200 B.P. and 10,000 B.P. (Shlemon 1972.)

Soils and Stratigraphy

One distinct soil map unit as identified by the Soil Conservation Service (now called the Natural Resources Conservation Service) is present within the APE: Orthents-Urban land complex, 0 to 2 percent slopes (Tugel 1993). However, information about past depositional environments cannot be fully derived from the soil description for this soil map unit because of its anthropogenic alteration. Instead, subsurface stratigraphy provides the best insight.

The stratigraphy of the APE has been defined to a depth of approximately 250 ft below ground surface by ERM (2002:3-2 and 3-3) and subdivided into three general geologic sequences (below the surface unit, or artificial Fill Sequence). These sequences have been further subdivided into hydrostratigraphic zones for the purposes of groundwater monitoring. In descending order, the stratigraphy encountered to a depth of 250 ft below ground surface has been broadly divided by ERM (2002:Figure 3-2) into the Fill, Fining Upward, and Interbedded sequences (Figures 4–8).

Fill Sequence

The Fill Sequence, originating at the ground surface, consists of imported material used to fill low-lying areas of the APE. According to historical information, the ground surface was raised prior to the construction of associated facilities in the project vicinity in 1863, and the source of the fill is believed to be primarily from the adjacent waterways—especially sand dredged during the rechannelization of the American River (Lagomarsino 1976; Severson 1973:108–111). The exact contact between the Fill Sequence and the original ground surface prior to infilling is difficult to determine and doubtlessly varies across the APE as a result of

mild undulations present prior to filling. The Fill Sequence is defined by the presence of anthropogenic debris. The Fill Unit materials include gravel, sand, silt, and clay with occasional to frequent occurrences of brick fragments, wood fragments, concrete, slag, newspaper, and metal debris. Thickness of the Fill Unit ranges from 0.5 to 13 ft below ground surface. (ERM 2002:3-3 and 3-4.)

The stratigraphy of the Fill Sequence encountered in the soil investigation of the Central Shops area below the Fill Unit includes the Silty Sand Subunit and the Clayey Silt Subunit. The Silty Sand Subunit typically underlies the Fill Unit (described above) across the majority of the project area. It is characterized by interstratified fine sand and silt layers and locally can be clayey. The differentiation between the Fill Unit and the Silty Sand Subunit is based solely on the presence of anthropogenic debris; as such, the interface between the two units is not well-defined and is likely artificial. The thickness of the Silty Sand Subunit observed in Central Shops borings ranges from 5 to 26.5 ft. (ERM 2002:3-4.)

The Clayey Silt Subunit beneath the Silty Sand Subunit is composed of interstratified silts and clays and typically is found throughout the APE. The thickness of the Clayey Silt Subunit observed in Central Shops borings ranges from approximately 3 to 17 ft. Because of its occurrence at a consistent depth throughout the Project area, the Clayey Silt Subunit of the Fill Sequence is the first identifiable native soil layer. (ERM 2002:3-4.)

Fining Upward Sequence

The Fining Upward Sequence includes the hydrostratigraphic Sand and Gravel zones, which represent a thick sequence of saturated, unconsolidated alluvium. The hydrostratigraphic Sand Zone consists of three lithologic units that display a generally fining-upward trend from the underlying hydrostratigraphic Gravel Zone. (ERM 2002:3-5.)

In descending order, the hydrostratigraphic Sand Zone includes clay, silty sand, and sand. The upper portion of the hydrostratigraphic Sand Zone (the clay lithologic unit) is characterized by brown to grayish-green silt and clay with generally discontinuous sand intervals. This unit contains natural organic matter and root casts. The thickness of the clay unit varies considerably. The silty sand portion is characterized by silty fine to medium-textured sand. It is absent in many areas and is generally less than 20 ft thick where it does occur. The sand unit is characterized by medium to coarse sand that is occasionally gravelly and varies in thickness from approximately 10 to 40 ft thick. This unit contains dark-colored, ferromagnesium minerals and light-colored quartzo-feldspathic minerals. The contacts between the three lithologic units within the hydrostratigraphic Sand Zone are gradational. (ERM 2002:3-6.)

The underlying hydrostratigraphic Gravel Zone in the Fining Upward Sequence is characterized by sandy gravel and gravelly sand that are generally coarsest in the middle of the zone. Gravels appear as lenses in some areas. The gravel ranges from pea-size to cobble up to approximately 6 inches in diameter and is typically sub-rounded to rounded. The hydrostratigraphic Gravel Zone is composed of igneous and metamorphic alluvium with minor sedimentary clasts that were derived from the Sierra Nevada to the east. Sand in the

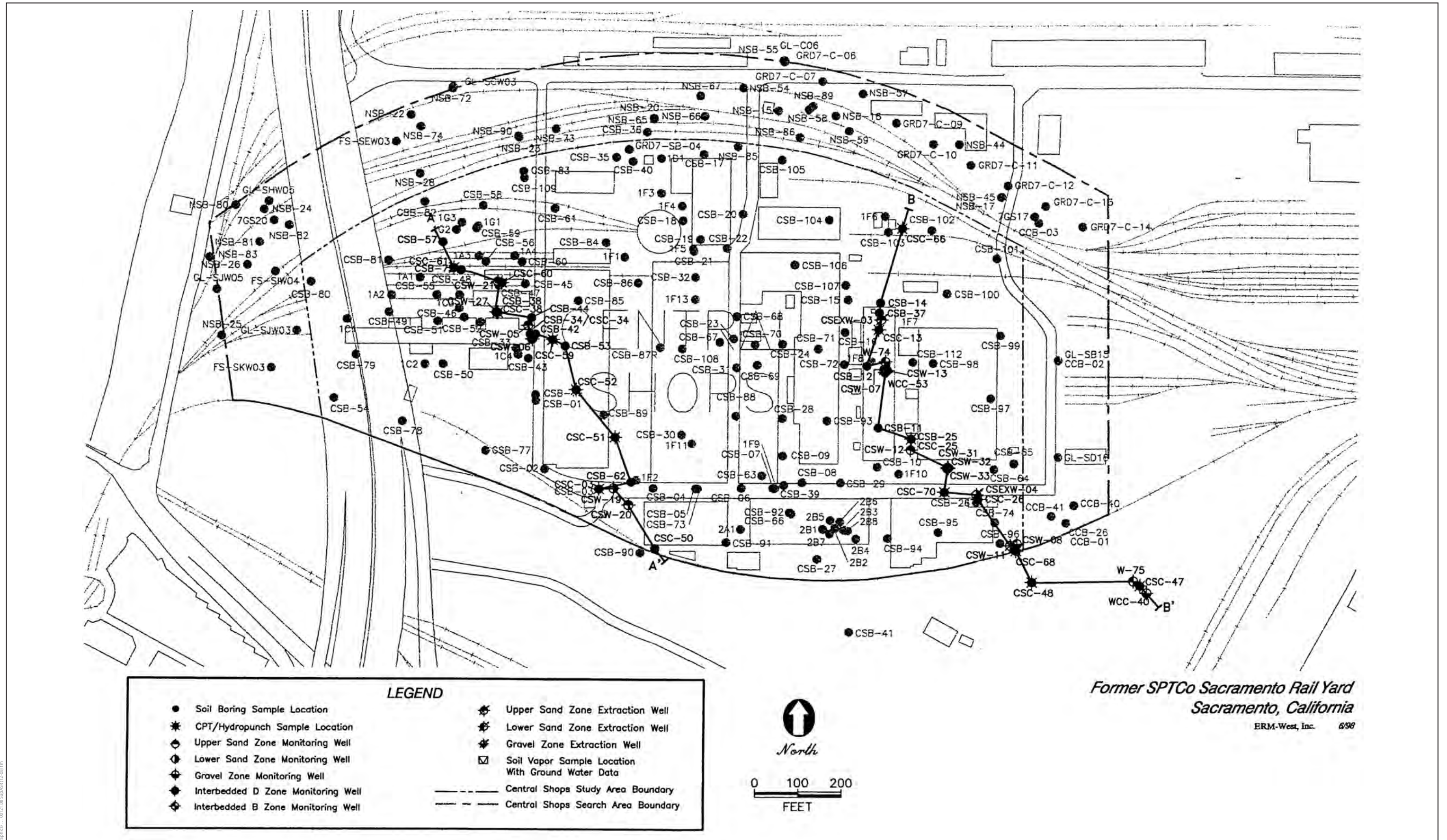


Figure 4
Geologic Cross Section Location Map

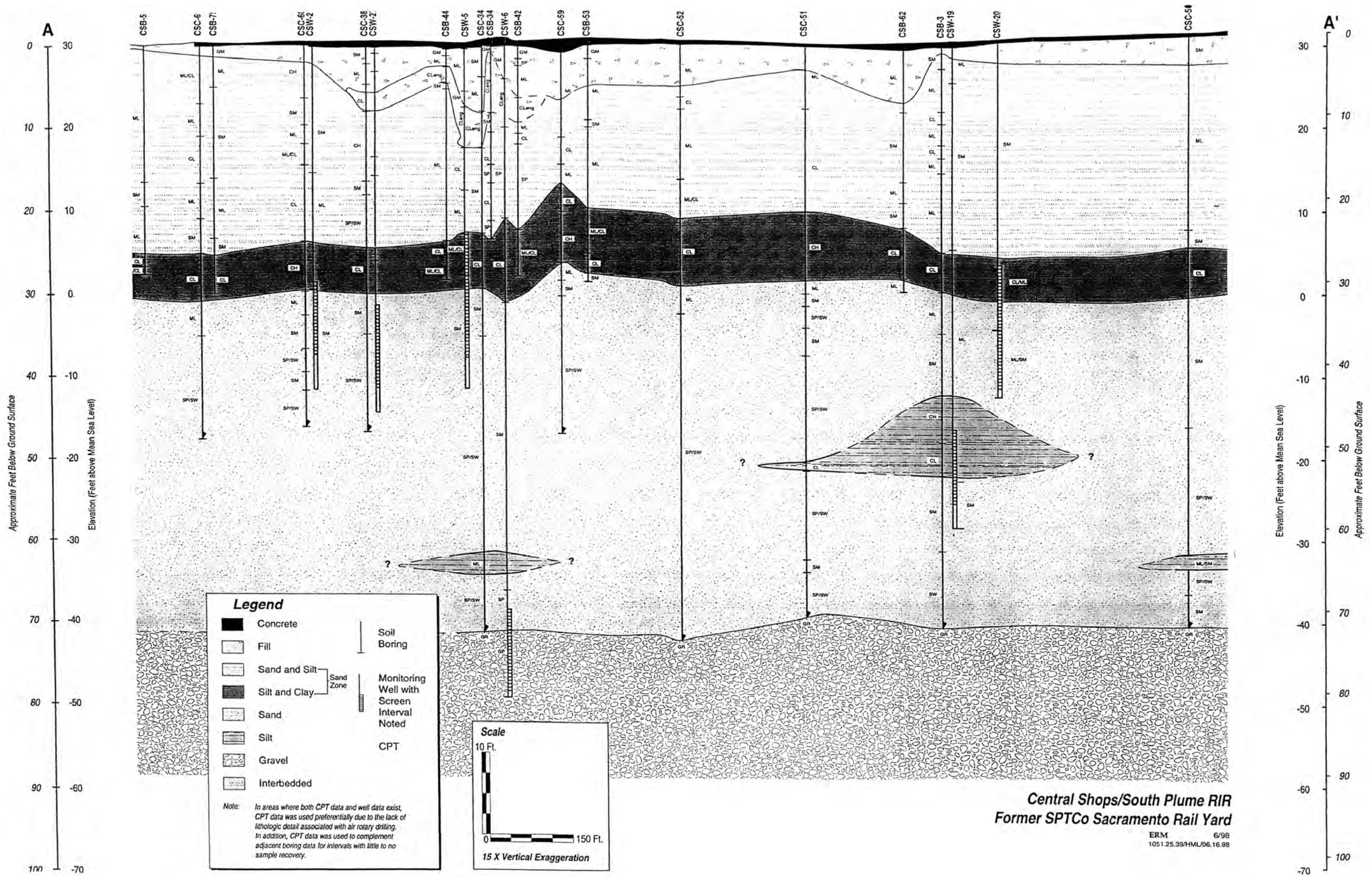


Figure 5
Geologic Cross Section A-A'

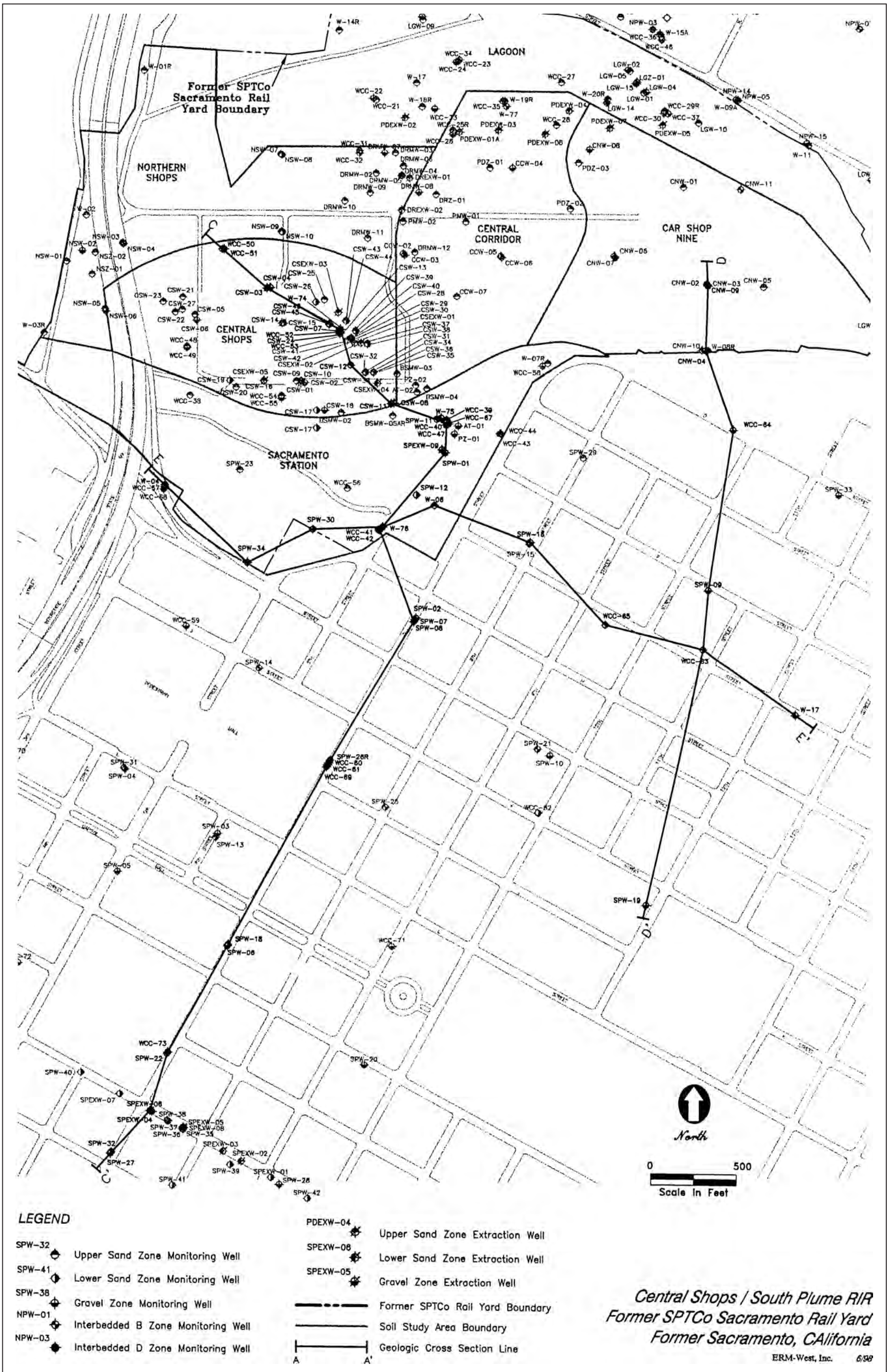
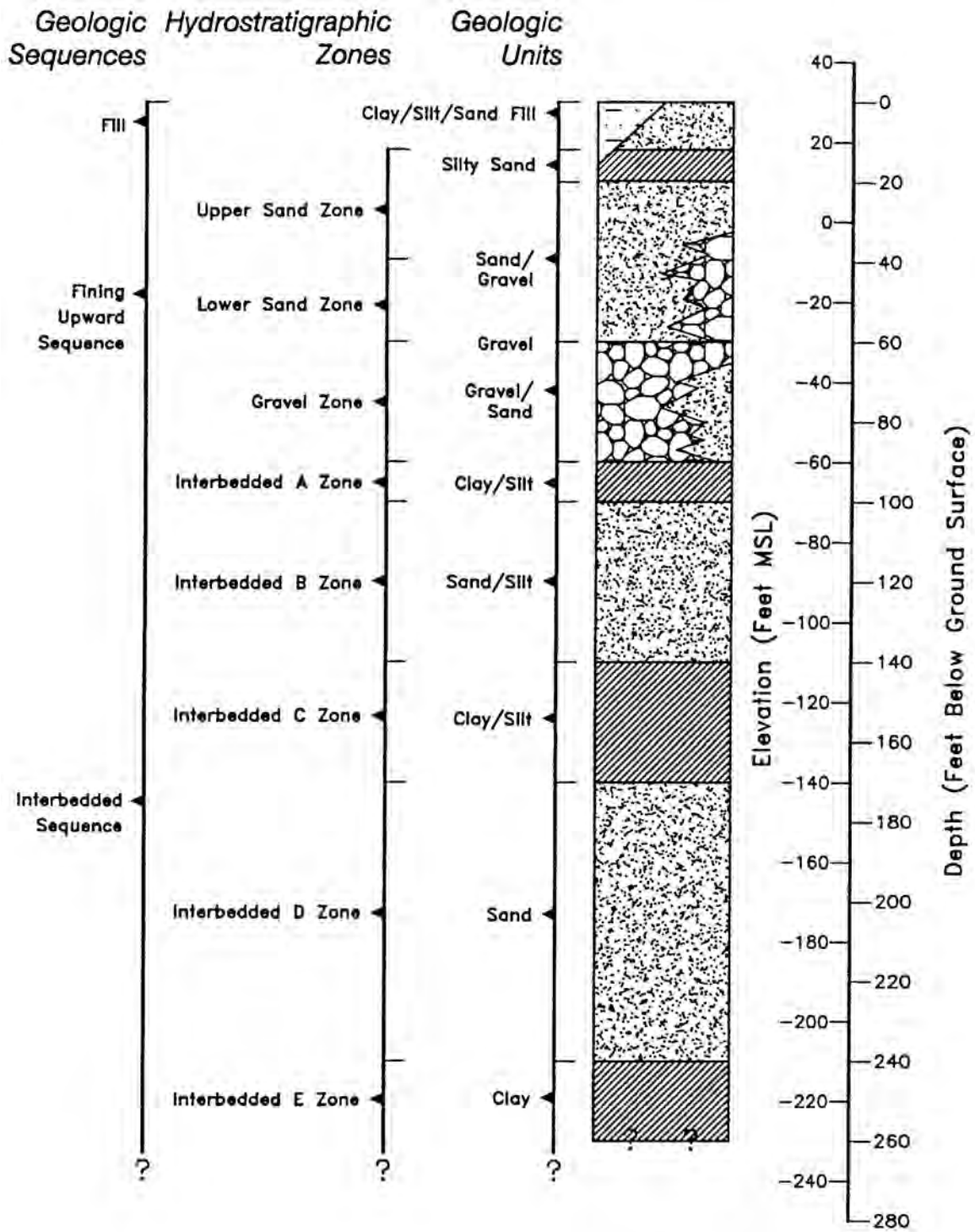


Figure 6
Geologic Cross Section Location Map

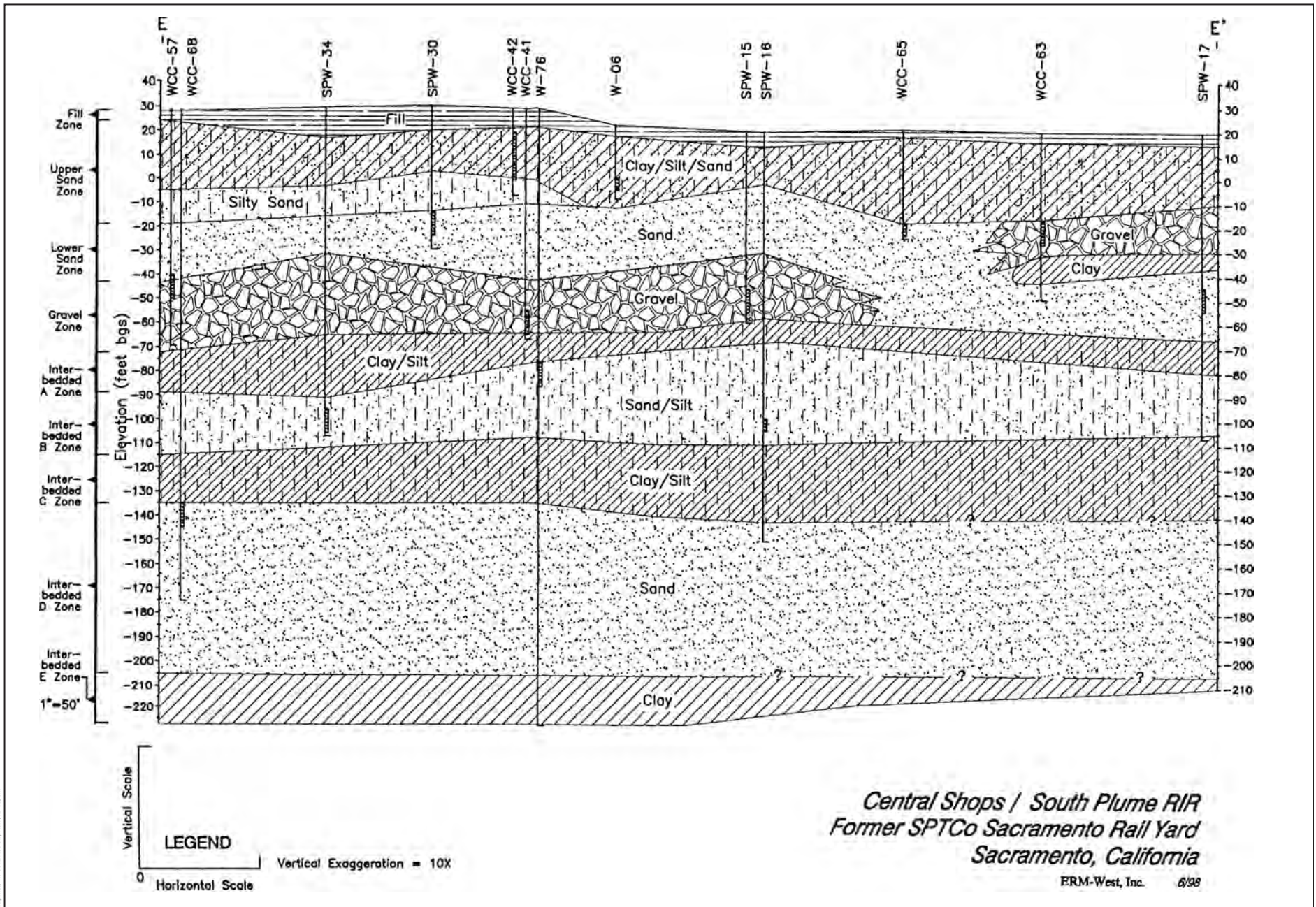


Central Shops / South Plume RIR
 Former SPTCo Sacramento Rail Yard
 Sacramento, California

ERM-West, Inc. 6/98

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Figure 7
 Legend for Geologic Cross Section E-E'



**Figure 8
Geologic Cross Section E-E'**

hydrostratigraphic Gravel Zone varies from fine to very coarse, although it is predominantly coarse to very coarse. The hydrostratigraphic Gravel Zone varies in thickness from approximately 20 to 35 ft. The contact with the overlying hydrostratigraphic Sand Zone is gradational. (ERM 2002:3-6 and 3-8.)

Interbedded Sequence(s)

The Interbedded Sequence comprises alternating layers of unconsolidated alluvial clay, silt, and sand layers that are identified as hydrostratigraphic zones A through E (ERM 2002:3-7 and 3-8).

The Interbedded A Zone is found directly beneath the hydrostratigraphic Gravel Zone. The Interbedded A Zone consists of tan to gray clay that typically contains an indurated (i.e., claypan or hardpan) interval. The Interbedded A Zone is typically silty, sometimes contains sandy intervals, and varies considerably in composition. It occasionally contains minor natural organic material and root casts. The contact with the overlying hydrostratigraphic Gravel Zone is sharp. The Interbedded A Zone varies from approximately 5 ft to 10 ft thick. (ERM 2002:3-7.)

The Interbedded B Zone is characterized by two tan, very fine to medium sand intervals separated by a layer of silt or clay (or both). Occasionally, the Interbedded B Zone contains only one distinct sand interval. The upper contact of the Interbedded B Zone is gradational and indistinct. It varies from approximately 25 to 40 ft thick. (ERM 2002:3-7 and 3-8.)

The Interbedded C Zone is characterized by fine-grained material consisting of grayish-green silt and clay (infrequently brown), with occasional thin layers of brown, silty fine to medium sand. The clay is typically dense and occasionally indurated. Thickness of the Interbedded C Zone varies from approximately 20 to 40 ft. The contact with the overlying Interbedded B Zone is distinct. (ERM 2002:3-8.)

The Interbedded D Zone is characterized by 20- to 40-ft-thick sand intervals with generally thin interbedded units of silt and clay. The sand intervals vary from silty to occasionally gravely (pea-sized), with coarse sand predominant. The sand varies from greenish-gray to varicolored dark gray and occasionally is brown. The upper contact of the Interbedded D Zone is distinct. It varies from approximately 50 to 70 ft thick. (ERM 2002:3-8.)

The Interbedded E Zone is characterized by a thick, dense green to tan clay. The clay occasionally contains thin layers of tan, fine sand. The upper contact with the Interbedded D Zone is distinct. Geotechnical testing in the project vicinity has not encountered the lower contact of this zone, but it is known to be at least 40 ft thick north of the project vicinity. (ERM 2002:3-8.)

Discussion

Since the Last Glacial Maximum, the majority of the sediments in the APE have developed in a low- to moderate-energy environment characterized by episodes of flooding where sands, silts, and clays were deposited. During flooding events, localized scour most likely influenced channel dynamics, enlarging, deepening, and shifting the rivers, sloughs, and lake shorelines in the project vicinity. The hydrostratigraphic Gravel Zone (composed of igneous and metamorphic alluvium with minor sedimentary clasts that were derived from the Sierra Nevada) may represent ancestral river (American River) deposits that were laid down immediately after the Last Glacial Maximum, approximately 10,000 B.P. The presence of gravels at a depth of approximately 50 ft below ground surface and the fact that it has a gradational contact with the Fining Upward Sequence above suggests that the sediment transport capacity of the glacial melt waters originating from the Sierra Nevada decreased with time. The composition of sediments in the APE is compatible with those found in the lower reaches of glacial outwash deposits (West 1997).

As the energy (essentially the amount of water available) and the bedload of the rivers decreased, the APE shifted from a high energy environment characterized by localized scour and deposition of coarse materials to a lower energy environment characterized by fine material deposition. The lower-energy environment created a situation where sloughs, oxbow lakes, and low-lying swampy areas could form.

As the Holocene progressed, deposition of sands, silts, and clays continued and created what has been observed as the Fining Upward Sequence. This sequence represents thousands of years of deposition of fine materials. The composition and condition of sedimentary samples taken from the former Sutter Lake area suggest rapid deposition with little physical or chemical alteration after deposition. The plant communities in the project vicinity most likely consisted of the riparian gallery forest and the freshwater marsh communities (West 1997:273). Temperatures during the Holocene Epoch were variable, but the alluvial sedimentation influenced the geomorphology of the APE until the inception of historic-period reclamation and flood-control efforts. Once the APE started to become filled in, and levees were built on the surrounding rivers, the geomorphic processes that created the thick sequence of alluvial sediments were permanently, though not completely, interrupted.

Because of the presence of the thick Fill Sequence, soil development is limited within the APE. As mentioned previously, the Clayey Silt Subunit of the Fill Sequence is the first unit that is wholly identifiable as a native soil layer. Accordingly, determining the depositional environment since the onset of soil development (i.e., pedogenic depositional history) is constrained. Instead, this analysis has sought only to explain the overall depositional environment of the geomorphic surfaces on which the soils are located (i.e., geologic depositional environment).

Summary

Determining the exact age of these soils is difficult; however, age can be inferred from the age of the geomorphic surface on which the soils are found (Bettis 1992; Parsons et al. 1970; Stafford 2004:1056). Soil development depends on a variety of factors, such as climate, living organisms, time, topography, and parent material. As such, determining the pedogenic history of a particular soil profile is difficult; however, present-day soil morphology, soil characteristics, and position within the landscape have revealed the following.

- Soils in the APE have developed during the present interglacial (i.e., the last 10,000 years), but soil development has been limited.
- The majority of the sediments in the APE have developed in a low- to moderate-energy environment characterized by episodes of flooding where silts and clays were deposited.
- The dominant geomorphic process in the project vicinity prior to the filling of the lakes and marshes and construction of levees was overbank and lacustrine deposition (scour was limited to only high flow events).
- The composition and condition of sediments suggest rapid deposition with little physical or chemical alteration after deposition, corresponding to the observed minimal soil development.
- Because of the presence of the artificial Fill Sequence, any artifacts that were left behind prior to ca. 1863 are presently buried.
- Resources, including hydrophytic plants such as tules and reeds, were widespread and may have encouraged habitation on higher-elevation surfaces, where present.

EXPECTED HISTORIC PROPERTY TYPES (ARCHAEOLOGICAL)

This section of the report summarizes the range and types of archaeological properties that are anticipated in the APE (Tables 1 and 2). The archaeological property types are described in terms of physical constituents to focus attention on the visibility and obtrusiveness of archaeological properties in the APE and to avoid functional and other behavioral assumptions that are best determined during Phase 2 and 3 archaeological investigations, should any be required. The property type descriptions are based on the SITF ASR (ICF Jones & Stokes 2008c), as well as ICF Jones & Stokes' previous field observations in the APE and vicinity (Jones & Stokes 2007a:3-4; Jones & Stokes 2007b:2-4). Full descriptions of the expected property types are contained in ICF Jones & Stokes (2008c:Tables 4, 5).

Table 1. Prehistoric Archaeological Property Types

Property Type	Characteristics
Midden sites	Dark, friable, or greasy soil; midden constituents may include all or some of the following: shell, bone, ash, charcoal, fire-affected rock, baked clay, worked bone, flaked and ground stone, house floors, and human burials
Multiple-constituent sites	Discrete occurrences of shell, bone, ash, charcoal, fire-affected rock, worked bone, flaked and ground stone, and human burials
Isolated burials and features	Deliberately interred burials, cremations, or human bone; beads and other ornaments (e.g., charmstones and pendants) may be interred with burials
Lithic scatters	Flaked stone debitage, projectile points, and flaked stone tools; also may include some ground stone
Isolated artifacts	Artifacts that are found without association with other artifacts or features; they frequently lack stratigraphic integrity and significant spatial patterning

Table 2. Historic Archaeological Property Types

Property Type	Feature Type	Attributes
Domestic and commercial refuse sites	Hollow-filled features (pits, privies, and/or wells)	Discrete deposits
	Sheet refuse (ephemeral vs. massive)	Thin layer of refuse that may have accumulated over time vs. large discrete layer of refuse representing one event
Domestic, commercial, and industrial architecture	Foundations	Brick alignments, concrete slabs, piers
	Builder's trenches	Trenches
	Walls	Concrete, brick, or wooden; in situ or collapsed
Industrial refuse sites	Hollow-filled features (pits, privies, kilns)	Discrete deposits of industrial waste
	Sheet refuse (ephemeral vs. massive)	In the project vicinity, typically extensive, thick deposits of slag, granite blocks, wood, etc.
Urban infrastructure	Sewer pipes	Metal or clay
	Power lines	Postholes
	Fill	Gravel, non-native soils, mixed refuse
Isolated artifacts	Not applicable	Artifacts that are found without association with other artifacts or features; they frequently lack stratigraphic integrity and significant spatial patterning.

Mapped Historic Archaeological Features in the Direct Area of Potential Effects

A comparison of historic maps with the APE map and with unmodified aerial photographs of the APE indicates that several CPRR and SPRR features were located in the direct APE (Figures 9–20). Specifically, construction of the newly proposed Phase 1 components of the undertaking are situated in the locations of several historic buildings and structures, none of which retain superstructure or are otherwise evident on the present ground surface:

- the pre-1926 Southern Pacific Railroad (SPRR) Depot (specifically the Dining Room, an unnamed ancillary building, the Baggage Room, several Offices, the News [stand], Train Shed, Office and Vault, Ticket Office and Waiting Room, and the Barber)
- the Wells Fargo Express Company's Depot
- two offices and outbuildings associated with former Capital Nursery
- a railroad material yard, the pre-1926 SPRR Depot's Telegraph and Phone Supplies store
- passenger platforms
- stores and shops associated with the Southern Car Shops (Paint Shop and Paint storage).

Examination of the soil remediation and geotechnical literature is equivocal concerning the likelihood for remnants of the buildings and structures listed above to remain in the APE below the present ground surface. Near I-5, the subsurface stratigraphy of the West Pedestrian/Bicycle Tunnel and West Service Tunnel contain scant materials attributable to the aforementioned buildings and structures. Bore hole 1-B10 contains “trace brick fragments” at 6–9 ft. below ground surface, but these materials occur within a stratum characterized as fill and so are not necessarily indicative of *in situ* remains of a historic structure. Bore hole WWC-38, near the eastern terminus of the West Service Tunnel, revealed fill to a depth of approximately 2 ft. below ground surface and bricks, gravel, and rubble to a depth of 2–3 ft. (ENGEO 2008:Appendix A).

With respect to identifiable native soil layers, where prehistoric archaeological resources are expectable, bore holes 1-B10 and 1-B12 revealed an identifiable native soil layer at 15 ft. below ground surface in the vicinity of the West Pedestrian/Bicycle Tunnel and West Service Tunnel (ENGEO 2008:Appendix A). Bore hole WWC-38, near the eastern terminus of the West Service Tunnel, revealed an identifiable native soil layer between 12 and 14 ft. below ground surface, suggesting a slight rise in topography from west to east. “Carbonaceous trash”, suggestive of fuel contaminants from railroad operations, was identified in the native soil layer. As noted in Appendix E of the original SITF ASR (ICF Jones & Stokes 2008c), an identifiable native soil layer is evident between 21 and 28 ft. below ground surface in the vicinity of the Central Tunnel and Ramp.

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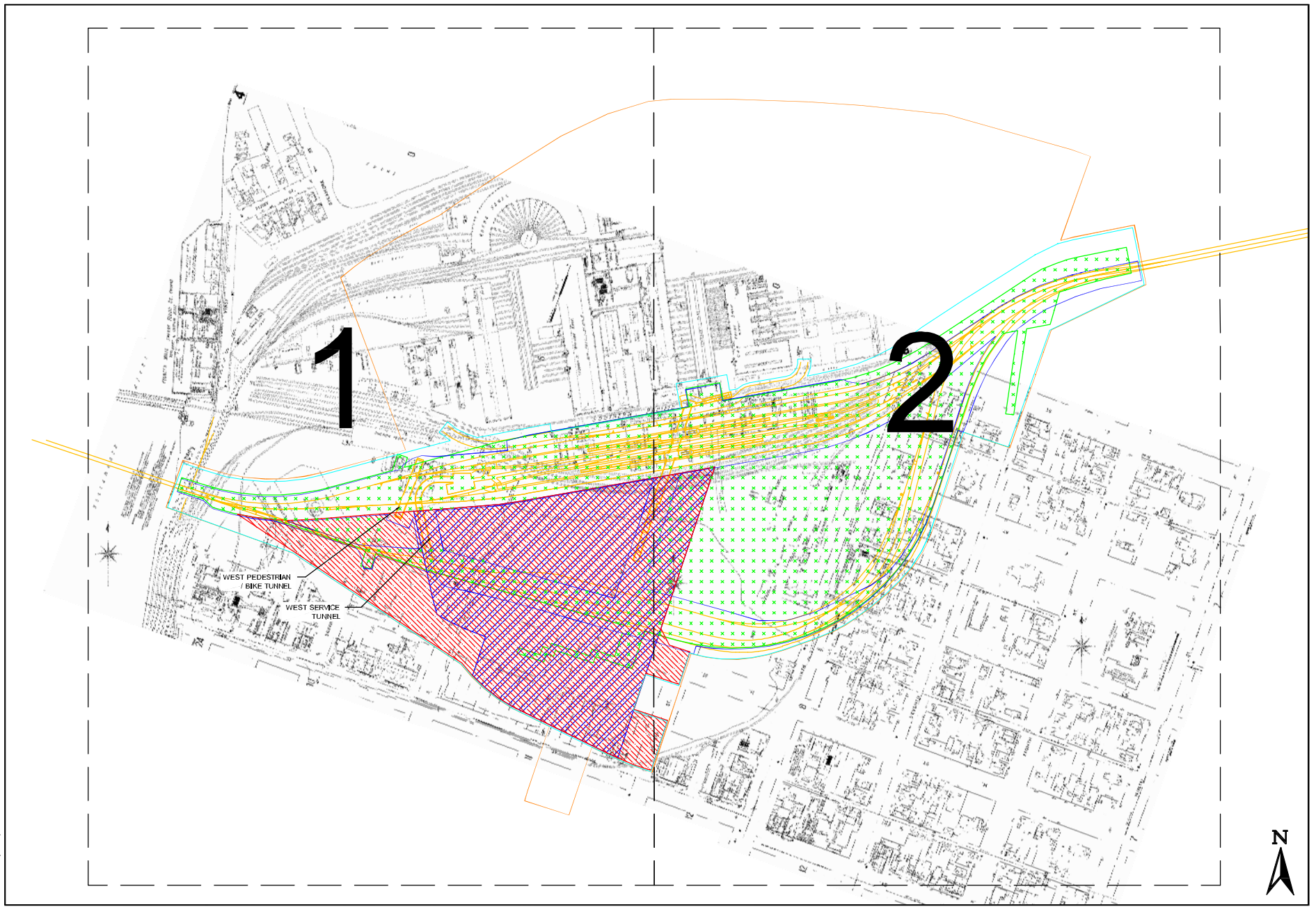
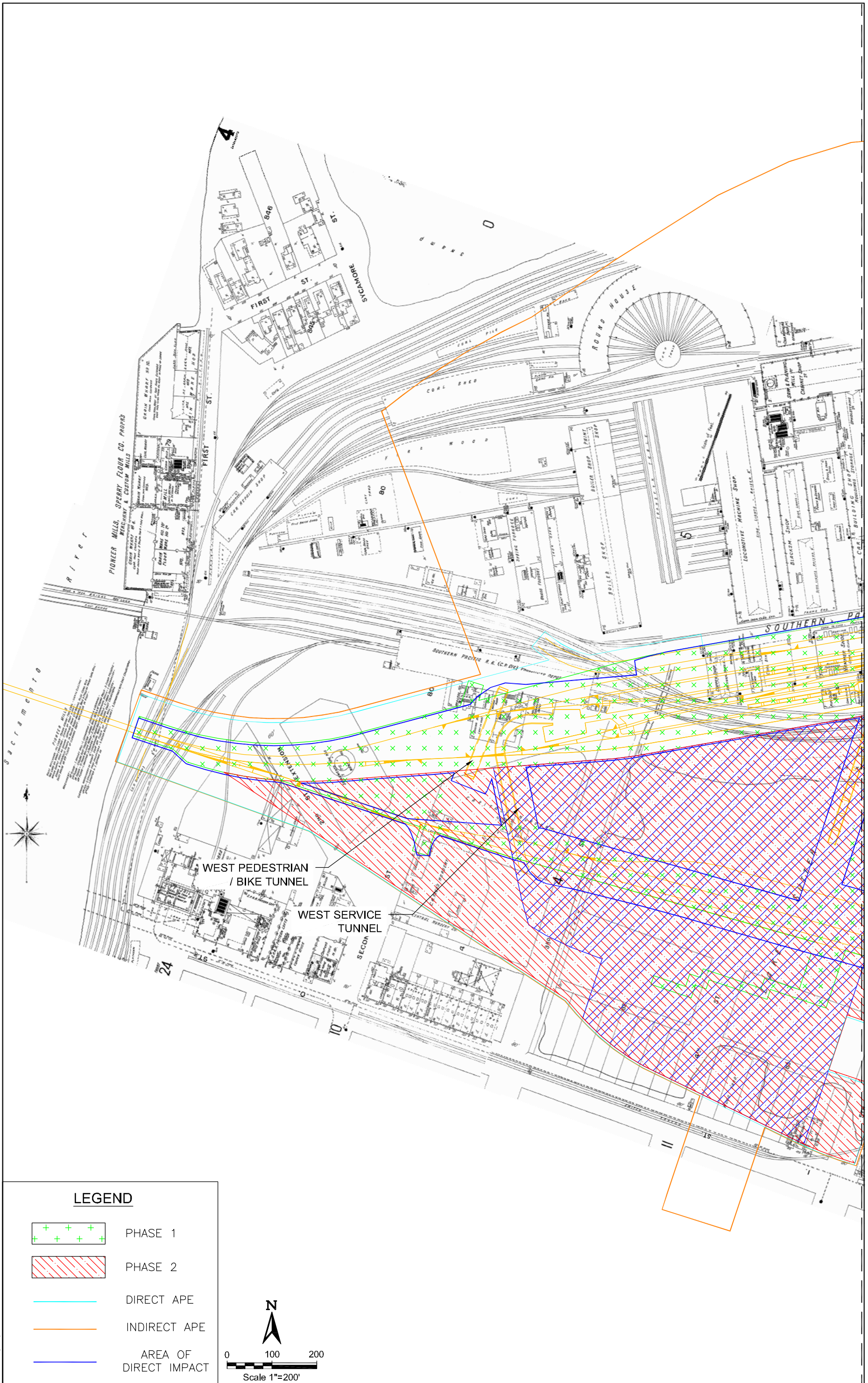
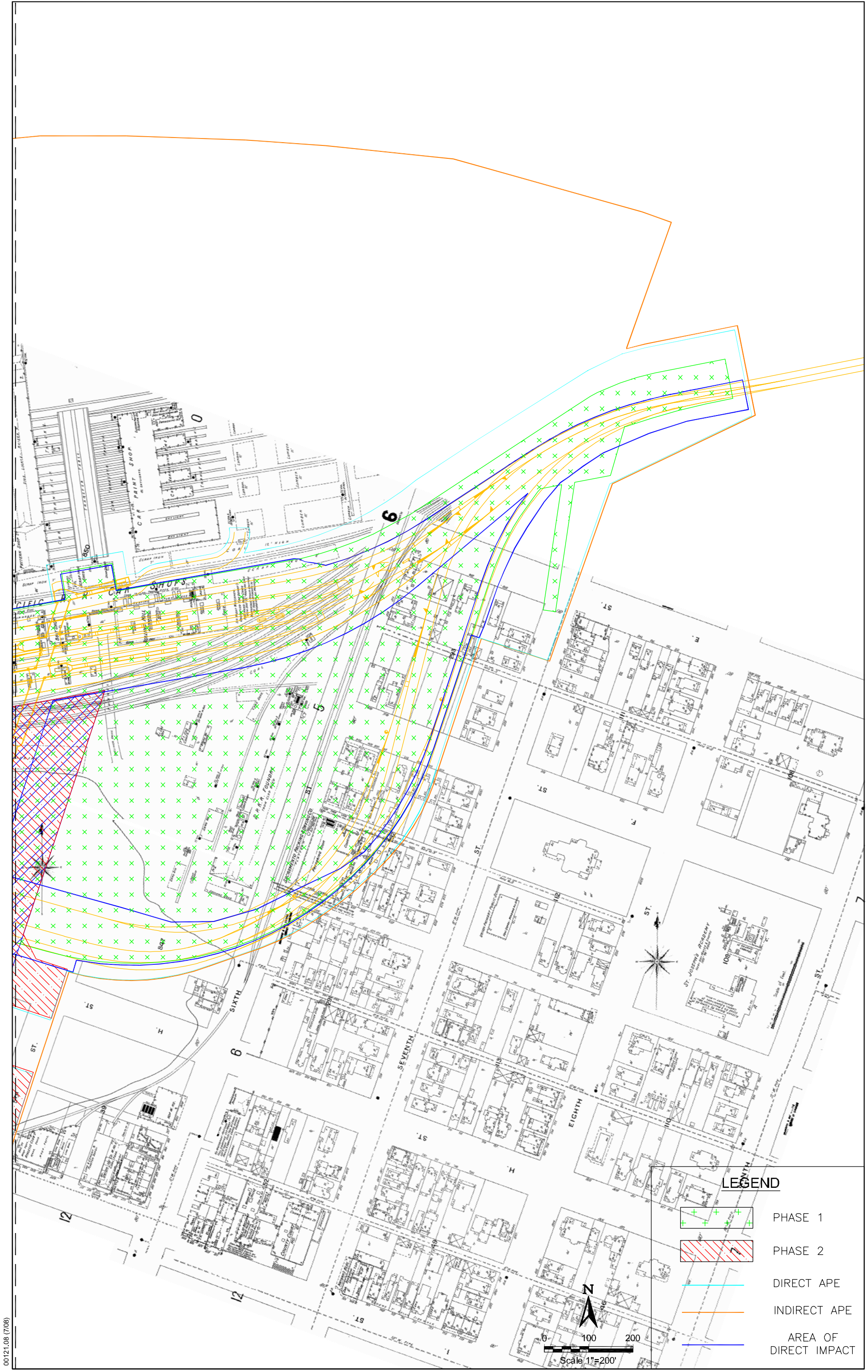


Figure 9
Overlay of Sanborn Insurance Map on APE
Overview, 1895



00121.08 (7/08)

Figure 10
Overlay of Sanborn Insurance Map on APE
Detail of Western Half, 1895



00121.08 (7/08)


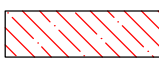



Figure 11
Overlay of Sanborn Insurance Map on APE
Detail of Eastern Half, 1895

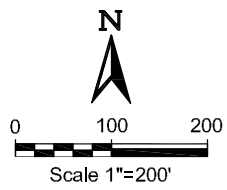


Figure 12
Overlay of Sanborn Insurance Map on APE
Overview, 1915



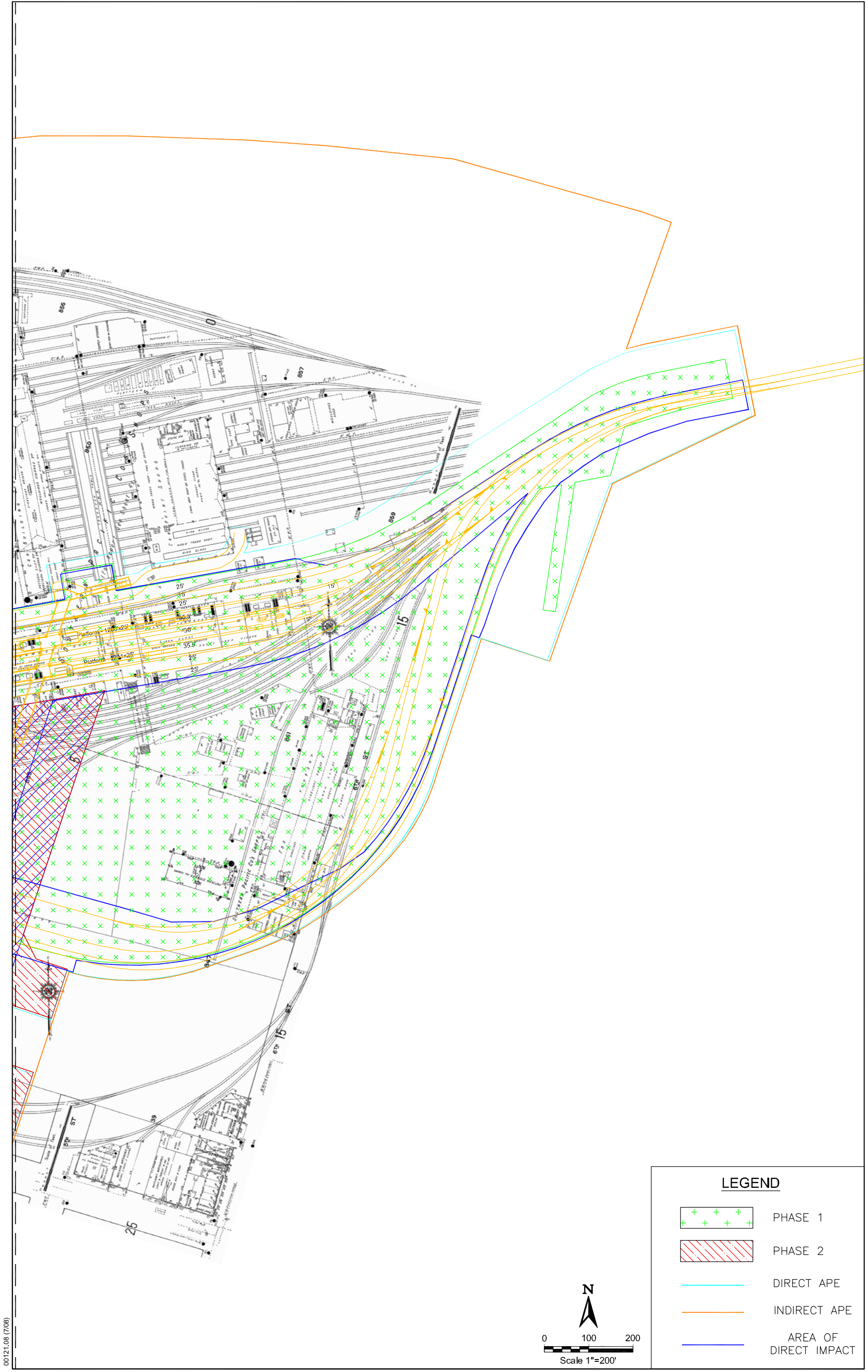
LEGEND

-  PHASE 1
-  PHASE 2
-  DIRECT APE
-  INDIRECT APE
-  AREA OF DIRECT IMPACT




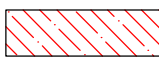



00121.08 (7/08)

Figure 13
Overlay of Sanborn Insurance Map on APE
Detail of Western Half, 1915




00121.08 (7/08)

LEGEND

	PHASE 1
	PHASE 2
	DIRECT APE
	INDIRECT APE
	AREA OF DIRECT IMPACT

N



0 100 200

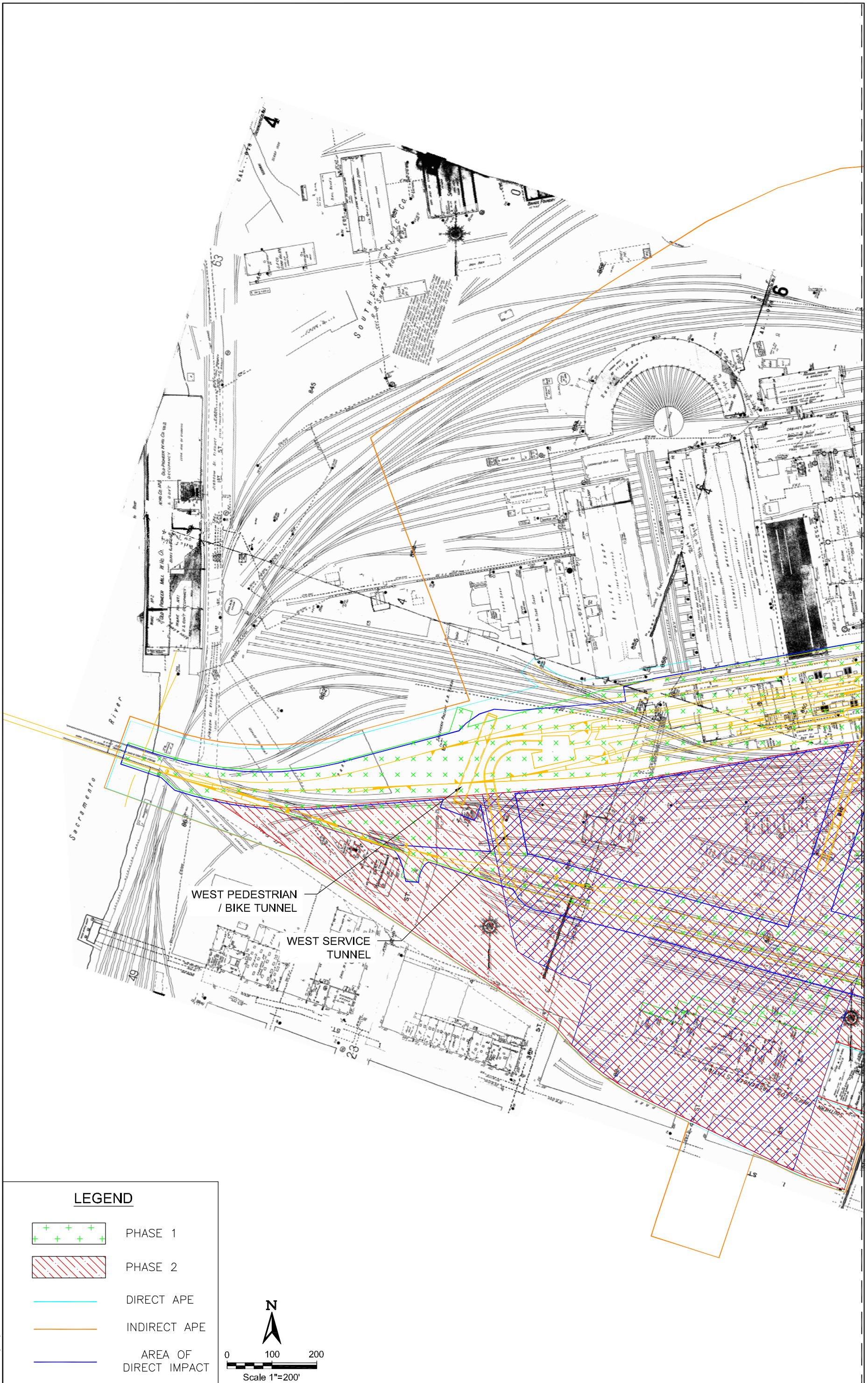
Scale 1"=200'

Figure 14
Overlay of Sanborn Insurance Map on APE
Detail of Eastern Half, 1915

00121.08 (7/08)

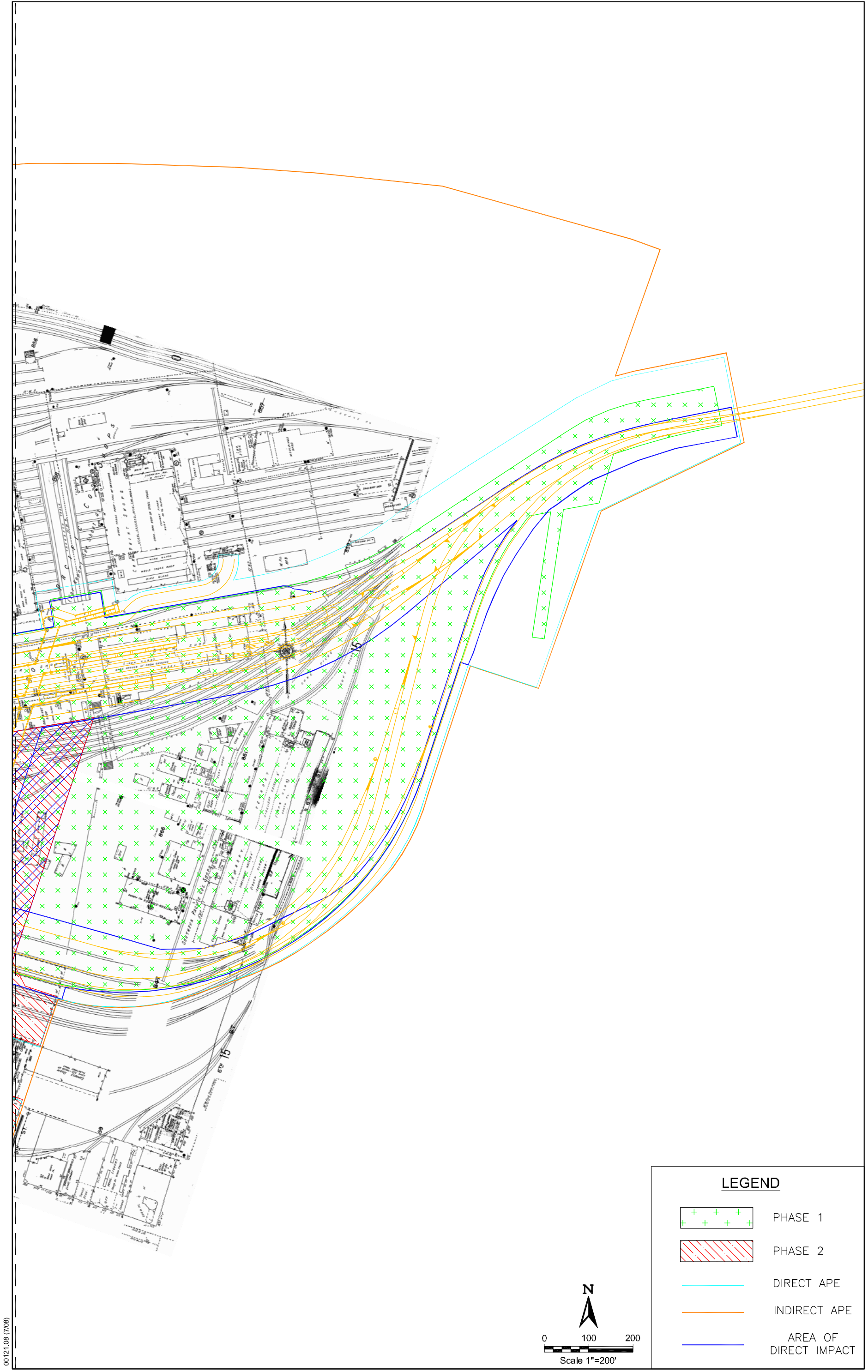


Figure 15
Overlay of Sanborn Insurance Map on APE
Overview, 1951



00121.08 (7/08)

Figure 16
Overlay of Sanborn Insurance Map on APE
Detail of Western Half, 1951



00121.08 (7/08)

LEGEND

	PHASE 1
	PHASE 2
	DIRECT APE
	INDIRECT APE
	AREA OF DIRECT IMPACT

N

0 100 200

Scale 1"=200'

Figure 17
Overlay of Sanborn Insurance Map on APE
Detail of Eastern Half, 1951


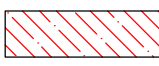



00121.08 (7/08)

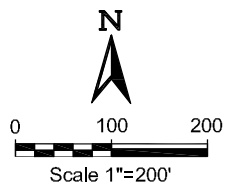


Figure 18
Overlay of Sanborn Insurance Map on APE
Overview, 1952



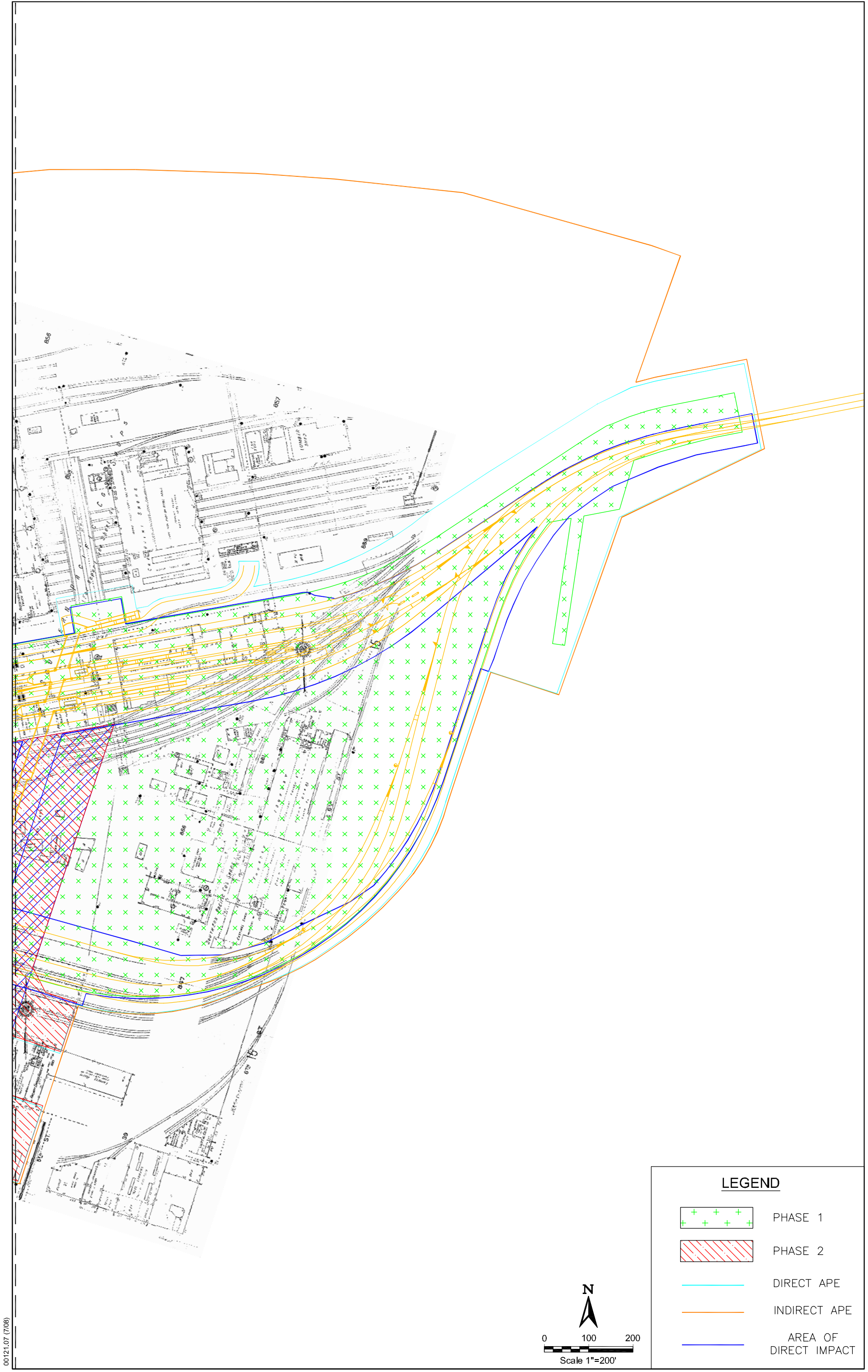
LEGEND

-  PHASE 1
-  PHASE 2
-  DIRECT APE
-  INDIRECT APE
-  AREA OF DIRECT IMPACT




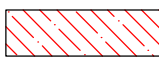



00121.08 (7/08)

Figure 19
Overlay of Sanborn Insurance Map on APE
Detail of Western Half, 1952




00121.07 (7/08)

LEGEND

	PHASE 1
	PHASE 2
	DIRECT APE
	INDIRECT APE
	AREA OF DIRECT IMPACT

N



0 100 200

Scale 1"=200'

Figure 20
Overlay of Sanborn Insurance Map on APE
Detail of Eastern Half, 1952

Chapter 6. Field Methods

ICF Jones & Stokes archaeologist Gabriel Roark conducted an archaeological reconnaissance of the direct APE on June 27, 2008. The purpose of the present archaeological reconnaissance was to determine whether mapped, historic railroad features were in fact present at ground surface or evident in recent cut banks and other exposures, recognizing that the bulk of archaeological resources in the direct APE would not be discernible through surface survey. Mr. Roark conducted a general walkover of the direct APE, beginning in the south-central portion of the APE and working northeastward to the eastern extremity of the direct APE, and then westward just south of the Central Shops to the western end of the direct APE. Observations were made of the ground surface and compared with aerial photographs, copies of historic lithographs, and an overlay of Sanborn map data (Sanborn-Perris Map Co. 1895; Sanborn Map Co. 1915, 1951, 1952) onto the draft APE map.

The direct APE was found to be largely denuded—save for a few stands of trees and occasional ruderal vegetation in the western and eastern portions of the APE—paved or graveled. Much shallow grading was evident throughout the direct APE. Additionally, a 10-ft.-tall sediment stockpile had been placed approximately 3 or 4 weeks prior to the present reconnaissance as part of the soil remediation effort underway north of the Central Shops. The presence of the sediment stockpile thwarted any attempt to determine whether the following mapped historic features were visible on the ground surface: the Office and Store Room, Print Shop, and Signal Service structure (Sanborn Map Co. 1915:Sheet 6). No archaeological resources were identified in the newly added or changed components of the undertaking.

Chapter 7. Identified Archaeological Resources, Study Findings and Conclusions

No new archaeological resources were identified in the modified portions of the Phase 1 APE. A previously recorded archaeological resource, the Southern Car Shops Slab Foundations, is located in the modified portion of the Phase 1 APE. Caltrans has found this resource to be ineligible for listing in the NRHP (ICF Jones & Stokes 2008a, 2008b). The resource, therefore, will not be discussed in this supplemental ASR

POTENTIAL FOR ARCHAEOLOGICAL DISCOVERIES

The review of historic maps, geomorphological data, and soil remediation documents described earlier in this supplemental ASR indicates that historic archaeological deposits may be located below ground surface in the modified portions of the Phase 1 APE. These deposits would likely relate to some or all of the following historic features:

- the pre-1926 Southern Pacific Railroad (SPRR) Depot (specifically the Dining Room, an unnamed ancillary building, the Baggage Room, several Offices, the News [stand], Train Shed, Office and Vault, Ticket Office and Waiting Room, and the Barber)
- the Wells Fargo Express Company's Depot
- two offices and outbuildings associated with former Capital Nursery
- a railroad material yard, the pre-1926 SPRR Depot's Telegraph and Phone Supplies store
- passenger platforms
- stores and shops associated with the Southern Car Shops (Paint Shop and Paint storage).

In addition, the presence of an identifiable native soil layers in the modified portions of the Phase 1 ADI indicate that some potential for inadvertent prehistoric archaeological discoveries during construction. Caltrans is preparing a Historic Properties Treatment Plan for the proposed undertaking, which will contain treatment measures designed to identify, evaluate, and resolve adverse effects on NRHP-eligible archaeological resources.

It is Caltrans' policy to avoid cultural resources whenever possible. If cultural resources cannot be avoided, then additional work may be necessary. If buried cultural materials are encountered during construction, it is Caltrans' policy that work in that area must halt until a qualified archaeologist can evaluate the nature and significance of the find (California Department of Transportation 2001). Additional archaeological survey will be needed if project limits are extended beyond the present survey limits.

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