

# ALAMEDA CORRIDOR

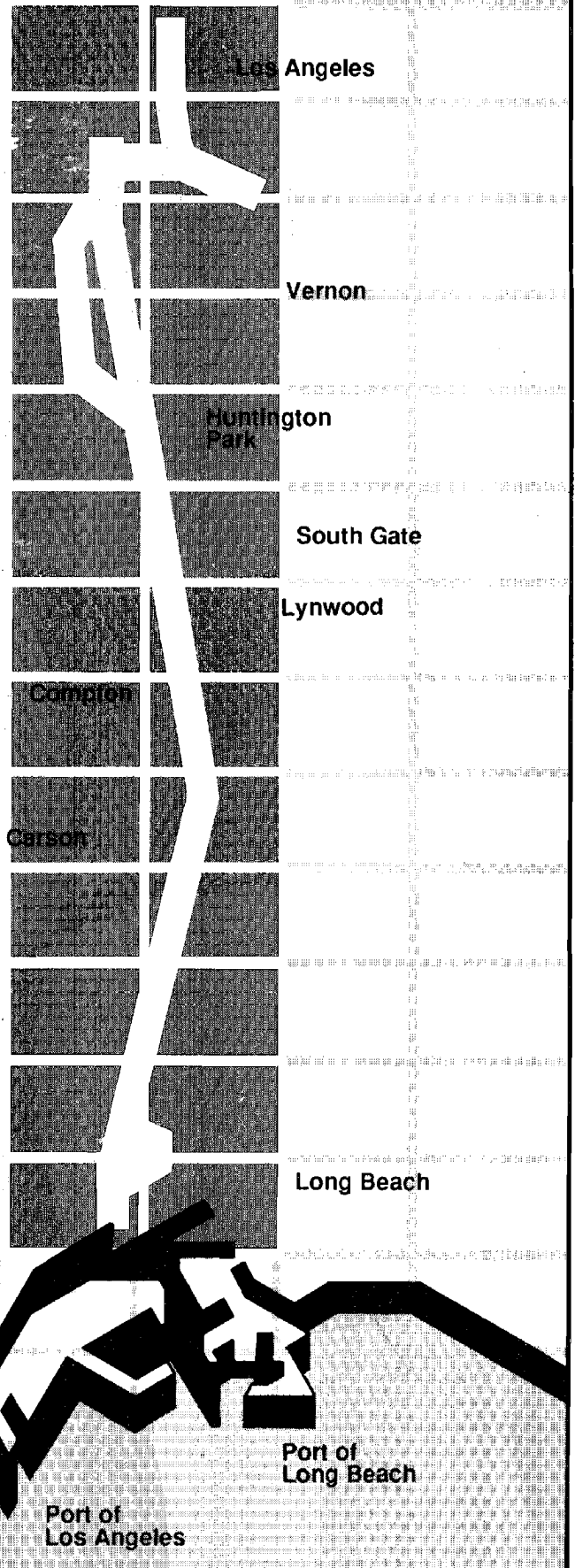
## Draft Environmental Impact Report Summary

Prepared for:  
**ALAMEDA CORRIDOR  
TRANSPORTATION AUTHORITY**  
Gill V. Hicks, General Manager

Prepared by:  
**MYRA L. FRANK & ASSOCIATES, INC.**

In Association with:  
**DMJM/M & N (A Joint Venture)**

August, 1992.



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Long Beach

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**DRAFT  
ENVIRONMENTAL IMPACT REPORT  
SUMMARY**

FOR THE

**ALAMEDA CORRIDOR**

AUGUST 1992

PREPARED FOR:

**ALAMEDA CORRIDOR TRANSPORTATION AUTHORITY  
GILL V. HICKS, GENERAL MANAGER**

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## PREFACE

The Governing Board of the Alameda Corridor Transportation Authority wishes to acknowledge the time and effort afforded to the project by the representatives of all ACTA members, including the ports of Los Angeles and Long Beach, SCAG, Caltrans, LACTC, the County of Los Angeles, and the cities of Los Angeles, Long Beach, Vernon, Huntington Park, South Gate, Lynwood, Compton and Carson. The input received played an important role in the success of the project.

In addition, ACTA wishes to acknowledge the efforts of the subconsultants who performed specific tasks on this project. These include: Myra L. Frank & Associates, Inc.; Felicia Bragg & Associates; Givens, Saiki, Williams/Airborne Systems; Katz, Okitsu & Associates; DKS & Associates; RL Banks & Associates; Harris Miller, Miller & Hanson; KaWES and Associates, Inc.; Leachman & Associates; Law/Crandall & Associates; MAA Engineering; Robert K. Meeks and Associates; J.L. Patterson & Associates; and the Radian Corporation.

The development of the Alameda Corridor project has resulted in a set of companion documents to this Environmental Impact Report. Those documents are fully cited in the bibliography, and they include the following:

DMJM/M&N. Concept Study of Railroad and Highway Improvement for the Development of the Alameda Corridor. 1991.

DMJM/M&N and DKS & Associates. Appendix A: Highway Capacity and Level-of-Service Analysis. 1992.

DMJM/M&N and Leachman & Associates. Appendix B: Railroad Capacity and Operation Analysis. 1991.

DMJM/M&N and Law/Crandall & Associates. Appendix C: Preliminary Geotechnical Investigation. 1991.

DMJM/M&N and MAA Engineering. Appendix D: Preliminary Environmental Site Assessment. 1991.

DMJM/M&N. Appendix E: Project Cost (3 vols.). 1991.

DMJM/M&N. Appendix F: Existing Corridor Projects and Status. 1991.

DMJM/M&N. Appendix G: Alternatives Analysis. 1991.

DMJM/M&N. Appendix H: Conceptual Design Layouts, Alternative 1 At-Grade Trainway. 1991.

DMJM/M&N. Appendix I: Conceptual Design Layouts, Alternative 2.1 and 2.2 Depressed Trainway. 1991.

DMJM/M&N. Feasibility Study of the Union Pacific San Pedro Branch and Los Angeles River Route as Alternative Consolidated Rail Corridor. 1991.

DMJM/M&N. Feasibility Study - Design Layouts. 1991.

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## SUMMARY

### S.1 INTRODUCTION

The proposed Alameda Corridor project is located in southern Los Angeles County, California, running from the ports of Long Beach and Los Angeles 20 miles north to downtown Los Angeles, primarily along Alameda Street and the Southern Pacific's San Pedro branch right-of-way. The project extends through or borders the cities of Vernon, Huntington Park, South Gate, Lynwood, Compton, Carson, Los Angeles, and the County of Los Angeles. The project location is shown in Figure S-1.

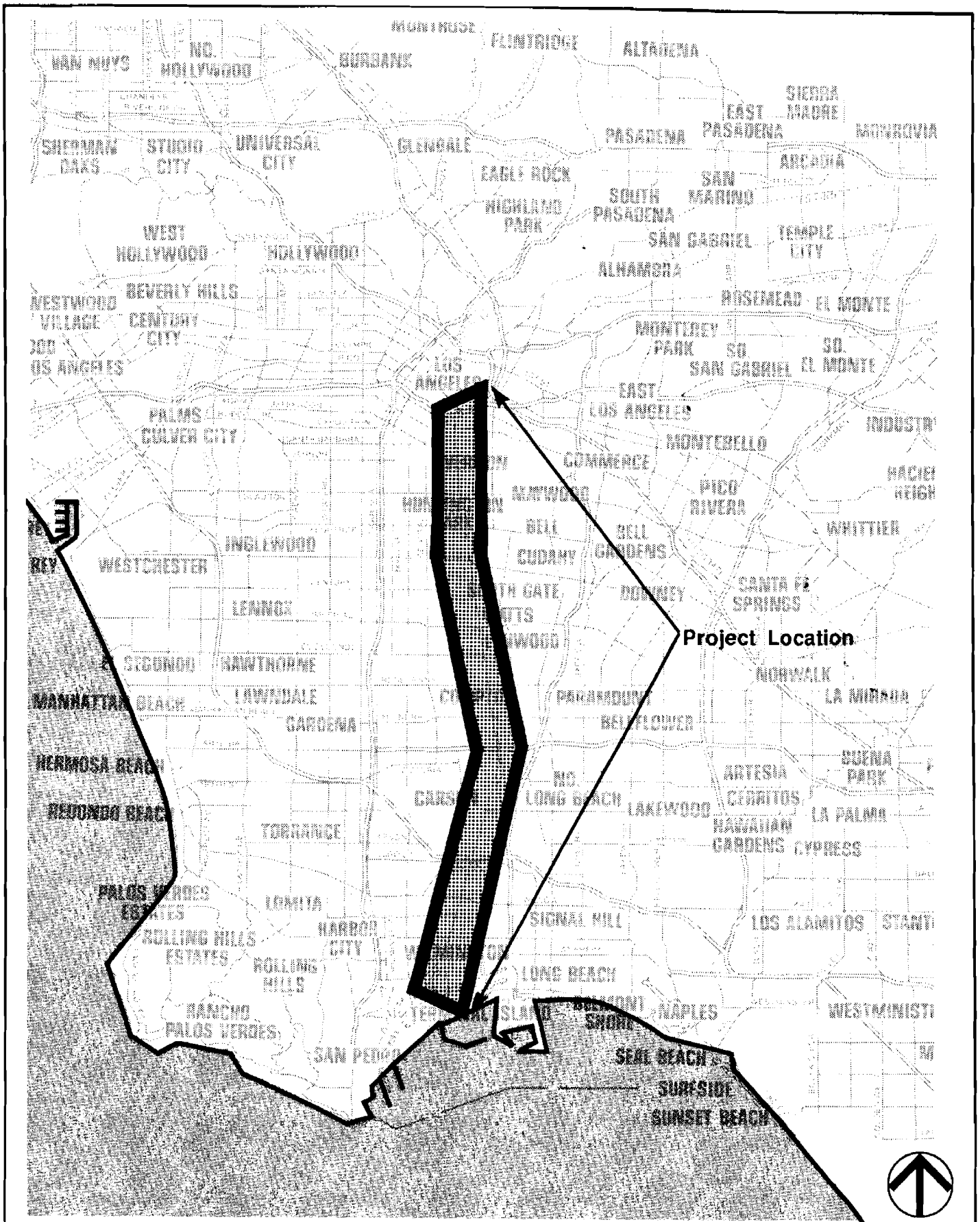
This current project's origin can be traced to the creation in October 1981 of the Ports Advisory Committee (PAC) by the Southern California Association of Governments (SCAG). This committee, whose members included local elected officials, as well as representatives of the ports of Los Angeles and Long Beach, the U.S. Navy, Army Corps of Engineers, affected railroads, trucking industry, and the Los Angeles County Transportation Commission (LACTC), was established in response to growing concerns about the ability of the ground transportation system to accommodate increasing levels of traffic in the port area.

The first phase of the PAC's study, completed in 1982, dealt with the problems of highway access to the ports. In this phase, the PAC addressed a number of problem areas and recommended a cost-effective set of highway improvements, including the widening of certain streets. The second phase, a study of rail access, was completed in 1984. As part of this second phase, additional highway improvements were also recommended; however the focus of the second phase was concern over the impacts of projected train traffic on communities north of the ports. Three routing alternatives were evaluated and the results of the analysis indicated that consolidating all trains on an up-graded Southern Pacific San Pedro Branch right-of-way would be the most cost-effective alternative.

To pursue this objective, in February 1985, SCAG created the Alameda Corridor Task Force (ACTF), whose membership was similar to that of the PAC, with the addition of the California Public Utilities Commission (CPUC) and each of the cities along the corridor. The need for the project was further confirmed by the Consolidated Rail Corridor Strategic Plan published by the two ports in November 1988. The ACTF concluded that a Joint Powers Authority should be created to have design and construction responsibility for the Alameda Corridor, and the Alameda Corridor Transportation Authority (ACTA) was created. In May 1990, ACTA contracted with Daniel, Mann, Johnson & Mendenhall/Moffatt and Nichol Engineers to develop conceptual designs, conduct highway and railroad capacity studies and prepare this Environmental Impact Report. The purpose of the project, as officially adopted by the ACTA governing board is:


*To facilitate access to the ports through the year 2020 while mitigating potentially adverse impacts of the ports' growth, including highway traffic congestion, air pollution, vehicle delays at grade crossings, and noise in residential areas.*





Source:

No Scale

<p><b>FIGURE</b> S-1</p>	<p><b>Alameda Corridor Transportation Project Location</b></p>	 <p><b>ALAMEDA CORRIDOR TRANSPORTATION AUTHORITY</b></p>
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## S.2 ALTERNATIVES

The ACTA governing board developed criteria for evaluating potential alternatives for the Alameda Corridor project.

- Economic goals included promoting economic development along the corridor, minimizing land devoted to port-related freight rail operations, sustaining economic growth, maintaining and improving existing businesses, promoting growth of international trade through the ports and minimizing property acquisitions.
- Traffic goals included reducing vehicle delays at grade crossings, improving north/south travel speeds, improving level-of-service at intersections, improving connections to I-105 and I-10, providing an alternative route to parallel freeways, improving emergency vehicle access, diverting truck traffic to rail, coordinating and interfacing with plans at corridor ends, and maximizing convenience to pedestrians crossing Alameda Street.
- The goals for railroad operations were to improve railroad operating flexibility and efficiency, improve railroad speeds, provide fair and equal access for all carriers and maintain service to customers.
- Environmental goals included improving the overall quality of life, minimizing projected air pollution, minimizing projected energy consumption, developing a project compatible with adjacent land uses, resolving present poor or deteriorating situations, and aesthetics and minimizing exposure to noise and vibration.
- Cost goals included maximizing cost effectiveness and maximizing coordination of the corridor project with existing projects and funding sources.
- Safety and security goals were to improve vehicular safety, improve safety for pedestrians, improve safety for operations and personnel and improve security.
- Construction goals were to minimize disruption to highway and rail users, maintain access to existing businesses and residences, minimize noise and other construction impacts and implement the project in phases.

For purposes of developing alternatives to implement a consolidated corridor, the limits of the study area for roadway improvements were from Alameda Street at the I-10 interchange on the north to the intersection of SR-47/SR-103 (Terminal Island Freeway) and Henry Ford Avenue on the south. For railroad improvements, the corridor would extend from the East L.A. Yard/Pasadena Junction on the east and north, connect with SP trackage in Alameda Street in the vicinity of 25th Street and continue southward along Alameda Street to the Badger Avenue Bridge access onto Terminal Island. A variation to this occurs in the reach between 25th Street and Randolph Street, where the rail facility could alternatively be routed to the west, along Long Beach Avenue, in the existing Southern Pacific Wilmington branch.

Two alternative trainway sections were considered: an at-grade section and a depressed (below grade) section. A range of sections for the roadway component of the project were examined, generally involving either splitting the roadway into a couplet straddling the rail tracks or placing

all of the roadway lanes on one side of the train tracks. In addition, some options retained use of the existing east barrel of Alameda Street, which would then function as a frontage road. In conjunction with the alternative trainway/roadway configurations along Alameda Street, selected east-west streets along the corridor would need to be provided with separations to permit effective railroad operations and improve traffic flow. These grade separations could be configured as overcrossings or underpasses, depending upon the constraints or opportunities at any given location. All other at-grade crossings of the tracks would be closed as part of this project. Over the course of project development, the following locations were selected for consideration for east-west highway grade separation:

- Santa Fe Avenue & Washington Boulevard
- 38th/41st Streets
- Vernon Avenue
- Slauson Avenue
- Gage Avenue
- Florence Avenue
- Nadeau Street
- Firestone Boulevard
- 92nd Street/Southern Avenue
- Tweedy Boulevard
- Imperial Highway
- Weber Avenue (at-grade trainway only)
- Martin Luther King Jr. Boulevard (depressed trainway only)
- El Segundo Boulevard
- Compton Boulevard
- Alondra Boulevard
- Greenleaf Boulevard
- Sepulveda Boulevard
- Pacific Coast Highway
- Anaheim Street
- Henry Ford Avenue and SR-47

In addition to transverse grade separations, a longitudinal roadway with elevated overcrossings along Alameda Street was also suggested.

The various roadway, trainway and grade separations options were combined to yield alternatives to be considered for the entire corridor. From Compton Creek south, all alternatives shared a common configuration. The original alternatives proposed included at-grade alternatives; depressed trainway alternatives, depressed trainway alternatives which would follow an alignment along the SP Wilmington Branch between 25th Street and Randolph Street; two modified depressed trainway alternatives, one of which would have brought the depressed trainway to an at-grade profile north of Rosecrans Avenue and the other would have brought the depressed trainway north of Firestone Boulevard; and a depressed trainway with two-way roadway alternative, and a truck expressway, which would have provided exclusive truck lanes along Alameda Street.

All of the alternative configurations were evaluated in terms of their ability to satisfy the goals and criteria. A series of technical memoranda was produced, documenting the methodology and

results of the evaluation. But the evaluation demonstrated that all the alternatives performed nearly the same; thus additional factors had to be considered. Alternatives providing only four traffic lanes were eliminated because of their inability to handle future traffic. Three alternatives remained in consideration: Alternative 1.0, an at-grade trainway with six lanes along Alameda Street; Alternative 2.1A, a depressed trainway along Alameda Street with six traffic lanes; and Alternative 2.2, a depressed trainway with the Vernon Diversion.

In addition to the configuration alternatives considered within Alameda Street, two alternative corridors were also examined, namely the Union Pacific San Pedro Branch and the Los Angeles River. The UPRR San Pedro Branch was suggested as a potential alternative corridor because it could theoretically connect the ports to downtown rail connections. The study corridor was along the UPRR line extending from the East L.A. Yard in the vicinity of Washington Boulevard and Downey Road in the City of Vernon south to Wilmington, a distance of approximately 20 miles. In addition to rail improvements, 18 grade crossings were identified for grade separations to improve traffic flow.

The river corridor would have begun at the Downey Road bridge in the north (south of Bandini Boulevard) and extend southward to the Union Pacific bridge south of Del Amo Boulevard. The length of the corridor would be approximately 15 miles. In order to complete the required rail connections at the southern end of the project, the trainway would have been required to leave the Los Angeles River route and assume an alignment along the southern reach of the UPRR route. Two alternative alignments in this corridor were identified: one beginning on the west side of the river and proceeding in an elevated configuration for much of its length; and the second running in a depressed configuration south to the UPRR bridge.

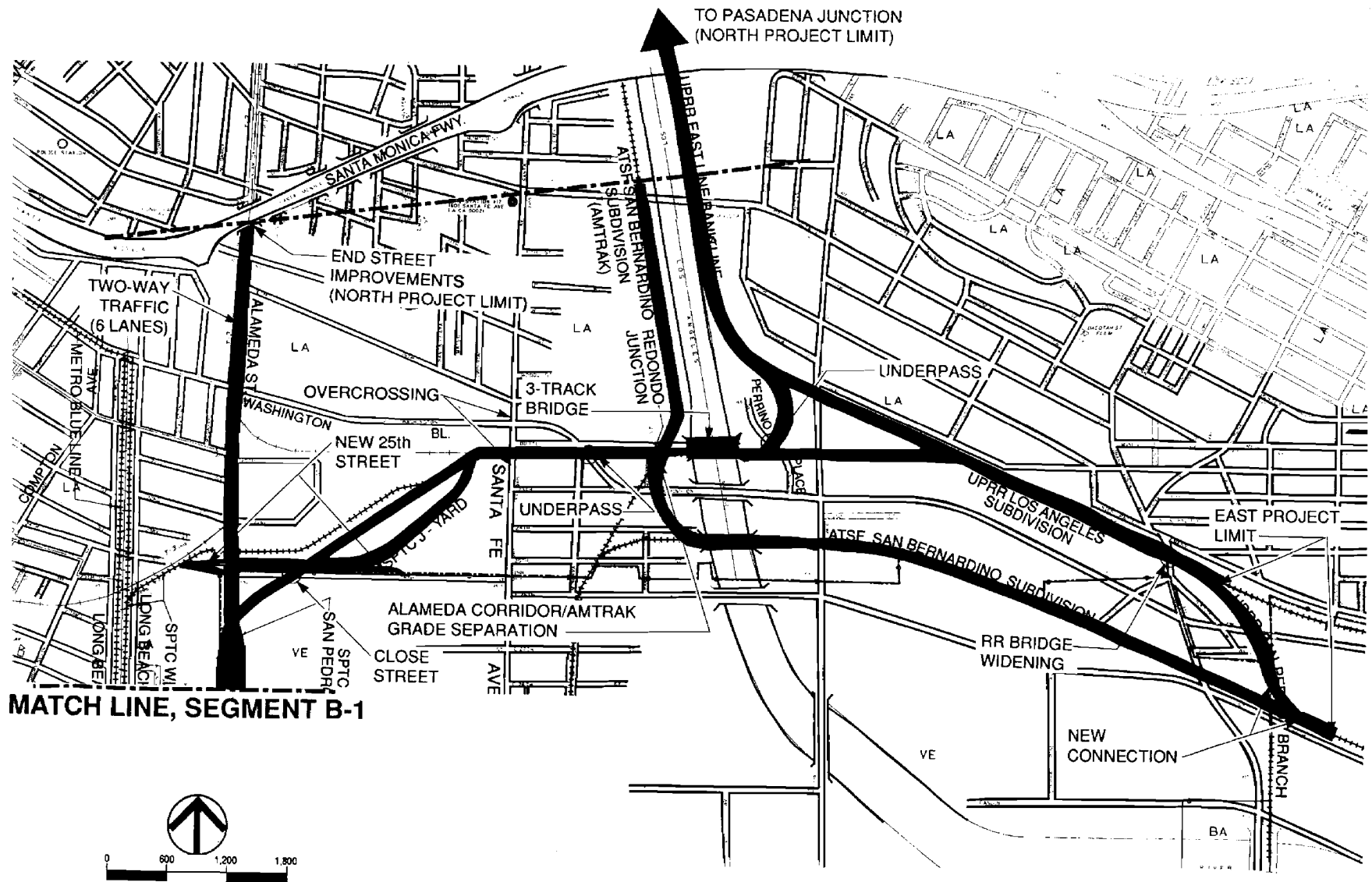
A combination corridor was also evaluated that would have combined portions of the UPRR and L.A. River alignments. Such a combination could provide the most benefits of the two alternative corridors being considered.

The alternative corridors were also evaluated extensively. Both the UPRR and L.A. River Route corridors had a higher population exposure than did the Alameda Corridor. Impacts to community facilities and residential areas were higher for the UPRR/L.A. River routes. Also, the alternative corridors had an overall negative rating along either route, with traffic, noise and local land use impacts being regarded as significant.

Based on the evaluation of the configuration alternatives and the alternative corridors, the project team recommended and the ACTA Governing Board agreed that: Alameda Corridor Alternatives 1.0, 2.1A and 2.2 would be evaluated in the environmental document; the UPRR and L.A. River routes would not to be given a complete environmental analysis; and the document would also examine the effects of a sloped trench variation of Alternative 2.1A for its potentially cost-saving aspects. These alternatives are described in detail in the following project description.

### **S.3 PROJECT DESCRIPTION**

The project corridor has been divided into segments for purposes of engineering design and environmental analysis. See Chapter 3 for a description of the segments.



SOURCE: Myra L. Frank & Assoc.

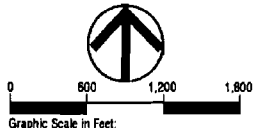
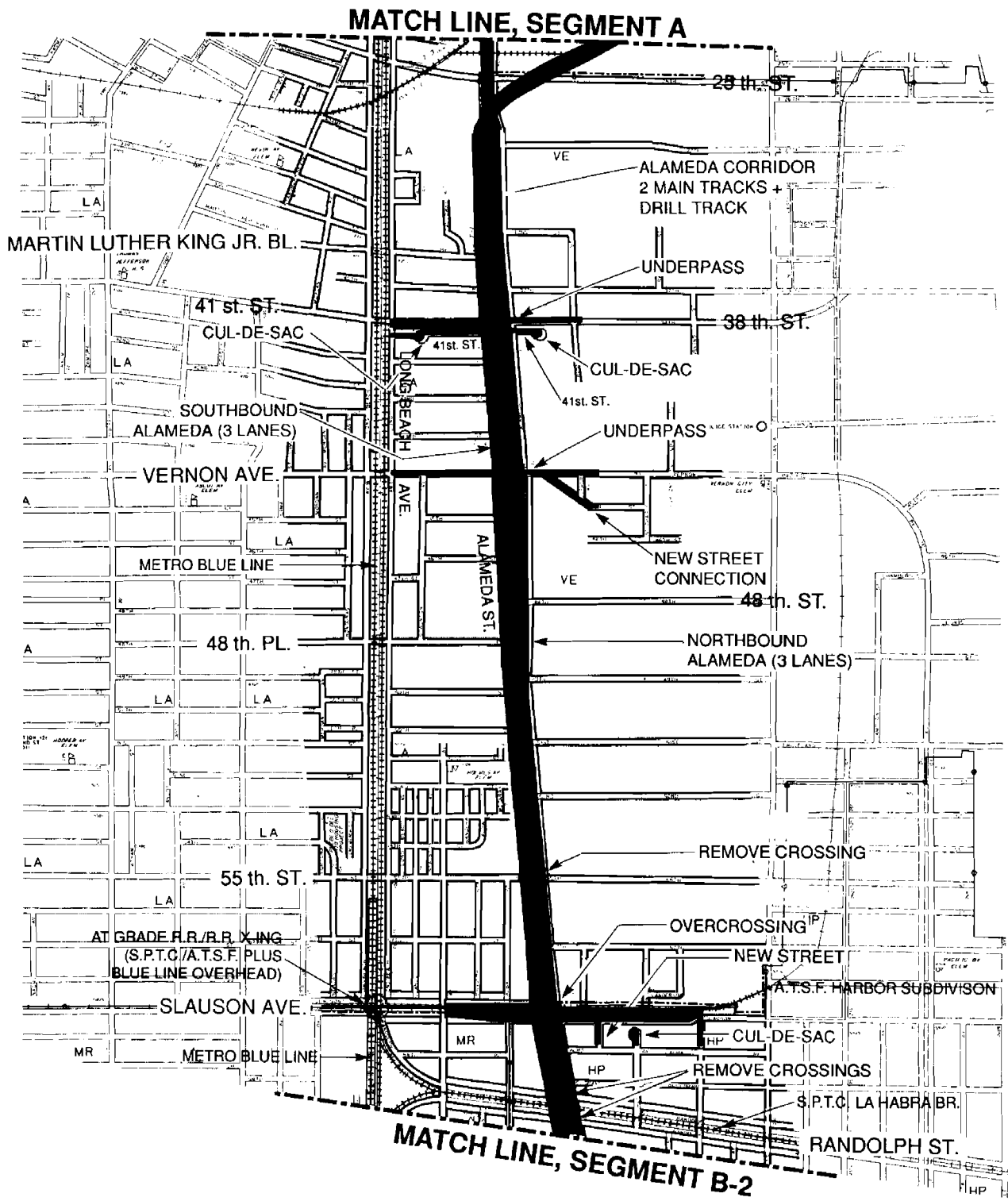
**FIGURE**

Fig. No. S-2

**SEGMENT A**  
Alternative 1.0



**ALAMEDA CORRIDOR  
TRANSPORTATION  
AUTHORITY**

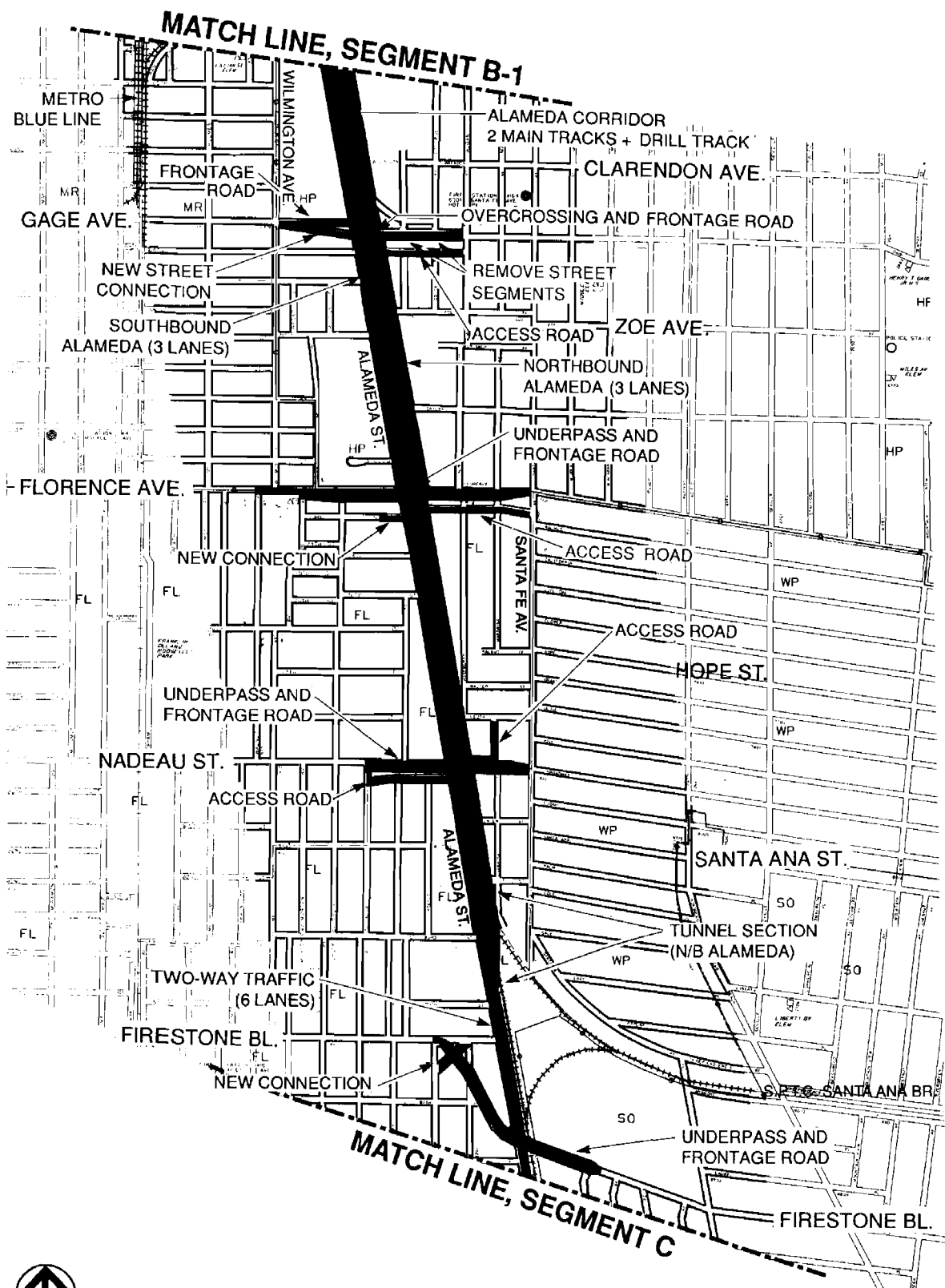


SOURCE: Myra L. Frank & Assoc.

**FIGURE**  
Fig. No. S-2

**SEGMENT B-1**  
Alternative 1.0





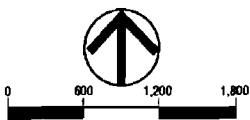
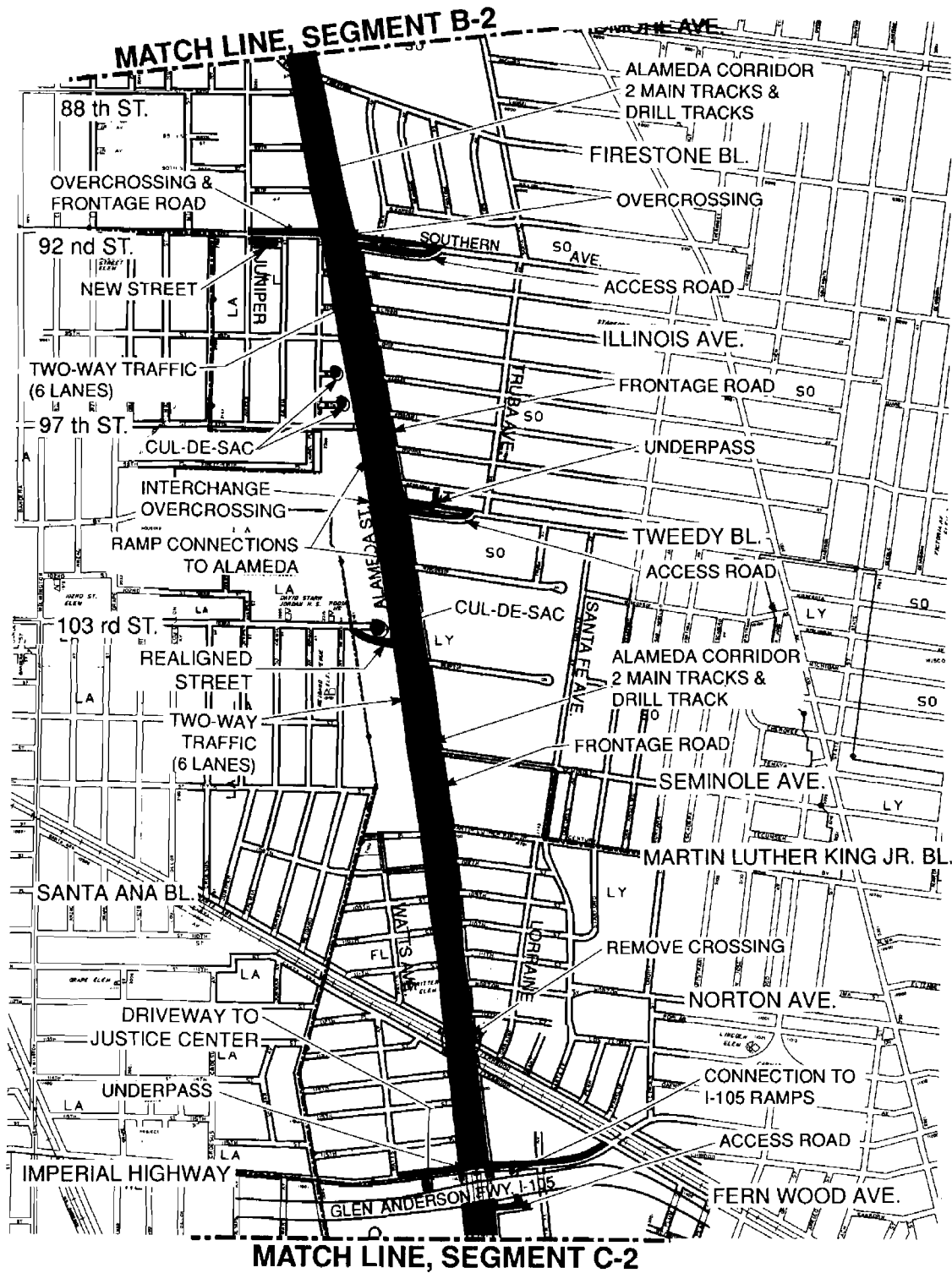
SOURCE: Myra L. Frank & Assoc.

**FIGURE**  
Fig. No. S-2

**SEGMENT B-2**  
Alternative 1.0



**ALAMEDA CORRIDOR  
TRANSPORTATION  
AUTHORITY**



SOURCE: Myra L. Frank & Assoc.

**FIGURE**

Fig. No. S-2

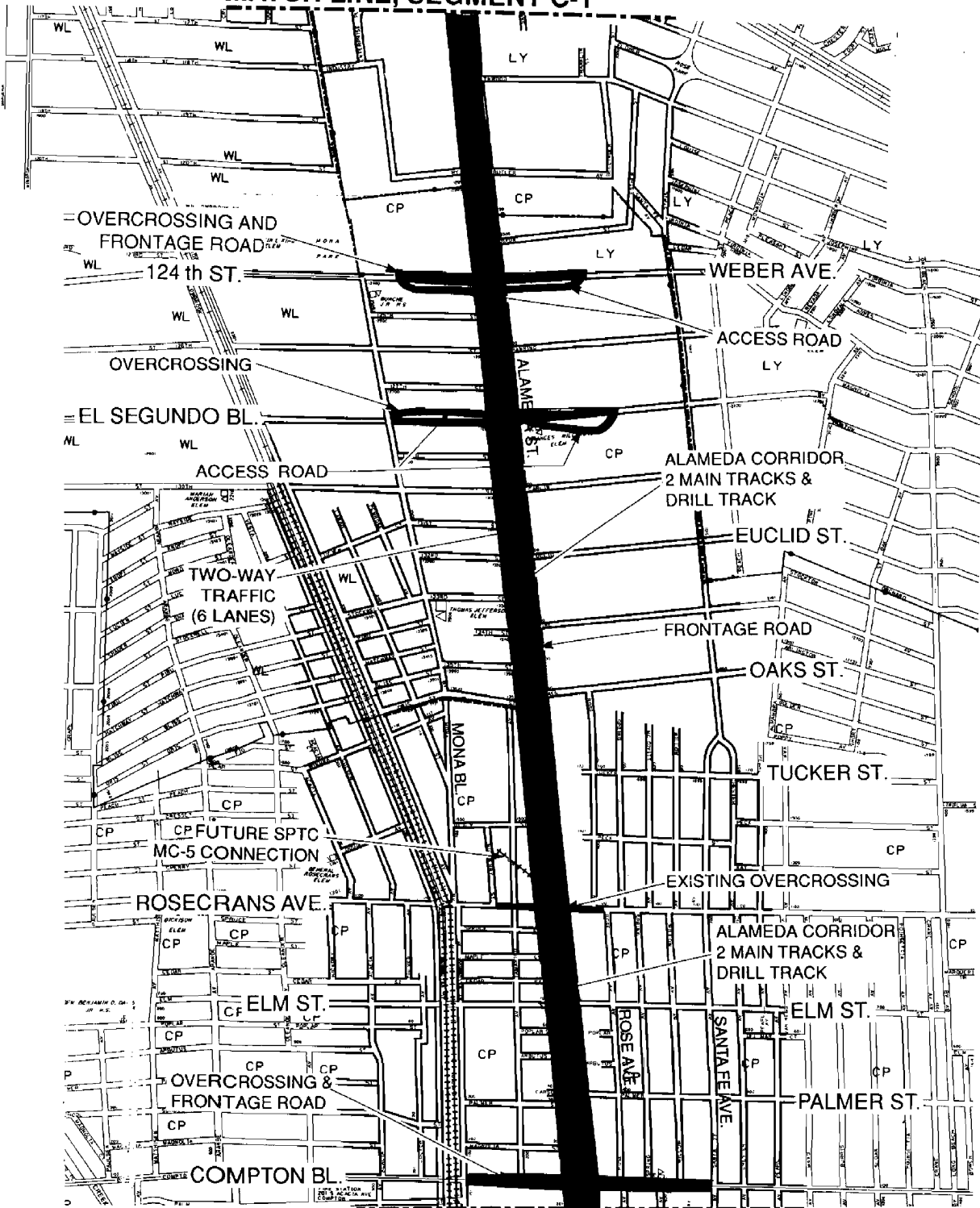
**SEGMENT C-1**  
Alternative 1.0



**ALAMEDA CORRIDOR  
TRANSPORTATION  
AUTHORITY**



MATCH LINE, SEGMENT C-1



MATCH LINE, SEGMENT C-3



SOURCE: Myra L. Frank & Assoc.

**FIGURE**

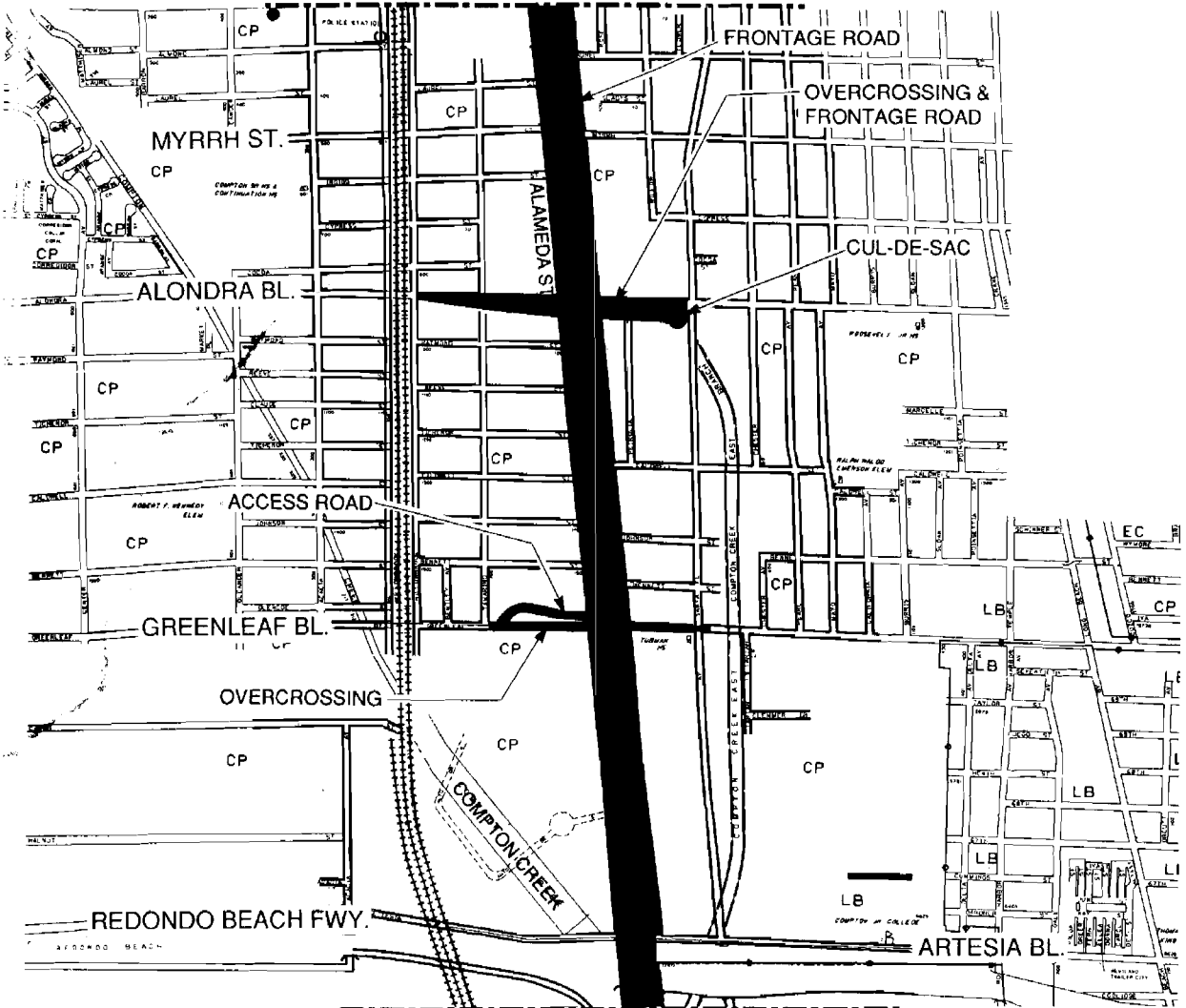
Fig. No. S-2

**SEGMENT C-2**  
Alternative 1.0

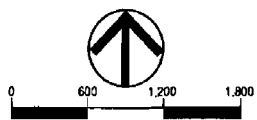


**ALAMEDA CORRIDOR  
TRANSPORTATION  
AUTHORITY**

**MATCH LINE, SEGMENT C-2**



**MATCH LINE, SEGMENT D-1**



SOURCE: Myra L. Frank & Assoc.

**FIGURE**

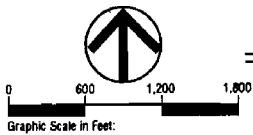
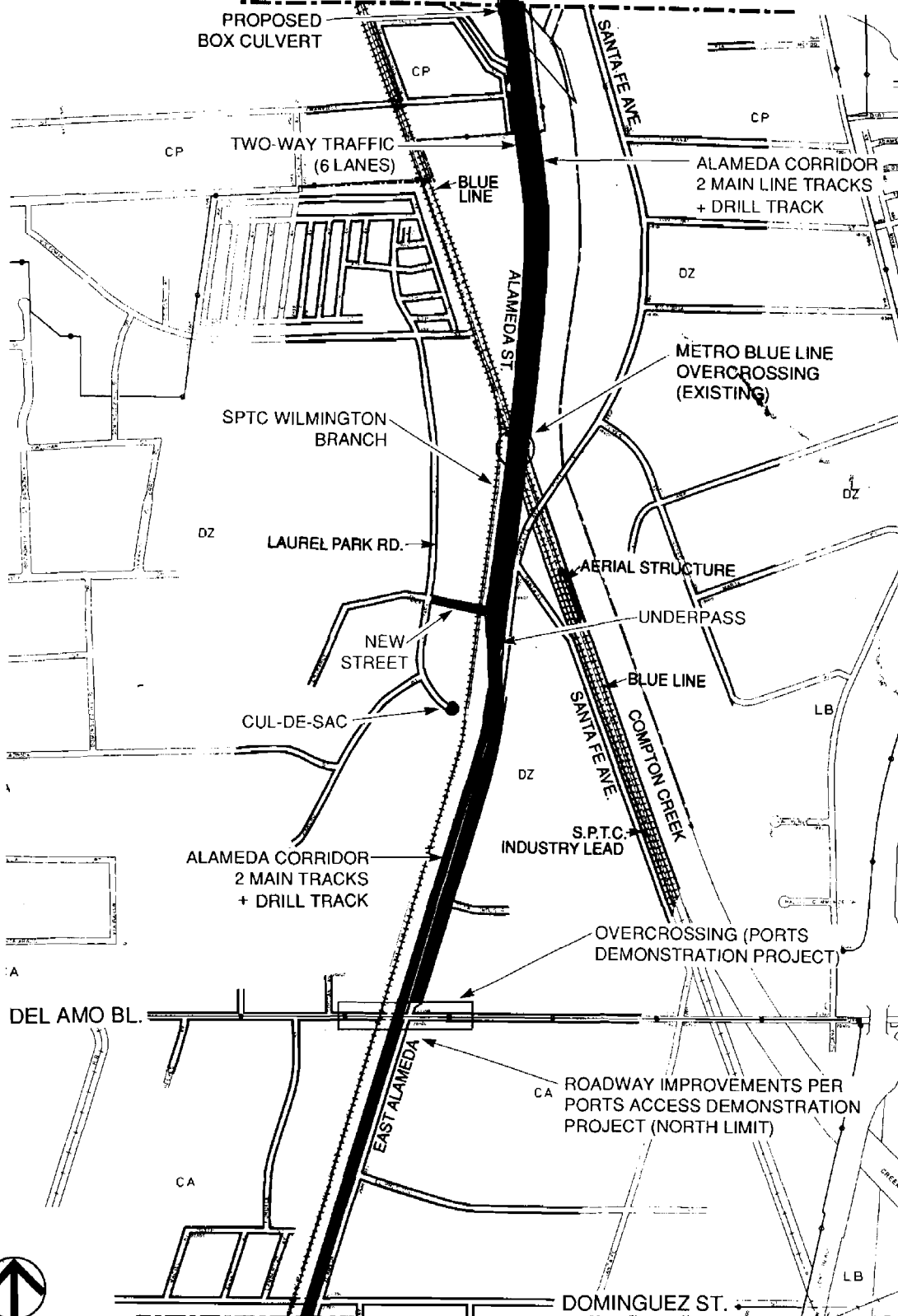
Fig. No. S-2

**SEGMENT C-3**  
Alternative 1.0



**ALAMEDA CORRIDOR  
TRANSPORTATION  
AUTHORITY**

**MATCH LINE, SEGMENT C-3**



**MATCH LINE, SEGMENT D-2**

SOURCE: Myra L. Frank & Assoc.

**FIGURE**

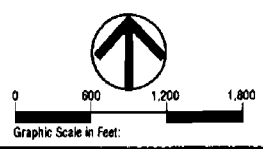
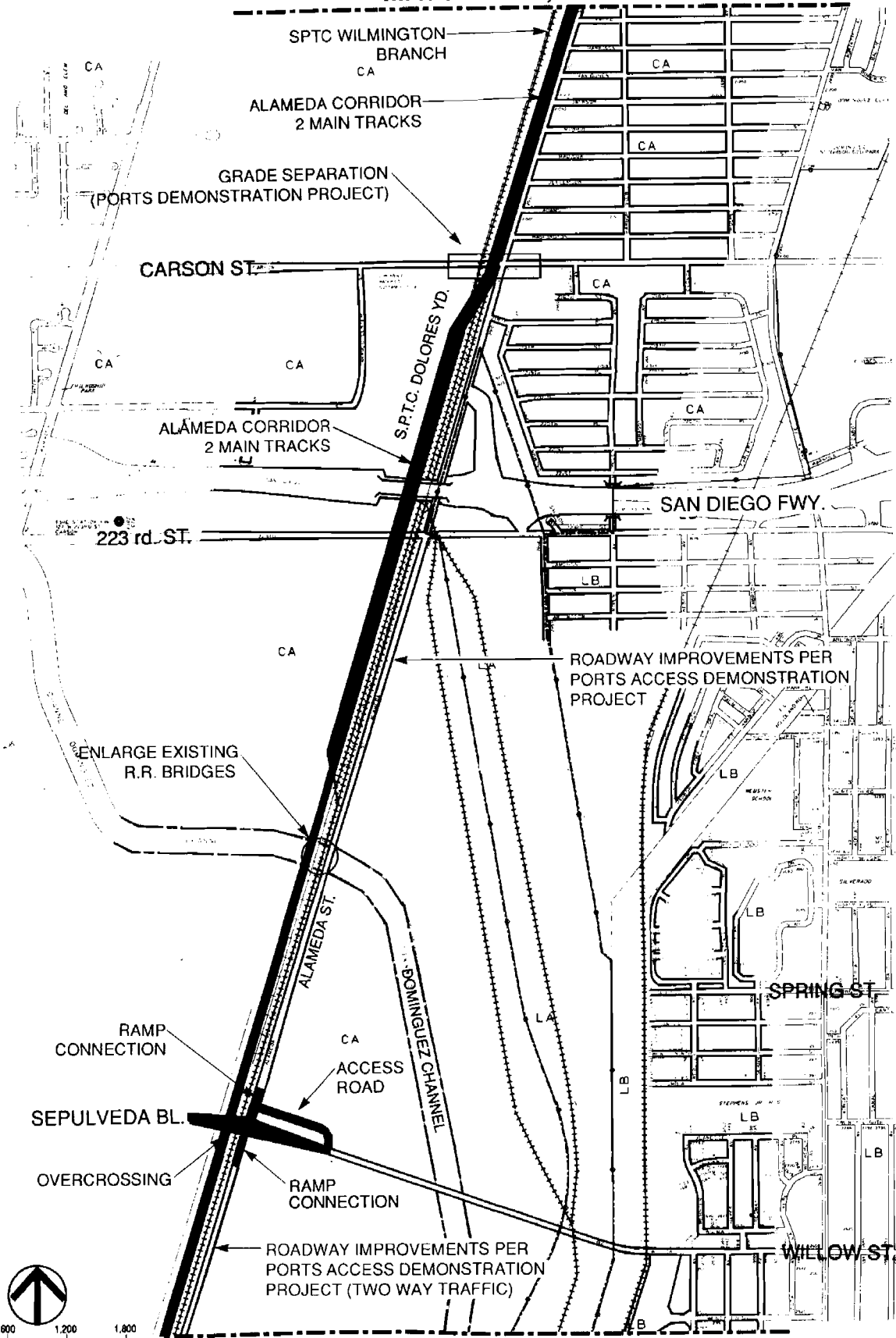
Fig. No. S-2

**SEGMENT D-1**  
Alternative 1.0



**ALAMEDA CORRIDOR  
TRANSPORTATION  
AUTHORITY**

MATCH LINE, SEGMENT D-1



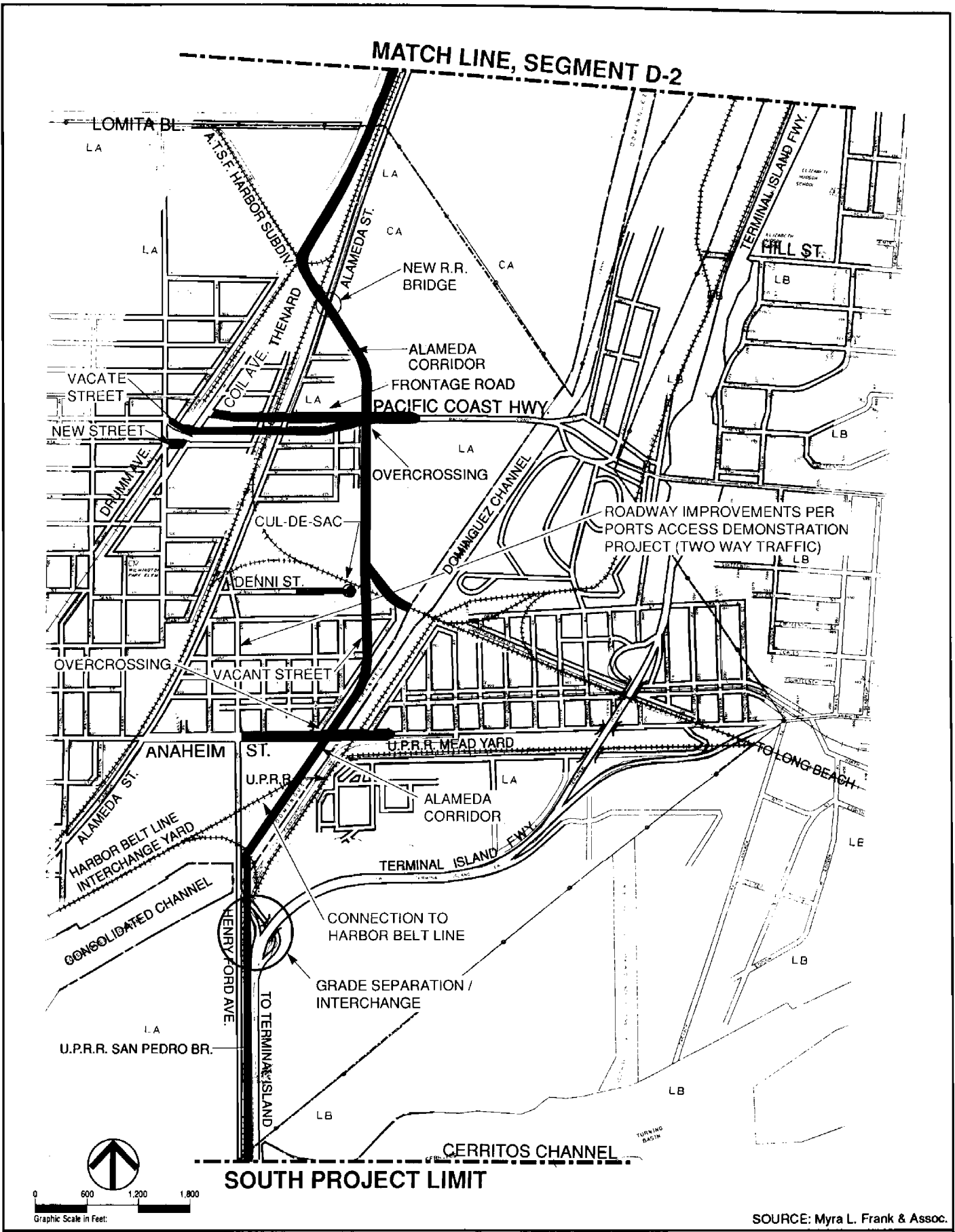
MATCH LINE, SEGMENT D-3

SOURCE: Myra L. Frank & Assoc.

**FIGURE**  
Fig. No. S-2

**SEGMENT D-2**  
**Alternative 1.0**





SOURCE: Myra L. Frank & Assoc.

**FIGURE**  
Fig. No. S-2

**SEGMENT D-3**  
**Alternative 1.0**



### Alternative 1.0 (Figure S-2)

Alternative 1.0 is the first of four build alternatives to be considered for implementation. It consists of an at-grade two-track railroad main line consolidated freight rail corridor with drill track, together with a six-lane roadway section throughout. At 22 selected streets, above-grade east-west grade separation structures would be provided. The combined trainway-roadway arrangement in Alameda Street would vary from a one-way couplet with trainway in the center to the trainway on one side of a six-lane roadway. In some locations a two-lane frontage road would also be provided.

Beginning at the north end of the corridor, modifications would be made in the Redondo Junction and J Yard areas to provide room for the consolidated trainway, which would consist of two main line tracks. The separate drill track would begin from J-Yard. The trainway and drill track would be redirected in a north-south direction on approach to Alameda Street. Beginning in the vicinity of 25th Street, the trainway would be along Alameda Street, approximately centered in the existing track area.

Roadway improvements to Alameda Street would begin in the area of the I-10 freeway interchange. Alameda Street would be widened to six lanes of traffic, three in each direction, separated by a painted median with turning lanes south to 25th street. At this point, the northbound and southbound lanes would divide to form a one-way couplet, with the trainway in the center.

South of Nadeau Street, Alameda Street would shift to the west side of the trainway, where it would again become a two-way roadway, separated by a painted median. This configuration would continue south to the vicinity of Del Amo Boulevard. A frontage road located on the east side of the trainway would be provided between 92nd Street and SR-91.

The I-105 freeway is currently under construction. A recommended related project would provide a loop off-ramp and a diamond on-ramp for eastbound I-105 traffic. Westbound ramp connections are not possible, since Imperial Highway is proposed as an underpass at Alameda Street and grades for the ramps would have been too severe. The existing Wilmington ramps would provide substitute access for westbound I-105 traffic.

South of SR-91, improvements to Alameda Street are part of the Ports Access Demonstration projects. In the vicinity of Laurel Park Road, Alameda Street improvements would pass beneath the consolidated trainway and occupy a position on the east side of the trackage. A small segment of frontage road would be provided where this transition takes place.

The proposed roadway improvements would continue south to the intersection of Alameda Street and Henry Ford Avenue, a short distance to the north of Anaheim Street. The roadway improvements would then proceed south along Henry Ford Avenue to its intersection with SR-103 (Terminal Island Freeway), where the interchange would be reconstructed.

Rail improvements would proceed south from SR-91 (Artesia Freeway) along Alameda Street until a junction is reached between the Southern Pacific tracks in Alameda Street and the AT&SF Harbor Subdivision tracks, at which point the corridor tracks would leave Alameda Street for the AT&SF tracks proceeding south to the Dominguez Channel. The trainway would run along the

west bank of the Dominguez Channel under the Anaheim Street bridge, then up and over the Dominguez Channel on a bridge toward a connection with the existing Union Pacific San Pedro Branch and the project terminus point on the north side of the Badger Avenue Bridge which spans the Cerritos Channel.

#### Alternative 2.1A (Figure S-3)

Alternative 2.1A is the second of the four build alternatives, and the first of three which calls for a depressed trainway configuration. This alternative was a derivative of Alternative 2.1, which would have had street and drill track overhangs over the depressed trainway. Alternative 2.1 A has no such overhangs. It consists of a depressed trainway providing for two main line consolidated freight rail tracks, together with an at-grade drill track to provide for local industrial service. Accompanying the depressed trainway would be a six-lane roadway facility, configured as a one-way couplet of three lanes in each direction. Grade separations would be provided for at grade with bridges crossing over the trainway.

From Redondo Junction, the trainway would extend through J Yard in an alignment that would traverse the yard area further north than under Alternative 1.0, in order to allow a fully depressed trainway to be achieved by the time Alameda Street is reached at 25th Street. The trainway would then proceed south in a depressed configuration along Alameda Street until south of Compton Boulevard, where it would swing to the east side of the corridor. The trainway would then continue in depressed configuration until south of Greenleaf Avenue, where it would begin to ascend to an at-grade section south of SR-91. The trainway would be at-grade at the crossing of Compton Creek. South of this point, the alignment of both the trainway and roadway improvements would be the same as in Alternative 1.0.

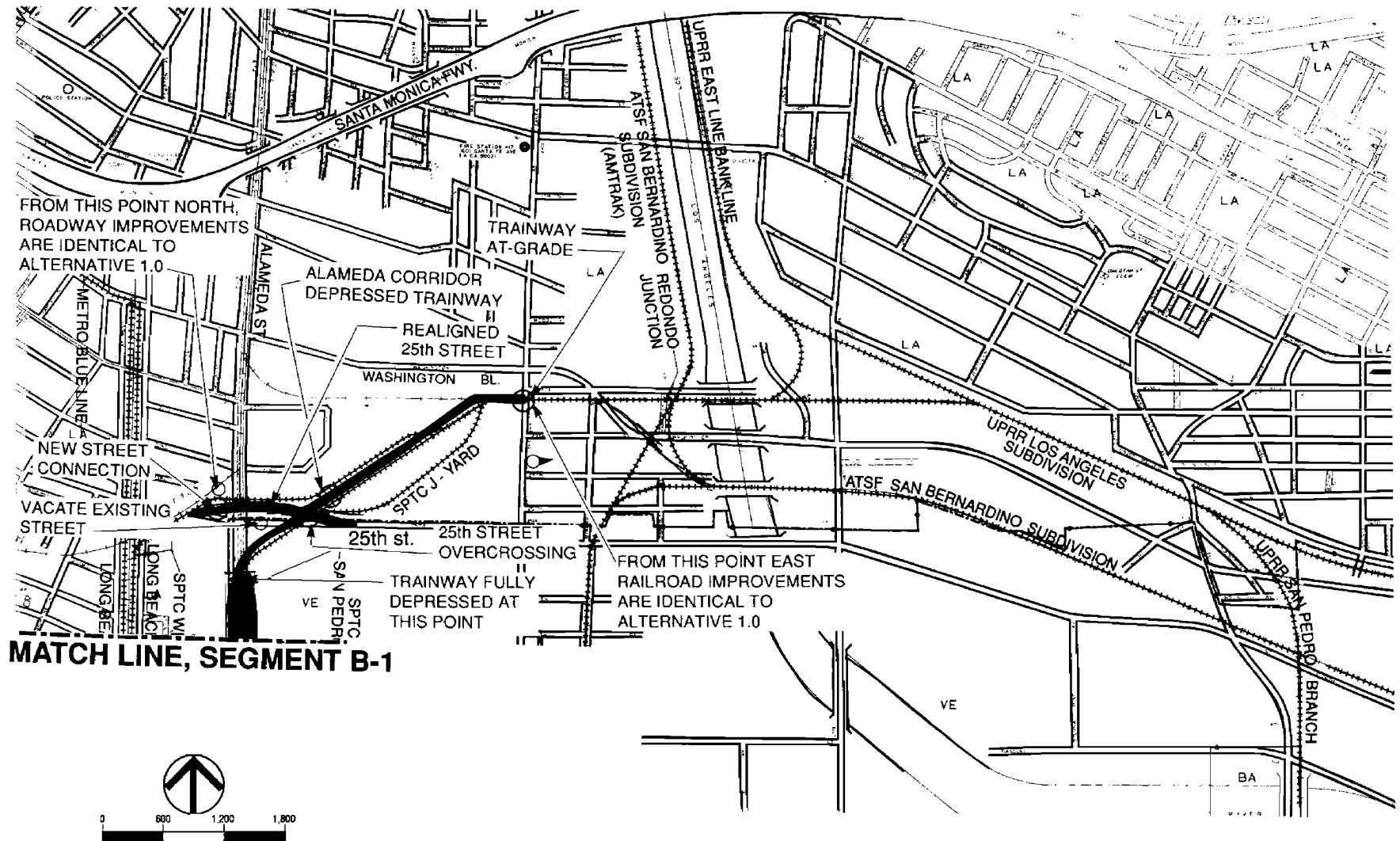
Roadway improvements for this alternative would consist of a one-way couplet straddling the trainway from I-10 to Compton Boulevard. A frontage road would be provided on the east side of the corridor between 92nd Street and El Segundo Boulevard. From Compton Boulevard until the vicinity of Del Amo Boulevard, the roadway would be on the west side of the trainway. An eastside frontage road would be provided between Compton Boulevard and south of Greenleaf Avenue. Grade crossings in these alternatives are provided in the form of at-grade bridges over the depressed trainway, with six lanes of traffic.

#### Alternative 2.1S

This alternative is the same as Alternative 2.1A except that the trainway trench would be modified by using sloped walls for a portion of the vertical rise. This variation of the basic trench design was offered as a means of reducing construction costs. Grade separations in this alternative would also be provided by means of at-grade bridges over the trainway.

#### Alternative 2.2 (Figure S-4)

This alternative would generally follow the same trainway and roadway alignments as Alternatives 2.1A and 2.1S north of 25th Street and south of Randolph Street, with the exception of small differences in railroad configuration. Between 25th and Randolph, however, the depressed trainway would follow an alignment along the SPTC Wilmington Branch, which parallels Long



SOURCE: Myra L. Frank & Assoc.

**FIGURE**

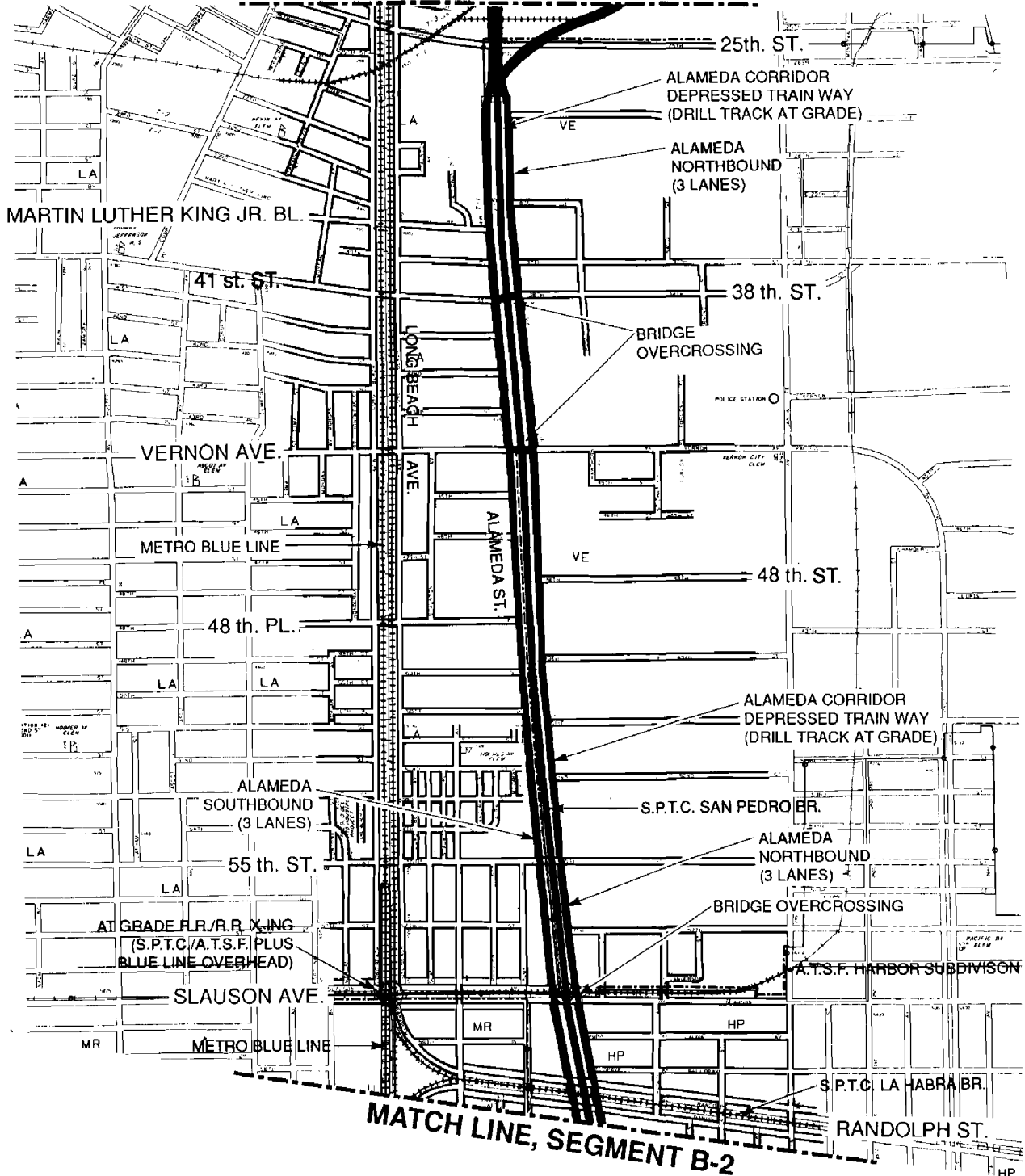
Fig. No. S-3

**SEGMENT A**  
**Alternative 2.1A**





**MATCH LINE, SEGMENT A**



0 600 1,200 1,800  
Graphic Scale in Feet

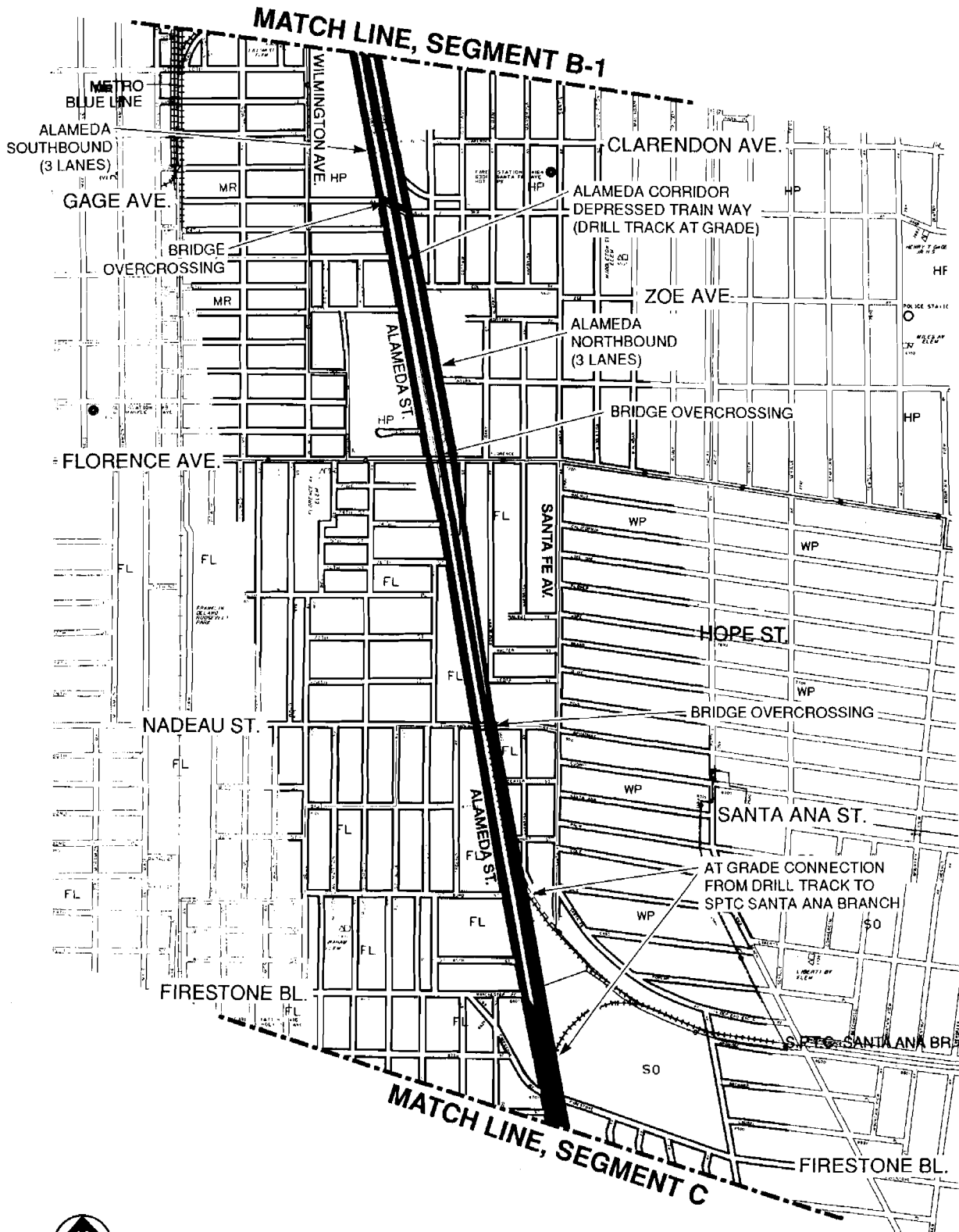
SOURCE: Myra L. Frank & Assoc.

**FIGURE**  
Fig. No. S-3

**SEGMENT B-1**  
**Alternative 2.1A**



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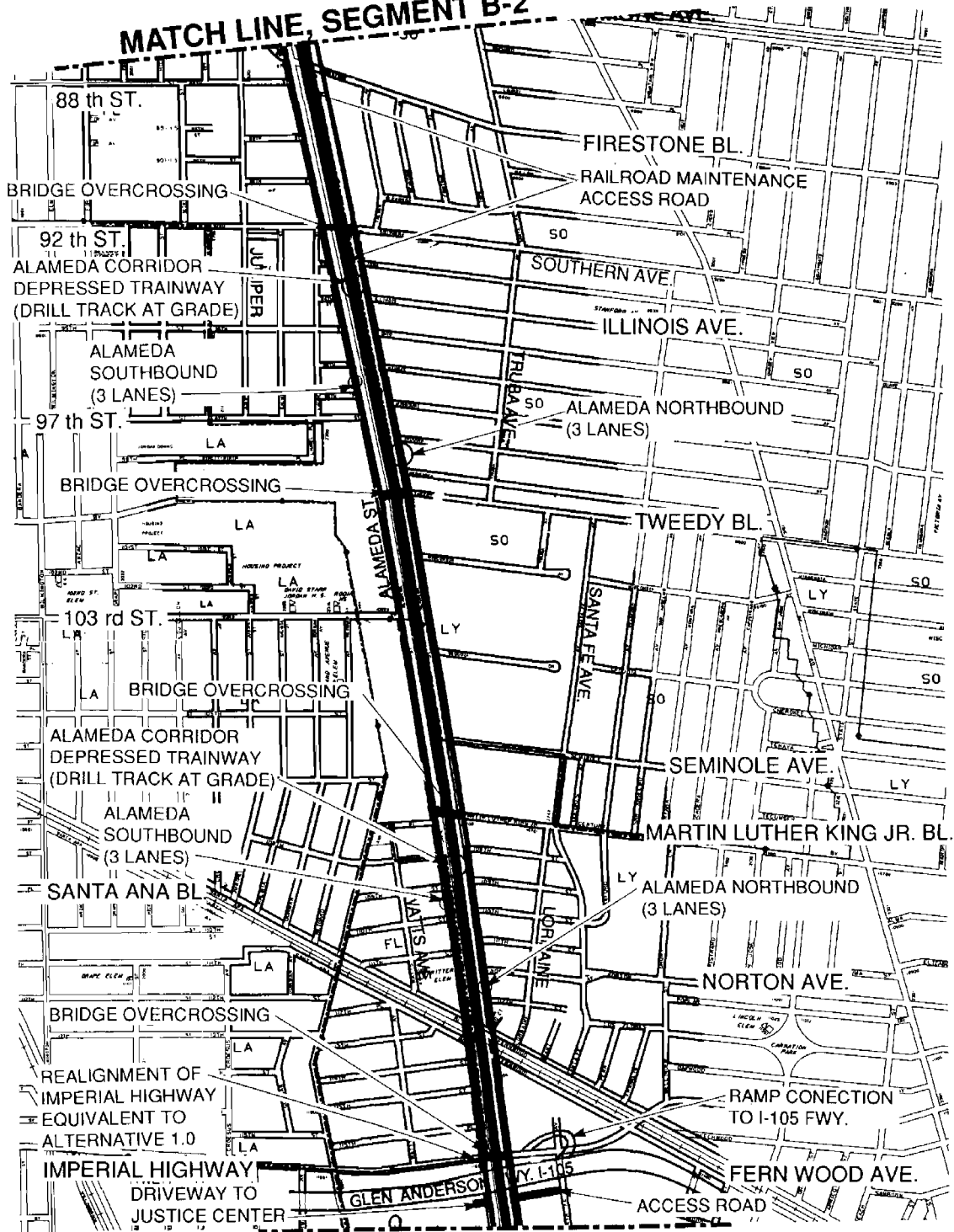
SOURCE: Myra L. Frank & Assoc.

**FIGURE**  
Fig. No. S-3

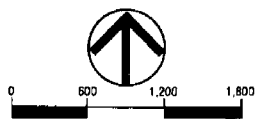
**SEGMENT B-2**  
Alternative 2.1A



**MATCH LINE, SEGMENT B-2**



**MATCH LINE, SEGMENT C-2**



SOURCE: Myra L. Frank & Assoc.

**FIGURE**

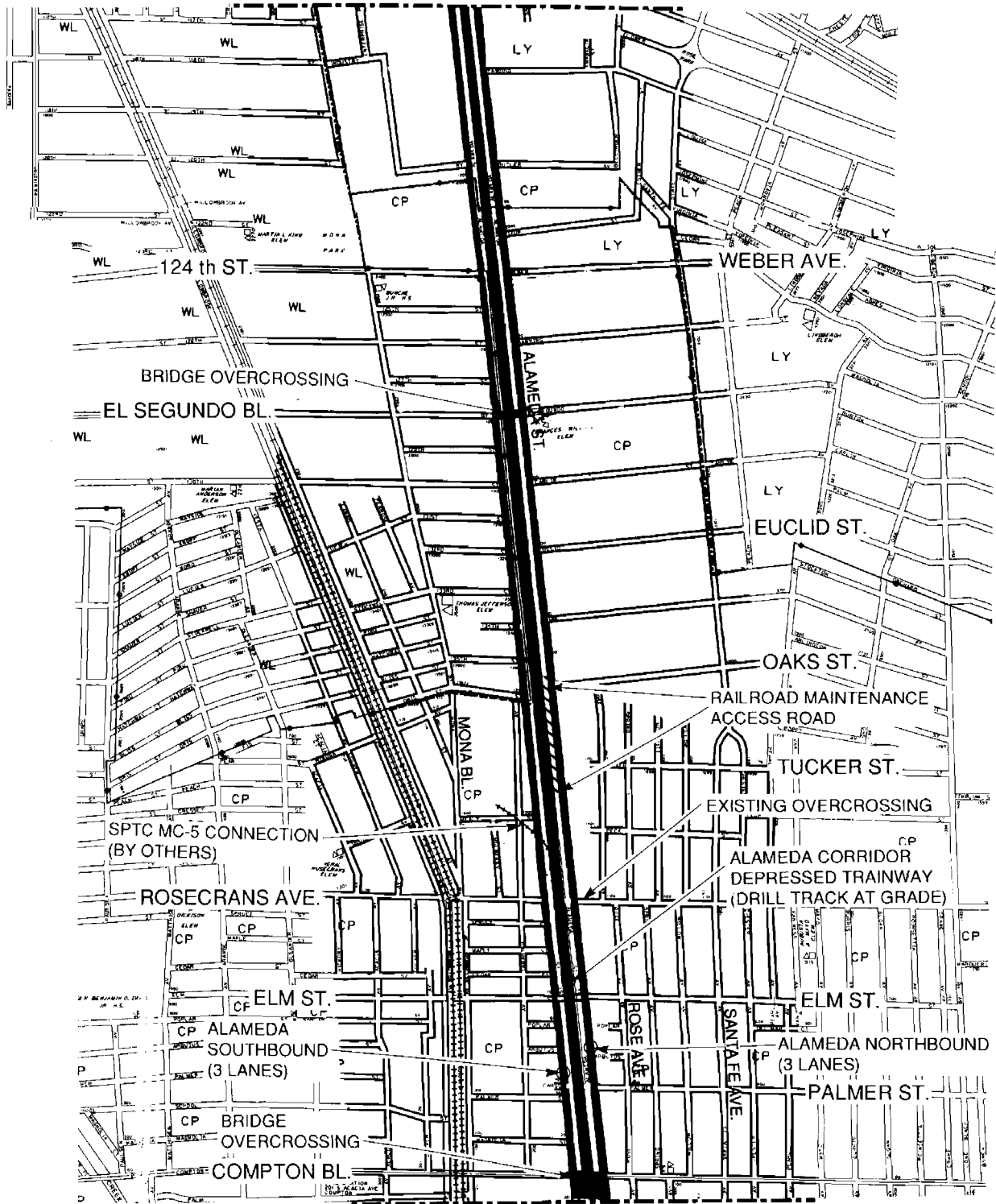
Fig. No. S-3

**SEGMENT C-1**  
Alternative 2.1A



**ALAMEDA CORRIDOR  
TRANSPORTATION  
AUTHORITY**

MATCH LINE, SEGMENT C-1



MATCH LINE, SEGMENT C-3



**FIGURE**

Fig. No. S-3

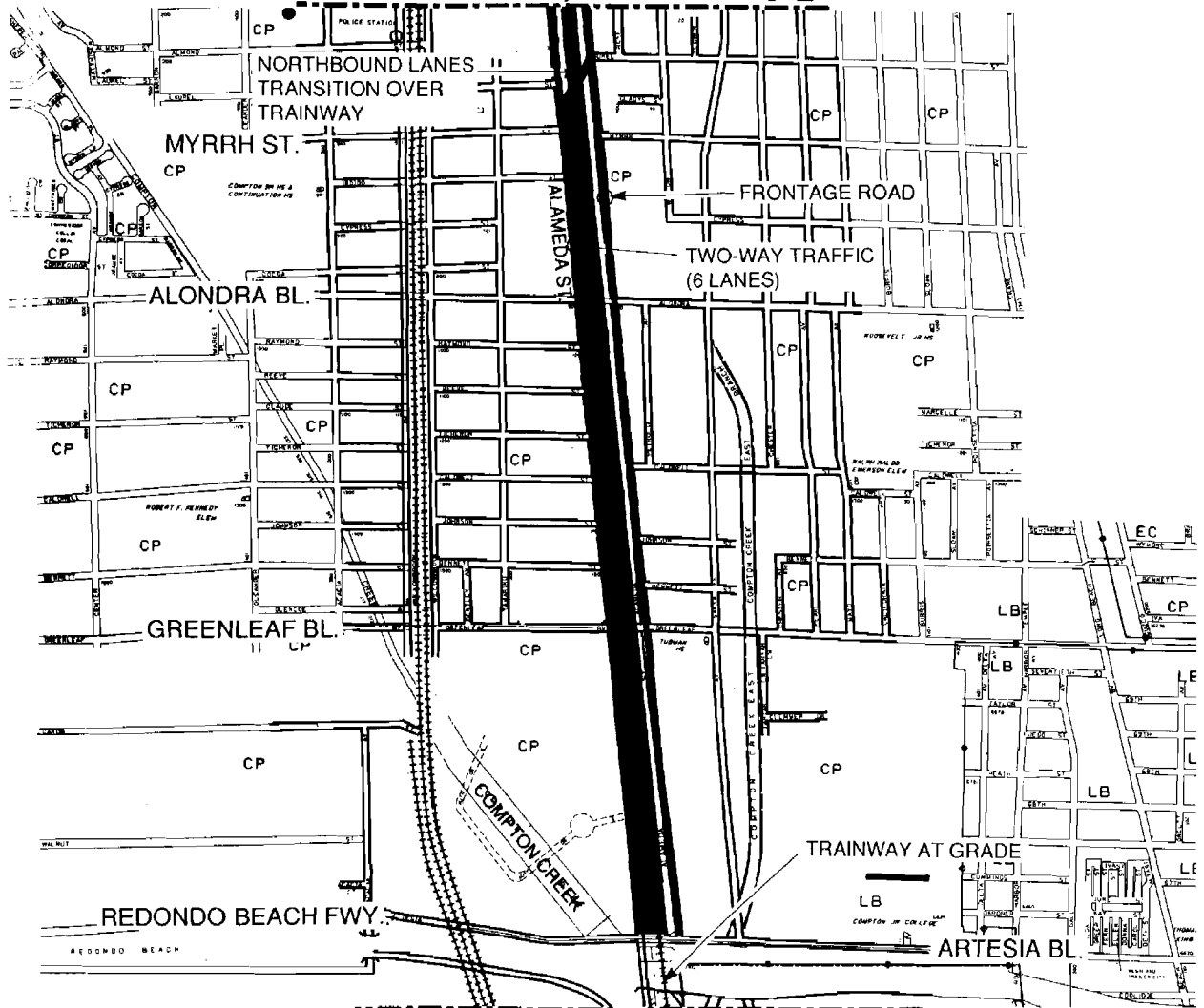
**SEGMENT C-2**  
Alternative 2.1A



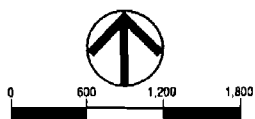
SOURCE: Myra L. Frank & Assoc.

**ALAMEDA CORRIDOR  
TRANSPORTATION  
AUTHORITY**

**MATCH LINE, SEGMENT C-2**



**IMPROVEMENTS IN SEGMENT D  
ARE IDENTICAL TO ALTERNATIVE 1.0**



SOURCE: Myra L. Frank & Assoc.

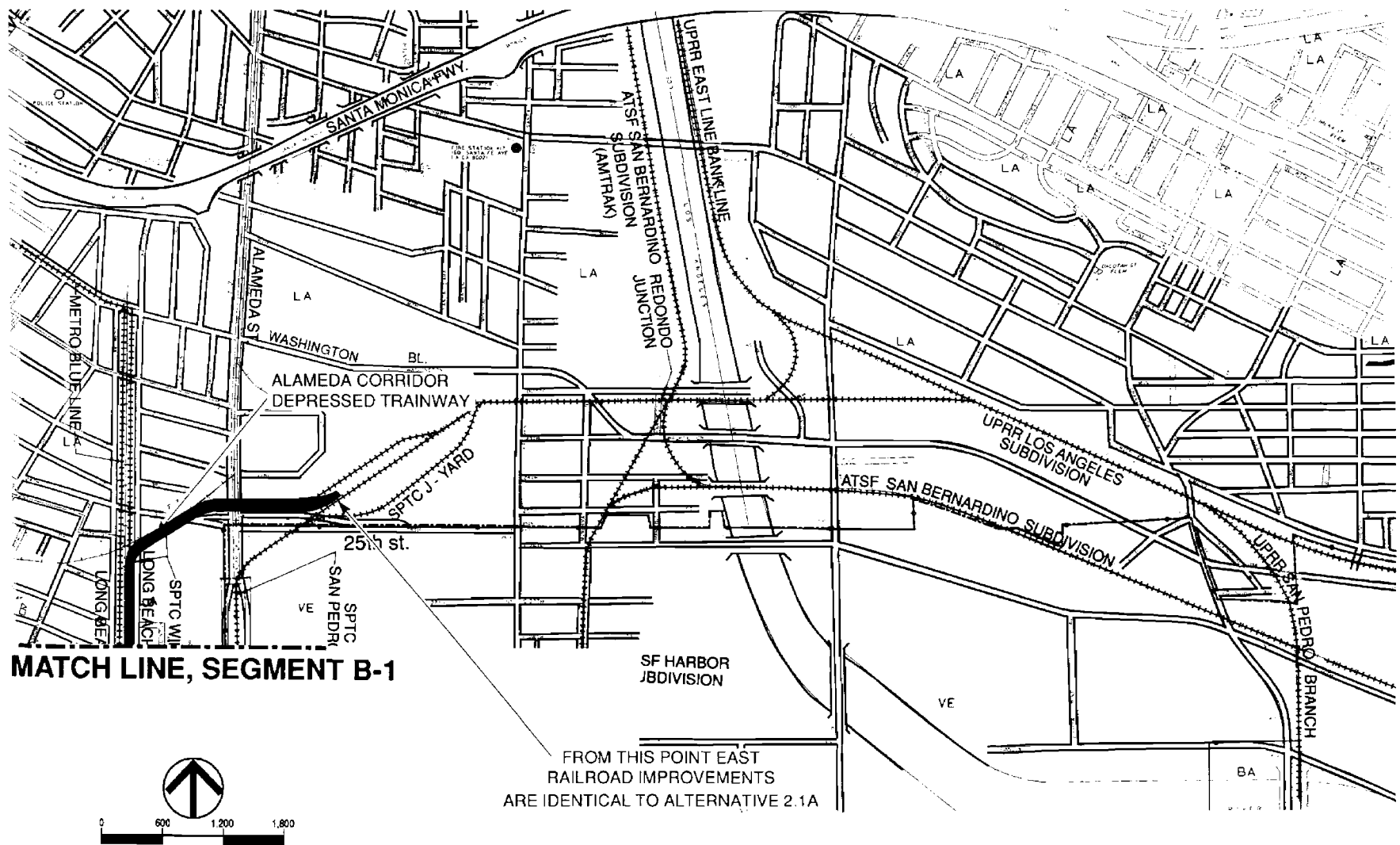
**FIGURE**

Fig. No. S-3

**SEGMENT C-3  
Alternative 2.1A**



**ALAMEDA CORRIDOR  
TRANSPORTATION  
AUTHORITY**



SOURCE: Myra L. Frank & Assoc.

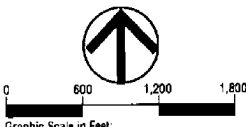
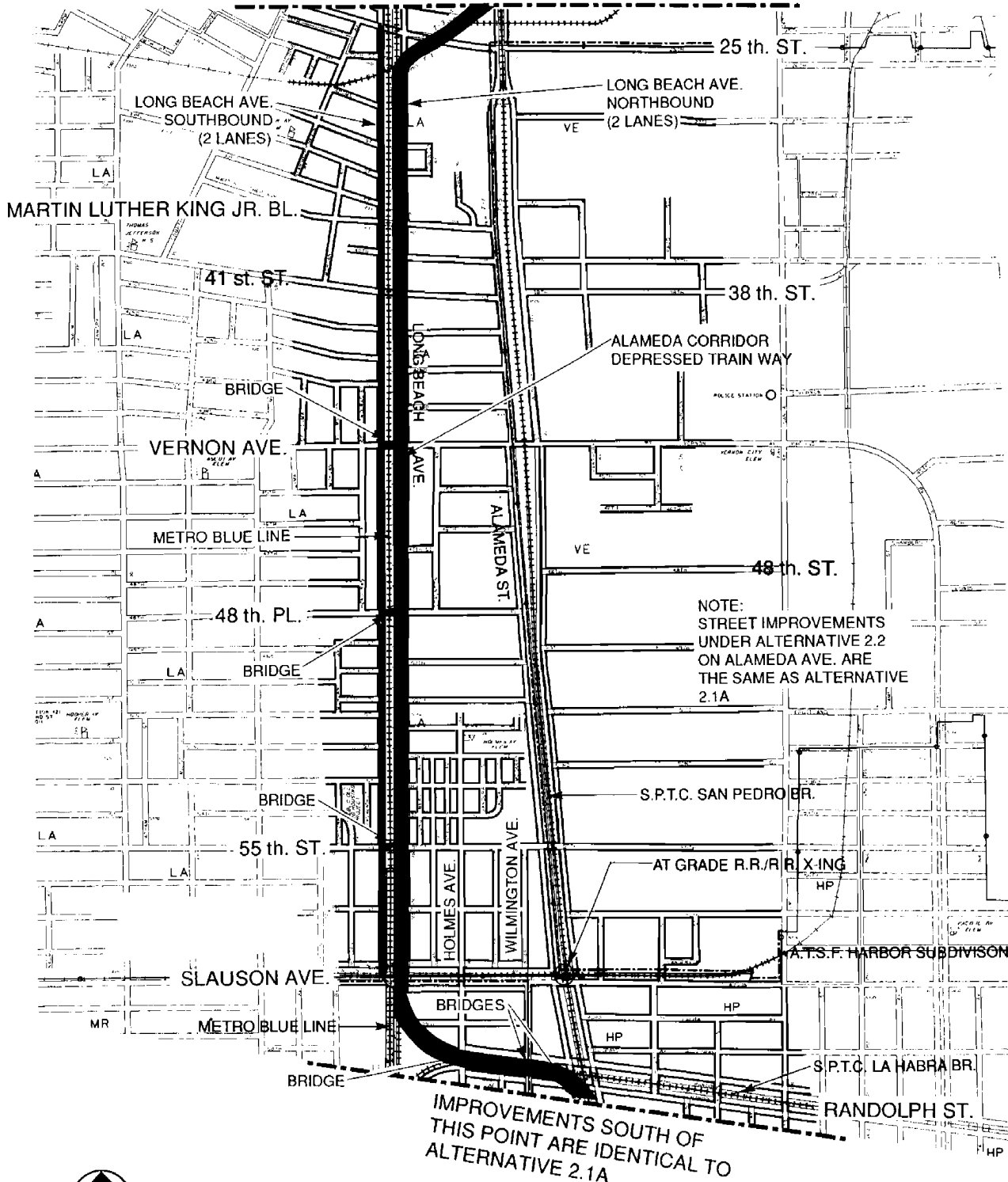
**FIGURE**

Fig. No. S-4

**SEGMENT A**  
**Alternative 2.2**



**MATCH LINE, SEGMENT A**



SOURCE: Myra L. Frank & Assoc.

**FIGURE**  
Fig. No. S-4

**SEGMENT B-1**  
**Alternative 2.2**



Beach Avenue to the west of Alameda Street. Also present in this segment are at-grade tracks of the SCRTD Blue Line passenger service and the SPTC Wilmington Branch line.

Between 25th and Randolph Street, the roadway improvements would consist of a two-way facility, separated by a paved median. Alternative 2.2 would provide for six lanes of traffic.

#### **S.4 AREAS OF CONTROVERSY**

Since the outset of concept design for the Alameda Corridor project, there have been two major issues of controversy. The first concerns whether the proposed facility should be configured at or below grade. The second concerns whether the facility should be diverted to the SP Wilmington Branch, bypassing the City of Vernon. Also, during the preparation of the EIR, mitigation measures have been developed that may become the subject of controversy. These topics are discussed in the sections following.

##### **S.4.1 Trench vs. At-Grade Configuration**

The choice between an at-grade or depressed trainway has been part of the discussion for the Alameda Corridor project since the beginning of concept engineering work. Both configurations were described in the original Request For Proposal (RFP) for the project (November, 1989), they were discussed at the September 13, 1990 Project Workshop, they were embodied in the initial set of configuration alternatives, and they have been included in the final set of alternatives examined in this EIR. In addition, the choice between these two configurations has been the subject of discussion at several ACTA Governing Board meetings and numerous meetings of its advisory committees.

*Since the beginning of the project, it has generally been the opinion of the corridor cities that a depressed trainway provided superior mitigation potential for a range of impacts (primarily right-of-way, traffic and noise), as compared to the at-grade option. Some corridor cities have felt so strongly about this that they have stated that no other option would be acceptable to them. In recognition of this strong feeling in favor of the depressed trainway configuration, and as a result of a debate that took place at the ACTA Governing Board March 12, 1992 meeting, a motion was introduced and passed that identified the depressed trainway as the preferred configuration.*

This environmental document examines both the at-grade and depressed trainway configurations. These options are discussed more fully in Chapter 3.

##### **S.4.2 Vernon Diversion**

A second area of controversy, also identified since the outset of the project, concerns the so-called "Vernon Diversion." The City of Vernon is located at the northern end of the project corridor. It is adjacent to the east side of Alameda Street, from 25th Street south to Slauson Avenue. To the west of Alameda Street, in the same area, is a portion of the City of Los Angeles, located within the ninth Council District.

The existing right-of-way along Alameda Street, including the railroad right-of-way in the reach between 25th Street and Slauson Avenue, is quite narrow; 125 feet in some portions. If the at-grade alternative (1.0) were implemented in this reach, the cross section required (at-grade



trainway with one-way roadway couplet) would extend to a minimum of 160 feet in width. The depressed trainway has two alternative cross sections. One would construct a trainway extending approximately 33 feet below grade and would have vertical concrete retaining walls approximately 47 feet apart, and the second would construct a trench that would have sloped walls for the upper one-half of the below-grade portion. Using a one-way roadway couplet to accompany this, the first typical section would require 171 feet to construct the facilities; whereas the second would require up to 218 feet.

The City of Vernon has expressed concerns that the project might require extensive property takings within its jurisdictional boundaries, for either the at-grade or depressed trainway configurations; and further, that these takings would constitute an undue hardship on the city and the property owners affected. Also, the current design would eliminate the "Little Alameda," the eastside two-way frontage road that provides access today to the properties along Alameda Street in the City of Vernon. As a result, the City of Vernon suggested an alternative alignment which would avoid takings there, such alignment using a portion of the SPTC Wilmington Branch track alignment from 25th to Randolph streets. This shift in the alignment would place it entirely within the jurisdictional boundaries of the City of Los Angeles in this reach. The City of Los Angeles has expressed concerns that this alignment would result in substantial adverse effects on its residents. This alternative (Alternative 2.2) is examined in this environmental document and is described in detail in Chapter 3. Displacement impacts are discussed in Section 5.3.

#### **S.4.3 Mitigation Measures**

During the course of concept engineering for the project, the need for mitigation measures in three main areas has arisen; emergency service provisions, intersection geometric improvements and noise barrier walls. Each of these has some degree of associated controversy, as described below.

##### Emergency Services

As a result of extensive discussions with fire and police representatives, the provision of emergency services after project implementation has been identified is a subject of some controversy. Concerns have been raised that the trench could become a potential source of vandalism and could be used to abandon stolen vehicles. The pursuit of persons committing crimes and attempting to escape on foot could also be compromised by the presence of the corridor, particularly the at-grade alternative. Precisely how these effects could be effectively mitigated requires further discussion.

The alternative trainway configurations have been viewed as each presenting some specific challenges with regard to fire fighting or response to another type of incident requiring fire personnel. In the at-grade trainway, access to an incident would be conducted from street level, using conventional equipment and techniques. A spill or derailment could present problems of containment. The depressed trainway offers natural containment for a spill or derailment; however, it could make it more difficult for personnel to reach the source of problems, and specialized fire fighting techniques may be required. The depressed trainway alternative would likely require installation of some additional fire fighting facilities (i.e., water mains, hydrants, special accessways) that would not be required for the at-grade alternative.

Required noise barriers would be 15 feet in height. Much of the central portion of the project would have soundwalls on at least one side of the trainway, and in some cases, both sides.

Soundwalls can be perceived as neighborhood and social barriers, as well as noise attenuation devices, because they tend to "wall off" areas due to their imposing height, and because they obstruct otherwise open views across the thoroughfare where they are located. They also provide opportunities for graffiti and vandalism, and they can have public safety implications. Given the extent and height of the soundwalls required for the project, particularly for Alternative 1.0, it is likely that these perceptions would be felt by large numbers of neighborhood residents along the affected portions of the corridor.

Resolution of the conflict between needing soundwalls for noise attenuation on the one hand and eliminating them for visibility and other reasons on the other hand is difficult. In some instances neighborhood residents may elect to tolerate increased noise in order to avoid the barrier. A detailed discussion of noise impacts and proposed mitigation is provided in Section 4.4.

## **S.5 ISSUES TO BE RESOLVED**

There are a number of issues that must be resolved before the project can be implemented. The following sections describe those issues.

### **S.5.1 Selection of the Project to be Implemented**

This EIR provides a comparative evaluation of the effects of four project alternatives: Alternative 1.0 (at-grade trainway), Alternative 2.1A (depressed trainway with vertical walls), Alternative 2.1S (depressed trainway with partially sloped walls), and Alternative 2.2 (Vernon Diversion). The ACTA Governing Board has identified the depressed trainway as "preferred" for purposes of the environmental document, but the decision to select a specific alternative for construction has not yet been made.

Selection of the project to be implemented will take place after the environmental review process has been completed and all comments have been received and responded to. The selected alternative will become the "Plan of the Corridor."

### **S.5.2 Railroad Right-of-Way Acquisition and Operating Agreements**

Negotiations are under way for the purchase by the ports of various railroad rights-of-way needed for the Alameda Corridor. The project will require ownership or permanent operating rights on certain railroad properties owned by the three rail carriers: Union Pacific, Santa Fe and Southern Pacific. The ports of Los Angeles and Long Beach have tendered offers to the carriers for the necessary properties.

The ports and railroad will also need to reach a consensus on a detailed operating agreement for the completed corridor as well as interim operating plans and trackage rights arrangements while the project is being constructed.

Los Angeles County Fire Station 105, located adjacent to the corridor, along Santa Fe Avenue, north of Del Amo Boulevard, currently has a rear exit that allows access across the SPTC San Pedro Branch tracks to reach problems located west of Alameda Street. This access would have to be closed as a result of the project. The use of this drive would become more difficult as the trains increase in frequency, even without the project. It would be necessary to develop some special mitigation so that access to the west side of Alameda can be maintained.

The effects of the project on fire and police services are discussed in Sections 5.5 (Public Services) and 5.6 (Safety and Security).

### Intersection Improvements

The corridor roadway improvements described in this EIR would reconfigure the present six lanes (4 lanes on Alameda, 2 lanes on "Little Alameda") to provide for six lanes for through traffic along Alameda Street and complete grade separation of train from vehicular traffic. As a result, improved traffic flow and capacity should occur. For Alternative 1.0, the traffic operations along Alameda Street for through traffic would be enhanced to a greater degree than the Alternative 2 series, because no major signalized intersections and no cross traffic conflict would exist.

As part of the project, a traffic impacts analysis has been conducted which recommended a number of improvements to the geometrics of the local street system surrounding the corridor as mitigation for increased traffic. The improvements to the local streets recommended for the at-grade alternative are more extensive than for the depressed trainway. Since regionwide growth in traffic is in large part the source of much of the traffic volume wishing to use the corridor, the following has been suggested for local street improvement mitigation:

- (1) For the at-grade alternative, recommended local street improvements are proposed to include the east-west grade separation structures, access roads to those structures, and other project-related changes (e.g. cul-de-sacs) that may be required. Improvements beyond the immediate vicinity of the grade separations are not proposed as part of the project.
- (2) For the depressed trainway alternative, the existing streets at each of the proposed grade separations would be reconstructed over the trench. Street improvements beyond the corridor are not proposed as part of the project.
- (3) Signalization and signage improvements required for the functioning of the grade separations would be provided by the project.

Traffic improvements proposed as part of the project, and additional improvements that are judged to be potentially necessary to accommodate future background traffic growth, are discussed in Section 5.4. Geometric improvements are illustrated in Appendix VII.

### Soundwalls

All project alternatives have common improvements south of SR-91. Noise barriers; would be required along certain portions of this route segment. North of SR-91, the limits of noise walls would vary by alternative. Alternative 1.0 would require the greatest amount--50,000 lineal feet.

### **S.5.3 Project Funding**

Depending on the alternative, the project is expected to cost between \$1.185 billion and \$1.329 billion in 1991 dollars. These figures exclude the cost of railroad rights-of-way. ACTA will be developing a detailed financial plan that would take into account monies already committed (approximately \$185 million) as well as potential new sources of funds, including revenue bond issues.

### **S.5.4 Project Phasing**

Section 3.6 of this document provides a suggested approach to phasing project construction, for both the at-grade and depressed trainway options. The suggested phasing was developed to satisfy two objectives: (1) provide for an orderly construction process that results in usable segments as soon as possible, and (2) provide for the timely and orderly transition of railroad operations from three independent lines to one consolidated corridor.

The actual phasing of project construction will depend upon a number of factors, including: availability of overall project funding, the timing of specific projects required by certain funding arrangements, selection of the preferred alternative, local jurisdiction requirements or desires, the right-of-way acquisition process, sequencing of related projects to be constructed by others, constraints or opportunities to be revealed during final design activities and constraints or opportunities occurring during the early stages of the construction process itself.

It is the goal of the SCAQMD's 1991 Air Quality Management Plan (AQMP) to have freight rail consolidation become a reality before the year 2010. This goal will be kept in mind as overall project phasing decisions are made.

### **S.5.5 Grade Separation with Commuter Rail**

Concurrent with Alameda Corridor Project development, the Los Angeles County Transportation Commission (LACTC) and the Los Angeles San Diego Rail Corridor (LOSSAN) are developing plans to provide a significant increase in commuter rail service in Southern California. One of the main rail routes under consideration for 80-100 commuter trips a day is the existing AT&SF line that crosses the Alameda Corridor, at-grade, in the vicinity of Santa Fe Avenue and Washington Boulevard, near the corridor track crossing of the Los Angeles River. Based on the commuter and freight rail projections by the year 2020, it would not be feasible from a stand point of maintaining schedules, nor prudent from a safety point of view, to maintain an at-grade crossing of these tracks.

As part of the Alameda Corridor concept design three alternatives were considered for elevating the commuter rail and providing the grade separation with an at-grade freight track. Due to the physical constraints, including the Los Angeles River crossing and roadway intersections in close proximity, no concept design for adjusting the profile of the consolidated freight line was considered feasible.

## **S.6 INTENDED USES OF THE EIR**

This Draft Environmental Impact Report (DEIR) was prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code, Sections 21000 et. seq., and

Guidelines for Implementation of the California Environmental Quality Act, Governor's Office of Planning and Research, 1986, as amended. The ACTA Governing Board adopted the above guidance as lead agency for this project, and therefore the document also satisfies ACTA's CEQA guidelines as well.

The primary purposes of this environmental document are two-fold. First, it is intended to identify and disclose the potential effects associated with each of the project alternatives under consideration. Second, after obtaining public comment regarding the effects, the document will be used in the process of deciding which alternative is to be implemented.

This environmental document will be used as the basis upon which Findings (pursuant to CEQA Guidelines Section 15091) and if necessary, a Statement of Overriding Considerations (pursuant to CEQA Guidelines Section 15093) will be prepared. It will also be used to prepare a Mitigation Monitoring Program, pursuant to CEQA Section 21081.6. These documents, in conjunction with the Final EIR, will be used in the project approval process.

Some federal agencies may take actions regarding this project. In doing so, some portions of this environmental document may be used by the affected agencies in preparing the documents used in those approval processes. The U.S. Department of Transportation would provide funding for some project components. Approval of the railroad property acquisitions and operating agreement may be required from the Interstate Commerce Commission. The Federal Railway Administration may also be required to approve certain corridor operating procedures, particularly as they relate to safety.

In addition to the above actions, other actions may be required to implement the project. This environmental document may be used by Responsible Agencies (pursuant to CEQA Guidelines Section 15096) and by other agencies and jurisdictions in taking those actions.

The parties that may be required to take an action or issue an approval regarding the proposed project include the following:

<b>Agency or Jurisdiction</b>	<b>Approval</b>
<u>State of California</u>	
California Transportation Commission	Potential funding for project components
Public Utilities Commission	Approval of portions of the corridor design, operating procedures and safety provisions
California Department of Transportation	Designation of Alameda Street as a component of the National Highway System (NHS); various permits
<u>Regional Agencies</u>	
South Coast Air Quality Management District	Review of project for consistency with AQMP

Southern California Association of Governments

Review of project for conformity with regional plans

Local Jurisdictions

Los Angeles County Transportation Commission

Potential funding for project components; coordination regarding project operating and dispatching arrangements in relationship to passenger rail operations

Los Angeles County Flood Control District

Various permits

Los Angeles County Road Department

Various permits; approval of project design elements affecting County roads

Los Angeles County Department of Public Works

Approval of project design elements affecting County facilities

Los Angeles County Fire Department

Approvals and permits regarding fire protection

Corridor cities (Carson, Compton, Huntington Park, Los Angeles, Lynwood, South Gate, Vernon)

Approval of project for implementation within city limits; assistance to ACTA in right-of-way acquisition; approval of project design elements affecting local facilities; approvals and permits regarding fire and police services; various other permits

Private Entities

Southern Pacific; Union Pacific; Atchison, Topeka & Santa Fe railroads

Approval of purchase and sale agreements;

Railroad operating agreements; and agreements regarding project design elements

**S.7 CUMULATIVE EFFECTS**

**S.7.1 Effects Associated with Ports Expansion**

Activity at the ports of Los Angeles and Long Beach is projected to double by the year 2020. The Alameda Corridor project would facilitate access to the ports by providing highway and rail improvements that would mitigate the adverse effects of the projected growth in ports activity. The Alameda Corridor would permit the anticipated growth activity to take place in an orderly manner by encouraging freight rail consolidation and channeling rail movements for all carriers to a common facility.

Expansion of the ports would inevitably affect the immediate area. Street and highway improvements in the vicinity of the ports could indirectly result in expanded industrial land use near the ports. Increased truck and train movements would result from development of the ports, requiring facility improvements beyond the immediate vicinity of the ports. The Alameda Corridor, could become the primary means for accommodating these movements, although additional improvements would be required. Cumulative noise effects from growth within the ports and the Alameda Corridor project may require mitigation measures. Expanded employment opportunities would result from increased activity at the ports as well as from the Alameda Corridor project.

### **S.7.2 Effects Associated with Other Projects**

Several projects in various stages of development may affect or be affected by the Alameda Corridor project. Among them are the Ports Access Demonstration projects, the Pacific Pipeline project and several projects in local jurisdictions. By and large, the cumulative effects of all the projects should be beneficial; however, mutual coordination is necessary to promote overall beneficial effects, reduce the potential for negative reinforcement and mitigate cumulative adverse effects.

### **S.7.3 Effects Associated with Regional Freight Rail Operations**

The Alameda Corridor would change the routing currently used by the three common rail carriers. The SPTC Wilmington Branch, UPRR, San Pedro Branch, and the SF Harbor Subdivision would no longer be used for ports-related train movements. Along its La Habra and Santa Ana branches SPTC could be channeled to the corridor by means of the Alhambra main line. As a result of the routing changes that would occur, many of the effects associated with freight train operations would no longer be experienced on a regional basis. They would instead be focused along the Alameda Corridor.

Train movements throughout the region would become more efficient because of the corridor: aggregate train miles would be reduced, average operating speeds would be increased, delays between trains would be reduced, vehicular traffic would be improved and delays at grade crossings would be reduced. The result would be a substantial reduction in locomotive and motor vehicle idling emissions; however, there would be increases in pollutant concentrations at some locations along the corridor that would, in some instances, produce violations of current standards. This would be in contrast to the more widespread distribution of increased local concentrations that would occur without the project.

The corridor has the beneficial effect of consolidating train movements in one area, where the mitigation of increased noise levels can be focused. If this were not to occur, increased train movements would result in more noise intrusion into residential areas throughout the region, with noise impacts of a severe or significant nature affecting a substantial number of persons. Because train movements would be reoriented to the Alameda Corridor rather than elsewhere, noise impacts would be greater there.

Consolidated train movements would result in reductions in overall diesel fuel consumption from locomotive use, as compared with the No Build Alternative. A regionwide savings of three percent is estimated in year 2010, increasing to five percent by 2020. The corridor's highway

improvements would attract more vehicular traffic. As a result, year 2010 vehicular fuel consumption in the study area would be five percent higher with the project than without; by 2020 this would decline slightly to four percent. Since the corridor would permit electrification, benefits associated with a future shift to electricity for locomotives would also accrue.

The complete grade separation of vehicular from rail traffic planned for the corridor would result in improved vehicular flow. Additionally, the consolidation concept would remove trains from a number of lines, thus greatly reducing vehicular delays at grade crossings.

The Alameda Corridor project would be designed so that close attention to safety would be maintained. The corridor would have continuously welded track, central traffic control, centralized dispatching, and a high level of surveillance. These conditions would result in a corridor that should provide a high level of protection to the general public from risk of accidents. The greater risk of train accidents that now exists on the various rail lines exposes a wider range of people than would be exposed under consolidation.

On balance, the cumulative effects to the region resulting from the Alameda Corridor, under any of the configuration alternatives being considered, would be beneficial.

## **S.8 UNAVOIDABLE ADVERSE EFFECTS**

### **S.8.1 Construction**

Impacts that could be encountered during the construction of the Alameda Corridor project include soil and groundwater contamination, air emissions, fugitive dust, noise and vibration, property acquisition and disruption of the local traffic circulation system. These effects would be temporary.

The discovery of contaminated soil or groundwater is likely, due to the fact that land use in much of the corridor has historically been industrial in nature and only in the recent past have laws been enacted that would prevent the inadvertent or deliberate misuse of hazardous materials. The extent of contamination cannot be ascertained without an analysis of actual soil and water samples. The concept study identifies all known documented hazardous materials sites along the corridor. Discovering areas of existing contamination is possible with all alternatives under consideration.

Equipment and vehicles used during construction would be a source of emissions and potentially toxic pollutants, and some construction activities would release fugitive dust. Although such emissions are expected to be localized and transitory in nature, an adverse effect is unavoidable. The same can be said of noise and vibration. Most construction activity would be confined to daytime hours, and local noise ordinances would be adhered to; however increases in noise levels, and to a lesser extent, vibration, would occur. Most locations would be exposed between two and three years during the 10-12 years of construction.

Construction of the Alameda Corridor would require complete reconstruction of the combined highway facilities in Alameda Street and the SPTC San Pedro Branch. All alternatives would require the acquisition of private property. Extensive disruption to the local traffic circulatory system would occur, creating detours and affecting accessibility to businesses and residences. The effects would be temporary, but in some instances they could be severe.



## **S.8.2            Operation**

The Alameda Corridor would result in a regionwide reduction in emissions from train and vehicular travel, as compared with the No Project condition; however, some locations which currently display local concentrations of carbon monoxide that exceed state or national standards would experience unavoidable increased emissions, once the project is completed.

Noise would increase along the corridor because of the high volume of vehicular and train traffic. In some sensitive locations noise attenuation walls would be necessary to mitigate the severe effect of increased noise. Because residual impacts would be felt by some residences even after mitigation, noise impacts must be considered adverse and unavoidable.

Alternative 2.2 would require the taking of several dwelling units in the Pueblo Del Rio public housing project, along Long Beach Avenue. All alternatives would require the acquisition of private property and a significant number of houses and businesses would be required to relocate. Some alternatives require less acquisition and displacement than others. Some displaced businesses may not be able to resume business for a variety of reasons. While all displaced residents and businesses would be compensated in accordance with state law, a residual hardship may still be felt by some for which compensation would not be available. The extent to which this may occur is not known, although it should be limited. This adverse effect would be unavoidable. In addition, a day care center located south of the Pueblo Del public housing project, next to the basketball court, would need to be relocated.

Despite the roadway improvements proposed under the various project alternatives, there would be residual adverse effects at intersections, due to background growth in regional traffic and the fact that the improved facility would be an attractor. The project provides mitigation; however, additional needed improvements should be provided to local streets beyond the limits of the project by local jurisdictions in order to avoid adverse effects.

Soundwalls required by Alternative 1.0 would attenuate project-related noise, however, they would also be visually intrusive, subject to graffiti and be perceived by adjacent neighborhoods as social barriers. Soundwalls required by the remaining alternatives would be far less extensive.

## **S.9                    ENVIRONMENTALLY SUPERIOR ALTERNATIVE**

All of the depressed trainway alternatives examined in this document have fewer adverse effects than the at-grade trainway. Accordingly, the ACTA Board identified the depressed trainway as its preferred option at the beginning of the environmental documentation phase of the project. In the final analysis, Alternative 2.1A has a generally less intrusive effect in most impact categories. This is especially important in the categories of property acquisition and vibration. Alternative 2.1A is hereby identified as the "environmentally superior alternative," pursuant to CEQA Guidelines Section 15126.

## **S.10                IMPACTS AND PROPOSED MITIGATION**

Table S-1 provides a summary of the impacts which have been found for the Alameda Corridor project and the mitigation measures which have been proposed to reduce the level of their significance. The table is organized to follow the order in which the topics are discussed in the

body of the document. In some instances, significant impacts would occur under the No Build Alternative; these are so identified in the table. All impacts should be regarded as adverse unless indicated as beneficial in the table. The No-Build Alternative is not described if no impact is anticipated.

**TABLE S-1  
ALAMEDA CORRIDOR SUMMARY OF IMPACTS**

<b>IMPACTS</b>	<b>ALTERNATIVE</b>	<b>POTENTIAL ENVIRONMENTAL IMPACTS</b>	<b>SIGNIFICANCE</b>	<b>MITIGATION</b>	<b>RESIDUAL IMPACT</b>
<b>Topography, Geology &amp; Soils</b>					
Construction <sup>1</sup>	All Build Alternatives	Some construction activities could disturb previously abandoned oil wells. This could result in the inadvertent release of hydrogen sulfide gas and could have other consequences.	Potentially Significant	Undocumented and/or improperly abandoned wells would be abandoned according to state guidelines.	Not Significant
		Construction along the corridor may encounter sites with contaminated soils and groundwater.	Potentially Significant	Sites known to be contaminated would have to be cleaned prior to or during construction. Clean-up activities would be conducted in accordance with applicable regulations. Responsibility for clean up has not been established.	Not Significant
Seismicity	All Build Alternatives	A moderate to major earthquake during the lifetime of the proposed project would subject the project to strong groundshaking. This could result in the failure of structures and could disrupt service along the corridor.	Potentially Significant	Careful testing of soil and correction of weakness in soil strength, coupled with state-of-the-art seismic design. The project would be designed in accordance with applicable codes and regulations.	Not Significant
		Some areas along the corridor, such as between Del Amo and Sepulveda boulevards and in the vicinity of Imperial Highway, may be subject to liquefaction.	Potentially Significant	All areas of high or perched ground water should be analyzed for potential liquefaction. Site specific engineering techniques should be implemented.	Not Significant

<sup>1</sup> Construction impacts are temporary and are therefore significant only during the construction period.

**TABLE S-1  
ALAMEDA CORRIDOR SUMMARY OF IMPACTS**

<b>IMPACTS</b>	<b>ALTERNATIVE</b>	<b>POTENTIAL ENVIRONMENTAL IMPACTS</b>	<b>SIGNIFICANCE</b>	<b>MITIGATION</b>	<b>RESIDUAL IMPACT</b>
Flooding	All Build Alternatives	Portions of the corridor are located in areas that have the potential for periodic inundation.	Not Significant	Adherence to building codes and other applicable regulations.	Not Significant
<b>Hydrology and Water Quality</b>					
Construction	All Build Alternatives	Construction activities would expose soil to erosion and result in surface runoff.	Not Significant	Standard erosion and drainage control. Proper removal and disposal of contaminated soil or water.	Not Significant
		Dewatering may be required in some portions of the corridor. Potential for encountering contaminated material.	Not Significant	Identify areas subject to potential dewatering, Contaminated material handled according to accepted regulations.	Not Significant
Operation	All Build Alternatives	Train derailment or other incident could result in surface water contamination. (See also Safety and Security.)	Not Significant	Emergency procedures will be developed and implemented.	Not Significant
<b>Air Quality</b>					
Construction	All build Alternatives	SCAQMD daily significance threshold exceeded for Nitrogen Oxides. Emissions of other criteria pollutants produced, but do not exceed SCAQMD thresholds.	Significant to not significant	Equipment and vehicle use restrictions.	Not Significant
		Fugitive dust produced in amounts substantially higher than SCAQMD threshold.	Significant	Site watering, equipment and vehicle washing and other measures should be employed.	Potentially Significant

**TABLE S-1  
ALAMEDA CORRIDOR SUMMARY OF IMPACTS**

<b>IMPACTS</b>	<b>ALTERNATIVE</b>	<b>POTENTIAL ENVIRONMENTAL IMPACTS</b>	<b>SIGNIFICANCE</b>	<b>MITIGATION</b>	<b>RESIDUAL IMPACT</b>
Regional Criteria Emissions	No Build	Locomotive emissions increase substantially. Vehicular emissions are improved by ARB emissions standards.	Significant	None proposed under this alternative.	Significant
	All Build Alternatives	Locomotive emissions would be substantially reduced by all project alternatives, for all criteria pollutants. Overall reduction in criteria emissions, taking into account cars and trucks.	Beneficial	Project is mitigation. Rail electrification produces additional benefits.	Beneficial
Local Criteria Emissions	No Build	Carbon monoxide concentrations are higher in future years at sensitive receptor locations, but state and federal standards are not exceeded.	Not Significant	None proposed under this alternative.	Not Significant
	All Build Alternatives	Carbon monoxide concentrations would be higher or lower than under the No Build Alternative, depending on receptor location and alternative. State and federal standards would not be exceeded.	Not Significant to Beneficial	Project is mitigation	Not Significant to Beneficial
Air Toxics	No Build	Air toxics would be emitted in increased amounts, in proportion to increased use of mobile sources, such as vehicles and locomotives.	Not Significant	None proposed under this alternative.	Not Significant
	All Build Alternatives	Project results in reductions of regional air toxics.	Beneficial	Project is mitigation.	Beneficial

**TABLE S-1  
ALAMEDA CORRIDOR SUMMARY OF IMPACTS**

<b>IMPACTS</b>	<b>ALTERNATIVE</b>	<b>POTENTIAL ENVIRONMENTAL IMPACTS</b>	<b>SIGNIFICANCE</b>	<b>MITIGATION</b>	<b>RESIDUAL IMPACT</b>
<b>Noise</b>					
Construction	All Build Alternatives	Construction activities would produce noise that could be intrusive at some locations. Alternative 1.0 would produce the most extensive effects.	Potentially Significant	Manage construction practices and equipment usage to reduce intrusion where possible. schedule high-noise activities for daytime periods.	Potentially Significant
Effects in Year 2010	No Build	53 residences experience severe impact. No increase along Alameda Street compared with 1992. (A severe impact has a project CNEL greater than 72 dBA). No residences experience a significant impact. (A significant impact has a project CNEL that exceeds 67 dBA, and it either exceeds the No Build condition by 3 dBA or existing conditions by 5 dBA).	Significant.	None proposed under this alternative.	Significant
	1.0	117 residences experience severe impact. 936 residences experience significant impact.	Significant	Noise barriers.	18 residences severely affected. 47 residences have significant impact.
	2.1A	57 residences experiences severe impact. 47 residences experience significant impact.	Significant	Noise barriers	25 residences severely affected. 13 residences have significant impact.

**TABLE S-1  
ALAMEDA CORRIDOR SUMMARY OF IMPACTS**

<b>IMPACTS</b>	<b>ALTERNATIVE</b>	<b>POTENTIAL ENVIRONMENTAL IMPACTS</b>	<b>SIGNIFICANCE</b>	<b>MITIGATION</b>	<b>RESIDUAL IMPACT</b>
Effects in Year 2010 (cont'd)	2.1S	60 residences experience severe impact. 66 residences experience significant impact.	Significant	Noise barriers.	59 residences severely affected. 32 residences have significant impact.
	2.2	58 residences experience severe impact. 70 residences experience significant impact.	Significant	Noise barriers.	25 residences severely affected. 24 residences have significant impact.
Effects in Year 2020	No Build	Severe impact on 69 residences. Significant impact on 113 residences.	Significant	None proposed.	Significant
	1.0	Severe impact on 281 residences. Significant impact on 1155 residences.	Significant	Noise barriers.	Severe impact on 77 residences. Significant impact on 275 residences.
	2.1A	Severe impact on 85 residences. Significant impact on 461 residences.	Significant	Noise barriers.	Severe impact on 54 residences. Significant impact on 365 residences.
	2.1S	Sever impact on 80 residences. Significant impact on 412 residences.	Significant	Noise barriers.	Severe impact on 79 residences. Significant impact on 363 residences.
	2.2	Severe impact on 86 residences. Significant impact on 500 residences.	Significant	Noise barriers. Trench modifications.	Severe impact on 53 residences. Significant impact on 384 residences.

**TABLE S-1  
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<b>IMPACTS</b>	<b>ALTERNATIVE</b>	<b>POTENTIAL ENVIRONMENTAL IMPACTS</b>	<b>SIGNIFICANCE</b>	<b>MITIGATION</b>	<b>RESIDUAL IMPACT</b>
<b>Vibration</b>					
Construction	All Build Alternatives	Construction activities have potential for low levels of vibration.	Not Significant	Isolate activities from sensitive receptors as much as possible. Use non-vibration construction techniques where feasible.	Not Significant.
Operation	1.0	Potential for considerable adverse effects on residences located between Southern Avenue and Tweedy Boulevard.	Significant	Various engineering and operating approaches such as reduce train speeds, relocation of special track work, ballast mats, moveable points frogs.	Not Significant
	2.1A	Possible effects at Alameda/Santa Ana and at Racket Club Villas.	Potentially Significant		
	2.2	Potential effects at 58 residences along Long Beach Avenue (M.L.K Boulevard to 42nd Street, 43rd Street to Randolph).	Potentially Significant		
<b>Energy</b>					
Construction	All Build Alternatives	Minor amounts of fossil fuel and electricity consumed during construction process.	Not Significant	Standard construction practices to promote efficient fuel use.	Not Significant
Operation	No Build	Growth in train and vehicular traffic results in increased fuel consumption.	Not Significant	Federal fuel economy standards.	Not Significant
	All Build Alternatives	Study area vehicular fuel consumption increased slightly over No Build.	Not Significant	Corridor provides for more efficient traffic flow.	Not Significant



**TABLE S-1  
ALAMEDA CORRIDOR SUMMARY OF IMPACTS**

<b>IMPACTS</b>	<b>ALTERNATIVE</b>	<b>POTENTIAL ENVIRONMENTAL IMPACTS</b>	<b>SIGNIFICANCE</b>	<b>MITIGATION</b>	<b>RESIDUAL IMPACT</b>
Operation (cont'd)	All Build Alternatives (cont'd)	Locomotive fuel consumption reduced, compared to No Build, due to reduced train-miles traveled.	Beneficial	None required.	Beneficial
<b>Vegetation and Wildlife</b>					
Effects on Plants and Animals	All Build Alternatives	No species of concern are known to exist in the corridor.	Not applicable	None required. Landscaping should incorporate drought-resistant native plants where feasible.	Not applicable.
<b>Land Use</b>					
Land Use compatibility	No Build	Increased train volumes could result in incompatibility with some adjacent land uses.	Potentially Significant	See All Build Alternatives below.	Potentially Significant
	All Build Alternatives	The project could remove some improved parcels that currently buffer residential and other sensitive uses.	Potentially Significant	Maintain buffer uses where possible. Provide landscaping or physical buffering.	Not Significant
		The project could remove all or part of some parcels that are intended for redevelopment projects.	Potentially Significant	Work with local jurisdiction to develop specific mitigation, such as excess land returned to the local jurisdiction.	Not Significant

**TABLE S-1  
ALAMEDA CORRIDOR SUMMARY OF IMPACTS**

<b>IMPACTS</b>	<b>ALTERNATIVE</b>	<b>POTENTIAL ENVIRONMENTAL IMPACTS</b>	<b>SIGNIFICANCE</b>	<b>MITIGATION</b>	<b>RESIDUAL IMPACT</b>
Property Takings	All Build Alternatives	Full and partial takings of industrial property. See Acquisition and Displacement section.	Significant	Industrial uses subject to partial takes should be reconfigured to remain operational where possible. Industrial uses subject to full takes should be relocated on available industrially designated land	Not Significant
		Full take of residences. Direct exposure of corridor to adjacent residential uses. See Acquisition and Displacement section.	Significant	Residential uses subject for full takes should be relocated. Sound walls to reduce noise to acceptable levels.	Not Significant
		Full and partial takes affecting community-serving retail commercial uses and parking areas. See Acquisition and Displacement section.	Significant	Neighborhood serving retail commercial uses should be relocated within the vicinity of the communities which they serve. Maintain use of remainder parcel if possible.	Not Significant
	2.2	Taking of units, parking and playground space at Pueblo Del Rio public housing project.	Significant	Affected residents from the Pueblo Del Rio Housing Project would be relocated. The project should erect sound walls to buffer newly exposed residential areas.	Not Significant.

**TABLE S-1  
ALAMEDA CORRIDOR SUMMARY OF IMPACTS**

<b>IMPACTS</b>	<b>ALTERNATIVE</b>	<b>POTENTIAL ENVIRONMENTAL IMPACTS</b>	<b>SIGNIFICANCE</b>	<b>MITIGATION</b>	<b>RESIDUAL IMPACT</b>
<b>Population and Housing</b>					
Effects on Local Population	All Build Alternatives	Minority and low income people displaced under all Alternatives.	Significant	Uniform Relocation Procedures and Real Property Acquisition Act would be followed, providing monetary compensation and relocation assistance. In addition, each jurisdiction should be coordinated with.	Not Significant
Effects on Housing Stock	All Build Alternatives	Very minor amounts of housing removed in the context of overall housing stock.	Not Significant	None Required	Not Significant
Effect on Public Housing	1.0, 2.1A, 2.1S	No Effect	Not Applicable	None Required	Not Applicable
	2.2	Approximately five units of the Pueblo del Rio Housing Project would be displaced as well as a child care center south of the housing project.	Significant	Selection of an alternative other than Alt. 2.2 would avoid this displacement. If Alt. 2.2 is chosen, consultation with the Los Angeles Housing Authority should be conducted to identify appropriate relocation measures.	Not Significant
Effects on Mobile Homes	1.0	A small portion of Deluxe Trailer Lot on El Segundo Boulevard would be acquired, possibly displacing three mobile homes.	Not Significant	If possible, the mobile homes should be relocated elsewhere on the lot. If relocation is not possible, the affected parties should be relocated to another park.	Not Significant
	2.1A, 2.1S, 2.2	No Effect	Not Applicable		Not Applicable

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ALAMEDA CORRIDOR SUMMARY OF IMPACTS**

<b>IMPACTS</b>	<b>ALTERNATIVE</b>	<b>POTENTIAL ENVIRONMENTAL IMPACTS</b>	<b>SIGNIFICANCE</b>	<b>MITIGATION</b>	<b>RESIDUAL IMPACT</b>
Barriers to Existing Neighborhoods	1.0	Overpasses could separate existing residential neighborhoods. Sound walls could be perceived as barriers.	Significant	Selection of another alternative would avoid these potential impacts. If the alternative is selected, efforts should be undertaken to reduce the barrier effect as much as possible.	Potentially Significant
	2.1A, 2.1S	No Effect	Not Applicable	None Required	Not Applicable
	2.2	The project could divide the east and west sections of the Pueblo del Rio Housing Project on Long Beach Avenue.	Potentially Significant	Selection of another alternative would avoid these potential impacts. If the alternative is selected, efforts should be undertaken to reduce the barrier effect as much as possible.	Potentially Significant

**TABLE S-1  
ALAMEDA CORRIDOR SUMMARY OF IMPACTS**

IMPACTS	ALTERNATIVE	POTENTIAL ENVIRONMENTAL IMPACTS	SIGNIFICANCE	MITIGATION	RESIDUAL IMPACT
<b>Acquisition and Displacement</b>					
Residential Displacement	All Build Alternatives	Residential units would be displaced as follows:  Alternative 1.0 = 327 2.1A = 13 2.1S = 17 2.2 = 44  Estimated displacement of residents would be as follows:  Alternative 1.0 = 1,373 2.1A = 48 2.1S = 65 2.2 = 190	Significant	Displaced residents would receive relocation assistance in accordance with the Uniform Relocation and Real Properties Assistance Act. Benefits include fair market compensation for owners, monetary payments to renters, moving expenses and other benefits.	Not Significant

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IMPACTS	ALTERNATIVE	POTENTIAL ENVIRONMENTAL IMPACTS	SIGNIFICANCE	MITIGATION	RESIDUAL IMPACT
Commercial Displacement	All Build Alternatives	<p>Non-residential properties subject to displacement would be as follows:</p> <p>Alternative 1.0 = 341 2.1A = 139 2.1S = 208 2.2 = 158</p> <p>Estimated displacement of employees would be as follows:</p> <p>Alternative 1.0 = 3,525 2.1A = 1,755 2.1S = 2,558 2.2 = 1,241</p> <p>Some businesses may have substantial difficulty in relocating.</p>	Significant	Businesses would be given relocation assistance and monetary payments for relocation expenses. Some businesses may choose lump sum payment and cease operation.	Not Significant
<b>Transportation and Circulation</b>					
Construction	All Build Alternatives	Traffic disruption would occur at various locations throughout the construction period. Potential effects include temporary inconveniences, delays, detours, reduced on-street parking, and restricted access to homes and businesses. The expected exposure of any one location to these effects could be up to 3 years.	Potentially significant to significant, depending upon location and uses involved.	Construction management plan. Minimize lane closures, provide workable detours, provide signage. Implement an extensive public information program to disseminate construction information and respond to local concerns.	Potentially Significant

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<b>IMPACTS</b>	<b>ALTERNATIVE</b>	<b>POTENTIAL ENVIRONMENTAL IMPACTS</b>	<b>SIGNIFICANCE</b>	<b>MITIGATION</b>	<b>RESIDUAL IMPACT</b>
Overall Traffic Handling Capacity	No Build	Increased train volumes and deteriorated roadway conditions would result in increasing delays, slower speeds, and less capacity to handle future demands.	Significant	None proposed under this alternative.	Significant
	All Build Alternatives	Corridor provides enhanced capacity, higher speeds, and fewer delays. Operations along Alameda Street would be significantly better under Alternative 1 than other alternatives	Beneficial	Project is mitigation.	Beneficial
Traffic Capacity at Intersections	No Build	3 study intersections at Los E&F in 2010; 65 intersections at Los E&F in 2020.	Significant	None proposed under this alternative.	Significant
	1.0	21 study intersections at Los E&F in 2010; 65 intersections at Los E&F in 2020. 49 intersections meet criteria for additional improvements in 2020.	Significant	Various intersection improvements, (e.g., turning lanes, through lanes).	Not significant to significant. 46 intersections still exceed criteria for additional improvements.
	2.1A, 2.1S	7 study intersections at Los E&F in 2010; 55 intersections at Los E&F in 2020. 35 intersections meet criteria for additional improvements in 2020.	Significant	Various intersection improvements.	Not significant to significant. 35 intersections still exceed criteria for additional improvements.

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Traffic capacity at intersections (cont'd)	2.2	5 study intersections at Los E&F in 2010; 46 intersections at Los E&F in 2020. 40 intersections meet criteria for additional improvements in 2020.	Significant	Various intersection improvements.	Not significant to significant. 31 intersections still exceed criteria for additional improvements.
Corridor Access & Local Circulation	All Build Alternatives	9 streets to be closed. 4-6 streets would no longer have direct access to the corridor. Traffic rerouting would affect local streets. Rerouting along local streets predicted to be of some significance under Alternative 1.	Potentially Significant	None proposed	Potentially Significant
Pedestrian Circulation	All Build Alternatives	Circulation patterns would become more circuitous, especially along Alternative 1, but improved pedestrian safety would also result.	Beneficial to adverse, depending on location.	Localized pedestrian accommodations where warranted. Fence corridor to prevent track crossing by pedestrians.	Not Significant
Parking	All Build Alternatives	On-street and off-street parking would be removed in amounts ranging from 1400-2600 spaces.	Potentially significant depending on location.	Retain parking where possible. Develop parking plans.	Potentially Significant
Mass Transit	1.0	Route modifications required for two SCRTD routes, and bus stops must be relocated at 14 locations.	Not Significant	Relocate portions of routes and stop locations as appropriate.	Not Significant
	1.0, 2.1A, 2.1S	SCRTD Line 107 would need to be rerouted due to closure of 55th Street.	Not Significant	Relocate portion of route.	Not Significant



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<b>Public Services</b>					
Construction	All Build Alternatives	Temporary inconveniences affecting access to community facilities and impaired emergency access response.	Not Significant	Construction management plan.	Not Significant
Corridor Accessibility	All Build Alternatives	The number of corridor crossings would be reduced from the 'No Build' condition. New crossings would be faster and safer.	Beneficial overall Potentially Significant Adverse at some locations	Location-specific design provisions.	Not Significant
Effects on Law Enforcement	No Build	Increased train and vehicular traffic volumes result in significant delays for cross-corridor travel.	Significant	None proposed under this alternative.	Significant
	1.0	Above-grade corridor crossings could cause increased response time from some locations.	Not Significant	None available.	Not Significant
	2.1A, 2.1S, 2.2	At-grade bridges have a minimal effect on response time.	Not Significant	None available.	Not Significant
Effects on Fire Service	No Build	Increased train and vehicular traffic volumes result in significant delays for cross-corridor travel.	Significant	None proposed under this alternative.	Significant
	All Build Alternatives	Reduced number of crossing opportunities may add to response time.	Potentially Significant for some locations	Modify response routes.	Not Significant
		L.A. County Fire Station 105 would have access across corridor eliminated for responses using rear gate.	Potentially Significant	Provide alternative access.	Not Significant

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Effects on Fire Service (cont'd)	1.0	Added distance to reach corridor crossings could increase response time to some areas; however, increased speed and lack of at-grade intersections along Alameda Street will provide more direct response route.	Not Significant	None available.	Not Significant
	2.1A, 2.1S, 2.2	Depressed trainway provides containment of spilled materials in the event of an incident, but access by fire personnel would be compromised.	Potentially Significant	Provide fire fighting support (e.g. water lines, hydrants) in trench. Provide additional means of access into trench.	Not Significant
Effects on Schools	All Build Alternatives	Increased noise and traffic effects at all schools located along corridor.	Potentially Significant	Sound walls; local traffic improvements.	Potentially Significant
	1.0	Partial right-of-way takings at Florence Avenue Elementary, Bunche Middle School, and Jordan High School. Pedestrian and vehicular access to Jordan High School impaired.	Potentially Significant	Local design modifications.	Not Significant
	2.1S	Partial right-of-way taking at Ritter Elementary and Jordan High Schools.	Adverse Not Significant	Local design modifications.	Not Significant
	2.2	Lilian Street Elementary School affected by noise from increased train volume.	Significant	Sound walls.	Potentially Significant

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Effects on Libraries, Churches, Hospitals, and Parks	1.0	Property acquisition required from several churches and from Wilson Park. Impaired access to Wilson Park.	Potentially Significant	Local design modifications. Relocation policies.	Not Significant
	2.1A, 2.1S, 2.2	Property acquisition required from Wilson Park.	Not Significant	Local design modifications.	Not Significant
<b>Safety and Security</b>					
Construction	All Build Alternatives	Construction activities and traffic detours produce impaired access; utility lines may rupture; and contaminated soil may be exposed.	Potentially Significant	Safe construction practices to be developed and implemented. Traffic management plan to be developed.	Not Significant
Auto/Train Conflicts	No Build	At-grade railroad crossings remain unchanged. Auto/train conflicts increase dramatically in the future, due to growth in freight train activity. Effects extend to all rail lines serving the ports.	Significant	See All Build Alternatives below.	Significant
	All Build Alternatives	Conflicts eliminated along consolidated corridor, with the exception of the drill track (local service) in the depressed alternative. Train volumes reduced on other rail lines serving the ports.	Beneficial	Project is mitigation.	Beneficial

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Train Derailments and Spills	No Build	Trains on all lines serving the ports would be subject to a potential derailment. Release of hazardous materials would be expected on a rare basis.	Potentially Significant	Federal and state laws and regulations to ensure safe rail practices. Railroad operating policies and procedures (e.g., employee training, response to incidents). Emergency response by local fire and police.	Potentially Significant
	All Build Alternatives	Increased train volumes on consolidated corridor; corresponding decreases on other lines serving the ports. Potential for accidents still exists but likelihood of injuries or property damage would be substantially reduced. Potential for spills of hazardous materials in transport.	Potentially Significant	The project will incorporate infrastructure improvements (e.g., complete signalization and centralized traffic control, continuously-welded track) and 24-hour active surveillance. A corridor Emergency Response Plan will be prepared in accordance with applicable guidelines and regulations, and it will be approved by all appropriate agencies.	Potentially Significant
	1.0	Emergency access would be unimpeded. Containment would not be improved.	Potentially Significant	Emergency response plan.	Potentially Significant
	2.A, 2.1S, 2.2	Containment would be improved. Emergency access could be impeded.	Potentially Significant	Emergency response plan	Potentially Significant

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<b>Aesthetics</b>					
Construction Effects	All Build Alternatives	Disorderly appearance of construction sites and materials storage areas.	Not Significant	Screen sites from view in areas of particular sensitivity.	Not Significant
		Construction activity could cause light and glare impacts to residences located adjacent to the corridor	Not Significant	Conduct construction activities during day time hours whenever possible. Shield construction lighting from residential areas.	Not Significant
Operational Effects	All Build Alternatives	Landscaping, portions of structures and signage would be removed or relocated at various locations along the corridor.	Not Significant	Replace or relocate as appropriate.	Not Significant
	1.0	Corporate building with roof-mounted fire truck would be taken in the City of Vernon.	Significant	Avoid taking the building, if feasible, or relocate structure and fire truck to a location acceptable to the City of Vernon.	Not Significant
		Overpass and underpass structures would visually intrude on residential areas at various locations along the corridor.	Significant	Investigate special design and architectural treatment options during final design. Provide buffer landscaping.	Potentially Significant
		Compton Blvd. overpass would adversely affect a shopping center.	Not Significant	Provide landscaping or other buffer.	Not Significant
	2.1A; 2.1S	Landscape removal and other minor effects, as identified under All Build alternatives above.	Not Significant	Replace or relocate as appropriate.	Not Significant

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Operational Effects (cont'd)	2.2	Improvements would place the northbound lane of Long Beach Avenue within 25 feet of some remaining residential units.	Significant	Provide a visual buffer between the project and the affected areas.	Potentially Significant
		Proximity of corridor to residences and Fred Roberts Park on the west side of Long Beach Avenue.	Significant	Provide a visual buffer between the corridor and the affected area.	Potentially Significant
		Playground area on the grounds of the Pueblo Del Rio housing project would be removed.	Significant	Relocate the playground to another appropriate location on the grounds of the Pueblo Del Rio housing project.	Not Significant
<b>Cultural Resources</b>					
Archaeological Resources	All Build Alternatives	No anticipated effects. Area between 109th and 111th streets considered sensitive.	Probable Not Significant	Monitoring recommended between 109th and 111th streets during construction.	No anticipated effects
Historic Resources	1.0, 2.1A, 2.1S, 2.2	Partial right-of-way takings and other potential effects affecting Jordan High School, Firestone Rubber Co. Administration Building, Macy Street Viaduct, & 2500 Nebraska Avenue.	Not Significant	None required.	Not Significant
	1.0	Construction of the Gage Avenue overpass would necessitate demolition of the architecturally significant Craftsman residence at 6407 Cottage Street.	Significant	Possible relocation of overpass to other side of Gage Avenue. Structure could be moved.	Potentially Significant

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Historic Resources (cont'd)	1.0 (cont'd)	Construction of the Tweedy Boulevard, overcrossing would necessitate demolition of the architecturally significant Colonial Revival residence at 2564 Nebraska Avenue.	Significant	Possible relocation of overcrossing to south side of Tweedy. Structure could be moved.	Potentially Significant
	2.2	Several units taken (5 of 1320) and increased noise exposure at the historically and architecturally significant Pueblo del Rio public housing project. Vibration effects potentially felt at 58 additional units.	Significant	Acoustical and vibration treatment.	Potentially Significant
<b>Economics</b>					
Construction	All Build Alternatives	Businesses along the corridor would experience reduced vehicular and pedestrian access, traffic detours, noise and other inconveniences. Some businesses could have substantial difficulty in relocating and some jobs could be lost as a result.	Significant	Construction management plan; specific measures targeted to individual businesses; public information program.	Potentially Significant
		Construction jobs created as follows: Alt. 1.0 = 6,900 Alt. 2.1A = 9,000 Alt. 2.1S = 9,000 Alt. 2.2 = 9,200	Beneficial	None Required	Beneficial

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Construction (cont'd)	All Build Alternatives (cont'd)	Direct and indirect expenditures in the local economy: Alt. 1.0 = \$ 1.097 billion Alt. 2.1A = \$ 1.427 billion Alt. 2.1S = \$ 1.427 billion Alt. 2.2 = \$ 1.452 billion	Beneficial	None Required	Beneficial
Ports-Related Economic Development	No Build	Does not support long-term growth at the ports. Long-term growth in train volumes produce widespread impacts that may constrain growth.	Significant	None proposed under this alternative.	Significant
	All Build Alternatives	Provides support for growth of ports activity to the year 2020. Provides a mechanism for focusing and mitigating impacts.	Beneficial	Project is mitigation.	Beneficial
Business Relocation	All Build Alternatives	Acquisition of commercial properties would be as follows: Alt. 1.0 = 341 Alt. 2.1A = 139 Alt. 2.1S = 208 Alt. 2.2 = 158	Significant	Relocation assistance as per Uniform Relocation and Real Properties Acquisition Act.	Not Significant
Revenue Losses	All Build Alternatives	Annual property tax losses, resulting from property acquisitions as follows: Alt. 1.0 = \$ 1,407,000 Alt. 2.1A = \$ 651,000 Alt. 2.1S = \$ 893,000 Alt. 2.2 = \$ 444,000	Significant	Reparcelization of excess land may partially restore some revenues.	Not Significant



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Revenue Losses (cont'd)	All Build Alternatives (contd')	All alternatives would result in some losses in local sales tax and business license revenues.	Not Significant	Reparcelization of excess land may partially restore some revenues.	Not Significant
Corridor Economic Development	All Build Alternatives	All alternatives would enhance economic development opportunities along the corridor for businesses supporting industrial and transportation functions.	Beneficial	None required.	Beneficial
<b>Cumulative Effects</b>					
Effects Related to Ports Expansion	No Build	Collective impacts of increased train and truck volumes become more pervasive and could inhibit growth.	Significant	None proposed under this alternative.	Significant
	All Build Alternatives	Project permits ports expansion to take place in an orderly manner, focusing mitigations to one corridor.	Beneficial	Project is mitigation	Beneficial
Effects Related to Ports Access Projects and Other Local Projects	No Build	These projects provide partial mitigation of some effects related to ports expansion.	Beneficial	Projects are mitigation	Beneficial
	All Build Alternatives	Alameda Corridor provides for enhanced mitigation resulting from these projects. Overlapping construction schedules could exacerbate some inconveniences. The Pacific Pipeline Project could extend the corridor construction process, if it were to be constructed first.	Beneficial	Project is mitigation.	Beneficial

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IMPACTS	ALTERNATIVE	POTENTIAL ENVIRONMENTAL IMPACTS	SIGNIFICANCE	MITIGATION	RESIDUAL IMPACT
Effects Related to Regional Freight Operations	No Build	Locomotive delays and operational difficulties would increase over time. Vehicular delays at grade crossings would increase. Goods movement would become less efficient over time.	Significant	None proposed under this alternative.	Significant
	All Build Alternatives	Overall locomotive and vehicular delays at grade crossings would be improved, although delays at some grade crossings could be worse, east of the corridor. Goods movement in the region would be substantially more efficient. The consolidated corridor focuses impacts to one corridor.	Beneficial	Project is mitigation.	Beneficial