

The earthquake damaged freeways in San Francisco as well, several of which remain closed pending repair. The damaged section of I-280 section is in proximity to the container terminal at Hunters Point. Closed Bay Bridge offramps affect commercial development on San Francisco Port property stretching from downtown to Fisherman's Wharf. And in San Francisco's case, real estate development generates more than half of the Port's revenue. Here too, then, the long-term prospects of the Port are dependent to some degree on the repair or replacement of the Embarcadero freeway extension from the Bay Bridge and the repair of I-280.

Return now to port access as it is seen through our kaleidoscope at MTC. Repair of earthquake-damaged facilities remains high on the region's agenda and is required to solve port access problems as well as a host of even larger problems in other sectors of the local economy.

Conclusion

Aside from earthquake repair, highway access to ports is a minor challenge in contrast to current issues of suburban and exurban growth. Here the result is widespread congestion which has caused our voters to rank transportation as the #1 problem in the region for eight straight years. Growth also threatens to reverse the trend of cleaning the air. State and federal laws governing air quality have us scrambling to determine how to comply in the future and in court defending ourselves for not having complied in the past.

As noted, our consultants tell us that highway access in the Bay Area is not on the critical list of deficiencies affecting port competitiveness. For this we are grateful, given these other unsolved and pressing problems. If we fail to address these other problems, however, the region's economy and port prosperity may all suffer.

We understand that congested highways may be more critical to ports in Los Angeles, Long Beach and elsewhere. These differences highlight the uniqueness of every region and the reason for encouraging each to make its own priority decisions regarding transportation investment and operations.

The Alameda Corridor

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Introduction

The Ports of Los Angeles and Long Beach, often referred to as the San Pedro Bay Ports, represent by many key measures the largest port complex in the

United States. Directly and indirectly the Ports of Los Angeles and Long Beach account for 363,000 jobs in Southern California. The Los Angeles Customs District also generates approximately \$3 billion in revenue for the federal government.

The ports are playing a major role in Pacific Rim trade, yet future growth may be slowed because of environmental problems associated with truck and railroad traffic to the ports. Indeed, perhaps the greatest challenge facing the ports is resolving community concerns about the impacts of truck and rail traffic on congestion delays at grade crossings, air pollution, and noise and vibration in residential areas.

Over the last several years, the ports have been working with neighboring communities, the Southern California Association of Governments (SCAG), the Los Angeles County Transportation Commission, Caltrans, the California Transportation Commission, other transportation agencies, and the private sector in developing a long-range plan for improving rail and highway access to the ports. A strong consensus has emerged for the development of an improved rail and highway corridor along Alameda Street (the Alameda Corridor).

Port Growth and the "2020 Plan"

The Ports of Los Angeles and Long Beach are experiencing rapid growth. The two ports combined handled 139 million metric revenue tons of cargo in 1989, up 6 percent from the previous year. Containerized cargo, which represents about 46 percent of total port tonnage, grew 14 percent between 1988 and 1989. Both ports combined handled about 64 million metric revenue tons of containerized cargo, or 3.6 million twenty-foot container equivalent units.

Port economists have assumed annual compound growth rates of 3.1 percent for total cargo and 4.17 percent for containerized cargo for the period 1989 through 2020. Although the assumed growth rates over this period are moderate compared to actual 1988-1989 rates, the projected cargo volumes for 2020 are substantial. Total cargo volumes are expected to reach 367 million metric revenue tons by 2020, and container throughput is projected to approach 13 million TEU'S by 2020.

To accommodate this growth the Ports of Los Angeles and Long Beach will need additional land and more terminals. The "2020 Plan" calls for the construction of 2400 acres of new landfills south of Terminal Island, as shown in Figure 1. Representing a \$5 billion investment, the 2020 Plan is a joint project of both ports and the U.S. Army Corps of Engineers.

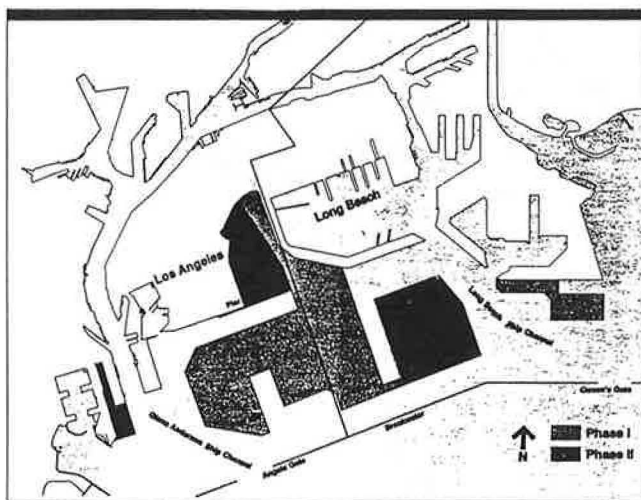


FIGURE 1 2020 plan proposed landfills.

Truck and Railroad Traffic to the Ports

Currently, the two ports combined generate approximately 19,000 truck trips per average weekday. Given projected cargo growth, truck traffic is expected to reach 49,000 truck trips by 2020, of which about 34,000, or 70 percent, will be container trucks. Congestion in the ports area and throughout Southern California is already a serious problem. Significant improvements in highway infrastructure will be required to properly mitigate the impacts of port traffic.

The ports are working cooperatively in various programs designed to reduce truck traffic. One project that has significantly reduced truck traffic is the Intermodal Container Transfer Facility (ICTF), which opened for business in 1986. Last year this facility, which is a joint project of the two ports and operated by the Southern Pacific Railroad, handled about 500,000 containers. The ICTF is 4.5 miles from the ports, in contrast to other intermodal rail yards near downtown Los Angeles, which are approximately 25 miles from the ports.

Both ports are also actively pursuing the development of "on-dock" or "near-dock" railroad yards. If trains can be brought directly to the port terminals, truck trips to distant rail yards can be substantially reduced. The Port of Long Beach currently has one operational ondock yard which generates three trains per week -- one on the Santa Fe and two on the Union Pacific. The Port of Long Beach has plans for five additional on-dock yards.

The Port of Los Angeles has plans for three "near-dock" intermodal facilities. These yards will be larger than the Port of Long Beach yards, but will require containers to be trucked a short distance from the dock to the yard.

The on-dock and near-dock yards will be capable of handling double-stack container trains. A double-stack train can be 28 cars long, with each articulated intermodal car capable of handling 10 forty-foot containers. Each car is approximately 270 feet long; thus, the length of the entire train including the locomotives can approach 8,000 feet.

The on-dock and near-dock yards will remove significant volumes of trucks from nearby freeways, but the major tradeoff is that additional trains will delay vehicles at grade crossings and cause additional noise impacts in residential areas.

Rail Lines Serving the Ports

As shown in Figure 2, the Ports of Los Angeles and Long Beach are served by four railroad branch lines: the Union Pacific San Pedro Branch on the east, the Santa Fe Harbor Subdivision on the west, and the Southern Pacific Wilmington and San Pedro Branches in the center.

As shown in Table 1, there are important differences in these lines, in terms of the number of people living near the railroad tracks and the number of unseparated grade crossings. The Santa Fe line has 92 unseparated rail-highway crossings. The other lines have between 33 and 39 unseparated crossings.

The Santa Fe line has nearly 26,000 people living within 500 feet of the tracks. The Union Pacific line and the Southern Pacific Wilmington Branch are also highly residential, with 15,800 people and 21,000 people living within 500 feet of the tracks, respectively. The Southern Pacific San Pedro Branch, which is immediately adjacent to Alameda Street, has only 7,900 people living within 500 feet, and most of these residents are protected from train noise by intervening warehouses and factories. Because it is largely industrial in character, the Alameda corridor is clearly more compatible with heavy truck and train traffic.

TABLE 1 THE NUMBER OF UNSEPARATED GRADE CROSSINGS AND THE NUMBER OF PEOPLE LIVING WITHIN 500 FEET OF THE TRACKS

	<u>No. of Crossings</u>	<u>Population</u>
Santa Fe	92	25,700
Union Pacific	33	15,800
SP Wilmington	39	21,000
SP San Pedro	34	7,900

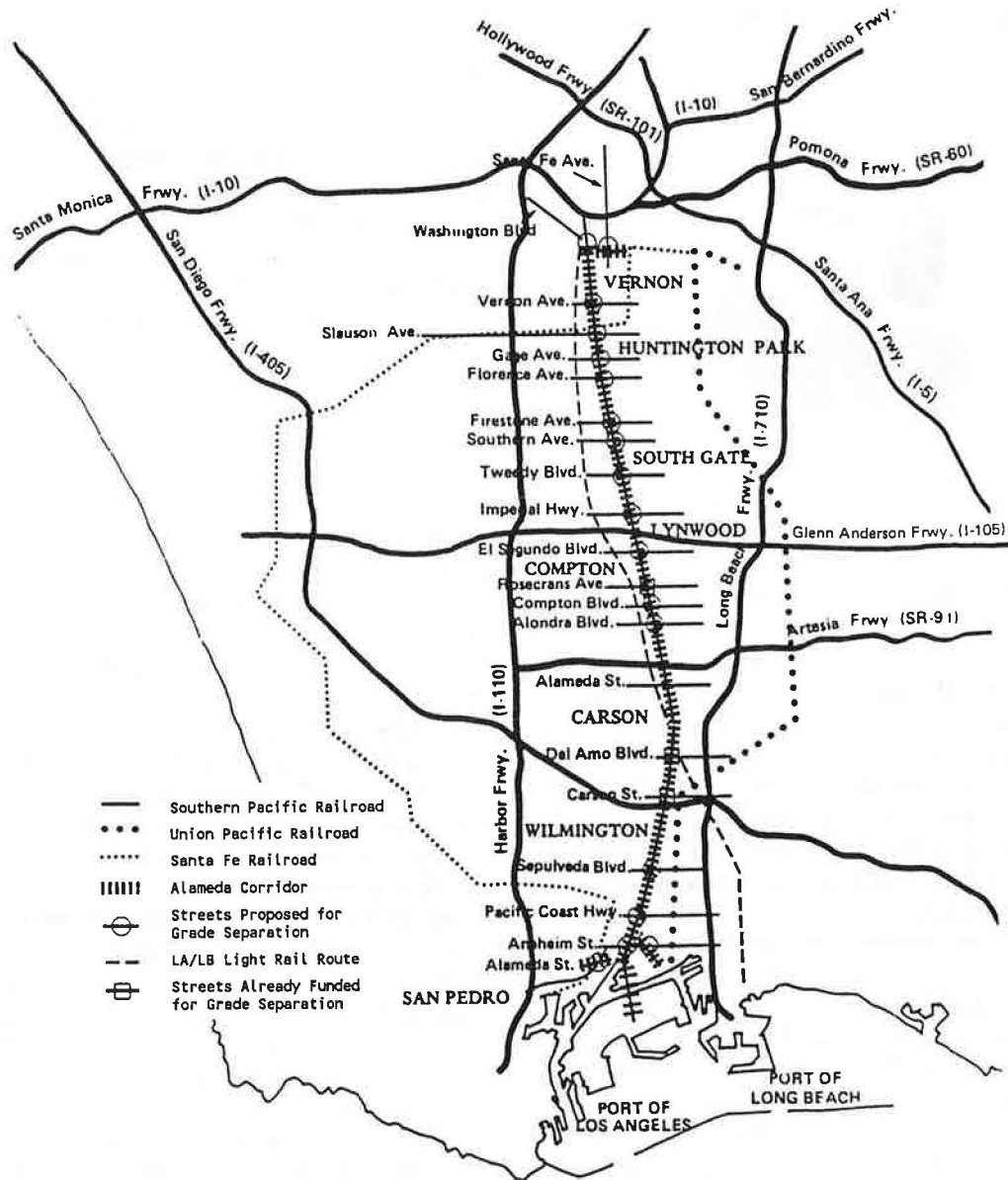


FIGURE 2 The Alameda corridor.

The Alameda Corridor

The Alameda Corridor Project is a \$500 million program of highway and railroad improvements between the San Pedro Bay ports and downtown Los Angeles. The project is designed to facilitate port access while mitigating potentially adverse impacts of port growth, including highway traffic congestion, air pollution, vehicle delays at grade crossings, and impacts of train noise in residential areas.

The Alameda Corridor represents a significant step forward in facilitating goods movement, while assuring

that neighborhood quality of life is preserved. The project will create a highway and rail system of national significance, connecting the economic center of the San Pedro Bay ports -- the largest port complex in the United States -- to the Interstate Highway System and the national railroad system, thereby facilitating the movement of international cargo.

Major elements of the project include:

Alameda Street, from the ports area to I-10, will be developed into a "truck expressway", which should relieve truck congestion on parallel freeways.

The Southern Pacific San Pedro Branch will be double-tracked, with Centralized Traffic Control. All port-related trains of the Southern Pacific, Union Pacific, and the Santa Fe railroads will operate over this improved corridor.

Mitigations, including grade separations and sound walls, will be concentrated along this one corridor.

Although rail traffic to the ports would be diverted to the SP San Pedro line, the other tracks (the Union Pacific, Santa Fe, and the SP Wilmington Branch) would still be needed for rail service to industries along those tracks.

Specific Benefits of the Alameda Corridor

The principal benefits of the Alameda Corridor are summarized below:

Reduced Freeway Congestion/Improved Freeway Safety

The Alameda Corridor will facilitate the development of on-dock rail. This will divert cargo from truck to rail, leading to reduced freeway congestion and improved safety.

The Alameda Corridor will divert truck traffic to Alameda Street, resulting in less congestion and improved safety on parallel north-south freeways.

Reduced Noise and Traffic Delays Along Existing Corridors

The project will result in an estimated 50 percent reduction in train-related noise and vibration impacts in residential areas.

Sound walls, continuously welded rail, and heavy-duty ballast will minimize the noise and vibration impacts of trains along the Corridor.

The Alameda Corridor will save approximately 6,300 vehicle hours of delay per day, due to the rerouting of trains and the elimination of grade crossings. This represents a 90 percent reduction in train-related traffic delays.

Improved Traffic Circulation Along Alameda Street

The project will result in an additional savings of 2,000 vehicle hours of delay, due to improved operations on Alameda Street.

The widening of Alameda Street to a six lane major highway will increase access to and through the corridor cities.

Improved Railroad Operations

The project will result in an estimated 30 percent reduction in train operating hours, and a 75 percent reduction in the number of times trains have to stop for other trains to pass. (Stopped trains cause severe traffic tie-ups on streets.)

The Alameda Corridor will allow train speeds to increase from 10-20 miles per hour to 30-40 miles per hour.

Improved Air Quality

Smoother flowing freeways and a reduction in truck traffic will reduce emissions.

The reduction in traffic delays at grade crossings and the improved traffic flow along Alameda Street will further reduce emissions.

The project increases the feasibility for electrification of the rail lines, which will reduce emissions.

Increased Economic Activity

The Alameda Corridor will allow the Ports of Long Beach and Los Angeles to implement the "2020 Plan", a \$5 billion program to expand the land and terminal areas of the two ports.

The project will result in an estimated increase of \$46 billion in economic output (gross sales) in the Southern California area, over a 20-year period (2000 - 2020).

By the year 2020, the Alameda Corridor will have generated an additional 37,000 trade-related jobs.

In the year 2020, the Alameda Corridor will generate an estimated \$966 million in additional wages, and \$2.9 billion in additional economic output.

Because of improved access along the Corridor, redevelopment and employment opportunities will be enhanced.

Development of the Alameda Corridor will generate approximately 5,000 construction-related jobs.

The Alameda Corridor Transportation Authority Plan

In August of 1989, a new Joint Powers Authority was formed to take the lead in implementing the Alameda Corridor. The Authority's Governing Board has 15 members, representing the cities of Los Angeles and Long Beach, each of the six cities along the corridor, the Los Angeles County Board of Supervisors, the Los Angeles County Transportation Commission, the two ports (with two representatives each), and Caltrans.

The Alameda Corridor Transportation Authority recently awarded a planning, conceptual design, and environmental evaluation contract to the consulting team of Daniel, Mann, Johnson & Mendenhall/Moffatt & Nichol, a joint venture. The study's cost is being funded through contributions made to the Alameda Corridor Transportation Authority by the Port of Long Beach and the Port of Los Angeles. Work on the study began in May of 1990, and final environmental approval for the project is expected by July 1992.

A flow chart of the various elements of the consulting contract is shown in Figure 3. The results of the capacity studies will be needed by the engineers to design the project. To complete the Environmental Impact Report, the consulting team will require information from both the capacity studies and the design effort. All of this work will be used in developing the "Plan of the Alameda Corridor."

Project Costs and Schedule

As shown in Figure 4, the first two years of the project will be devoted to completing the conceptual design for the corridor, evaluating its environmental impacts, and developing financial and operating plans. Final engineering will be conducted between mid-1992 and mid-1993. A preliminary agreement with the railroads for use and access to the corridor should be in place prior to the Preliminary Engineering phase. Construction would begin in the summer of 1993 and would last four to five years.

Costs of the project by major element are shown in Table 2.

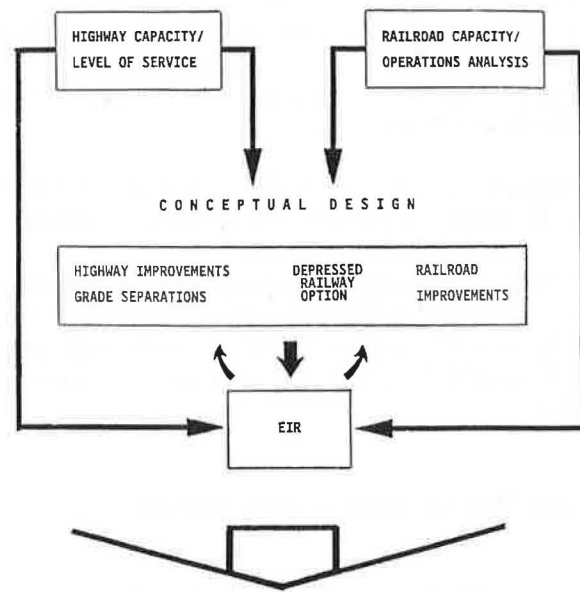


FIGURE 3 Major elements of consultants contract.

TABLE 2 ESTIMATED COSTS (MILLIONS OF 1989 DOLLARS) FOR THE ALAMEDA CORRIDOR

Track and Signal Improvements	\$100
Grade Separations (16 @ \$13 million)	\$208
Alameda Street Widening N/O Rt. 91	\$ 50
Contingencies	\$ 72
Engineering, EIR, Permitting, Study	\$ 72
TOTAL	\$502

Project Financing

One of the most important tasks of the Alameda Corridor Transportation Authority will be to develop a detailed financial plan for the corridor. Potential sources of funds include mitigation fees collected by the ports, federal highway funds, State Transportation Improvement (STIP) funds, contributions from the railroads, and the State Clean Air and Transportation Improvement Act of 1990 (Proposition 116), which will provide \$80 million for grade separations along Alameda Street.

Federal demonstration programs in 1982 and 1987 provided approximately \$125 million in federal funds for San Pedro Bay ports access improvements. The widening of Alameda Street, from the ports to State Route 91, and three grade separations on Alameda Street, were a few of the projects funded by the federal demonstration programs.

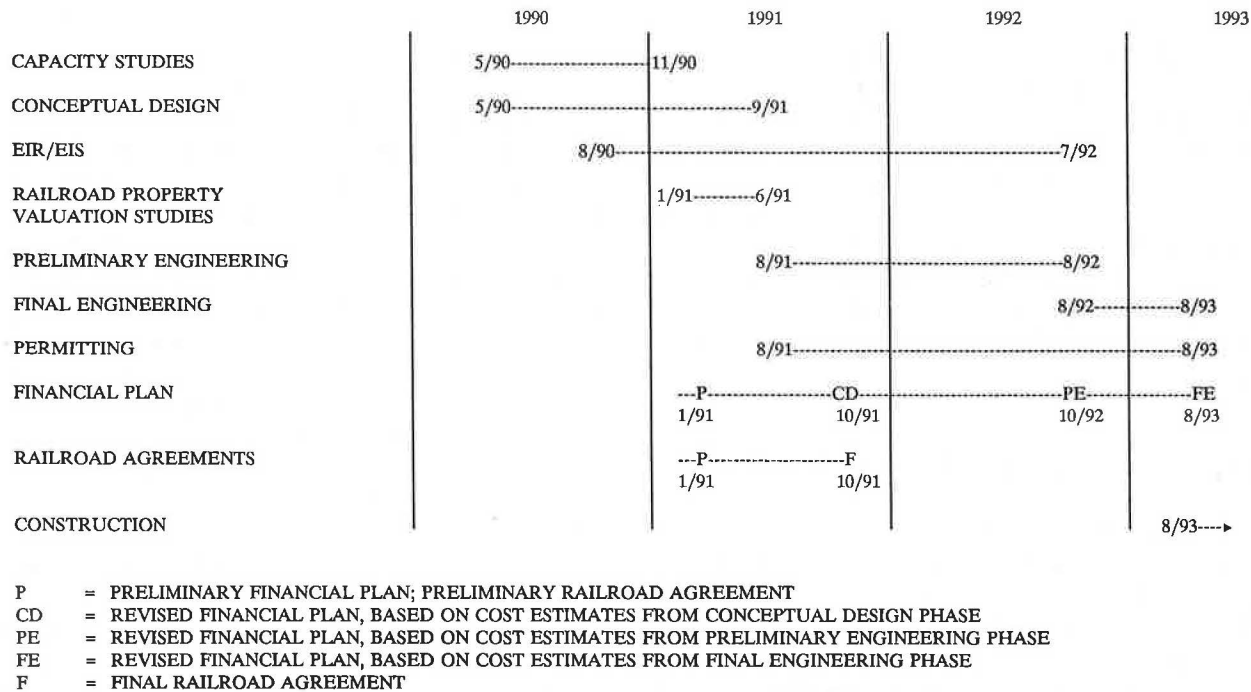


FIGURE 4 The Alameda Corridor project schedule.

The Alameda Corridor Transportation Authority has requested \$332 million in federal assistance for the Alameda Corridor. While the feasibility of obtaining additional federal funds is by no means certain, federal assistance is clearly justified. The Ports of Long Beach and Los Angeles play a vital role in international trade, economic development, as well as national defense. Thus, there is a strong argument for specific federal attention to this project in the next highway re-authorization bill.

Conclusion

While seeking to expand their role in international trade, the Ports of Long Beach and Los Angeles are paying careful attention to community concerns about potentially adverse impacts of port growth, such as increased traffic congestion and air pollution. The Alameda Corridor represents a "win-win" solution for all concerned. The project will result in significant improvements to air quality and regional mobility, and assure continued economic development associated with port growth.

Southern California is not the only region in the United States attempting to meet the challenges of port growth through improvements in inland transportation facilities. Other areas could potentially benefit from similar consolidation efforts where more than one rail

carrier is involved. Other port areas could also benefit from the consensus-building process that has been used in Southern California. Developing and implementing a complex plan such as the Alameda Corridor requires an extensive communications network, and a structured approach to resolving conflicts among governmental agencies and the private sector. The Alameda Corridor Transportation Authority can perhaps be seen as a model for other port areas facing similar challenges.

Energy and Port Access

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Introduction

Today my comments will be about energy. And as a ship operator, I find that in many of these forums, all we talk about is containers, real estate, and money, but we very seldom talk about the ship operator and what happens when policies are made within port authorities that may affect the ship operator.

Additionally, as you may know, a couple of years ago we had a very tragic affair in the state of Alaska, and to say the least, the transportation of hazardous materials and oil has been under the microscope ever since.