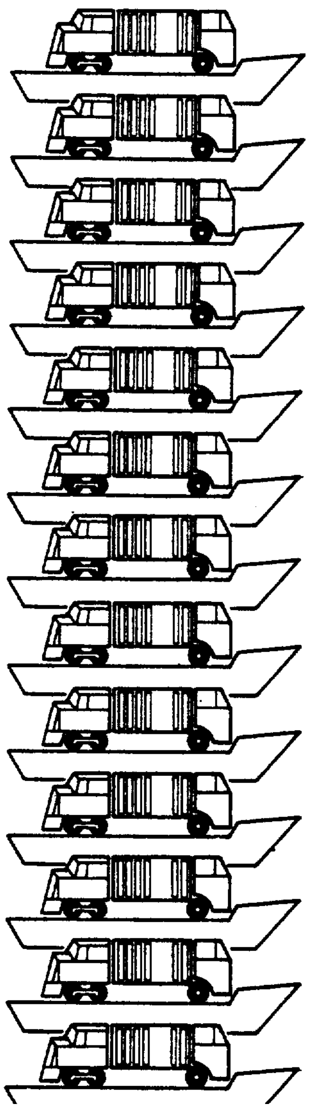
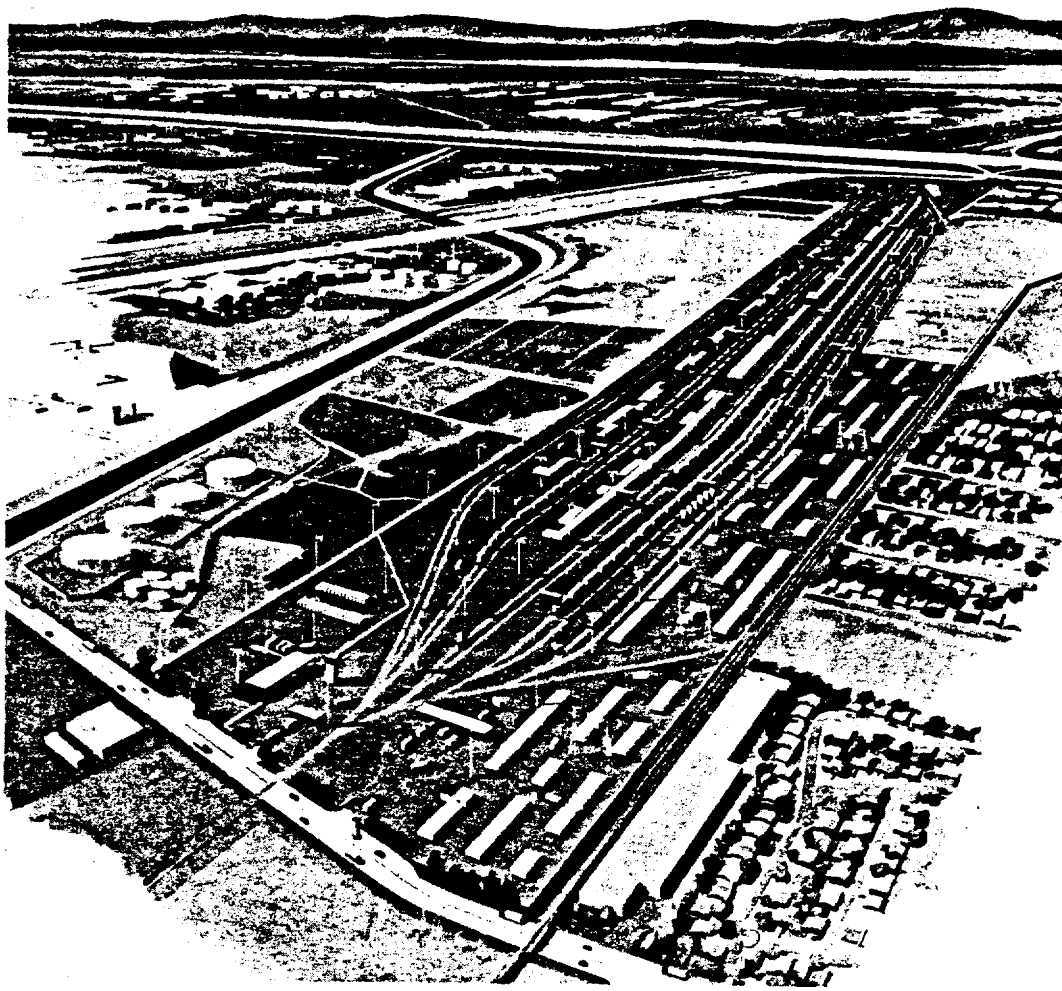
ICTF

INTERMODAL CONTAINER TRANSFER FACILITY





Environmental Impact Report

Draft June, 1982

PREPARED BY: THE HARBOR ENVIRONMENTAL STAFF, LOS ANGELES HARBOR DEPARTMENT
THE PORT PLANNING STAFF, LONG BEACH HARBOR DEPARTMENT

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DRAFT ENVIRONMENTAL IMPACT REPORT

FOR THE

INTERMODAL CONTAINER TRANSFER FACILITY

State Clearinghouse No. 81100215

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JUNE 1982

CITY OF LOS ANGELES
OFFICE OF THE CITY CLERK
ROOM 395, CITY HALL
LOS ANGELES, CALIFORNIA 90012

CALIFORNIA ENVIRONMENTAL QUALITY ACT

SUMMARY SHEET

(Article IV - City CEQA Guidelines)

POSSIBLE IMPACTS (Check where a Yes is appropriate)

I-Significant Adverse Impact;*B-Mitigation Measures Available; C-Unavoidable Adverse Impact	A	B	C
1. EARTH			
. Change in topography or ground surface relief features?			
b. Increase in wind or water erosion?			
c. Unstable or hazardous geologic or oil conditions?			
2 AIR			
. Increased mobile or stationary air emissions or air quality?		X	X
b. Creation of objectlonable odors?			
3. WATER			
. Change in absorption rates,.drainage patterns, or surface runoff?			X
b. Alteration to direction of any water course?.			
c. Reduction in amount of water available for public water supplies?			
d. Exposure to fiood hazards?			
4. PLANT UPE			
. Reduction of the numbers of any unique or endangered species of plants?			
b. Reduction of existing mature trees?			
c.Changein diversity of species?			
5. ANIMAL UFE			
. Reduction of the numbers of any unique or endangered species of animals?			
b. Introduction or increase of any new animals?			
c. Impact on any existing animal habitat?			X
a NOISE			
. Increase in existing noise levels?	X	X	X
b. Exposure of people to noise levels?		X	X
7: LIGHT Will proposal produce light or glare?		X	X
6. LAND USE Alteration of the present or planned land use of the area?			X
9. NATURAL RESOURCES			
. Increase in consumption of any natural resource?		X	X
b. Depletion of any non-renewable natural resource?		X	X
10. POPULATION Any increase or alteration of the distribution, density of growth rate of the population?			
1. HOUSING Any increase in the demand for housing or reduction in existing housing?			
12. TRANSPORTATION/CIRCULATION			
. increase in traffic volume or change in circulation patterns?			X
b. Increase in parking demand (not met by onsite parking provided by the project)?			
c. Increased hazards to vehicles, bicyclists or pedestrians?			X
d. Impact on existing transportation systems?.			X
13. PUBLIC SERVICES			
. Increase in demand for fire, police or other government& services?			X
b. Impact on school or recreational services?.			
C. Increase in maintenance of public facilities including roads?			X
14. ENERGY			
a. Use of' additional amounts of fuel or energy?		X	X
b. Increase in demand upon existing sources of energy or required development of new sources of energy?		X	X
15. UTILITIES			
. Demand on water, gas, power or communication sybtems?			X
b. Impact on sewer or solid waste disposal?.			X
c. Impact on storm water drainage?			
16. SAFETY			
. Creation of any health hazard?			
b. Potential risk of explosion or release of chemicals or radiation in event of accident?			X
17. AESTHETICS Will this project result in a diminishment or obstruction of a publicly available scenic vista or in the creation of an offensive site visible to the public?			
a CULTURAL RESOURCES Will this project impact or alter any archaeological, paleontological or historical site. structure, or object7			
OTHER			
Without mitigation measures	-	-	

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INTERMODAL CONTAINER TRANSFER FACILITY

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Executive Summary

ICTF

INTERMODAL CONTAINER
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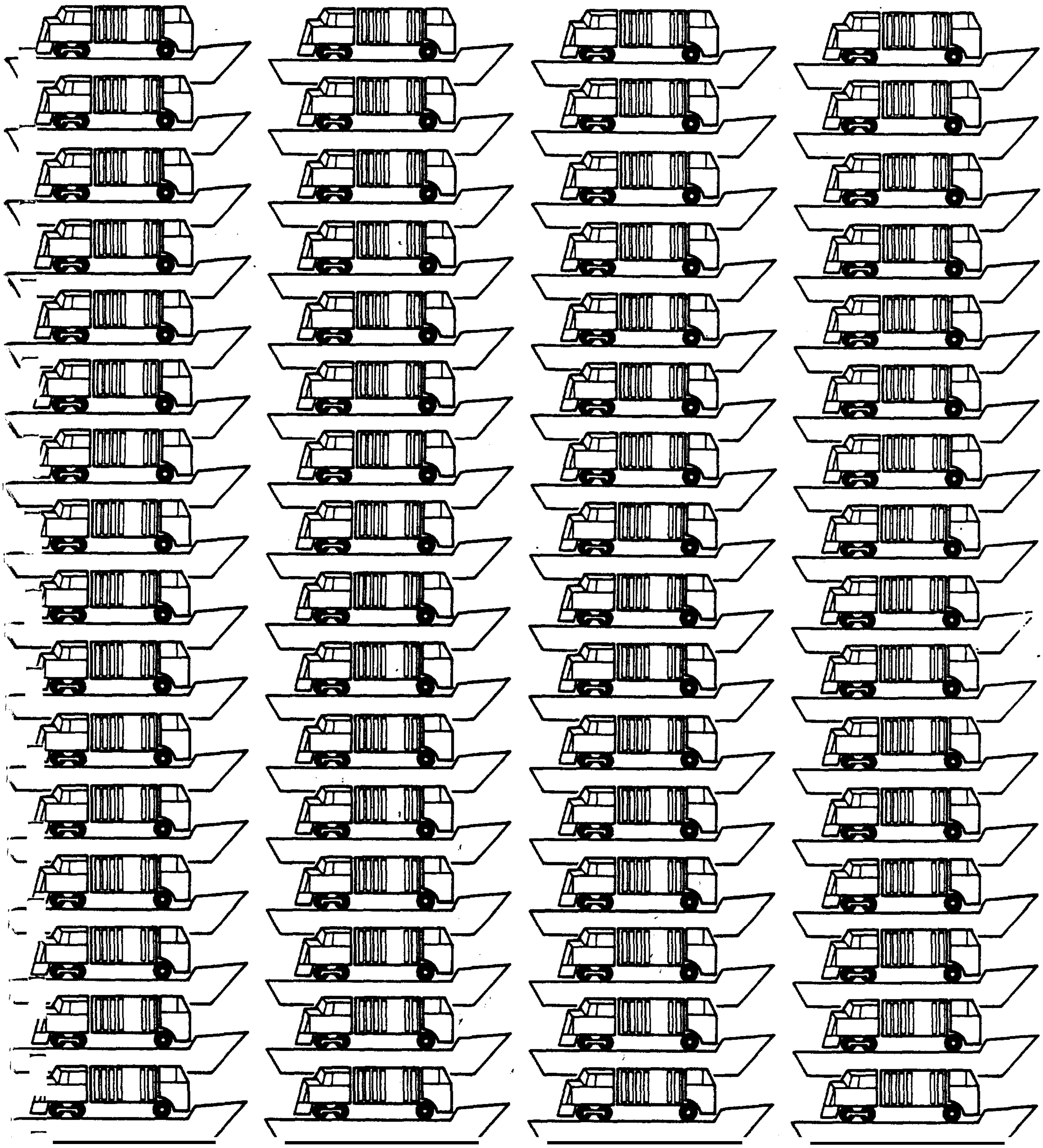


EXECUTIVE SUMMARY

PROJECT LOCATION:

The proposed site of the Intermodal Container Transfer Facility (ICTF) encompasses approximately 260 acres of land north of Sepulveda Boulevard. The site is bounded on the south by Sepulveda Boulevard/ Willow Street, on the north by 223rd Street, on the east by the Los Angeles/Long Beach city limits, and on the west by Los Angeles/Carson city limits.

PROJECT DESCRIPTION:

The Ports of Los Angeles and Long Beach jointly propose to construct the Intermodal Container Transfer Facility, in conjunction with the Southern Pacific Transportation Company. The ICTF will provide a closer, more centralized location for the transfer of marine-oriented containers from the container terminals to the rail transfer yards. Presently, these containers are trucked 22 to 28 miles from the Ports' area to downtown Los Anqeles railyards. With the construction of the ICTF, marine containers which are transported by Southern Pacific rail line would be trucked only 4 to 6 miles.

The ICTF will be developed in three phases. However, the implementation of second and third phases is dependent on the container throughput demand and the economic feasibility to construct the subsequent phases. The major elements of each phase are summarized below.

Phase I (1983 - 1990):

- Grade separation of Alameda Street to provide rail access to the site.
- Improvements to Sepulveda Boulevard including truck access to the site.
- Facility improvements, including paving, utility installation, liqhting, buildings and other site improvements.
- Eight railroad tracks (six working tracks and two return tracks).

Phase II (1991 - 1995):

- Two additional working tracks.
- Remote storage construction.

Phase III (1996 - 2000):

- Four additional working tracks.
- Additional remote storage construction.

In addition to the 137 acres of Port of Los Angeles property, project development will require the acquisition or lease of additional adjacent land.

BENEFICIAL IMPACTS:

- Increase efficiency of container movement;
- Reduce air emissions in the Basin;
- Reduce truck-miles-traveled and truck travel time;
- Reduce fossil fuel consumption;
- Consolidate truck travel:
- Reduce container transportation cost;
- Improve safety through decreased truck-miles-traveled;
- Reduce road wear to the highways; and
- Produce positive impacts to local economy.

POTENTIALLY SIGNIFICANT ADVERSE IMPACTS AND MITIGATIONS:

- Air Quality

  Project emissions have the potential to degrade the local air quality in areas adjacent to the ICTF and in areas along the rail corridors. The ICTF project will, however, have an overall beneficial impact to the air quality of the South Coast Air Basin.

  Mitigations: Reduced truck-miles traveled;

  Energy conservation measures;

  Increased efficiency of container transfer.

- Noise

  Operational activity will increase tie community noise levels at locations* adjacent to the Terminal Island Freeway, at certain residential areas adjacent the project site and at certain locations along the rail corridors.

  Mitigations: Procurement of yard equipment with lowered operational noise levels:

  Construction of noise tarriers, as required:

  Remote storage and stacking of containers.

- Transportation and Circulation

  Project-generated traffic will not result in a significant impact but will incrementally add to tie traffic congestion on the local street system. There will be increase vehicular traffic delay at at-grade crossings due to increased train movements associated with tie ICTF.

Mitigations: Grade separation of Alameda Street:

Improvements to Sepulveda Boulevard;

SCAG's Phased Program of Highway Improvements, if implemented, will provide sufficient future traffic capacity.

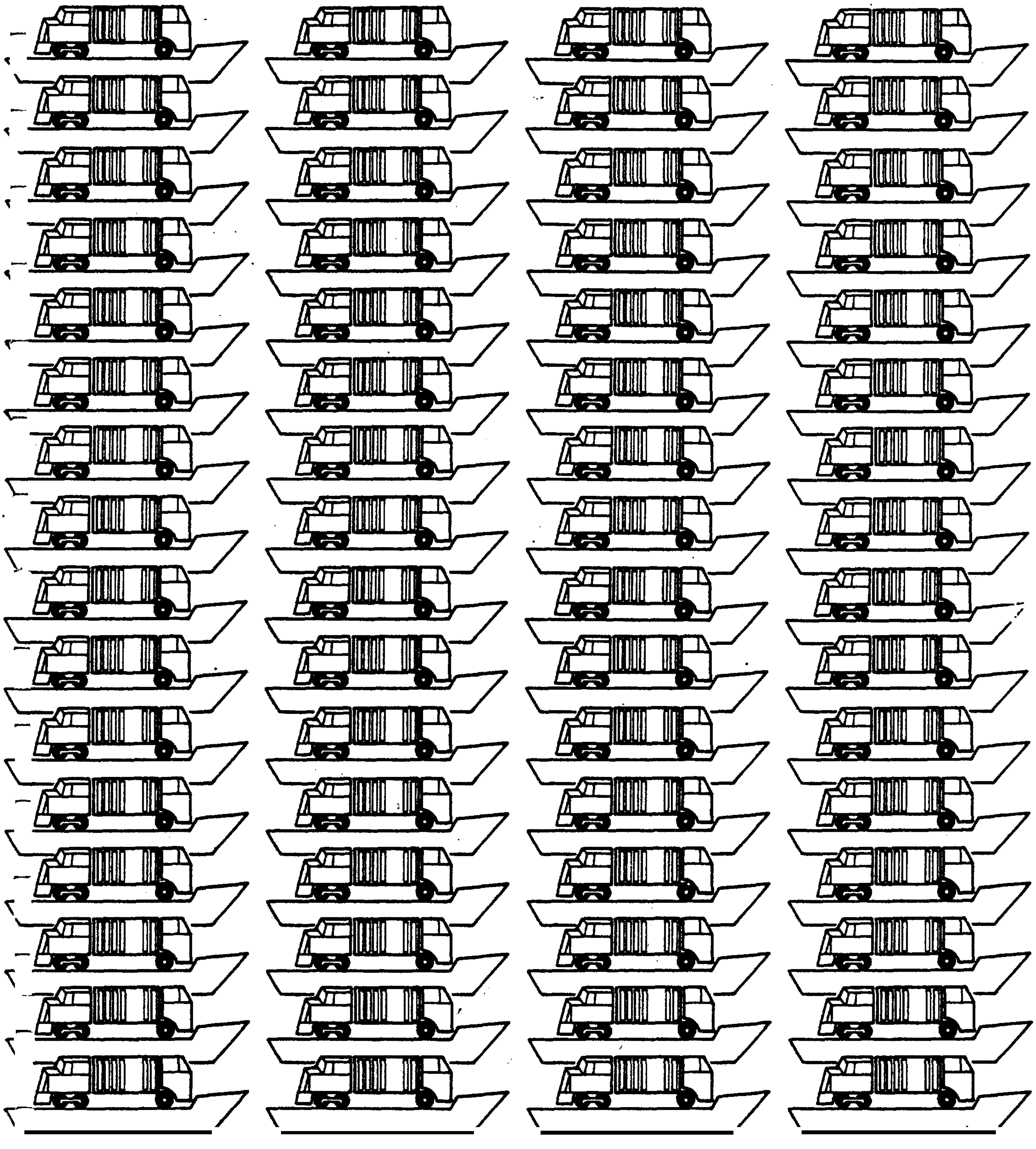
ALTERNATIVES:

Feasibility and technical studies examined the following alternatives:

- No project alternative;
- Alternative site locations;
- Direct rail access to the container terminals;
- Facility access (rail and truck) alternatives:
- Preferred alternative.

ICTF

INTERMODAL CONTAINER TRANSFER FACILITY



Project Description

1.0 DESCRIPTION OF THE PROJECT

1.1 PROJECT LOCATION AND BOUNDARIES

The site of the proposed Intermodal Container Transfer Facility (ICTF) encompasses approximately 260 acres of land north of Sepulveda Boulevard the northerly terminus of the Terminal Island Freeway (SR 47) (Figure 1). The site is bounded on the south by Sepulveda Boulevard and the north by 223rd Street near the San Diego Freeway (I-405) - Alameda Street intersection. The east and west boundaries are the City of Los Angeles city limits. Property to the east of the site is within the City of Long Beach and property to thewest is in the city of Carson. The ICTF site is zoned for heavy industrial use as is the majority of adjoining properties except for the residential areas to the east of the site.

In the initial phase (Phase I) of the ICTF, the project site will consist of approximately 135 acres of land owned by the Port of Los Angeles, approximately 15 acres of property currently owned by Watson Land C-any, and approximately 6.3 acres of additional privately-owed property. The property to the east of the Phase I project site is owned by the Southern California Edison Company, and contains a power substation and high voltage transmission towers. A Union Pacific Railroad line parallels the ICTF site on the east of the Edison Company property. The area adjoining the northeast corner of the site is a residential develópsent. Most of the property to the west of the site is vacant land owned by the Watson Land Company. Macmillan Oil Company has a liquid hulk storage facility on the north side of Sepulveda Boulevard on property leased from the Watson Land Company. There are several smaller parcels of land under separate ownership on the east side of Alameda Street that are used for storage of containers, a scrap metal yard, and a trucking terminal.

The proposed project will be developed in three phases, as required by increased container throughput demand and economic feasibility to construct subsequent phases. Additional land will be required to develop the ultimate project.

The parcels which comprise the project site are illustrated in Figure 2. These parcels include:

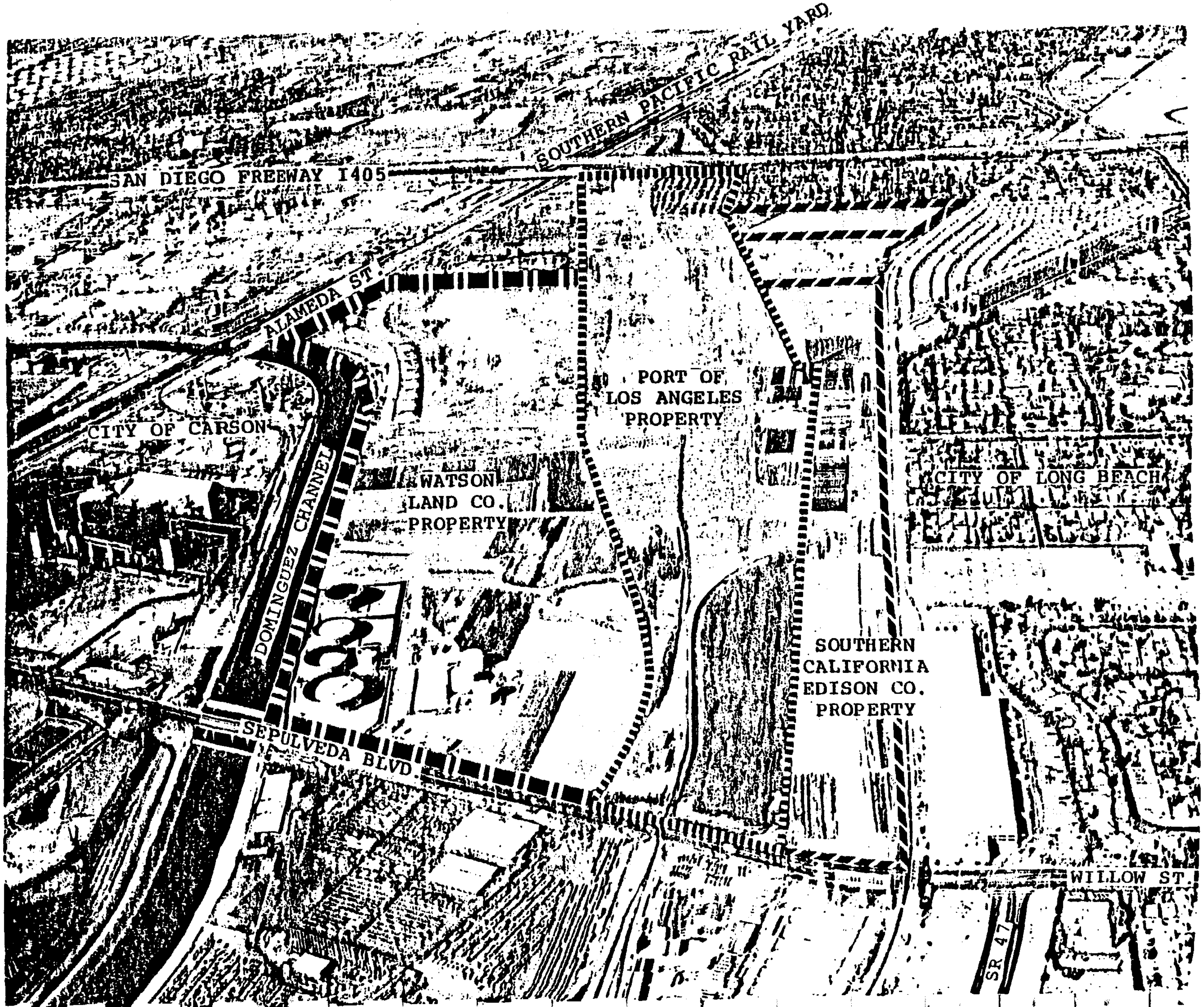
*Approxiarttely 137 acres of land are owned by the Port of Los Angeles (Phase I). The site is approximately 7000 feet long with a variable width from 450 feet to 900 feet, It is flat, vacant land except for several areas that have been leased on a short term basis for the storage of steel pipe andother temporary uses.

Approximately 15 acres of property will be acquired from the Watson Land Company (Phase I).

°Approximately 6 acres of privately-property will be acquired (Phase I).

°Approximately 0.3 acres of privately- property will be acquired (Phase I).

°Approximately 40 acres of land will be leased from Southern California Edison Company on the east portion of the site for remote storage use (Phase II).


SOUTHERN PACIFIC RAIL YARD
SAN DIEGO FREEWAY I405
ALAMEDA ST
CITY OF CARSON
PORT OF LOS ANGELES PROPERTY
WATSON LAND CO. PROPERTY
DOMINGUEZ CHANNEL
CITY OF LONG BEACH
SOUTHERN CALIFORNIA EDISON CO. PROPERTY
SEPULVEDA BLVD
WILLOW ST.
SR 47

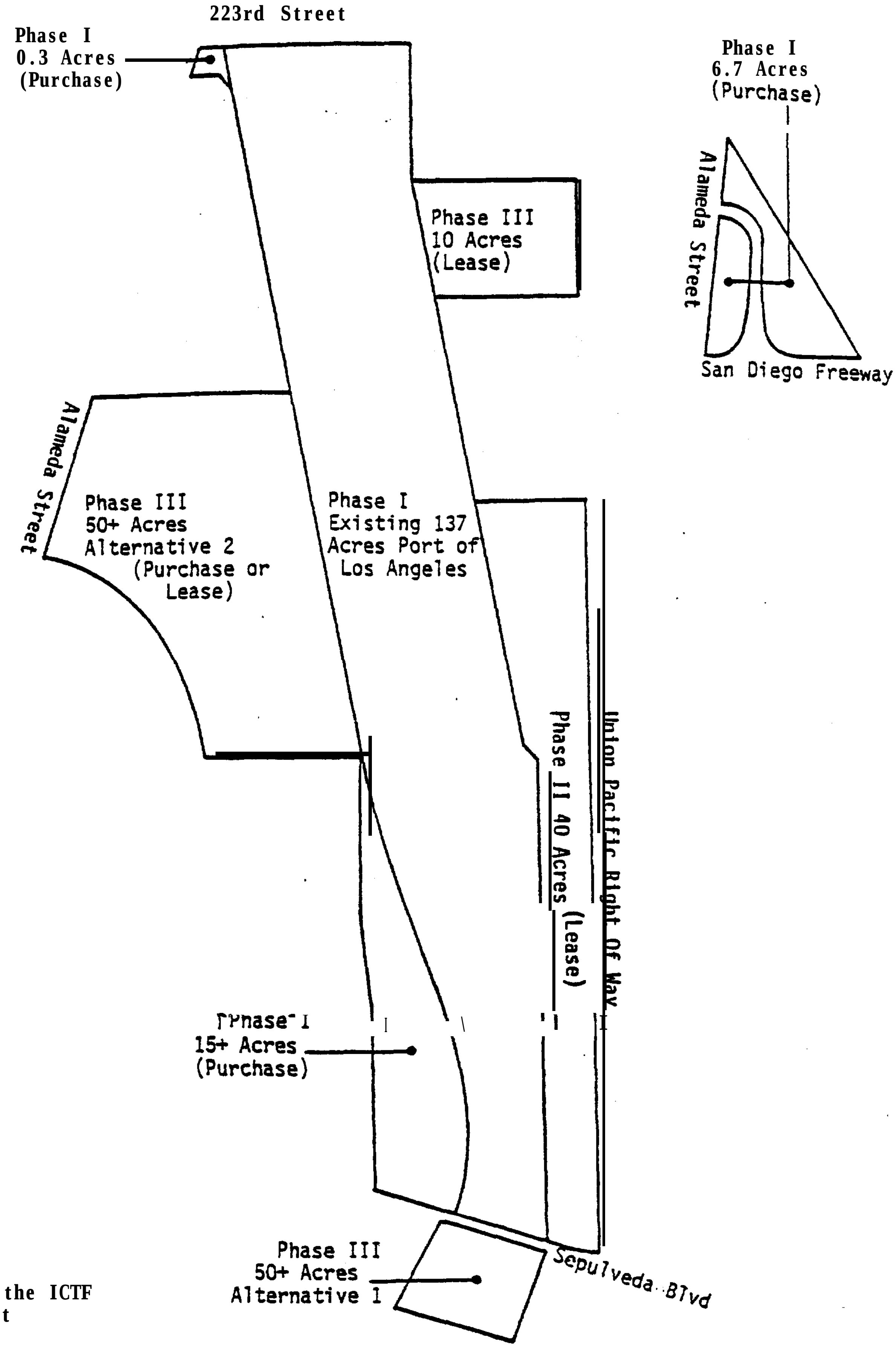


Figure 2
Phases of the ICTF
Development

°Approximately 10 acres of land will be acquired from Southern California Edison Company by lease. An additional SO acres will be acquired from the Watson Land Company and/or Port of Los Angeles-owned property southerly Of Sepulveda Boulevard for remote storage use (Phase III).

Regional access (Figure 3) to the project area is provided by the Long Beach, Terminal Island, Harbor, and San Diego Freeways- Primary traffic service on the street system is via Sepulveda Boulevard, Terminal Island Freeway, and Alameda street.

Rail access to the site will be from the north across Alameda Street and under the San Diego Freeway and 223rd Street. The trains can travel between the ICTF and downtown Los Angeles along one of two rail corridors--either Southern Pacific's San Pedro Brand or the Wilmington Branch. Primary rail service to/from the ICTF will be via the Wilmington Branch.

Refer to Figure 27 for the properties adjacent to the ICTF site.

l.2 PROJECT OBJECTIVES AND BACKGROUND

1.2.1 OBJECTIVES OF THE PROJECT

The Ports of Los Angeles and Long Beach jointly propose to construct the Intermodal Container Transfer Facility, in conjunction with the Southern Pacific Transportation Company. The ICTF will provide a closer, more centralized location for the transfer of marine-oriented containers from the marine container terminals (Figure 4) to the rail transfer yards. Presently, these containers are trucked 22 to 28 miles from the Port areas to me of the three existing downtown rail yards. With the development of the ICTF, marine containers which are transported by Southern Pacific rail lines would be trucked only 4 to 6 highway miles. This would achieve the following:

°Increase efficiency of container moverrent;

°Reduce air emissions in the Basin;

°Reduce truck-miles-traveled and truck traveltime;

°Reduce fossil fuel consumption;

°Consolidate truck travel;

°Reduce container transportation cost;

°Improve safety through decreased truck-miles-traveled;

°Reduce roadwear to the highways: and

°Produce positive impacts to local economy.

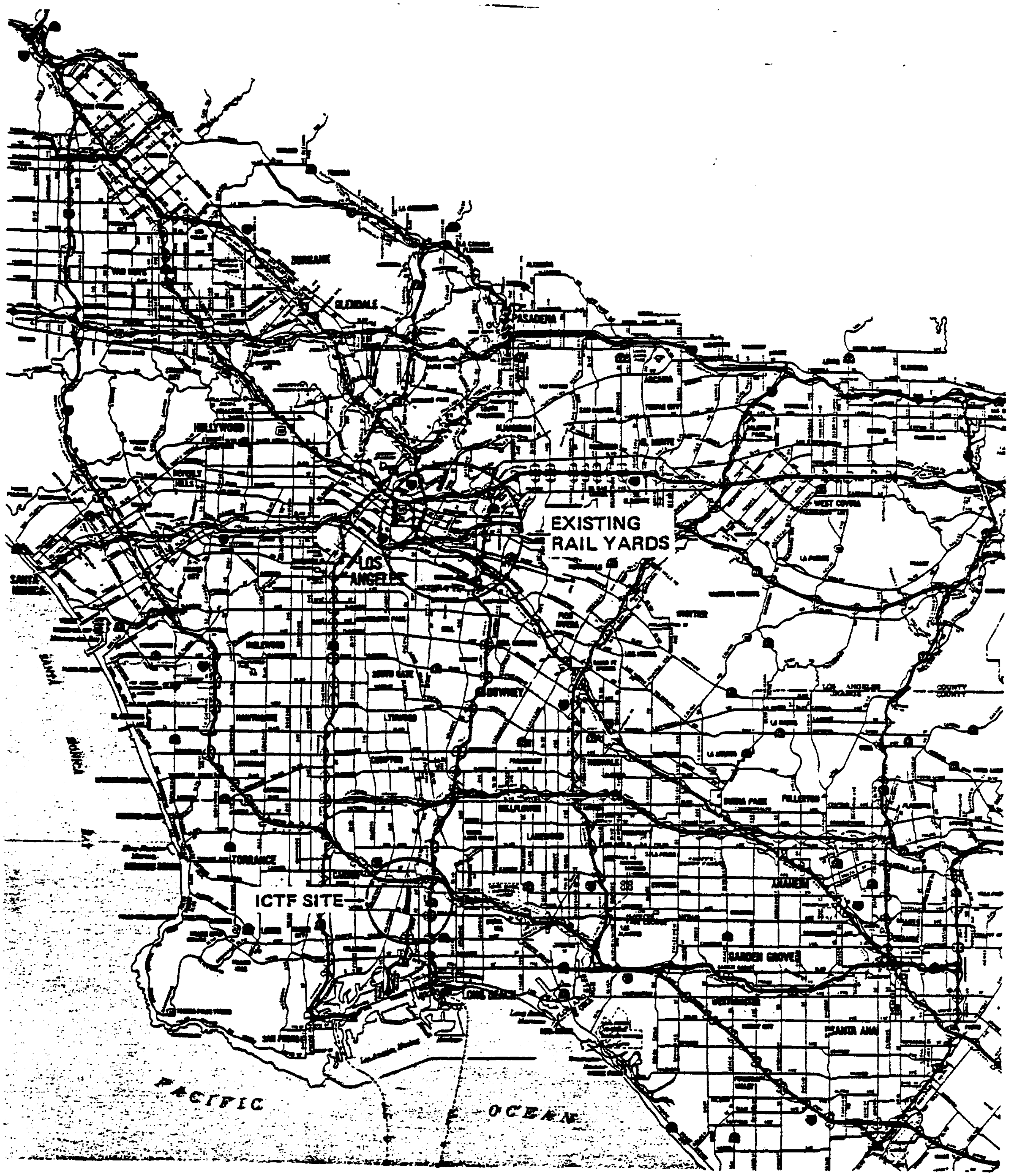


Figure 3
Regional Location Map

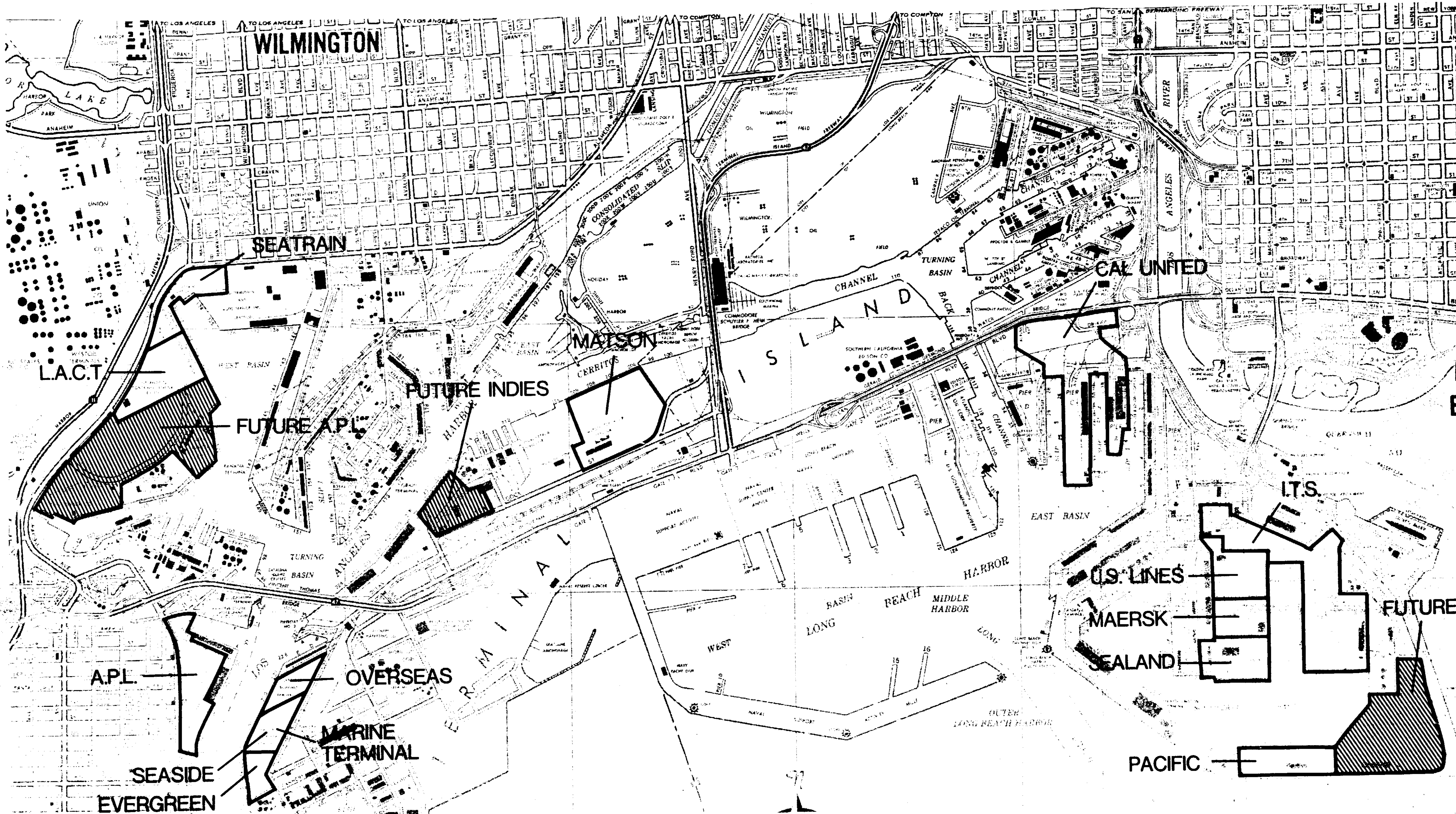


Figure 4
Ports' Container Terminals

1.2.2 BACKGROUND

Since the Arab oil embargo that began in late 1973, the economics of cargo transport have been changing rapidly- Prior to 1973, there was considerable marine trade through the Panama Canal in both directions connecting U.S. Atlantic and Pacific ports with European/African ports and western Pacific ports. The tenfold increase in the price of foreign crude Oil has resulted in more than fourfold increase in the cost of marine bunker and diesel fuels which in turn has significantly increased the cost of marine transport -more so than rail freight movement.

As the result, it has become more economical to transport goods from western Pacific ports to the west Coast of the United States, transfer the container to rail cars for transport to Gulf and East Coast ports, with final stages of shipment by marine transport to European and African ports. This movement is referred to as Pacific "Bridge" shipments. The same economic advantage also applies to traffic from Euro-African ports bound for West Coast and western Pacific destinations and is the European Bridge. Major factors influencing this condition include: shorter overall route, lower cost for overland transport, improved ship utilization factors, less total shipment time, and increased Panama Canal transit fees and frequent delays.

The rail portion of the intermodal system has become known as a "bridge." Containerized cargo offloaded at a West Coast port and shipped by rail to an East Coast or Gulf port (or offloaded at an East or Gulf Coast port and shipped by rail to a West Coast port for further marine transport) is termed "landbridge". For containers shipped from a West, East, or Gulf Coast port to an inland U.S. destination by direct rail movement, the rail transport segment is termed "microbridge." When the midcontinent city is the ultimate destination but the container is transported from West Coast port to an East or Gulf port by rail or vice versa and then back to its destination by rail or truck, the segment is termed "minibridge."

Thesavings in both cost and time of this intermodal method of transportation has resulted in a constant increase in the number of containers "bridged" between the West East and Gulf coasts and inland destinations of the United States. Data indicate that in the Ports of Los Angeles and Long Beach "bridge" shipments have increased from about 2,000 per month in 1976 to an estimated 25,000 per month in mid-1980. This far exceeds the increase in total marine container shipments, with aworldwide average rate increase of about 10 percent per year, and reflects the rapid growth of railroad transport of international containerized goods.

1.3 DESCRIPTION OF THE PROJECT'S PLANNING AND CONSTRUCTION CHARACTERISTICS

1.3.1 PROJECT DEVELOPMENT PLAN

The project will be developed in three phases (see Figure 2) to meet the increasing demand for shipment of marine containers. The initial phase is estimated to be operational in late 1983 with the second phase in 1990 and third phase in 1996. The second and third phasing plans are dependent on the throughput demands placed on the facility and the economic feasibility to construct the subsequent phases.

ft is anticipated that the ICTF facility will, in general operate 2 shifts per day, 5 days per week for the loading/unloading of rail Cars. Occasionally, the loading/unloading operations will be necessary on weekends and late evening hours. The gate will be open 24 hours per day for trucks..

1.3.1.1 Phase I (19841990)

The initial phase (Figure 5) will result in the construction of eight railroad tracks With the two outside tracks used for return tracks and the six interior tracks used for working tracks. Widening of the narrow southwesterly end of the site to increase the working length of tracks will necessitate the acquisition of approximately 15 acres of property from Watson Lard Company, which is now leased by the Macmillan Oil Company. Rail access to the ICTF will be from the north, crossing Alameda Street north of and passing under the San Diego Freeway and 223rd Street. A full grade separation of Alameda Street will be constructed. Vehicular access to the ICTF will he from Sepulveda Boulevard on the south.

construction of the rail access grade separation will isolate 6 acres of land north of the freeway. It will be necessary to acquire these privately owned parcels of land. Additionally, a 0.3-acre parcel will be acquired on the south side of the freeway.

An administration and U.S. Customs building will be built adjoining the entrance/exit gates at the south end of the facility. A railroad control tower will also be located in this area. A maintenance building will be located in the northeasterly area of the ICTF site. The maintenance facility will be used to service the ICTF operating equipment. Railroad locomotives will not be serviced or refueledwithin the facility.

Adrainage system, yard lighting and other utilities will be constructed to serve the facility. Water, sewer, electrical power, telephone and natural gas services are available in the immediate vicinity of the site. The entire ICTF site will be paved with either asphalt or portland cement concrete pavement depending on the type of activity to occur in a particular area. A security fence with other security measures will be required.

Rail access to the ICTF will be from the north: truckswith containers-on-chassis from the Ports will enter the facility from Sepulveda Boulevard on the south.

1.3.1.2 Phase II (1991-1995)

The second phase (Figure 6) for the ICTF will include installing two additional working tracks within the easterly center storage area. This will eliminate center storage within that area of the facility.

Approximately 40 acres of land will be leased from the Southern California Edison Company on the east side of facility for remote storage use to replace the enter storage area eliminated. The remote storage area will he paved. Storage of movable cargo, such as containers-on-chassis is a permitted use of land under power transmission lines. Additional entrance/exit gate lanes will be required to support the increased throughput capacity of the ICTF.

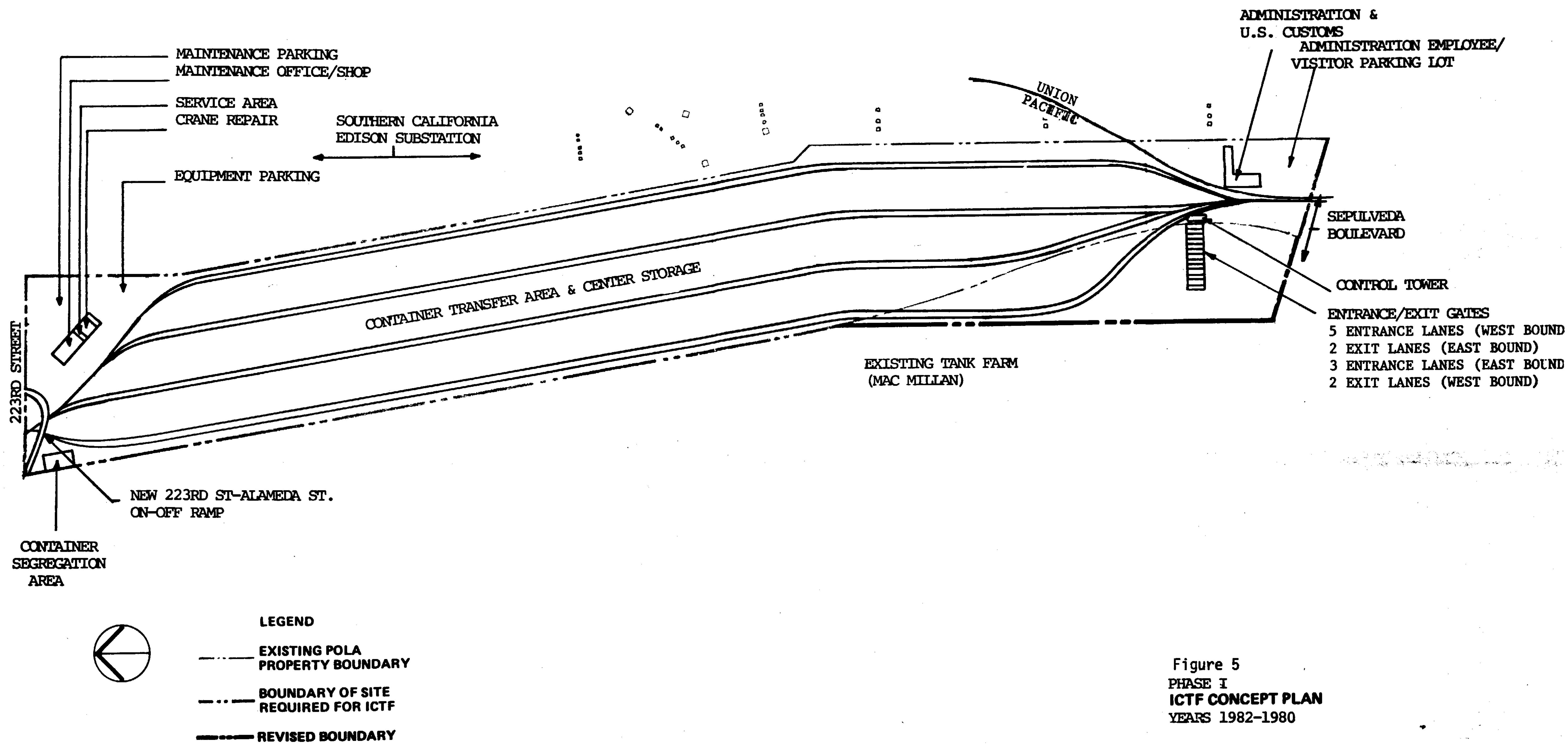


Figure 5
PHASE I
ICTF CONCEPT PLAN
YEARS 1982-1980

1.3.1.3 Phase III (1996-2000)

The third phase (Figure 7) will construct four additional working sets of tracks within the two remaining center storage areas of the facility. This would convert the facility from a center storage operation to a remote storage type of facility.

The lease area from the Southern California Edison Co. would be increased to a total of 50 acres as shown in Figure 2 on the east side of the ICI'!?. Additional acres for remote storage will be needed and obtained by acquisition of one of two alternative sites. The first alternative would be to use 50 acres of Watson land on the western edge of the facility. The second alternative would be to utilize 50 acres of Los Angeles Harbor Department (LAHD) property south of Sepulveda Boulevard, where a grade separation for truck access may be necessary. Entrance and exit lams would be increased, with additional entrances/exits provided if Watson or LAHD remote storage areas were used.

In summary, the ultimate development of the ICTF will include construction of twelve working tracks With two outside return tracks in a phased development. All support facilities, including buildings and utility system, will be installed in the initial phase. The second and third phases will be constructed only if additional throughput capacity is required.

1.3.2 CONSTRUCTION CHARACTERISTICS

Development of the ICTF facility will require a series of staged site improvements to support each of the three phases. Table loutlines the major construction activities that will take place during each phase. Specific constructian equipment to be used and hours of use are given in Appendix 6.3A.

1.3.2.1 PHASE I CONSTRUCTION

1.3.2.1.1 Rail Access

Rail access to the site (Figure 8) will be provided from the Southern Pacific% tracks on the west side of Alameda Street, approximately 650 feet north of the San Diego Freeway (I-405). To eliminate traffic interference from unit trains entering the ICTF across Alameda Street, a skewed grade separated rail/highway crossing at Alameda Street will be constructed. Alameda Street will be lowered approximately 1500 feet with the trackage remaining at 'the existing elevation. This grade separation requires that the northbound I-405 on-off ramps to Alameda Street be realign&and reconstruction. Once the access trackage has crossed Alameda Street, itwill proceed under the freeway through an open cell provided for this purpose.

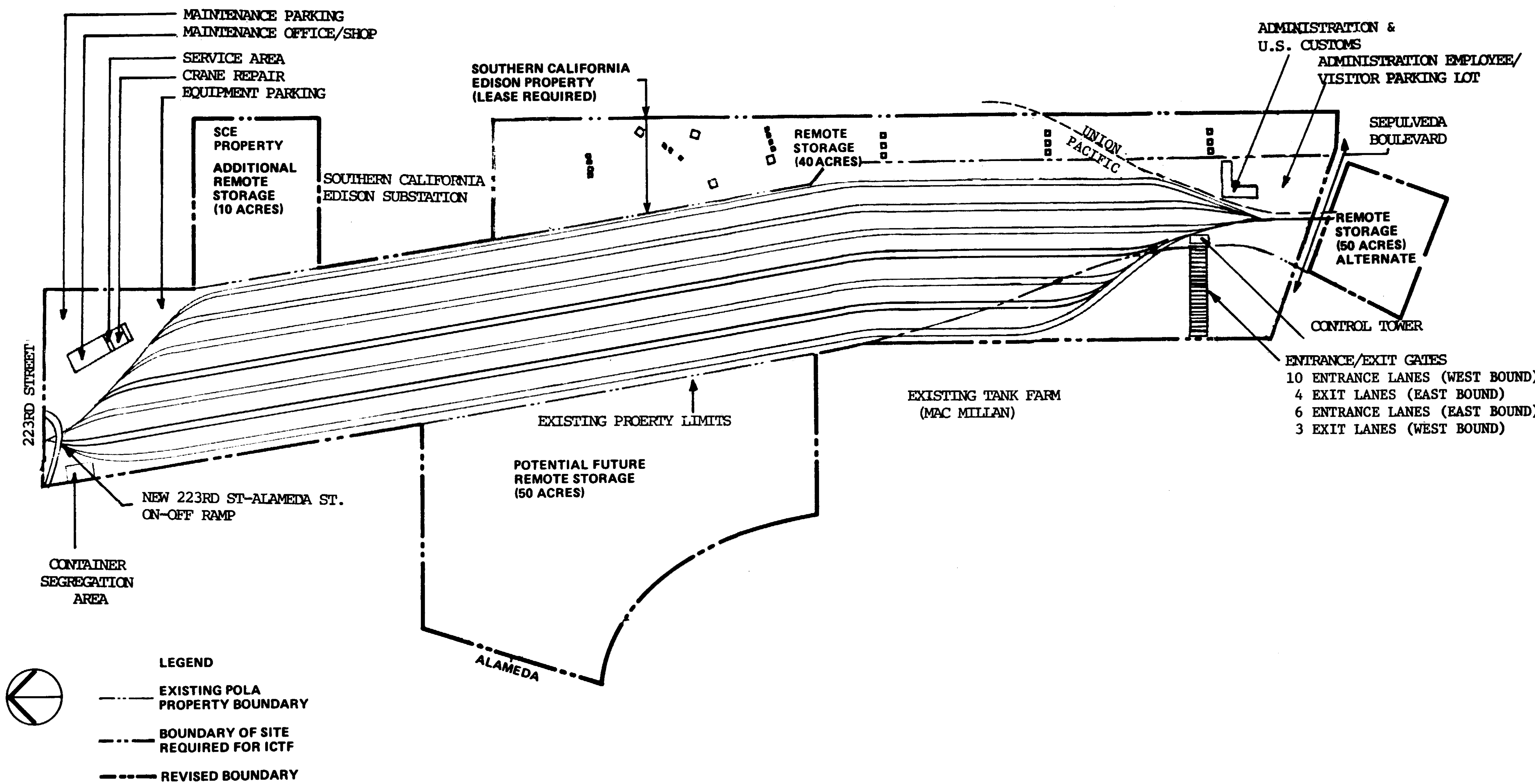
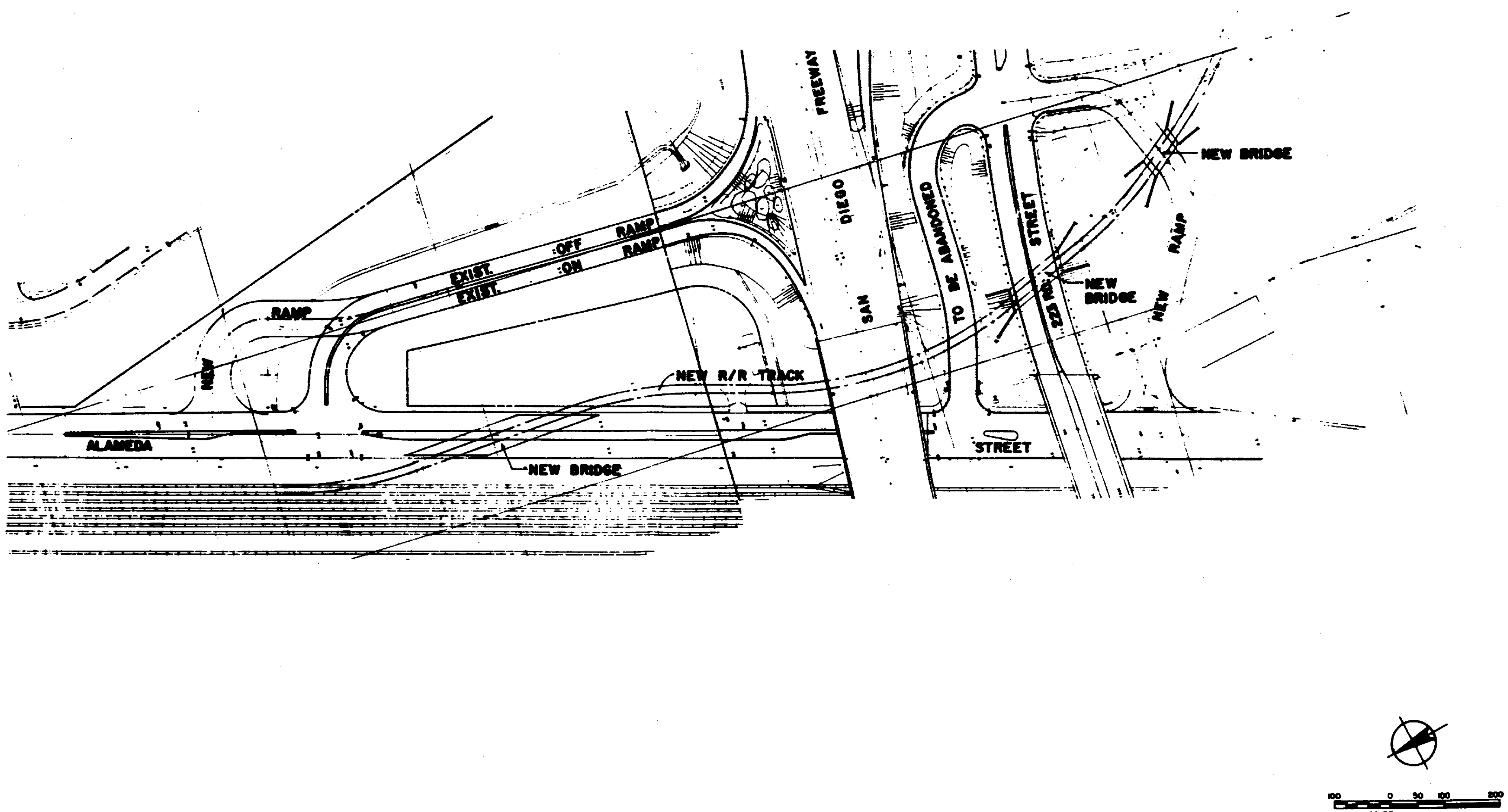


Figure 7
PHASE III
ICTF CONCEPT PLAN
YEARS 1995-2000

TABLE 1

SUMMARY OF CONSTRUCTION ACTIVITIES

Construction Activity	Time
I. PHASE I CONSTRUCTION (1983-1990)	16 months
A. RAILACCESS	14 months
1. Construct separation of Alameda Street	
2. Relocate utility lines	
3. Realign San Diego Freeway on/off ramp	
4. Construct new 223rd Street on/off ramp	
5. Construct railroad tunnel under 223rd Street	
B. STREET IMPROVEMENT	
1. Upgrade Sepulveda Boulevard: grade, excavate, pave, lighting, drainage	
C. SITE IMPROVEMENTS	13 months
1. Prepare site cut and fill grading	
2. Install paving	
3. Construct storm drains	
4. Install fencing, block walls, landscaping	
5. Install Utility hookups (sanitary sewer, water, air, gas, electrical power, telephone)	
6. Install lighting	
7. Install 8 rail tracks: 6 working tracks and 2 outside return tracks for the locomotives	
8. Construct buildings: Custom/Administration building, railroad control tower, maintenance building, customs dock, guard house, and check stations	
II. PHASE II (1991-1995)	10 months.
A. SITE IMPROVEMENTS	
1. Construct storage: excavate, pave, fence,	
2. Construct two additional sets of working tracks	
III. PHASE III (1996-2000)	10 months
A. SITE IMPROVEMENTS	
1. Construct remote storage: excavation, paving, fencing, drainage	6 months
2. Construct four additional sets of working tracks	8 months
3. Construct additional entry/exit lanes	
4. Construct control tower	



Intermodal Container Transfer Facility
CONCEPTUAL
RAIL ENTRY
OVERALL DESIGN

FIGURE 8

Theexisting access roadway between Alameda Street and the elevated roadway of 223rd Street will require removal. A replacement roadway structure will be built cm the south side of 223rd Street to provide a connection between 223rd street and Alameda street. After this replacement roadway is constructed, a railroad structure through the fill section that supports 223rd Street will be built.

It is anticipated that construction of the rail access to the ICTF will be completed in five stages in order to maintain through traffic on Alameda Street, the San Diego Freeway on-off ramp to AlamedaStreet, and the 223rd Street on-off ramp to Alameda Street. A temporary detour roadway adjacent to Alameda Street will be constructed. This will shift traffic approximately 100 feet east of the present roadway. Two 12-foot traffic lanes in each directian will be maintained on the detour during most of the construction period. It will be necessary for this detour traffic to pass under the San Diego Freeway bridge through the space that will be ultimately used for the railroad access. A clearance of 6 feet will be maintained between the outside travel lanes and the nearest freeway bridge columns. Temporary traffic guardrails will be placed between the outside travellanes and these columns.

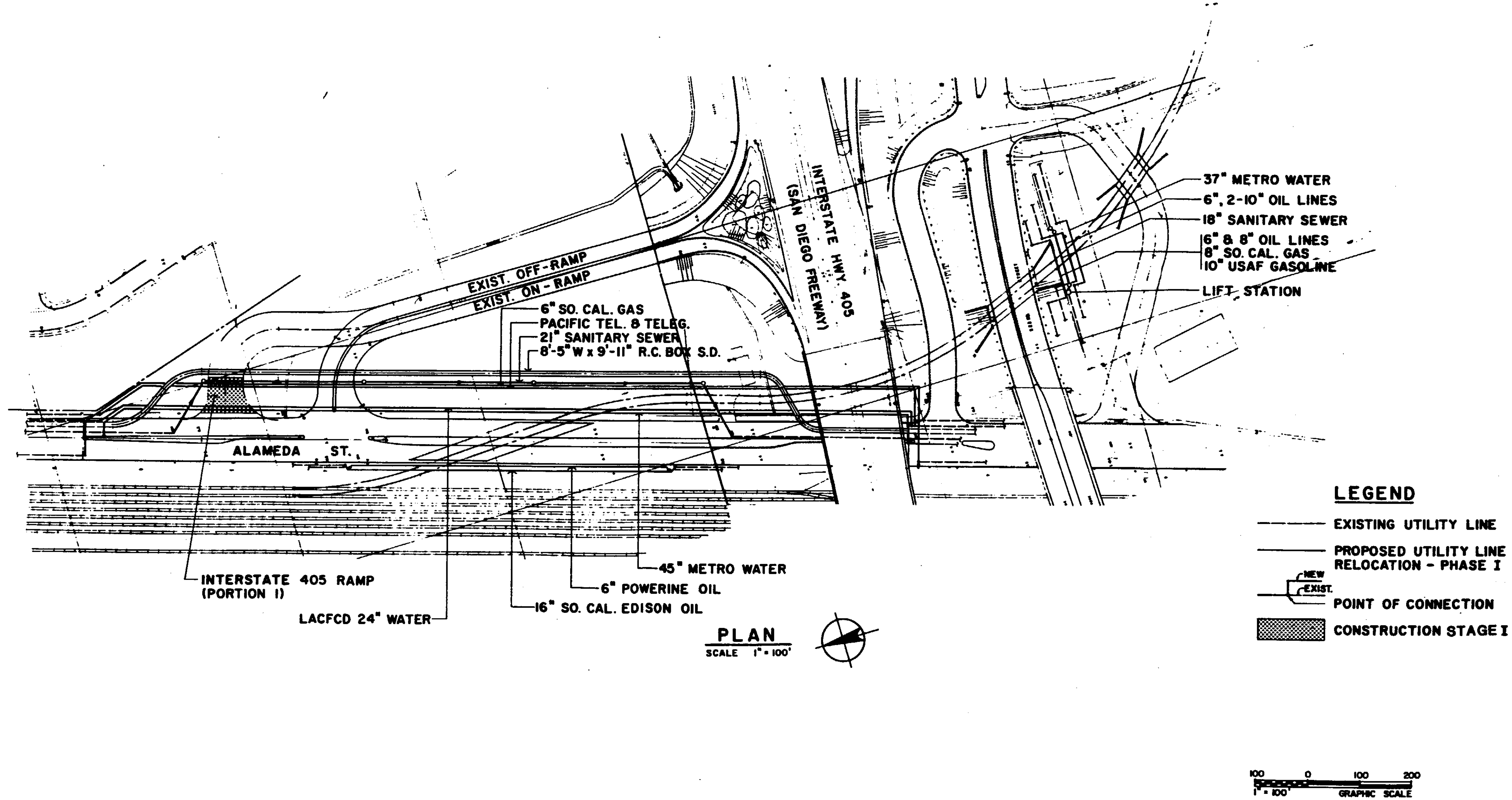
The five stages of construction associated with the rail access grade separation will be constructed in Phase I of the project and are as follows:

1. Construction of Bypass Utilities and Pipelines, Alameda Street (Figure 9): Construction of the grade separation will require relocation of the following substructures: Pacific Telephone conduit, Los Angeles County Flood Control District (LACFCD) 24-inch water line, LACFCD 8-foot 5-inch x S-foot ll-inch reinforced concrete box storm drain, Los Angeles County Sanitation District (LACSD) 21-inch "Davidson" sewer line, Metropolitan Water District (MWD) 45-inch water line, Socony-Mobil 6-inch oil line (idle) recently sold to Douglas Oil, Southern California Gas Company (SCG) 8-inch line, Southern California Gas Company (SOG) 8-inch line (abandoned), Socony-Mobil 6-inch oil line (idle), Southern California Edison (SCE) 16-inch fuel oil line (within Southern Pacific right-of-way), Powerine Oil 6-inch oil line (within Southern Pacific right-of-way), and Southern Pacific pipeline 10-inch oil line (within Southern Pacific right-of-way).

Those facilities presently within the Alameda Street right-of-way, with the exception of the Socony-Mobil 6-inch oil line recently sold to Douglas, will be reconstructed within a new utility easement easterly of the Alameda Street right-of-way. The rerouted utilities will extend from I-405 on the south to the northerly end of the Alameda Street depression. Facilities presently within the Dolores Yard of Southern Pacific and the Douglas line can be relocated and/or protected within the rail yard in the vicinity of the proposed bridge crossing.

The LACFCD specifies that construction affecting their storm drain operation can occur only between April 15 and October 15, with prior LACFCD approval of the construction schedule.

In addition to the utility relocation, a portion of the new San Diego Freeway ramp will be constructed where it crosses the proposed Alameda detour roadway in the firststage of the rail access construction.



Intermodal Container Transfer Facility
CONCEPTUAL
CONSTRUCTION STAGE I
UTILITY RELOCATION

FIGURE 9

2. Alameda Detour Roadway (Figure 10): After the relocated utilities have been constructed and backfilled, the Alameda detour road way will be constructed. With the exception of the connections of the detour to Alameda Street and the freeway ramp, Alameda Street will remain completely open during this stage. The construction of these connections, as well as the switching of traffic from Alameda Street to the detour, will require reducing traffic flow to one lane in each directian for short periods of time.

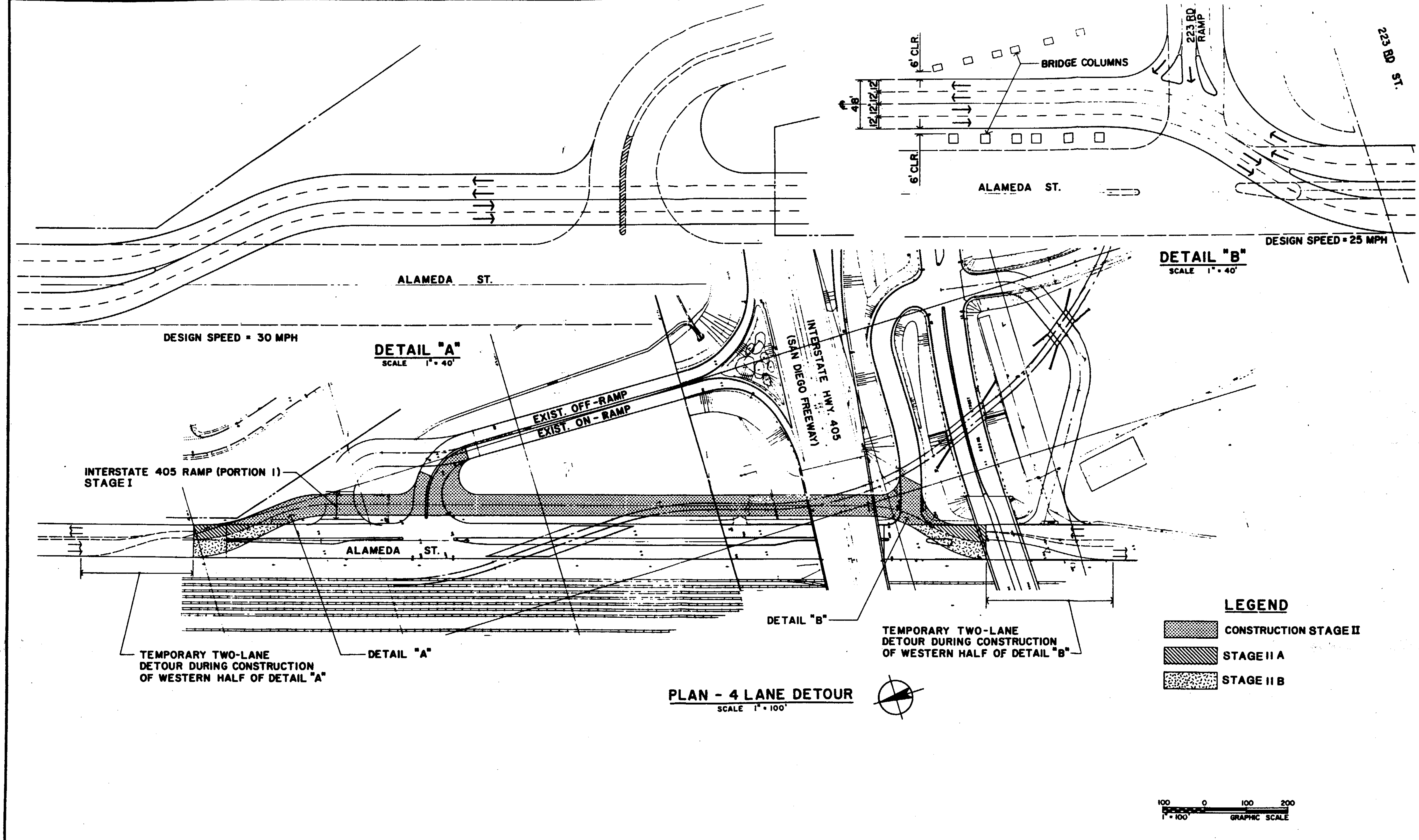
3. Alameda Street Grade Separation, Railroad Bridge over Alameda, Portion of Freeway Ranp, Half of 223rd Street Tunnel, New 223rd Street Ramp, and Grade Separation (Figure 11): bring this constructian stage, two lanes in each direction will be maintained on the Alameda detour roadway. The detour will cross the portion of the new freeway constructed previously. The finished elevation of the new freeway ramp is approximately six feet below the grade of the detour roadway. It will be necessary, therefore, to place a layer of construction fabric and temporary fill over this newly constructed portion of the ramp in order to bring this area to the grade of the detour roadway.

To construct the 223rd Street rail access tunnel, the following facilities will require lowering and protection:

- North of 223rd Street: 24-inch reinforced concrete storm drain line, located between the existing on-off ramp to Alameda Street and 223rd Street (Caltrans).
- Within the old 223rd Street right-f-way (from south property line; northerly): SCE (relocated overhead power line), Pacific Telephone 4-foot 4-inch multiduct conduit, Golden Eagle 6-inch oil line, MWD 37-inch main, Union Oil 10-inch oil line, l8-inch sanitary sewer, LACSD U-inch sanitary sewer, SOG 8-inch gas line (abandoned), Union Oil 10-inch oil line, 15-inch sanitary sewer, SO; 8-inch gas line, Standard Oil Company/Chevron 8-inch oil line, United States Air Force 10-inch Norwalk airplane fuel supply line, and Union Oil 6-inch oil line.
- Southerlyof 223rd Street: Dominguez Water Company I-inch water line.

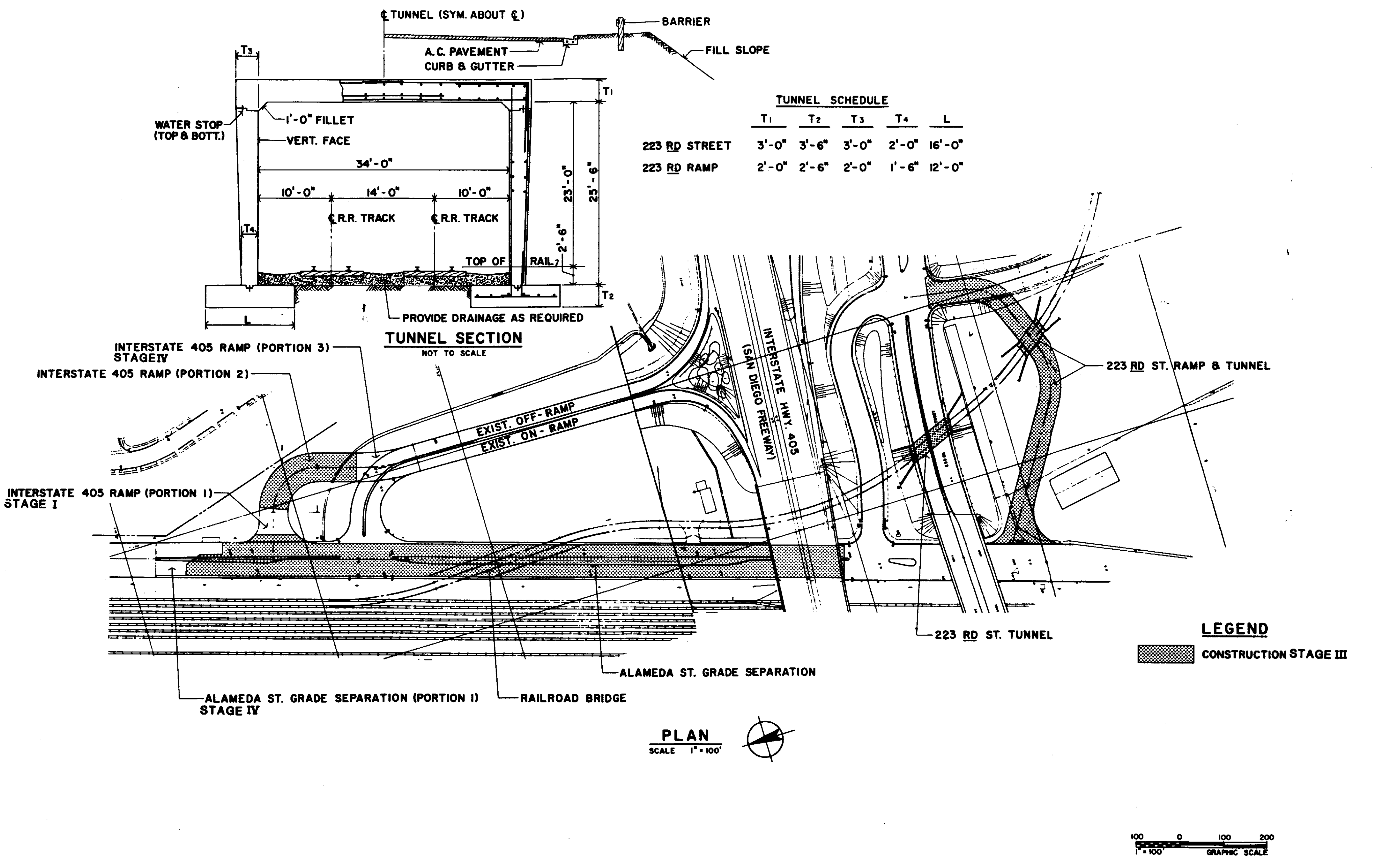
Construction of the grade separation will involve protection of utilities near Alameda Street and the proposed 223rd connection for the new Alameda Street- 223rd Street on-off ramp.

4. Reopening of Alameda Street (Figure 12): This shortphase includes tie construction of connections between the newly constructed and existing sections of Alameda Street, as well as a connection between the newly constructed and existing sections of San Diego Freeway on-off ramp. This will include removing the temporary fill over that portion of the newly constructed ramp at the Alameda detour crossing. Traffic flow at these connections will again be reduced to one lane in each direction for a short period of time.



Intermodal Container Transfer Facility
CONCEPTUAL
CONSTRUCTION STAGE II
ALAMEDA ST. DETOUR

FIGURE
10

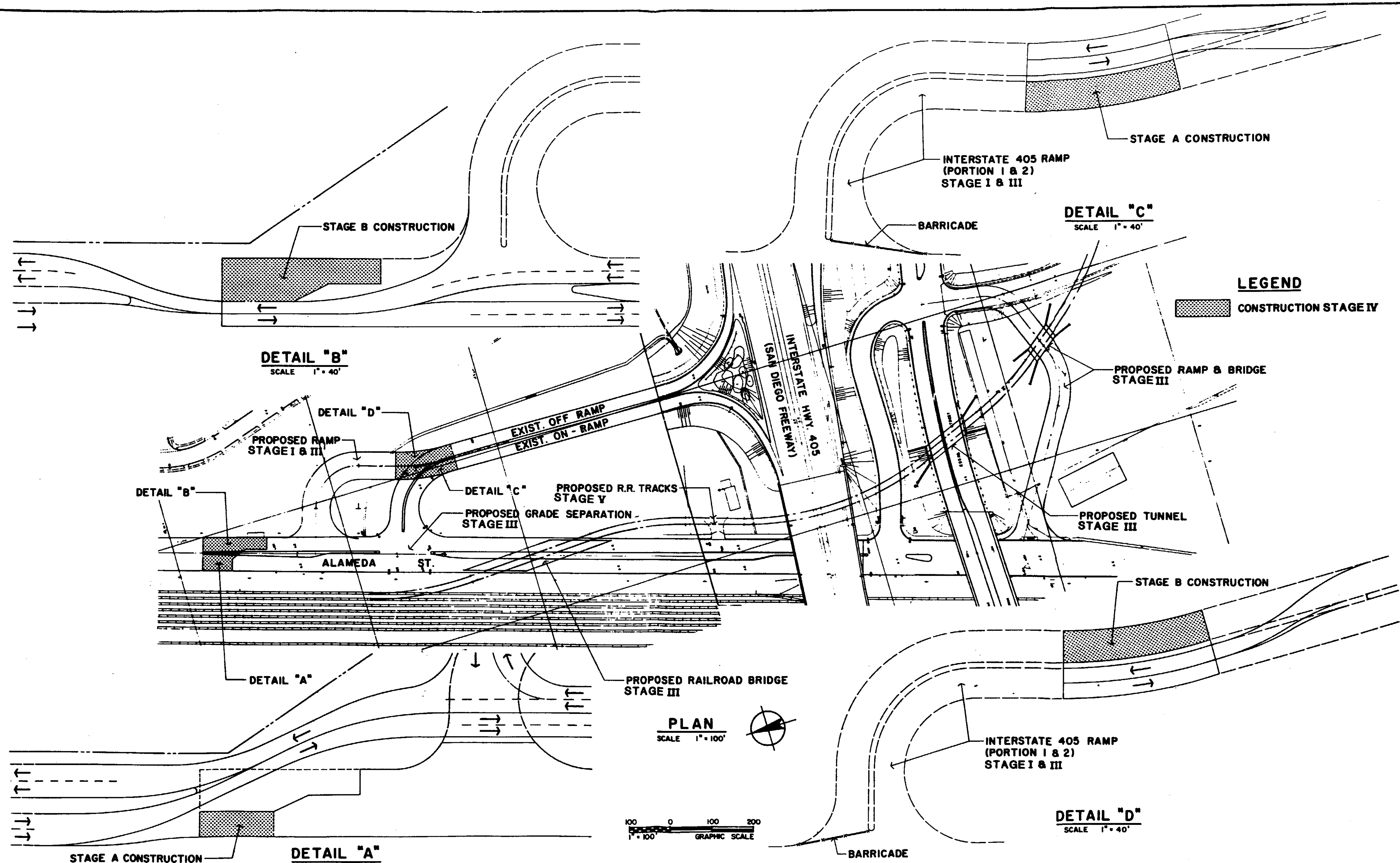


TUNNEL SCHEDULE

	T1	T2	T3	T4	L
223 RD STREET	3'-0"	3'-6"	3'-0"	2'-0"	16'-0"
223 RD RAMP	2'-0"	2'-6"	2'-0"	1'-6"	12'-0"

Intermodal Container Transfer Facility
CONCEPTUAL
CONSTRUCTION STAGE III
ALAMEDA ST. GRADE SEPARATION
PORTION INTERSTATE 405 ON-OFF RAMP
223 RD STREET TUNNEL & RAMP

FIGURE 11



Intermodal Container Transfer Facility
CONCEPTUAL
CONSTRUCTION STAGE IV
RAMP CONNECTION
ALAMEDA ST. CONNECTION

FIGURE 12

5. Rail Trackage, Demolition of Alameda Detour, Demolition of Existing 223rd Street Ramp to Alameda Street (Figure 13): During this stage, the Alameda grade separation will be in full service.

It is estimated that construction of the rail access to the site will require approximately 14 months. The estimated construction schedule is given in Figure 14. The railroad access plan will provide unrestricted rail access to the ICTF from the Southern Pacific main line track.

1.3.2.1.2 TRUCK Access

Truck access to the ICTF will be via Sepulveda Boulevard (known as Willow Street in the City of Long Beach). In order to provide adequate traffic volumes, improvements on Sepulveda Boulevard along the ICTF frontage and easterly to the Terminal Island Freeway are required. The proposed improvements include:

1. Striping, channelization, and signalization on Sepulveda Boulevard west of the ICTF (Figure 15), Sepulveda Boulevard east of the ICTF (Figure 16) and LAHD property across Sepulveda Boulevard.

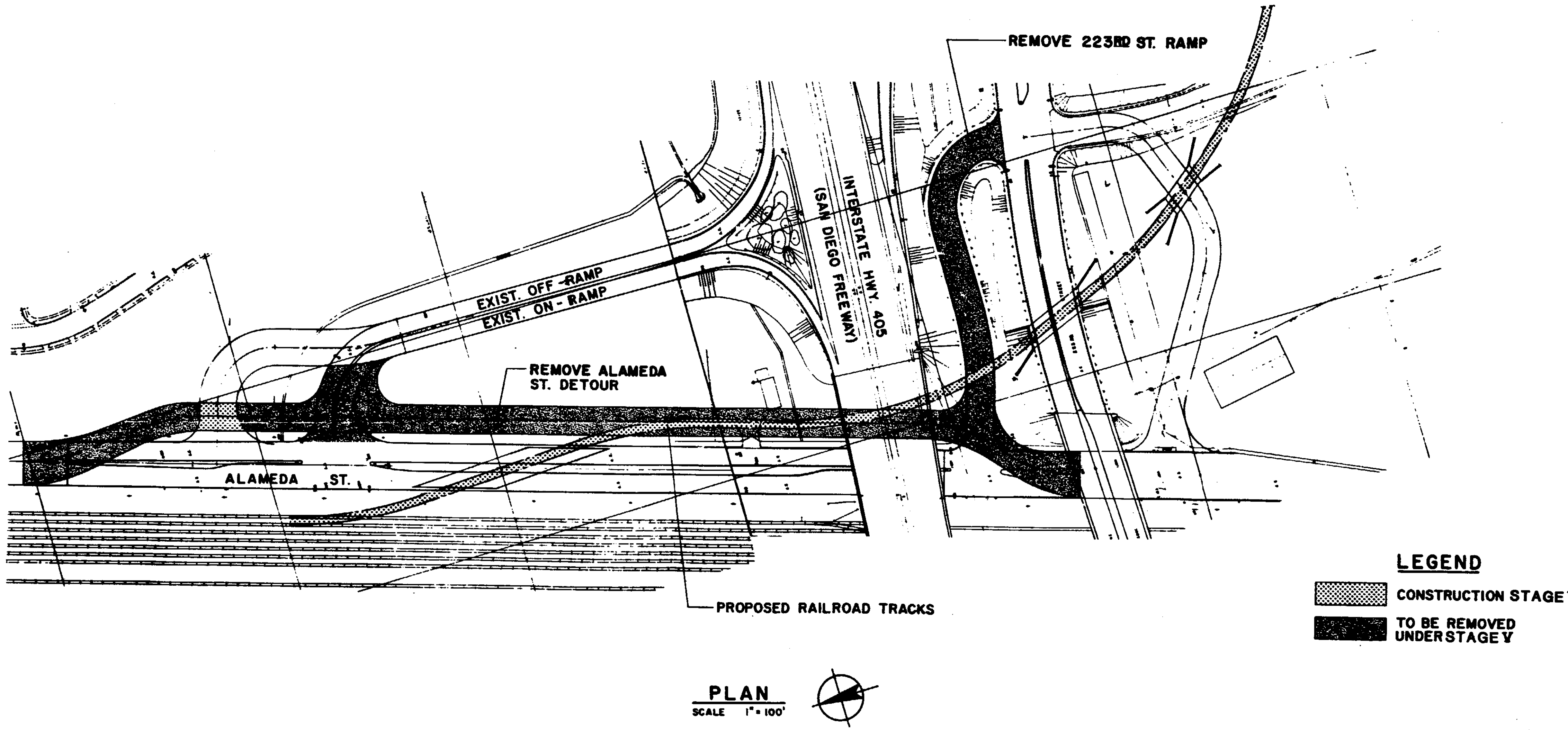
Rechanneling Sepulvada Boulevard/Willow Street will provide two through-travel lanes of traffic in each direction while allowing for all required moves into and out of the ICTF. The principal modification affecting through traffic along Sepulveda Boulevard/Willow Street is the transition of the throughtravel lanes from the north Side Of the roadway (at the Terminal Island Freeway intersection) to the south side of the roadway (at the ICTF entrance) and then back to the north side of the roadway (west of the ICTF entrance). This transition his been designed in accordance with the standards of the City of Long Beach Traffic Department assuming a design speed of 30 mph.

Three traffic signal phases are necessary to accommodate the required traffic movement in/out of the ICTF.

2. ICTF Entrance/Exit.

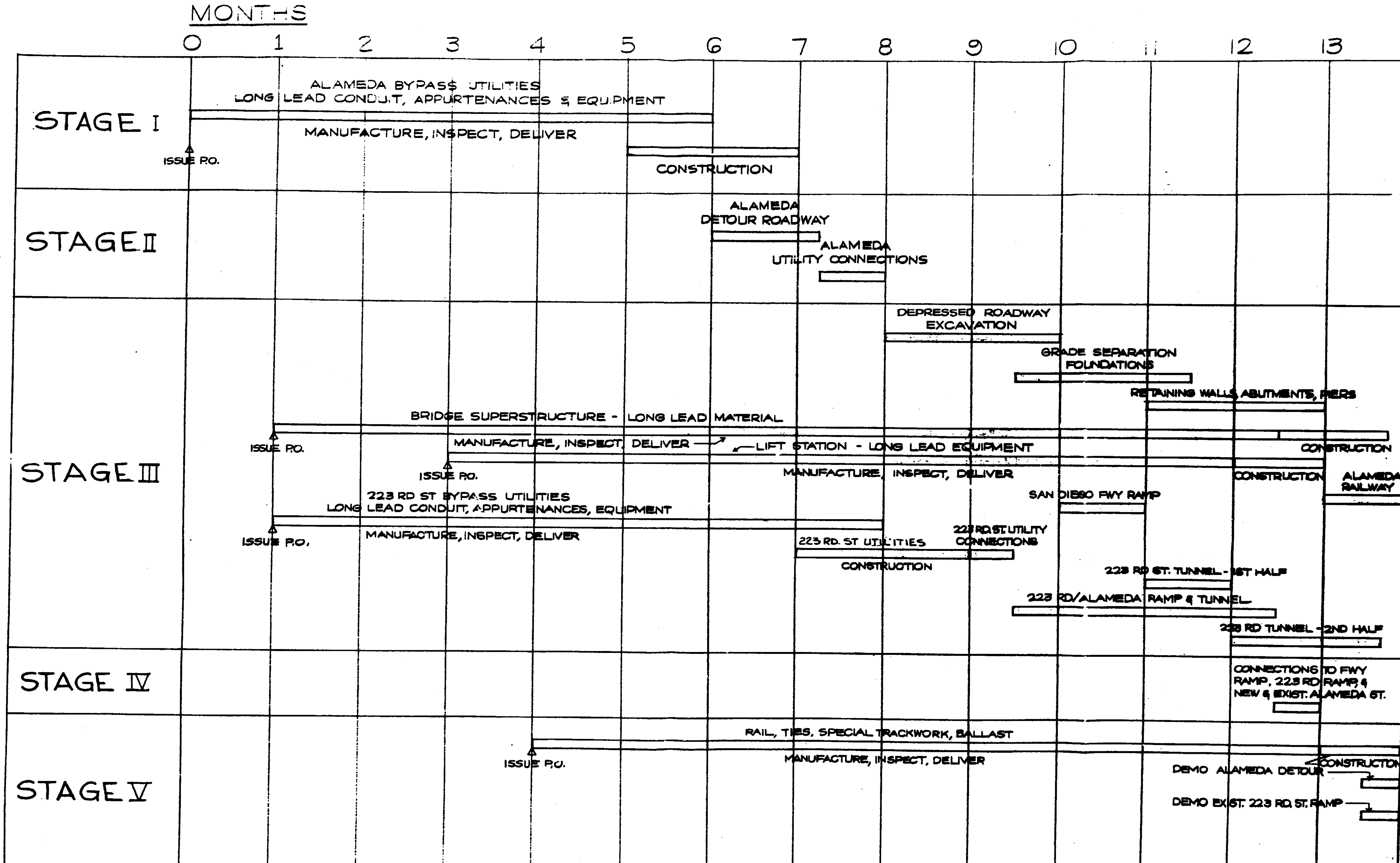
The ICTF truck entrance/exit on Sepulveda Boulevard (Figure 17), includes two separate entrance/exits which segregates the traffic arriving or leaving via Sepulveda Boulard west of the ICTF from traffic arriving or leaving via Sepulveda Boulevard/Terminal Island Freeway east of the ICTF. In this manner, the crossing of inbound and outbound traffic is avoided. Two exclusive turning lanes are provided for each of these four movements.

In addition, provision is made at this intersection for traffic movement between the ICTF an&the LAHD-owned property directly south across Sepulveda Boulevard, as well as movement from Sepulveda Boulevard into this property. Two lanes in each direction are maintained along Sepulveda Boulevard for through traffic across the intersection.



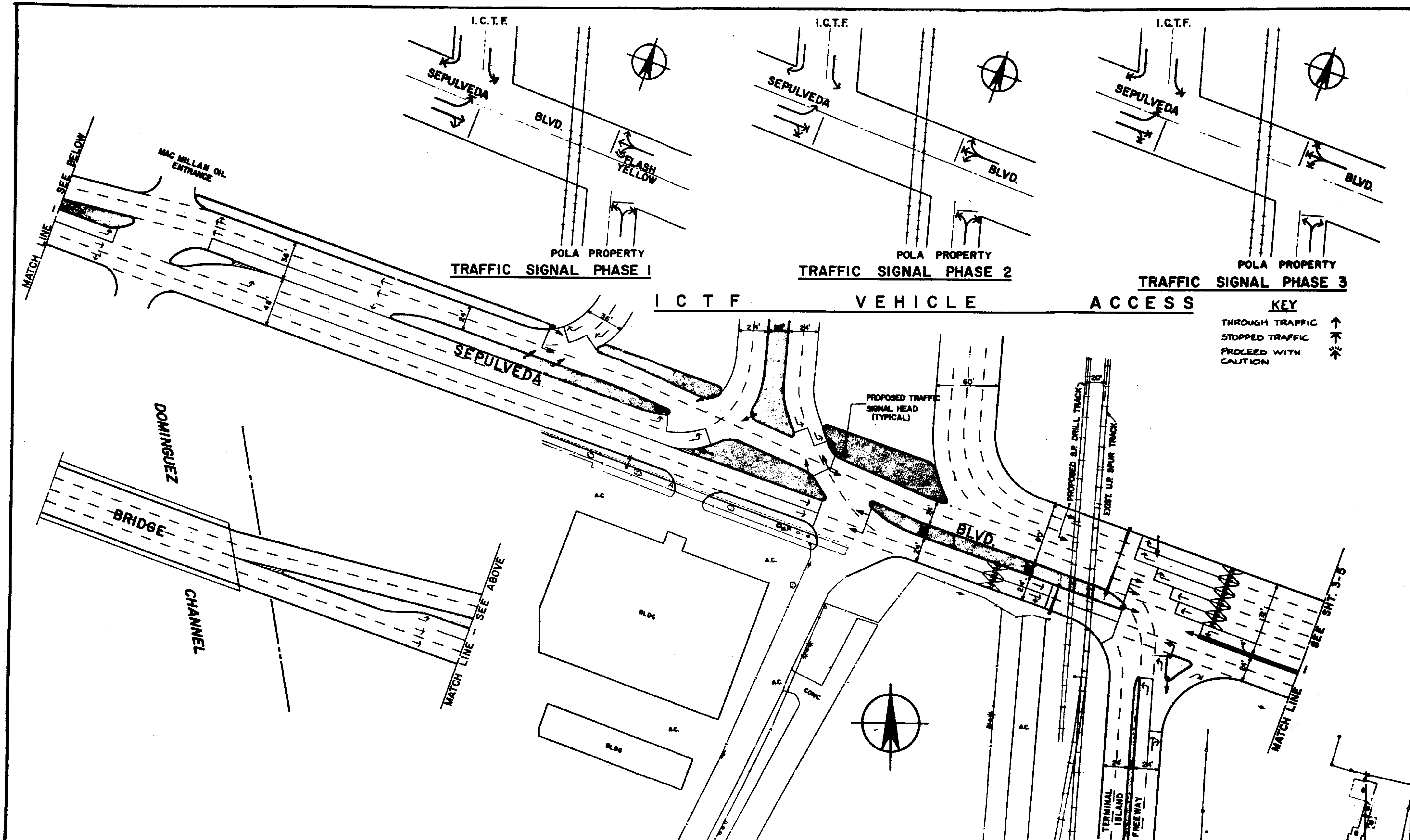
Intermodal Container Transfer Facility
CONCEPTUAL
CONSTRUCTION PHASE V
CONSTRUCT RAILROAD TRACKS

FIGURE 13

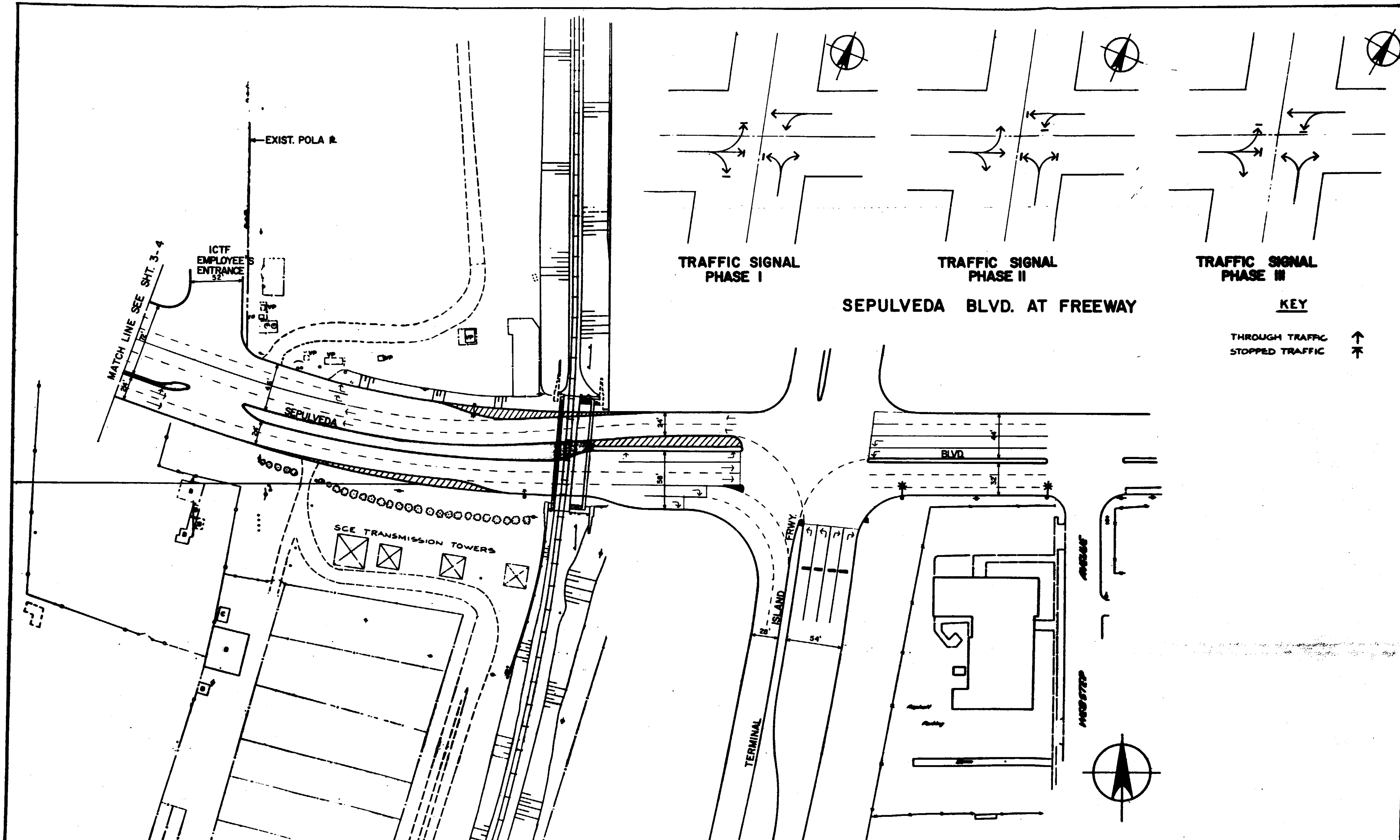


Intermodal Container Transfer Facility
PROPOSED
RAIL ACCESS
CONSTRUCTION SCHEDULE

FIGURE
14



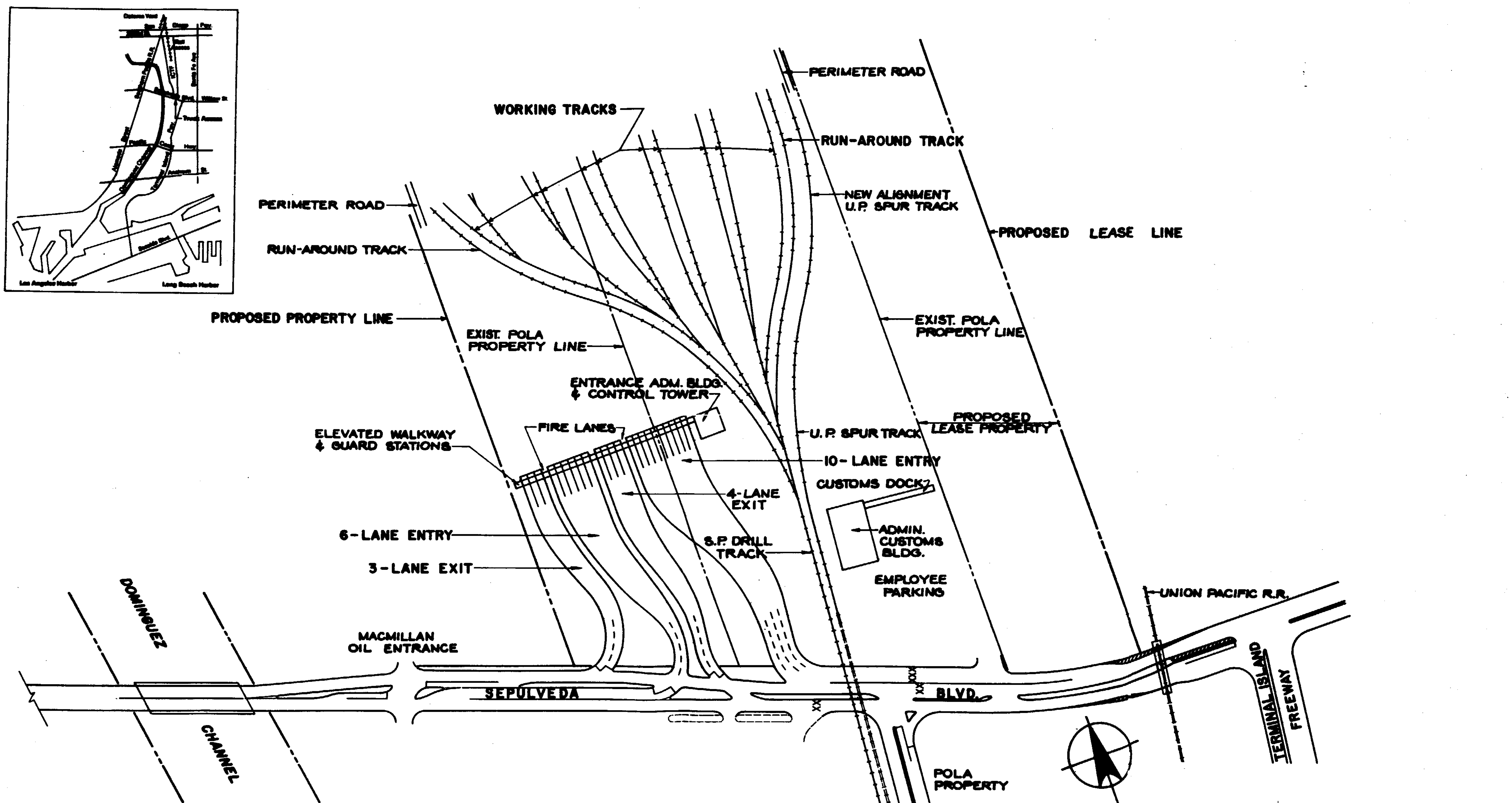
Intermodal Container Transfer Facility	FIGURE
PROPOSED ALIGNMENT SEPULVEDA BLVD. WEST	15



Intermodal Container Transfer Facility

PROPOSED ALIGNMENT
SEPULVEDA BLVD. EAST

FIGURE 16



Intermodal Container Transfer Facility
CONCEPTUAL
TRUCK ENTRANCE
OVERALL DESIGN

FIGURE 17

Traffic control for the Union Pacific track spur will be maintained by train-actuated crossing gates and flashing signals.

The entrance lanes from westbound Sepulveda Boulevard/Willow Street are separated approximately 150 feet from the exit lanes to east-bound Sepulveda Boulevard/Willow Street. The separation of these entrance lanes away from the intersection is required in order to facilitate smooth traffic flow from the two entrance lanes to the entrance gate positions. In addition, this separation eliminates the requirement to impose signalization upon this incoming movement. The exit lane to westbound Sepulveda Boulevard is also separated away from the intersection in order to segregate this merging traffic from the intersection. This outbound movement is signalized in coordination with the intersection signals.

In order to accommodate the ICTF entrance/exit configuration, it will be necessary to relocate the Volkswagen of America entrance/exit, which is presently located across Sepulveda Boulevard from the proposed ICTF site. The Volkswagen of America entrance/exit will be relocated further west.

3. Terminal Island Freeway at Willow Street.

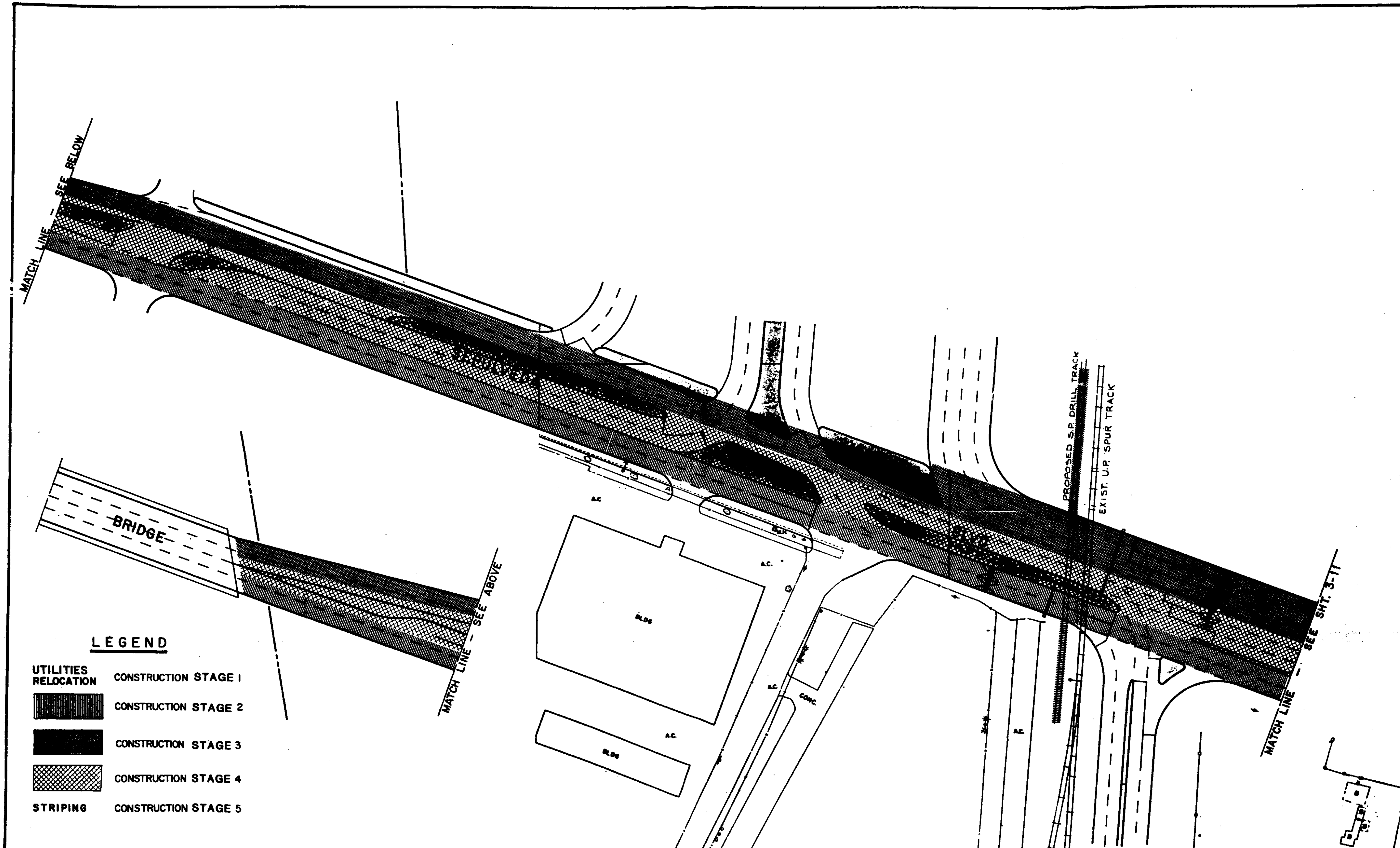
The proposed roadway configuration at the intersection of the Terminal Island Freeway and Willow Street will require two modifications: for two exclusive right turn lams from eastbound Willow Street to the southbound freeway and signal phasing coordination with the ICTF entrance intersection at Sepulveda Boulevard..

Two right&n lanes from Willow Street eastbound to the Terminal Island Freeway southbound will probably be constructed by widening Willow Street between the Union Pacific Railroad trestle and the Terminal Island Freeway.

Sepulveda Boulevard, within the City of Los Angeles and adjacent to the ICTF site, is presently of insufficient width to accommodate truck access requirements. The street presently has a right-f-way width of 50 feet and will be widened to fully intended width of 100 feet.

A 100-foot right-f-way will match the existing right-of-way west of the site in Carson and east of the site in Long Beach.. The ICTF site north of the street is unoccupied but encumbered with oil line easements next to and parallel to the north/south property lines and also parallel to the existing right-of-way line. Property on the south side of Sepulveda needed for dedication is owned by the LAHD, but occupied by Container Freight Services under a rental agreement. It will be necessary to have the tenant move his operation from this strip of land. This property is also encumberedby existingoil line and utility company easements. Approximately, 25 feet must be dedicated to each side of Sepulveda Boulevard.

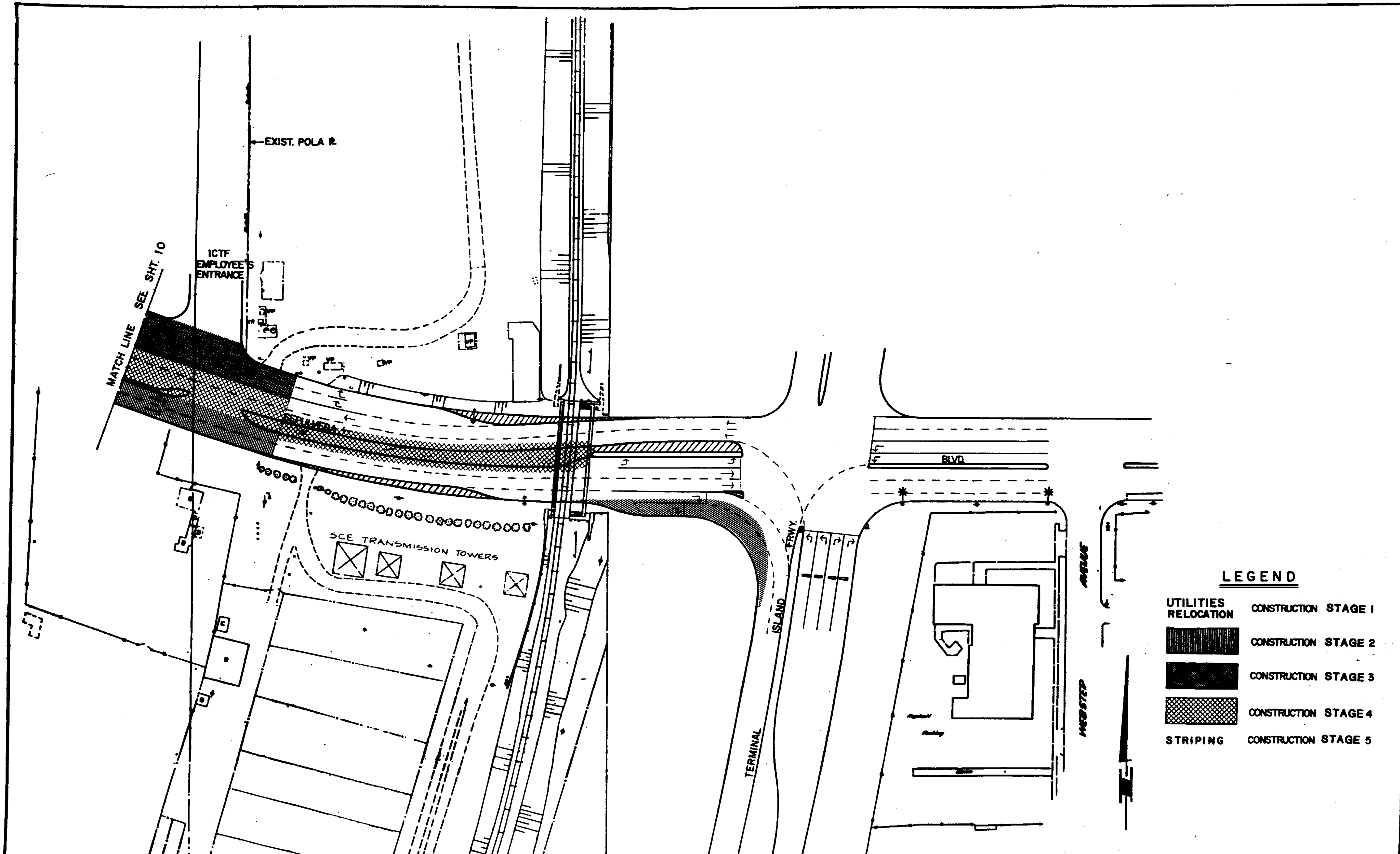
The existing underground utilities and petroleum pipelines in Sepulveda Boulevard will be protected during construction. The construction stage for the truck access are shown on Figures 18 and 19. It is estimated that the truck access construction will be completed in 14 months (Figure 20).



Intermodal Container Transfer Facility

PROPOSED ALIGNMENT
SEPULVEDA BLVD. WEST
CONSTRUCTION STAGES

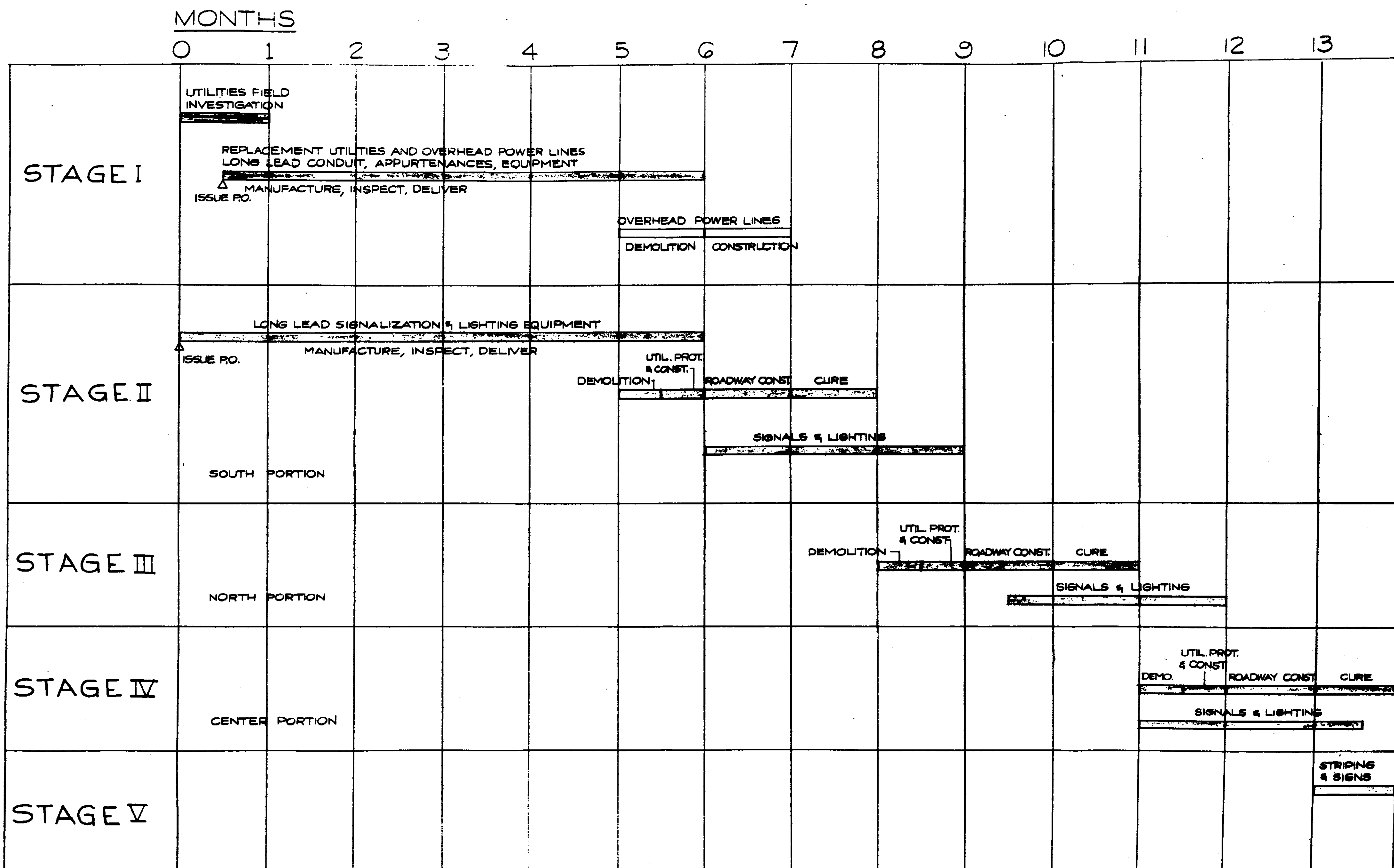
FIGURE 18



Intermodal Container Transfer Facility

PROPOSED ALIGNMENT
SEPULVEDA BLVD. EAST
CONSTRUCTION STAGES

FIGURE 19



Intermodal Container Transfer Facility
PROPOSED
TRUCK ACCESS
CONSTRUCTION SCHEDULE

FIGURE 20

A segment of the existing Union Pacific rail line that crosses the site will be relocated to a more easterly location with the crossing of Sepulveda Boulevard to remain at its present location.

1.3.2.1.3 OTHER SITE IMPROVEMENTS

Site improvement work in Phase I will include excavation, soil compaction, and installation of utilities, paving, rail trackage, buildings, fen&g and landscaping A balance of cut and fill will probably be attained, with approximately 50,000 cu. yds. of material moved during grading. An estimated 750,000 cu. yds. of material will be excavated and recapacted on-site. Approximately 80% of the usable area of the site will be paved with Portland cement concrete or asphalt concrete.

An on-site storm drain system will be constructed by extending concrete drains that are on or adjacent to the site. Primary drainage will be via an existing Port of Ins Angeles 78-inch stormdrain line. Utility connections will also be installed in Phase 1. Connections to existing water pipelines ownedby the Dominguez Water Company can meet the water requirements of the ICTF. Hookups for electrical power, sanitary sewer, gas service and telephone service will be made to adjacent existing off-site utility system.

Installation of fencing, block walls, landscaping and lighting will also be in Phase I site improvements. Eight railroad tracks will be installed in approximately 8 months of construction activity.

Structures to be constructed in Phase I during a nine-month period are: the administration/customs building, and adjacent customs inspection dock and storage area, railroad control, maintenance building, guard house, and check stations. Them majority of the buildings will be located in the southern portion of the ICTF site, adjacent to the main entrance/exit off Sepulveda Boulevard. The maintenance building will be constructed in the northeast corner of tie site and will have access from 223rd Street.

1.3.2.2 PHASE II CONSTRUCTION

Phase II constructian should commence in 1990. Support facilities will be installed in Phase I, Construction activity for Phase II is primarily to develop the remote storage area on approximately 40 acres of land leased from Southern California Edison Company on the east side of the Phase I project boundaries (Figure 2). Development of the remote storage area will require excavation, soil compaction, utility installation, paving and fencing installation. This work will be completed in approximately 4 months.

Two additional working tracks will be installed in the easterly center storage area. The rail track construction includes removal of center storage pavement, track installation and paving. This work will take approximately 6 months to complete and will be completed during the construction work for the remote storage area.

1.3.2.3 PHASE III CONSTRUCTION

As currently projected, the facility will require 12 working tracks for the years 1996 and later- Four additional working sets of rail tracks will be constructed in the remaining center storage areas of the ICTF. This would require **50+** acres for remote storage of containers. Development of the remote storage area would take approximately 6 months and would involve excavation, compaction, utility installation, paving and fencing.

1.4 DESCRIPTION OF PROJECT'S DEMAND AND OPERATIONAL CHARACTERISTICS

An extensive investigation and evaluation of various methods and arrangements of handling and storage of containers was completed in June 1981 by H. M. Scott and Associates and Daniel, Mann, Johnson, and Menderball (DMJM). A copy of this study "Final Report ICTF Intermodal Container Transfer Facility Feasibility Study" by Scott/DMJM is available for review at the Los Angeles Harbor Department Environmental Management Office, 425 S. Palos Verdes Street, San Pedro, California. This study contained, in addition to an operational analysis, the container demand and projection forecasts upon which the operational analysis and "sizing" of the facility were based.

1.4.1 CONTAINER DEMAND AND PROJECTION FORECASTS

Historical data of the Ports of Los Angeles and Long Beach were analyzed for the period 1972 to 1980 to determine what were the growth rates in total container movements and in the segment termed international "bridge" movements. Bridge movements include the three classes: la&bridge, microbridge and mini-bridge. This analysis revealed that in the base period, bridge shipments increased a total of l,l50 percent with anaverage annual growth rate of approximately 184 percent. In 1980, the bridge portion of the total container movement through the two, Ports was 35 percent, with the remaining 65 percent of the container movements destined for or originating from the Southern California regionalmarket areas.

Numerous reference sources were reviewed to determine anticipated future forecast projections for container movements through the West Coast ports and in particular Los Angeles/Long Beach. A wide range of forecasts in container movement projects was analyzed considering world-wide and Pacific Ocean shipping trends and potential shifts in the established trading routes. An 11 percent growth rate in container traffic for the period 1980 to 1990 was determined as the most probable (with the range from 8 percent to 15 percent). After 1990, an eight percent growth rate was used.

The historical datawere further evaluated to determine the percentage of imports and exports comprising the total container market through the two Ports. Sixty percent of the containers were imported, and forty percent exported. The mix of forty-foot and twenty-foot containers had to be determined inorder to covert the nuder of containers to the number of rail cars required to transport the containers. For the bridge container movement, approximately 85 percent of the containers were forty-foot and 15 percent were twenty-foot. These percentages were modified to represent a conservative estimate of 75 percent forty-foot containers and 25 percent twenty-foot containers. Comparison of these percentages (of import/export container movements and the mix of conainers) with the historical container movement data of the railroads serving the Southern California area shared a very high correlation. Further investigation conducted with the railroads and the Ports' marine terminal operators showed that a peak day factor of 2 should be anticipated for the average daily bridge container movements. The Southern Pacific presently handles 45 percent of bridge container movements into and out Of the Southern California area. This market share is expected to increase to approximately 50 percent in the next several years.

Once the various factors and percentages were identified, the container demand and projection forecast were completed. Given in Table 2 is the projected ICTF demand forecast which formed the basis for determining the size of the facility and phases of construction.

1.4.2 OPERATIONAL CHARACTERISTICS

The operational characteristics of intermodal railyards vary between railroads, yard operators and regional areas of the United States. The factors that influence the operations and railyard configurations are: types of container handling equipment used, availability of on-site and off-site storage flexibility, track lengths and track spacing, unloading/loading concepts, operational costs: and demand throughput capacities. The criteria established for the analysis of the factors influencing operational characteristics and rail yard layouts for the ICTF were:

- Minimize the time the unit train must spend in the facility,
- Minimize the time each road tractor truck must spend in the facility,
- Minimize the number of handling moves to which each container is subjected.

These criteria all relate to maximizing performance and minimizing costs of the ICTF and possible adverse environmental impacts of the project on the surrounding area.

The Scott/DMJM ICTF Feasibility Study (1981) evaluated over one hundred different railyard layout alternatives. These alternative layouts studied the different factors that influence the operational characteristics. The analysis showed that a double track arrangement with wide center storage aisles was the operational arrangement that mat the established criteria (see Figure 21). Using this track arrangement concept and the operational storage system of center storage in early years of operation and remote storage in subsequent years, the overall conceptual ICTF project was developed (see Section 1.3). The bridge crane was identified as the preferred container handling equipment for use in the ICTF. Figure 22 depicts the relationship between the double track arrangement and two bridge cranes working on the paired tracks simultaneously.

1.4.3 RAILROAD OPERATIONS

The ICTF will be operated by the Southern Pacific Transportation Company. Only Southern Pacific's trackage will be used to transport containers to/from the facility.

TABLE 2

PROJECTED DEMAND FORECAST FOR ICTF
(International Containers)

Year	Total TEUs Through Both Ports [1]	Total Bridge TEUs Through Both Ports (35%)	Projected ICTF Share (50% of Bridge TEUs): TEUs	Projected ICTF Share (50% of Bridge TEUs): Containers (TEU x .575)
1980	1,102,600	385,910	192,954	110,950
1981	1,233,886	428,360	214,180	123,200
1982	1,358,5l3	475,479	237,738	136,700
1983	1,507,949	527,782	263,890	151,700
1984	1,673,824	585,838	292,918	168,400
1985	1,857,945	650,280	325,140	186,900
1986	2,062,3l9	721,811	360,904	207,500
1987	2,289,174	801,210	400,604	230,300
1988	2,540,983	889,344	444,672	255,700
I.989	21820,491	987,171	493,584	283,800
I.990	3,130,745	1,095,760	547,880	315,000
1995[2]			805,016	462,900
20002		-	1,182,832	680,100

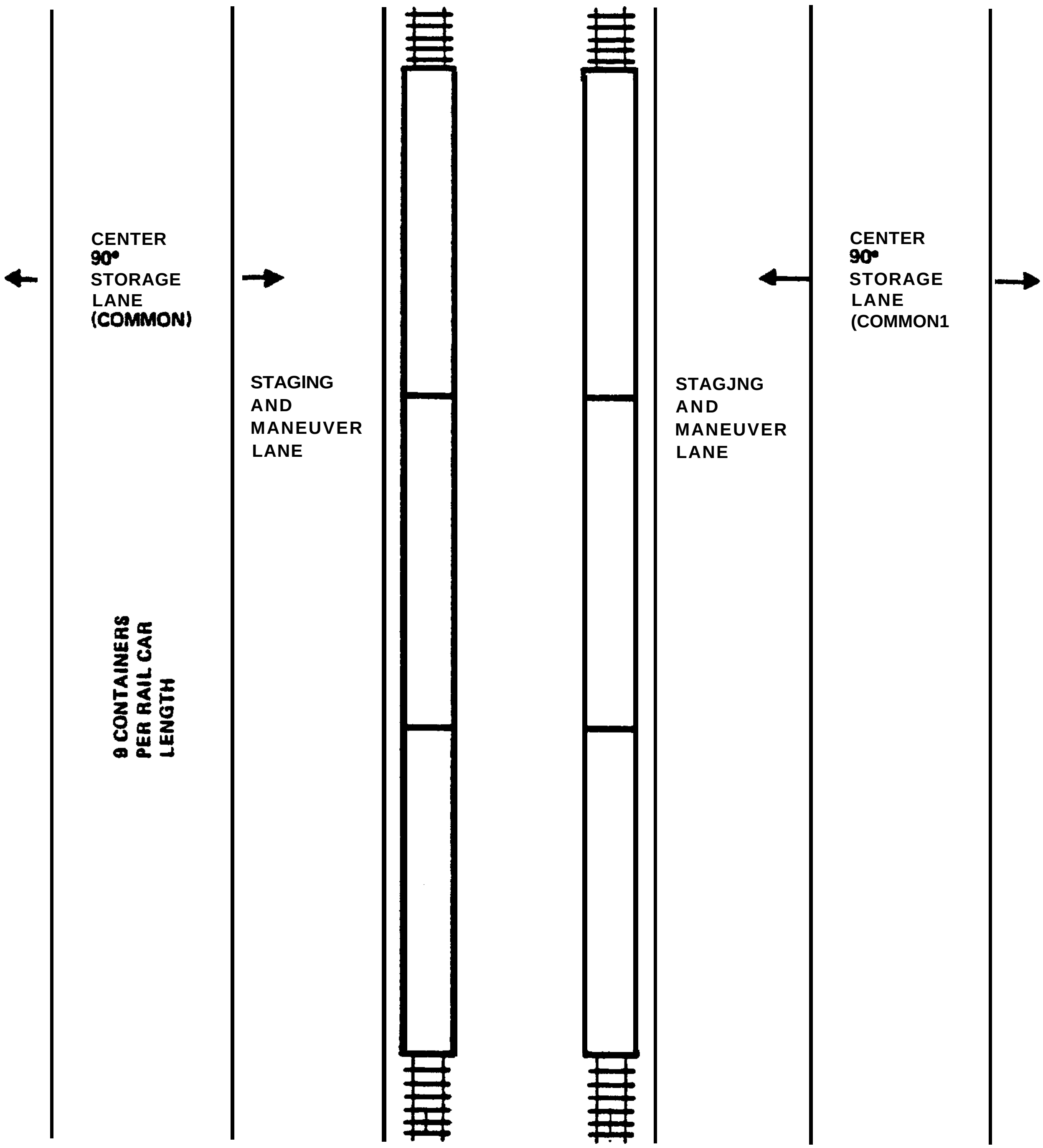
[1] 1981 through 1990 growth 11% per year compounded.

[2] 1991 through 2000 qrowth 8% per year compounded.

SOURCES: 1979-1990 - Forts of Los Angeles and Long Beach.
l995 & 2000 - Scott- Report (1981).

Conversicm TEUs to container: $\frac{115}{200} = 0.575$

FIGURE 21
TRACK WORKING SPACE REQUIREMENTS



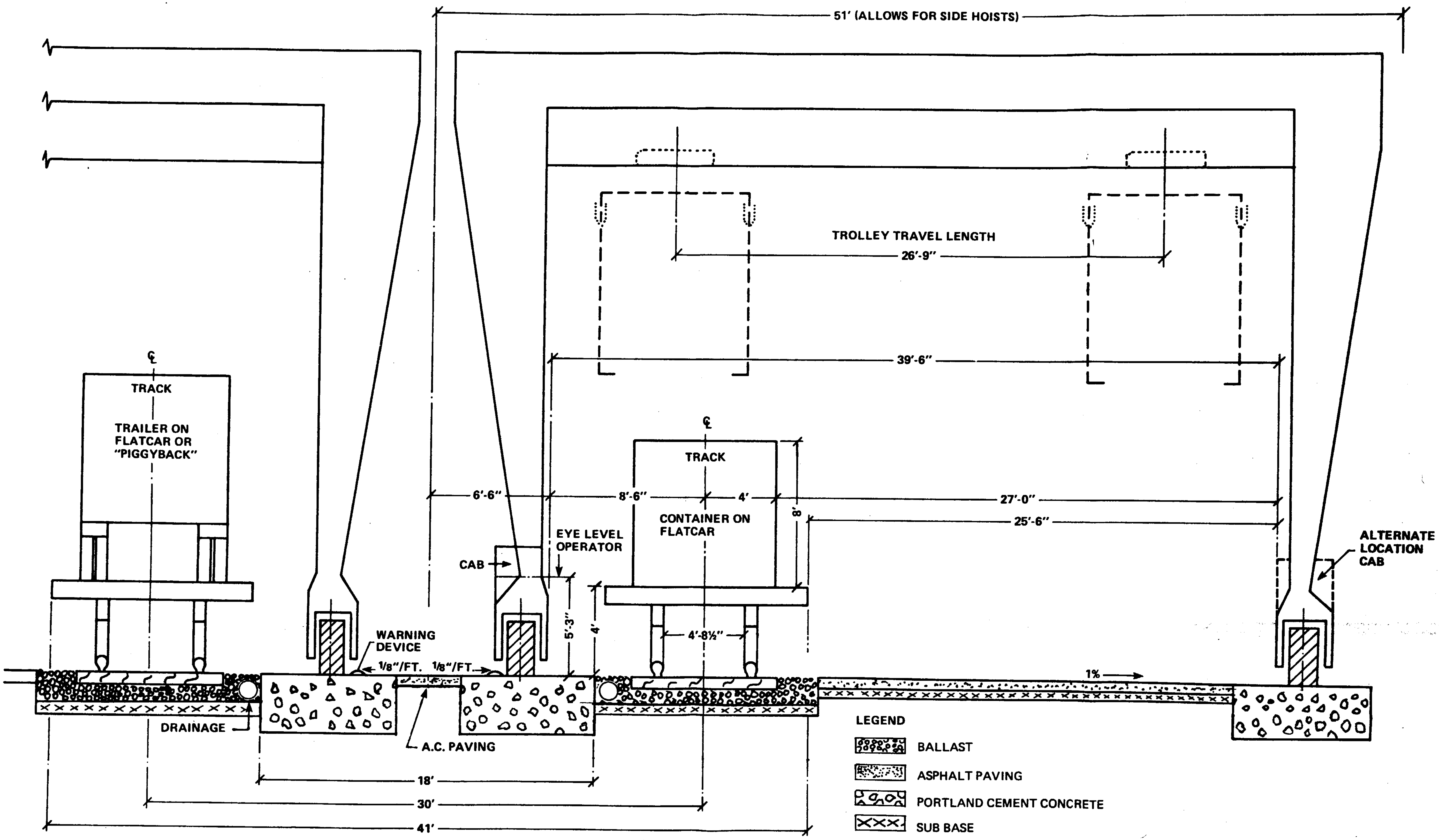


Figure 22

**BRIDGE CRANE CLEARANCE REQUIREMENTS
DUAL TRACK ARRANGEMENT**

A unit train of containers will enter the facility via the Dolores Yard on the west side of Alameda Street by a rail access over Alameda Street and under the San Diego Freeway and 223rd Street. A unit train is a train composed of one commodity type, i.e., coal, grain, containers. The length of the train does not determine if it is a unit train. The arriving unit trains will proceed. directly from the Southern Pacific West Coltoh, California classification yard without stopping for additional rail handling operations in the downtown Los Angeles yard or in the Dolores Yard.

Once inside the ICTF, the train will proceed south along thepredetermined working track. The working track lengths will be of sufficient length so that one track can accommodate one train. This eliminates the need to break apart the train onto separate tracks within the facility. When the train is psi-timed on the working track, the locomotive power will be disconnected from the railcars and will leave the facility via me of the designed perimeter runaround/return tracks provided for this purpose. The locomotives will return to the Dolores Yard where they could be serviced and refueled. The inbound containers are off-loaded from the railcars and outbound containers reloaded. When this operation is completed, loumotives reenter the facility, couple to the north end of the train and depart the ICTF. The unit train will proceed to the West Colton. railyard where a train crew change occurs, and additional fuel and/or locomotives are added.

The typical switching of and rearrangement of railcars will not take place in the ICTF, because it is not a railroad classification yard. The exception to this would occur when there is a railcar with a mechanical problem that requires it to be removed from the rest of the train. Routine safety inspections and light running repairs of the railcars will occur while the unloading/loading operation is going on. Maintenance on the locomotives will not take place in the ICTF. Empty surplus railcars will not bestored onsite: however, rail cars could remain spotted on site waiting to be loaded. If additional railcars are to be added to a particular train or extra railcars are present within the facility, they will come from or be removed to the Dolores Yard on the westerly side of Alameda Street. Potential ICTF noise impacts to the surrounding residential area will be minimized since switching activity will not normally occur within the ICTF.

1.4.4 TRUCK OPERATIONS

The trucks with container-on-chassis franthe Ports will enter the facility from Sepulveda Boulevard on the south. After being checked through the entrance gate, a truck will drop off the container-on-chassis in an assigned stall in the center storage area. The initial phase will be constructed to provide three-wide center storage areas between pairs of working tracks. This storage method allows the container to be stored adjoining the working track areas and reduces the handling costs within the facility. A yard "hostler" will tow the container-on-chassis from center storage to trackside where a bridge crane will pick up the container and place it cm a railcar. The reverse operation will occur when unloading an in-bound train. An intermodal operations diagram is shown in Figure 23.

INTERMODAL ALTERNATIVE OPERATIONS DIAGRAM

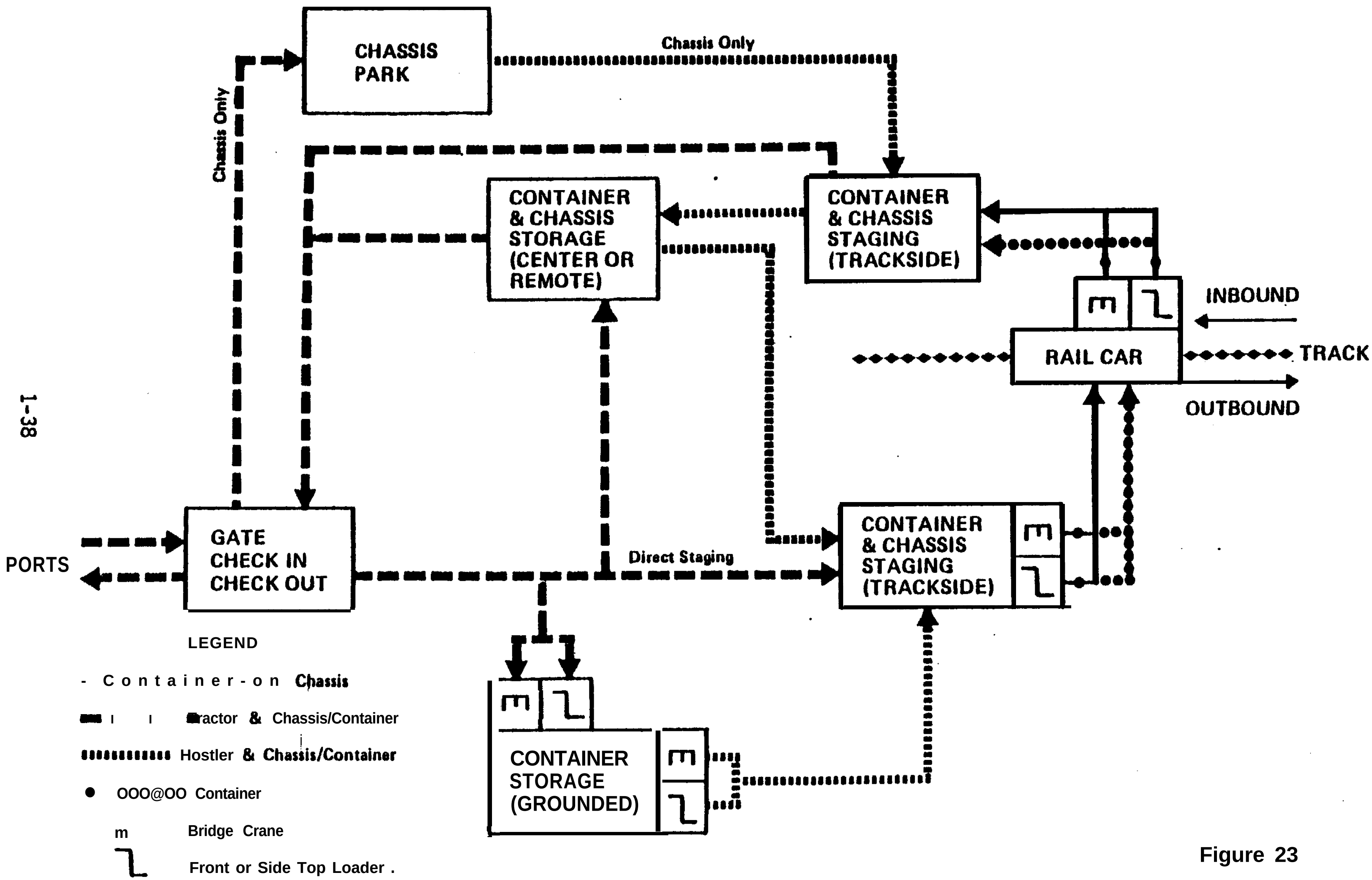


Figure 23

1.5 ICTF ORGANIZATIONAL STRUCTURE

The ICTF is a joint project of the Port of Los Angeles and the Port of Long Beach. The project will have sufficient container throughput capacity to transfer bridge containers from both Ports. The project is viewed as a remote extension of a "wharf and dock" and is a function required to support the marine container terminals.

For this project only, the two Ports propose to form a Joint Power Authority for the administration of the ICTF. This governing board will be established by the Joint Power Agreement which must be approved by the existing governing boards of both Ports (the Board of Harbor Commissioners) and the City Council of each respective city. The laws of the State of California provide for the joint exercise of powers of charter cities for their mutual benefit through accepted agreements. The governing board will have a commissioner appointed by the respective Board of Harbor Canmissioners.

The Joint Power Authority will develop and provide for the construction of the ICTF. Various alternative financing options are available to the Authority. Revenue bonds or industrial development bonds are being evaluated. The Internal Revenue Service has been requested to rule on the tax-exempt status of bond financinq. The ICTF will be self-supporting from collected gate fees andwill not require any financial Support fran the respective city's general revenues.

The ICTF will be leased, on a lonq-term basis, to the Southern Pacific Transportation Company, who will operate the facility.

1.6 INTENDED USE OF THE ENVIRONMENTAL IMPACT REPORT

In accordance with State CEQA Guidelines, Section 15141(d), the project description includes, to the extent that the information is known to the Los Anqeles Harbor Department, a list below of the agencies that may be expected to use the EIR in their decision-making and a list of the approvals for which the EIR may be used:

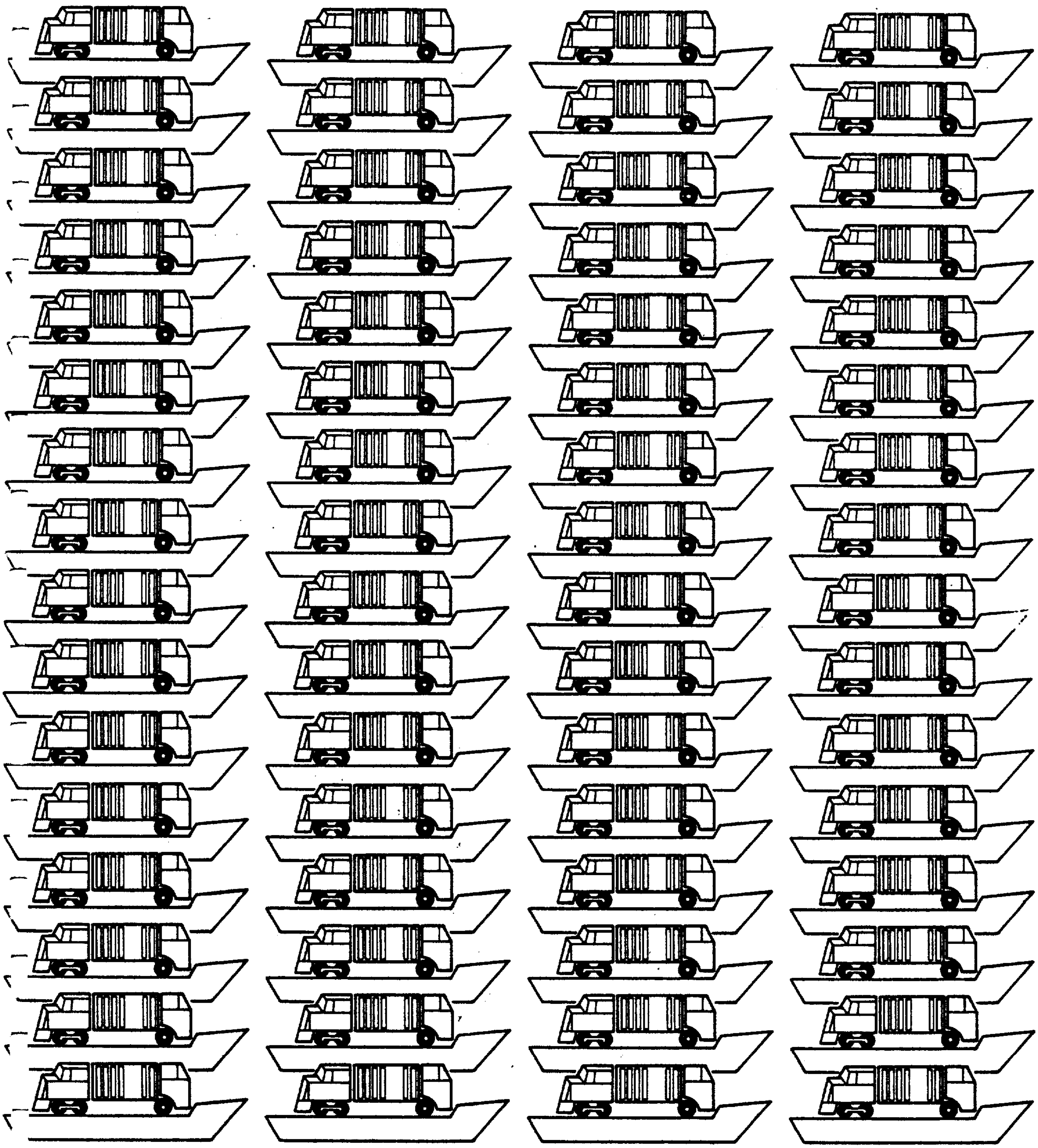
TRUSTEE AGENCIES	RESPONSIBILITIES
1. California Department of Fish and Game	Review and submit recommendations
2. California Air Resources Board	Review and submit recommendations

RESPONSIBLE AGENCIES	APPROVALS/PERMITS
1. California Regional Water Quality Control Board	National Pollutant Discharge Elimination System Permit
2. city of Los Angeles	Facility design review - Building and Safety permit Industrial Waste permit Street plan improvements (include grade separation and on/off ramp connections) review and construction permit issuance Joint Power Agreement approval Lease agreement with Southern Pacific

3.	City of Carson	Street plan improvements (including grade separation and on/off ramp connections) review and construction permit issuance
4.	Los Angeles county Road Department	Street plan improvements review and approval
5.	City of Long Beach	Street plan improvements review and permit issuance
6.	California Department of Transportation	Conceptual Plan review, encroachment and construction permits issuance relative to I-405 and the Terminal Island Freeway
7.	Federal Highway Administration	Concurrence on Caltrans permit
8.	Public Utilities Commission	Authority to construct the Alameda grade separation and Sepulveda Blvd.
9.	Union Pacific Railroad	Construction agreement for relocation of UPrr track
10.	Southern Pacific Railroad	Construction agreement for trackage connection
11.	Los Angeles County Flood Control District	Connection permit
12.	U.S. Air Force	Approval for fuel line relocation
13.	Utility companies L.A. County Sanitation District Pacific Telephone & Telegraph Co. Metropolitan Water District Southern California Gas Co. Southern California Edison Co.	Approvals for utility line relocations
14.	Oil companies Douglas Oil/Conoco Co. Powerine oil co. Golden Eagle Refinery Union Oil Standard Oil/Chevron Co. Mobil oil co.	Approvals for oil line relocations

ICTF

INTERMODAL CONTAINER
TRANSFER FACILITY



Relationships to Plans

2.0 RELATIONSHIP TO FEDERAL, STATE, AND LOCAL LAND USE PLANS, POLICIES, OR CONTROLS

2.1 CURRENT LAND USE

The following discussion of land use at and adjacent to the project site is keyed to the accompanying maps (Figures 24, 25, 26). Each parcel is discussed in relation to its existing use and occupancy. The project site is in an area of diverse land uses. Land uses on the project site include industrial, agricultural, rights-of-way for pipelines and utilities, and vacant land. Petroleum product pipelines are located parallel to the site along its boundaries or enter the adjacent area to serve liquid bulk storage tanks. The U.P. railroad line parallels the site to the east. Adjacent land uses include industrial, agricultural, residential, rights-of-way for pipelines and, utilities, and vacant land.

2.1.1 Existing Uses - Project Site

A. **PHASE I OF PROPOSED PROJECT**

The existing land uses within the proposed project site phase I are (Figure 24):

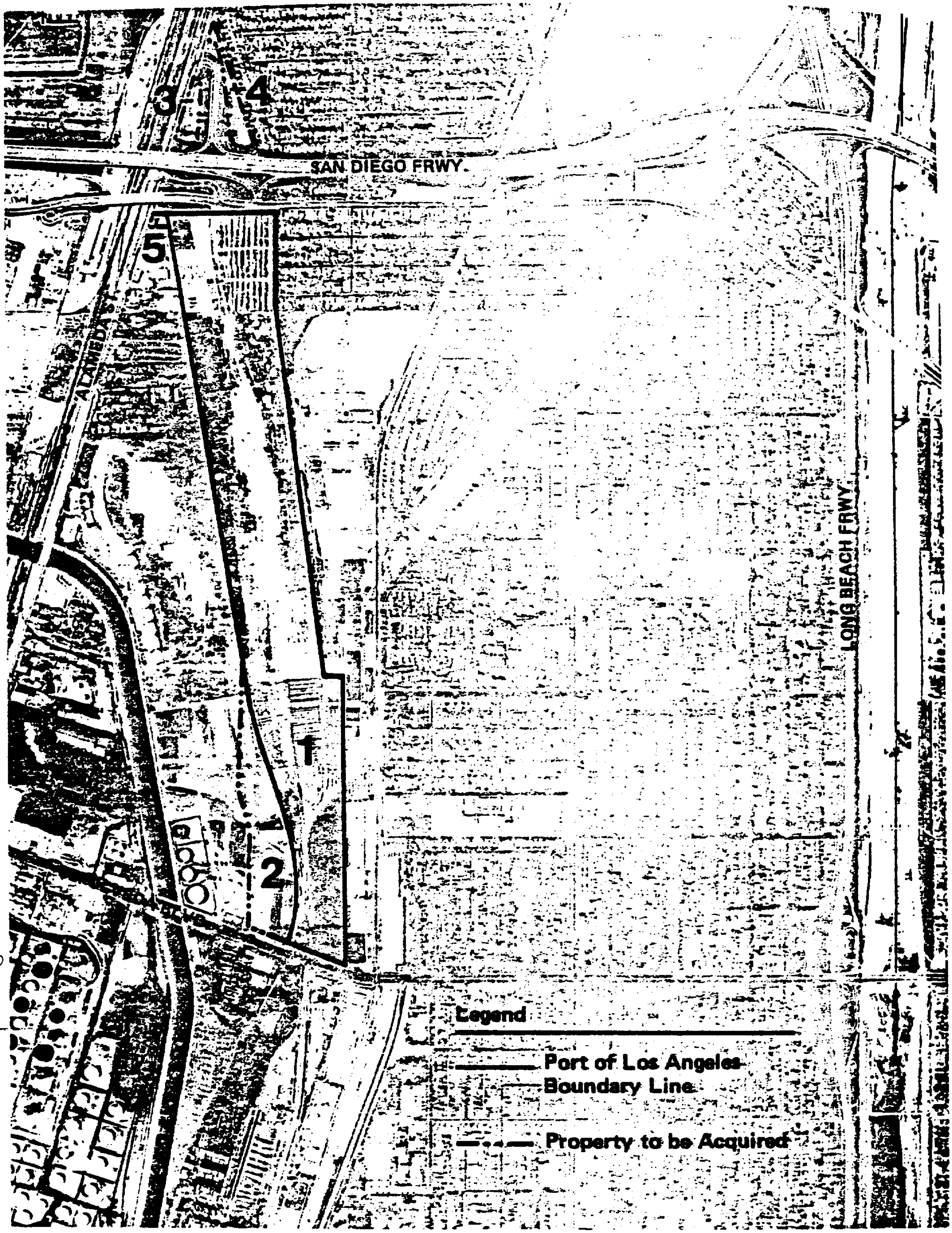
Farce11	137 ± acres
Owner	**LAHD**
Use	**103 acres vacant land**
	34acresunderlease:

Parcel	1.5 acres	Parcel	6.7 acres
Tenant	**Crosby & Overton**	Tenant	**Commercial**Carriers
Use	Storage of vacuum **trucks**	Use	Auto storage
Parcel	**5 acres**	Parcel	10 **acres**
Tenant	Port Pipe & Steel	Tenant	Davies Transportation
Use	Steel storage	Use	Steel storage
Parcel	1 acre	Parcel	**10 acres**
Tenant	**Harbor** Sandblasting	Tenant	**Import Dealers** Service
Use	sandblasting	Use	Auto storage

Parcel **2**	15 ± acres
Owner	**Watson** Land Co. leased to Macmillan Oil Co.
Use	agricultural, leased to Macmillan Oil Co.

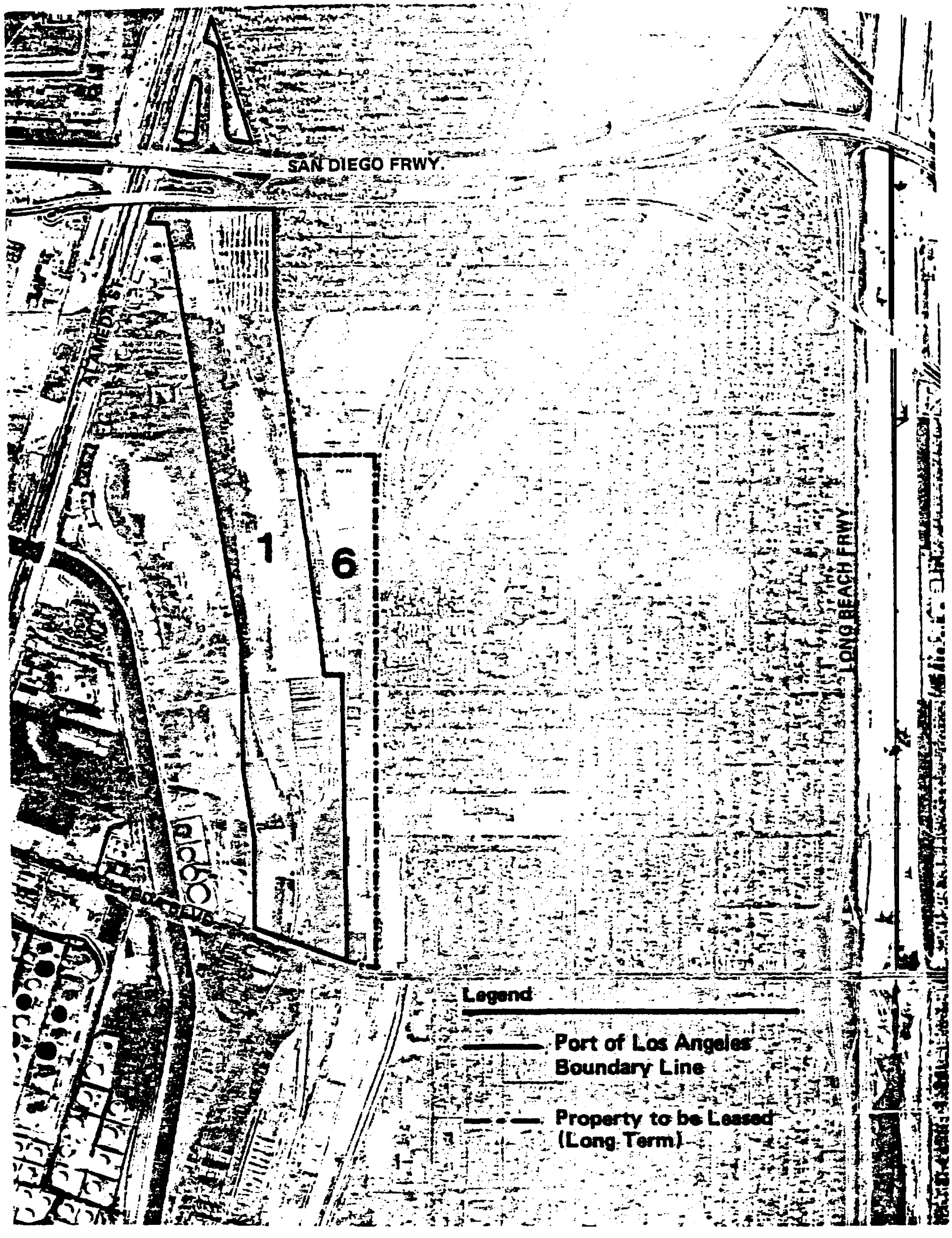
parcel3	2.5 ± acres
Owner	A **Moine**
Use	**vacant except for equipment** storage

Parcel4	4.0 acres
Owner	**T. Moine**
Use	vacant except for equipment storage



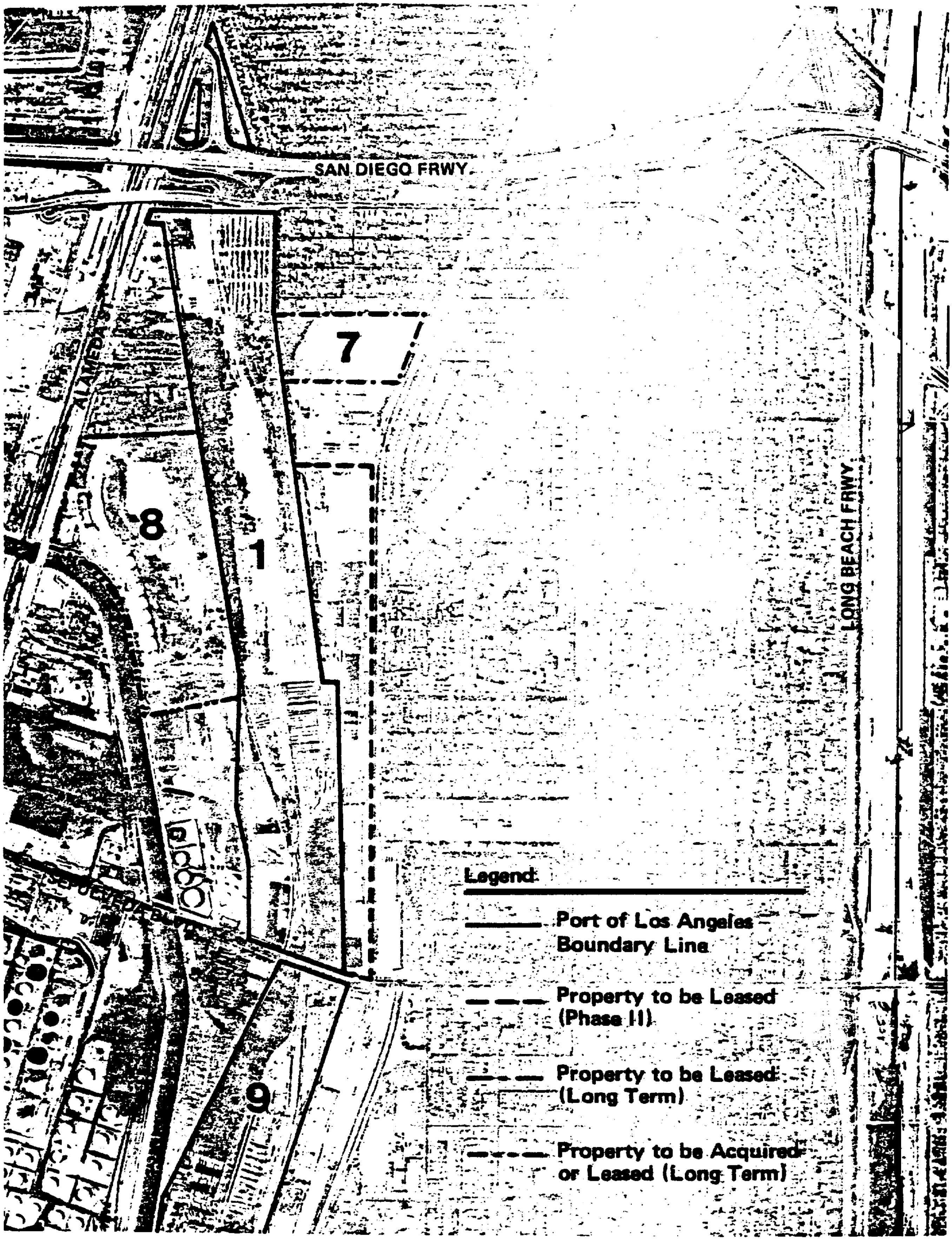
PROPERTY REQUIRED FOR PHASE I

ICTF
INTERMODAL CONTAINER TRANSFER FACILITY



PROPERTY REQUIRED FOR PHASE II

ICTF
INTERMODAL CONTAINER TRANSFER FACILITY



PROPERTY REQUIRED FOR PHASE III

ICTF
INTERMODAL CONTAINER TRANSFER FACILITY

Parcel 5 0.3 acres
Owner Super **Service,** Inc.
Use Tanker truck parking and storage under lease to Matlock Brite-Sol

B. PHASE II OF PROPOSED PROJECT

Existing land uses in parcels that will additionally **be** required by 1991 in Phase **II,** if **developed,** are (Figure 25):

Par-16 **40 ± acres**
Owner **Southern California Edison Co.**
uses transmission line **right-of-way**
agricultural/horticultural, leased to V. **V.** Songcayauon for flower **cultivation**

horse stable, leased to S. E. Whitney and N. F. Conte

agricultural, leased to Dr. J. Barton for **backyard** garden

agricultural, leased to Louis **deMartini** Farm, Inc. for cultivation of **row** crops

C. PHASE III OF PROPOSED PROJECT

Existing **land uses in parcels** that will additionally be needed by 3.996 in Phase III, if developed, are (Figure 26):

Parcel 7 **10 ± acres**
owner **Southern California Edison Company**
Use transmission line right-of-
agricultural, leased to **Louis** Wiartini Farm, Inc. for **cultivation** of row crops

Parcel 8 (alternative) 50 **± acres**
Owner Watson **Land Company**
Use vacant

or

Parcel 9 (alternative) **50 ±** acres
Owner **LAHD**
Use general **merchandise** storage

2.1.2 Existing Uses - Adjacent Area

The existing land uses in the area adjacent to the proposed project site are (Figure 27):

Parcel 10
Owner Super Service, Inc.
Tenant Matlock-Brite Sol
Use Tanker truck pafkingandstorage facility

Parcel 11 & I.2
Owner Imported Auto Transport Service & Hillard Lewison
Tenants Commercial Corner and Aluminum Recycling
State Salvage

Parcel l3
Owner Arlene & Violet Jacobson
Tenant Carson Auto, Inc. - Alco scrap

Parcel 14
Owner Desser Enterprises Inc.
Tenant Common Market Distributors
Use container repair and storage

Parcel 15
Owner Watson Land Company
Tenant Macmillan oil co.
Use petroleumtank farm, and vacant land.

Parcel16
Owner Southern California Edison Co.
Use transmission line right-of-way: miscellaneous uses under trammission lines.

Parcel 17
City of Long Beach
residential area

2.2 PROJECT-RELATED CHANGES IN LAND USE

Impacts of land use changes that will occur as a result of tie project can he described under the following categories: 1) the change in types of land uses: 2) the change in intensity of land uses: and 3) the compatibility of proposed and existing land uses.

2.2.1 Change in Land Use Types. The proposed project will result in the conversion of approximately 100 acres in vacant land and 60 acres of agricultural/ horicultural land to industrial (ICTF) uses. Secondary implications of the land use changes are related to the displacement of those tenants presently operating their businesses in the project area and potential changes over the long term in the character of surrounding areas. Current tenants on the LAHD property are under 30-day revocable leases. At the time of project approval, formal termination will be sent to the tenants allowing maximum possible

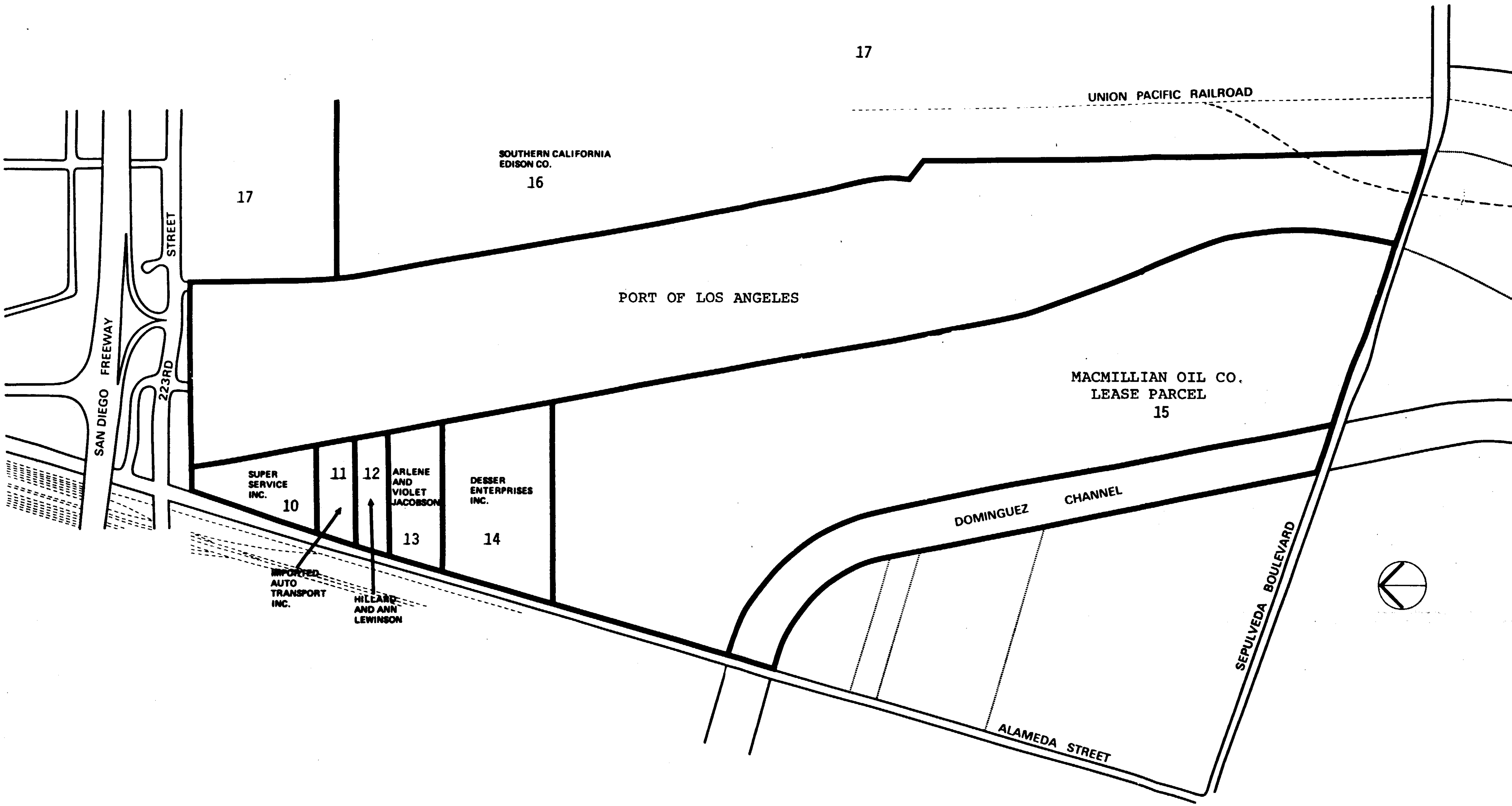


Figure 27
Adjacent Property Ownership

time for relocation prior to commencement of site preparation. Southern California Edison Company has indicated that it is their policy not to terminate a tenant's license prior to the expiration date unless there is just cause for the termination. All existing Licenses on the property that is to be acquired from SCE will have expired by January 1, 1985 The Watson Land Company lease to Macmillan Oil Company will not terminate until April 30, 2020. Several parcels of property will be acquired from others private owners to allow construction of tie rail access to the ICTF (Figure 28).

Alteration of the character of surrounding areas over the long term is likely to result from the change in type and intensity of proposed land use. While it is difficult to correlate changes in the character of surrounding areas, specifically with the enhancement or redevelopment of an adjacent area, parallel circumstances in other similar industrial developments would indicate that over the long term additional development is likely to occur in areas bordering the project site. Possible developments would include projects to serve the trucking industry or container handling industry.

2.2.2 Change in the Intensity of Land Uses. Land use in tie project area will increase in intensity with project implementation due to greater activity levels resulting from the ICTF. Much of the land is presently vacant or underutilized. The increased intensity of land uses has ramifications that affect the project area, as well as surrounding areas. These secondary impacts include: increased demands on service and circulation systems, and impacts to air, water andnoise quality. These anticipated secondary impacts are d&cussed further in the corresponding sections of this document.

2.2.3 Compatibility of Reposed and Existing Land Uses. The proposed project can be accomplished within the confines of present zoning and in accordance with the relevant plans for the area.

The primary area of concern with regard to land use compatibility is the residential area to the east of the project site. The project as proposed, including mitigations incorporated as part of tie project, will not result in significant effects to the residential areas adjacent to the site.

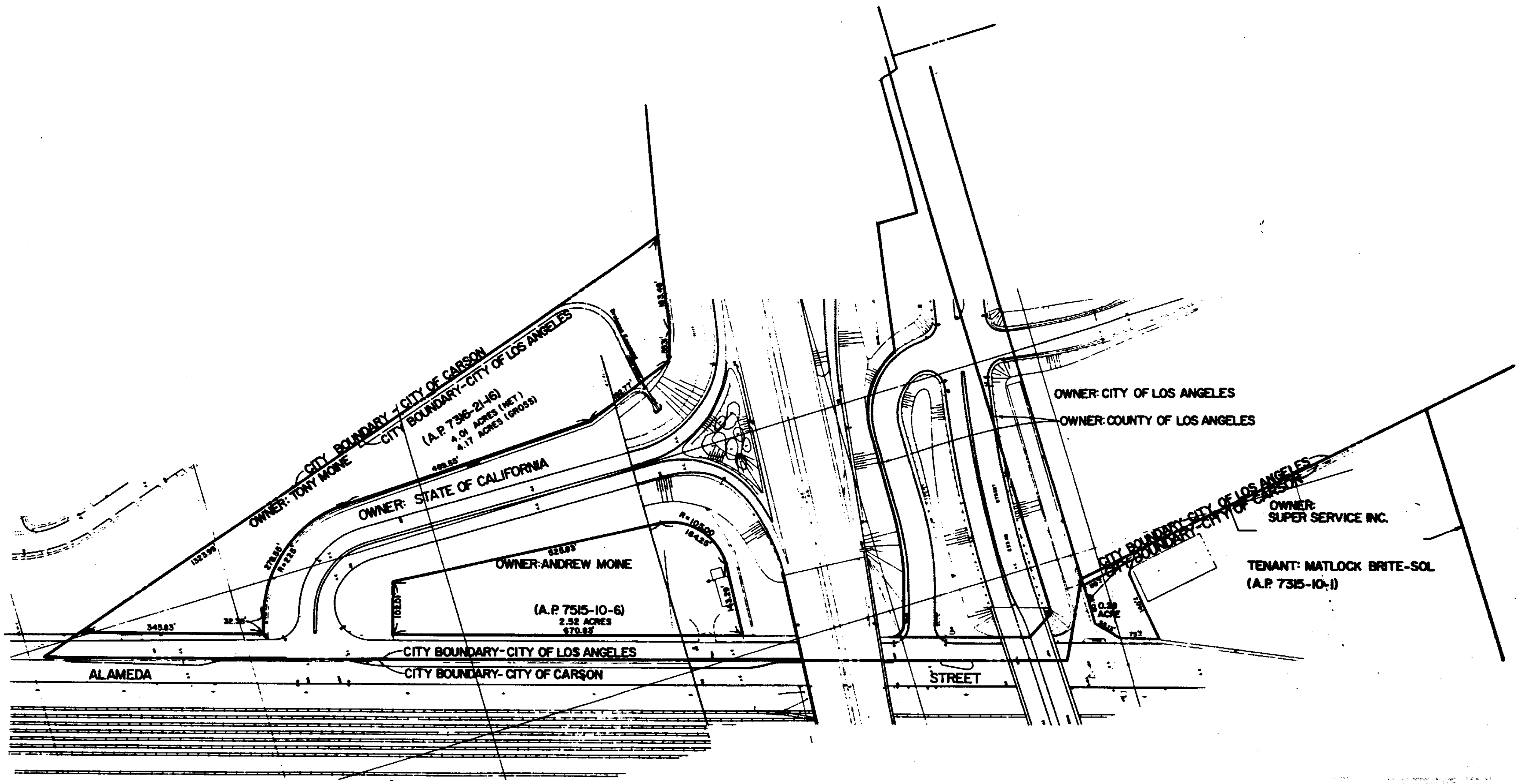
Existing tenants within the proposed project site will be displaced from their present leaseholds. Termination of leases of existing tenants in the proposed Phase I project site will be required upon implementation of the project. However, leases of existing tenants in the proposed Phases II and III project site may not be affected for a number of years.

No specific mitigation measures are proposed for land use impacts although this and future developments in the area will continue to be governed by zoning ordinances andspecific land use plans.

2.3 PORT OF LOS ANGELES MASTER PLAN

Among the objectives of the Port Master Plan (PMP) are the following:

> "To consistently develop, expand, and alter the port in both the short-term period and long-range period for purposes of commerce, navigation, fisheries, port-dependent activities and general public recreation consistent with the provisions of the California Coastal Act of 1976, the Charter of the City of Los Angeles, and all other applicable federal, state, county and municipal laws and regulations.



LEGEND

PROPERTY REQUIRED TO COMPLETE PROJECT

DIMENSIONS SHOWN ARE COMPILED FROM VARIOUS SOURCES AND DOES NOT REPRESENT A FIELD SURVEY

100 0 100 200
1" = 100' GRAPHIC SCALE

Intermodal Container Transfer Facility
PROPOSED
RAIL ENTRY

RIGHT OF WAY, PROPERTY & JURISDICTION

FIGURE 28

To permit the port to have the necessary flexibility to adequately respond inits development processes to the pressures and demands placed upon it by:

- Changing technologies in the ocean and land movement of waterborne commerce
- changing patterns in the commodity mix and form of waterborne commerce
- changing developments in the Port of Long Beach and the surrounding residential and industrial areas adjacent to and affected by the port
- changes in laws and regulations affecting the environmental and economic uses of the port
- changes in other U.S. ports affecting the port's competitive changes."

As set forth in Section 1, ICTF Project Description, this project is in accordance with the objectives of the PMP as enumerated above.

The proposed project is also consistent with the specific development plans of the PMP. Although not within the coastal zone, the joint Los Angeles-Long Beach Intermodal Container Transfer Facility is discussed in Chapter VI of the PMP as presently proposed for the Port of Los Angeles Classification Yard.

2.4 CITY OF Los ANGELES GENERAL PLAN -PRELIMINARY PORT OF LOS ANGELES PLAN

The Preliminary Port of Los Angeles Plan is a part of the General Plan of the city of Los Angeles. This proposed plan has beendesigned to be consistent with the Port Master Plan and is expected to be approved by the Los Angeles City Council in 1982. The plan is designed to provide a 20-year official guide to the continued development and operation of the Port of Los Angeles for the use of the City Council, the Mayor, the City Planning Commission, the other concerned governmental agencies and interested citizens.

With respect to the proposed project, the Port of Los Angeles Plan in Section IV (Circulation) recommends the following: "8. Establishment on Harbor Department property in Wilmington of an Intermodal Container Transfer Facility: serving both the Port of Angeles and the Port of Long Beach".

2.5 SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS REGIONAL TRANSPORTATION PLAN

The Regional Transportation Plan prepared by the Southern California Association of Governments (SCAG) guides future development of the regional transportation system.

The proposed project is consistent with this plan's key transportation planning objectives as follows:

1. "Reduce missions from mobile sources measured in tons per day by 1987..." (see Section 3.1 air quality impacts)

2. "Conserve transportation energy in the region..." (see Section 3.9 energy conservation.

The maritime and railroad policies also state: "Utilize adopted local Master Plans for the Ports as a basis for future port development," and "recognize the interface between rail facilities and highways as a primary consideration in future transportation planning efforts." The project is consistent with the above policy as discussed in the previous section on the PMP.

SCAG's Regional Transportation Plan identifies the present alignment of Route 47 (Terminal Island Freeway) as the adopted State Highway route. 'The proposed extension of Route 47 as a 6-lane expressway from Willow Street in Long Beach to the I-405 (San Diego Freeway) was designated as a new construction project of the SCAG Regional Highway System Plan. This proposed extension was also listed as a State Highway Construction Priority by the Los Angeles County Transportation Commission. As such, the ICTF site location would preclude the use of the primary route option for the proposed Route 47 extension and would conflict with SCAG's Transportation Plan.

However, the SCAG Port Advisory Committee recently completed their highway study of the Ports' area. The Committee developed a phased program of highway improvements which would result in greater traffic benefits than the Route 47 extension (see Section 3.8).

Assembly Bill No. 3375 introduced by Assemblyman Elder will rescind, if adopted, the state highway designation on the, existing Terminal Island Freeway and the proposed freeway extension. Adoption of this bill would resolve the issue of the Terminal Island Freeway extension, and the ICTF project would be consistent with the SCAG Transportation Plan.

2.6 CITY OF LONG BEACH GENERAL PLAN TRANSPORTATION ELEMENT

The City of Long Beach General Planwas developed to provide guidance and direction for policy decisions affecting the future development of Long Beach. The Transportation Element of the General Plan as revised in January 1980, provides guidance for future transportation policies.

The Transportation Element recognizes several congestion and capacity problems that are related to the increased activity at the Ports of' Long Beach and Los Angeles and the Naval Station. Among these issues are the inadequate peak-period capacity on the east-west throughfares south of I-405, such as Anaheim Street and the congestion on Willow Street at the terminationof Route. 47. At the terminus, traffic spills onto Willow Street moving toward the regional freeway network.

The Transportation Element Of the General Plan recommends that "the Terminal Island Freeway (Route 47) should be extended to the San Diego Freeway as a four-lane expressway with an overcrossing at Willow Street and a direct connection at Wardlow Road." This recommendation is made in response to the existing traffic and congestion problem on Willow Street. *cording to the Transportation Element the extension of Route 47 to I-405 would alleviate the Willow Street traffic problem by creating a more direct connection from Route 47 to the regional freeway network and by providing a grade separation at the junction at Willow Street and Route 47.

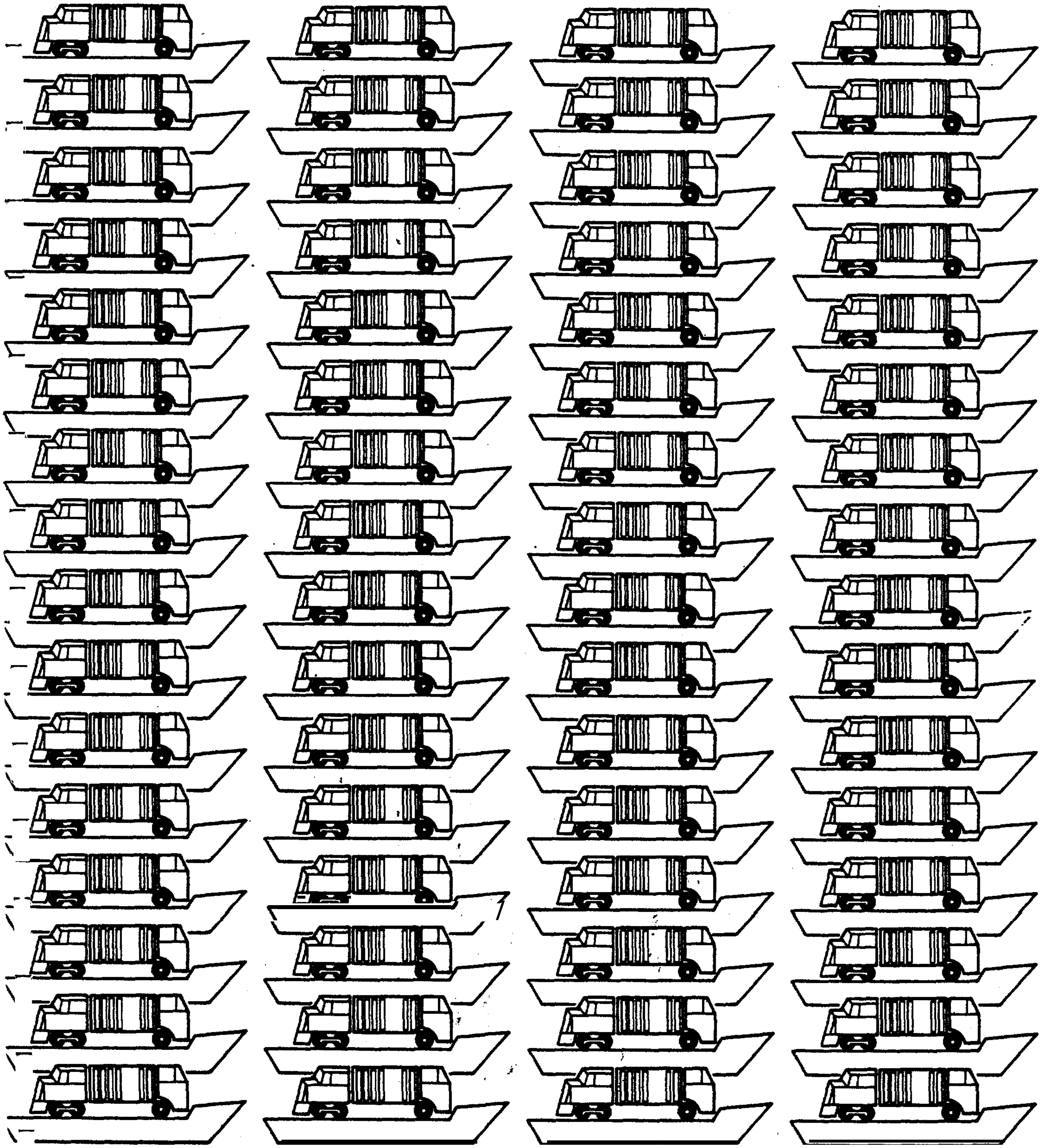
Although the proposed ICTF project is hot consistent with the recommendations of the Transportation Element, a recent analysis of highway improvements conducted by SCAG; (see Section 3.8) has suggested alternative means of alleviating traffic congestion on Willow Street and the Long Beach Freeway. A portion of these alternatives recommend increased east-to-west roadway capacity which is also a recommendation of the Transportation Element. The General Plan recognizes that transportation is a dynamic activity that responds to external influences. The Transportation Element is not "cast in concrete" and new or unanticipated local or regional circumstances could result in significant changes in policy decisions. The General Plan process allows for increased flexibility through the Plan amendment process.

2.7 PORT OF LONG BEACH MASTER PLAN

The Port of Long Peach Master Plan was certified in 1978, just prior to the Ports of Los Angeles and Long Beach jointly initiating detailed plans for the development of the Intermodal Container Transfer Facility. Thus, the Port of Long Beach Master Plan makes no specific reference to the ICTF project. Although the location of the proposed ICTF is hot included within the coastal zone boundaries, the project will be included in the updated revision of the Port of Long BeachMaster Planpresently underway. The relationship between the utilization and capacities of the container terminals in Long Beach Harbor and the ICTF warrants this project becoming an integral part of the Port of Long Beach Master Plan.

ICTF

INTERMODAL CONTAINER TRANSFER FACILITY



Setting/Impacts/ Mitigations

3.1 AIR QUALITY
SUMMARY

Setting:

The ICTF project site is located within the South Coast Air Basin (SCAB). This geographical region generally has adverse air quality due to a combination of meterologic, topographic, and demographic conditions. The project site is near a coastal fronting zone which may enhance the overall air quality.

Impacts:

Assessment of the impacts generated by the ICTF indicates that increased amounts of air pollutants will be generated by direct and indirect oroject sources. Direct sources of air pollution include construction activity, electrical power generation, and mobile on-site equipment. Indirect sources include rail, truck and employee transit Passions.

A complete air emissions inventory has been conducted for both direct and indirect sources of project air pollution. These sources have the potential to impact localized air quality in the following ways:

° Project equipment will generate significant levels of carbon monoxide and nitrous oxide which exceed South Coast Air Quality Management District New Source Review standards.

° Train transit emissions will generate increased levels of carbon monoxide, hydrocarbons, and nitrous oxide.

° The use of rail in lieu of truck transport for the ICTF will produce dramatic reductions in truck-miles-traveled and fuel expended. These savings will produce significant net reductions in all primary air pollutant categories.

The ICTF project will have a beneficial impact to local air quality, when mobile emissions are collectively considered with the truck emission savings.

Mitigations:

The air emissions generated by ICTF implementation will be minimized to the extent possible by rigid practice of energy conservation measures that are incorporated into the overall project design. The ICTF is designed to allow maximum efficiency of container transfer from trucks to rail flat cars.

3.1 AIR QUALITY

3.1.1 SETTING

The proposed project site is located in the south coast Air Basin (SCAB), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD).

3.1.1.1 Ambient Meterology The climate of the SCAB is influenced by the Basin's geographical location and the surrounding terrain. The SCAB is essentially a coastal plain encompassed by the Pacific Ocean in the southwest quadrant, law desert to the east, and mountain ridges which outline the Basin's northern boundary. The climate is typically mild, occasionally interrupted by periods of extremely hot weather, winter storms, or Santa Ana winds.

While the climate of the SCAB is not unique, the Basin is highlypopulated, and industrialized with a highly mobilized metropolitan area. These factors, taken together with a climate that severely restricts dispersion of atmospheric pollution, account for the area's par sir quality.

Historically, temperatures of the project arm have averaged 63 ± 10°F **as measured at Long Beach for a 30-year period (SCAQMD, 1980).**

The climate of the SCAB is characteristic of a semi-arid environment. However, due to the presence of a shallowmarine layer which effectively resists the vertical mixing of air, the average relative humidity along the coast is 70 percent. The relatively hi h humidity along the coast is reduced during periods when offshore winds (winds which bring continental air into the Basin) are dominant. The majority of rainfall experienced in the Basin occurs between-andApril. Historical annual precipitation for a 40-year period recorded in Long Beach is l2.24 inches. Fog is typical along the coast, especiallyduring the late fall and early winter months. Morning and evening fog consisting of low stratus clouds is common along the coast (SCAQMD, 1980).

The movement of winds within the Basin is strongly influenced by the beating and cooling of land and seasurfaces. Typically, daytime ocean winds (which blow inland from the sea) reverse direction at night (blowing from over the land out to sea) (SCAQMD, 1980). These winds are typicallystronger during the day, especially during the summer months. During winter months, however, **night drainage winds may be as strong or stronger than winter ocean winds. The historical wind speed is approximately 6.4 miles per hour (SCAQMD, 1980).**

Low thermal inversions in the Basin restrict the vertical mixing of air, increasing ambient pollutant concentrations. Pollutants are introduced into the inversion layer by the undercutting sea breeze, the return flow from mountain ridges, and by direct introduction from tall industrial smoke stacks. Typically, themixing height of air under the thermal inversionbegins at a low level near thee ground surface (Le. 1200 ft.) in early morning: The inversion then either rises to new heights due to thermal warming from the sun where it may be broken up later, or during winter may remain low thus concentrating inert pollutants, i.e. nitrogen dioxide and carbon dioxide. They may then be changed by photochemical reactions into irritating photochemical oxidants(called smog) which, insufficient concentrations, may affect health.

3.1.1.2 Ambient Air Quality Atmospheric pollution problem in the SCAB result from the accumulation of primary pollutants or secondary pollutants formed by photochemical transformation of primary pollutants. The potential to form these pollutants is largely influenced by poor atmospheric ventilation, abundant sunshine, and a constant infusion of air pollutants, or their by-products, into them.

Environmental Protection Agency (EPA) air quality data for the State of California indicates that &ring 1977 Los Angeles was the only major metropolitan area which did not meet any of the Primary National Ambient Air Quality Standards (NAAQS) for the various criterion pollutants (hydrocarbons, ozone, sulfur dioxide, total suspended particulate matter, nitrogen dioxide and carbon monoxide). In 1978, the SCAB met Primary NAAQS for sulfur dioxide. Table A-10 in Appendix 6.3A shows the national and California ambient air quality standard.

The single most serious air pollution problem in the South Coast Air Basin is the high, concentrations of oxidants. About 95 percent of photochemical oxidants is comprised of ozone (O_3), a powerful oxidizing agent. Ozone formation results fromthe reactions of hydrocarbons and nitrogenoxides, which, in the presence of sunlight and oxygen, participate in complicated photochemical reactions. Motor vehicle emissions contribute the largest proportion of hydrocarbon and nitrogen oxide emissionswithin the SCAB.

The following table summarizes the emissions of the SCAB for the year 1979, and illustrates the magnitude of the existing air quality problems:

Table 3. **SUMMARY OF EMISSIONS**
1979 Base Year **Emissions**
Average Annual Day - Tons/Day
South Coast Air Basin

SOURCE	TONS/YEAR				
	CO	Hc	NO_x	SO_x	PARTICULATES
stationary	1601.34	4796.3	469.96	208.77	527.37
Mobile	6063.09	900.2	936.11	76.88	99.93
Total	7664.43	5669.50	1406.07	285.65	627.30

Table A-ll in Appendix 6.3A summarizes ambient airguality recorded at the Long Beach air **quality** monitoring station during1980. The Long **Beach** station is the closest mnitoring station to the project site and its data is considered **most** representative. The Long Beach monitoring station does not monitor total suspended **particulate matter,** particulate lead, or **particulate** sulfate. Therefore, particulate pollutant **measurements** in Table A-11 **have** been taken from the Los **Alamitos** mnitoring station (the next closest station). It should **be** noted that air quality is generally better closer to the coast than in and. Because both the Long Beach and Los **Alamitos** ations are located at different sites than the project site, project pollutant concentratiohs may vary from those reported in the project vicinity.

3.1.1.3 Regulatory Considerations. The Clean Air Act of 1970 and its subsequent as amendments provide theauthority for the regulatory system and base for implementation by state and local regulatory systems. As a consequence, the EPA has been designated as the federal agency responsible for the identification of pollutants in the air establishing air quality standards regarding these pollutants, establishing regulations limiting emissions from various sources, and overseeing state and local governments enforcement of air quality regulations. In general, federal guidelines set minimum levels of regulations, above which state and local governments may impose more stringent requlatory requirements.

TheCalifornia Air Resources Board (CARB)has been designated as the state agency responsible for establishing ambient air quality standards, developing emission regulations for vehicular sources, and overseeing local air quality programs Local air quality programs are developed to maintain air quality at levels such that the appropriate standards for an area are met.

The South Coast Air Quality Management District (SCAQMD) is the local authority for air quality. SCAQMD responsibilities include adopting regulations to control stationary sources, monitoring air quality information, and enforcement of federal, state and local regulations.

The National Ambient Air Quality Standards (NAAQS) have been developed by EPA and serve as national baseline standards. Primary and secondary standards, sham in Table A-10 in Appendix 6.3A, are designed to protect health and public welfare (including animals and structural properties), respectively. If the standards are violated for a particular pollutant within the district, the district is regarded as a Non-Attainment area for that year. However, should the district meet NAAQS for a pollutant, the district would be designated as an Attainment area.

The CARB alsohas developed California ambient air quality standards which regulate those pollutants specified in NAAQS andprovide standards for sulfates, hydrogen sulfide, ethylene, and visibility reducing particles. A violation of California ambient *air* quality standards results whenever a state standard concentration is exceeded.

The SCAQMD's *New Source* Review Rule (Rule 213) requires that certain conditions be met before a permit to construct any major new stationary emission source may be granted. *Rule 213* defines a stationary source as "a unit or an aggregation of units of non-vehicular air-contaminant-emitting equipment which is located on one property or on contiguous properties; which is under the same ownership or entitlement to use and operate: and, in the case of an aggregation of units thoseunits related to one another."

3.1.2 IMPACTS

3.1.2.1 Air Emissions Inventory. Project-related emissions are categorized as direct, indirect, and construction-related.

Direct sources of emissions are usually defined as being stationary or non-mobile sources located at the project site. However, mobile equipment, such as bridge cranes and yard hostlers, are included within the Scope of these sources because they do not leave the project site. These sources are summarized in Table 4.

Indirect sources usually are defined as equipment or activities which are related to the project but may generate emissions at a site other than the project. These sources are usually mobile in nature and travel to and from the project site. However, emission sources, such as power generation stations, may add emissions to an area, such as the South Coast Air Basin, in the process of providing electricity for the project. These sources are summarized in Table 4.

Emissions from project construction activity are usually included within the scope of air emissions. These emissions are usually considered transitional in nature because of their temporary duration. However, in projects with multiple phases, these emissions may account for a considerable portion of the overall emissions scenario. These sources are summarized in Table 5.

3.1.2.1.1 Construction Emissions

3.1.2.1.1.1 Construction equipment emissions. The air pollutant emissions generated in the construction phase of the project include those emitted by equipment used to provide materials to the project, equipment used to construct the project, and vehicles used to transport construction workers to and from the project site. Construction emissions are usually limited to those pollutants at the project site. H-ever, emissions generated by vehicles which provide construction material from off project sites and workman vehicles used to transport workers to and from the construction site ate also included.

The anticipated Construction activities are categorized by activity type, location, and phase of project in Table A-l of Appendix 6.3A. This table discloses the construction activity by phase, the type of equipment required for this activity, number of pieces of equipment, equipment fuel consumption, duration of use, and the quantity of air pollutants generated by equipment type and activity. Due to the phased nature of the project and the concurrent overlapping activity of different construction aspects, the missions are representative of all emissions produced within a particular activity. The relation of these construction activities and their completion time is given in Table 1 (Section 1.3).

Table 5 summarizes equipment emissions from construction activities of all phases of construction. Generally, the major pollutants emitted from each segment of the construction activity will be carbon monoxide (CO) and nitrous oxides (NO_x). The major sources of CO and NO_x are bottom-dumping trucks, cranes and sheep-foot, double-drum rollers.

TABLE 4

ICTF PROJECT EMISSIONS
(lbs/day)

	STATIONARY					MOBILE				
	al	HC	NOx	SOx	PART	CO	HC	NOx	SOx	PART
1983	81	29	377	24	26	480	136	630	85	47
1984	81	29	377	24	26	491	138	643	88	49
1985	81	29	377	24	26	505	138	646	91	50
1986	105	38	485	32	34	612	185	873	122	66
1987	105	38	485	32	34	630	189	874	127	68
1988	128	47	595	39	**42**	651	191	875	131	72
1989	128	47	595	39	42	679	195	880	137	76
1990	128	47	595	39	42	798	244	1106	172	92
1991	152	56	704	46	50	882	254	1128	177	96
1992	176	64	813	53	57	912	258	1140	182	101
1993	199	73	922	61	65	948	264	1165	187	102
1994	199	73	922	61	65	1071	314	1408	224	121
1995	233	82	1030	68	73	1112	320	1431	227	125
1996	247	90	1139	72	81	1207	330	1459	233	132
1997	256	93	1181	78	84	1334	384	1709	269	149
1998	270	99	1248	82	88	1388	394	1738	278	154
1999	270	**99**	1248	82	88	1444	400	1768	287	164
2000	285	**104**	1316	87	93	1590	451	2024	322	179

TABLE 5
SUMMARY OF CONSTRUCTION EMISSIONS

	GALLONS	EMISSIONS POUNDS/ACTIVITY a3	Hc	NOx	SOx	PART
SUMMARY PHASE I CONSTRUCTION (1983)						
Site 'Preparation/Excavation	208,700	22,700	7,600	91,300	6,700	6,000
Grade Separation/Alameda Street	92,300	8,400	2,600	35,200	2,500	2,100
Railroad Tunnel/223rd Street	28,800	3,900	1,100	16,700	1,200	900
Alameda Street/223rd Street Ramp	35,000	2,200	600	9,700	700	500
Utility Construction	54,000	3,100	800	13,200	1,000	800
Site Construction	113,900	10,700	2,900	47,700	3,200	2,600
Building/Administrative, Maintenance	42,400	3,200	900	13,900	1,000	900
	575,100	54,200	16,500	227,700	16,300	13,800
SUMMARY PHASE II CONSTRUCTION (1991)						
Remote Storage Construction	36,100	4,000	1,300	18,300	1,300	1,000
Railroad Track Construction	26,700	2,300	700	9,900	700	600
	62,800	6,300	2,000	28,200	2,000	1,600
SUMMARY PHASE III CONSTRUCTION (1996)						
Remote Storage Construction	106,600	11,900	3,800	53,000	3,700	3,200
Railroad Track Construction	64,000	5,300	1,600	25,600	6,000	1,300
	170,600	17,200	5,400	78,600	9,700	4,500
PROJECT TOTAL	808,400	77,700	23,900	334,500	28,000	19,900

Comparison of construction emissions to emissions from off-road motor vehicle within the South Coast Basin and Los Angeles County (CARB, 1980) and building construction emissions indicates that project emissions in all phases represent insignificant air pollution levels.

3.1.2.1.1.2 Construction Worker Transit Emissions. The number of automobiles required for construction worker transportation, automobile fuel consumption, and the resulting emissions for each construction phase is shown in Table A-2 of Appendix A. The to the phased, overlapping nature of each construction activity, air pollutants calculated for construction worker transit are based upon the duration of the largest construction activity.

3.1.2.2 Operation Phase Emissions. Operational emissions will be produced from both mobile and stationary aspects of the project. emissions will be produced by equipment located at and confined to the project site, such as bridge cranes and yard hostlers. Additional emissions will be produced off the project site by the production of project-required electrical energy by an electrical generating station. Mobile emissions will be generated by unit trains traveling between the project site and the downtown Los Angeles railyard. Further mobile emissions will be generated by trucks and automobiles. Heavy duty diesel trucks will be employed to transport containers from their entry in both ports and additional sites to the project facility and vice versa. Employees traveling to and from theproject facility will produce emissions from the use of their automobiles.

3.1.2.2.1 Operation Stationary Emissions.

3.1.2.2.1.1 Energy Consumption Emissions. Air pollutants will be generated with the production of electrical energy which is utilized at the project facility. Total operational electrical energy utilization for the years 1983 through 1986 is estimated at 9,600,OOO kilowatt hours (KWH). Fran 1987 through 2000, the total consumption is estimated at 39,200,OOO KWH.

The following table estimates the project air pollutant emissions generated based on the yearly electrical energy consumption for these two periods:

Table 6. **ELECTRICAL POWER GENERATION EMISSIONS (Lbs/Year)**

	C O	HC	NOx	sox	Particulates
1983 - 1986	360	20	33.20	19	58
1987 - 2000	420	23	3640	22	67

3.1.2.2.1.2 Project Equipment Emissions. The use Of bridge cranes to load containers from prestaging areas onto the rail cars and the use of yard hostlers to transport containers and chassis to various areas of pre-loading will generate air pollutants.

Tables A-3 h A-4 of the Appendix A discloses the amount of air pollutants for each category of equipment based on yearly and daily fuel consumption. Table 7 summarizes the fuel consumption, both yearly and daily missions, for operational emissions of all equipment categories.

Both bridqe cranes and yard hostlers will generate nitrous oxides and carbon monoxide in quantities which will exceed the new stationary sources level of significance set at 150 lbs of each pollutant per day (except CO which is 750 lbs/day). Yard hostler emissions will exceed permissible NO_x levels beginning 1983 and continuing throughout all project phase years. Bridge cranes will generate significant NO_x emissions from 1983 throughout project phase years and significant levels of CO from 1993 through 2000.

The above emission projections are somewhat limited by several factors. First,. the emission factors used to calculate these emissions are only projected to 1990. The current trend for these emission factors declines with increasing years. Therefore, project missions for these categories of equipment from 1991 to 2000 could be expected to emit less than those emissions represented as based upon a fixed 1990 emission standard. Also, these emissions do not consider increases inemission control technology for future years. Future technological advances could account for significant emission reductions. Finally, the net emissions from ICTF equipment aperations and operation of the same equipment in the Los Angeles facility cannot be accurately predicted. The operation of bridge cranes and yard hostlers at the ICTF facility will most certainly eliminate the use of similar equipment at the Los Angeles facility. This displacement of equipment use will also incorporate new equipment at the ICTF facility which represents the best available control technology for air emission, thus decreasing emissions for the same equipment used at the ICTF site. Design of the ICTF site will allow a higher efficiency for rail/container operations, thus decreasing overall equipment deployment and decreasing emissions from use of equipment.

3.1.2.2.2 Operation Mobile Emissions. Air pollutant emissions will be generated from operations which are not located at the specific project site. These operations generally emit air pollutants in the process of transpoking project-related items from one area to another. Thus they contribute to the general air quality of thearea and the SouthCoast Air Basin. The mobile sources of air pollution of this project are derived from trucks transporting containers to and from the ICTF facility and unit trains which will transport containers to and from the Los Angeles container facility;

3.1.2.2.2.1 Truck Emissions. Truck transport of containers to and from the proposed facility will generate air pollutants. These emissions will usually be generated off the project site. Overall, the emissions generated by trucks on-site or awaiting entry into the site are considered negligible compared to overall transit emissions.

TABLE 7
OPERATIONAL EQUIPMENT EMISSIONS
COMBINED BRIDGE CRANE AND YARD HOSTLER EMISSIONS

Year	YEARLY OPERATIONAL EMISSIONS (lbs/year) Fuel Consumed (Gallons)	CO	HC	NO_x	SO_x	Part	DAILY OPERATIONAL EMISSIONS (lbs/day) Fuel Consumed (Gallons)	CO	HC	NO_x	SO_x	Part
Phase I												
1983	286,200	29,192	10,733	134,227	8,929	9,588	784	80	29	368	24	26
1984	286,200	29,192	10,733	134,227	8,929	9,588	784	80	29	368	24	26
1985	286,200	29,192	10,733	134,227	8,929	9,588	784	80	29	368	24	26
1986	370,800	37,821	13,905	173,905	11,569	12,422	1,016	104	38	476	32	34
1987	370,800	37,821	13,905	173,905	11,569	'12,422	1,016	104	38	476	32	34
1988	455'500	46,461	17,081	213,629	14,211	15,259	1,248	127	47	585	39	42
1989	455,500	46,461	17,081	213,629	14,211	15,259	1,248	127	47	585	39	42
1990	455,500	46,461	17,081	213,629	14,211	15,259	1,248	127	47	585	39	42
Phase II												
1991	540,200	55,101	20,258	253,354	16,854	18,097	1,480	151	56	694	46	50
1992	624,900	63,740	23,434	293,078	19,496	20,935	1,712	175	64	803	53	57
1993	709,600	72,379	26,610	332,802	22,140	23,772	1,944	198	73	912	61	65
1994	709,600	73,379	26,610	332,802	22,140	23,772	1,944	198	73	912	61	65
1995	794,200	81,008	29,783	372,480	24,779	26,606	2,176	222	82	1,020	68	73
Phase III												
1996	878,900	89,648	32,959	412,204	26,422	29,444	2,408	246	90	1,129	72	81
1997	911,000	92,922	34,162	427,259	28,423	30,519	2,496	255	93	1,171	78	84
1998	963,600	98,287	36,134	451,929	30,064	32,281	2,640	269	99	1,238	82	88
1999	963,600	98,287	36,134	451,929	30,064	32,281	2,640	269	99	1,238	82	88
2000	1,016,100	103,642	38,103	476,551	31,702	34,039	2,784	284	104	1,306	87	93

Tables A-5 to A-9 of Appendix 6.3A show the emissions generated from two points of origin within the Fort of Los Angeles, the Port of Long Beach, and other nearby localities to the project site respectively. Table 9 illustrates the emissions which would be generated with no project, utilizing the same number of truck trips from the same localities to the downtown railyard based upon projected container proportions from the above localities to ICTF.

Truck emissions summarized in Table 8 shows a project versus ho project scenario for five major air pollutants. The differences in project vs. no project emissions are also listed in this table to illustrate the sizeable savings of air pollutants which would follow with initiation of the project. The net air pollutant savings are amidered a significant beneficial impact to air quality within Los Angeles County and the South Coast Air Basin based upon criteria currently used by the South Coast Air Quality Management District (SCAQMD, 1980).

3.1.2.2.2.2 Rail Emissions. Rail transport of containers between the ICTF facility and Los Angeles will generate air pollutants. The rail activity will generate practically all emissions off the project site and shall be considered on the basis of contributing to the air pollution of the immediate area, Los Angeles County, and the South Coast Air Basin.

Table 8 shows the five primary air pollutants which will be generated by the rail activity of unit trains transporting containers. The daily and yearly emissions are based upon the number of unit train round trips per day and the fuel used in the round trip between the ICTF and the Los Angeles rail terminal. These rail activities will produce substantial quantities of carbon monoxide and nitrous oxides, which will contribute to the degradation of localized air quality.

3.1.2.2.2.3 Employee Transit Emissions. The number of project employees will increase with the phased expansion of the project. The total number of employees is anticipated to range from 70 (single shift, Phase I) to 320 double shift, Phase III). Transit of these employees to and from the project will produce air pollutants. These pollutants are calculated in Table 10.

3.1.2 UNAVOIDABLE ADVERSE IMPACTS

Project air poll&ion emission which arise from mobile and stationary sources that are either without feasible mitigation or without regulatory agency control are considered unavoidable. Mobile on-road vehicle sources of air pollution are appreciably reduced by functional control&vices such as catalytic converters. However, mobile off-road vehicle sources, such as construction equipment and associated equipments, are not subject to these same emission control requirements and should be consideredas unavoidable.

TABLE 8

ICTF TRUCK EMISSIONS SUMMARY[b]
EMISSIONS (lbs/day)

		MILES/DAY[a]			CO			HC			NOx			SOx			PARTICULATES		
	RND TRIPS/ DAY	PROJ.	NO PROJ	NET BENEFIT	NO PROJ.	ICTF PROJ.	NET BNFIT	NO PROJ.	ICTF PROJ.	NET BNFIT	NO PROJ.	ICTF PROJ.	NET BNFIT	NO PROJ.	ICTF PROJ.	NET BNFIT	NO PROJ.	ICTF PROJ.	NET BNFIT
PHASE I																			
1983	413	4,724	20,650	15,926	548	188	'360	82	30	52	1,339	169	1,170	128	30	98	90	21	
1984	458	5,243	22,900	17,657	608	209	399	86	33	53	1,474	183	1,291	142	33	109	99	23	76
1985	507	5,796	25,350	19,554	645	230	415	90	34	56	1,509	187	1,322	157	40	121	110	24	86
1986	563	6,429	28,150	21,721			429	93	35	58	1,539	190	1,349	174	45	134	122		94
1987	626	7,169	31,300	24,138	762	277	485	104	39	65	1,568	192	1,376	194			136	30	106
1988	694	7,935	34,700	26,765	844	298	546	115	41	74	1,581	193	1,388	215	55	166	150	34	116
1989	771	8,806	38,550	29,744	938	332	606	119	45	74	1,628	198	1,430	239	61	184	167	38	129
	854	9,750	42,700	32,950	1,039		36'672	123	47	76	1,653	200	1,453	265			185	42	143
1990		55,845	244,300	188,455			3,912			508			10,779			1,165			819
PHASE II																			
1991	922	10,525	46,100	35,575	1,122	396	726	133	51	82	1,785	216	1,569	286	65	221	200	45	155
1992	996	11,367	49,800	38,433	1,212	426	786	143	55	88	1,928	228	1,700	308	70	238	216	50	166
1993	1,076	12,300	53,800	41,500	1,309	462	847	155	61	94	2,083	253	1,830	333	75	258	233	51	182
1994	1,162	13,283	58,100	44,817	1,414	500	914	167	64	103	2,249	273	1,976	360	86	274	255	58	197
1995	1, 258	14,375	62,900	48,525	1,531	541	990	181	70	111	2,435	296	2,139	390	89	301	273	62	211
		61,850	270,700	208,850			4,263			478			9,214			1,292			911
PHASE III																			
1996	1,355	15,475	67,750	52,275	1,649	582	1,067	195	75	120	2,625	318	2,307	420	95		294	60	226
1997	1,463	16,708	73,150	56,442	1,780	624	1,156	210	81	129	2,832	342	2,490	453	103	325	317	73	244
1998	1,580	18,036	79,000	60,964	1,923	678	1,245	227	91	136	3,059	371	2,688	489	112	377	343	78	265
1999	1,678	19,515	83,900	64,385	2,042	734	1,308	241	97	144	3,248	401	2,847	520	121	399	364	88	276
2000	1,844	21,046	92,200	71,154	2,244	792	1,452	265	102	163	3,570	434	13,468	571	129	442	400	91	309
		90,780	396,000	305,220			6,228			692						1,893			1,320
Total	18,220	208,475	911,000	702,525	22,295	7,892	14,403	2,729	1,051	1,678	38,105	4,644	33,461	5,644	1,294	4,350	3,954	904	3,050

[a] Assumes a mixture of round trip miles and average speeds. Please consult individual calculation tables for each acea.

[b] Source: SCAQMD "Air Quality Handbook for EIR's." (Oct. 1980). Based on California State Moving Exhaust Emissions, Heavy Trucks, 1983 - 1990 Emissions Factors.

TABLE 9
ICTF RAIL EMISSIONS

YEAR	TRAIN ROUND TRIPS/DAY	FUEL CONSUMPTION[a] PER DAY (GAL)	FUEL CONSUMPTION[a] PER YEAR (GAL)	DULY EMISSIONS (LBS)[b] CO	HC	NOx	SOx	PART	YEARLY EMISSIONS (LBS)[b] CO	HC	NOx	SOx	PART
Phase I													
1983	2	952	348,210	171	94	448	54	24	62,678	34,473	163,659	19,983	8,706
1984	2	952	348,210	171	94	448	54	24	62,678	34,473	163,659	19,983	8,706
1985	2	952	348,210	171	94.	448	54	24	62,678	34,473	163,659	19,983	8,706
1985	3	1,431	522,315	258	141	672	81	36	94,017	51,710	245,489	19,983	13,058
1987	3	1,431	522,315	258	141	672	81	36	94,017	51,710	245,489	19,983	13,058
1988	3	1,431	522,315	258	141	672	81	36	94,017	51,710	245,489	19,983	13,058
1989	3	1,431	522,315	258	141	672	81	36	94,017	51,710	245,489	19,983	13,058
1990	4	1,908	696,420	344	189	897	110	48	125,355	68,946	327,318	39,696	17,410
Phase II													
1991	4	1,908	696,420	344	189	897	110	48	125,355	68,946	327,318	39,696	17,410
1992	4	1,908	696,420	344	189	897	110	48	125,355	68,946	327,318	39,696	17,410
1993	4	1,908	696,420	344	189	897	110	48	125,355	68,946	327,318	39,696	17,410
1994	5	2,385	870,525	429	236	1,120	136	60	156,694	86,182	409,148	49,620	21,764
1995	5	2,385	870,525	429	236	1,120	136	60	156,694	86,182	409,148	49,620	21,764
Phase III													
1996	5	2,385	870,525'	429	236	1,120	136	60	156,694	86,182	409,148	49,620	21,764
1997	6	2,862	909,630	514	284	1,346	164	72	188,034	103,419	490,976	59,544	26,116
1998	6	2,862	909,630	514	284	1,346	164	72	188,034	103,419	490,976	59,544	26,116
1999	6	2,862	909,630	514	284	1,346	164	72	188,034	103,419	490,976	59,544	26,116
2000	7	3,339	1,218,735	602	330	1,569	191	84	219,372	120,656	572,805	69,468	30,468

a. Assumes average fuel consumption of 63.5 gallons/hr for each 3,000 hp diesel unit for each 2.5 hour round trip. Based upon 3 diesel engines/unit trains. (Personal connnmication SP railroad.)

b. Source: EPA AP-42

Table-10

ICTF EMPLOYEE TRANSIT EMISSIONS

Year	No. OF EMPLOYEES	TRANSIT[a] MILES/DAY	EMISSIONS (Lbs/day)[b] CO	HC	NO_x	SO_x	PART
PHASE1							
1983	140	2,340	121	12	13	1	2
1984	140	2,340	111	11	12	1	2
1985	140	2,340	104	10	11	1	2
1986	140	2,340	98	9	11	1	2
1987	140	2,340	95	9	10	1	2
1988	140	2,340	91	9	10	1	2
1989	140	2,340	89	9	10	1	2
1990	140	2,340	87	8	9	1	2
PHASE II							
1991	229	3,820	142	14	15	2	3
[illegible]	229	3,820	142	14	15	2	3
[illegible]	229	3,820	142	14	15	2	3
1994	229	3,820	142	14	15	2	3
[illegible]	229	3,820	142	14	15	2	3
PHASE III							
1996	318	5,300	196	19	21	2	4
1997	318	5,300	196	19	21	2	4
1998	318	5,300	196	19	21	2	4
	318	5,300	196	19	21	2	4
2000	318	5,300	196	19	21	2	4

a. Eased upon 20 mile round trips at an average speed of 30 mph. Assumed carpooling factor of 1.2 employees per vehicle.
b. SCAQMD, 1980a.
c. SCAQMD, 1982.
d. SCAQMD, 1977.

Project implementation will produce a subsequent increase in electrical power consumption- This electrical power will be generated by electrical power generating stations which must bum fossil fuel or natural gas for this production. This fuel consumption will produce pollutants which will contribute to the existing degraded air quality within the SCAB. This condition is considered unavoidable.

3.1.3 CUMULATIVE IMPACTS

The preceding air quality impact analysis shows that although there is the potential for significant localized &verse impact to air quality with project implementation, there will not be a significant cumulative impact upon local or basin *air* quality from truck activities. The net beneficial cumulative air quality impacts of the proposed project truck activity will significantly enhance efforts to achieve air quality goals set forth in the Air Quality Management Plan for the SCAB.

3.1.4 MITIGATIONS

Mitigations which originate on the state, regional, or local levels may effectively reduce air emissions in the South Coast Air Basin and offset emissions produced by project operation. These control strategies, whether implemented or proposed, could affect emissions as follows:

- <u>Application of Control Technology to Stationary Sources</u>

  Application of best state-of-the-art control technology to stationary sources of pollution within the SCAB will reduce hydrocarbons and nitrous oxides, which are known precursors to photochemical formation of oxidants, collectively called smog.

Measures which have the potential to *reduce* specific project emissions include:

<u>Construction</u>

- Emissions from construction equipment and activities will be mitigated to the extent that construction projects will be of temporary duration and phased throughout project development. Total construction time is anticipated to be 51 months phased throughout 17 years of project development.

- Dust abatement during construction will be limited to the application of water to control fugitive dust missions. Watering twice daily can achieve a SO percent reduction of these dust emissions (EPA AP-42).

- Emissions generated by construction worker transit to and from the *project* site can be mitigated with the use of car pools and ride-sharing.

Operations

- Implementation of the ICTF project will significantly reduce air pollutants generated from trucks which transport containers. The location of a container transfer facility near the ports incoming and outgoing container operations will significantly reduce the round trip miles presently required for transport of containers to the Los Angeles container-rail facility.

- Implementation of the ICTF project will reduce *air* pollutants generated from rail container handling equipment. Upon project implementation, containers would be loaded upon unit trains at the ICTF. This would cause a subsequent decrease of container loading activity at the Los Angeles facility. The ICTF project has the potential of greater container handling efficiency than the Los Angeles facility. Additional benefits in air pollutant conservation will be derived from the use of container handling equipment which incorporates the state-of-the art air pollutant control technology.

- Air pollution emissions, generated from employee transit to and from the project can be: effectively minimized with car pooling and ridesharing.

3.2 WATER QUALITY
SUMMARY

Setting:

Water quality within the harbors is strongly influenced by inputs from the major flood control channels (L.A. River and Dominguez Channel). The ICTF site will drain into the Dominguez Channel through a storm drain constructed previously for this site in 1971. Water quality in Consolidated Slip (Dominguez Channel enters Los Angeles Harbor at Consolidated Slip) is marginally acceptable (dissolved oxygen level of 5+ mg/l), with tie slip having poor circulation, weak flushing action, and-inputs from Dominguez Channel. The water quality within Dominguez Channel is below accepted standards.

Impacts:

Paving of the project site will cause changes in absorption and drainage patterns at the location. The water quality of storm water draining into Dominguez Channel will. be typical of pavement runoff. Inputs of storm water from the ICTF to the Dominguez Channel will be insignificant compared to the volume carried by the channel after a period of rainfall.

Hazardous or toxic chemicals spilled at thee site have the potential of reaching the channel and affecting harbor water quality. Spill containment controls will be incorporated into the project to prevent spills from reaching the channel (see Section 3.6).

Mitigations:

Storm drain design will incorporate oil and grease traps in the storm drains within the maintenance areas. Procedures will be developed to control and clean up spills of liquid or dry chemicals that have the potential of affecting water quality within Dominguez Channel or the harbors.

3.2 WATER QUALITY

3.2.1 SETTING

Los Angeles and Long Beach Harbor receive rainfall drainage from approximately 926 square miles of the South Coast Basin. A portion (about 33 sq. mi.) flows directly into Los Angeles Harbor. The major drainage of the basin is through the Los Angeles River (which drains approximately 826 sq. mi.) and the Dominguez Channel (which drains approximately 67 sq. mi.). Water quality within the harbors is strongly influenced by these inputs, especially after a storm system has passed through the basin.

The ICTF project site will drain into the Dominguez Channel through a 78 inch storm drain previously constructed for the site in 1971. The channel enters the Los Angeles Harbor at the Consolidated Slip in the Inner Harbor. Within Consolidated Slip circulation is poor, flushing action is weak: however, water quality is marginally acceptable with a dissolved oxygen level of S+. Water quality problem in Dominguez Channelhave pronounced effect upon water quality in consolidated slip.

Water quality within the channel varies widely. It is strongly influenced by inputs of storm water runoff and waste water discharges.

The Los Angeles Harbor Department has recently undertaken a water quality survey of the Dominguez Channel, sampling two stations (Station Nos. 1 and 2) near the proposed project site (Figure 29). Transparency at the stations has a mean value greater than 6 feet, and temperature averages **16.8°C.** Disregarding the samples taken after rain, dissolved oxygen (D.0.) averages 2.6 to 2.9 mg/l and biochemical oxygen demand (B.0.D.) averages 0.6 to 0.7 mg/1. Nitrates and sulfates in the channel are negligible. Salinity normally averages greater than 26.0 ppt total salts. A halocline develops within the channel after a period of rainfall, with a fresh water layer atop the water column. The tidal prism apparently moves upchannel on the bottom, and drainage flows downchannel on the surface.

The Los Angeles Harbor Department monitors two stations in Consolidated Slip (LA SO h LA 51) and one at Holiday Harbor Marina (LA 49A) as part of an ongoing monthly Harbor Water Quality Survey (Figure 29). The water quality at these stations is influenced by the water quality within the Dominguez Channel. The history of the stations show an increase in water quality in the area that can be directly attributed to controls placed on waste discharges into Dominguez Channel by the California Regional Water Quality Control Board (CRWQCB). Before 1971 dissolved oxygen averaged well below 5 mg/l at all stations (CRWQCB minimum attainment goal for D.O. is 5.0 mg/l). Since 1971, station LA 50 located at Berth 200B has averaged 5.5 mg/l D.O., station LA 51 at Berth 200H has averaged 5.1 mg/l D.O. at 20ft and 5.8 mg/l D.O. at the surface, and station LA 49A in Holiday Harbor has averaged 5.9 mg/l D.O. at the surface. All stations average over 6 feet transparency with the mean annual water temperature ranging from 16.PC to **17.8°C.**

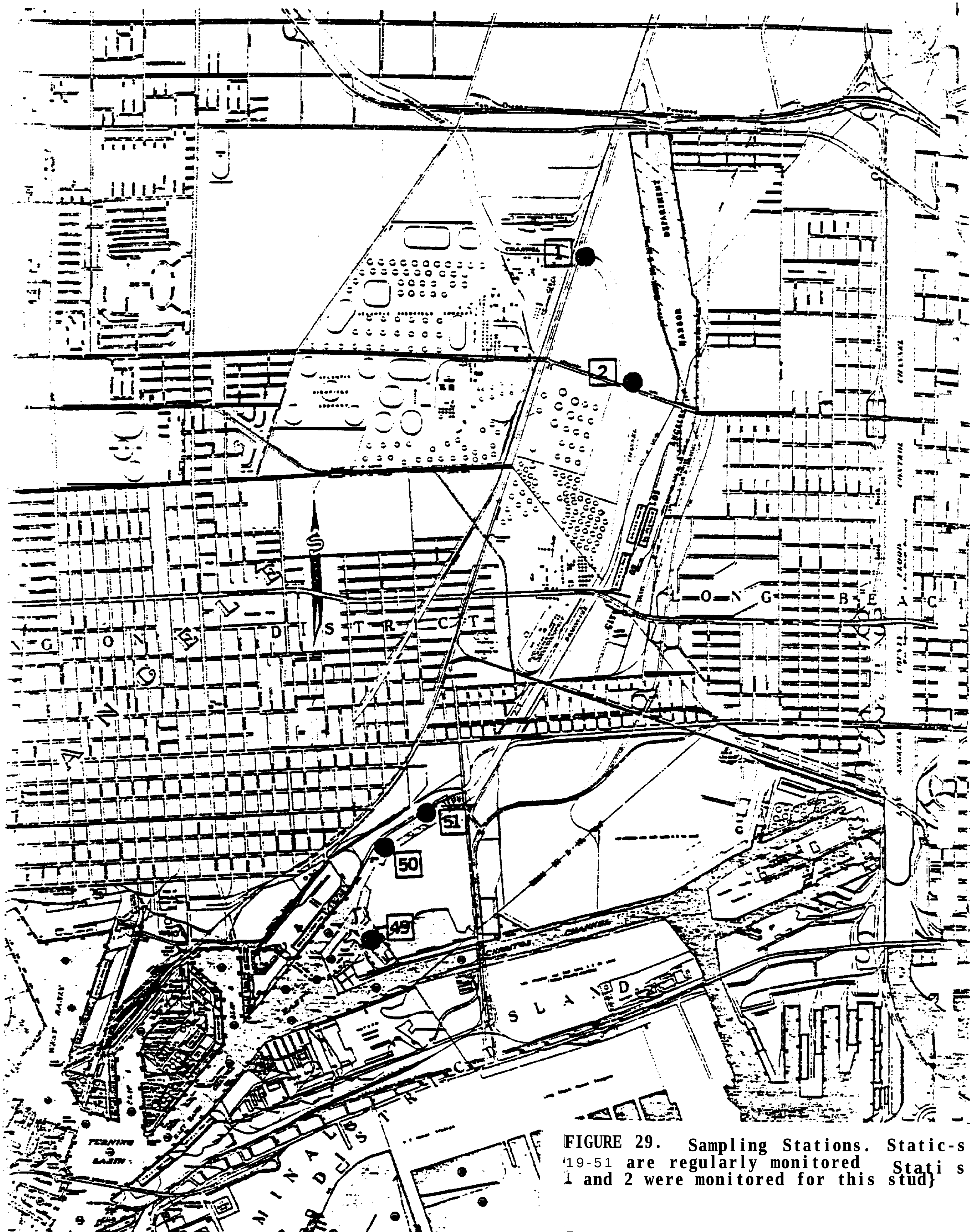


FIGURE 29. Sampling Stations. Static-s 19-51 are regularly monitored Stati s 1 and 2 were monitored for this stud}

3.2.2 IMPACTS

Paving of the ICTF project site will cause changes in absorption and drainage patterns at the location. The site will receive very little percolation: instead, water runoff will flow into a storm drain system eventually dumping into the Dominguez Channel. Inputs to the channel will only occur after rainfall over the site.

The water flowing into the drain will be typical of pavement runoff throughout the basin.

Storm runoff flowing dawn Dominguez Channel affects harbor water quality. Storm water washes off dirt, organic matter, and trash from paved surfaces into flood control channels. The materials give the runoff relatively high B.O.D. levels. This translates to temporary lowering of the D.O. in the receiving water. Water with lowered D.O. becomes less capable of supporting animal life.

Inputs of storm water from the ICTF to the Dominguez Channel will be insignificant compared to the tremendous volume carried by the Channel after a period of rainfall. *A* 0.5 inch rain over the site (exceeded only 9 days per year, SCAQMD 1980) would put approximately 2.17 MGD of runoff into the Channel.

Hazardous or toxic liquid chemicals, if spilled at the project, have the potential of reaching the channel and affecting harbor water quality. The careful *operation* of the project will limit these chances, Spill containrent controls have have incorporated into the project to prevent the spill from reaching the channel (see Section 3.6). Containers carrying hazardous materials will be segregated in a specific area which will be designed so spilled liquids will be directed to a central sump area. Dry chemicals spilled at the project during operation also havethe potential to be washed into the channel with the runoff from rainfall. Proper clean-up procedures after a spill will limit the impacts of *this occurrence.*

3.2.3 UNAVOIDABLE ADVERSE IMPACTS

Input of storm water runoff from the ICTF site to the Dominguez Channel is unavoidable.

3.2.4 CUMULATIVE IMPACTS

Cumulative impacts to harbor water quality from the project are expected to be insignificant

3.2.5 MITIGATIONS

Storm drain design will incorporate oil and grease traps in storm drains at the maintenance areas. Procedures have been developed to control and clean up spills of liquid or dry chemicals that have the potential of affecting water quality within Dominguez Channel or the harbors.

3.3 HABITATS AND BIOTA
SUMMARY

Setting:

Terrestrial Plant and Animal Communities. The proposed project site consists of extensive areas that are vacant or covered with asphalt, gravel or sandy dredged material. The plant community consists principally of invading or pioneer species. Few animal species utilize the site. There are no unique biologic habitats on or adjacent to the site. No rare, endangered, or threatened species of plant or animal are known to utilize the site.

Marine Communities. The Dominguez Channel will receive storm water runoff from the ICTF site. Species diversity is generally low, since most animal species are not tolerant to the extremes experienced in the channel. Small fish species, such as the topsmelt, are the most abundant species observed.

Impacts :

Terrestrial Plant and -Animal Communities. Construction and operation of the proposed project will result in elimination of most existing terrestrial habitats for flora and fauna at the project site. However, the impacts on the quantity and diversity of specie; and habitat Will be insignificant.

Marine Communities. Impacts to marine communities will not be significant, since the amount of storm water runoff from the ICTF will be minor relative to total storm water runoff input to the Dominguez Channel.

Mitigations:

No mitigations for loss of habitats and biota are necessary.

3.3 HABITATS AND BIOTA

3.3.1 SETTING

3.3.1.1 Terrestrial Plant and Animal Communities. The proposed project site is essentially a flat unimproved parcel. There are extensive areas that are vacant or covered with asphalt, gravel, or sandy dredged material. The soil cover the majority of the site is sand, silt, and clay. The site is characterized by several vegetation types, including coastal strand, volunteer native and introduced plant species common on disturbed terrain, and agricultural crop vegetation.

The proposed site has scattered patches of flora. In a plant survey in November 1981, the plant species listed in Table 11 were identified. The vegetation consisted principally of invading or pioneer species. Many of the plants are annuals and are characteristic of highly disturbed environments. Table 12 is a species list of plants previously identified in the LAHD classification yard area (Macmillan Oil Company Final Environmental Impact Report, This list is representative of plant species that may be found at the site during the year.

In addition to naturally-occurring plant species, a variety of agricultural crops and species of commercial flowers are cultivated in the SCE transmission line right-of-way.

Little fauna (animal) life was observed at the site. There are indications (from observation and previous reports) that ground squirrels, lizards, gophers, jack rabbits, brush rabbits, small rodents, and domestic animals (dogs and cats) frequent the site. Numerous mourning doves and occasionally birds of prey, including burrowing owl, forage at the site.

There are no unique biologic habitats on *or* adjacent to the site. No rare, endangered or threatened species of plant or animal are known to utilize the site.

3.3.1.2 Marine Communities. The Dominguez Channel is a major flood control channel of the Los Angeles County Flood Control District. The channel drains tributary channels in the south bay region, and ultimately empties into the Consolidated Slip of Los Angeles Harbor. Water quality within the channel is generally poor. The channel will receive storm water runoff from the ICTF site.

Most animals are not tolerant to the extremes experienced in the channel. Fish species live in the water column of the tidal prism during dry periods, but disappear during and immdiately following a period of heavy rainfall. They reappear within a short period after the tidal prism is reestablished (Port of Long Beach, 1976).

Sampling made for thermal effects studies of discharges into the channel (Truesdail Labs 1971) found limited marine biota along the tidal reach. No significant amount of plankton was observed, and there was a near absence of benthic organisms in the anaercbic bottom, The topsmelt Atherinops affinis was The most abundant species observed. The mosquitofish Gambusia sp. is a freshwater species tolerant of the brackish waters at the upper end of the tidal prism.

TABLE 11

PLANT SPECIES IDENTIFIED AT THE PROPOSED ICTF SITE
ON A FIELD SURVEY, NOVEMBER 1981

Common Name	Scientific Name
Saltbush	Atriplex rosea
Mule fat	Baccharis viminea
Mustard	Brassica geniculata
White pigweed	Chenopodium album
Bermuda grass	Cynodon dactylon
Common sunflower	Helianthus annuus
Camphor weed	Heterotheca grandiflora
Cheese-weed	Malva parviflora
White Melilot	Melilotus alba
Tree tobacco	Nicotiana glauca
Wild radish	Raphanus sativus
Castor bean	Ricinus communis
Russian thistle	Salsola postifera

TABLE 12

PLANT SPECIES IDENTIFIED IN THE LAHD CLASSIFICATION YARD AREA*

Common Name	Scientific Names
Tumbleweed	Amaranthus albus
Narrow - leaf milkweed	Asclepias moxicana
oat	Avena barbata Brot.
Baccharis	Baccharis emoryi
Mule fat	Baccharis viminea DC.
Saltbush	Bassia hyssopifolia
Mustard	Brassica geniculata
"Ripgut" grass	Bromus diandrus
Soft chess	Bromus molis
Red brome	Bromus rubens
Hoary-cross	Cardaria draba
Tocaloto, Noon thistle	Centaurea melitensis
White pigweed, White goosefoot Lamb's quarters	Chenopodium album
Chrysanthemum	Chrysanthemum coronarium
Conyza	Conyza bonariensis
Wart cross	Coronopus didymus
Bermuda grass, Devil grass	Cynodon dactylon
Chufa, Rush-nut	Cyperus esculentus
Salt grass	Distilchlis spicata
Fleabane	Erigeron sp.
Storksbill	Erodium botrys
Rat's-tail fescue	Festuc myuros
Franseria	Franseria acanthicarpa
Cudweed	Gnaphalium sp.
Haplopappus	Haplopappus venetus
Common sunflower	Helianthus annus
Chinese pulsey	Heliotropium curassavicum
Tarweed	Hemizonia australis
Camphor weed, Telegraph weed	Heterotheca grandiflora
Wild barley	Hordeum plaucum
Prickly lettuce	Lactuca serriola
Lepidium	Lepidium lasiocarpum
Lepidospartum	Lepidospartum squamatum
Italian rye grass, Australian rye grass	multiflorum
Cheese-weed	Malva parviflora
white melilot	Melilotus alba
Yellow melilot	Melilotus indica
Iceplant	Mesembryanthemum crystallinum
Fig marigold	Mesembryanthemum nudiflorum
Tree tobacco	Nicotiana glauca
Polygonum	Polygonum arenastrum
Wire grass, Yard grass	Polypogon aviculare
Beard grass	Polypogon monsnoliensis
Wild radish	Raphanus sativus
Castor bean	Ricinus communis
Curly dock	Rumex crispus
Russian thistle	Salsola postifera
Club rush, Three square	Scirpus americanus
Tumble-mustard	Sisymbrium orientale
Common sow thistle, Hare's Lettuce	Sonchus cluraceus
Staphanomerin	Staphanomerin vifgata
Cocklebur	Xanthium strumarium

* From Macmillan Oil Company Final EIR, 1974.

biota survey of the lower channel was undertaken for the Port of Long Beach Shell Oil Pipeline RR (POLB, 1974). Benthic (bottom-dwelling) species were in relative abudance, indicating that the condition of the bottom improved after the previous studies- As in the earlier studies, no significant amount of planktonwas observed$_o$. Several species of algae were present along the bank and on pilings. The biota observed in the two surveys are listed in Table 13.

3-3.2 IMPACTS

3.3.2.1 Terrestrial Plant and Animal Communities. Construction and operation of the proposed project will result in the elimination of most existing terrestrial habitats for flora and fauna at the present site. The existing vegetation will be removed$_r$ and most of the site will be covered with paving. The plants would be permanently lost, but most of the animals would move to adjacentareas.

The impact on the quantity and diversity of plant and animal species and habitats will not be significant. The diversity of the plant and animal life found at the project site is limited and characteristic of areas disturbed by man. The area is regularly cut for weed control and fire abatement, Portions of the site were used in the past for dredged material disposal and as a drag strip.

The project will also result in the reduction of land available for agricultural/horticulturaL crops. However, the amount of crops cultivated is minimal and the reduction in acreage (approximately 60 acres) will be insignificant, Ornamental landscape plants will be installed and will provide limited habitats for animal life.

3.3.2.2 Marine Communities. Impacts to marine communities will not be significant. Storm water runoff from the ICTF will be minor compared to the total flow carried by the Dominguez Channel after a period of heavy rainfall (see Section 3.2).

3.3.3 UNAVOIDABLE ADVERSE IMPACTS

Unavoidable adverse impacts on terrestrial biota and habitats within the project site include: permanent loss of existing flora, loss of or disturbance toexisting fauna,andreduction in terrestrial habitats available for fauna and flora (including agricultural crop cultivation).

Inputs of storm water to Dominguez Channel is unavoidable, but will not significantly imact marine comnunities when compared to the normal total flow of the channel after a period of rainfall.

3.3.4 CUMULATIVE IMPACTS

Project implementation will contribute to the incremental reduction of terrestrial habitats for plant and animal communities, However, the terrestrial habitats within the project site are disturbed and do not support unique or diverse species of flora or fauna.

3.3.5 MITIGATIONS

No mitigations for loss of terrestrial biota or habitats are necessary. **Landscape** material to be planted will provide limited habitats for animal **species.**

TABLE 13

DOMINGUEZ CHANNEL MARINE SPECIES LIST

Coelenterata:	
Obelia sp.	Hydroid
Annelida:	
Polychaetes various species	
Mollusca:	
Aplysia californica	Sea Hare
Archidoris montereyensis	Dorid Seaslug
Crepidula fornicata	Slipper shell
Mytilus edulis	Bay Mussel
Navanax inermis	Striped Sea Hare
Protothaca staminea	Littleneck Clam
Arthropoda:	
Balanus amphitrite	Acorn Barnacle'
Balanus glandula	Acorn Barnacle
Hemigrapsus oregonensis	Yellow Shore Crab
Hippolytidae	Brackish Water Shrimp
Palaemon macrodactylus	Shrimp
Bryozoa:	
Cryptossula pallasiana	Bryozoan
Chordata, Osteichthyes:	
Anchoa compressa	Deepbody Anchovy
Atherinops affinis	Topsmelt
Clevelandia ios	Arrow Goby
Cymatogastor aggregata	shinerSurfperch
Engraulis mordax	Northern Anchovy
Fundulus parvipinnis	California Killifish
Gambusia sp.	Mosquitofish
Phanerodon furcatus	White Surfperch
Seriphus politus	Queenfish

source: Port of Long Beach (1976):
Shell Oil Co. Pipeline EIR
Truesdail Lab (1971):
Therman Effects Studies

NOISE

3.4.1 **SETTING**

3.4.1.1 Noise Assessment. A noise assessment study for the proposed project was completed by J.J. Van Houten and Associates, Inc.. A COPY of the noise study document "Noise Assessment Study for tie Intermodal Container Transfer Facilty (ICTF)", is available for review at the LAHD, Environmental Management Office, 425 S. Palos Verdes St., San Pedro, California. This assessment includes measurements of the existing noise associated with rail and arterial, traffic within the general vicinity of the site and at locations along the rail and arterial system to the South and north of the proposed facility. It also includes an assessment or noise levels which will be generated as a result of the project's operation. Extensive measurements were obtained at the southern Pacific Railroad (SPrr) transportation center in central Los Angeles. This latter data was used to assess the future noise of: ICTF operations and potential impact at nearby noise-sensitive locations.

Analyses were performed to assess and project the future noise associated with rail movements, arterial traffic, and ICTF operations, both with and without the project. For each noise source activity, the three phases of the ICTF development were considered.

3.4.1.2 Noise Evaluation Criteria. Below. is a description or the measures of sound level and noise exposure used to characterize and evaluate *the* existing noise levels. These values were applied to make the assessment of the impacts of noise emitted from the proposed ICTF and from associated activities upon certain noise receptor areas.

° **A-weighted Sound Level**

The scale of measurement which is most useful in community noise measurement is the' A-weighted sound pressure level, commonly called the A-level or dB (A). It is measured in decibels to provide a scale of pure tones within the range and characteristics most consistent with that of people's hearing ability. An analysis of recordings of A-level values for noise is useful in determining the potential annoyance of sounds. For this noise evaluation the following values were used:

° L99 -This value is representative of: a minimum A-weighted sound level, that is exceeded 99 percent of the time by higher sound levels during theperiod when the sound measurements were taken.

- 3

* L90 - This value is indicative of a near minimum A-weighted sound level. This value is exceeded 90% of the time by higher sound levels.

° **L50** - This value represents the central tendency of tie sound levels **recorded**. This A-weighted sound level is exceeded 50% of the time during the measurement period.

° L10 - Sound levels recorded at this value are near the maximum A-weighted sound levels for the area surveyed. Only during 10% of the measurement time are noise levels recorded greater than this value.

- L_1 - This value is representative of a maximum A-weighted sound level This is exceeded only 1% of the time during the period when the sound measurements were taken-

- L_{eq} - This represents the Equivalent Sound Level and is useful to characterize environmental noise. L_{eq} is detined as an A-weighted sound level which contains the sam sound energy as the variable sound energy measured during a specific timeperiod.

Measures of the values above were obtained to provide representative samples cf the existing noise during the time period being examined (e-q., peak traffic period, morning, afternocn, niqht, etc.); then the follcwinq noise evaluation criteria were calculated:

- Community Noise Equivalent Level (CNEL)

It is recognized that a given level ot noise may be more or less tolerable depending on the duration of exposure and the tme of day the noise was experiencedbyantiividual. The CNEL takes into account the duration and when the noise is encountered. This measure considers aweighted averaqe sound level for the evening hours (7:OO p.m. to 10:00 p.m.) increased by 5 dB and the late evening and early morning hours (10:00 p.m. to 7:00 a.m.) increased by 10 dB. In general, early evening noise exposures are penalized +5 dB, and later noise exposures are penalized +10dB. Daytime noise levels (7:OO A.M. to 7:00 P.M.) are not adjusted.

- Sound Exposure level (SEL)

The SEL, or the Single Event Noise Exposure Level, is a sound measurement that indicates the maximum sound energy perceived above background sound levels over a short period of time. For example, the SEL can best aescribe the maximum noise exposure emitted by apassingtrain, truck or airplane (see Table'81 and Figures Bl-86 in Appendix 6.3B).

3.4.1.3 Wise Source And Level Characteristics And The Decibel Scale. In order to assist the reader to understand how a decibel (dB) reading may be related tc everyday sound level experiences, the following figures are provided in Append&x 6.3B: Flqure 87 (Representative Noise Sources and Sound Levels) and Fiqure B8 (Outdoor Noise Exposures at Various bcations).

To the human ear, each 1O dB increase seems twice as loud. In some ways, the decibel scale resembles the Richter Scale for earthquakes. Thedeciklis a logarithmic value of a ratio cetween a reference sounduower and a sound uower transmitted in a sound wave: therefore, tar every one decibe1 increase in sound, there is a-ten fold increase in the sound enercy received. For a norm1 'human population, the begin&q threshold for hearing-is between 16 and 20 dB: and the threshold of pain and probable hearinq loss is 130-149 dB. The human ear also does not hear all sounds squally. Because hearing also varies widely between individuals, what may seem loud to one person nay not to anotner. Althouqh loudness is a personal judqement, precise measurement of sound made possible byuseof the decibel scale.

3.4.1.4 Noise Environment. The ICTF is proposed to be built on a site bounded by sepilveda Boulevard on the south, 223rd Street on the north, Alameda street on the west, and the Southern California Edison powerline right-of-way on the east. Property to the east of the site is within the City of Long Beach and property to the west is in the City of Carson. The noise-related land use policies of these cities are found in Table 14. Figures 30a and 30b, and Table 15 identify the study area where existing noise measurements were obtained at 22 positions including a location within the naval housing project adjacent to the Terminal Island Freeway (Route 47) and residential locations directly east of the praposed ICTF site, east of the existing Dolores Yard and Alameda Street, and along the Wilmington and San Pedro Branches of the SPrr. Table 16 lists a summary of existing sound levels described by Ll_r LlO, L50, LgO, L99, +, SEL, and CNEL noise level criteria. Ambient noise measurement data summeries depicting existing noise levels for the 22 survey locations are available in the 'Noise Assessment Study for the Intermodal. Container Transfer Facility (ICTF)" on file with L.A.H.D. Examples of data summaries taken at areas affected by railroad and street traffic movements are provided in the appendices as follows:

Figure	Land use	Noise Source	Location
Bl	Stephen's Jr. High School	Traffic, aircraft	Long Beach
B2	Windward Village Mobile Home Park	Railroad (UPrr)	Long Beach
B3	Residential	Traffic	Carson
B4	Dominguez Seminary	Railroad (SPrr)	Compton
B5	Compton Neighborhood center	Traffic	Compton
B6	Residential area	Railroad. (SPrr)	Roosevelt Park.

The dominant existing n+se sources which may impinge upon sound receptor areas near the ICTF site and the associated railroad lines are train movements and train whistles. Table Bl, in Appendix 6.38, has a summary of the existing SEL values for coal, freight, switcher, and *grain train* movements adjacent to the uprr line. The train movement SEL values range from 76.6 dB(A) to 100.5 dB(A).

As expressed by public comment, the most in,trusiq noise source is the train whistle. The sounding of a train's horn is required by the State Public Utility Commission prior to all at-grade crossings. When experienced at residential locations, The sound of the warninq device may be very annoying. Figure 31 indicates the sound level which is likely to be experienced at various distances frcun the locomotive. Sound levels as high as 90 to even 95 dB(A) are not uncommon and are now experienced at many residential locations along the Wilmington Branch and, to a lesser extent, along the San Pedro Branch of the Sprr. It is not possible to reduce or eliminate the sound level of the warning devices since this would defeat its purpose. It is a necessary by-product of rail movement activity within developed urban areas.

Table 14 - Noise Related Land Use Policies of the Cities and County Within the ICTF Study Area

CITY	DATE NOISE ELEMENT ADOPTED	NOISE RELATED LAND USE POLICIES, MAXIMUM PERMITTED CNEL		COMMENTS REGARDING POLICIES	POLICIES REGARDING RAILROAD NOISE
		EXTERIOR	INTERIOR		
Carson	September 1977	65 dB	45 dB		Discourage late night/early morning movements. Consider redevelopment and/or noise barriers along right-of-way. Encourage limiting of horn soundings
Compton	January 1976	*	N/S	Interior CNEL of 45 dB interpreted from Noise Element. Exterior CNEL for new construction: 55 dB or less	
Huntington Park	N/S	65	N/S	Interior CNEL of 45 dB interpreted from Noise Element	
Long Beach	March 1975	N/S	45	Exterior CNEL of 65 dB interpreted from Noise Element	New residential construction adjacent to railroad should be insulated from noise. Consideration should be given to ground-borne vibration
Los Angeles (City)	September 1975	N/S	45	Exterior CNEL of 65 dB interpreted from Noise Element	Encourage use of welded rail
Lynwood	N/S	N/S	N/S	Exterior CNEL of 65 dB and interior CNEL of 45 dB interpreted from Noise Element	
South Gate	August 1974	N/S	N/S	Exterior CNEL of 65 dB and interior CNEL of 45 dB interpreted from Noise Element	Encourage scheduling of freight trains during daytime hours
Vernon	September 1974	N/S	N/S	Exterior CNEL of 65 dB and interior CNEL of 45 dB interpreted from Noise Element	
Los Angeles (County)	October 1974	N/S	45	Exterior CNEL of 65 dB interpreted from Noise Element	Encourage noise abatement measures adjacent to all rail lines

N/S: Not Specified

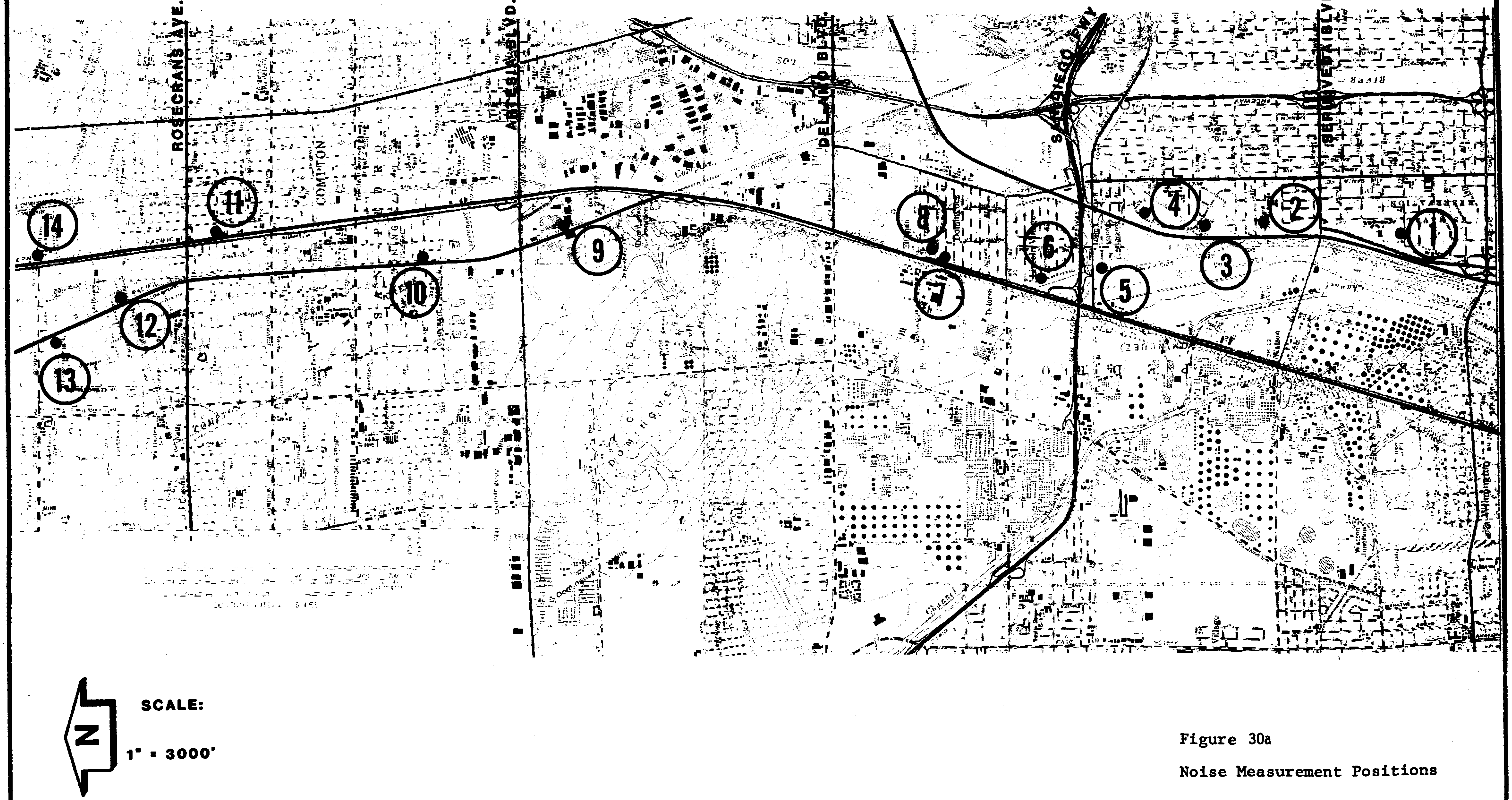
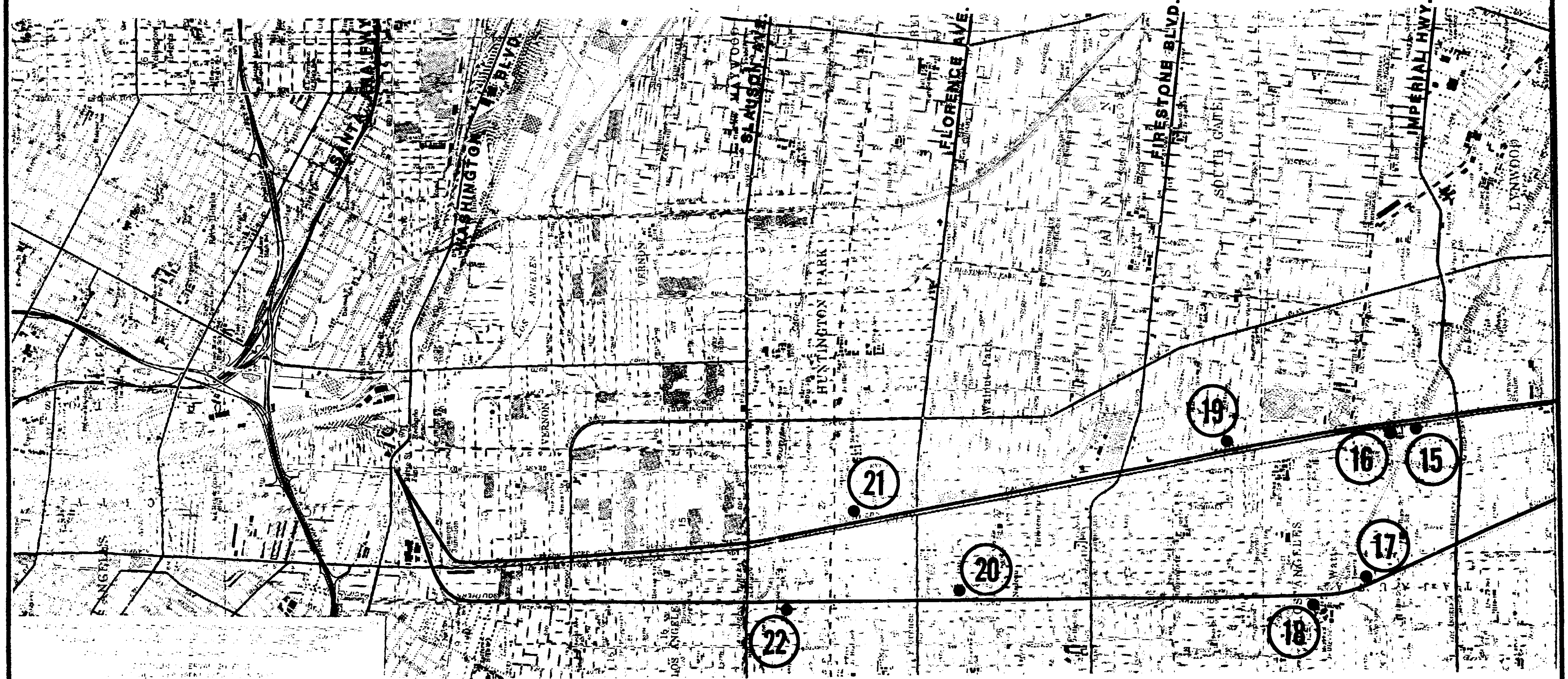


Figure 30a

Noise Measurement Positions

*For an index to locations refer to Table 17.



N

SCALE:

1" = 3000'

Figure 30b (Continued)

Noise Measurement Positions

*For an index to locations refer to Table 17

Table 15 - Noise Measurement Data Summary for the Study Area

Position #	Location	Jurisdiction	Existing Land Use	Distance to RR	Distance to Arterial	Hours Measured
1	Burnett St., Adj. to Rt. 47 Fwy.	Long Beach	Elizabeth Hudson Ele. Sch.	400'	230'	1
2	Columbia St., E of UPRR	Long Beach	Stephens J. High School	500'	N/A	1
3	Adjacent to Playground, UPRR to West	Long Beach	Webster School Playground	500'+	N/A	1
4	Windward Village Mobile Home Park, Space 93, E of UPRR	Long Beach	Mobile Homes	51'	N/A	48
5	Hesperian Ave. & Cameron, S of Rt. 405 Fwy.	Long Beach	Residential	N/A	400'	1
6	Salmon Ave., Adj. to Alameda St.	Carson	Residential	220'	95'	24
7	Motel, Jackson St. & Alameda St.	Carson	Commercial/Residential	150'	30'	24
8	Homes Nearest Alameda on Van Buren	Carson	Residential	230'	112'	1
9	Dominguez Seminary, Adj. to SPRR	Compton	Seminary	60'	N/A	74
10	Willowbrook St. & Bennett St., SPRR	Compton	Residential	100'	25'	1
11	Alameda St. & Elm St., SPRR	Compton	Compton Neighborhood Center	100'	35'	1
12	Willowbrook St. & Winona St.	Compton/County	Residential	130'	20'	1
13	Willowbrook St. & 130th St.	L. A. County	Marian Anderson School	140'	35'	1
14	Alameda St. & El Segundo Blvd.	Compton	Exceptional Adult Center	120'	35'	1
15	Alameda St. & Santa Ana Blvd.	County/Lynwood	Residential	110'	40'	1
16	Alameda St. & 111th St.	L. A. County	Ritter School	120'	60'	1
17	Willowbrook St. & 109th St.	Los Angeles	Residential	100'	25'	1
18	Grandee Ave. & 104th St.	Los Angeles	Edwin Markham Jr. H. S.	140'	N/A	1
19	Alameda St. & Indiana Ave.	South Gate	Residential	110'	130'	1
20	Graham Ave., Parking Lot	L. A. County	F. D. Roosevelt Playgound	100'	N/A	1
21	Zoe Ave. & Regent St.	Huntington Park	Residential	160'	N/A	1
22	60th St. at SPRR	L. A. County	Residential	100'	N/A	1

By illustrating a cross section of an examination area (refer to Figure 32 for the location of these areas), **Figures** 33a through 33d show the noise exposure level variations, expressed in CNEL (dB), as a function of the distance from proposed noises sources such as ICTF equipment, rail activities and arterial movements, to a noise receptor. Existing noise exposure levels at various distances taken from these locations are summarized as follows:

Location	Distance from	Sound level (CNEL) at, SO'	100'	200'	400' in dB(A)
° A	Rt. 47 **FWY** centerline	70	66	**61**	56
° B	**Union Pacific Railroad**	65	63	**59**	*
° C	**Union Pacific Railroad**	64	62	**58**	*
° D	**Working** tracks	63	60	56	*
° F	**Alameda** Street	66	**61**	**57**	*
° H	**Alameda** street	69	64	**60**	*
° J	**San Pedro Branch, SPRR**	**69**	66	**63**	57
° K	**Wilmington Branch,** SPRR	**65**	63	59	*
° L	**Long** Beach Avenue	60	*		

1 Refer to **Figure** 32
* **CNEL less** than **55 dB(A)**

3.4.1.5 Noise-Sensitive Locations. Scnvols, parks, play grounds, and other locations where people meet to communicate and relax are considered to be noise sensitive locations. Tables B7 and B8, in Appendix 6.3B, provide the existing near maximum noise levels (Ll and LlO) measured at ten representative locations within the study area considered to he noisesensitive. The California Streets and Highways Code indicates that classrooms should not be exposed to an interior sound level Treater than SO dB(A). By subtractinq 15 dB for partially open windows, and 20 dB for closed windows from the exterior noise level (Ll), the interior noise level (Ll) can be determined. The following noise sensitive locations may experience existing interior sound levels (Ll) exceeding 50 dB(A):

Location	Existing exterior sound level, L-p in dB(A)	Probable existing interior noise level Ll in dB(A). Windows: open,	closed
Elizabeth Hudson Elementary School	70	**55**	SO
Dominguez seminary	**71**	56	Sl
Marian Anderson School	**70**	**55**	SO
Ritter School	70	**55**	50
Edward Markham Jr. Hiqh School	67	**52**	47
F. D. Roosevelt Playground	70	**55**	50

TABLE 16

A sum-nary of field noise level data collected December 1981 and January 1982 at positions 1 thru 22 (see Figures 30a & 30b for position locations) near the ICTF project site and adjacent to the traffic arteries and railroad lines.

		A-Weighted Sound Level 11							Single Event Data1			
* Position	Noise Source[2]	L_1	L_{10}	L_{50}	L_{90}	L_{99}	L_{eq}	CNEL	SEL	L_{eq}	Time (sec.)	Noise Source
1	T	96.5	66.8	61.3	54.3	52.0	62.9	65.0				
2	T,A	65.4	63.2	57.3	50.0	49.7	60.0					
3	T,A	70.8	66.5	58.3	52.0	50.5	61.8	65.0*				
4	R		53.0	51.0	49.0		65.6	65.1				
5	T	75.8	67.5	61.3	58.0	57.0	64.7	62.0*				
6	T,R		66.0	59.0	55.0		63.1	63.0				
7	T,R		72.0	64.0	55.0		69.5	69.5				
8	T	72.8	70.5	61.3	52.8	50.5	67.3					
9	R		67.0	51.0	48.0		70.6	66.1				
10	R		60.0	52.5	42.3		56.5		100.6	77.5	199.4	SPrr Hauler
11	T	66.8	62.3	52.0	43.0	40.0	56.6	62.0*				
12	T	66.8	62.3	52.0	39.8	36.0	57.4					
13	T,R	55,8	53.8	50.3	48.8	48.3	52.5	62.0"				
14	T	73.8	67.8	63.0	58.8	57.3	64.5					
15	T	69.5	67.8	63.0	59.0	56.3	64.1					
16	T,R	69.8	67.3	61.0	58.0	57.0	63.3					
17	T		63.5	55.2	43.0		59.4		105.5	81.0	282.9	SPrr Hauler
18	R,T	55.0	53.6	50.5	49.0	48.1	53.0					
19	R,T	67.3	60.3	54.5	43.3	36.8	57.2	66.0*				
20	R		62.3	52.5	4ii.3		57.8		103.8	82.5	134.5	SPrr Hauler
21	T	67.0	62.8	58.3	44.5	43.0	59.3					
22	T		62.1	51.3	40.0		57.3	65.0*	100.8	77.3	222.8	SPrr Hauler

1. Sound level values are in dB(A)
2. Noise source: T (traffic); A (airplane); R (railroad)
* Values taken from Table V in "Noise Assessment Study for the ICTF" by Van Houten (1982).

TRAIN AND HORN SOUNDING LEVELS

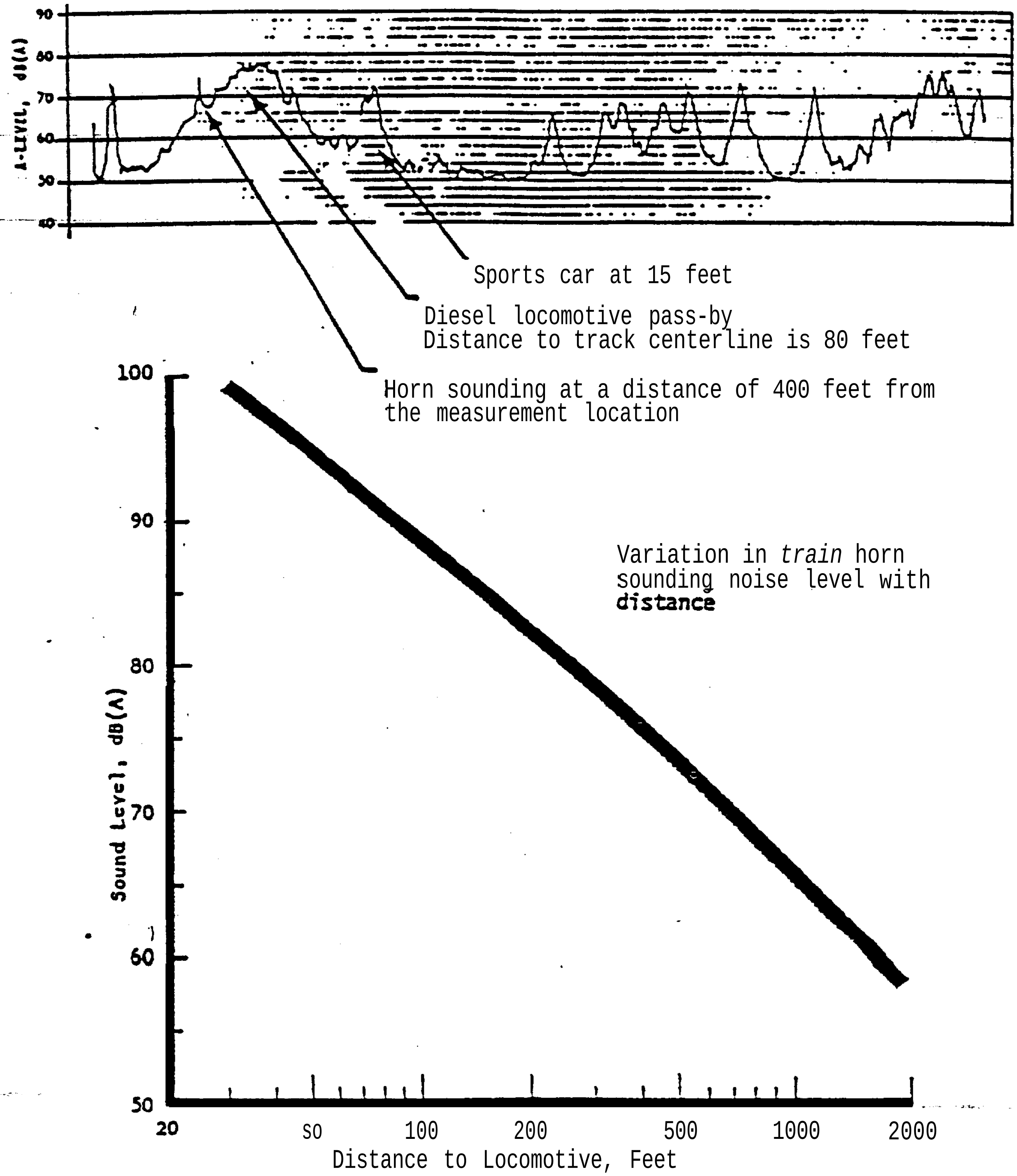


Figure 33 - Variation in Train Horn Sounding Level With Distance to Locomotive

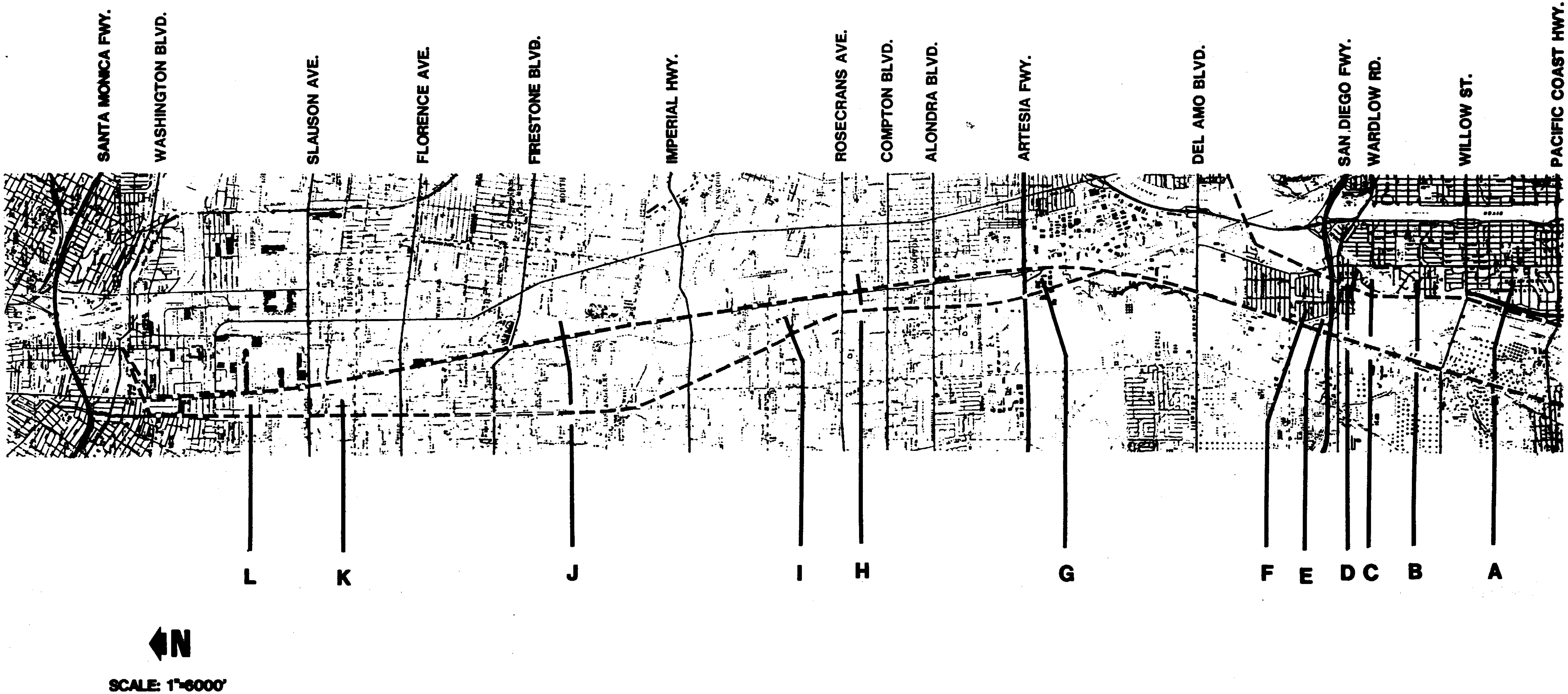
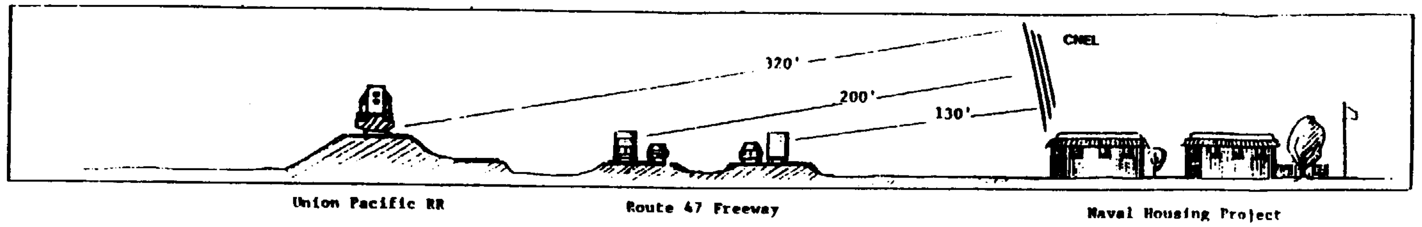


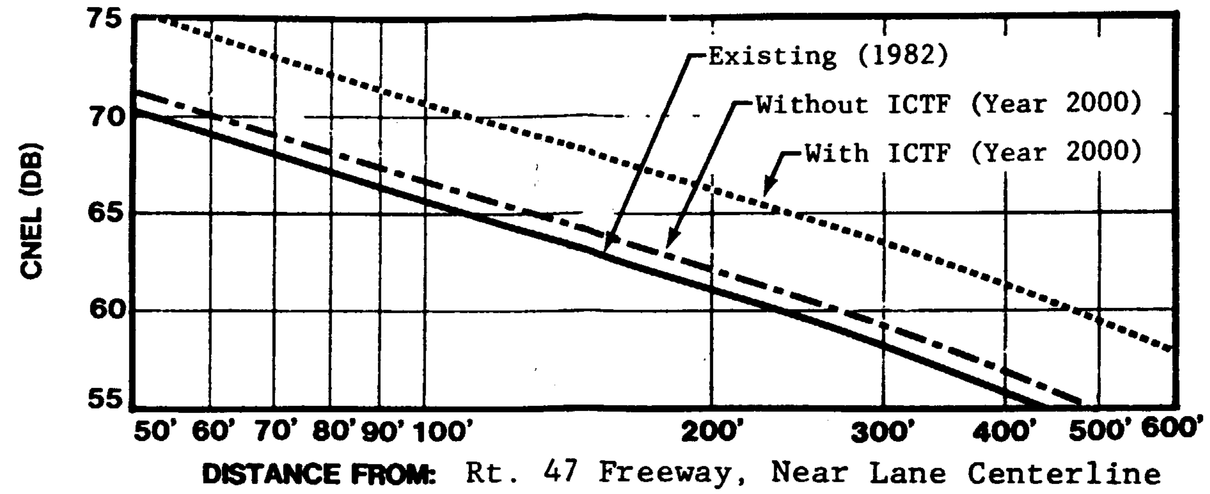
Figure 32

Cross Sections Considered in the Examination of Noise Exposures With and Without the ICTF Project

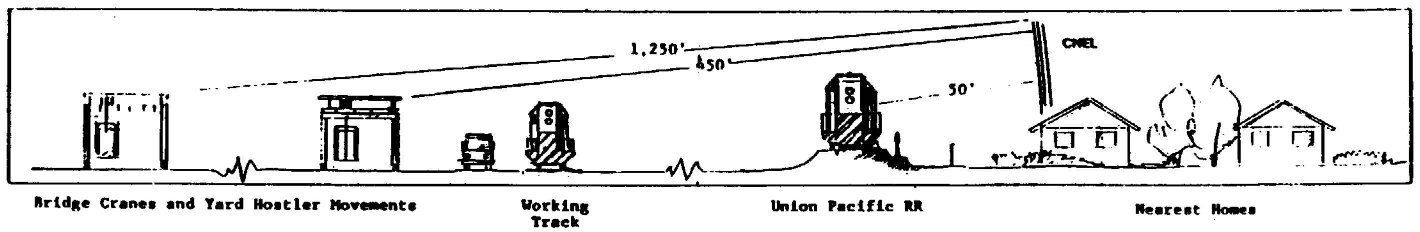
Figure 33a - Noise Exposure Variation With Distance from ICTF Equipment, Rail Activity, & Arterial Movements

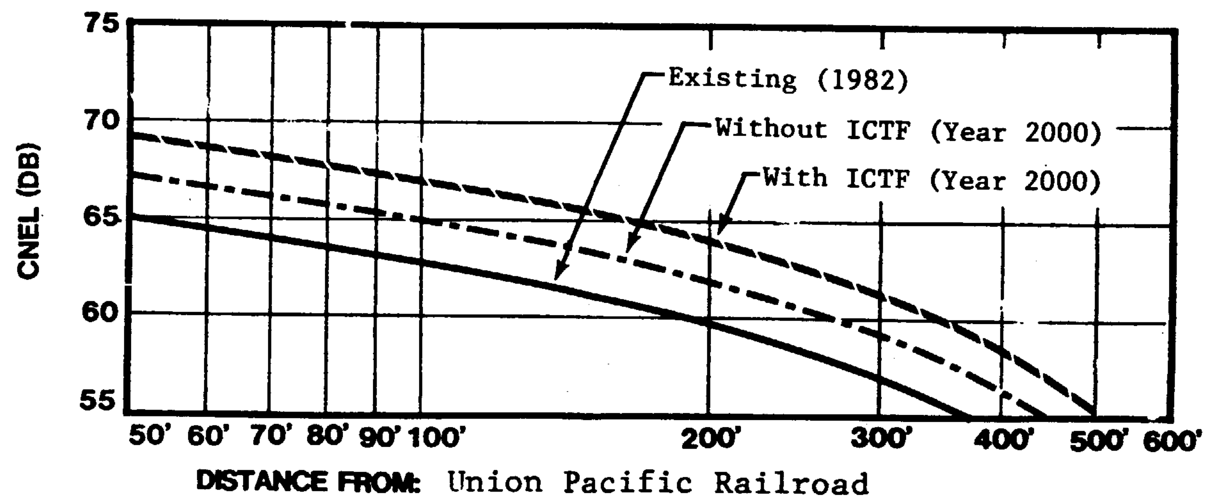
LOCATION: A Naval Housing Project Adjacent to the Rt. 47 Freeway & UPRR



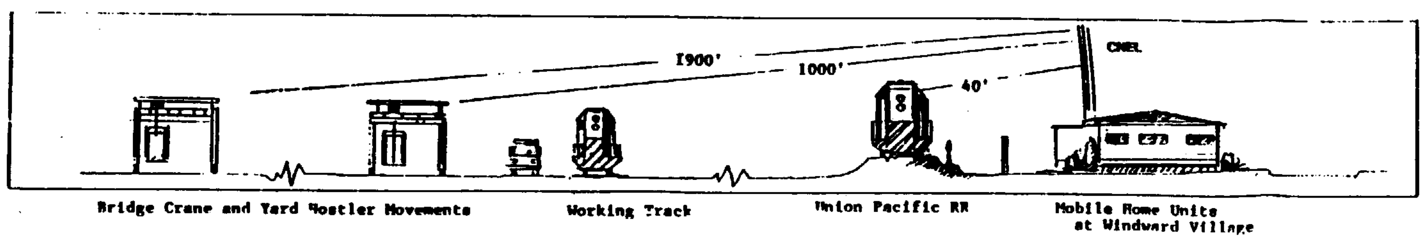


LOCATION: B Nearest Homes (About Spring St.) Adjacent to the UPRR & Proposed ICTF





LOCATION: C Nearest Mobile Homes (Windward Village) Adjacent to the UPRR and Proposed ICTF



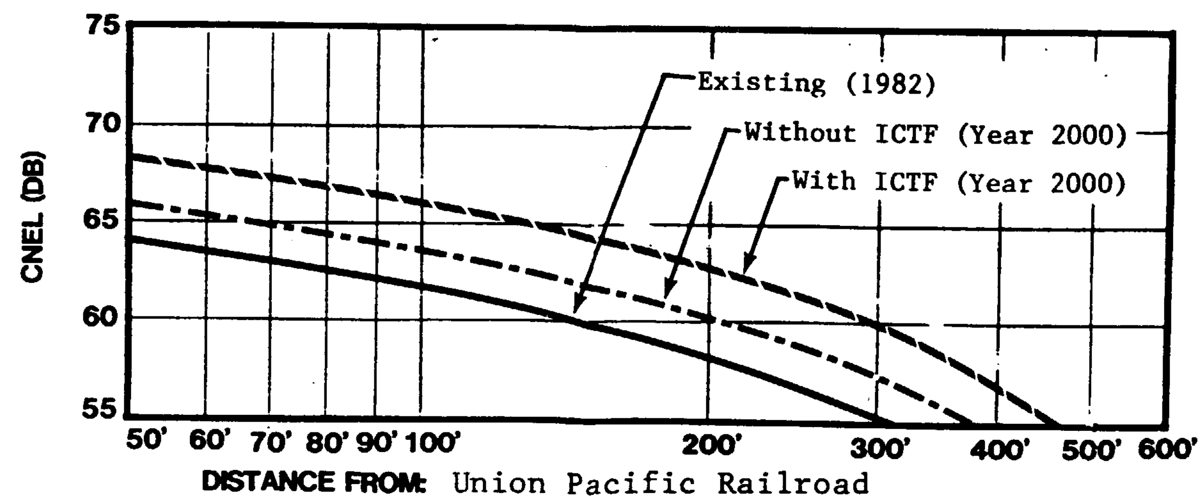
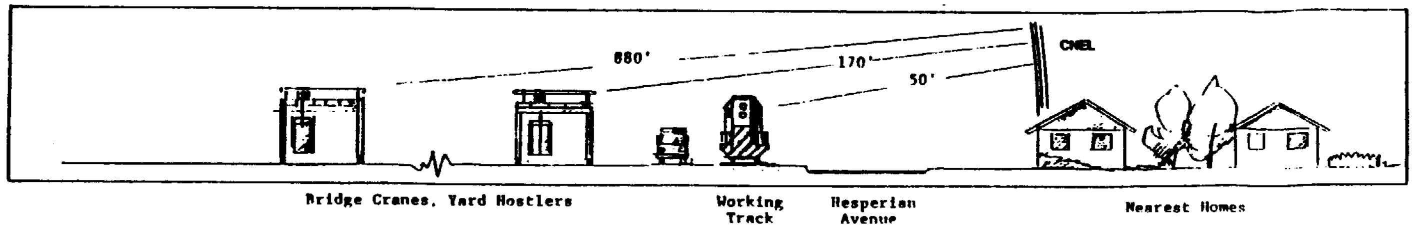
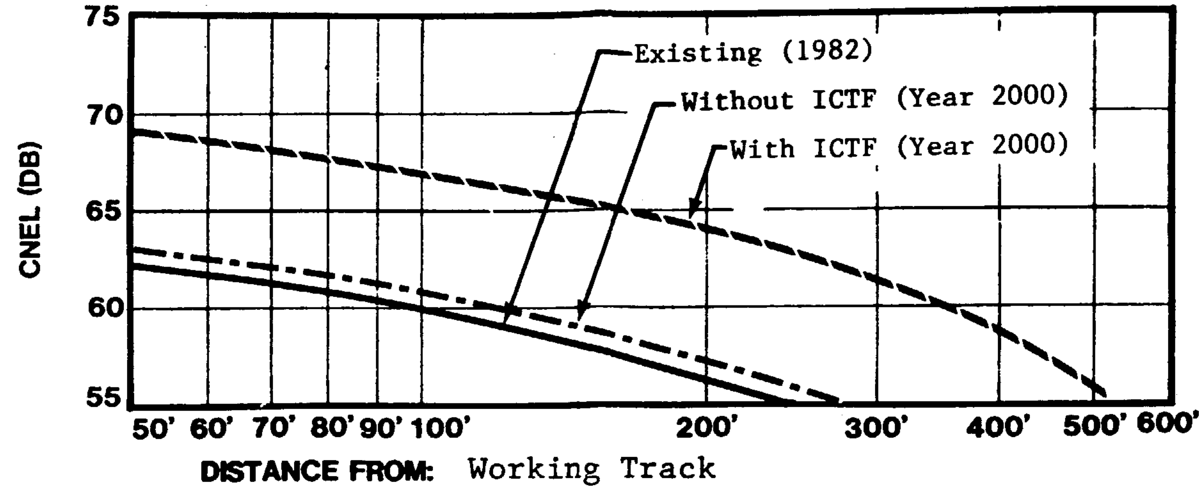


Figure 33b - Noise Exposure Variation With Distance from ICTF Equipment, Rail Activity, & Arterial Movements, Continued
Page Two

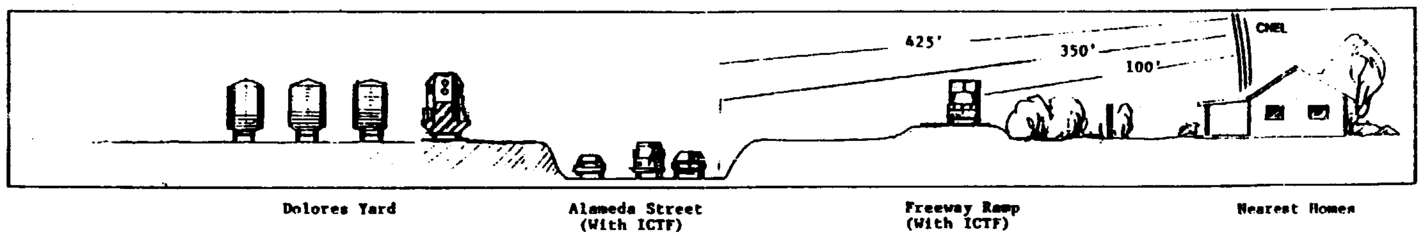
SECTIONS D, E, F

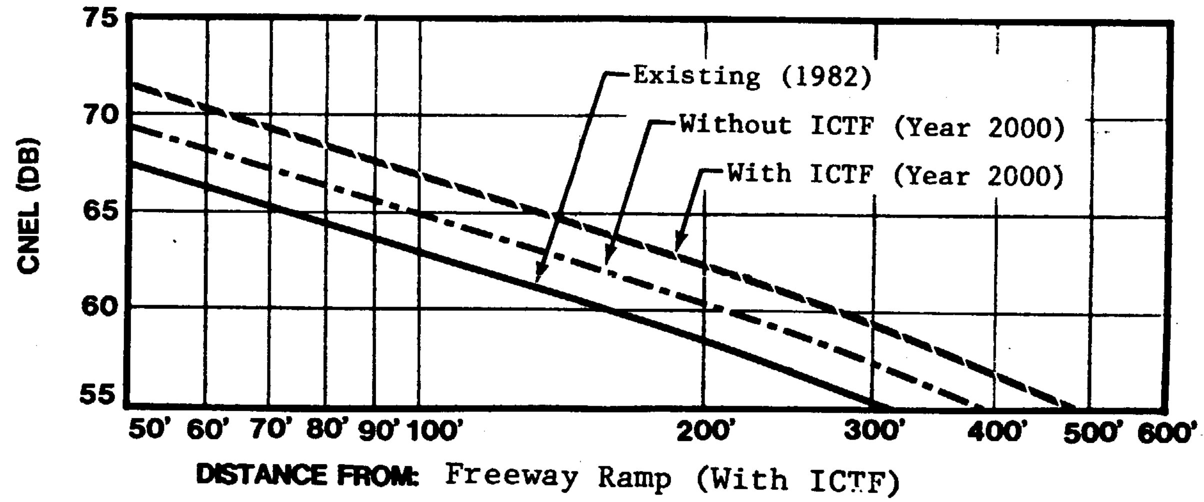
LOCATION: D Nearest Homes on Hesperian Avenue to Proposed ICTF



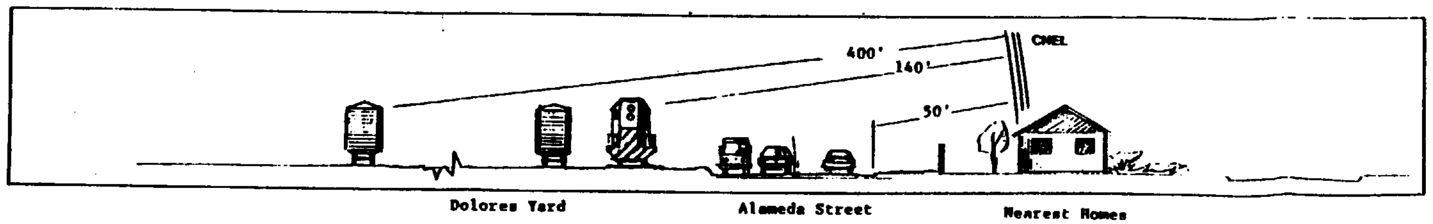


LOCATION: E Nearest Homes Adjacent to the Freeway Ramp, Alameda St., and the Dolores Yard of the SPRR





LOCATION: F Nearest Homes Adjacent to Alameda St. and the Dolores Yard of the SPRR



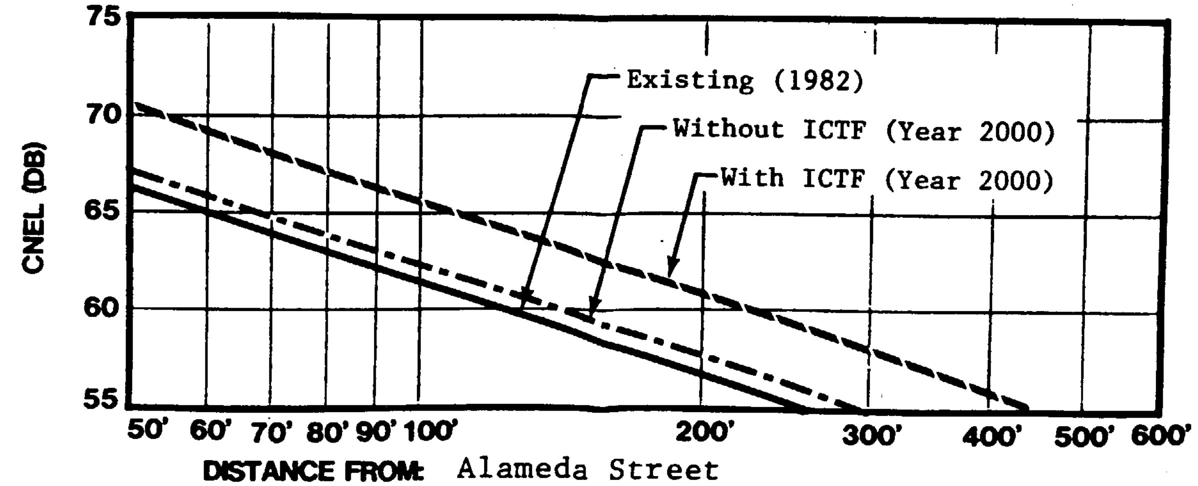
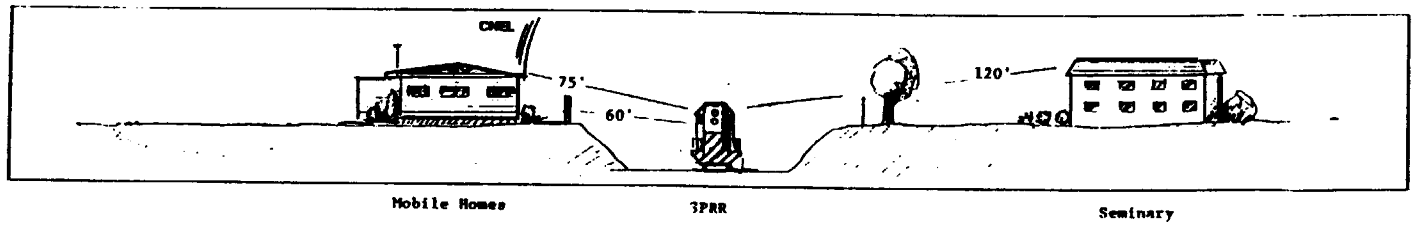
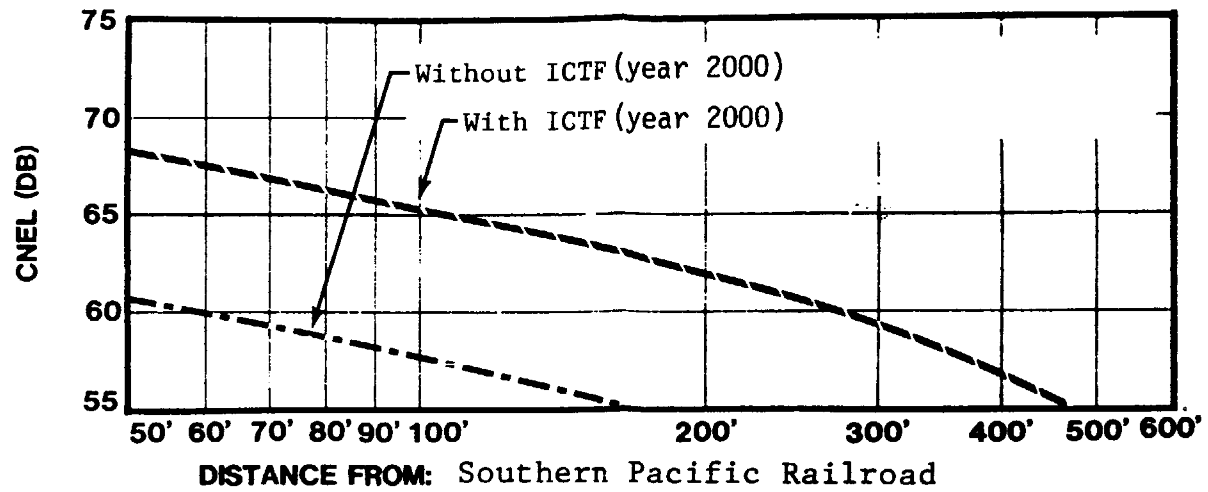


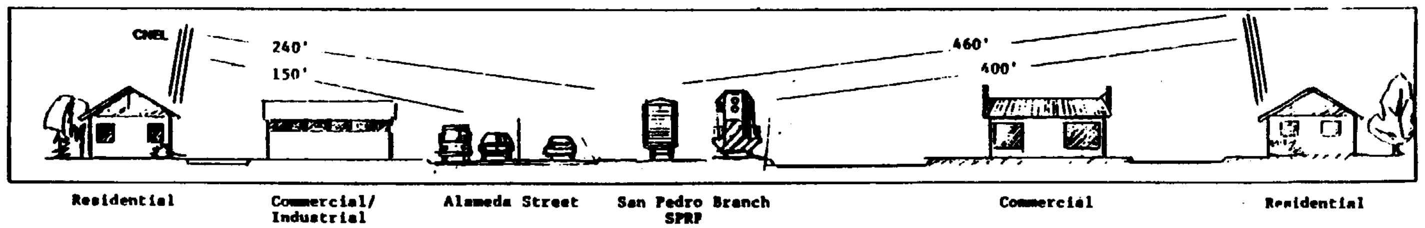
Figure 33c - Noise Exposure Variation With Distance from ICTF Equipment, Rail Activity, & Arterial Movements, Continued
Page Three

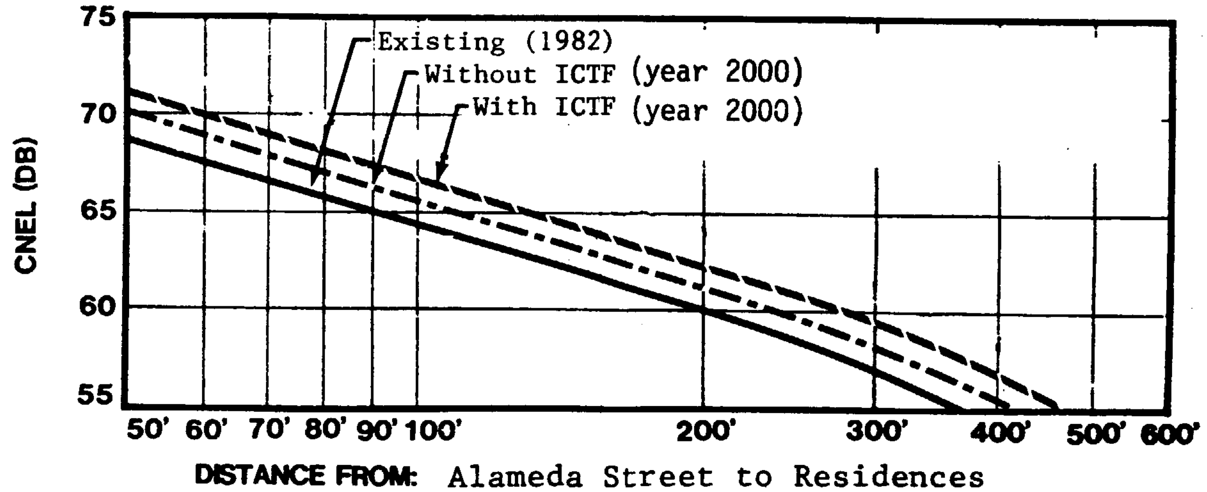
LOCATION: G Nearest Mobile Homes in Rancho Dominguez Adjacent to the Wilmington Branch of the SPRR



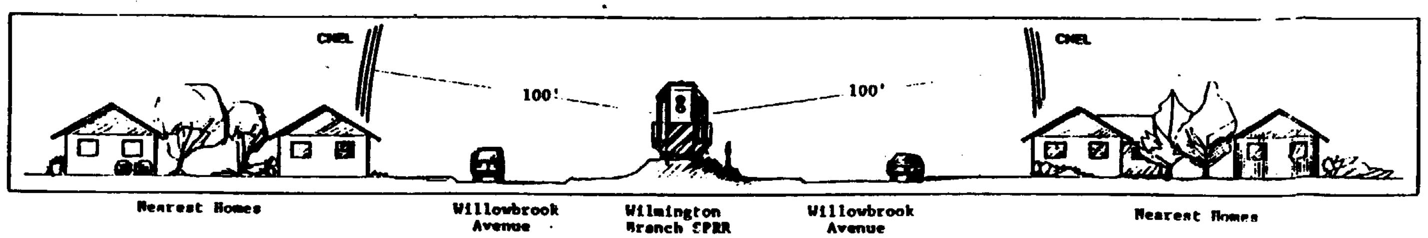


LOCATION: H Nearest Homes to Alameda St. and the San Pedro Branch of the SPRR (Alondra to El Segundo)





LOCATION: I Nearest Homes to the Wilmington Branch of the SPRR



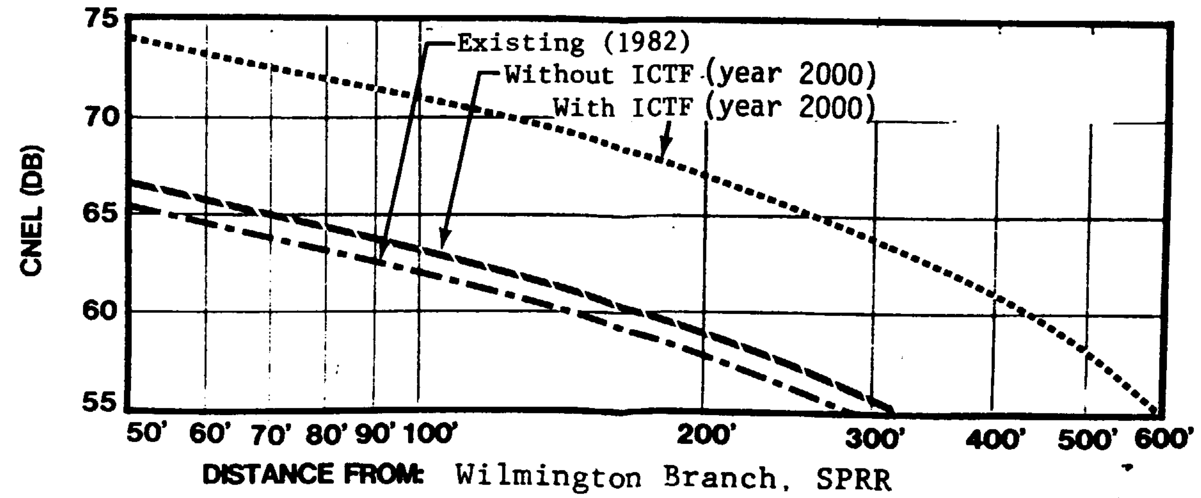
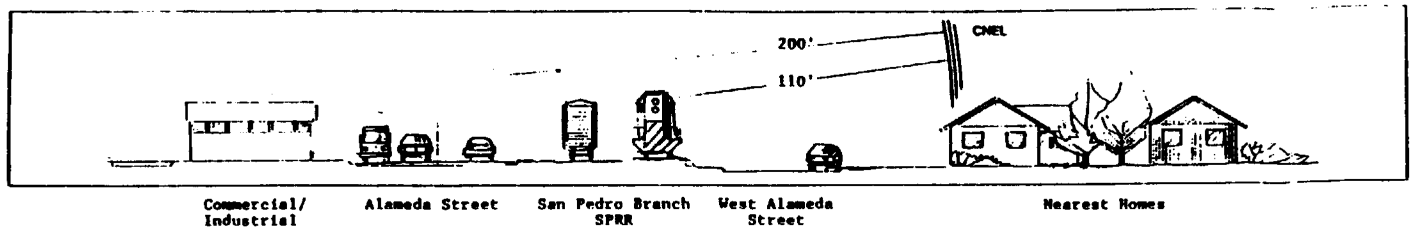
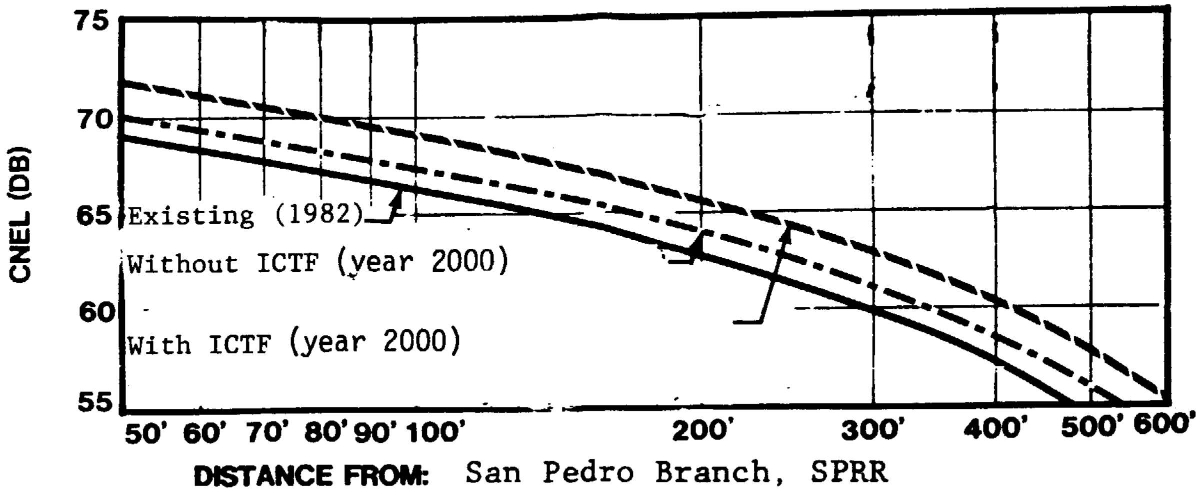


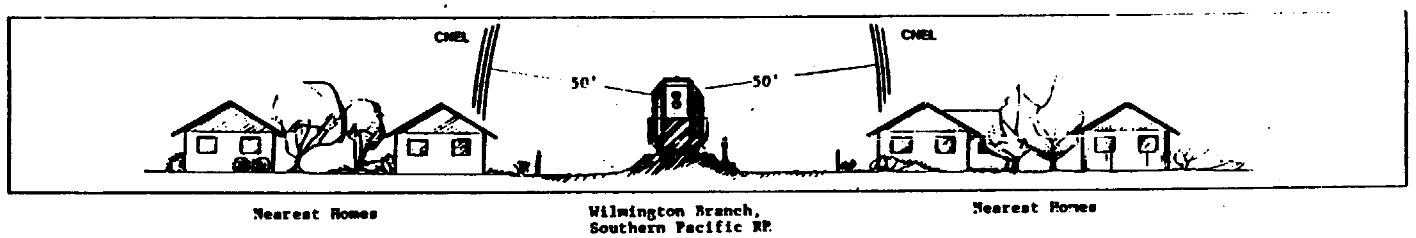
Figure 33d - Noise Exposure Variation With Distance from ICTF Equipment, Rail Activity, & Arterial Movements, Continued
Page Four

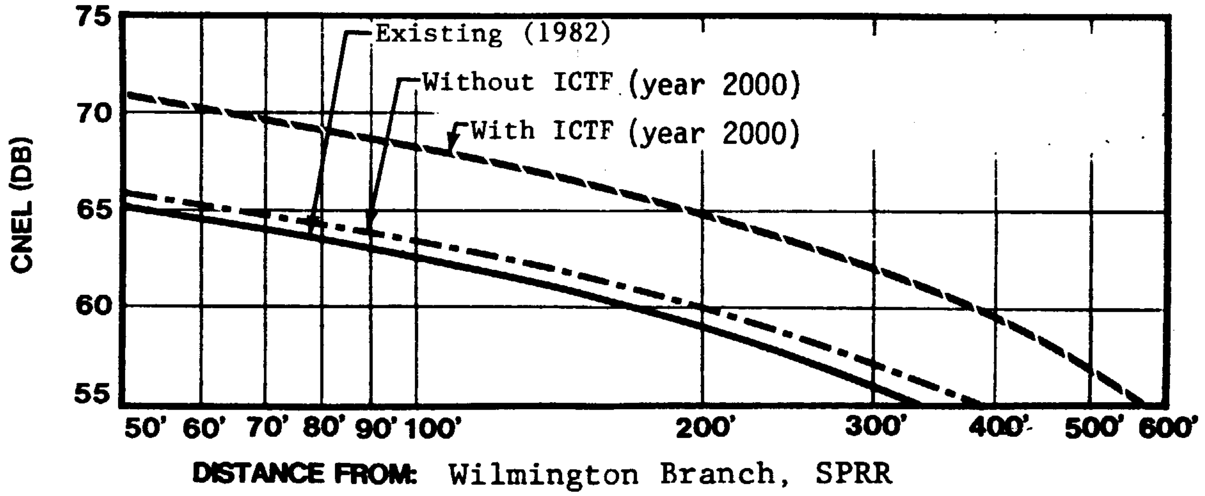
LOCATION: J Nearest Homes to the San Pedro Branch of the SPRR at Alameda St. (Tweedy to Southern Ave.)



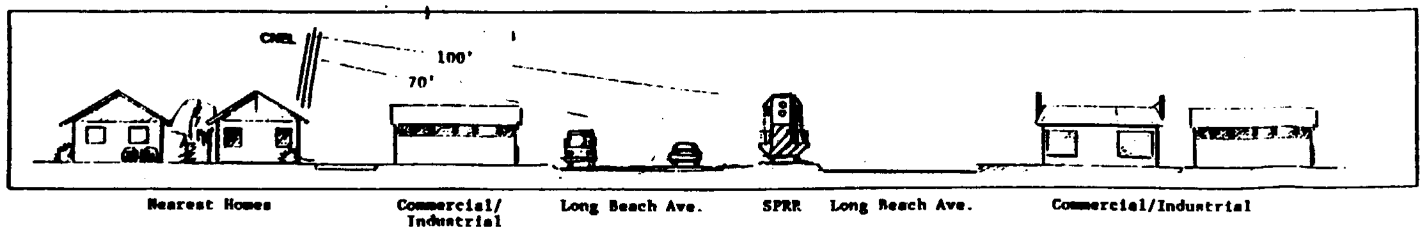


LOCATION: K Nearest Homes to the Wilmington Branch of the SPRR in the Vicinity of 60th St. to Florence





LOCATION: L Nearest Homes to Long Beach Ave. and the Wilmington Branch of the SPRR



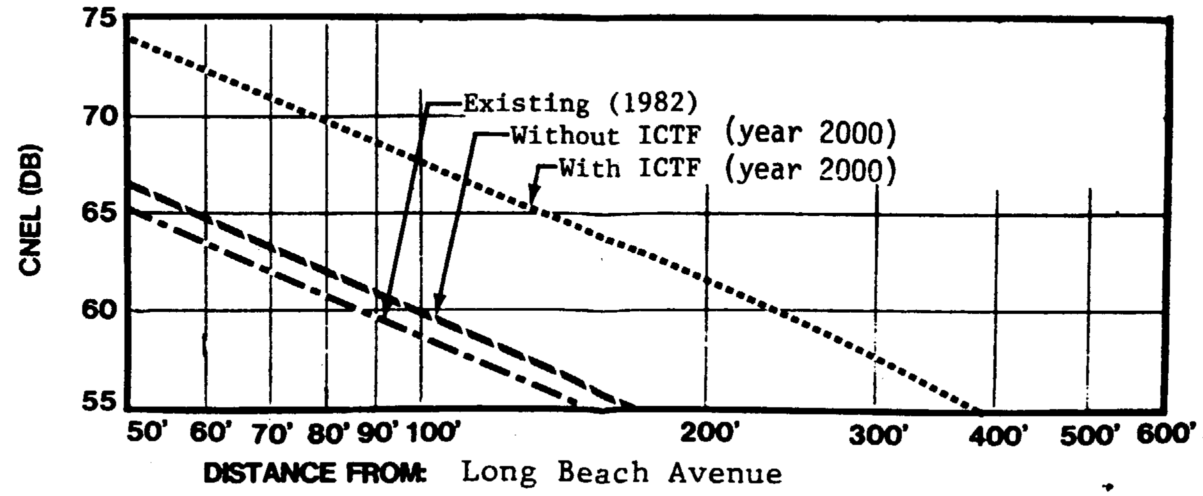
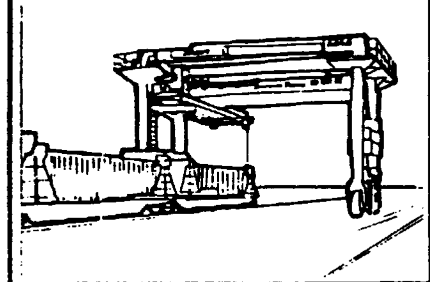
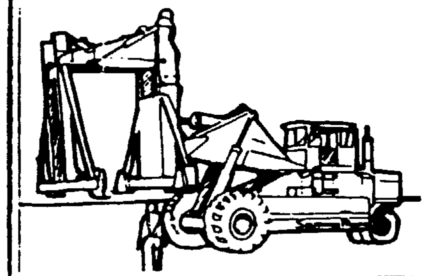
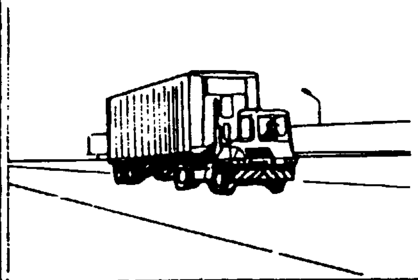
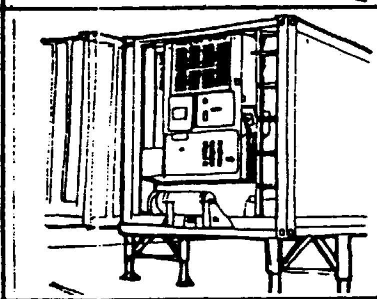
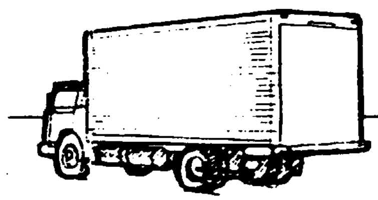


Table 17 Transportation Center Equipment Noise Levels and Exposures (Sound Level Values Per Long Beach Noise Ordinance)

EQUIPMENT	ILLUSTRATION	SOURCE HEIGHT	SOURCE SOUND LEVELS & EXPOSURES @ 100 FEET							DURATION (PEAK HOUR ACTIVITY)	
			L_{99} dB(A)	L_{50} dB(A)	L_{25} dB(A)	$L_{8.3}$ dB(A)	$L_{1.7}$ dB(A)	L_{max} dB(A)	L_{eq} dB(A)		
BRIDGE CRANE		15'	74	77	78	78	79	86	77	1 hr. (continuous)	
FRONT END LOADER		10'	79	81	88	92	95	101	88	1 hr. (operates for 40 minutes in an hour)	
YARD TRACTOR/TRAILER (HOSTLER)		6'	40	60	64	66	68	82	61	1 hr. (100 movements per hour)	
REFRIGERATION CAR		8'	68	68	68	68	68	68	68	1 hr. (continuous)	
YARD OPERATIONS CONTAINER/TRAILER CARS		10'	49	52	53	54	58	74	55	1 hr. (1 movement per hour within the facility)	
YARD MAINTENANCE VEHICLES & OPERATIONS		5'	30	49	53	56	58	82	50	1 hr. (2 movements per hour within the facility)	

*These sound level descriptions correspond to the 30, 15, 5 and 1 minute exceedance levels specified in the City of Long Beach Noise Ordinance

3.4.2 IMPACTS

3.4.2.1 Assessment of Impact. The potential impact of the propos& project assessed by comparing the expected sound levels and noise exposures with the standards identified in the noise elements from cities near the projectoject site and railroad corridors and from the Long Beach Noise Ordinance. Table 14 provides a summary of noise-related policies of each jurisdiction withinthin the ICTF study area. For the assessment of the impact of noise upon the project study area, these policies were considered in creating guidelines for the noise assessment, and noise levels for significant impact were determined as follows:

community noise equivalent level (CNEL) was considered for those sources of noise on public right-of-ways (arterials) and rail lines under the jurisdiction of state and federal agencies. For the usable portions of exterior residential spaces exposed to a CNEL, which is 65 dB or less, the impact of rail and arterial traffic noise was considered insignificant. If the combined CNEL from these sources exceeded 65 dB, the impact was considered significant.

2. Hourly sound levels which intrude into residential locations from fixed or movable sources of noise (such as those within the proposed ICTF) should amply with the standards set by the jurisdiction in which the intrusion occurs. Hence, for noise generated at the ICTF site, the City of Long Beach noise ordinance was applied.

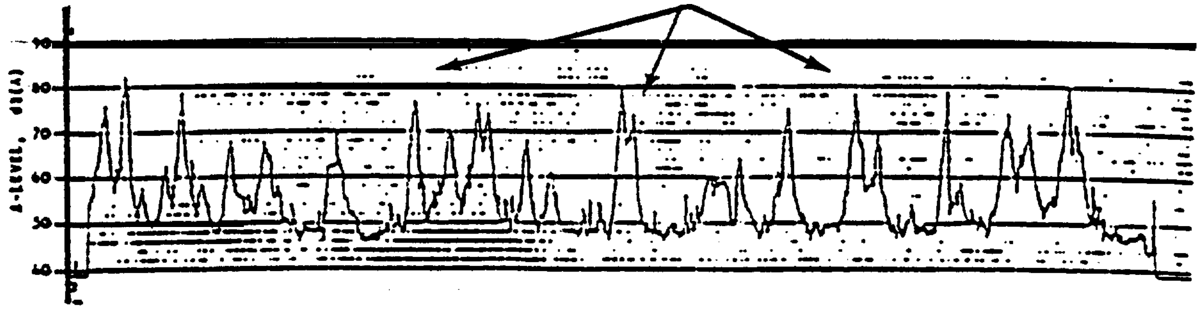
.Using the guidelines established above, exterior noise exposures at residential locations should not exceed a CNEL of 65 dB. A CNEL of 65 dB was the guideline sound level considered in the environmental assessment of the ICTF project. The potential impacts associated with the ICTF project are discussed in two categories: 1) construction activity noise; and 2) operational activity noise.

3.4.2.2 Construction Activity Noise. Annoyance due to construction noise during the development of the ICTF project is potentially significant. Equipnent associated with grading and excavation can produce significant levels when experienced at residential locations. Figure 34 identifies the levels of construction activity noise, some of which will be generated by truck movemmts to and from the site and throughout the proposed facility. Considering the specific aspects of the ICTF development, the following are areas of concern:

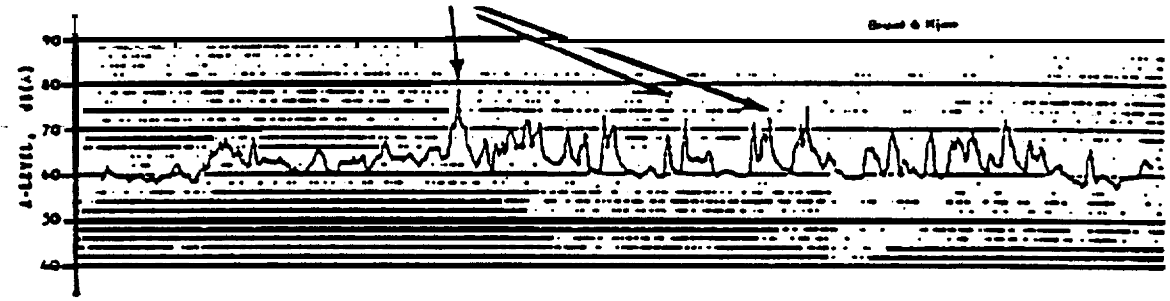
* Transfer and Working Track. Excavation and grading operations will generate near peak sound levels at homes and apartments (about Spring Street) which approach 70 to 75 dB(A). The average hourly noise level (L50) will, of course, be significantly less [e.g., 60 to 65 dBA)]. Homes nearest the ICTF site in the area of Hesperian Avenue will be affected primarily during the earliest phases of construction.

CONSTRUCTION EQUIPMENT .

Truck and Front Loader at Construction Site



Trucks (6-axle) on Highway Leaving Construction Site



CONSTRUCTION EQUIPMENT NOISE LEVELS
(measured at a distance of 50 feet)

Equipment	Noise Level
Earthmoving	
front loader	79 dB(A)
backhoe	85
bulldozer	80
tractor	80
scraper	88
grader	as
truck	91
paver	89
Materials Handling	
concrete mixer	85
concrete pump	82
crane	83
derrick	88

Equipment,	Noise Level
Stationary	
pump .	76 dB(A)
generator	76
compressor	a1
Impact	
pile driver	101
jack hammer	88
rock drill	98
pneumatic tools	86
Other	
saw	78
vibrator	76

Source : Handbook of Noise Control

Figure 34 Construction Activity Noise Levels

- 0 Freeway Ramp Modifications. The extension and modification of the **I-405** Freeway ramps will affect homes in proximity to there. east of Alameda Street. During the period when the ramp extension project on the north side of the freeway requires the closure of the ramp, a slightdecrease in noise will be experienced.

3.4.2.3 Operational Activity Noise. The ICTF operations will issue equipment noises associated with the storage, transfer, and movement of containers within the facility. Figure 35 presents the existing or known A-weighted sound levels, in dB(A), and the amount of time the sound levels are exceeded durirq the operation of various yard equipment and operations. From sound measurements Obtained at the SPrr transportation center in central Los Angeles, noise levels of yard equipment associated with the proposed ICTF operations are shown in Table **17.** Although used at the transportation **center,** front end loaders will not be used at the ICTF. It is anticipated that be ICTF will not handle refrigeration cars **or** trailers which use diesel-powered coo1ing units. Refrigerated containers may be stored on-site, but these will be supplied with quiet electrically-powered cooling units. The sound levels of the operational equipment directly associated with the ICTF are summarized as follows:

Equipment	Sound level at 100 feet b in dB(A), 1 hour
*Bridge crane	77
*Hostler	**61**
°Container/trailer cars	**55**
°Yard maintenance vehicles	**50**

3.4.2.3.1 Residential Noise Exposures. Referring to locations A through L (Figure 32) and Table 18, the impact of each phase of the ICTF at locations throughout the study area may be assessed. Considering the CNELs and --hourly noise levels at the nearest residences, the following summarizes the impacts associatedwith the ICTF project:

1. Locations adjacent to the Route 47 Freeway (Section A) will be exposed to increased truck noise as a result of the project. The CNEL at the nearest housing units will increase by about two to four decibels over projected noise levels without ICTF to 67 to 69 dB.

2. Residential locations just east of the **ICTF** site, adjacent to the UPrr (Sections B and C) are currently exposed to CNEL levels of approimtey **65** dB(A), The ICTF development will incrementlly increase the noise level by l-2 dB(A). Future noise impacts at these locations will be associated with additional rail movements on the UPrr and not ICE-generated operational noise.

3. Residential location northeast of the ICTF site (SectionD) could be exposed to significantly increased CNEL exposures, if mitigation measures are not applied -- It is estimated that a 3 to 6 dB(A) increase-will be experienced at this location from ICTF development.

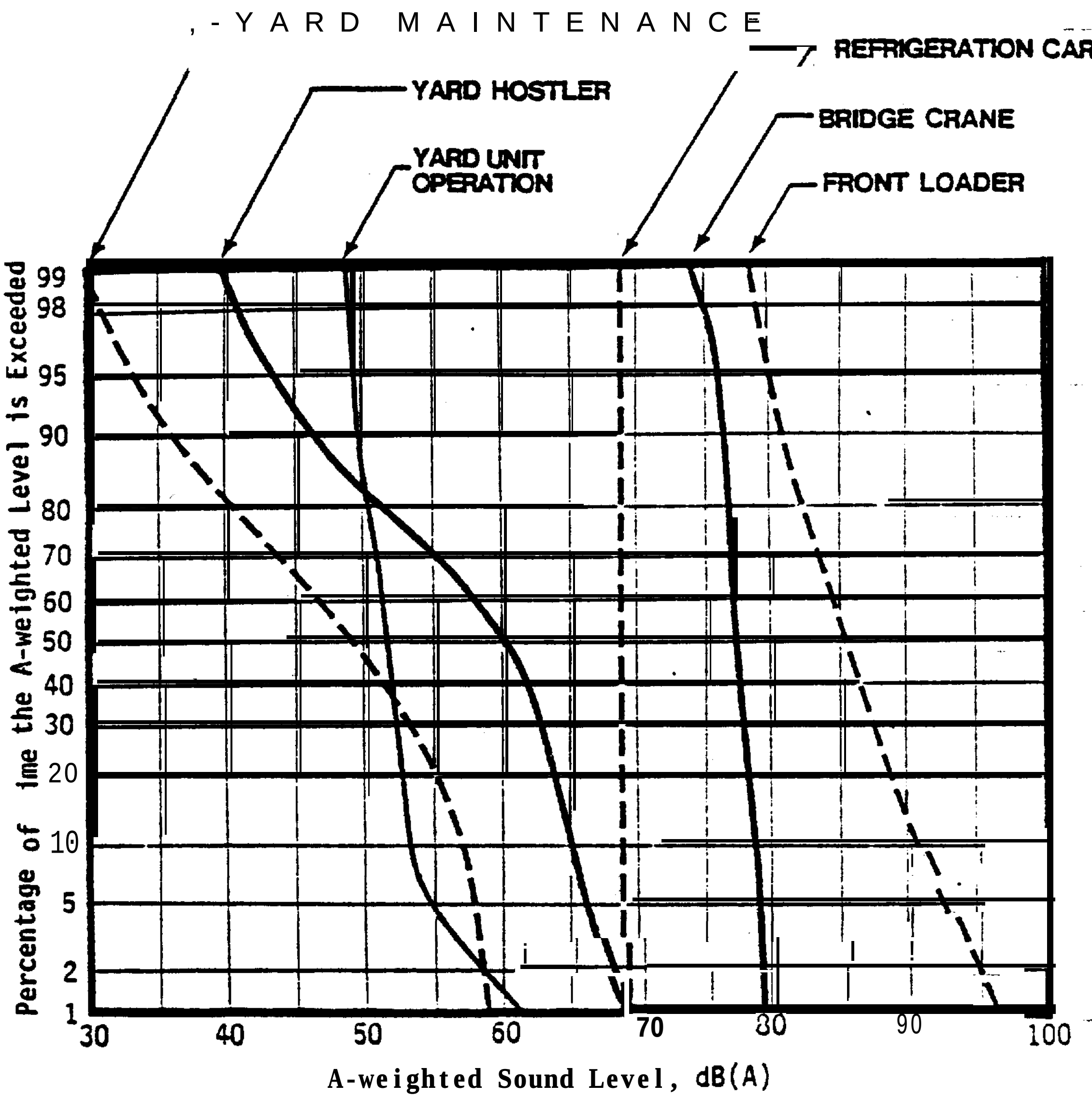
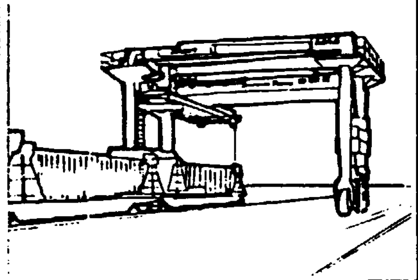
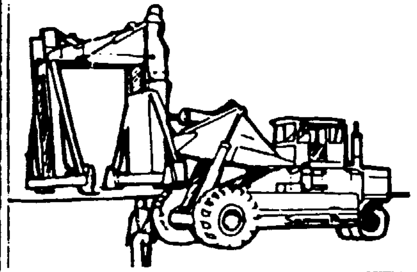
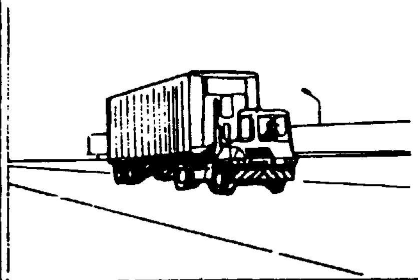
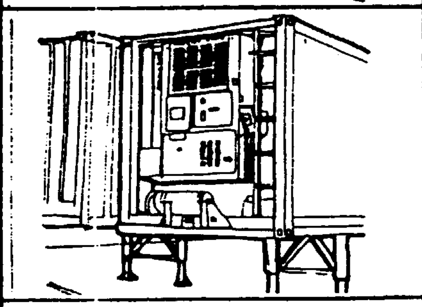
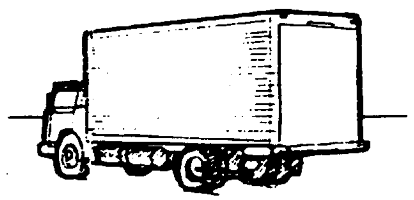


Figure 35 - Transportation Center Equipment Measured at a Distance of 100 Feet

Table 17 Transportation Center Equipment Noise Levels and Exposures (Sound Level Values Per Long Beach Noise Ordinance)

EQUIPMENT	ILLUSTRATION	SOURCE HEIGHT	SOURCE SOUND LEVELS & EXPOSURES @ 100 FEET							DURATION (PEAK HOUR ACTIVITY)	
			L_{99} dB(A)	L_{50} dB(A)	L_{25} dB(A)	$L_{8.3}$ dB(A)	$L_{1.7}$ dB(A)	L_{max} dB(A)	L_{eq} dB(A)		
BRIDGE CRANE		15'	74	77	78	78	79	86	77	1 hr. (continuous)	
FRONT END LOADER		10'	79	81	88	92	95	101	88	1 hr. (operates for 40 minutes in an hour)	
YARD TRACTOR/TRAILER (HOSTLER)		6'	40	60	64	66	68	82	61	1 hr. (100 movements per hour)	
REFRIGERATION CAR		8'	68	68	68	68	68	68	68	1 hr. (continuous)	
YARD OPERATIONS CONTAINER/TRAILER CARS		10'	49	52	53	54	58	74	55	1 hr. (1 movement per hour within the facility)	
YARD MAINTENANCE VEHICLES & OPERATIONS		5'	30	49	53	56	58	82	50	1 hr. (2 movements per hour within the facility)	

*These sound level descriptions correspond to the 30, 15, 5 and 1 minute exceedance levels specified in the City of Long Beach Noise Ordinance

TABLE ,18

The Comnunity Noise Equivalent Level (CNEL) for noise receptor areas A through L (see Figure 32 for locations) compared to existing levels and related conditions through Phases I, II, and III of the ICTF Project. All CNEL values are in A-weighted decibels, dB(A).

Section	Location	1982 Existing	1983 to 1990 (Phase I) *1	2	1991 to 1995 (Phase II) *1	2	1996 to 2000 (Phase (III) *1	2
A	Naval Housing Project	64	65	67	65	68	65	69
B *	About Spring Street	65	66.	68	67	69	67	69
C	Windward Village	65	66	67	67	68	67	69
D	Hesperian Avenue	62	62	65	62	67	63	69
E	Dolores Yard/Fwy Ramp	63	64	66	64	66	65	67
F	Alameda Street	66	66	68	67	69	67	70
G	Rancho Dominguez	57	58	65	58	66	59	67
H	Alameda St., Compton	62	62	63	62	63	63	64
I	Willowbrook Avenue	62	62	69	63	70	63	71
J	Alameda St ./South Gate	66	67	68	67	68	67	69
K	60th St, SPrr	65	66	69	66	70	66	71
L	Long Beach Avenue	62	62	69	63	70	63	71

*conditions: 1. CNEL without ICI%'
2. CWEL with ICTF

4. Locations adjacentto the extended freeway ram (Section E) north of the Route 47 Freeway can benefit from noise tarriers which may be constructed as part of the ramp extension. The need for noise barriers will be assessed by Caltrans, using the criteria established by the Federal Highway Administration in the Federal-Aid Highway Program Manual, Vol. 7, Ch. 7, Section 3 (FHPM, 7-7-3).

5. Homes adjacent to freeway ram and the Dolores Yard (Sections E and F) will experience an increase in noise exposures of from two to three decibels as a result of the ICTF project. However, it is noted that the residential area adjacent to Alameda Street and the Dolores Yard (Secticn F) is presently subjected to CNEL levels greater than 65.

6. Locations adjacent to the Wilmington Branch (Sections G, I, K and L) will experience a Significant impact due to noise exposures generated by the increased rail activity with the ICTF project. It is noted that with the project the CNEL is expected to increase by about l-2 decibel. With the project, the CNEL, by the year 2000, at the nearest residential locations could be 67-7ldB.

7. Residential locations nearest to the San Pedro Branch (Sections A throuqh F, H, and J) are buffered from rail and arterial noise by the existing comercial/industrial buildings. The exception involves the homes between Tweedy Boulevard and Southern Avenue in South Gate (Section J). The existing and future impacts at these locations are (and will continue to be) significant with or with cut the ICTF project.

3.4.2.3.2 Number of People Exposed. Table 19 indicates the approximate number of people exposed to various levels of noise within the study ares. These counts include the hams nearest to the sources of noise from the existing rail and arterial traffic and the development period (the year 2000).

3.4.3 Unavoidable Adverse Impacts

For residents adjacent to the San Pedro and Wilmington Branches of the Southern Pacific railroad, there will be an increase in the duration of ground vibration generated by the projected increase in the number of unit container trains associatedwith the ICTF.

The CNELS at areas adjacent to the ICTF site, the San Pedro and Wilmington Bran&es and the Route 47 Freeway will increase due to the construction activities and the operational activities associated with the project such as: 1) yard equipment operation and maintenance, 2)an increase in truck movements, and 3) an increase in train activity.

3.4.4 cumulative Impacts

3.4.4.1 Cumulative Impact of Phase II and III. After the completion of Phase I (1983 to 1990), the implementation of Phase II and III s&e&led for the years 1990 to 1995 and 1995 to 2000, respectively, will increase the noise sources activities of the ICTF. However, the development and timing of these phases are dependent on the future container demand and economic viability.

Table 19 - Number of People Exposed to Various Levels of Noise With and Without the ICTF Project

Noise Source Activity	CNEL, Existing 60-65	CNEL, Existing 66-70	CNEL, Existing Greater than 70	CNEL, Ultimate (Phase III, Year 2000) Without ICTF 60-65	CNEL, Ultimate (Phase III, Year 2000) Without ICTF 66-70	CNEL, Ultimate (Phase III, Year 2000) Without ICTF Greater Than 70	CNEL, Ultimate (Phase III, Year 2000) With ICTF 60-65	CNEL, Ultimate (Phase III, Year 2000) With ICTF 66-70	CNEL, Ultimate (Phase III, Year 2000) With ICTF Greater than 70
Route 47 Fwy. & UPRR	160	80	---	180	100	---	250	130	---
ICTF Site & UPRR	150	50	---	180	60	---	160	120	---
Route 405 Fwy. & ICTF (Hesperian Ave.)	150	170	60	170	200	70	40	210	130
Dolores Yard, Alameda, & Route 405 Fwy.	130	60	---	250	90	---	270	180	20
				60-65	66-70	70+	60-65	66-70	70+
Wilmington Branch, SPRR	3430	150	---	4030	370	---	910	1650	3730
San Pedro Branch, SPRR	760	---	---	920	---	---	1360	160	---
TOTAL PEOPLE:	4780	510	60	5730	820	70	2990	2450	3880
	5,350			6,620			9,320		

CNEL: Community Noise Equivalent Level

CNEL values, in dB(A), for noise generated by the operational activities associated with the ICTF project have been determined for noise receptor sites at various distances from the noise source (Figures 33a through 33d). These figures provide the existed CNEL levels and the projected CNEL levels to the year 2000 with and without implementation of the ICTF.

3.4.4.2 Cumulative Impact of Proposed Union Pacific Pail Movements. **The Ports of Long Beach and Los Angeles are considering a coal transport project** for each port which could increase the number of rail movemen**ts on the UPrr.** this could have a major impact at residential locations directly adjacent to the railroad east of the ICTF site and at the naval housing project adjacent to the Route 47 Freeway. The cumulative noise associated with the coal project, with and without the ICTF, has been examined Table 20 provides a summary of the a studies for these three areas which can be affected by the cumulative impact of the ICTF and coal projects (refer to Figure 32 for locations of sections A, B, and C). These areas and the ultimate CNEL expected are as follows:

- Route 47 Freeway/UPrr (Section A, Naval Housing Project) Without the ICTF and with the coal project, the CNEL at the nearest housing units will be 66 dB. With the ICTF and the coal project, the ultimate exposure will increase significantly by about three decibels to 69 dB.

- Homes and Apartments Near Spring Street (Section B) Without the ICTF and with the coal project, the CNEL will be 69 dB. With the ICTF and the coal project, the noise exposure could increase by about two decibels to 71dB. However, this assumes that existing container transfer equipment is used (bridge cranes and yard hostlers). If the noise measures given in the mitigation section are implemented, the ICTF noise will not contribute significantly to the CNEL at the nearest homes.

- Mobile Home Units Northeast of the ICTF (Section C) Mobile home units will be exposed to a CNEL as high as 69 dB with the coal project. With noise control measures (as indicated above), the ICTF will not contribute to the CNEL at the nearest units.

3.4.4.3 Cumulative Impact of Proposed Los Angeles-Long Beach Light Pail Project. Both the Los Angeles County Transportation Commission (LACTC, 1982 a & b) and Caltrans District 07 (1981) have been evaluating various rapid transit opportunities for the Southern California area. A potentially feasible proposal has been developed for a light rail transit (LRT) in the Los Angeles-Long Beach corridor, which proposes to use SPrr's Wilmington Branch as the trunk segment. If the LRT along the Wilmington Branch proves feasible and is implemented, the cumulative noise impacts to residential areas along this rail corridor would be significant. In a preliminary analysis of Los Angeles- Long Beach LRT (LATCT, 1982), noise barrier installation at noise-sensitive areas was assumed for the Study to provide the bases for the cost estimating and impact assessment efforts,

TABLE 20

The Community Noise Equivalent Level (CNEL) for three areas potentially affected by the cumulative impact of the ICTF and the proposed coa1 projects of Los Angeles and Long Beach Harbors. All CNEL values, in A-weighted decibels, dB(A), are compared to existing levels and related conditions through three phases of the ICTF Project.

		1982	1983 to 1990 (Phase I)				1991 to 1995 (Phase II)				1966 to 2000 (Phase III)			
Section[5]	Location	Existing	* 1	2	3	4	* 1	2	3	4	* 1	2	3	4
A	Naval Housing Project	64	65	65	67	67	65	66	68	68	65	66	69	69
B.														
C.	Windward About Village Spring Street	65 65	66 66	67 67	68 67	69 68	67 67	68 68	69 68	69 70	67 67	69 69	69 69	71 70

*Conditions:
1. CNEL without ICTF and without additional coal trains
2. CNEL without ICTF, but with additional coal trains
3. CNEL with ICTF, hut without additional coal trains
4. CNEL with ICTF and with additional coal trains
5. refer to Figure 32 for location sites

3.4.5 MITIGATION MEASURES

The reduction of noise related to the operationof the ICTF is examined in terms of sources of potential *disturbance* at residential locations nearest to the site, materials, and rail lines. These sources and mitigation methods are considered in the following:

1. Sound Levels Generated by ICTF Equipment. Referring to Tables 14 and 21 it is noted that to achieve the City of Long Beach noise ordinance standards, ll to 14 dB of noise reduction is required at the apartments and homes east of the site activity (near Spring Street).

TABLE 21

ICTF Generated Sound Levels Compared to the City of Long Beach Noise Ordinance Standards

Location	Nighttime Noise Standard	ICTF Generated Noise 1 Phase I	Phase II	Phase III	Noise Reduction Required
Homes nearest to east boundary line near Spring Street	**50***	61	63	64	**11-14**
Homes along Hesperian **Av.**	**50***	69	71	72	19-22
Mobile Home Units Adjacent to UPRR	**50***	53	55	56	3-6

1, Values in dB(A)
* The nighttime noise standard is 45 dB(A); however, when the ambient sound level exceeds this standard, the allowable noise exposure is increased in five decibel increments. The ambient noise level within each of the locations considered is at least 48 to 50 dB(A) or greater.

To achieve a level of 50 dB(A) at the residential locations adjacent to Hesperian Avenue, noise reduction from 19 to 22 dB will be needed. These reductions may be achieved by applying the following noise control methods:

- Remote storage of containers will act as a partial barrier to the noise generated by the container transfer operations. This portion of the noise reduction will be at least two to three decibels. If containers were stacked three high and placed end-to-end between the ICTF boundary and the homes to the east, a noise reduction of about 6-7 dB could be achieved.

- **Bridge crane noise needs to be reduced** at least 12 dB relative to the **levels measured at the transportation** center. New equipment will, however, be quieter than the existing equipment whicn was measured at the downtown yard (Mi-Jack Products, 1982). This my be achieved by enclosing the diesel/electric power plant and using residential class silencers on the diesel engine exhaust and intake systems. The procurement specification for the bridge cranes should include a sound level requirement. The average sound level produced by the machine during a complete container transfer operation should not exceed 65 dB(A) at a distance of 100 feet from any surface of the crane.

- Yard hostlers contribute only to the near peak sound levels associated with the ICTF equipment operations. The procurement of the hostlers can include a sound level requirement. This requirement will generally be met with a conventional tractor which has a residential class muffler.

  Noise barriers are needed at locations along the eastern and northern boundaries of the ICTF site nearest to Hesperian Avenue. A barrier noise reduction of at least 10 dB is needed in order to comply with the City of Long Beach noise ordinance standards. With the bridge crane noise control requirement indicated above, the combination of barrier and crane noise reduction will be at least 22 dB. A barrier height of about 9 to ll feet is required to achieve a least 10 dB of noise reduction. Figure 36 indicates the approximate locations of the barriers in relation to the ICTF site and homes of concern.

- Ground vibration. The vibration trasmitted to the homes may be significantly reduced or even eliminated by application of the following measures:

  a. Maintenance of ballast of the working track on a regular basis.

  b. Continous foundations of the noise barrier walls to a depth of 6 to 8 feet.

  c. Reduced locomotive speed at locations in proximity to Hesperian Avenue.

Additional ICTF noise control measures should be considered as follows:

a. No voice paging systems should be used within the ICTF complex.

b. Rail car impact noise should be reduced by substantially reducing the coupling speeds, particularly for yard operations occurring between 10:00 p.m. and 7:00 a.m. However, since trains will not usually be broken down into individual rail cars, coupling noises that are associated normally with switching and classification yard operation will not usually be present.

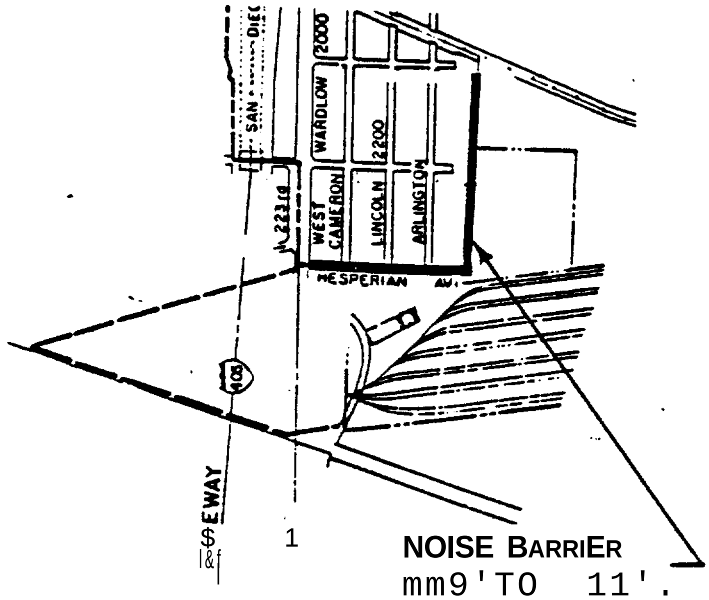


Figure 36 Noise barrier location in the vicinity of Hesperian Avenue and the northerly boundaries of the ICTF site. (Precise barrier height will depend on the final grade of the ICTF site relative to that of the near-by-homes.)

2. Freeway Ramp Extensions-Route 405 Freeway to Alameda Street. When existing portions of the freeway system are modified, noise tarriers may be included in the modification in compliance with tie Federal Highway Administration (FHA) regulations to reduce the sound levels at adjacent areas. The FHA regulations for freeway modifications are administered by Caltrans.

   Barrier height will depend on the detail geometry of the ramp, its elevation relative to the homes, and the specific distances from the roadway surface to the homes such that noise levels are consistentwith the Federal-Aid Highway Program Manual Standards. Figure 37 provides the approximate location of the prospective barrier which may be considered for the new location.

3. ICTF-Ralated Rail movements. The ICTF-related rail movements through the Dolores Yard and along the Wilmington and San Pedro Bran&es of the SPrr are under the jurisdiction of state and federal agencies. As such, the noise produced by these movements is not required to comply with local land use policies or regulations. However, it is recognized that the late night and early morning rail movements associated with the ICTF may be annoying to residents living in proximity to the yard and branch lines. The following mitigation measures can be considered to reduce the potential impacts identified in the previous section:

   - The San Pedro Branch of the SPrr should be used as much as possible.

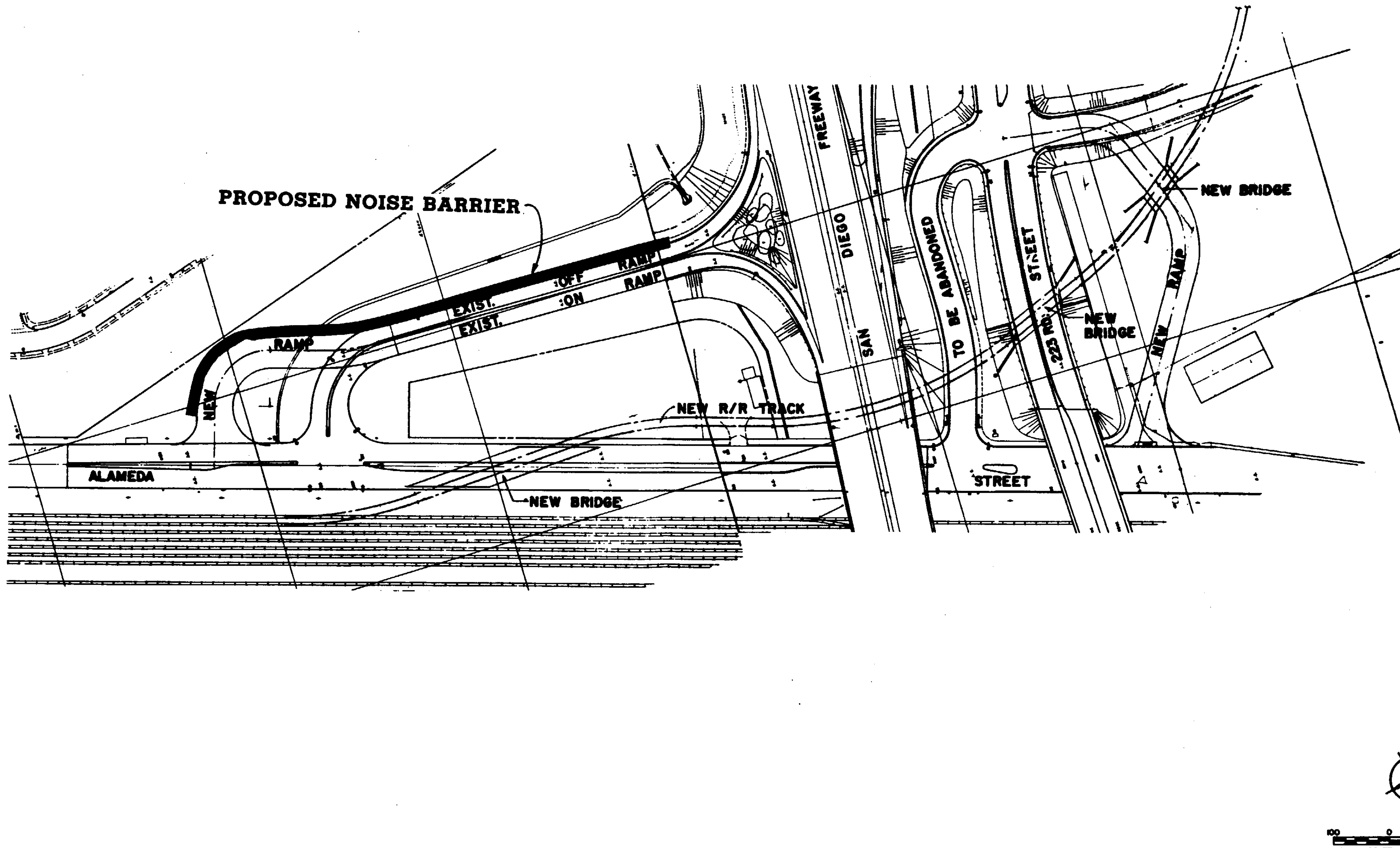
   - The trackage along both bran&es should be upgraded to the extent possible. This should include the replacement of existing tracks with ribbon (continuous welded) sections, and the improvement and maintenance of the ballast.

   - Maintain reduced speeds along the Wilmington Branch and those portions of the San Pedro Branch with homes directly bordering the line (between Tweedy *Boulevard* and Southern Avenue in the City of South Gate).

   - **Maintain train lengths to no more than about 60 cars.**

   Increases in rail noise impacts will be incremental and gradual as the future phases of the ICTF are developed.

4. Noise Barrier Heights, &cations, and Alternatives. An alternative to the bridge crane noise control requirement indicated earlier in this section would involve the construction of noise barriers along all or a portion of the eastern boundary of the ICTF. This may not prove to be a cost-effective alternative, but should be evaluated as a trade-off when procurement of the bridge cranes and yard hostlers is being considered. The barrier heights and alternative locations for this consideration have been included in the "Data and Analysis Report" (Van Houten, 1982) which is on file with the Environmental Management Division, Los Anqeles Harbor Department, 425 S. Palos Verdes St., San Pedro, .California.



Intermodal Container Transfer Facility

PROPOSED NOISE BARRIER LOCATION

FIGURE 37

5. Construction activity noise. Construction related noise is a potential annoyance at residential locations during the various development periods of the ICTF. However, the large distances from the construction activity to tie homes, the noise barriers which may be built as part of the project, and the limitations on late night and early morning construction activity will, greatly reduce and, in most cases, eliminate this potential annoyance,

3.5 LIGHT AND GLARE/AESTHETICS
SUMMARY

Setting:

Light and glare. At night, there is no existing light and glare from the proposed project site, but there is glare emitted from neighboring commercial and industrial facilities and from bordering street lights.

Aesthetics. The project area is a relatively underdeveloped disturbed flatland surrounded primarily by industrial and commercial facilities with some residential areas to the east.

Impacts:

Light and glare. Project implementation will result in a noticeable increase in the amount of nighttime illumination of the area. The most adverse impact is an overall increase on the amount of glare affecting adjacent properties.

Aesthetics. There will be a general daytime visual change of the project site and nighttime illumination.

Mitigations:

Light and glare. Mitigation measures have been considered in the plan for light and glare:

The number of lamps at the perimeter of the ICTF will be minimal; and the lamps will be focused inward and downward to reduce light and glare emissions to outlying areas.

High pressure'sodium lamps are recommended in order to produce economical, low visual fatigue white light.

Activation of the lighting system will be regulated by a photocell-switch, timerswitch, or hand operated switch to avoid unnecessary transmission of artificial light.

Aesthetics. No mitigation measures are necessary..

3.5 LIGHT AND GLARE/AESTHETICS

3.5.1 SETTING

3.5.1.1 Light and Glare. The Intermodal Container Transfer Facility (ICTF) project site located in an area that is adjacent to extensive petroleum-related facilities to the west and some residential areas to the east. At night, the existing area not serviced by utility lighting, is dark and is slightly illuminated by glare infiltrating from neighboring commercial and industrial facilities. Light originating from bordering street lights is noticeable but contributes insignificantly to the illumination of the area.

The illumination for the ICTF was designed to supply an efficient low energy luminary resource and to provide a safe working environment at night, Three types of lamps are commonly used for utility lighting: mercury vapor lamp, low pressure sodium lamp (LPS), and high pressure sodium lamp (HPS). HPS lamps are recommended for the ICTF yard lighting because HPS lamps consume less z than mercury vapor lamps, and are safer to handle and maintain than LPS . Also, the use of HPS lamps result in less eye strain than LPS lamps.

Presently, it is proposed that high pressure sodium lamps will be installed on 80 to 100 foot galvanized steel utility poles spaced 250-400 feet apart. The lamps' mounting height and pole spacing will provide an economical design requiring fewer poles resulting in a minimum of ground obstruction. The utility poles will be located at the perimeter of the site and at utility corridors between the working tracks (Figure 38). Lighting will be maintained at various levels of illumination throughout the night. Additional lighting will not be required for either railroad or truck operations outside the site. The adjoining streets that provide access to the site generally have street lighting. The improvement of Sepulveda Boulevard, adjoining the ICTF, will require the installation of a street lighting system. The permanent buildings include the administration, control tower, and maintenance/service facilities which will have their own internal lighting.

3.5.1.2 Aesthetics. The character of this open underdeveloped area maybe contrary to the character of the surrounding - industrial/commercial facilities, but the existing project site cannot be considered to have high aesthetic value. Daylight reveals a flat undeveloped--site, interrupted by -scattered dirt piles, and contains abandoned roadside refuse and weedy pioneer Vegetation indication of a disturbed environment.

3.5.2 IMPACTS

3.5.2.1 Light and Glare. The ICTF project will issue a noticeable increase in the amount of nighttime illumination of the area. This impact is beneficial in that good lighting will enhance security and provide a safe working environment. The anticipated increase in light and glare may create an annoyance to adjacent residential areas.

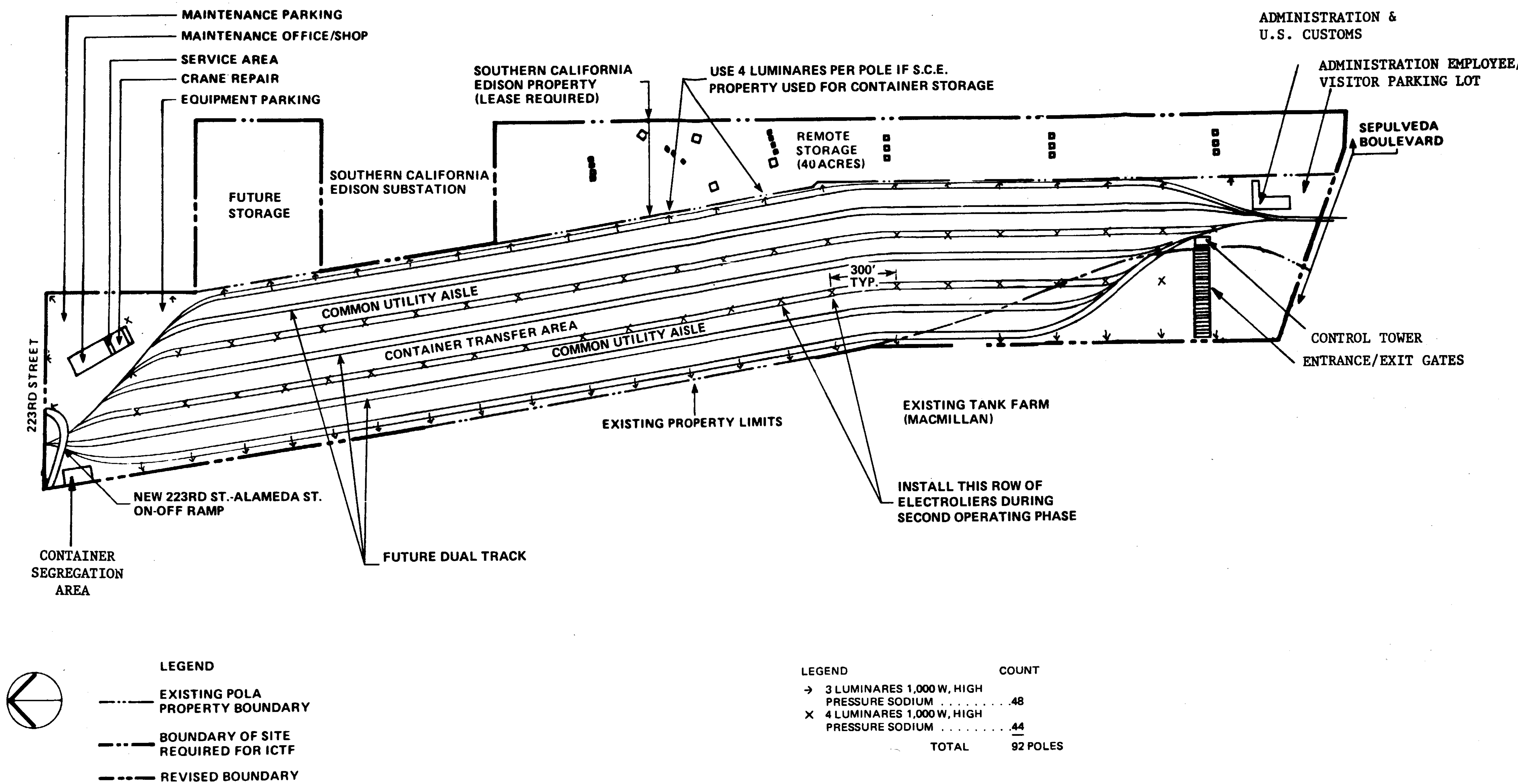


Figure 38

CONCEPTUAL LIGHTING LAYOUT

3.5.2.2 Aesthetics. Aesthetically, there will be a general visual change of the project site by the construction of the ICTF. Construction activities may be unattractive, but the proposed facility is in character with surrounding industrial and commercial properties. The nighttime illumination initiated by the project's yard-lighting may curtail the present problem of illegal refuse dumping which occurs around the existing site. This effect would enhance any aestheticprofile the ICTF may exhibit to the surrounding community.

3.5.3 UNAVOIDABLE ADVERSE IMPACTS

3.5.3.1 Light and Glare. The only unavoidable adverse impact will be the transmission of light and glare upon adjacent residential areas on the eastern perimeter of the ICTF. The impacts will be mitigated by providing focused lighting at the perimeters of the facility directing the light away and down from outside areas. The high pressure sodium (HPS) lamps will create a "white" light, The HPS lamp is recommended above the "yellow" low pressure sodium (LPS) lamp that produces a glare considered uncomfortable and fatiguing. Internal building lights should have an insignificant adverse light and glare impact as compared to yard lighting.

3.5.4 CUMULATIVE IMPACTS

3.5.4.1 Light and Glare. The cumlative impacts of light and glare can be generally described as an overall increase in the level of illumination of the project area and the adjacent properties. Then light time lighting characteristics will be changed. The existing isolated light sources will be combined with acentralized lighting system projected by the ICTF. The proposed illumination will provide light for security and safety. Insignificant secondary light sources will be associated with bridge cranes, front/side loaders, train engines,and emergency lighting.

3.5.4.2 Aesthetics. The long-term increase in the maintenance and service activities associated with the implementation and operation of the ICTF will maintain an overall standard of aesthetic quality for the entire project.

3.5.5 MITIGATIONS

3.5.5.1 Light and Glare. The mitigation of potentially offensive light and glare has been considered in the lightingdesign for the ICTF:

° The reduction in the number of lamps at the perimeter of the facility, and the inward and downward focusing of perimeter lighting will reduce light and glare to outlying areas-

° Uniform lighting using high pressure sodium lames will avoid sight fatigue caused by lighting contrasts.

° The lighting system can be activated by a photocell-switch on top of the utility pole(s) or by a timer: thereby avoiding unnecessary transmissionof artificial light.

In regard to residential areas, the lighting system will be designed to minimize unwanted light and glare leaving the site by focusing lamps and by the use of hoods and shades on the site boundary lights. HPS lamps (1000 watt) are recommended for the ICTF yard lighting because: 1) the lights are small, have a long lamp-life, and can be easily mounted and serviced: 2) the lams transmit"white light" and can be focused; and 3) HPS lamps use one-half the amount of energy required by mercury vapor lamps. A uniform lighting pattern is preferred to avoid sight fatigue caused by contrast or "stage effect".

3.5.5.2 Aesthetics. Aesthetics is a highly subjective issue: therefore, mitigations pertaining to aesthetics can be unwarranted. The perimeter eight foot chainlink fencing may be substituted by concrete block walls at locations where sound attenuation adjacent to neighboring residential areas is necessary. The walls could eliminate a view of the ICTF.

3.6 SAFETY
SUMMARY

Setting:

Several aspects of the ICTF will require safety considerations on both a design and ongoing basis. Safety features which are designated for project incorporation are general fire protection measures, a container segregation area, diesel fuel storage area, and general security measures.

Impacts:

Potential impacts could result from the storage of flammable fuel at the facility, the transport and handling of containers containing potentially hazardous materials, and building or equipment fire on the project premises. Greater train and truck activity will increase the potential for train/vehicle accidents.

Mitigations:

Safety provisions which are proposed for project incorporation to mitigate potential hazards include:

- Fire protection measures including ingress/egress routes, fire lanes, fire flow capabilities, hydrants, sprinklers, and general fire equipment which is in conformance with the Los Angeles Municipal Code and the Los Angeles Fire Department Planning Division.

- Segregation of containers with hazardous materials in a specific area designed with special spill containment and fire fighting capabilities.

- Storage of flammable fuels in a Los Angeles Fire Department-approved underground tank.

- General security measures to include perimeter fencing, lighting, and 24 hour surveillance.

Safety provisions which will be incorporated off site with respect to rail and truck activities include:

- Use of visual, audible, and barrier devices for at-grade rail crossings.

- Specialized education and coordination of railroad employees into hazardous material teams.

- Trucks transporting containers with hazardous materials will conform to the special transportation provisions of the U.S. Department of Transportation.

3.6 SAFETY

Safety aspects at the project site include fire protection measures which are proposed for project incorporation, a container segregation area, storage of diesel fuel, and general security measures.

Aspects of the ICTF project have the potential for adversely affecting safety off the project site. Both rail and truck transport of containers occur principally off the ICTF project site.

3.6.1 SETTING

3.6.1.1 Fire Protection. The fire protection safety of the ICTF project will be assured by the city of Los Angeles (LAPD) and City of Long Beach (LBFD) Fire departments. The LAFD will approve all fire protection plans and equipment proposed for the facility, After implementation, periodic inspections will assure that fire protective measures which have been approved and installed are operational. Both LAFD and LBFD may provide emergency fire protection measures to the ICTF. The proximity of LAFD and LBFD emergency response units to the ICTF is discussed in Public Services, Section 3.10.

3.6.1.2 Hazardous Materials/Container Segregation/Fuel Storage. The transfer of containers will follow standard procedures now implemente marine container terminals. Containers will be transported by truck to the facility where they will be directed to a specific locality within the site where the most efficient loading of the container or container-on-chassis can be loaded upon rail flatcars. Truck tractors will either pick up port-bcund containers or return to the port unloaded for subsequent transfer operations.

A small percentage of containers handled at ICTF will have contents of a hazardous nature. Based on existing levels currently handled at various container terminals, it is estimated that the percentage of containers with hazardous cargo will be approximately five (5) percent of containers handled.

According to the Los Angeles Fire Department, hazardous materials may be briefly defined as follows:

Corrosive Material - Solids, liquids or gases which can damage living tissue or cause fire.

Explosive Material - Any compound which is classed as A, B, or C Explo-

Qxidizing Materials - Any element or compound which yields oxygen or reacts when subjected to water, heat, or fire conditions.

Toxic Materials - Gases, liquids or solids which may create a hazard to Life by ingestion, inhalation, etc.,under fireconditions.

Unstable Materials - Those materials which react from heat, shock, friction, contamination, etc., and which are capable of violent decomposition or auto reaction, but which are not designed primarily as an explosive.

Water Reactive Material - React violently or dangerously upon exposure to water or mature.

Other materials - Any indicated material of doubtful classification.

Flammable Liquids and Materials - Cases, liqified gases, liquids, dusts, fibers, or other materials which are flammble.

Class A- Flammable liquids having a flash point below 70° F. and a vapor pressure greater than 14.7 psi (absolute) but not greater than 27psi (absolute) at 100° F.
ClassB- Flammble liquids having a flash paint below 70 F. and a vapor pressure not greater than 14.7 psi (absolute) at 1000 F.
Class C - Flammable liquids having a flash point of 70 F. or greater, but less than 100' F.
ClassD- Flammable liquids having a flash mint of 100 F. or greater, butless than 1500 *F.*

Not all categories of hazardous materials are allowed to be transported in toners. For example, at the ports no class A or B explosives are permitted in containers; however, class C explosives (fireworks) are permitted in container transport.

Bridge cranes and yard hostlers will be used to transfer containers to and from rail flat cars. This equipment will be fueled primarily by diesel fuel oil. The fuel oil will be stored in a 10,000 gallon underground storage tank. Yard hostlers will be refueled at the storage tank site, while bridge cranes will be fueled with the use of a law capacity tank truck which can go to the bridge cranes. Locomotives will not be fueled on the ICTF site.

3.6.1.3 Security. Security within the Fort of Los Angeles is the primary role of the City of Los Angeles Harbor Department Fort *Wardens'* Office. This office coordinates combined land, water, and air patrol operations with the Los Anqeles City Police and *Fire Departments.* Further coordination is provided withcities of Carson and Long Beach Police and Fire Departments.

3.6.1.4 Rail Safe The transport of containers by rail to and from the ICTF will increase train traffic over existing levels (see Section 3.8.). Trains will *utilize* principally the Wilmington Branch of the Southern Pacific Transportation company. Thesecondary rail route will be the SanPedro Bran&.

There is apotential for train vehicle collisions at points where roadways cross rail tracks. These are usually referred to as at-grade crossiqs. There are 34 at-grade crossing on the Wilmlngton Branch and 31 crossings on the San Pedro Branch With implementation of the ICTF project, the number of trains utilizing these branches will increase and thus increase the potential for train/vehicle accidents.

Since January 1971, there have teen 95 train/vehicle accidents on the Wilmington Branch line resulting in 33 injuries and 4 deaths. The San Pedro Branch line has had ll9 train/vehicle accidents resulting in 24 injuries and no deaths. The accidents of both branch lines account for fewer than 4 accidents per hand, per year, for the recordedperiod.

3.6.1.5 Truck Safety. Implemtation of the ICTF will not increase he number of trucks generated for container transport, but will alter their travel pattern. Truck travel on the routes to/from the ICTF will increase (see section 3.8). However, the total truck miles-traveled will be significantly decreased.

3.6.2 IMPACTS

3.6.2-l Fire Protection. The potential for fires at the ICTF exists from the storage of flammable fuel at the facility, the transport and handling of containers with materials which may be flammable, oxidizing or explosive; and general building or equipment fires. The fire protection measures and equipment proposed for installation at ICTF are expected to minimize the potential for fire impacts to insignificant levels.

3.6.2.2 Hazardous Materials/Container Segregation/Pbl Storage. The potential impact of the accidental release of hazardous materials from a container depends upon many factors such as the quantity and nature cf the hazardous material, existent weather conditions, and the extent to which the immediate impact can be mitigated or neutralized. A segregated storage will be provided within the ICTF site and graded such that spilled materials will be diverted to a central sump area. In the event of the accidential release of hazardous material, the spill would be effectively contained and controlled.

Southern Pacific's employees are organized and trained in the handlinq of hazardous materials. The Southern Pacific has developed a document, "Instructions for Handling Hazardous Materials,~ which sets forth procedures for shipping, placarding, packaging, load/unloading, and storage of hazardous material. The Hazardous Materials Regulations of the U.S. Department of Transportation and Southern Pacific's Company prcocedures form the basis for safe transportation of hazardous materials.

No siqnificant adverse impacts are anticipated from the storage and handlinq of diesel fuel.

3.6.2.3 Security. All truck arrivals and departures will be checked by control and guard personal at the south entry to the facility: Controlled access for maintenance and railyard employee parking is planned for the northeast end of the facility off 223rd Street. Administration and visitor parkinq access will be from Sepulveda Blvd., and the main fire department access will also be from Sepulverda Blvd. through the entrance gates usinq designated fire lanes. A second fire access gate will be provided from 223rd Street. Access franother points of entry will be limited by mans of eight foot high security fencing. All aspects of the ICTF will be adequately lighted by means of evenly spaced lightinq standards.

No siqnificant adverse impacts to the security of the ICTF are anticipated.

3.6.2.4 Rail Safe Implementation of the ICTF will increase both the number and frequency of trains Utilizing the SanPedro and Wilmington Branch lines. This will also increase the potential for train/vehicle accidents at at-grade rail crossings.

Train/vehicle accidents can be categorized as resulting from three types of errors (Berg, 1981):

1, Recognition error - failure to perceive or detect the approach of a train and take available actions to avoid collision. This is the primary cause of accidents at at-grade crossings with crossbuck (minimal) warning signs.

2. Decision error - failure to choose available actions to avoid collision. This is the primary cause of accidents at at-grade crossings with flasher warning devices.

3. Action error - failure to successfully execute collision avoidance maneuvers. Action errors do not cause as many accidents as the previous two factors.

The potential for derailment of trains my also be increased. However, the frequency of derailments is low, and the potential increase is not predictable.

3.6.2.5 Truck Safety Implementation of the ICTF will result in a significant net beneficial impact to truck safety. project implementation will result in a net reduction in truck-miles traveled of approximately 16,000 miles per day beginning 1983, increasing to over 71,154 miles per day in the year 2000. based upon a 250 day working year, project implementation would reduce the total miles traveled by trucks hauling containers by over 700,000 miles in the proposed 17 year duration of the proposed project phasing.

The sizeable reduction of truck miles will reduce the overall interaction of trucks hauling containers and automotive vehicular traffic which would be encountered on the freeway transit to the Los Angeles Terminal. Actual reduction of accidents by the removal of these trucks from the freeway is difficult to characterize. The potential for traffic accidents involving trucks with comtainers would obviously be reduced.

There will also be a subsequent increase in the potential for accidents between trucks with containers and vehicular traffic on O street routes between the ports and ICTF However, an overall decrease in the truck accident potential is expected since there will be a significant reduction in truck-miles-traveled. All trucks which transport containers with hazardous materials must do so in conformance with U.S. Department of Transportation guidelines.

The potential for train/vehicle accidents is very difficult to quantify. Although various formulae for the calculation of this potential have been studied they are not generally used because of the extreme variability of the component factors used in the calculation. Additional time delays to vehicular traffic at at-grade crossings resulting from increased train activity are discussed in Section 3.8.

Current rail activity on the San Pedro and Wilmington Branch lines is approximately one through train (round trip) per day. Impleme`ntation of the ICTF is expected to increase rail activity by 2 roundtrips during the initial Phase, increasing to 7 roundtrips per day by the year 2000. This gradual increase in the number of trains is not expected to generate a significant impart to train vehicular accident potential.

3.6.3. UNAVOIDABLE ADVERSE IMPACTS

The unavoidable adverse impacts included within this section are those impacts related to rail safety which can be reduced to an insignificant level, but cannot be eliminated or relieved without imposing an alternative design,

0 No unavoidable adverse *acts are anticipated with the implementation of fire protection, container segregation, fuel storage, and security,

0 Truck transit activity will be decreasedin the present Port-to-downtown Los Angeles railyard route and accentuated in the Port-to-ICTF routes. This will pose an unavoidable adverse impact upon vehicle safety along the Port-to-ICTF routes by increasing the traffic and thereby increasing the potential for truck/vehicle accidents.

* The increase in train traffic which will be generated by the ICTF will impose an unavoidable adverse impact upon train/vehicle interaction at at-grade crossings. The increase in train traffic will unavoidably increase the potential for train/vehicle accidents. However, this potential is not considered significant.

3.6.4 CUMULATIVE IMPACTS

Cumlative impacts are not anticipated from the implementation of fire protection, container Segregation, fuel storage, security or Truck transit.

A net adverse cumulative impact will be generated as a result of increasing the number of train trips from Los Angeles to ICTF. This will increase the potential for train/vehicle accidents at at-grade crossings.

Container rail transport will include a small percentage of containers which carry hazardous materials, there by increasing the potential for spillage due to leaks or derailment while being transported. Overall consideration of rail transport should result, however, in a net beneficial cumulative impact on safety Container movement will be shifted from truck transport on a congested highway system to rail transport on underutilized rail corridors.

3.6.5 MITIGATIONS

3.6.5.1 Fire Protection. Several fire protective measures are proposed for incorporation into the ICTF. Briefly, they are:

0 Ingress and Egress Routes - two separate routes of entry and exit will be provided for the ICTF which will accommodate major fire fighting apparatus and provide adequate evacuation during emergency situations. A southerly entry/exit will be from Sepulveda Blvd./willow St-/and a northerly &try/&it fran 223rd Street will be a controlled gate with Fire department access.

O Fire Lanes. All firelanes within the ICTF will be paved all weather roads which can SuFport the weight of heavy fire fighting equipment. These fire lanes shall be 20 feet wide with revisions made for 28 foot wide areas where hydrants are installed. Please fire lams will be free of obstructions at all times.

Fire Flow Capability. The quantity of water necessary for fire protection is related to such-factors as land use, type of development, occupancy, and the degree of fire by hazard. Water may be provided to the ICIF from the Dominguez Water Company. Five (5) thousand gallons per minute (GEM) at a pressure of 135 pounds per square inch could be delivered to the ICTF from,a main line running parallel to Sepulveda Blvd. Preliminary meetings with the Los Angeles Fire Department indicate that this will be sufficient to meet the fire protection needs of this project. However, increased industrial development of this area would probably require increases in the fire flow capability.

- Multiple fire hydrants will be located on each of three (3) main water lines which will run parallel to the long axis (north-south) of the ICE (Figure 39). Hydrants will be spaced approximately 400 feet apart and will have guard posts to prevent accidental truck or equipment collisions with hydrants.

- Specific portable and fixed fire fighting equipment will be located throughout the facility and buildings as required by the Los Angeles fire Department.

- Buildings of the ICTF will have automatic sprinkling systems as recomended by the Los Angeles Fire Department.

3.6.5.2 Hazardous Materials/Container Segregation/Fuel Storage. **Several** mitigating features have been incorporated into the ICTF project which will minimize any adverse impacts generated by the accidental spill or release of hazardous materials transported in containers.. These features are as follows:

* All containers carrying hazardous materials which are not scheduled for immediate transfer to rail flatcars will be stored in a special *area* which is segregated or removed from *other* general container storage areas and residential sites. The segregated area will be located in the northwest sector of the ICTF site, southerly of 223rd Street. This one acre area will be paved with asphalt to prevent possible spilled materials from soaking into the subsurface soil. The area will be graded such that any spilled liquid material will be directed and collected into a centralsump or depressed area capable of holding the contents of a single container plus a reasonable amount of fire fighting fluids/foams which may be used. In the event the sump area contains hazardous material, a special waste disposal truck will be hired to pump out the material and dispose of it in a suitable waste disposal site.

  The outside perimeter of the segregation site will have a raised or bermed area which will allow the retention of spilled materials and still allow trucks with chassis to pass over them.

* The segregated area will have suitable fire fighting equipment to assure immediate protection/prevention measures. The equipment may include such measures as both fixed and portable combination water/foam (AFFF) equipment andportable carbondioxide dispensers.

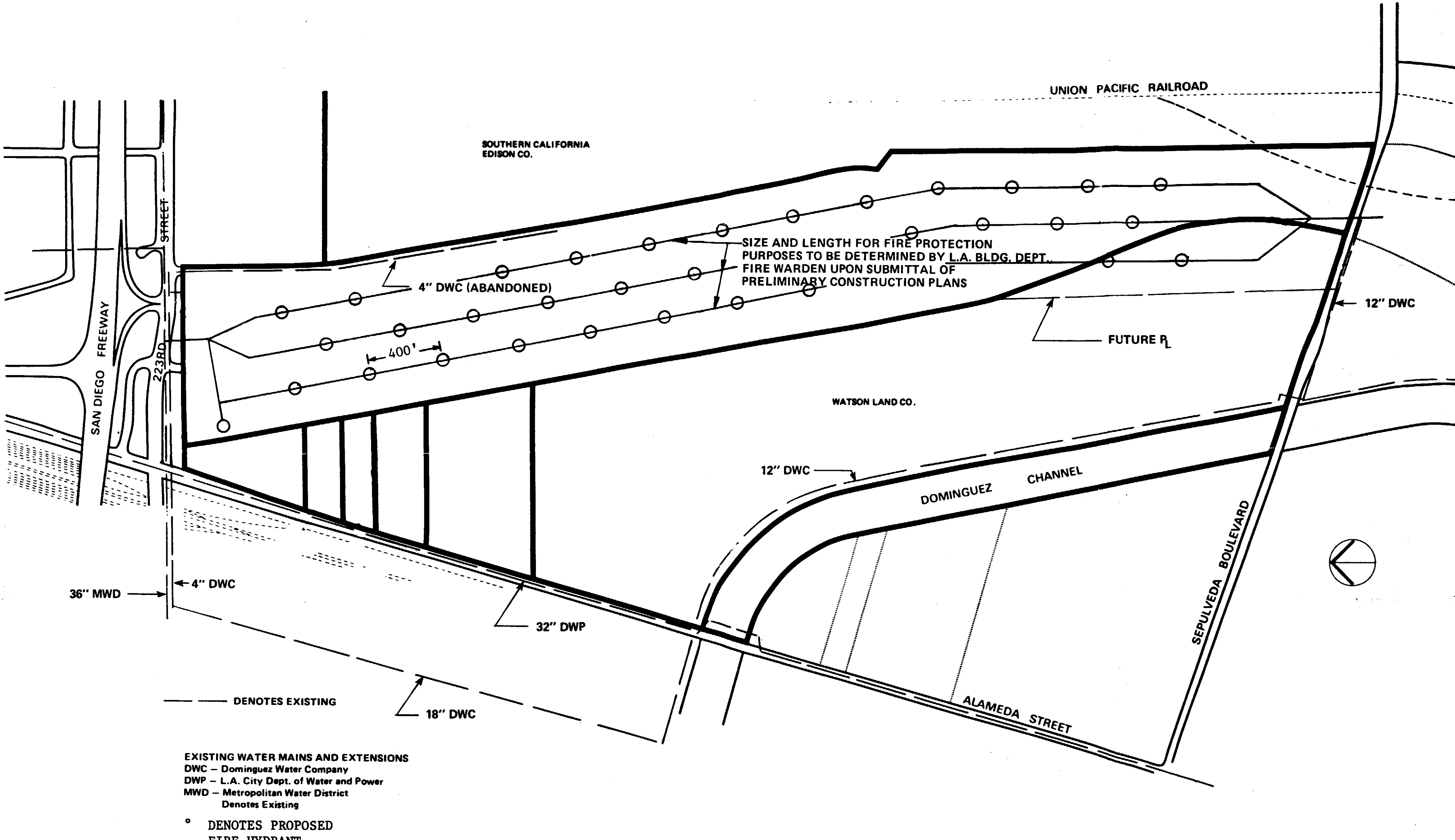


Figure 39

FIRE PROTECTION CONCEPT
WATER SUPPLY

The segregated area will have immediate access from 223rd Street with controlled assess available to fire and emergency personnel. **Further,** access from Sepulveda Blvd. (south end of project) will be available to emergency personnel. Fire lanes on the project site will be provided which will remain unrestricted at all times.

Measures to handle containers carrying hazardous materials during rail transport include:

1. Loading and securing all trailers and containers with hazardous materials on flatcars in strict conformance with U.S.Department of Transportation or Bureau of Explosives criteria.
2. Hazardous materials are identified by quantity and product description in all shipping papers, bills, and transit correspondence.
3. Containers are posted with placards which indicate the hazardous contents.
4. Initial inspection to **assure** loading, placarding, and shipping papers as above. All rail cars not in conformance are refused and other carriers notified to avoid further transport.
5. Rail employees on the rail route are instructed, trained, and organized into hazardous materials emergency response teams in the event that hazardous materials are released from the containers.

The initiation of these mitigating measures is expected to effectively reduce the impacts of hazardous materials which have teen accidentally released from their containers to insignificant proportions.

3.6.5.3 Bail Safety The potential impact of train/vehicle accidents is currently reduced on the rail lines with the use of various warning devices and controlled speed at at-grade crossings.

The Wilmington Branch employs a mix of 31% passive signs, 40% flashing lights with bells, and 29% automatic gates and flashing lights with bells at 34 crossings. There are several types of warning devices employed such as passive signs, flashing lights, bells, and autoamatic gate arms. The San Pedro Branch employs a mix of 27.5% passive signs, 57.5% flashing lights with hells, and 15% automatic gates, flashing lights and bells at the 31 at at-grade crossings between Los Angeles rail terminal and ICTF.

In addition to the above safety precautions, the California Public Utilities Commission also requires trains to blow their whistles commencing with the approach to the crossing and while the train engine transits the crossing to provide further warning of the trains approach.

3.7 SOCIOECONOMICS
SUMMARY

Setting:

The majority of the land proposed for the ICTF site is vacant or occupied by a few tenants on short-term leases. As such, there are little existing economic benefits in terms of employment or indirect economic inpacts on the community.

No absolute figures are given on surrounding residential and industrial land values. This analysis examines the potential for this project to indirectly effect a decrease or increase in the surrounding land value. The only major development plan for any portion of the proposed ICTF site is the proposed expansion of Macmillan Oil Company liquid bulk facility on property leased from Watson Land Company.

Truck operating costs for transfer of containers between the Ports and the Southern Pacific downtown Los Angeles railyard are estimated at between one and two dollars per mile.

Impacts :

Seventy new jobs will be created by 1986 from the managerial level down through the ranks of operations. Utilizing two shifts, this number will double to 140. By the year 2000, one and two shifts will require 159 and 318 employees, respectively. The use of 156 construction employees is expected over the three phase construction period. The action of respending by both the ICTF operator and its employees creates extended employment and income benefits throughout the local and regional economy.

Estimated cost savings based on the reductions in truck miles traveled resulting from the use of the ICTF rather than the existing Southern Pacific Yard is estimated at $48.20 per container in 1981 dollars. As fuel costs increase, these savings would also increase in the future years.

The potential exists for reduction in land values of the residential areas along the Wilmington Bran& of the Southern Pacific Railroad due to increased noise levels. The land value of vacant industrial lands surrounding the facility could potentially increase due to their prime location for ancillary facilities that could serve the ICTF.

Mitigations:

As most economic impacts are beneficial, no mitigations are necessary. For mitigation of adverse impacts on residential land values due to increased noise levels (see Noise chapter, Section 3.4).

3.7 SOCIOECONOMICS

3.7.1 SETTING

3.7.1.1 Employment and Economic Impacts Since the majority of the land is vacant, there are presently no economic benfits in terms of employment or indirect impacts on the community from the vacant parcels. There are some short-term users of the land who have 30-day revocable permits but no major facilities with significant employees. Mostof theparcels are used for Storage or agricultural uses.

3.7.1.2 Surrounding Land Values. No absolute figures are given here on surrouding residential and industrial land values. This analysis only examines the potential for this project to indirectly effect a change (i.e., increase or: decrease) in the surrounding land values.

3.7.1.3 Truck Operating Costs. Estimated mileage costs rage from about one to two,dollars per mile each way for transfer of containers between the container terminals and the Southern Pacific downtown Los Angeles railyard. This cost was estimated at $1.25 in 1981. The truck operating costs for the year 2000 are not estimated in future dollars because of the difficulty in escalating fuel costs for the period of years.

3.7.1.4 Private development plans for the ICTF Site. The only major development plan for any land areas needed for the ICTF is a proposal by Mac-millan Oil Company to expand their liquid bulk facility on property that they currently lease from Watson Land Company. The land is presently being devoted to agricultural uses.

3.7.2 IMPACTS

3.7.2-1 Employment and Economic Impacts in Surrounding Region. The estimated costs of site improvements operations resulting from the Intermodal Container Transfer Facility will not only benefit the private firms directly engaged in the construction and operations of the site, tut will also benefit other local and regional firms through tie respending of this capital influx.

Comservative estimates have shown that private companies pay approximately 30% of the their gross business revenue toward wages andsalaries. Approximately 40% of the gross revere is spent on purchases by the firm for material inputs, 20% is retained earning for the firm, and the remaining 10% is paid out in taxes.

The econcmic impact on the micro-level will involve the creation of an estimated 70 new jobs by 1986 from the managerial level down through the ranks of operations. When the facility is utilizing the services of two shifts, this number will double to 140. The personnel estimates will increase substantially by the year 2000, where one and two shifts will require 159 and 318 employees, From the wages and salaries earned by the employees of the site improvements and operations, approximately 50% is estimated to be respent throughout the local and regional market area for consumer purchases. The remaining 50% is presumed to be saved or invested by the employees.

The action of respending by both the private firm and its employees creates extended employment and income effects throughout the local and regional economy. The application of a derived market area multiplier can be used to estimate the extent of the local and regional economic impacts. For the purpose of estimation, the regional market area multiplier developed for the Port of Long Beach study by the consulting firm of Williams-Kuebelbeck and Associates (1976) has been applied.

In the Williams-Kuebelbeck study, it was shown that the respending of income throughout the local and regional market area by port dependent firm and their employees has the effect of creating additional revenues for other non-port dependent firms and their employees. This respending effect continues to ripple through the local and regional mrketareawith each successive round of respending having a lesser effect than the previous. Without having to calculate each round of respending, Williams-Kuebelbeck developed a regional market area multiplier to estimate the full extent of respending beyond the first round of the induced indirect effects.

The regional market area multiplier derived for the Port of Long Beach by the Williams-Kuebelbeck group was 2.49, which means that for every dollar spend by the Port of Long Beach on improving or expanding harbor facilities, an additional $1.49 is generated by respending throughout the local and regional market area.

Tables 22 and 23 detail the direct, indirect and total economic impacts resulting from the estimated site improvement costs from the ICTF.

3.7.2.2 Construction Phase. Estimates of manpower required for the construction phases are listed below:

		Avg. No. of Workers/Day	Length of Time Required
Phase I (1983)	Railroad Access	25	14
	Site Improvement	46	13
Phase II (1991)	Remote storage	17	4
	Rail track Construction	20	6
Phase III (1996)	Remote Storage	22	6
	Rail track Construction	26	8

Because the numbers of conetructionworkers are low an&the construction period for specific projects is short, it is expected that these construction workers will be from the existing labor force. Thus, noinfluxof construction workers into the regionwill result from this project.

TABLE '22

Total Estimated Cost **of** Site **Improvements**
$64,007,000 (1981 Dollars)
Direct, Indirect, and **Total** Economic **Impacts**
for the **Ports** of Los Angeles **and Long Beach Regional Market Area**

Market Ares Multiplier = 2.49

	Direct	Indirect	Total
Gross Business Revenues	$64,007,000	$97,096,000	$161,103,000
Local and Regional Purchases	25,880,000	38,561,200	64,441,200
Wages and Salaries	19,202,100	29,128,800	48,330,900
Retained Earnings	12,801,400	19,419,200	32,220,600
Taxes	6,400,700	91709,600	16,110,300

TABLE 23

Total Estimated Cost of Site **Improvements** Escalated
To Year of Construction
$130,441,000 (1981 Dollars)

Market Area Multiplier = 2.49

	Direct	Indirect	lbtal
Gross Business Revenue	$130,441,000	$194,357,090	$324,798,090
Local and Regional Purchases	52,176,400	77,742,830	129,919,230
Wages and Salaries	39,132,300	58,307,127	97,439,427
Retained Earnings	26,088,200	38,871,418	64,959,618
Taxes	13,044,100	19,435,709	32,479,809

3.7.2.3 changes in Surrounding Land values.

3.7.2.3.1 Residential Land Values. As a secondary impact due to increased noise levels, the Possibilty exists that there will be an impact on the land value of surrounding residential areas. This impact is difficult to quantify, if it exists at all.- A1980 study prepared by the Long Beach Comm-nity & Environmental Planning Division of the Departmnt of Planning and Building entitled Recommendations on Airport Operations Adopted by the Airport Advisory Task Force" could draw no conclusion about property values impacted by airport noise. Property values, based on recorded sales, under the adjacent flight patterns were compared to property values outside the flight pattern. The results were inconclusive because the data did not take into account conditions of maintenance, aesthetics, 'etc. In other words, the selling price of each home was based on many other factors besides locations within the flight pattern. Also in this study, Some Long Beach realtors suggested that rather than a reduction in property values, the sales period may be extended.

Another consideration is that the appraised value of the home might take into account the proximity of the railroad tracks, but not the number of trains that may be using the track- In other words, the original purchaser may have realized a lower purchase cost due to the presence of the railroad tracks, regardless of how many trains used the track. This original reduction in the value of the home would probably be passed onto subsequent purchasers.

There are four areas where residential areas will experience an increase in sand levels due to the ICTF project (See Secticn 3.4). These are:

i. Residential locations just east of the ICTF.

2. Residential locations adjacent to Alameda Street and San Pedro Dolores Yard.

3.' Residential locations along the San Pedro Branch of the SPrr line between Tweedy Blvd. and Southern Avenue in South Gate.

4. Residential locations adjacent to the Wilmington Branch of the Southern Pacific rail line.

Noise impacts at residential locations east of the facility should be reduced with equipment modifications on equipment used at the ICTF site. Other noise experienced in this region is a result of the Union Pacific Railroad tracks and not the ICTF project.

Location at numbers 2 and 3 above will not experience significant in-creases in noise levels with implementation of the ICTF. Only residential locations adjacent to the Wilmington Branch of the Southern Pacific Railroad will be impacted specifically as a result of the ICTF project. These locations are the ones that could experience a potential adverse impact on land value.

3.7.2.3.2 Industrial Land values. The land values of vacant industrial properties surrounding the site are expected to increase as the need for ancillary facilities such as container freight stations, is expected to increase- Want areas surrounding the site will beecome prime locations for some of these ancillry facilities.

3.7.2.3.3 Truck Operation Cost Savings One of the major benefits of the use of the ICTF will be reduction in truck miles traveled (VMT) and costs that result from the use of tie ICTF instead of the existing railyards in downtown Los Angeles Estimated cost savings were based on the reductions in truck travel (Section 3.8). These reductions are summrized below for 1983 and 2000 average days:

DAILY TRUCK MILEAGE REDUCTION FROM USE OF ICTF
(Miles)

1983	2000
Average Day	Average my
15,926	71,154

These daily figureswere converted to annual estimates by assigning a mix of 260 average days (five full days and two l/2 quantity days equivalent to six full days per week) totaling to the 3l2-day operation year.

Cost savings per mile of truck travelwere calculated for a typical tractor chassis combination operating in a combined freeway and local street rake. Estimated current mileage costs range from about me to two dollars per mile each way between the container terminals and the Southern Pacific railyard. This resulted in an estimated weighted typical operating cost, in 1981 dollars, of $1.25 per vehicle mile. When applied to them reductions listed earlier, the annual estimated cost savings that result are summarized below:

ESTIMATED TRANSPORT COST SAVINGS

	1983	2000
Estimated Annual Cost		
Savings from VMT **Reductions** **(VMT)x(312 days)x(Cost/Container)**	**$6,211,100**	**$27,750,100**
Estimated Savings per Container **(Annual** cost **saving)x(1/312** days) **x(1/daily** trip)*	$48.20	**$48.20****

*The number of round trips daily is estimated at 4l3 in 1983 and 1,844 in the year 2000.

**l981 dollars. As fuel costs increase, the savings per container would also increase.

3.7.4 CUMULATIVE IMPACTS

The economic analysis presented in Section 3.7.2 is a cumulative analysis of respending of income generated by this project throughout the local and regional market area.

3.7.5 MITIGATIONS

3.7.5.1 Employment and Economic Impacts in Surrounding Region. As impacts are beneficial, no mitigations are necessary.

3.7.5.2 Changes in Surrounding Land Values.

3.7.5.2.1 Residential. Please refer to the mitigation section of the Noise Chapter (Section 3.4) for a discussion of mitigations to reduce noise in residential areas. These same mitigations would have the effect of reducing any possible impacts to land values. Generally, use of the San Pedro Branch of the Southern Pacific rail line will reduce the amount of residential area exposed to increased noise levels, thereby eliminating possible impacts on surrounding land values.

3.7.5.2.2 Industrial. As impacts are beneficial, no mitigations are necessary.

3.7.5.2.3 Truck Operating Cost Savings. As impacts are beneficial, no mitigations are necessary.

3.7.5.2.4 Land Aquisition. Because the majority of tenant agreements in the area include a 30-day revocable notice by either party, no mitigations are necessary. Although Macmillan Oil Company has a long term lease with Watson Land Company, Macmillan has not proceeded with expansion onto the site as yet. The parcels of land that are identified as required for inclusion into the ICTF site (Section 2.1) will either be acquired through purchase or long-term lease agreements. In cases where the land is to be purchased, the fair market values of the land will be established through the use of independent land appraisers, and negotiated agreements will be reached.

3.8 TRANSPORTATION AND CIRCULATION
SUMMARY

Setting:

Vehicular Traffic and Circulation. The proposed ICTF site has excellent accessibility to the regional freeway system. The major surface streets serving the site from the Ports' container terminals are Alameda Street on the west, 223rd Street on the north, and Sepulveda Boulevard/Willow Street on the south. Analysis of intersections in the vicinity of the ICTF shows that these are currently operating at relatively high levels of service during peak hour periods.

Pail Traffic. The proposed ICTF will be serviced exclusively by the Southern Pacific Transportation Company with two single-track branch lines that connect the Ports' area to downtown Los Angeles. North of the Dominguez Junction, the Wilmington Branch will be used principally for ICTF container train movement. Current rail activity on these bran&es is very low.

Impacts:

Vehicular Traffic and Circulation. There will be temporary disruptions to traffic flow during the construction period. Truck traffic volumes anticipated from the ICTF operation will not have a significant impact on the traffic flow of adjacent streets. However, numerous intersections in the vicinity of the site will exceed capacity in the future (with or without the ICTF during peak hours unless improvements to the streets and intersections are implemented.

Although ICTF-generated traffic will incremently add to the traffic congestion on the local street system, the ICTF will result in a significant reduction in the truck vehicle-miles-traveled in transporting containers. There will be increased vehicular traffic delay at at-grade crossings due to the increased number of train movements associated with the ICTF.

Pail Traffic. The ICTF will increase train activity (up to 14 trains per day) on Southern Pacific's rail line. The rail mode of transportation to/from the Ports' area is highly underutilized. Impacts are associated with increased train movements, including increased levels of noise, air, vehicular delay and impacts on adjacent land uses.

Mitigations:

Vehicular Traffic and Circulation. Construction plans for rail are truck accesses were developed to minimize the disruption to traffic flow. The ICTF will incremently add to the traffic congestion in the Ports' area. Implementation of SCAG's Phased Program of Highway Improvements will provide sufficient capacity to meet future Port traffic demands. Increases in vehicular traffic delay at at-grade crossings can be mitigated partially by: installation of grade crossing predictors, improved traffic signalization, appropriate train scheduling, and improved lane geometric design.

Pail Traffic. Increases in unit container trains is unavoidable but partially mitigated by Southern Pacific's use of double stack trains, which reduces the number of trains required. Improved crossing protection or grade separation construction at grade crossings as recommended by the PUC would reduce the rail associated impacts.

3.8 TRANSPORTATION AND CIRCULATION

3.8.1 SETTING

3.8.1.1 Vehicular Traffic and Circulation. A vehicle traffic analysis for the proposed project was completed by Wallen Associates (1982). A copy of the "Intermodal Container Transfer Facility Traffic Analysis" is available for review at the LAHD, Environmental Management Office, 425 S. Palos Verdes St., SanPedro,CA

3.8.1.1.1 Vehicular Access to the Project Site. the proposed ICTF site has excellent accessibility to the regional freeway system (Figure 3). The San Diego Freeway (Interstate Route 405) is located just north of the project with inter changes for northbound freeway-oriented traffic on 223rd Alameda Street and for northbound on-off traffic on Alameda street north of 223rd Street- The Long Beach Freeway (State Route 7) is located about two miles west of the site with a partial interchange at wardlow Road (223rd Street) and a full interchange at Willow Street (Sepulveda Boulevard). The Terminal Island Freeway (State Route47)terminates at Willow Street about one-quarter mile east of the south boundary of the proposed ICTF facility and provides direct access between the site and the two Ports via Terminal Island.

The major-surfacre streets serving the site from the container terminals are Alameda Street on the west 223rd Street on the north, and Sepulveda Bculevard/ willow street on the south. In general, these arterial highways have a minimum of two lanes in each direction. The primary exception being the narrow section of Sepulveda Boulevard between Alameda Street and Wilmington Avenue, which is striped for one each way with a painted median. Alameda Street is controlled with traffic signals at the nor&bound San Diego Freeway on-off the connector road between Alameda Street and 223rd Street, and at Sepulveda Boulevard. Also, 223rd Street has traffic signals at the connector road and at the south bound San Diego Freeway on-ff ramps. This east-west street became Wardlow Road at the City of Long Beach city limits at the east property line of the ICTF parcel Sepilveda Boulevard, which becomes Willow Street within the City of Long Beach east of the site, is signalizedat Alameda Street and at the Terminal Island Freeway terminus to the east. Because of the relatively long distances between traffic signals and the relatively low current traffic demands on these arterials,prevailingtravelspeeds are in the 40 to 50 mph range.

Six signalzed intersections in the vicinity of the site were selectedfor detailed analysis to determine the theoretical current operational characteristics of the street system serving the ICTF area. Alamada Street and the northbound San Diego Freeway ramps are controlled with a multi-phase fully-actuated traffic signal with separate left turn phasing for southbound traffic. All three approaches to this "T" intersection have two lanes, plus the southbound approach has a separate left turn storage lane. The "T" intersection of Alameda Street at 223rd Street has similar traffic signal control and intersection geometric design characteristics with the addition of a separate right-turn-only lane for northbound traffic. Alameda street and Sepulveda Boulevard intersection is controlled with a standard two phase traffic signal with two through lanes and a left turn on all four approaches, plus a very short right-turn-Only lane for westbound traffic.

The intersection of willow street (Sepulveda Boulevard) and the Route 47 Freeway terminus.- has double right and left turn lanes on the northbound approach, one lane for southbound traffic from the Paul Marshall Products Plant access driveway opposite the freeway, four approach lanes for eastbound traffic (left-turn-only, two through lanes, a right-turn-only lane), and double left turn, plus two through lanes for westbound traffic. The two traffic signals on 223rd Street at the connector road and at San Diego Freeway southbound closely spaced; approximtely 350 feet apart. At 223rd Street the connector road, there are two approach lanes for southbound traffic, three through lanes in each direction 223rd Street,plus and eastbound left turn lane. The south leg of this intersection is a little use unstriped access road for the subject parcel site. The approach lane striping at the "T" intersection of 223rd Street and the freeway on-off ramps is similar, except that eastbound approach has double left turn lanes to facilitate the turn movement entering the southbound 2 San Diego Freeway, plus two through lanes with no south leg at this location.

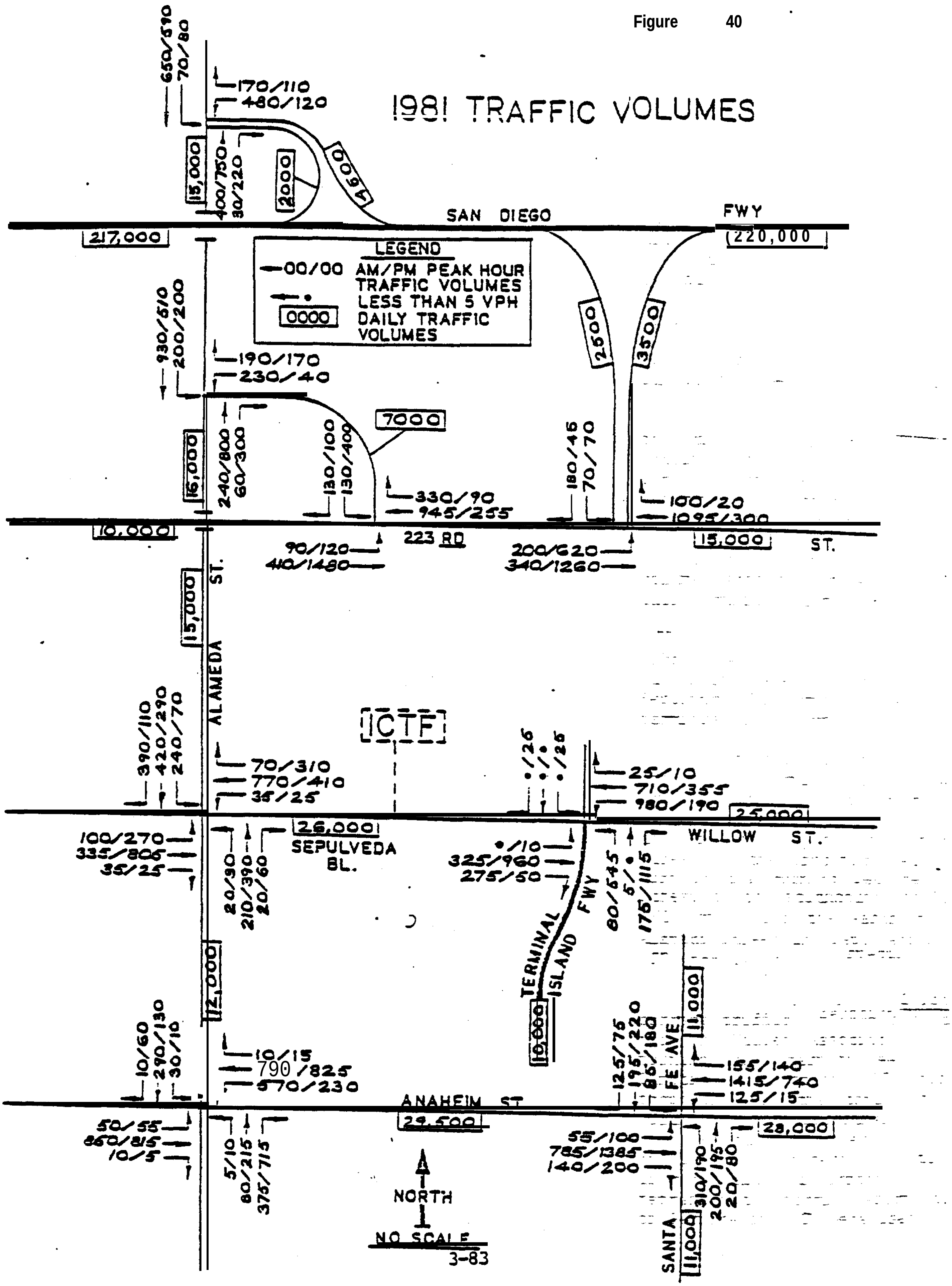
3.8.1.1.2 <u>Existing Traffic Volumes</u>. Current traffic demands on the street system serving this area were estimated based on traffic volume data obtained from the City of Los Angeles Department of Transportation (LADOT), the City of Long Beach Traffic Engineer Department, the State of California Department of Transportation (Caltrans), and from automatic and manual turning movement traffic counts made by Wallen Associates (1982).

Shown on Figure 40 are the current daily and directional peak hour traffic volumes from the street system serving the proposed project area. The highest daily traffic volumes occur on Willow Street east of the Terminal Island Freeway with about 25,000 vehicle trips per day (vpd). Other relatively high volume street segments in this area include: 223rd Street east of the southbound San Diego Freeway on-off ramps (15,000 vpd), Alameda Street north and south of the San Diego freeway overcrossing (14,000 and l5,OOO vpd, respectively), and Sepulveda Boulevard between Alameda Street and the Terminal Island Freeway termins (l3,OOO vpd).

The highest directional peak hour traffic volumes occur on Willow Street east of the Terminal Island Freeway: approximately 1,700 vehicle trips per hour (vph) westbound in the morning and 2,100 vph eastbound in the afternoon peak hour periods. High peak hour turning movement volumes of importance include: the northbound right turn from the Route 47 Freeway to eastbound on Willcw Street in the afternoon peak hour (l,ll5 vph)and the opposite westbound left turn in_the morning peak period (980 vph), the eastbound-left turn from 223rd-Street to the southbound SanDiego Freeway on rasp in the afternoon peak period -- (620 vph), and the eastbound and southbound approach left turn movements at Alameda Street and sepulveda Boulevard in the morning and afternoon peak periods (270 and 240 vph, respectively).

3.8.1.1.3 <u>Existing Levels of Service</u>. In order to evaluate current traffic operations on the street system, a volume/capacity analysis was made by Wallen Associates (1982) at six study intersections for the normal-morning and afternoon weekday commuter peak-travel periods. The "Intersection---- Capacity Utilization (ICC) method was used in the analysis- ICU represents the proportion of the total hour required to accommodate intersection traffic volumes-if all approaches are operating at capacity (Level of Service);- This does not mean that Level of Service E is appropriate for-urban design, but the evaluation of present and future operating conditions in terms of total capacity is more easily understood. In the Los Angles region, Level of Service would represent the normal design value. The following relation between levels of service and ICU were used:

Figure 40


1981 TRAFFIC VOLUMES
LEGEND
00/00 AM/PM PEAK HOUR TRAFFIC VOLUMES
LESS THAN 5 VPH
0000 DAILY TRAFFIC VOLUMES
SAN DIEGO FWY
217,000
220,000
15,000
2000
4600
2500
3500
7000
16,000
10,000
15,000
223 RD ST.
ALAMEDA ST.
ICTF
26,000
25,000
SEPULVEDA BL.
WILLOW ST.
TERMINAL ISLAND FWY
12,000
10,000
11,000
SANTA FE AVE
ANAHEIM ST
29,500
28,000
NORTH
NO SCALE

Level of Service A, volume/capacity (v/c) ratio of 0.60 of less
Level of Service B, v/c of 0.61 - 6.9
Level of Service c, v/c of 0.70 - 7.9
Level of Service D, v/c of 0.80 - 8.9
Level of Service E, v/c of 0.90 - 1.00
Level of Service F, v/c greater than 1.00

The term level of service is used to describe quality of traffic flow. Levels of Service A to C operate quite well. Level of Service D typically is the level for which an urban street is designed. Level of Service E represents volumes at or ner the capacity of the highway which will result in possible stoppages of momentary duration and fairly unstable flow. It is not uncommon to find "E" at industrial areas which have very high peak-hour to average-hour ratios. Level of Service F occurs when a facility is overloaded and is characterized by stoppages of long duation.

The ICU calculations assume that Signals are properly timed. At poorly timed locations, it is possible to have an ICU of well below 1.00, yet severe traffic congestion occurs because a movement is not getting enough time to satisfy its demand with excess time beingwasted. Tables 24a and 24b show the volume/capacity relationships at the six intersections for both commuter peak demand periods. For the ICU calculations, a through and turn lane capacity of 1,500 vehicles per hour of signal green time (vphG) was selected. This value is somewhat lower than the range of 1,600-1,800 vphG capacity values more commonly used in the greater Los Angeles region to reflect the higher than normal percentage of trucks to total traffic volumes at most locations in this area.

Based on this analysis, all six intersections are operating at relatively high levels of service during both peak periods. With the exception of Alameda Street and Seplveda Boulevard, field observations are in reasonable conformance with the results of the volume/capacity analysis. No significant congestion was observed at any location at any time except Sepulveda Boulevard approaching Alameda Street in the afternoon between 3:30 and 4:00 p.m. During this time period, eastbound traffic on Sepulveda Boulevard would back up as much' as one half mile west of the traffic signal at Alameda Street. This results from Sepulveda Boulevard having only one travel lane in each direction in the vicinity of Alameda street.

The intersections of Anaheim street with Santa Fe Avenue and Anaheim Street . and Alameda Street currently have peak-hour levels of service of D. This indicates the capacity to accommodate any substantial increase in future traffic.

3.8.1.2 Rail Traffic. The proposed ICTF will be serviced exclusively by the Southern Pacific Transportation Company. Figure 41 shows the Southern Pacific rail network in the Los Angeles and San Bernardino area. Southern Pacific has two single-track lines that connect the Fort's area to downtown Los Angeles. The San Pedro Branch generally parallels Alameda Street, and the Wilmington Branch is slightly to the west of the San Pedro Branch, along Willowbrook Avenue. All trains from the ICTF will travel northerly via the San Pedro Branch to Dominguez Junction (south of Artesia Boulevard) where either branch lines could be utilized to downtown Los Angeles. The Wilmington Branch will be used principally for unit container train movements to/from the ICTF north of Dominguez Junction, From the Wilmington Branch trains will access a short distance on the Santa Monica Branch to the downtown Los Angeles area. Tables 25a, b, c_I and d list the characteristics of the grade crossings on each branch line, including number of tracks, type of protective crossing device, train speed, train traffic, vehicular traffic and accidents.

TABLE 24a

1981 VOLUME/CAPACITY RELATIONSHIPS AND LEVELS OF SERVICE

INTERSECTION	DIRECTIONAL MOVEMENT	(1) CAPACITY	A.M. PEAK HOUR Traffic Volume	A.M. PEAK HOUR (2) V/C Ratio	P.M. PEAK HOUR Traffic Volume	P.M. PEAK HOUR (2) V/C Ratio
Alameda St & The NBD San Diego Fwy on-off Ramps	NB SBLT	3000	430	0.14	970	0.32*
	SB	I.500	70	0.05	80	0.05
	WB(3)	1500	650	0.32*	590	0.20
						0.08*
	Yellow			0.06*		0.05*
	TOTAL ICU:			0.60		0.50
	LEVEL OF SERVICE:			A		A
Alameda St & The 223rd Connector Rd	NB(4)	3000	240	0.08	800	0.27*
	SBLT	1500	200	0.13	200	0.13
	SB	3000	930	0.31*	510	0.17
	WB(3)	1500	230	0.15*	40	0.03*
	Yellow			0.05*		0.05*
	TOTAL ICU::			0.51		0.48
	LEVEL OF SERVICE:			A		A
223rd St & The Alameda St Connector Rd	SB	3000	260	0.09*	500	0.17*
	EBLT	I.500	90	0.06*	I.20	0.08
	EB	4500	410	0.09	1480	0.33*
	WB	4500	I.275	0.28*	345	0.08
	Yellow			0.05*		0.06*
	TOTAL ICU:			0.48		0.56
	LEVEL OF SERVICE:			A		A
223rd St & The SBD San Diego Fwy On-Off Ramps	SB EBLT(5)	2700 3000	250 200	0.08*	115	0.04*
	EB	3000	340	0.11	1260'	0.42*
	WB	4500	1195	0.27*	320	0.07
	Yellow			0.05*		0.05*
	TOTAL ICU:			0.47		0.51
	LEVEL OF SERVICE:			A		A
Alameda St & Sepulveda Bl	NB	3000	230	0.08	70	0.15*
	SB 6)	1500	240	0.09	400	N/A
	EBLT(6)	1500	810 100	0.N/A	270	0.13
	EB	3000	370	0.12	830	0.28
	WB(7)	3000	840	0.28*	720	0.24*
	Yellow			0.06*		0.06*
	TOTAL ICU:			0.61		0.56
	LEVEL OF SERVICE:			B		A

TABLE 24b (Contd)

INTERSECTION	DIRECTIONAL MOVEMENT	(1) CAPACITY	A.M. PEAK HOUR Traffic Volume	A.M. PEAK HOUR (2) V/C Patio	P.M. PEAK HOUR Traffic Volume	P.M. PEAK HOUR (2) V/C Ratio
Willow St & The Terminal Island Fwy Terminus	NB(8)	2700	80	0.03*	925	0.32*
	SB	1500	0	0.00	50	0.03
	EBLT		0		10	
	EB(4)	I.500 3000	325	0.11*	960	0.32*
	WBLT(5)	2700	980	0.36*	190	0.07*
	WB	3000	735	0.25	365	0.12
	Yellow			0.06*		0.08*
	TOTAL ICU:			0.56		0.79
	LEVEL OF SERVICE:			A		C
Anaheim St. & Santa Fe Ave.	NBLT[f]	1500	310	0.14*	190	0.06*
	SBLT[f]	3000	220	0.07	280	0.09
		I.500	85	N/A		0.05
	EB	3000	320	0.11*	295	0.10*
	WBLT[f]	3000 I.500	925	0.31 0.02	1515	0.53*
			125			N/A
	WB	3000	1570	0.52*	880	0.29
	Yellow			0.09*		0.08*
	TOTAL ICU:			0.86		0.80
	LEVEL OF SERVICE:			D		C
Anaheim St. & Alameda St.	NB	3000	455	.15*	930	.31*
	SE	3009	300	.10	190	.06
	EBLT	1500	50	.03	95	.04
	EBTR	3000	800	.27*	820	.27*
	WBLT	1500	570	.39*	230	.15*
	WBTR	3000	860	.29	840	.28
	Yellow			.09*		.08*
	TOTAL ICU:			.89		.81
	LEVEL OF SERVICE:			D		D

Notes:

(1) Through and turn lane capacities = 1500 vphG.
(2) Critical v/c Ratios denoted with an asterisk.
(3) Left turn traffic only in one lane.
(4) Excludes right turns in separate right-turn-only lane.
(5) Double left turn lane capacity = 1.8 x single lane capacity.
(6) Left turn volumes in excess of 100 vph treated as being controlled with a separate left turn signal phase.
(7) Includes right turns in very short right-turn-only lane.
(8) Right-turns-only in double right-turn-only lanes less WBD left turn volumes or left turns in double left turn lanes whichever is greater.
(9) Critical movement used to calculate ICU.

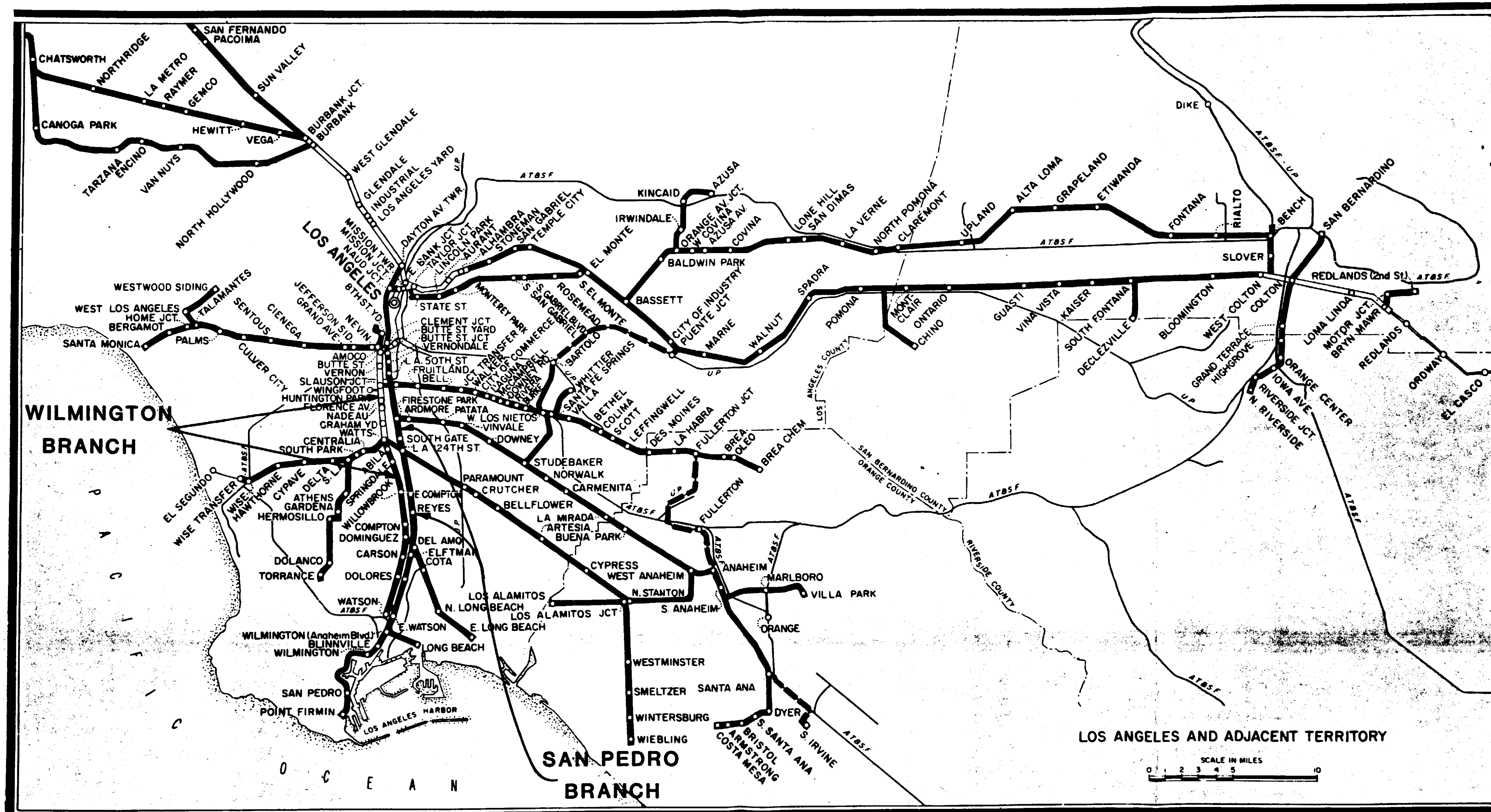


Figure 41
Southern Pacific's Local
Rail Network

TABLE 25a

SOUTHERN PACIFIC TRANSPORTATION COMPANY ICTF TRAIN ROUTE

Wilmington Branch "BBH"

Xing Number	Roadway Name	Number of Tracks(1) B	P	S	Other	Total	Warning Device	Service Date	Speed Min	Speed Max	Public Juris-diction	Daily Vehicle	Train Traffic (2)	No. of Lanes	Accidents (1-1-71 to 10-31-81) No.	Kill	Injured
BBA*-485.48	Alameda St.	1				1	2 #9	6-60		10	City of LA	25940	10	4	4	-	1
BBA*-485.58	24th St.	1		1	1	3	2 #8	6-11-63		20	"	3125	10	2	3	-	-
BBA*-485.69	E. Long Beach Ave	1		2		3	3 #3	3-4-57		20	"	11466	10	2	1	-	-
BBH-486.00	S. Barbara Ave.	2		1		3	2 #3	8-9-56		10	"	6000	20	2	1	-	-
BBH-486.13	41st St.	2		1		3	2 #3	6-21-56		20	"	9920		2	-	-	-
BBH-486.42	Vernon Ave.	2				2	2 #9	4-19-67		20	"	12390		4	5	-	-
BBH-486.73	48th Pl.	2				2	2 #3	8-8-56		20	"	750	20	2	1	-	-
BBH-487.17	55th St.	2				2	2 #3	6-21-56		20	"	6140	20	2	-	-	-
BBH-487.42	Slauson Ave.	2			1	3	2 #9A	7-23-80		20	LA County	23700		4	7	-	1
BBH-487.67	60th St.	2				2	2 #8	6-28-55		20	"	1500	20	2	-	-	-
BBH-487.98	Gage Ave.	2				2	2 #9A	7-16-80		25	"	12000		4	4	2	2
BBH-488.43	Florence Ave.	2			1	3	2 #9A	6-30-59		25	"	25500		4	2	-	4
BBH-488.33	Nadeau St.	2			1	3	2 #9	5-13-68		25	"	13090		4	-	-	-
BBH-489.44B	Firestone Bl. SR 42	2		1		3		9-12-36			"				-	-	-
BBH-489.94	92nd St.	1				1	2 #9A	7-10-75		25	City of LA	6602		3	1	-	-
BBH-490.26	97th St.	2			1	3	2 #3	8-8-56		25	"	6000	8	2	1	-	-
BBH-490.60	103rd St.	2	1			3	2 #3	6-21-56		25	"	15000		2	3	1	5
BBH-490.97	108th St.	1				1	2 #4	6-21-56		30	"	620	8	2	-	-	-
BBH-491.50	Wilmington Ave.	1				1	2 #8	6-21-56		30	"	10000	8	2	1	-	-
BBH-491.60	Imperial Hwy.	1				1	4 #9	2-9-70		30	"	29430	8	6	3	-	-

NOTE: Speed limit governed by current time table

Footnote:

Data was provided by the State of California Public Utilities Commission.

(1) B = branch; P = passing; S = switching

(2) Includes switching, switcher pass by, haulers.

*BBA = Santa Monica Branch

Key:

Warning Devices

#1R Reflecturized cross bucks

#3 Wig-wag

#8 Flashing lights and bells

#8A Flashing lights and bells with cantilever flashing lights

#9 Automatic gates with flashing lights and bells

#9A Automatic gates with flashing lights and bells and cantilever flashing lights

TABLE 25b

Xing Number	Roadway Name	Number of Tracks(1) B	P	S	Other	Total	Warning Device	Service Date	Speed Min	Max	Public Juris-diction	Daily Vehicle	Train Traffic (2)	No. of Lanes	Accidents (1-1-71 to 10-31-81) No.	Kill	Injured
BBH-492.00	119th St.	1				1	1 #3	6-21-56		30	LA County	2600	8	2	1	-	1
							1 #1	11-5-52									
BBH-492.33	124th St	1				1	1 #3	6-21-56		30	LA County	900	8	2	-	-	-
							1 #1	11-5-52		30	"						
BBH-492.60	El Segundo Bl.	1				1	4 #9	5-11-67		30	"	22570	8	4	-	-	-
BBH-492.73	130th St.	1				1	2 #8	3-6-67		30	"	400	12	2	-	-	-
BBH-493.00	Stockwell Ave.	1				1	2 #8	6-6-63		10	"	1500	8	2	1	-	-
BBH-493.56	Rosecrans Ave.	1				1	2 #8	6-21-56		30	City of Cpt.	27940	8	4	11	1	10
BBH-493.75	Elm St.	1				1	2 #8	6-21-56		25	"	1755	12	2	2	-	-
BBH-494.07	Compton Bl.	1				1	1 #1	6-21-56		10	"	17700	8	4	8	-	-
BBH-494.12	Palm St.	1				1	2 #8	5-1-51		15	"	2815	12	2	2	-	-
BBH-494.26	Laurel St.	1				1	2 #8	4-20-51		15	"	1687	12	2	-	-	-
BBH-494.33	Myrrh St.	1				1	2 #8	4-18-51		15	"	855	12	2	1	-	-
BBH-494.40	Indigo St.	1				1	2 #8	4-18-51		15	"	589	12	2	1	-	-
BBH-494.58	Alondra Bl.	1				1	2 #8	4-20-51		30		17780	8	4	3	-	-
BBH-494.870	Ped. Crossing	1				1		4- -65							-	-	-
BBH-495.09	Greenleaf Dr.	2				2	2 #8A	1-7-63		30	"	6300	12	4	4	-	3
BBH-495.61A	College OH St. 91	1				1		4-17-74							-	-	-
BBH-495.85	Manville St.	1		1		2	2 #9	8-29-57		30	"	200	12	4	1	-	-

NOTE: Speed limit governed by current time table

TABLE 25c
SOUTHERN PACIFIC TRANSPORTATION COMPANY ICTF TRAIN ROUTE
San Pedro Branch "BG"

Xing Number	Roadway Name	Number of Tracks (1) B	P	S	Other	Total	Warning Device	Service Date	Speed Min	Speed Max	Public Juris-diction	Daily Vehicle	Train Traffic (2)	No. of Lanes	Accidents (1-1-71 to 10-31-81) No.	Kill	Injured
BG-485.6	25th St.	1	1	1		3	3 #1	1-1-31		10	City of Vernon	6530	14	4	-	-	-
BG-485.63	Alameda St.	1				1	1 #9	3-6-70				7400	14	2	2	-	1
BG-486.0	Vernon 36th LA 41st	2				2	2 #4	10-29-52		10	"	9900	24	2	5	-	1
BG-486.3	Vernon Ave.	1	1	1		3	2 #4	8-17-29		10	"	12100	40	5	4	-	1
							1 #1	1-1-31									
BG-487.07	55th St	1	1	1	1	4	2 #4	10-28-52		12	"	6140	40	2	7	-	-
BG-487.3	Slauson Ave.	1	1			2	1 #8A										
							2 #8	7-24-59		10	Huntington Pk.	28300	28	4	4	-	-
BG-487.5	Randolph St.	1	1	1		3	2 #8A	6-19-78		15	"	6743	28	4	-	-	-
BG-487.9	Gage Ave.	1			2	3	2 #8A	8-25-76		10	"	11000	28	3	5	-	3
BG-488.3	Florence Ave.	1	1			2	2 #8A	1-11-71		10	LA County	28500	28	6	7	-	-
BG-488.9	Nadeau St.	1	1		3	5	2 #9	6-10-69		15	"	13090	28	5	1	-	-
BG-489.5	Firestone Bl. SR 105	1			1	2	3 #9	6-22-72		15	"	17700	28	5	4	-	-
BG-489.8	Southern Ave.	1			1	2	2 #8A	5-26-66		30	"	2000	28	4	4	-	1
BG-490.3	Tweedy Bl.	1			1	2	2 #8	3-8-61		30	"	7400	28	4	9	-	-
BG-490.0	Century Bl.	1		1	2	4	2 #8A	5-22-75		10	City of Lynwood	9500	28	4	7	-	1
BG-491.3	Fernwood Ave.	1				1	2 #8	11-7-57		10	"	2800	28	2	1	-	-
BG-491.5	Imperial Hwy.	1				1	2 #8	1-25-54		10	"	28000	10	5	9	-	5
BG-491.8	Lynwood Ave.	1			1	2	2 #1	10-28-52		30	"	8400	42	2	1	-	-
BG-491.9	Butler St.	1		1	1	3	2 #1			30	"	270	42	2	1	-	-
BG-492.2	Weber Ave.	1				1	1 #1	10-28-52		30	City of Compton	1000	42	2	1	-	-

NOTE: Speed limit governed by current time table

TABLE 25d

Xing Number	Roadway Name	Number of Tracks (1) B	P	S	Other	Total	Warning Device	Service Date	Speed Min	Speed Max	Public Juris-diction	Daily Vehicle	Train Traffic (2)	No. of Lanes	Accidents (1-1-71 to 10-31-81) No.	Kill	Injured
BG-492.4	El Segundo Bl.	1				1	2 #8	4- -49		30	"	16200	42	3	2	–	1
BG-492.8	Pine St. 134th St.	1				1	2 #1	10-28-52		30	City of Compton	1000	42	2	2	–	2
BG-493.3	Rosecrans Ave.	1				1	2 #8	5- -46		10	"	27470	42	5	3	–	–
BG-493.5	Elm St.	1				1	2 #8	6- -50		20	"	1500	42	3	–	–	–
BG-493.6	Palmer Ave.	1				1	1 #1 1 #3			20	"	3000	42	4	–	–	–
BG-493.8	Compton Bl.	1				1	1 #4	10-28-52		20	"	15800	42	4	5	–	–
BG-494.0	Laurel St.	1			1	2	2 #8	10-28-52		20	"	1000	42	2	–	–	–
BG-494.3	Alondra Bl.	1			2	3	2 #3	3-23-35		20	"	18030	42	5	8	–	1
BG-494.8	Greenleaf Dr.	1				1	2 #8	3-21-56		20	"	9320	14	5	–	–	–
BG-495.3A	Artesia Bl.	1				1		4-19-56							–	–	–
BG-495.36A	Compton Creek SR 91	1				1		4-17-74							–	–	–
BG-495.38A	Compton Creek SR 91	1				1		4-17-74							–	–	–
BG-495.48A	Compton Creek SR 91	1				1		4-17-74							–	–	–
BG-497.2	Del Amo Bl.	1			1	2	4 #9	7-11-78		20	LA County	16300	14	4	5	–	1
BG-497.8	Dominquez St.	1				1	2 #8	2-17-54		20	City of Carson	8300	8	3	3	–	–
BG-498.3	E. Carson St.	1			2	3	2 #8	9- -45		20	"	5200	12	4	21	–	6
BG-498.7A	San Diego Fwy. SR 405	1				1		7-16-62			"				–	–	–
BG-498.8A	223rd St.	1				1		10-15-74			"				–	–	–

NOTE: Speed limit governed by current time table

Current rail activity on the branch rail lines is very low. Typically are two through freight train movements (Dolores Hauler) per day between the Dolores Yard and the downtown transportation center. The Dolores Yard is a local switching yard and lies immdiately west of Alamda Street and northwest of the proposed ICTF site. Approximately 75% of the time the Dolores hauler uses the wilmington Beach and approxinately 25% of the time uses the San Pedro Branch Additional rail movements on these branches (Tables 25a-d) result from switching movements by industries utilizing the tracks.

Southern Pacific's major intermodal transfer yard is located just northeast of the downtown Los Angeles center with good access to the freeway system. The yard is a combination marine container and road trailer piggyback intermodal facility. Containers from the Ports' area currently are transported by truck approximately 22-25 miles to the downtown yard.

3.8.2 Impacts

3.8.2.1 Vehicular Paffic and Circulation.

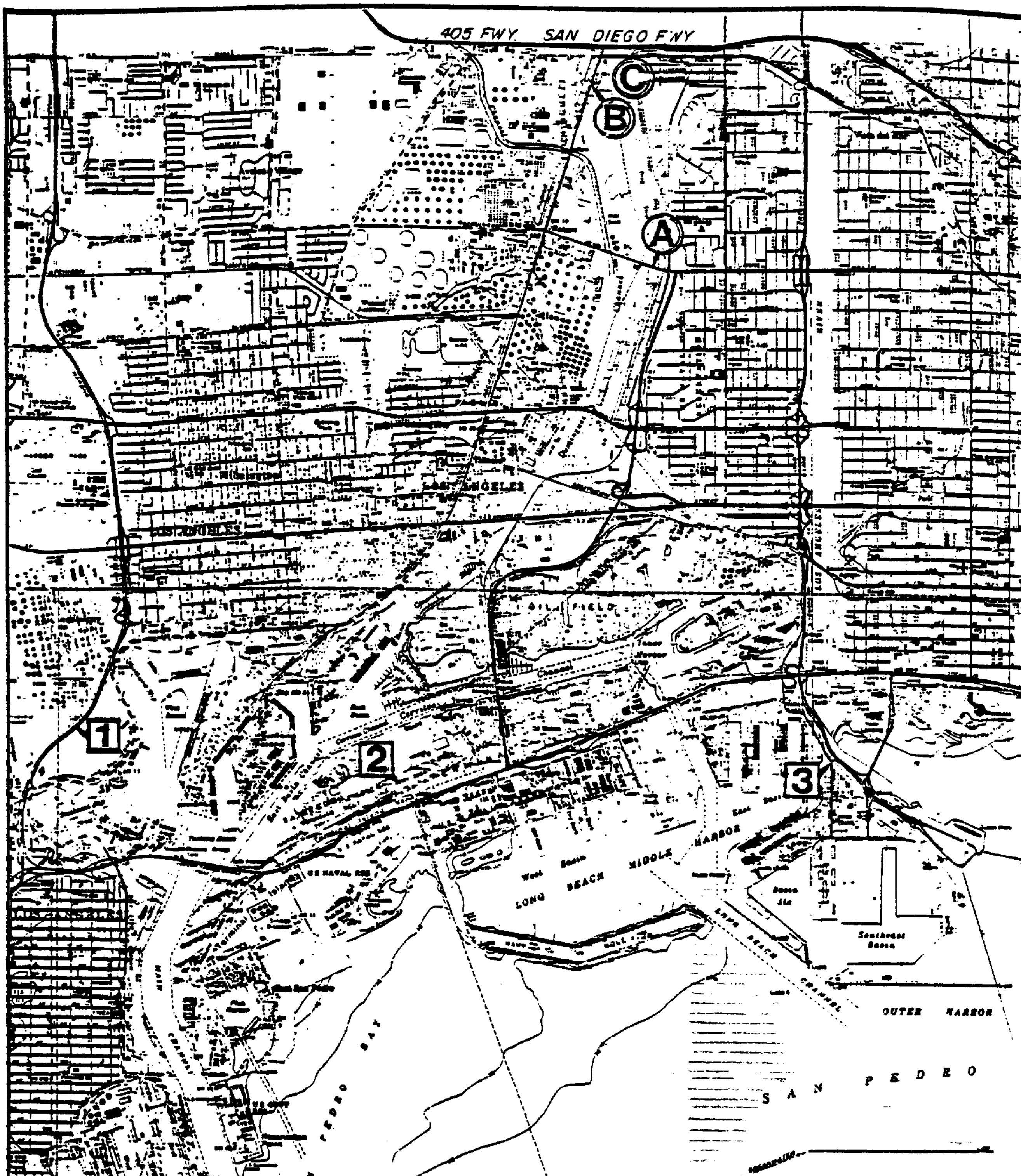
3.8.2.1.1 Construction Impacts. There will be disruption to the traffic circulation pattern during the construction period, particularly during the rail access Motorists in the construction area will experience some inconvenience, such as reduction the number of travel lanes However, the construction activity will be implemented in phases (see Section 1.3) to minimize traffic disruption to to maintain through traffic flow.

3.8.2.1.2 Vehicular Access to the Project Site. It is antici- -ted that the three major truck routes to/from the ICTF and the Ports' container terminals (Figure 42) will be:

1. From Terminal Island via the Terminal Island Freeway to Sepulveda Boulevard,
2. from the San Pedro/Wilington area of the Fort of has Angeles via B street to Alameda Street t Sepulveda Boulevard, and
3. from the Port-of Long Reach via the Long Beach Freeway to Anaheim Street to the Terminal Island Freeway.

To determine the truck routes between the proposed ICTF and the Ports that will likely be used, a study of alternative routes was conducted (Wallen Assoc- fates, 1982). Estimated route distances, travel times and average route speeds for round trip trip movements on these alternative routes are summarized in Table 26. These values were estimated using the afternoon peak hour period when total area- traffic demands are normally at the highest levels and the mid-day (off peak) period when the majority of the ICTF truck traffic is pres- **ent.** The average total travel times and speeds obtained from the data are **approximate values only.**

The alternative truck route comparison showed that the ICTF entrance/exit from Sepulveda Boulevard is the most advantage location, especially from the Terminal Island Freeway- the Part of the Long Beach.



ICTF ACCESS & CONTAINER TERMINAL AREAS

LEGEND
ICTF SITE ACCESS LOCATIONS
CONTAINER TERMINAL AREAS

PORT OF LONG BEACH
4/30/82 SGS

FIGURE 42

TABLE 26

ALTERNATIVE TRUCK ROUTE COMPARISON

Alternative Route	Average Round Trip Quantities: Route Length (miles)	Travel time (mins)	Speed (mph)
I. Between ICTF* and San Pedro/ Wilmington area via:			
a) B St./Alameda/Sepulveda**	10.6	22.2	29
b) B St./Anaheim/T.I. Frwy	11.1	22.5	30
II. Between ICTF* and Terminal Island, Port of Los Angeles via			
a) T.I. Frwy/Sepulveda**	8.2	12.1	41
b) Henry Ford/Alameda/Sepulveda	9.4	18.4	31
III. Between ICTF* and Port of Long Beach via:			
a) L.B. Frwy/Willow	7.8	14.1	33
b) L.B. Frwy/Anaheim/T.I. Frwy**	8.7	15.0	35
c) L.B. Frwy/PCH/T.I. Frwy	8.2	15.1	33

* Assumes entrance off Sepulveda Blvd.
** Anticipated to be the major route of travel

3.8.2.1.3 Rejected Traffic Volumes. The potential utilization of the ICTF is sham in Table Cl of Appendix 6.3C which provides the estimated container movement to and from the facility. Based upon a truck movement consisting of one 40-foot or two 2O-foot containers and an anticipated mix of 75% 40-foot containers and 25% 20-foot container, estimates of daily container truck traffic are shown in Table C2 of Appendix 6.3C. The table shows the container traffic between the three areas of container operation plus the movement to/from the ICTF and industries in Southern California. The latter will comprise about 13 percent of the total container movements and will bring traffic to the area which otherwise would have been destined to the downtown yard of the Southern Pacific.

Since more full containers are imported than exported and not all empty containers are returned to the Ports. It was estimated that the extra moves would amount to about 20 percent of the container traffic from the Ports. Extra trips to/from local industry were estimated at approximately 40 percent due to the greater difficulty in matching pickup and delivery.

The hourly traffic to/from the ICTF is shown in Table C3 of Appendix 6.3C. The average hourly figure is assumed as the daily traffic divided by the eight hours of normal terminal operation. This is a very conservative figure as most terminals will use a second shift between 6 p.m. and 3 a.m. to accommodate shippers and also operate on Saturday and Sunday if requested.

The direction at distribution of traffic on Sepulveda Boulevard is given in Table C4 of appendix 6-3C. Truck movements to/from the Port of Long Beach and Terminal Island were assigned to the east. These trips to the San Pedro/ Wilmingtcn area were assigned to the west, and local destination trips were assumed to use Alameda Street and the San Diego Freeway. Figure 43 shows the project hourly distribution of truck traffic between the ICTF and the container terminals.

3.8.2.1.4 SCAG Ports advisory Committee Results. In order to estimate the future potential impacts of the ICTF-generated traffic, it is necessary to characterize the future traffic volumes in the Ports' area. The Southern California Association of Governments (SCAG) Forts Advisory Committee formulated a Phased Program of Highway Improvements (see Appendix 6.3C) as an alternative to the proposed extension of the Termina1 Island Freeway.

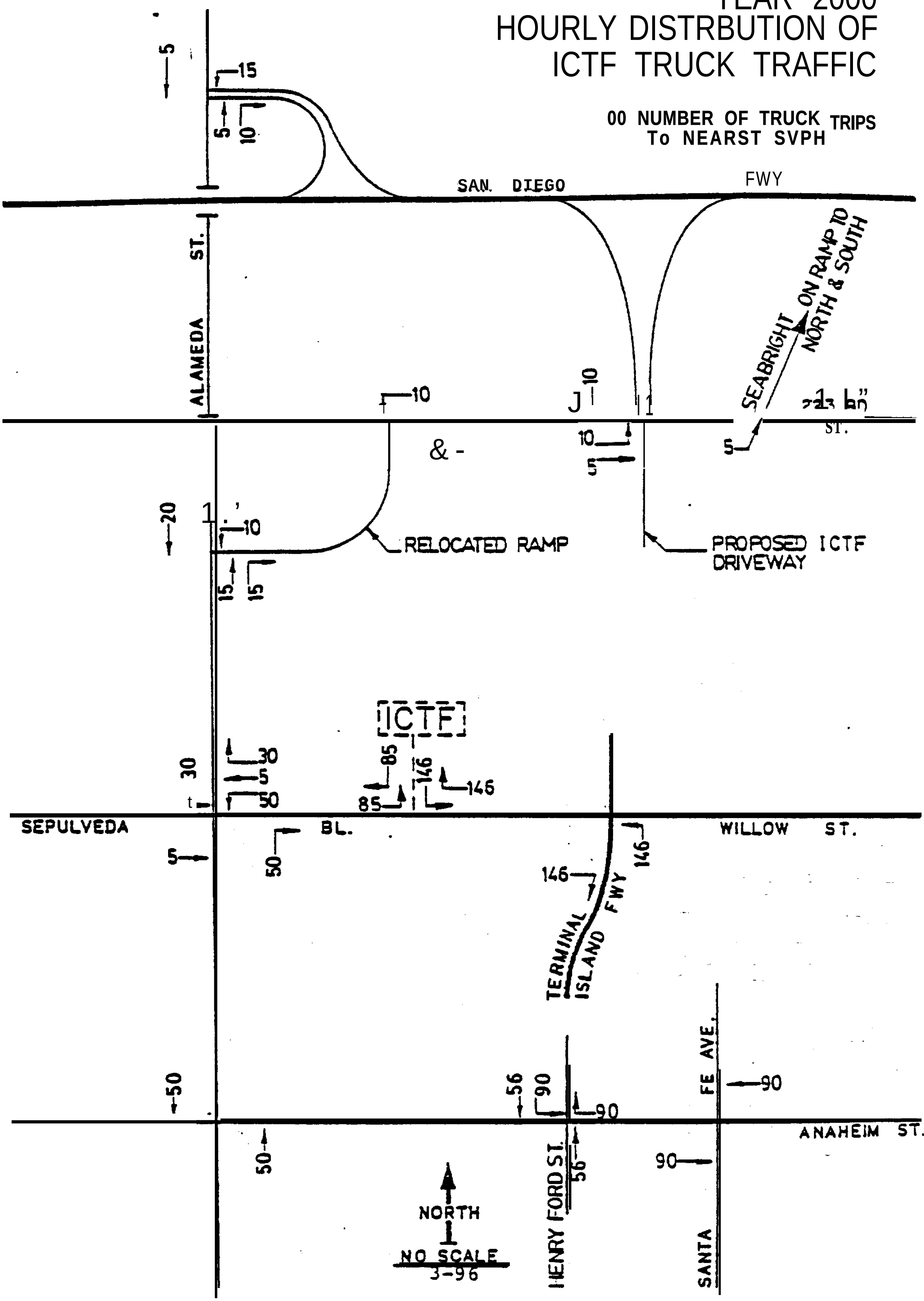
The traffic estimates developed by SCAG (Figure 44) formed the basis of theanalysis of future traffic at critical intersections in the vicinity of the ICTF. The 3.981 traffic volumes were extrapolated to the year 2000. Figure 45 shows the traffic volumes in the year 2000 if no highway improvements were made ("null alternatives), and Figure 46 shows the traffic volumes if the proposed SCAG program of highway improvements were implemented.

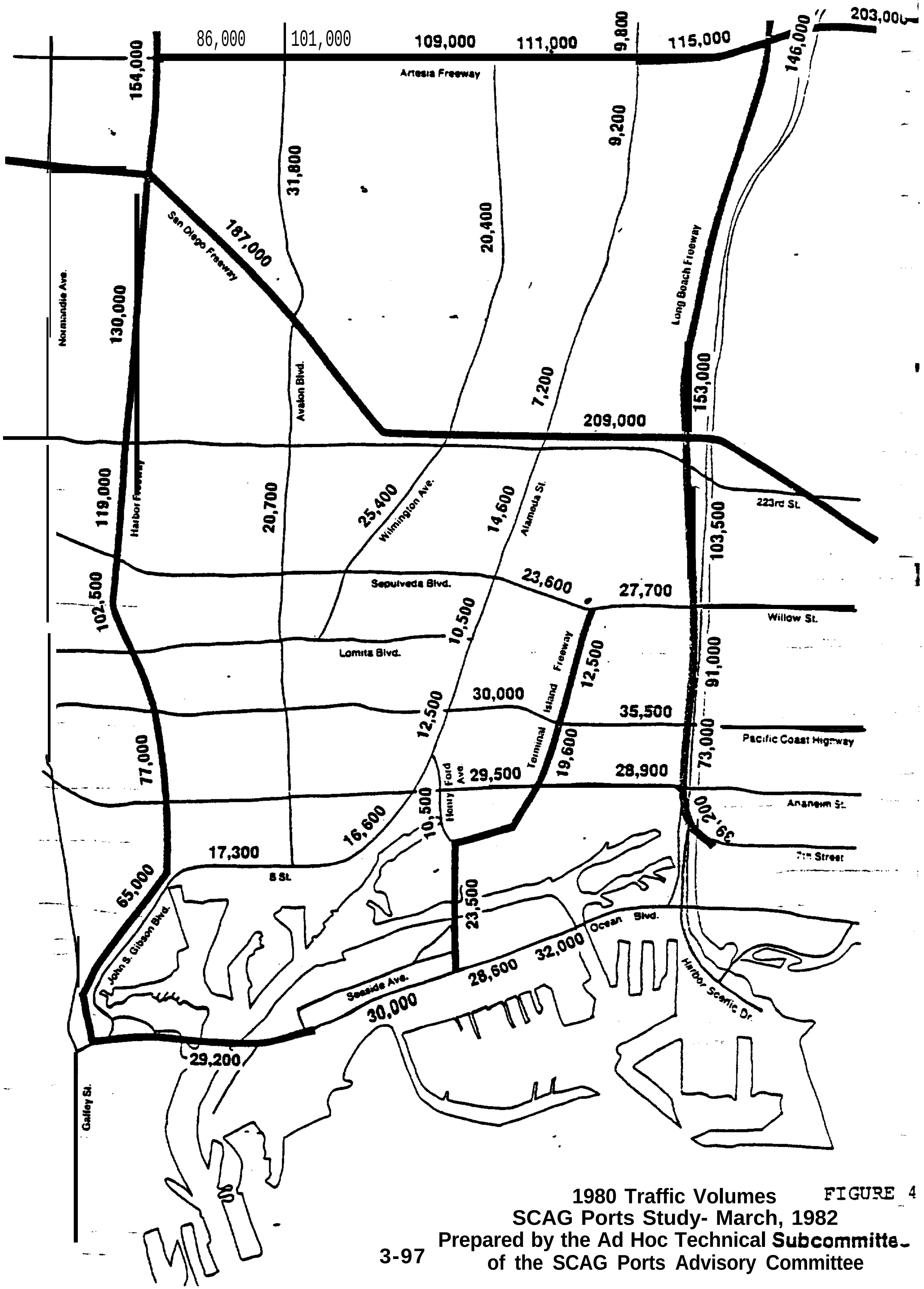
3.8.2.1-S Rejected Levels of Service: SCAG's traffic estimates were used as the basis for projecting the peek hour traffic volumes in the year 2000. The hourly distribution of ICTF truck traffic was compared to the projected hourly volumes. Tables 27 and 28 summarize the analysis of critical intersections in the year 2000 for the null condition and the condition with highway improvements. (The calculation sheets for these ICUs are given in Appendix 6.3C Tables C5-C10).

Figure 43

YEAR 2000 HOURLY DISTRBUTION OF ICTF TRUCK TRAFFIC

00 NUMBER OF TRUCK TRIPS To NEARST SVPH



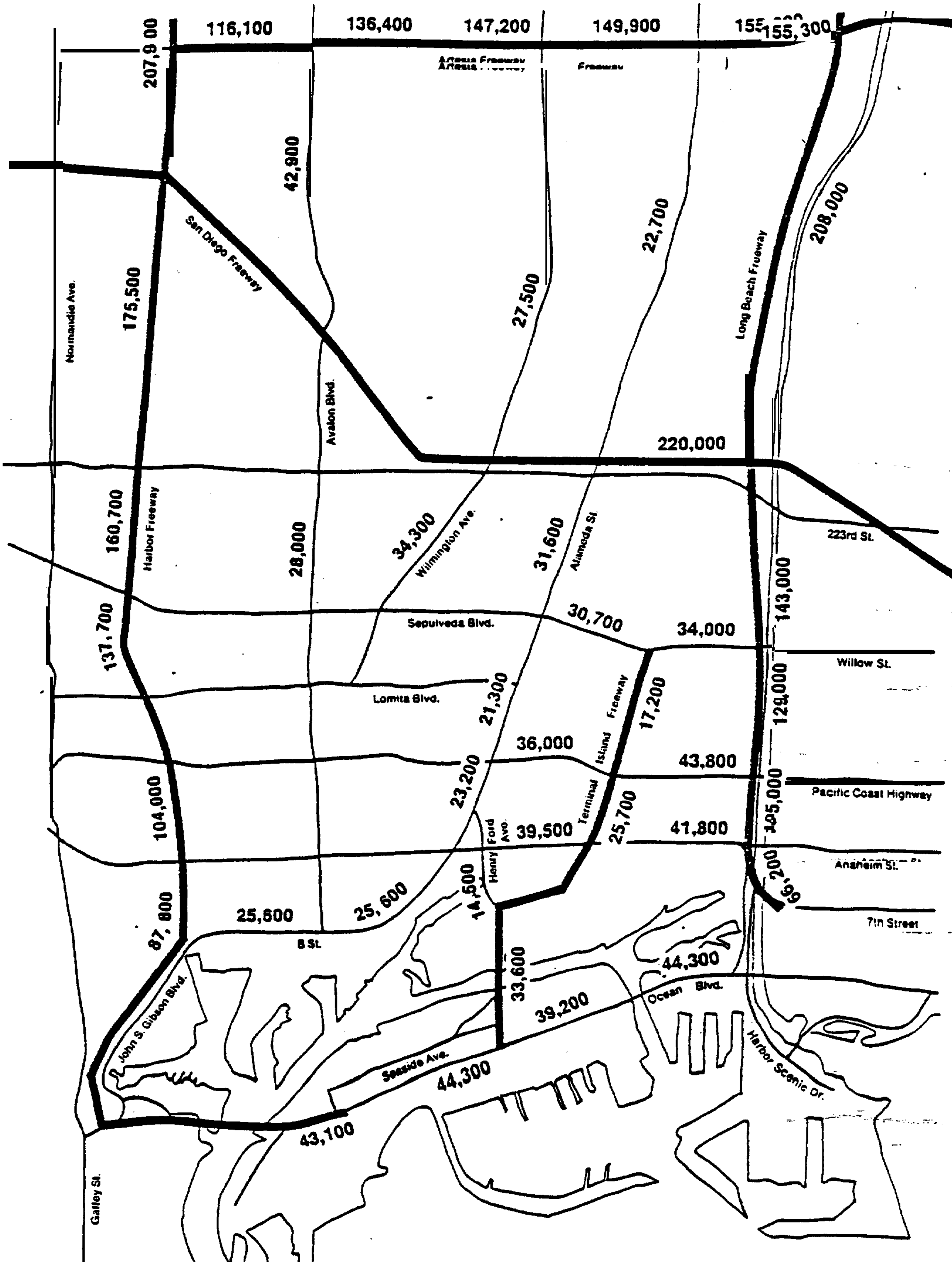


1980 Traffic Volumes FIGURE 4

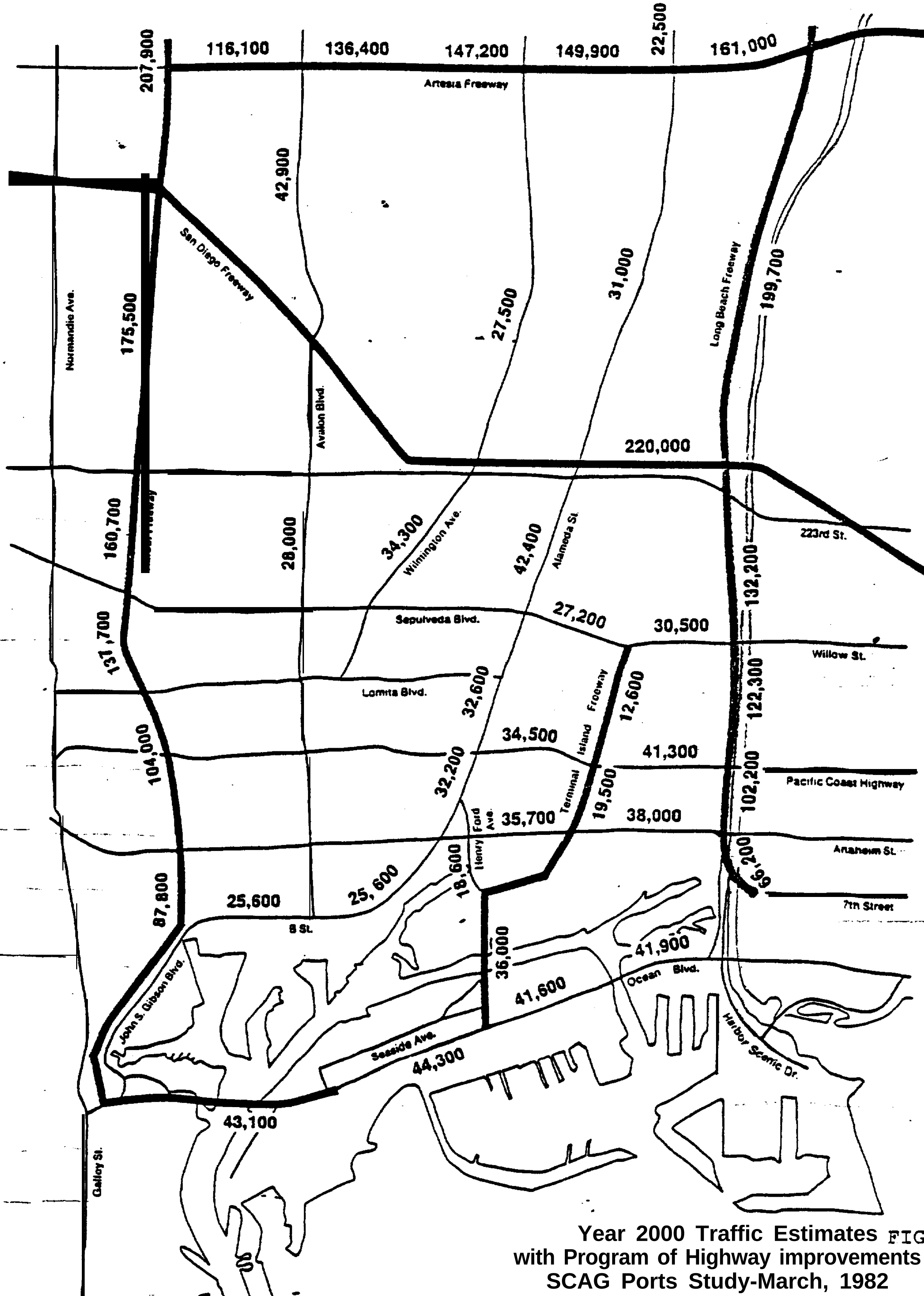
SCAG Ports Study- March, 1982

Prepared by the Ad Hoc Technical Subcommitte

of the SCAG Ports Advisory Committee



Year 2000 Null Alternative Traffic Estimates
SCAG Ports Study — March, 1982 FIGURE 45
Prepared by the Ad Hoc Technical Subcommittee
of the SCAG Ports Advisory Committee



Year 2000 Traffic Estimates FIGURE
with Program of Highway improvements
SCAG Ports Study-March, 1982
Prepared by the Ad Hoc Technical Subcommitt
of the SCAG Ports Advisory Committee

TABLE 27

SUMMARY OF VOLUME/CAPACITY ANALYSIS
YEAR 2000—NULL ALTERNATIVE (NO BIGBWAY IMPROVEMENTS)

INTERSECTION	A.M. PEAK HOUR ICU WITH ICTF	A.M. PEAK HOUR ICU W/O ICTF	A.M. PEAK HOUR LEVEL OF SERVICE WITH ICTF	A.M. PEAK HOUR LEVEL OF SERVICE W/O ICTF	P.M. PEAK HOUR ICU WITH ICTF	P.M. PEAK HOUR ICU W/O ICTF	P.M. PEAK HOUR LEVEL OF SERVICE WITH ICTF	P.M. PEAK HOUR LEVEL OF SERVICE W/O ICTF
Alameda St. & NBd San Diego Fwy Ramps	1.06	1.05	F	F	0.73	0.72	C	C
Alameda St. & 223rd St. Connector Rd	0.94	0.93	E	E	0.84	0.82	D	D
223rd St, & Alameda St. Connector Rd.	0.64	0.63	B	B	0.72	0.72	C	c
223rd St. & SBd San Diego Fwy Ramps	0.60	0.60	A	A	0.65	0.65	B	b
Alameda St. & Sepulveda Bl.	0.94	0.92	E	E	0.87	0.81	D	D-
willow St. & Terminal - m	0.80	0.75	.C	C	1.12	1.12	F	F-
Anaheim St. & Santa Fe Ave.	1.12	1.09	F	F	1.02	0.99	F	E
Anaheim St. & Alameda St.	1.12	1.10	F	F	1.08	1.08	F	F

See Appendix 6.X for details.

TABLE 28

SUMMARY OF VOLUME/CAPACITY ANALYSIS YEAR 2000—
WITH PORTS ADVISORY COMMITTEE (SCAG)
B E - -

INTERSECTION	A.M. PEAK HOUR ICU WITH ICTF	A.M. PEAK HOUR ICU W/O ICTF	A.M. PEAK HOUR LEVEL OF SERVICE WITH ICTF	A.M. PEAK HOUR LEVEL OF SERVICE W/O ICTF	P.M. PEAK HOUR ICU WITH ICTF	P.M. PEAK HOUR ICU W/O ICTF	P.M. PEAK HOUR LEVEL OF SERVICE WITH ICTF	P.M. PEAK HOUR LEVEL OF SERVICE W/O ICTF
Alameda St. & NBd San Diego Fwy Ramps	0.76	0.76	C	C	0.53	0.52	A	A
Alameda St. & 223rd St. Connector Rd	0.98	0.96	E	E	0.81	0.81	D	D
223rd St. & Alameda St. Connector Rd.	0.56	0.56	A	A	6.77	0.77	c	C
223rd St. & SBd San Diego Fwy Ramps	0.65	0.63	B	B	0.69	0.69	B	B
Alameda St. & Sepulveda Bl.	0.85	0.84	D	D	0.88	0.86	D	D
Willow St. & Terminal Island Fwy	0.57	0.51	A	A	0.8'6	0.86	D	D
Anaheim St. & Santa Fe Ave.	0.89	0.87	D	D	0.79	0.77	C	C
Anaheim St. & Alameda St.	0.70	0.69	B	B	0.62	0.62	B	B

See Appendix 6.3C for details,

The analysis shows that:

- Truck movements generated from the ICTF will have very little or impact on future traffic flow at most intersections. The major impacts will be on Alameda Street at Sepulveda Boulevard and Willow Street at the terminus or the Terminal Island Freeway. Table 28 shows that the proposed highway improvements will be needed for these intersections to be able to accommodate anticipated traffic.

- 0 Truck movement to and from the ICTF will be at a reasonable level of service. Additional travel time during periods of,peak hour traffic will not exceed a few minutes per trip.

- Implementation of the highway program developed by the SCAG Ports Advisory Comittee will provide a balanced transportation system for the ports' area. Traffic would distribute evenly and no one intersection or route would experience extreme congestion. Alameda Street and Anaheim Street would be utilized to capacity and relieve pressure on the Long Beach and SanDiego Freeways.

3.8.2.1.6 Reduction in VMT. The ICTF will be located about 5 miles from the container terminals in the Long Beach. The present Southern Pacific Transportation Center container transfer yard is located adjacent to Mission Road and the Golden State Freeway,.Interstate Route 5, abut two miles east of downtown Los Angeles. The distance between the ports' container terminals and the existing Southern Pacific facility is abut 22-25 miles. The utilization of the ICTF will mean a reduction in me-way travel of 17-20 miles between the Ports' container terminals and the rail transfer yard.

Table 29 shows the vehicle miles of travel (VMT) with and without the ICTF, and the reduction in daily VMT due to utilization of the ICTF.

The location of the present Southern Pacific container transfer yard indicates that the Long Beach Freeway will be the major beneficiary of the ICTF. Thepresent Union Pacific and Santa Fe facilities arelocated adjacent to the Long Beach Freeway. Any future expansionof the ICTF to accomodate additional rail service would be of direct benefit to the Long Beach Freeway.

Implementation of the highway improvement program recommended by the SCAG Ports Advisory Committee will provide adequate street capacity to accommodate any future ICTF traffic.

The reduction in VMT as a result of the ICTF will additionally reduce the amount of roadwear to the highway system, conserve energyand reduce air emssions in the South Coast Air Basin.

3.8.2.1.7 Vehicular Traffic delay. The increased number.cf~trair~ movements resulting from the ICTF project will produce increased delays to vehicular traffic at at-grade street crossings. A grads crossing computer simulation analysis of thepotential delays at 65 grade crossing (31 on the San Pedro Branch and 34 on the Wilmington Branch including 3 on the Santa Monica Branch) was conducted by Reese-Chambers System Consultants (1982). Data inputs to the computer program for each crossing were: existing and projected average daily vehicular traffic (ADT), existing and projected peak hour traffic volumes, and existing and projected train volumes.

TABLE 29

AVERAGE DAILY TRUCK TRIPS TO/FROM ICTF

YEAR	ROUND TRIPS PER DAY	MILES PER DAY WITHOUT PROJECT VMT	WITH PROJECT VMT	PROJECT REDUCTION VMT
1983	413	20,650	4724	15,926
1985	507	25,350	5796	19,554
1990	854	42,700	9750	32,950
1995	1258	62,900	14,375	48,525
2000	1844	92,200	21,046	71,154

The following criteria were applied to the computer analyses in order to identify at-grade crossing for further Study:

1 - ADT of greater than 20,000 vehicles,
2 - More than 2% of the average daily traffic (ADT) blocked per day, and
3- Total additional delay (blockage) time of 30 minutes or greater per day-

Grade crossings which meet tie above criteria are listed in Table 30. Grade crossings with an accident history of more than 10 accidents in a ten-year period were also examined- E. Carson Street (Crossing No. BG-498.3) showed 21 accidents primarily non-injury accidents), but was eliminated from further study since the ADT was very low (existing ADT = 5200).

The increase in vehicular traffic delays at the at-grade crossings with greater train activity may pose potentially significant impacts. By the year 2000 and assuming that the ICTF trains utilize the Wilmington Branch 75% of the time and the San Pedro Branch 25% of the time, andexisting freight rail activi-es on these branches remain the same, there will be an additional blockage of approximately 60 minutes per day (over existing delays) at the listed crossings (Table 30) on the Wilmington Branch and approximately 30 minutes additional blockage at the listed crossings along the San Pedro Branch. The Del Amo Boulevard crossing may experience a total additional daily blockage delay of approximately 110 minutes in the year 2000, since all ICTF trains must traverse this crossing.

In the year 2000 it is estimated that about 5% of the ADT will be blocked at the listed Wilmington Branch crossings (Table 30) and 3-8% of the ADT on the San Pedro Bran& crossings will be blocked by freight rail movements, including switching and ICTF activities.

It is not known at this time the exact frequency of use of each bran& line for ICTF trains. In the worst case, in the year 2000 the estimated fourteen ICTF trains will travel on the Wilmington Branch. This would result in vehicular traffic delays at the listed crossing (Table 30) of 60-82 minutes of additional blockage (over existing levels) per day with approximately 6-7% of the total ADT blocked per day.

The existing daily blockages for the grade crossings given in Table 30 are 17.90 minutes per day with 2-5% of the total existing ADT blocked.

3.8.2.1.8 Related Traffic Issues. Two ICTF-related traffic issues are truck traffic on Willow Street and the Terminal Island Freeway extension to the SanDiego Freeway. Willow Street/Sepulveda Boulevard provides the most direct connection between the ICTF and the Fort of Long Beach via the Long Beach Freeway. There was initially much concern regarding the use of Willow Street for heavy truck traffic to/from the ICTF. The City of Long Beach has indicated that it will propose via an amendment to the long Beach Municipal Cods to redesignate the section of Willow Street between the Long Beach and Terminal Island Freeways as a non-truck route. Thedesignation of this roadway segment as a non-truck rate would not restrict trucks from accessibility to business activities, such as making pickups or deliveries of goods, or utilizing retail businesses along willow Street. It would restrict trucks from traversing the area.

TABLE 30

GRADE CROSSINGS IDENTIFIED FOR FURTHER VEHICULAR TRAFFIC DELAY STUDY

STREET/INTERSECTION	GRADE CROSSING NO.*
Alameda street*-	BBA 485.48
Slauson Avenue	BBH 487.42
Florence Avenue	BBH 488.42
Imperial Highway	BBH 491.60
El Segundo Blvd	BBH 492.60
Rosecrans Avenue	BBH 493.56
Slauson Avenue	BG 487.3
Florence Avenue	BG 488.3
Imperial Highway	BG 491.5
Rosecrans Avenue	BG 493.3
Del Amo Blvd.**	BG 497.2
Firestone Blvd.***	BG 409.5
Alondra Blvd.***	BG 494.3
Compton Blvd.*-	BBH 494.07
Alondra Blvd.***	BBH 494.50

*Refers to the PUC milepost number. BG=San Pedro Branch; BBH=Wilmington Branch.

**All ICTF ptnrfntrafficwilltrave~thisgtiadecrossing.

***These 5 crossings met the criteria in Phase II development of the ICTF.

The SCAG Ports study found that the use of Anaheim Street (with improve-, ments) is a viable alternative to Willow Street as a route between the ICTF the Port Of Long Beach

Another ICTF-related issue is the extension of the Terminal Island Freeway (Route 47) between Willow Street and the San Diego Freeway. This is the adopted route as given in the State Highway Routes of the Streets and Highways Code. Concern was expressed that the proposed ICTF location would preclude the primary route option for the Terminal Island Freeway extension. However, SCAG's Phased program of Highway Improvements concluded that improvements to major local highway arterial Would provide better services for transportation that the Terminal Island Freeway extension.

The SCAG Highway Improvements program has generated considerable local support Assembly Bill No. 3375 was introduced by Assemblyman Elder. This bill proposes the following amendments to the streets and Highways Coda:

°Add To State Highway System:

1. The extension of the Long Beach Freeway (Route 7) south of Pacific Coast Highway (Route 11, Harbor Scenic Drive to Ocean Boulevard, and Ocean Boulevard between the extension of the Long Beach Freeway and the Terminal Island Freeway (Route 47),

2. Henry Ford Avenue from the Terminal Island Freeway to Alameda Street; Alameda Street from Henry Ford Avenue to Artesia Freeway, and

3. Seaside Avenue from Vincent Thomas Bridge Toll Plaza to intersection of Ocean Boulevard and the Terminal Island Freeway. (This segment is already in the State Highway System as part of SR47, but it is maintained locally. California Transportation Commission action is required **before** the State can assume responsibility for maintenance.)

"Delete From State Highway System:

1. Segment of Terminal Island Freeway north of Pacific Coast Highway to willow street, and

2. The adopted route for the extension of Terminal Island Freeway between Willow Street and the San Diego Freeway.

The adoption of AB 3375 and the relinquishment of the State route to the local agency by California Transportation Commission resolution would resolve _ the issue of the Terminal Island Freeway extension.

3.8.2.2 RAIL TRAFFIC

3.8.2.2.1 construction Impacts The rail connection to SPrr main line will require a grade Separated rail/highway crossing at Alameda Street (see section 1.3 for details) and a rail crossing below both the existing San Diego Freeway overpass and the 223rd Street overpass. Two parallel access tracks will be connected to the two eastern most tracks at the Dolores Yard. The switches, turnouts and track work within Southern Pacific's right-of-way will be constructed by their forces.

construction of the rail access to the ICTF will result in short-term construction impacts. There will be increased levels of noise and dust. Disruption to vehicular traffic will be minimized by phasing the construction to ensure continuos flow Of traffic on Alameda Street and the ramps to the San Diego freeway. During construction it will be necessary to provide adequate protection or relocation of existing substructures and utilities.

Two land parcels on either side of tieexisting San Diego freeway ramp will require acquisition for utility easements adjacent to Alameda Street. The new access ramp between 223rd Street and Alamada Street will necessitate acquisition of an adjacent 0.3-acre parcel.

3.8.2.2.2 Operation Impacts. The proposed ICTF project will expedite the transfer of containers from truck trailers to flatcars. Containers will only have to be trucked about Smiles from the Ports to the ICTF versus 25 miles to the downtown yard. Implementation of the project will, however, increase train activity. The number of inbound and outbound trains that are estimated to &required to accommmodate the container traffic is given in Table 31. The ICTF container trains will use primarily the Wilmington Branch north of

Dominguez Junction where the Wilmington and San Pedro Branches cross. The use of the Wilmington Branch (versus the San Pedro Branch) is preferable with regard to traffic circulation impacts, due to the following: less existing train activity (especially switching operations) and less vehicular traffic (ADT) traversing the grade crossings on the Wilmington Branch. There is adequate rail capacity to handle ICTF-related containers. The rail mode of transportation to and from the Ports'area is highly underutilized.

The ICTF implementation will result in impacts associatedwith increased train movements in a metropolitan area: increased levels of noise, air emissions, vehicular delay, and impacts on adjacent land uses (refer to appropriate sections in the E.I.R.). Unit trains will have to cross numerous intersections on the local street system, There are approximately 34 at-grade crossings on the Wilmington Branch (including 3 on the Santa Monica Branch) and 31 on the San Pedro Branch. This will increase the delay experienced by vehicular traffic and increase the surface street traffic congestion (see Subsection 3.8.2.1.7).

TABLE 31

INBOUND/OUTBOUND TRAIN MOVEMENTS FOR THE ICTF

Year	No. of Inbound Trains	No. of Outbound Trains
Phase I		
1983	2	2
1986	3	3
1990	4	4
Phase II		
1991	4	4
I.995	5	5
Phase III		
I.996	5	5
1998	6	6
2000	7	7

Assumptions:

1. Each train is 5250 feetlong.
2. One hour travel tire between Los Angeles rail yard and ICTF.
3. The use of the Southern Pacific double stack unit train was assumed at the following rate:

    1983-1989 1DoubleStackUnitTrairrsperday.
    1990 -.l993 2 Double St&c Unit Traim **per** day.
    I.9940 1997 3Couble St&c UnitTrairs *per* day.
    1998 - 2000 4Ckxble Stxk Unit Traimperday.

One double stack unit train has the carrying capacity of two unit trains using standard railroad flatcars.

4. **One regularily scheduled train per day travels between downtown Los Angeles and the Ports.**

3.8.3 UNAVOIDABLE ADVERSE IMPACTS

3.8.3.1 Vehicular Traffic and Circulation. Short-term adverse impacts from construction activity cannot be avoided. Some inconvenience such as disruption to traffic flow will result. The implementation of the ICTF will Significantly reduce the truck -miles-traveled in the transportation of containers to/from the ports' area- However, therewill be a localized increase in truck movements between the ICTF and the Ports. This increase will have little or no impact on the traffic flow at intersections in the vicinity of the ICTF. Additional vehicular trafficdelay at at-grade crossing is unavoidable as a result of increased train activity.

3.8.3.2 Rail Traffic. The ICTF will increase the amount of train activity between the ports and the downtown Los Angeles area and will contribute to potential increases in rail/vehicular traffic conflicts. As estimated, me ICTF will handle about 780,000 containers annually by the year 2000, which will, result in 14 train movements per day (in both directions). Unavoidable impacts of greater train movements include potential increases in: air, noise, vehicular trafficdelays at at-grade crossings, and accidents.

3.8.4 CUMULATIVE IMPACTS

3.8.4.1 Vehicular Traffic and Circulation. Project-generated vehicular traffic will add incremantly to the traffic congestion on the local street system, However, the project will provide an overall benefit to the traffic circulation pattern, particularly on the already congested freeway systems between the Ports and downtown Los Angeles.

SCAG Ports Advisory Comittee has *projected* future traffic volumes result*ing* from proposed Ports' and U.S. Navy projects, and has proposed a phased program of highway improvements to meet the projected traffic demands.

3.8.4.2 Rail Traffic. Although the ICTF unit trains will contribute to future rail/community conflicts, there is uncertainty in future train projects since latter phases of the ICTF will be implemented if and when they are economically feasible.

Numerous projects involving rail transportation are proposed which could result in potentially cumulative impacts. The Ports of Los Angeles and Long Beach both propose to construct coal/dry bulk terminals which would substantially increase the number of unit trains calling on the Ports. It is anticipated that the cumulative impacts of the ICTF and the coal terminals will be minor Since different rail corridors will be utilized.

Another potential project is the Los Angeles-Long Beach light rail transit project. Light rail passenger trains would travel on Southern Pacific's Wilmington branch from Washington Blvd. in Los Angeles to Willow Street in Long Beach. The Los Angeles county Transportation commission (LACTC) (l982a and b) and Caltrans (l981) have conducted feasibility studies on the LA-L8 light rail transit.

The width of the right-of-way along the Wilmington Branch could technically accommodate both light rail transit and ICTF rail traffic. If the light rail project proves feasible and is approved, numerous rail trackage and grade crossing improvements would have to be made. The LACTC's draft preliminary analysis for the LA-L8 light rail project (1982) identified both vehicular crossing and railroad grade separations as potential mitigations for the proposed light rail project. If implemented, these grade separations would remove the major impacts to through traffic flow along the Wilmington Branch.

3.8.5 MITIGATION

3.8.5.1 Vehicular traffic and Circulation. The construction plans for the rail access and the truck access were developed in order to minimize the disruption to traffic and maintain through traffic flow during construction activity. (see section 1.3).

The impact of ICTF trucks on the existing street system in the vicinity of the project site will he minor. How ever, street and intersection improvements *will* be required in order to acccomodate the future traffic demands. SCAG has proposed a phased program of highway improvements.

Increases in vehicular traffic delays at at-grade crossings can partially be mitigated by installation of grade crossing predictors (GCP), improved traffic signalization, and improved lane geometric design. Installation of GCPs could substantially reduce vehicular delay time at crossings. Theywould reduce early signal activation by allowing the automatic gate crossing to come down at a set time prior to the train arrivals. A grade separation of Alameda Street will be constructed as part of the project. ICTF trains will be unit trains that normally will traverse the traders as through movements with no switching operations.

3.8.5.2 Rail traffic. Mitigations for rail-associated impacts (such as noise, air, socioeconomic, and traffic delay) are given in the specific sections of the E.I.R. The increase in unit container trains is unavoidable, but is partially mitigated by Southern Pacific's use of double stack trains. One double stack unit train has the carrying capacity of two unit trains using standard railroad flatcars. This will reduce the number of trains required to transport the containers. The train numbers used in the E.I.R. were basedupon a maximum of 4 double stack unit trains per day in the year 2000. If a greater proportion of double stack trains is used, a substantial decrease in the anticipated rail-associated impacts my result.

Additionally, the California Public Utilities Commission (PUC) has developed recommended lists of public crossings in California for improved crossing protection or grade separation. These priority lists form the basis for funding from state and federal agencies.

Florence Avenue (Crossing Number BG-488.3) on the San Pedro Branch is listed as priority number 74 as a grade crossing nominated for separation (or elimination). Numerous grade crossing along the two branches have been listed by them for improved crossing protection (installation of gates and flashing light signals) with federal funding. Funding of these recommended improvements will further mitigatepotential ICTF rail at-grade crossing impacts. Implementation of the Los Angeles-Long Reach light rail transit project would incremntally worsen the impacts to both rail traffic flow and vehicular traffic flow at rail/street intersections. However, if rail and vehicular crossing grade separations are included in the light rail project, major circulation impacts would be mitigated,

3.9 ENERGY
SUMMARY

Setting:

The proposed ICTF development project will require the expenditure of moderate amounts of energy resources in its implementation. The enerqy requirements for all of the construction and operational phases of this project have been inventoried with the following findings. It is estimated that construction activity will need about 784,200 gallons of diesel fuel and about 57,100 gallons of gasoline. Total operational activities from the years 1983 throuqh 2000 will utilize approximately 48.8 million kilowatt-hours of electricity, 16.8 million cubic feet of natural gas, 22.9 million gallons of diesel fuel, and 1.6 million gallons of gasoline.

Impacts

The energy impact analysis, contained in the Impacts and Cumulative Impacts sections, is based upon a comparison of the project energy inventory with existing basin or area wide energy consumption statistics and typical energy usage factors. Although moderate quantities of nonrenewable energy resources will be expended in project implementation, the regional supply and demand of energy resources is not anticipated to be seriously affected. Indeed, the operational activities of ICTF will result in a major reduction of fossil fuel usage (about 53% savings) for transporting containers.

Mitigations:

The strongest mitigating feature, which will offset the operational energy requirements of ICE?, will be the shift of transportirg marine-related containers from trucks to trains at a closer, centralized location near the ports. In addition, conservation tactics are discussed in detail in this section.

3.9 ENERGY

3.9.1 SETTING

Enerqy has been one of the major international issues since the 1970's. while the same basic problems affect the national energy picture, California has some specific differences in resources, consumption patterns, and future development potential from that of thenation (California Council for Environmental and economic balance, 1977). More than 90 percent of the state's energy supply depends on petroleum and natural gas. About 40 percent of the State's electrical power is produced by burning oil. Oil is the base fuel for every type of transportation vehicle in the state. An informative overview of the state's energy situation is contained in the 1981 biennial report entitled Energy Tomorrow - Challenges and Opportunities for California (California Energy Commission, 1981).

The various activities associated with the operation of the Port of Los Angeles and Port of Long Beach can be characterized according to energy consump All existing facilities and their associated activities require that energy be consumed either directly or indirectly. Major on-site energy utilization is directly associated with the transportation, commercial, and industrial systems that are present in the ports. Even some recreational facilities that are seemingly energy-passive such as beaches and parks indirectly consume energy due to transportation element to and from such facilities.

The role of the port of Angeles and the port of Long Beach in accommodating the flow of energy resources is apparent both domestically and internationally. Substantial portions the total commercial cargo volume that flow through the ports are petroleum -related consequently,the ports perform integral roles in accommodating the local and regional demand for energy resources. The availability of low cost fuel oil has made the ports major refueling stops for commercial vessels on the Pacific Coast. Moreover speculated shifts in foreign demand for energy resources related to the exportation of domestic coal may further enhance, the ports' roles in the future..

The proposed ICTF project will consume energy in its implementation. The energy requirements to construct and support the operational elements of the project are inventoried in the following section. Construction and operational phase requirements are addressed separately, each in the context of fossil fuel andelectricity consumption.

3.9.2 IMPACTS

The following energy impact analysis reflects estimated construction and operational requirements for fossil fuel and electricity. The total projected energy consumption inventory from the years 1982 though 2000 is presented in Table 32. Detailed calculations are located in Appendix 6.3A. All energy calculations based on a wide variety of activities, my conservatively overestimate the specific aspects of this project. However, conservative estimate are often the only ones which may be formulated until detailed engineering designs are available for more accurate appraisals,

TABLE 32

ICTF ENERGY CONSUMPTION INVENTORY
FOR THE YEARS 1982-2000

Project Phase[a] and Activity	Electricity ($x10^6$ KWH)	Natural Gas ($x10^6$ Ft^3)	Gasoline ($x10^3$ Gal)	Diesel (x103 Gal)
Construction Phases				
Employee Vehicles	N.A.	N.A.	32.8	(c)
Construction Equipment	A.N.	A.N.	24.3	784.2
operational Phases				
Employee vehicles	N.A.	N.A.	1,563.9	(c)
Trucks	N.A.	N.A.	(d)	10,007.9
Trains	N.A.	N.A.	(d)	12,883.7
Indoor Utilities	21.8	16.8	N.A.	N.A.
Outdoor Systems[b]	27.0	N.A.	N.A.	N.A.

(a) Based on the sum total of three phases; values are rounded off to the nearest 100
(b) Yard lighting
(c) Assumed all have gasoline-powered motors
(d) Assumed all have diesel-powered motors
N.A. Not Applicable
A.N. Assumed negligible

3.9.2.1 Construction Phases. Fossil Fuels. Energy consumption during all three construction phases will arise from employees commuting to/from work from workers using construction equipment. Natural gas utilization for **these periods** gec-=J&=ed rregfigifle- Table 32 summarizes the total energy **inventory for** , including construction and operation. The employee-commuting energy requirement was based on the following assumptions: all employees commute in gasoline-powered vehicles, the carpooling factor is l.2 occupants per vehicle, the average daily round trip distance is 20 miles per vehicle, and the average fuel consumption is 15 miles per gallon. Given the three different construction periods, the project requirement for construction employees commuting is about 32,800 gallons.

The energy demands required for the operations of construction equipment during major energy-intensive activities have been inventoried, and the estimated diesel fuel andgasoline consumption for the major construction activities have been summarized in Table 33,

Therefore, the estimated to fossil fuel demands for implementation of all three construction phases are 784,200 gallons of diesel fuel and 57,100 gallons of gasoline (32,800 + 24,300).

The construction periods of ICTF, as shown in Table 33, have different activities ranging from four to 14 months in duration. Consequently, the impact of energy utilization will be temporary. The consumption of gasoline and diesel oil, as a result of commuting and operating equipment, will fluctuate due to the phased nature of this activity. In Los Angeles County during l977, the amount of diesel fuel used in various construction activities was approximately 32 million gallons (California Air Resources Board, 1980). Assuming a ten percent annual increase in county-wide construction activity by the end of ICTF construction, the project's average diesel fuel usage will be approximately 2.3 percent of the projected courty-wide usage,

Electricity. Electricity utilization through the three construction phases is considered negligible.

3.9.2.2 Operational Phases, Energy resources will be needed for employees commuting and for the operation of trains, yard equipment, utilities, and trucks. Unlike the construction phases, energy consumption during the operation phases will be permanent and will not only contribute to but also be affected by the future energy supply and demand scenario,

Fossil Fuels Starting with Phase I, about 140 employee commuting to/from work will utilize 56,800 gallons/year of gasoline to operate their vehicles. Furthermore, the numbers will increase to 229 and later to 3l8 employees daring Phases II and III, respectively. Based on these employment projections, gasoline consumption will rise from 92,900 to 129,000 gallons year. These values are based on the same assumption used previously for construction, except that the numbers of employees are based on threework shifts per day for 365 days a Ye=-

TABLE 33

TOTAL CONSTRUCTION PHASE ENERGY INVENTORY FOR ICTF

CONSTRUCTION ACTIVITY	CONSUMPTION IN GALLONS[a] Diesel	Gasoline
Phase I		
Site Preparation/Excavation	202,400	6,300
Grade Separation/Alameda Street	89,500	2,800
Railroad Tunnel/223rd Street	27,900	900
Alameda Street/223rd Street Ramp	34,000	1,000
Utility Construction	52,400	1,600
Site Construction	110,500	3,400
Building/Administrative, Maintenance	41,100	1,300
Sub Total	557,800	17,300
Phase II		
Remote Storage Construction	35,000	1,100
Railroad Track Construction	25,900	800
Sub Total	60,900	1,900
Phase III		
Remote Storage Construction	103,400	3,200
Railroad Track Construction	62,100	1,900
Sub Total	165,500	5,100
Grand Total	784,200	24,300

(a) Assumed 97% diesel equipment to 3% gasoline equipment; values are rounded off to nearest 100.

An estimated 1,563,900 gallons'of gasoline will be consume during the ICTF operation for the years 1983 through 2000 (Table 32). Statistics reveal that gasoline consumption in Los Angeles County has increased at a steeper rate-population size during the past decades, and that the average daily consumption in recent years has Surpassed ten million gallons.

The natural gas requirement of the project (1983-2000) is - estimated at 16.8. million cubic feet. This value represents the typical energy factor on the order of 4O cubic feet per year per square foot of flour space (City of Angeles, 1975.

During the three operational phases,various types of yard equipment will require the expediture of energy resources. Diesel fuel consumption rates for.-the bridge crane and the yard hostler are 5.5 and 3 gallons per hour, respec tive1y. The average operating schedule for each piece of yard equipment will~ 16 hours per day. It is predicted that during the three phases (l983-2OOO)of the ICTF, a total of ll,078,400 gallons of diesel fuel will be used at the site. While this will be an appreciable amount of energy, it must be noted that this--energy loss will occur whether or not project implementation results. Without the ICTF project, more bridge cranes and yard equipment will have to be incor- downtown Los Angeles railyard facility to handle the predicted tiE!zeah the marine-related container movements. Conseqently, this energy usage will not be considered in the total energy consumption inventory in Table 32.

It is estimated that the future growth in container transport will necessitate over 1800 truck trips per day by the year 2000. For the first operational year, it is believed that more than 400 truck trips per day will be completed from the ports to the railyard facility. Table 34 presents diesel fuel consumption by trucks with and without ICTF implementation over the three operational periods. The table is based on the following assumptions: all trucks run on diesel fuel; for every five miles, one gallon of fuel is consumed by heavy-duty trucks: the average round trip distance in miles from ICTF to the port of Los Angeles (Terminal Island), Fort of Los Angeles (San Pedro), Port of Long Beach, and local origin/destination are 8.2, 10.6, 8.7, and 25.0, respectively; and the average round trip distance in miles from ICTF to the-downtown Los Angeles railyard facility is 44.0 miles. As noted from the table, a total of 10,007,900 gallons of diesel fuel will be required for the operational phases.

O Without the proposed project, 48,523,OOO gallons of diesel oil will be consumed. Therefore, an overall reduction of 79 percent in truck fuel consumption will transpire &ring ICTF operations. This will be an extremely beneficial impact, in conjunction with the reduction in the number of trucks on the street3 and with the decrease in truck-related air emission (Sections 3.1).

In addition, Table 34 refers to the amount of fuel required for train movement between ICTF and downtown Los Angeles. About 12,883,700 gallons of diesel fuel will he utilized by trains daring the years 19842000. This due is based on the following assumptions: three locomotives will be required to transport one unit train round trip between ICTF and Los Angeles in two and one half (2.5) hours: and each locomotive will use 63.5 gallons of diesel fuel per hour.

'IIA8LE 34

DIESEL- a x m m m I m B Y n A N D m -
'x!m YEARS 1983 - 2000

OPERATION PHASE	DIESEL FUEL CONSUMPTION[a] (x10^3 Gals)			
	Truck Fuel Witk+ltIcm	Truck Fuel with ICXF	Train Fuel To/FranICIF	' Total Fuel[b] Red~ctim PerPhase
I	X2,999.8 *	. 2,680-f	31830.3	61489.0
II	14,403.Z	2,970-o	3,830.3	7,602-g
III	21,120.o	4,357.4	5,223.l	ll, 539.5
Total	48'523.0	10,007.g	X2,883.7-	25,631.4
				Total Pehction

(a) ~~~orepbtOtalS for=& categoryandare roundedoff.to the

l (b) Totalfuelreduction~estimated.fraasubtractingtrudrandtrainfu~ cguuptimwith ICE mplemntatxan fromtruck fuelamsurfptionwithaA

0 Inclusion of additional train movement between ICTF and Los Angeles still yields a major fuel reduction with ICTF implementation by wrong **imately 53 percent.** This is a substantial reduction in fuel usage **associated with** with container movement.

Electricity. The total electricity requirement during- the years 1983 **through 2000 is** about 48.8 million kilowatt-ham (Table 34). The estimated indoor utilities value is represented by an annual average of 50 kilowatt hours per square foot of floor space (City of Los Angeles, 1975). The value for outdoor illumination is based on an eight hour per day usage for 365 days a year (13842000).

3.9.3 UNAVOIDABLE ADVERSE IMPACTS

Significant impacts to energy sources would result if the development of ICTF would require substantial amounts of fuel, increaseddemands on existing energy sources, or development of energy sources. The discussion presented in the preceeding paragraphs that none of these cases occur to a significant extent with respect to ICTF. However, unavoidable adverse impacts my arise with possible environmental consequences, including: reduction of nonrenewable resources decrease of energy resource availability for other usages, continuation of the energy resource supply/demmd imbalance, and indirect detrimental environmental effects. An example of the interrelationship between these consequences and potential adverse environmental impacts is natural gas. This nonrenewable energy resource has recently become limited in its supply. As a consequence, its availability for use in. the production of electricity at power-generation plants has been reduced and has resulted in greater emissions of primary air contaminants due to the alternative usage of fuel oil.

3.9.4 CUMULATIVE IMPACTS

Two areas of major concern on the subjectof cumulative energy impacts are the interaction of energy consumption and environmental problem: and the energy requirements of the local region versus ICTF. The following discussion focuses on the salient features of this energy impact analysis.

3.9.4.1 E<u>nergy Usage and Environmental Problem</u>. A strong relationship exists between energy consumption and certain forms of environmental pollution. In essence, the effects pollution increase with the expanded use of nonrenewable energy forms. Potential environmental problems that are directly related to increases in energy consumption include the emission of air pollutants from fossil fuel combustion (Section 3.1) and the risk of upset and safety (Section 3.6).

This project will result in a substantial reduction in fossil fuel consumption (Table 34). The shift of transporting marine-related containers from trucks to trains, at a closer, centralized location the ports, will be more energy efficient with less associated environmental problems. This approach - follows the, spirit of the California Energy Commission's 1981 biennial report.

- - - 3.9.4.2 Comparison of Energy requirements between local Region and ICTF. project shared not substantially impact the regional supply and demand of energy resources. ICTF when compared with the effects of past projects, present activities and future enterprises will certainly contribute to the total. demand on finite energy reserves. There may he a potential for cumulative,& considerable impacts from rail-related impacts on the surface street system (Section 3.8)' because both ports propose to construct dry hulk handling terminals. However, without this proposed project, the energy cmsumption in the movement of containers from the ports to downtown Los Angeles will dramatically rise whether or not the dry bulk facilities are inoperation. Other energy resources to be utilized during the construction and operational. phases of ICTF are listed. The values for the south Coast Air Basin and Los Angeles County were obtained from the energy chapter in the Todd Pacific Shipyards Draft EIR (Los Angeles Harbor Department, 1981).

Electricity for the South Coast Air Basin in 1979 was 3.1 x 1010 kilowatt+- per year- The average annual power projected for ICTF will range from approximately 2.4 x 106 kilowatt-haxs per year in the first operational phase to 2.9 x 106 kilowatt-hours per year by the year 2000.

Natural gas consumption for the basin during 1979 was 1.7 x 1011 cubic feet per year. Average annual values reveal that ICTF will require about 0.7 x 106 cubic feet per year at the beginning and increase to 1.0 x 106 cubic feet per year by the year 2000.

Gasoline requirements in Los Angeles County during l977 were almost ten million gallons per day. Although projected trends in gasoline comsumption for the 1980% is unpredictable, a comparison can be made using the most current values (1977) on gasoline usage. Fuel consumption from cammuters~ vehicles during the construction of ICTF will be negligible in comparison to the total daily consumption for Los Angeles County. For the operational phases of the project, fuel requirements for employees' vehicles will be less than one percent of the current daily fuel usage in the Los Angeles County

Fuel requirements for construction equipment in Los Angeles County during 1977 were 1.1 million gallons per year of gasoline and 32.0.. million gallons per year of diesel fuel. In comparison. ICTF will require 24,300 gallons of gasoline and 784,206 gallons of diesel fuel during the total construction phases.

Therefore, from the above presentation, this project will represent an -insignificant percentage of the County's energy requirements and will not cumulatively impact the region's energy supply.

3.9.5 MITIGATIONS/MEASURES TO REDUCE ENERGY CONSUMPTION

While the proposed project will require appreciable quantities of energy during the three construction phases, the operational activities ICTF will oriented containers the major reduction of fossil fuel usage for transporting marine-containers.

Mitigation measures which may substantially reduce the energy consumption during construction and operation Of the proposed ICTF project include the following.

3.9.5.1' Reduction of Energy Use During Construction. There are no current regulations which control energy consumption during construction; consequently, measures that may, contribute to energy savings during these phases of project implementation are limited to:

0 Implementing the most efficient project time schedule, design, and equipment to avoid energy waste:

0 Encouraging workers to carpoo1 to the project site from their homes

O Keeping the use of security lights to the minimum level required for effective protection of equipment and materials.

Three permanent buildings (administration, control tower, and maintenance/ service facility) will be constructed using steel frames with curtain walls. The actual measures to be employed will not be known until the buildings, heating/cooling systems and lighting systems are designed. All buildings will meet or exceed City of Los Angeles Department of Building and Safety code requirements pertaining to structural strength, insulation material to be used and R values, and any other conditions. In order to meet state standards, any number of measures may be incorporated into the building designs:

Caulking and weathers tripping of doors and windows;

Clock thermostat control devices;

Ceiling, attic, wall, and floor insulation:

Storm doors and windows ;

Load Management devices

Duct insulation:

Pips insulation:

Water heater blankets; - 2

Use of reflective paint colors on building exteriors:

Life-cycle costing prior to purchase of energy consuming devices;

Thermal windows.

3.4.9.2 Reduced Energy Consumption During Operational Activities. Three mitigating features inherent in the ICTF plan during the operational phases are:

- 0 Major reduction in fossil fuel usage for transporting marine-related containers including:
  - 9 79% reduction in gross truck fuel consumption (rail fuel consumption not included);
  - 0 53% net reduction in total fuel consumption (rail fuel consumption included);
- * Improved truck traffic and circulation near the facility; and
- * Energy efficient equipment and operating procedures to reduce energy waste.

Carpooling, ride sharing, and busing plans will be considered for use at the facility. However, there will not be a large commuters pool from which to form an extensive plan. The railyard employee will be working during one of three different shifts, while the administrative employee will be working a regular daytime shift. A facility of this kind is not labor intensive but rather capital intensive, as with most marine terminals.

With respect to general illumination, natural lighting should be utilized wherever feasible. When additional lighting is required, consideration will be given to the following measures:

- * Use of high pressure sodium lights;
- O Devices for controlling the intensity and timing of lighting;
- * Regular maintenance of lighting apparatus and more frequent replacement;
- * Paint walls andceilings lighter colors.

In addition to mitigating energy consumption, these measures also reduce the impacts of light and glare from the facility (Section 3.5).

3.9.5.3 Reduced energy Consumption Through Water Conservation. Energy Saving Landscaping Measures. Carefully planned landscaping can contribute to savings in water consumption and in reduction of cooling requirements for buildings. The areas around the administration building employee/visitor parking lots and the areas in front of the entrance/exit gates will be landscaped. Other possible measures may include some of the following:

0 Selection of plants that require minimum irrigation:

* Use of mulch in all landscaped areas to improve the Water-holding capacity of the soil: and

0 Placement and sizing of trees to maximize shading.

Water Consumption Reduction Methods. Measures should be incorporated into faclities to reduce human consumption of water. These include:

* water flow control devices on faucets, showers, and hoses; and

0 Toilet tank holding capacity reduction devices.

3.10 PUBLIC SERVICES
SUMMARY

Setting:

Police. The ICTF site is situated on **a** narrow strip of Los Angeles Harbor Department property. The Harbor Department Port Warden Division has jurisdiction and maintains patrols over Harbor-controlled property. Los Angeles Police Department (LPSD) provides assistance upon request.
Fire. **Responsibility** for fire protection within Los Angeles city limits is with the Los Angeles Fire Department (LAFD). The LAFD stations nearest the project site are FS-38 Task Force and FS-49 Single Engine Co., with response distance of 7.25 mi. and 9.5 mi. respectively. There are three L. A. County Fire Stations and one L. B. City Fire Station close to the ICTF site.
Road Maintenance. The primary ICTF access routes. are presently heavily travelled by truck traffic. Most of the length of the routes is within the cities of Los Angeles and Long Beach.
customs. The ICTF will require participation of the U. S. Custom Service, and facilities will be provided for on-site inspections.

Impacts:

Police. The project will require increased patrol by the Port Wardens; however, security problems are not anticipated at the facility.
Fire. The response distance for LAFD stations exceeds the maximum response distance recommendations (1.5 mi. - 2.0 mi.). The ICTF project will require expansion of LAFD protection into the area, or mutual aid agreement with the Long Beach and/or Los Angeles County fire departments.
Road Maintenance. There will be an increase in truck traffic flow along the major access roadways resulting in increased roadwear in some locations. There will be **a** significant decrease in traffic flow to the existing downtown L. A. Transportation Center with a corresponding decrease in roadwear maintenance costs.
customs. The ICTF is expected to have only minor impact to U. S. Customs Service operations.

Mitigations:

Police. The project site will be fenced, with guards at the entrance to the facility. A variety of security devices may be used including visual, infrared and sonic surveillance. The site will have security lighting.
Fire. All proposed buildings will be constructed and fire protection devices installed as specified by fire codes and building and safety codes. Three emergency access roads will be provided into the facility. A mutual aid agreement between the City of Los Angeles and the County of Los Angeles and/or the City of Long Beach would allow adequate fire protection coverage of the proposed project with only minimum expansion of existing facilities.
Road Maintenance. Traffic flow and road maintenance along the major routes to the existing Los Angeles transportation center downtown will be reduced significantly.

3.10 PUBLIC SERVICES

3.10.1 SETTING =

3.10.1.1 Police/Security. The ICTF is situated on a narrow strip of Los Angeles Harbor Department property The site will be security fenced with controlled access through guarded gates The Los Angeles Harbor Department Port Warden Division has jurisdiction over Harbor-controlled property and maintaining regular patrol of port boundaries. The Los Angeles Police Department provides assistance upon request.

3.10.1.2 Fire Protection. Responsibility for fire protection within Los Angeles city limits is with the Los Angeles City Fire Department. The Harbor area is Served by two battalions. Battalion 6 has primary responsibility for for Pedro and Battalion 16 has primary responsibility for Wilmington and Terminal Island.

Los Angeles Harbor Fire Stations (F.S.):

Bat. 6 -	Fire Station ll0:	w29, S.P.	Fire Rescue Boat
	Fire Station lOl:	1414 25th St., S.P.	Single Engine Co.
	Fire Station 48:	160. S. Grand Ave, S.P.	Ssk Force
	Fire Station 53:	438 N. Mesa Ave, S.P.	Siqle Engine Co.
Bat. 16 -	Fire Station 38:	124 E. I St., Wilm.	Task Form
	Fire Station 49:	400 Matsonia, Wilm.	Sirqle Engine Co.
	Fire Station 40:	406 Ttma St., T-1.	TWJ Engine co.
	FireStation U2:	B-227, T.I.	Fire Boat
	Fire station Ill:	954 Seaside Ad., T.I.	Fire Boat

The Los Angeles City Fire Stations closest to the project site are FS - 38 Task Force and FS - 49 Single Engine Company. Response distances are 7.25 miles and 9.5 miles respectively.

There are four fire stations closer to the ICTF site:

L.A. County Fire Station 127:	2049 E. 223rd St., Carson Msponse Distance - 1.25 mi.
L.A. County Fire Station 36:	127 W. 223rd St., Carson &sponse Distance = 5.25 rd..
L.A. County Fire Station 10:	1860 E. Del Am0 Blvd., Carscm Mspmse Distance = 4.25 mi.
Beach City Fire Station 13:	2475 Adriatic, Long Beach FksponseDistancx -1.25mi.

3.10.1.3 Road Maintenance. Maintenance of public roadways is the reponsibility of the city in which the roadway is located. The California Department of Transportation (Caltrans) is responsible for maintenance along state highways.

There will be three major access routes to the proposed facility:

1. Long Beach Fwy. (Rte 7) to Anaheim to Terminal Island Freeway to Willow/Sepulveda
2. Terminal Island Fwy (Rte 47) to Willow/Sepulveda from POLB & POLA
3. Alameda St. to Sepulveda/Willow from POLA

Only a minor amount of traffic is expected to use the Harbor Fwy (Rte. 11) to Sepulveda Blvd. due to the heavy flow and large number of traffic control devices along Sepulveda- Blvd.

Most of the length of the major access roadways lie within tie cities of Los Angeles and Long Beach Less than me mile of Alameda (between PCH and Sepulveda) and less than one mile of Sepulveda from Alameda to the project site) lie within the City of Carson.

Presently the primary access routes are heavily traveled by truck traffic.

3.10.1.4 U.S. Customers. Customs services in the Ports of Los Angeles and Long Beach are provided by the U. S. Customs Service at 300 S. Ferry St. Terminal Island

The ICTF will require participation from the U. S. Customs Service. Accommodations in the Administration Building will be allocated for the Customs inspector. A customs inspection area and dock will be constructed:

3.lO.2 IMPACTS

3.10.2.1 Police/Security. The project will require the Fort Wardens to increase regular patrols around the project site. Security problem are not anticipated at the facility. LAPD will continue to provide assistance upon request, and demand for their services may increase, although this is expected to be insignificant.

3.10.2.2 Fire Protection. Fire protection resource deployment within the classification yard area of The Port of Los Angeles, due to location is marginal. The response distances for L.A. City Fire Stations exceeds the maximum response distance recommendations (of 1.5 mi for a single engine company and 2.0 mi for a task force) established by the fire department. Development of the ICTF project will require expansion of city fire protection into the classification yard area. A mutual aid agreement between the L.A. City Fire Department and Long Beach City and/or L.A. County Fire Departments could allow adequate average of the proposed project with only minimum expansion of existing support facilities.

3.10.2.3 Road Maintenance. Maintenance costs are expected to increase for the following segments of the major access roads:

Approximately l mile of Anaheim street between the Long Beach Freeway and the Terminal Island Freeway.
Approximately l mile of Sepulveda/Willow between-Alameda. and the project site.
Approximately 5 miles of Alameda St.between B St **and Sepulveda/Willow.**

Increased maintenance costs are related to increased traffic flow. There will be an increase in roadwear as a result of the increased truck traffic. Estimates of increased maintenance costs that may result are difficult to make due to the number variables that must be taken under consideration. Estimation of costs for roadway repair is generally considered on a case-by-case basis.

There will he a major decrease in truck traffic flow from the Ports' area to Southern Pacific's Los Angeles Transportation Center downtown. Road maintenance costs of the major routes to the downtown facility may be reduced significantly.

3.10.2.4 U.S. Customs. The need for Customs Services will primarily be for inspection of westbound containers arriving to the ICTF from the Atlantic/Gulf Coasts. The ICTF *is* expected to have only minor impact on U. S. Customs service operations.

3.10.3 UNAVOIDABLE ADVERSE IMPACTS

The facility will create a greater demand for fire protection and police service. The demand for increased road maintenance in the proposed project area is unavoidable.

3.10.4 CUMULATIVE IMPACTS

This project will result in an incremental increase in the need for fire protectian, police and road maintenance services in the Ports' area.

3.10.5 MITIGATIONS

The project site will be fenced, with guards at the entrance to the facility. A variety of security devices may be used including visual, infrared and sonic surveillance. The site will be lighted with security lighting 24 hours a day.

All proposed buildings will be constructed and fire protection devices installedas requiredby firecodes and building and safety codes. Placement of fire hydrants with the Fire Protection and Prevention Plan. Three emergency access roadswill be provided into the facility. A mutual aid agreement between the City of Los Angeles and the County of Los Angeles and/or the City of Long Beach would allow adequate fire protectian coverage of the proposed project with only mininmum expansion of existing facilities.

Traffic flow and road maintenance along the major routes to the existing Los Angeles Transportation Center downtown will be reduced significantly.

3.11 UTILITIES
SUMMARY

<u>Setting:</u>

The project site is minimally develop&. All utilities to service the site must be extended from near* service lines.

<u>Impacts:</u>

Relocation of many existing subsurface utility and oil lines is necessary to construct rail entry into the ICTF site. Short term impacts involve temporary traffic disruption and dust and dirt due to placement and connection of new utility lines. Long term impacts involve increased demand on utility service, but due to the nature of the project tie increased demand is expected to be insignificant (see Energy, Section 3.9).

<u>Mitigations:</u>

A combination of well written and tightly enforced specifications relating to scheduling, traffic detouring, and dust control will mitiqate utility construction impacts. Energy conservation measures will partially mitigate demand needs for the various utilities.

3.11 UTILITIES

3.11.1 SETTING

The project site is currently only minimally developed. All utilities to service the site must be extended from nearby service lines.

3.11.1.1 Water. The project site is within the Dominquez Water Company (DWC) services. DWC can provide sufficient water for the antici-pated work force plus 5,000 gpm fire flaw. There is an existing 12 in& water main under Sepulveda Boulevard that will be extended into the sits for the administration/customs area as well as the main yard and fire support, and an existing 4 inch line south of 223rd Street may be extended for service in the northern maintenance yard (see Figure 39).

3.11.1.2 Power. Southern California Edison (SCE) may supply power to the site from one of three existing overhead lines running near the site. If SCE supplies power, it can charge the ICTF directly or can enter into a "fringe agreement" whereby Los Angeles Department of Water and Power (LADWP) will purchase the power from SCE and pass the charge to the ICTF. Electrical power will be used for lighting, building functions, communications, security, switching, and reefer storage. An emergency generator will be installed onsite to provide emergency power for security, command computer, emergency lighting, and reefer units.

3.11.1.3 Natural Gas. An 8 inch Southern California Gas Co. as line under Sepulveda Blvd. will be extended into the project site to provide service to all buildings on the site.

3.11.1.4 San.Sanitary Sewer. The administrations/custom area will be connected to the existing 30 inch diameter "La Rocha" trunk west of the Sepulveda Boulevard/Alameda Street intersection. An existing 15 inch diameter saver line under 223rd Street will serve the northern maintenance yard. Main-tenance areas will be &signed with oil and grease traps in the sewers and storm drains.

3.11.1.5 Telephone. Telephone service will be provided by Pacific Telephone and Telegraph from lines along Sepulveda Boulevard.

3.11.1.6 Storm Rain. The northern maintenance area of tie project will be served by a 30 inch extension of the L.A. County Flood Control District stormdrain along 223rd Street. The major portion of the ICTF will be drained to a 78 inch storm drain that empties into Dominguez Channel above Sepulveda Blvd. The drainage system will consist of two secondary lines, running north and south of the main with a number of smaller tertiary lines draining the-itch basins between trackage. The entrance/parking/administration/customs area will be surface drained to Sepulveda Blvd. The 33 inch drain along Sepulveda Blvd. will be capable of handling this load.

3.11.2 IMPACTS

Successful completion of the rail entry is dependent upon the relocation of many existing subsurface utility and oil lines that interfere with the construc-tion of the Alameda Street grade separation and the 223rd Street grade separa-tion.

The following facilities will require relocation before construction of the Alameda Street grade separation

Pacific Telephone conduit

Los Angeles County Flood Control District 24-inch water line

Los Angeles County Flood Control District 8-foot 5-inch X 9-foot 11-inch reinforced concrete box storm drain

Los Angeles County Sanitation District 21-inch "Davidson" sewer line

Metropolitan Water District 45-inch water line

Socony-Mobil 6-inch oil line (idle) recently sold to Douglas Oil

Southern California Gas Company 8-inch line

Southern California Gas Company 8-inch line (abandoned)

Socony-Mobil 6-inch oil line (idle)

Southern California Edison l6-inch fuel oil line (within Southern Pacific right-of-way)

Powerine Oil 6-inch Oil line (within Southern Pacific right-of-)

Southern Pacificpipeline l0-inch oil line (within Southern Pacific right-of-)

The following facilities will require lowering and protection before construction of the 223rd Street grade separation:

- Northof 223rd Street

  24-inch reinforced concrete storm drain line, located between the existing on-off ramp to Alameda Street and 223rd Street (Caltrans)

- Within the old 223rd Street right-f-way (from south property line, northerly)

  Southern California Edison (relocated overhead power line)

  Pacific Telephone 4-foot 4-inch multiduct conduit

  Golden Eagle 6-inch oil line

  Metropolitan Water District 37-inch main

  Union Oil l0-inch oil line

18-inch sanitary sewer

Los Angeles County sanitation District

Southern California Gas Company 8-inch gas line (abandoned)

Union Oil l0-inch oil line

Sanitary sewer 15-inch

Southern California Gas Company 8-inch gas line

Standard Oil Company/Chevron 8-inch oil line

United States Air Force 10-inch Norwalk airplane fuel supply line

Union Oil 6-inch oil line

Southerly of 223rd Street

Dominguez Water Company I-inch water line

Short term impacts associated with utilities involve traffic interruption and dust and dirt due to street excavation and utility placement. Themajority of utility placements will be within areas not yet improved. However, all utility relocations and connections to existing facilities will be within areas heavily travelled by traffic (Sepulveda Blvd., Alameda St., and 223rd Street). A detour roadway adjacent to Al&a Street will be constructed to minimize disruption to traffic flow. Service will not be disrupted during utility reconstruction. Impacts from construction are only temporary.

Long-term impacts involve increased demand on each utility, but due to the nature of the project, the demand for increased utility service is expected to be insignificant (see Energy, Section 3.9).

3.11.3 UNAVOIDABLE ADVERSE IMPACTS

The additional demand for power, natural gas, water, sewer and storm drains created by the project is unavoidable. Refer to Section 3.9.5 for energy conservation measures.

3.11.4 CUMULATIVE IMPACTS

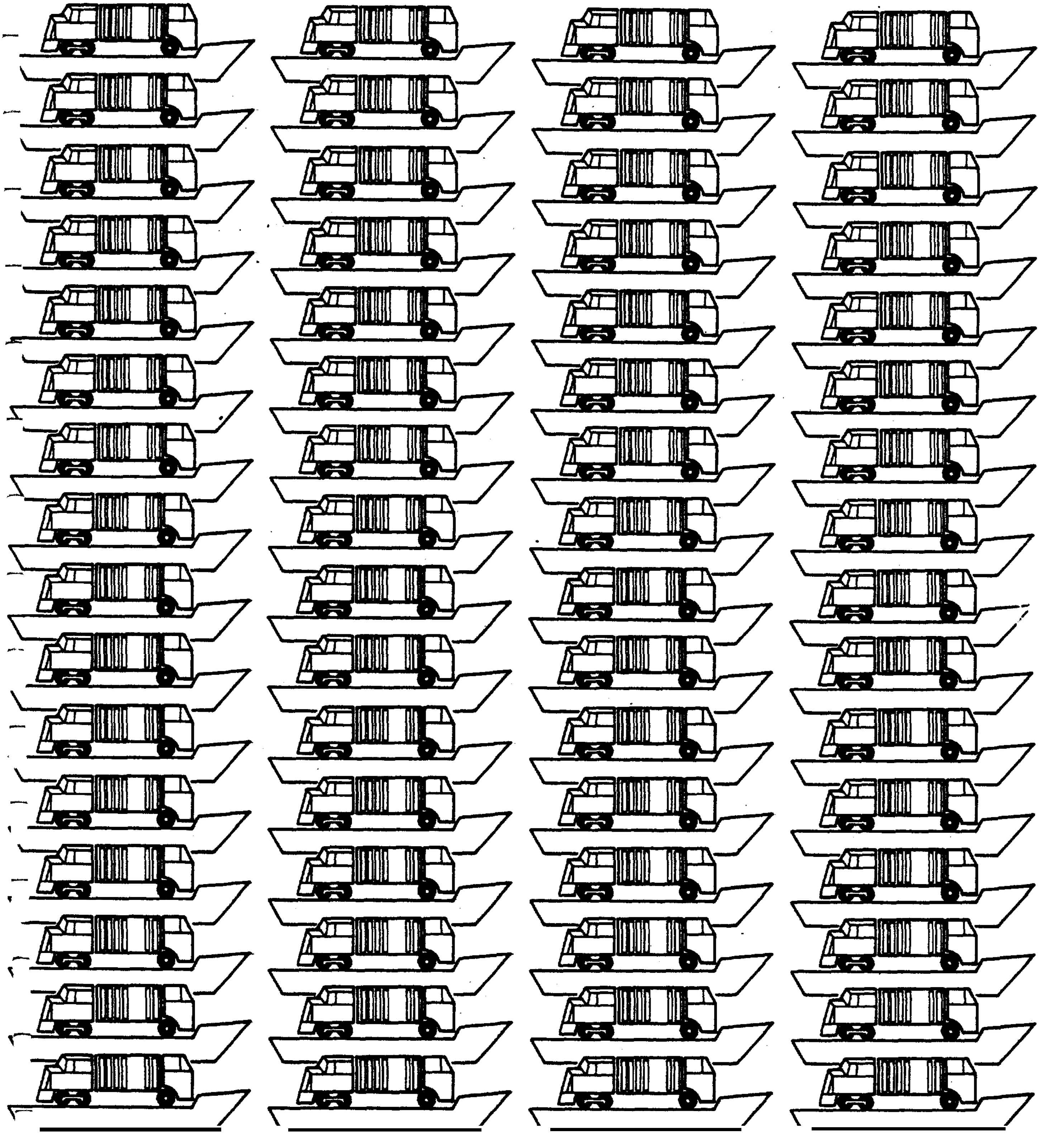
Cumulative impacts of the proposed project will result in an increased demand utility systems.

3.11.5 MITIGATIONS

A combination of well written and tightly enforced specifications relating to Scheduling, traffic detouring, and dust control will mitigate utility construction impacts. Energy conservation measures will partially mitigate demand needs for thevarious utilities.

ICTF

INTERMODAL CONTAINER TRANSFER FACILITY



Alternatives

4.0 LONG-TERM IMPLICATIONS OF THE PROPOSED PROJECT

4.1 THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

4.1.1 Project Justification. The ICTF project will allow for efficient transport of marine-oriented containers from the container terminals in the Ports to the tail transfer yards. The project is justified now to accommodate the increase in containerized cargo movements through the Ports.

The ICTF project will reduce the anticipated impacts on air quality and vehicular travel that would be associated with the local transportation of containers to the railyards. The project improves rail usage and represents a viable alternative to Use of vehicular transportation system, which in the Los Angeles area is congested and approaching capacity.

Theproject results in the economic benefits associated with the construction and operational activities. Net enhancement of productivity will be achieved. The currently underutilized land will be developed to provide an efficient transportation corridor which will result in savings of time, cost and energy.

4.1.2 Long-term Risks to Health or Safety Project implementation will expose persons in areas immediately adjacent to the ICTF site&d along the rail corridors to potentially greater levels of noise and air emissions. However, the emphasis of rail transport (vs. truck transport) for the local movement of containers will reduce the air pollutants emitted and will provide a net benefit to theair quality of thebasin.

The ICTF should additionally enhance public safety by removing the containerized cargo on trucks from the street and freeway system.

4.2 IRREVERSIBLE ENVIRONMENTAL CHANGES

The construction and operational requirements of the project would irreversibly commit natural resources (particularly fossil fuels), other energy sources and construction materials. However, the ICTF will move containers more efficiently and, thereby, reduce the overall energy resource commitment.

There will be a permanent but minor loss of terrestrial habitat and agricultural land as a result of paving of the site. The acreage lost is very low and is located in a disturbed area zoned for heavy industrial use. No unique biological habitat values have been identified for this site.

Development of the ICTF would change the type and intensity of land use in the area. Some of the existing tenants/owners will be displaced from their leaseholds/property. Most of thepersons affected are on short-term leaseholds.

Commitment of the project site to the proposed ICTF use would not restrict future generations to the same use. Alternative uses of the site could be made available. The project is proposed in phases and development of future phases is dependent on economic considerations.

It is not anticipated that irreversible environmental damage would result from negligent operation or failure Of the project's environmental safeguards. Numerous mitigation measures have been included in the project to minimize potentially adverse impacts.

4.3 GROWTH-INDUCING IMPACTS

Construction of the proposed project will have a temporary growth-inducing impact on the greater T Angeles area. Estimates of manpower and time required for the construction phases are given in Section 3.7. Wages and salaries paid to construction workers would contribute to the local economy of the area. Additionally, money spent for the purchase of construction materials and supplies would foster the local economy. Direct income through the economy would further stimulate secondary expenditure (multiplier effect).

Since employment increases associatedwith the construction phase would be temporary, a significant effect on population, housing or community service is not anticipated.

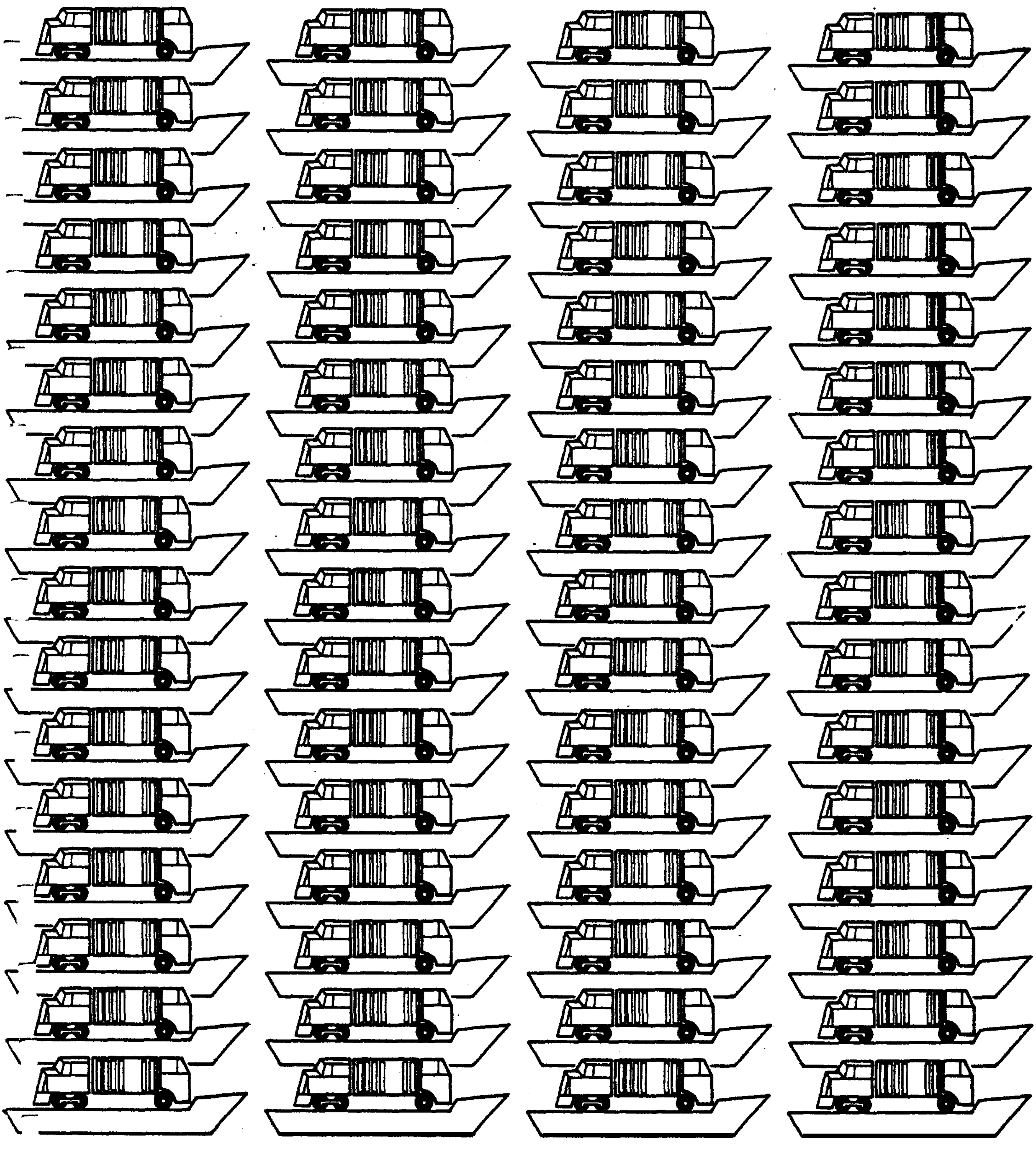
operation of the ICTF will involve the direct hire of approximately 70-320 persons. This will introduce new disposable income into the local economy, as will additional local purchases by the ICTF for supplies, equipment and services (see Section 3.7).

The ICTF by virtue of its operation is capital, not labor intensive. The number of permanent employees generated by the project is limited. The project should not alter the population pattern, and any direct impact on the demands for housing and community services should be minimal.

The operation of the ICTF my secondarily stimulate the development of support facilities (trucking operations, etc.) in the vicinity of the ICTF. The degree of increased economic activity resulting frompotential support facility development cannot be estimted.

ICTF

INTERMODAL CONTAINER TRANSFER FACILITY



Alternatives

5.0 ALTERNATIVES

5.1 NO PROJECT ALTERNATIVE

If the proposed ICTF project was not implemented, the local transport of marine containers destined for Southern Pacific's railyard would continue to rely on heavy truck transport to the downtown yard. Development of the ICTF would shift the major part of the local transport of these containers to the rail mode. This would result in numerous long-term benefits including reduced air emissions reduced consumption of fossil fuels, reduced congestion on the already congested freeway system, reduced wear on the highway road beds, and reduced cost of container transport. Furthermore, the ICTF would provide a more efficient handling system where unit trains would be assembled at a central location close to the container terminals and would travel as unit trains to the final destinations.

Southern Pacific's downtown railyard is approaching maximum throughput. There is no available land adjoining that site for future expansion. The ICTF will provide adequate future capacity, since the ICTF is designed to handle 50% of the total "bridge" container traffic that is estimated to be generated by the Ports in the future.

As the growth in containerized cargo movement through the Ports' area continues, the benefits **of** the ICTF will be more evident.

5.2 ALTERNATIVE SITE LOCATIONS

There are no other site locations available in close proximity to San Pedro Bay for this facility. Large acreage parcels of land with sufficient length to provide the long working tracks required for a rail yard are non-existent. Imposed on the site selection process was the requirement that access to rail tracks had to be provided through the site or adjoining the site.

The Upland Industry Corporation (Union Pacific Railroad) has extensive land holdings adjacent to the Parts of Los Angeles and Long Beach. The Union Pacific has an existing rail classification and storage yard in the Terminal Island district of the Port of of Angeles. The 1979 Upland Pacific Master Plan lists as an alternative use for the present Terminal Island yard an expansion and modernization project to provide a similar intermodal rail yard. However, there are no plans in the foreseeable future to implement this alternative.

The Ports could potentially acquire the existing Union Pacific railyard property on Terminal Island and construct a smaller scale intermodal transfer facility project. However, the additional cost of the land plus the required construction costs will make such a facility economically nonviable. Further*more,* the existing rail yard serves the Port of Los Angeles marine terminals and other tenants on Terminal Island as well as the U.S. Naval Station, Naval Shipyard and Naval Supply Center. The complete elimination of the existing railyard on Terminal Island would require the construction of a new facility *elsewhere* with very limited site alternatives available.

As an alternative to one large, centrally located site for an intermodal transfer facility, selecting and constructing several smaller facilities was investigated. This produced the same results in that there were m vacant smaller sites available that had rail access to then. The smaller sites also would have the same impacts as the proposed ICTF without having any advantages.

5.3 DIRECT RAIL ACCESS TO THE CONTAINER TERMINALS

The possibility of installing additional railroad trackage and providing rail access to existing and Planned container terminals was evaluated. If sufficient rail tracks were available within each container terminal, then the containers would not have to be transported by truck outside the terminal, but would rather loaded or offloaded directly from railcar to a ship. This mode of operation exists in the Ports today to a very limited extent and is confined to containerized cargo that is either too heavy or too large to be transported by trucks over the highway system.

If direct rail access was the standard mode of operation to transport the containers to/from each container terminal, the existing terminals would have to be expanded by 15% to 20% in land area to accommodate the rail trackage. Extensive rail operations within the terminal would have a severe impact on the internal operations of those terminals. In addition to the increased land areas required to provide rail service within the terminals and the in-pacts on internal operations, there would be in&eased impacts on the surface street network throughout the Ports' areas with the large number of train movements to the container terminals.

Marine terminals must have water access and sufficient backland to support their operation. Rail transportation is a water-related support function but is not a water-dependent function. It can occur away from the water front, yet still efficiently support water-dependent operations.

5.4 FACILITY ALTERNATIVES

5.4.1 Rail Access Alternatives. A feasibility study for the ICTF was conducted by Scott and DMJM (1981). Two rail access approaches to the ICTF were evaluated with one entry franthe north and theother from the south. These two approaches were analyzed as five separate alternatives (Figure 47):

1. Alternative 1 - Grade-Separated Fail Access Crossing Alameda Street About 600 Feet South of 223rd Street

   It was anticipated that a new at-grade street crossing of Alameda Street for the entry into the site would not be sufficient. Therefore, this alternative together with Alternatives 2 and 3 involved a rail line grade separation crossing above Alameda Street. The separation would consist of raising the entry rail as much as practical (approximately 2 feet above the Dolores Yard rail elevations) and depress* Alameda Street to attain the required separation.

   The major elements of this alternative were:

   - Lowering approximately 1,150 feet of existing Alameda Street together with construction of the structures to support the rail crossing and the adjacent ground surfaces.

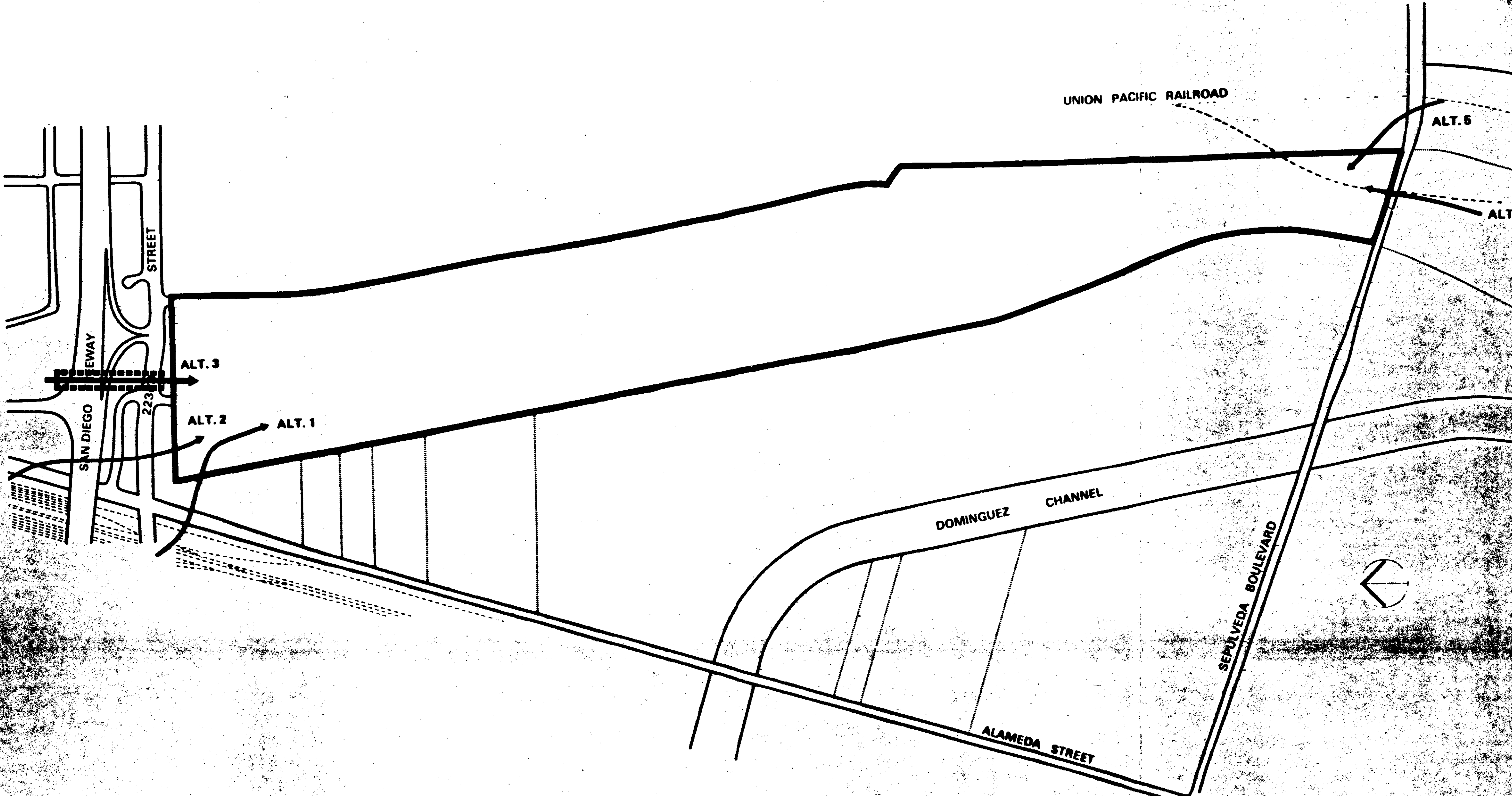


Figure 47

ALTERNATIVE RAIL ACCESS

Relocation and protection of existing substructures, including a concrete storm drain that requires relocation to the east or being protected in place by construction of additional concrete wall supports; and a 32-inch Department of Water and Power water main, which would require lowering throughout the length of the depressed roadway.

Approvals required by the City of Carson and the State Public Utilities Commission.

Land acquisition of approximately 2 acres for the lead track entry and as much as 7 acres of additional land due to severance of its access to Alameda Street, This additional land could, however, be used for internal storage and support facilities.

Demolition of approximately 14,000 square feet of existing buildings to accommodate trackage and acquisition of as much a 2,400 square feet of additional buildings on the severed properties.

Alternative 1 would result in limiting working track length within the ICTF and would require demolition of industrial buildings on the existing site. By shifting the Alameda Street crossing approximately 600 feet south and reducing the length of each track correspondingly, the "additional" land acquisition and building demolition probably could be avoided.

2. Alternative 2 - Grade-Separated Pail Access Crossing Alameda Street **About 600 Feet North of the San Diego Freeway**

Provision for a grades-rated rail connection was included in the design of the San Diego Freeway, which would permit rail access to the site to be made from a more northerly location than Alternative 1. This would result in longer working track lengths, permitting the use of full 50-car unit trains.

Alternative 2 was selected as the most advantageous rail access route based on the following criteria: generation of maximum length of working track within the ICTF; minimum acquisition of private property; and maintaining automobile access to both 223rd Street and the San Diego Freeway.

3. Alternative 3 -Grade-Separated Pail Access with a Tunnel Under the San Diego Freeway

This alternative would require the construction of a grade separation, almost identical to Alternative 2, together with the same street lowering, structure construction, substructure relocation, and approvals. Its advantage over the first alternative is that it would allow additional work- length for each track within the facility. However, it would appear to involve more construction and greater cost than Alternatives 1 and 2.

Disadvantages include the following:

- Construction of a railroad structure (approximately 400 feet in length) under the San Diego Freeway,. 223rd Street ramps and 223rd street itself.

- Reconstruction of the San Diego Freeway on off ramps adjacent to Alameda Street due to the required street lowering.

- Acquisition of approximately 4 acres of land on the east side of Alameda Street north of the freeway. The remainder of this land would, for all practical purposes, become unusable because of its severed access to Alameda Street and its remoteness from the ICTF.

The costs connected with tunnel construction and theapprovals required by Caltrans and other agencies rust be considered in relation to the benefits of increasing working track lengths by 15 percent.

4. Alternative 4 - Entry from the South via Union Pacific Mainline

The major advantage of this alternative is that it would not involve the need for construction of a new grade separation since the existing union Pacific bridge over Sepulveda Boulevard could be utilized. It would, therefore, not cause substructure relocations, City of Carson approval, and building demolition required by the other alternatives. Another important advantage would be 15 percent more working track length than Alternative 1.

The following disadvantages, however, ware substantial and, outweighed theadvantages mentioned above:

- Approximately 4.5 miles of rail travel would be added to each trip to and from the Dolores Yard.

- Rail traffic and potential congestion on the UPrr and SPrr lines south of the ICTF would be significantly increased.

- A Track Agreement would be required between SPrr and UPrr.

- Truck traffic, entering the site from Sepulveda Boulevard, could be constrained by crossing rail traffic, which will exist in the rail entry area. (It was shown that the most desirable truck access point is franthe south.) It is advantageous to have truck and rail access on opposite ends of the site.

- Anewtrack connectian and possible attendant land acquisition would be required between UPrr and SPrr railroad lines at their present crossing east of the Dominguez Channel, approximately 2 miles south of the site.

- Land acquisition by easement or in fee would be required for the crossing of the SCE right-of-way.

- The existing UPrr drill track within the Port property (as it would be relocated) would have to be crossed by proposed trackage at several locations.

In summary, the benefits of tie increased working trackage and the elimination of the costs associated with a new grade separation were more than offset by the increased operating costs and disadvantages itemized above.

5. Alternative 5 - Entry from the South via the Existing Union Pacific Drill Pack

This rail entry to the ICTF had all of the advantages of the fourth alternative but also had all of its disadvantages, except the need for the SCE easement or acquisition and the drill track crossings. The major disadvantage associated with this alternative was that, due to the increased rail traffic volumes expected in connection with the ICTF, it was highly unlikely that the PUC would allow the use of the existing at-grace crossing of Sepulveda Boulevard.

An additional alternative, that ot a new grade separation at Sepulveda Boulevard, had not been seriously studied because it seemed to incorporate most of the disadvantages ot the other alternatives am few redeeming advantages. For these reasons rail access from the south was considered infeasible and was not investigated further.

5.4.2 Truck Access Alternative. Three alternative truck entrance/exit locations to the ICTF were considered:

1. Southerly access from Sepulveda Boulevard
2. Westerly access from Alameda Street
3. Northerly access from 223rd Street

Based upon operational characteristics, estimated route distances and travel times (see Section 3.8), the truck access from Sepulveda Boulevard is the most advantageous.

5.5 PREFERRED ALTERNATIVE

The preferred alternative (see Figure 48) is to construct the ICTF on the site owned by the Fort of Los Angeles. The facility will be a three phased development, with tie second and third phase constructed in subsequent years as the throuhput container demand requires additional adjoining storage areas and working trackage within the facility. The three development phases are described as follows:

5.5.1 Phase I. Years 1983-1990. The initial phase will construct the ICTF as a complete facility that will not require additional construction activity in future years, unless throughput contamer demand requires increased storage area or working trackage. Phase I will provide for complete utility installation including: tire protection system, water, electrical, yard lighting, and storm drain and sewer systems. The Administration and U.S. Customs building, the maintenance building and the control tower will be sized initially to accommodate the anticipated increase volume ot containers and the assouated demand for support facilities. The basic. entrance/exit gate tacility will be designed and constructed so that additional entrance/exitlanes can oe added in the subsequent phases.

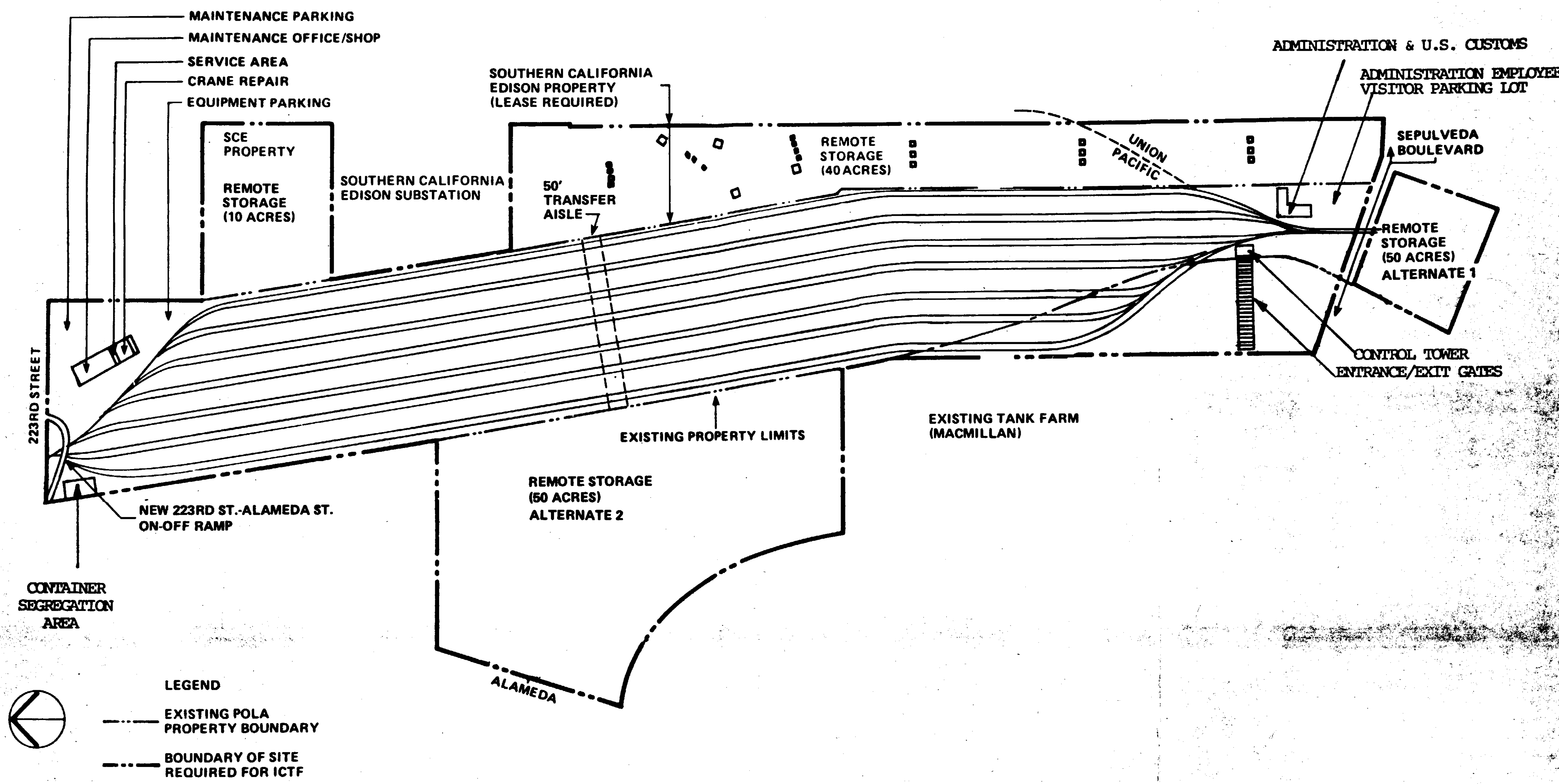


Figure 48
ICTF CONCEPT PLAN YEAR 2000 (ULTIMATE)

phase I will provide six working tracks and two runaround/return tracks with the facility The runaround/return tracks will be constructed adjoining the easterly and Westerly boundaries of the site. These two) trackswill only be used for railroad locomotives and cabooses to traverse the facility. The initial phase will use the center storage concept of container storage, whereby all inbound/outbound containers are held in designated storage rows immediately adjoining the working track that the container is received from or is to be shipped out. This minimizes the hostling time and associated operating costs. The entire ICTF site will be paved.

5.5.2 Phase II. Years 1991-1995. The second phase will provide for two additional working tracks, eliminating one of the center storage rows to be eliminated. The utility systems will be designedand constructedso that the locations of the substructures and above ground features (fire hydrants and yard lighting standards) are compatible to the additional working trackage and will not require relocation or modification, Since the two additional working tracks remove center storage area and will only be constructed when container throughput capacity warrants an increasedcapacity, approximately forty acres of a remote storage area will be added to the facility. This remote storage site is available adjoining the easterly side of the facility on property owned by the Southern California Edison Company. The storage of containers-on-chassis is a permitted land use under high voltage power lines. This remote storage area Will be paved to control dust and make the area usable the year round. A slight increase in container hostling time and operating costs will occur because of the use of remote storage.

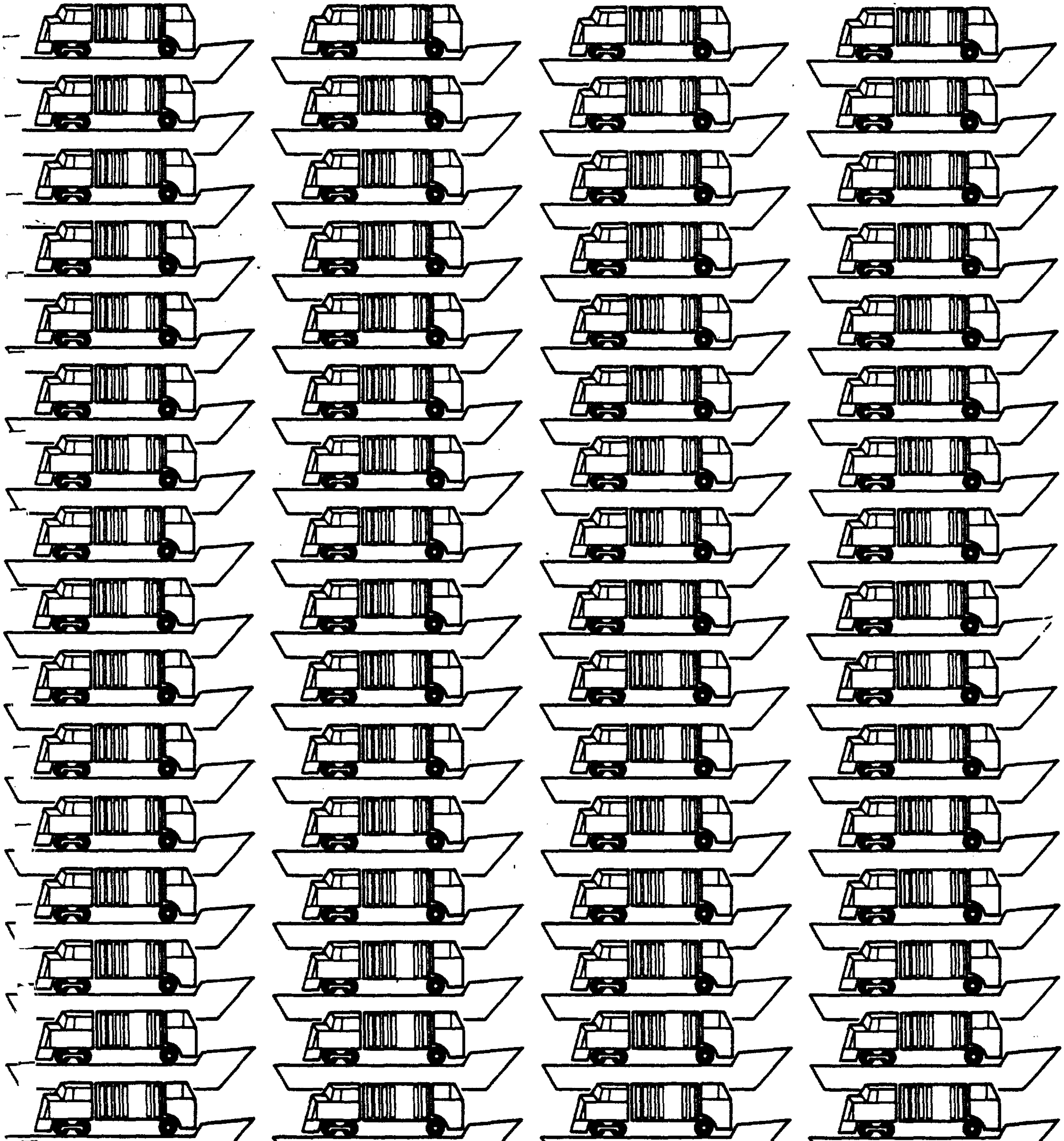
5.5.3 Phase III. Years 1995-2000. Phase III will add 4 working tracks and eliminate the remaining two designated center storage rows. The utility system were predesigned and constructed to allow for the construction of the 4 working tracks and will not require any edification to the existing systems. The elimination of the center storage rows and increasing container throughput demands require additional remote storage areas to be included within the ICI!?. Ten acres are available on the easterly side of the site from the Southern California Edison Company. An additional SO-acre site is presently vacant on the Westerly side of the facility, or property owned by the Port of Los Angeles south of Sepulveda Boulevard will have to be evaluated in the future as to availability and compatibility with the ICTF toprovide additional remote storage areas. The remote storage areas will require pavement yard lighting system. The remote storage of containers will increase the container hostling time and operating costs.

5.5.4 Reduced Development Alternative. Each of the three phases is indepedent of the subsequent phase. Phase II or Phase III are not required to allow Phase I to be constructed and operated efficiently. Phase I could be a complete project Within itself, since this phase includes all the necessary utility systems, rail trackage within the facility, support buildings, and entrance/exit gates. The rail access on the north end of the site and the vehicular access requirements for Sepulveda Boulevard will be completed aspart of Phase I With m additional expansion or modification to these accesses required in developing Phases II or III.

Phase II or Phase III will not be constructed until the container throughput demand for the facility requires additional working tracks and/or remote storage ares for containers. Facts tha effect this demand are: the United States and work economic situation, shifts in ocean-hipping patterns and to a limited extent, the efficiency of the ICTF compared to other available railyards and railroad transportation companies. It is, therefore, possible thaty Phase II and/or Phase III my not be constructed., A smaller scale project, such as one limited to the Phase I development, could have substantially rteduced environmetnal impacts; however, the preferred alternative of a phased developmen allows for the flexibility of expanding the ICTF to met the anticipated increases in container throughput demand in future years.

ICTF

INTERMODAL CONTAINER TRANSFER FACILITY



Appendices

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6.3A AIR QUALITY/ENERGY TECHNICAL APPENDIX

Table A-1
CONSTRUCTION EMISSIONS INVENTORY
BY PHASE AND ACYIVITX

PHASE I (1982-1989)

A. SITE PREPARATION/EXCAVATION

EQUIPMENT	QUANTITY	CONSUMPTION GALLON/HOUR	PRODUCTION HOUR x DAYS	GALLONS	EMISSIONS POUNDS/ACTIVITY CO	HC	NOx	SOx	PART
Scraper	8	34.80	6 X 60	100,224.	9,852	4,229	41,994	3,127.	2,736
Tractor, Crawler	4	16.64	6 X 65	25,958.4	4,179	1,321	8,878	807	1,207
Loader, Track	1	10.16	6 X 30	1,828.	120	24	439	57	44
Roller, Sheep Foot, Double Drum	4	24.32	6 X 65	37,939.2	4,325	922	18,514	1,180	918
Grader, Motor	4	21.19	6 X 65	33,056.4	2,578	575	12,363	1,028	734
Truck, Water	3	7.28	6 X 65	8,517.6	1,578	513	8,955	534	300
Truck, Highway	2	'7.28	8 X 10	1,164.8	64	9	155	15	10
SUBTOTAL				208,700.	22,697	7,593	91,298	6,748	5,949

n. GRADE SEPARATION/ ALAMEDA STREET

EQUIPMENT	QUANTITY	CONSUMPTION GALLON/HOUR	PRODUCTION HOUR x DAYS	GALLONS	CO	HC	NOx	SOx	PART
Scraper	4	34.80	6 X 25	20,880.	2,053	881	0,749	670	570
Tractor, Crawler	2	16.64	6 x 30	5,990.4	964	305	2,049	186	279
Loader, Track	2	10.16	6 X 18	2,194.6	145	29	527	68	53
Truck, Bottom Dump	4	12.13	6 X 30	8,733.6	971	315	5,512	328	185
holler, Sheep Foot Double Drum	2	24.32	6 X 25	7,296.	832	177	3,560	227	177
Grader, Motor	2	21.19	6 X 25	6,357.	496	111	2,378	198	141
Crane	1	22.96	6 X 60	8,265.6	779	287	4,083	257	249
Truck , Highway	4	7.28	8 X 50	11,648.	637	90	1,545	149	104
Truck , Water	2	7.28	'6 X 25	2,184.	405	131	2,296	137	77
Truck, Concrete	6	7.28	6 X 45	11,793.6	430	61	1,043	100	70
Welder, 300 Amp	2	0.66	4 x 35	184.8	17	6	91	5	6
Air Compressor	2	2.60	6 X 20	624.	59	22	308	19	19
Asphalt Paver	1	4.89	6 X 25	733.5	69	25	362	23	22
Aggregrate Spreader	1	11.73	6 X 25	1,759.5	166	61	069	55	53
Compactor	1	24.32	6 X 25	3,648.	344	127	1,802	113	110
Subtotal				92,300.	8,367	2,620	35,174	2,535	2,115

Table A-l
CONSTRUCTION EMISSIONS INVENTORY
BY PHASE AND ACTIVITY

PHASE I (1982-1989)

A. **SITE PREPARATION/EXCAVATION**

EQUIPMENT	QUANTITY	CONSUMPTION GALLON/HOUR	PRODUCTION HOUR X DAYS	GALLONS	EMISSIONS POUNDS/ACTIVITY CO	HC	NOx	SOx	PART
Scraper	8	34.80	6 X 60	100,224.	9,852	4,229	41,994	3,127	2,736
Tractor, Crawler	4	16.64	6 X 65	25,958.4	4,179	1,321	8,878	807	1,207
Loader, Track	1	10.16	6 X 30	1,828.	120	24	439	57	44
Roller, Sheep Foot, Double Drum	4	24.32	6 X 65	37,939.2	4,325	922	18,514	1,180	918
Grader, Motor	4	21.19	6X65'	33,056.4	2,578	575	12,363	1,028	734
Truck, Water	3	7.28	6 X 65	8,517.6	1,578	513	8,955	534	300
Truck, Highway	2	7.28	8 X 10	1,164.8	64	9	155	15	10
SUBTOTAL				208,700.	22,697	7,593	91,298	6,748	5,949

B. GRADE SEPARATION/ ALAMEDA STREET

EQUIPMENT	QUANTITY	CONSUMPTION GALLON/HOUR	PRODUCTION HOUR X DAYS	GALLONS	CO	HC	NOx	SOx	PART
Scraper	4	34.80	6 X 25	20,880.	2,053	881	8,749	670	570
Tractor, Crawler	2	16.64	6 x 30	5,990.4	964	305	2,049	186	279
Loader, Track	2	10.16	6 X18	2,194.6	145	29	527	68	53
Truck, Bottan Dump	4	12.13	6 X 30	8,733.6	971	315	5,512	328	185
Roller, Sheep Foot Double Drum	2	24.32	6 X 25	7,296.	832	177	3,560	227	177
Grader, Motor	2	22.19	6 X 25	6,357.	496	111	2,378	198	141
Crane	1	22.96	6 X 60	8'265.6	779	287	4,083	257	249
Truck, Highway	4	7.28	8 X 50	11,648.	637	90	1,545	149	104
Truck, Water	2	7.28	6 X 25	2,184.	405	131	2,296	137	77
Truck, Concrete	6	7.28	6 X 45	11,793.6	430	61	1,043	100	70
Welder, 300 Amp	2	0.66	4x35.	184.8	17	6	91	5	6
Air Compressor	2	2.60	6 X 20	624.	59	22	308	19	19
Asphalt Paver	1	4.89	6 X 25	733.5	69	25	362	23	22
Aggregrate Spreader	1	11.73	6 X 25	1,759.5	166	61	869	55	53
Compactor	1	24.32	6 X 25	3,640.	344	127	1,802	113	110
Subtotal				[illegible],30[illegible]	[illegible]367	2,6[illegible]	3[illegible],[illegible]14	[illegible]535	[illegible]115

PHASE1

Table A-l

C. RAILROAD TUNNEL/ 223rd ST. TRACK WORK	QUANTITY	CONSUMPTION GALLON/HOUR	PRODUCTION HOUR X DAYS	TOTAL GALLONS	EMISSIONS POUNDS/ACTIVITY CO	HC	NOx	scbc	PART
Tractor, Crowler	2	16.64	6 X15	2,995.2	482	152	1,024	93	139
Loader, Track	2	10.16	6 X 35	4,267.2	281	56	1,024	133	102
Truck, Bottom Dump	4	12.13	6 X 35	10,189.2	1,133	368	6,430	383	216
Roller, Sheep Foot Double Drum	2	24.32	6 X 8	21334.7	266	57	1,139	73	57
Grader, Motor	2	21.19	6 X10	21542.8	198	44	951	79	56
Crane	1	22.96	6 X 50	6,888.	649	239	3,403	214	207
Truck Highway	4	7.28	8 X 45	10,483.2	573	81	1,390	134	94
Truck, Water	1	7.28	6 X10	436.8	81	26	459	27	15
Truck, Concrete	4	7.28	.6X30	5,241.6	191	27	464	45	31
Welder, 300 amp	2	0.66	4 X 25	132.	12	5	65	4	4
Air Compressor	2	2.60	6 X 25	780.	73	27	385	24	23
			SUBTOTAL	28,800.	3,939	1,082	16,734	1,209	944

D. ALAMEDA STREET/ 223rd STREET RAMP	QUANTITY	CONSUMPTION GALLON/HOUR	PRODUCTION HOUR X DAYS	TOTAL GALLONS	CO	HC	NOx	scbc	PART
Backhoe	1	13.17	6x20	1,580.4	75	28	410	26	25
Truck, Bottan Dump	4	12.13	6 X 15	4,366.8	486	158	2,756	164	92
Loader, Truck	1	10.16	6 X 10	609.6	40	8	146	19	15
Roller, Sheep Foot, Double Drum	1	24.32	6 X 10	1,459.2	166	35	712	45	35
Grader Motor	1	21.19	6 X 5	635.7	50	11	238	20	14
Crane	1	22.96	6 X 40	5,510.4	519	191	2,722	171	166
Truck, Highway	4	7.28	8 X 45	10,483.2	573	81	1,390	134	94
Truck, Water	1	7.28	6 X 10	436.8	81	26	459	27	15
Truck, Concrete	6	7.28	6 X 35	9,172.8	191	27	464	45	31
Welder, 300 amp	2	0.66	4 x 20	105.6	10	4	52	3	3
Air Compressor	2	2.60	6 X 20	624.0	59	22	308	19	19
			SUBTOTAL	35,000.	2,250	591	9,657	673	509

PHASE I

Table A-1

E. UTILITY CONSTRUCTION	QUANTITY	CONSUMPTION GALLON/HOUR	PRODUCTION HOUR x DAYS	GALLONS	EMISSIONS POUNDS/ACTIVITY CO	HC	NOx	SOx	PART
Backhoe	4	13.17	6 X 75	23,706.	749	284	4,102	258	252
Loader, Track	2	10.16	6 X 60	7,315.2	482	97	1,755	228	176
Truck, Highway	4	7.28	8 X 55	12,812.8	701	99	1,700	163	114
Truck, Concrete	2	7.28.	6 X 35	3,057.6	191	27	464	45	31
Truck, Dump	2	7.28	6 X 35	3,057.6	567	184	3,215	191	108
Welder, 300 amp	2	0.66	4 x 30	158.4	15	5	78	5	5
Air Compressor	2	2.60	6 X 30	936.	88	32	462	29	28
Poller Sheep Foot Double Drum	1	24.32	6 X 20	2,918.4	333	71	1,424	91	71
		SUBTOTAL		54,000.	3,126	799	13,200	1,010	775

F. **SITE CONSTRUCTION**

Backhoe	4	13.17	6 X 40	12,643.2	399	152	2,188	137	134
Loader, Track	2	10.16	6 X 30	31657.6	241	48	878	114	88
Truck, Highway	6	7.28	8 X 70	24,460.8	1,338	190	3,245	312	219
Truck, Concrete	4	7.28	6 X 40	6,988.8	254	36	618	59	42
Truck, Dump	6	7.28	6 X 60	15,724.8	2,915	946	16,534	984	554
Grader, Motor	3	21.19	6 X 35	13,349.7	1,041	232	4,993	415	296
Truck, Water	2	7.28	6 X 20	1,747.2	324	105	1,837	109	62
Crane	2	22.96	6 X 45	12,398.4	1,168	430	6,125	386	373
Asphalt Paver	4	4.89	6 X 60	7,041.6	663	244	3,479	219	373
Aggregate Spreader	4	11.73	6 X 50	14,076.0	1,326	448	6,953	438	424
Welder, 300 amp	4	0.66	6 X 45	712.0	67	24	352	22	21
Air Compressor	2	2.60	6 X 35	1,092.	1,003	38	539	34	33
		SUBTOTAL		113,900.	10,739	2,893	47,741	3,229	2,619

PHASE I

Table A-l

G.

BUILDING/ADMINISTRATION, MAINTENANCE	QUANTITY	CONSUMPTION GALLON/HOUR	PRODUCTION HOUR X DAYS	GALLONS	EMISSIONS POUNDS/ACTIVITY CO	HC	NOx	SOx	PART
Crane	3	22.96	6 X 40	16,531.2	1,557	573	8,166	514	497
Backhoe	2	13.17	6X20	3,160.8	298	110	1,561	98	95
Loader	2	10.16	6 X15	1,828.8	121	24	439	57	44
Truck, Highway	5	7.28	8 X 50	14,560.0	796	113	1,931	186	130
Truck, Concrete	3	7.28	6 X 30	31931.2	254	36	618	59	42
Welder, 300 amp	3	0.66	6 X 55	653.4	61	23	323	20	20
Air Compressor	3	2.60	4 x 55	1,716.	162	60	848	53	52
		SUBTOTAL		42,400.	3,249	939	13,886	987	880

PHASE II - 1990-1995)

Table A-l

EQUIPMENT	QUANTITY	CONSUMPTION GALLON/HOUR	PRODUCTION HOUR X DAYS	GALLONS	EMISSIONS POUNDS/ACTIVITY CO	HC	NOx	SOx	PART
A. **Remote** Storage/ **Construction**									
Scraper	2	34.80	6 X 30	12,528.0	1,232	529	5,249	402	342
Tractor Crawler	1	16.64	6 X 15	1,497.6	241	76	512	47	70
Loader Track	1	10.16	6 X 10	609.6	40	8	146	19	15
Roller, Sheep Foot, Double Drum	1	24.32	6 X 30	4,377.6	499	106	2,136	136	106
Grader, Motor	2	21.19	6 X 25	6,357.	496	111	2,378	198	141
Truck, Water	2	7.28	6 X 25	2,184.	405	131	2,296	137	77
Truck, Highway	2	7.28	8 X 10	1,164.8	58	7	93	15	10
Truck, Concrete	2	7.28	6 X 5	436.8	44	5	70	11	8
Truck, Dump	4	7.28	6 X 20	31494.4	648	210	3,674	219	123
Asphalt Paver	2	4.28	6 x 20	1,173.6	111	41	580	37	35
Aggregate Spreader	2	11.73	6 X 15	2,111.4	199	73	1,043	66	64
111 Compressor	1	2.60	6 X10	156.0	15	5	77	5	5
		SUBTOTAL		36,100.	3,988	1,302	18,254	1,292	996
B. Railroad Track/ **Construction**									
loader, Track	1	10.16	6 x 20	1,219.2	80	16	293	38	29
Backhoe	2	13.17	6 x 30	4,741.2	150	57	820	51	50
Truck, Dump	4	7.28	6 X 25	4,368.	810	263	4,593	273	154
Truck, Concrete	2	7.28	6 X 15	1,310.4	44	5	70	11	8
Truck, Water	2	7.28	6 X 10	873.6	162	53	919	55	31
Truck, Highway	4	7.28	8 X 30	6,988.8	350	41	558	89	62
Crane	1	22.96	6 X 25	3,444.	324	119	1,701	107	104
Asphalt Paver	1	4.89	6 X 15	440.1	41	15	217	14	13
Aggregate Spreader	1	11.73	6 X 30	2,111.4	199	73	143	66	64
Welder, 300 amp	2	0.66	6 X 30	237.6	22	8	118	7	7
Air Compressor	2	2.60	6 X 30	936.	88	32	462	29	28
		SUBTOTAL		2[illegible] 700.	3,[illegible]	682	9,8[illegible]	[illegible]40	550

PHASE III (1996 - 2000) **Table** A-l

CONTRUCTION ACTIVITY EQUIPMENT	QUANTITY	CONSUMPTION GALLON/HOUR	PRODUCTION HOUR X DAYS	GALLONS	EMISSIONS POUNDS/ACTIVITY CO	Hc	NOx	SOx	PART
A. REMOTE STORAGE/CONSTRUCTION									
Scraper	4	34.80	6 X 40	33,408.	3,284	1,410	13,998	1,072	912
Tractor, Crawler	2	16.64	6 X 30	5,990.4	964	305	2,049	186	279
Loader, Track	2	10.16	6 X 20	21438.4	161	32	585	76	58
Roller Sheep Foot, Double Drum	4	24.32	6 X 40	23,347.2	2,662	567	11,393	726	565
Grader, Motor	2	21.19	6 X 40	10,171.2	793	177	3,804	316	226
Truck, Water	3	7.28	6 X 40	5,241.6	972	315	5,512	328	185
Truck, Highway	4	7.28	8 X 25	5,824.	292	35	465	74	52
Truck, Concrete	2	7.28	6 X15	1,310.4	44	5	70	11	8
Truck, Dump	6	7.28	6 X 40	10,483.2	1,943	640	11,023	656	670
Asphalt Paver	3	4.89	6 X 40	3,520.8	332	122	1,739	110	106
Aggregate Spreader	2	11.73	6 X 30	4'222.8	398	147	2,086	131	127
Air Compressor	2	2.60	6 X 20	624.	59	22	308	19	19
			SUBTOTAL	106,600.	11,904	3,777	53,032	3,705	3,207
B. RAILROAD TRACK/CONSTRUCTION									
Loader, Track	2	10.16	6 X 35	4,267.2	281	56	1,024	4,370	102
Backhoe	4	13.17	6 X 40	12,643.2	399	152	2,188	137	134
Truck, Dump	6	7.28	6 X 35	91172.8	1,700	552	9,645	574	323
Truck, Concrete	4	7.28	6 X 25	4,368.	146	17	232	37	26
Truck, Water	2	7.28	6 X 20	1,747.2	324	105	1,837	109	62
Truck, Highway	6	7.28	8 X 35	12,230.4	613	72	976	156	109
Crane	2	22.96	6 X 40	11,020.8	1,038	382	5,444	343	332
Asphalt Paver	2	4.89	6 X 20	1,173.6	111	41	580	37	35
Aggregate Spreader	2	11.73	6 X 30	4,222.8	387	147	2,086	131	127
Welder, 300 amp	4	0.66	6 X 40	633.6	60	22	313	20	19
Air Compressor	4	2.60	6 X 40	2,496.0	235	87	1,233	78	75
			SUBTOTAL	64,000.0	5,294	1,633	25,558	5,992	1,341

9-6

Table A-1

a. Equipment type quantity and production based on engineering requirements for job completion.

b. Consumption based upon U.S. Army Corpss of Engineers *Construction Equipment Ownership and Operating Expense Schedule", 1981.

c. Emission factors based on:

1. Offroad heavy duty construction equipmmt--U.S. EPA-AP-42, 1977.
2. Onroad heavy duty--SCAQMD, 1980a.

Table A-2

ICTF CONSTRUCTION WORKER TRANSIT EMISSIONS

ACTIVITY	DURATION (Months)	No. of Workers/day	No. of Cars/Day[a]	Total Miles Traveled[b]	EMISSIONS (Pounds)[c] co	HC	Nox	SOx	PART
I. CONSTRUCTION									
PHASE I (1983-1990)									
RAILROAD ACCESS, SITE IMPROVEMENT	14	71	60	336,000	17,226	1,671	1,797	148	244
PHASE II (1991-1995)									
REMOTE STORAGE, RAILROAD TRACK CONSTRUCTION	6	37	32	76,800	2,847	276	311	34	52
PHASE 111 (1996-2000)									
REMOTE STORAGE, RAILROAD TRACK CONSTRUCTION	8	48	41	131,200	4,864	471	532	58	90

a. Assumed carpooling factor of 1.2 employees per vehicle.
b. Based upon 20 mile round trip at an average speed of 30 mph each working day.
c. SCAQMD, 1980a. Phase I emission8 factora based upon projected 1983 and 1984 factors. Phase II and III based upon 1990 emission factors.

Table A-3

OPERATIONAL EQUIPMENT EMISSIONS
BRIDGECRANE

Year	Fuel Consumed[a] (Gallons)	YEARLY OPERATIONAL EMISSIONS[b] (lbs/year) CO	HC	NO_x	SO_x	Part	Fuel Consumed (Gallons)	DAILY OPERATIONAL EMISSIONS[b] (lbs/day) CO	HC	NO_x	SO_x	Part
Phase I												
1983	128,500	13,107	4,819	60,266	4,009	4,305	352	36	13	165	11	12
1984	128,500	13,107	4,819	60,266	4,009	4,305	352	36	13	165	11	12
1985	128,500	13,107	4,819	60,266	4,009	4,305	352	36	13	165	11	12
1986	160,600	16,381	6,023	75,321	5,011	5,380	440	45	16	206	14	15
1987	160,600	16,381	6,023	75,321	5,011	5,380	440	45	16	206	14	15
1988	192,700	19,655	7,226	90,376	6,012	6,455	528	54	20	248	16	17
1989	192,700	19,655	7,226	90,376	6,012	6,455	528	54	20	248	16	17
1990	192,700	19,655	7,226	90,376	6,012	6,455	528	54	20	248	16	17
Phase II												
1991	224,800	22,930	8,430	105,431	7,014	7,531	616	63	23	289	19	21
1992	257,000	26,214	9,638	120,533	8,018	8,610	704	72	26	330	22	24
1993	289,100	29,488	10,841	135,588	9,020	9,685	792	81	30	371	25	26
1994	289,100	29,488	10,841	135,588	9,020	9,685	792	81	30	371	25	26
1995	321,200	32,762	12,045	150,643	10,021	10,760	880	90	33	413	27	29
Phase III												
1996	353,300	36,037	13,249	165,698	10,023	11,836	968	99	36	454	30	32
1997	385,400	39,311	14,452	180,753	12,024	12,911	1,056	108	40	495	33	35
1998	385,400	39,311	14,452	180,753	12,024	12,911	1,056	108	40	495	33	35
1999	385,400	39,311	14,452	180,753	12,024	12,911	1,056	108	40	495	33	35
2000	385,400	39,311	14,452	180,753	12,024	12,911	1,056	108	40	495	33	35

a. Based upon a 16 hour/day, 365 day/year operation at 5.5 gallons/hour fuel conswption.
b. Emission rates from EPA. 1977. Section 3.3.3

Table A-4

OPERATIONAL EQUIPMENT EMISSIONS
YARD HOSTLERS

Year	Equip. No.	Fuel Consumed (Gallons)[a]	YEARLY OPERATIONAL EMISSIONS[b] (lbs/year) CO	Hc	NO_x	SO_x	Part	Fuel Consumed (Gallons)	DAILY OPERATIONAL EMISSIONS[b] (lbs/day) CO	HC	NO_x	SO_x	Part
Phase I													
1983	9	157,700	16,085	5,914	73,961	4,920	5,283	432	44	16	203	13	14
1984	9	157,700	16,085	5,914	73,961	4,920	5,283	432	44	16	203	13	14
1985	9	157,700	16,085	5,914	73,961	4,920	5,283	432	44	16	203	13	14
1985	12	210,200	22,440	7,882	98,584	6,558	7,042	576	59	22	270	18	19
1987	12	210,200	21,440	7,882	93,584	6,558	7,042	576	59	22	270	18	19
1988	15	262,800	26,806	9,855	123,253	8,199	8,804	720	73	27	338	22	24
1989	15	262,800	26,806	9,855	123,253	8,199	8,804	720	73	27	338	22	24
1990	15	262,800	26,806	9,855	123,253	8,199	8,804	720	73	27	338	22	24
Phase II													
1991	18	315,400	32,171	11,828	147,923	9,840	10,566	864	88	32	405	27	29
1992	21	367,900	37,526	13,796	172,545	11,478	12,325	1,008	103	38	473	31	34
1993	24	420,500	42,891	15,769	197,214	13,120	14,087	1,152	118	43	540	36	39
1994	24	420,500	42,891	15,769	197,214	13,120	14,087	1,152	118	43	540	36	39
1995	27	473,000	48,246	17,738	221,837	14,758	15,846	1,296	132	48	608	40	43
Phase III													
1996	30	525,600	53,611	19,710	246,506	16,399	17,608	1,440	147	54	675	45	48
1997	30	525,600	53,611	19,710	246,506	16,399	17,608.	1,440	147	54	675	45	48
1998	33	578,200	58,976	21,682	271,176	18,040	19,370	1,584	162	59	743	49	53
1999	33	578,200	58,976	21,682	271,176	18,040	19,370	1,584	162	59	743	49	53
2000	36	630,700	64,331	23,651	295,798	19,678	22,128	1,728	176	65	810	54	59

a. Based upon a 16 hour/day, 365 day/year operation at 3 gallons/hour fuel consumption.
b. Emission rates from EPA, 1977. Section 3.3.3
c. CARB, 1980.

Table A-5

TRUCK EMISSIONS
PORT OF LOS ANGELES (WEST BASIN) TO ICTF

Year	ROUND TRIPS[a] PER DAY	EMISSIONS (lbs/day) CO	HC	NO_x	SO_x	PART
PEASE1						
1983	90	38	6	34	6	4
1984	100	42	7	37	7	5
1985	110	46	7	38	7	5
1986	122	51	7	38	a	6
1987	I.37	56	a	39	9	6
I.988	I.51	60	8	39	10	7
1989	168	67	9	40	11	a
I.990	187	75	10	41	I.2	9
PHASE II						
1391	202	81	lo	44	13	9
I.992	217	86	11	47	14	10
I993	235		I.2	51	15	11
1994	253	I.2	13	55	17	I.2
1995	274	lo9	14	60	la	13
PEASE III						
1996	295	118	15	64	19	14
1997	319	126	16	69	21	15
l998	344	137	18	75	23	16
I.999	373	149	19	81	24	17
2000	402	160	21	88	26	18

a. Assumes a round trip distance of 10.6 miles at an average speed of 30 mph. Based upon heavy diesel trucks.

b. Source: SCAQMD "Air Quality Handbook for EIRs" (Oct. 1980). Based upon California State Moving Exhaust Emissions, Heavy Trucks, 19841990 Emission Factors.

Table A-6

TRUCK EMISSIONS
PORT OF LOS ANGELES (TERMINAL ISLAND) TO ICTF

Year	ROUND TRIPS[a] PER DAY	EMISSIONS (lbs/day)[b] CO	EC	NO_x	SO_x	PART
PHASE I						
1983	101	33	S	30	S	4
	113			32	6	4
1985	125	41 37	f	33	6	4
I.986	140	46	6	34	7	5
I.987	154	49	7	34	8	5
I.988	170	52	7	34	9	6
1989	190	59	8	3s	10	7
1990	210	65	8	3s	11	7
PEASE II						
	227	70	9	38	I.2	8
1992	246	7s		42	12	9
1993	264	81	10			9
I.994	286	88	11	4s 48	15	10
1995	310	96	12	52	16	ll
PHASE III						
1996	334	103 111	13 14	66 61	17 18	12
1997	360	120			20	13
I.998	389	129	16 17	71 66	21	14
1999	420					15
2000	454	140	18	77	23	16

a. **Assumes** a round tripdistance of **8.2 miles** atanaverage speed of 30 **mph.** Basedupmheavydieseltnicks.

b. **Source: SCAQMD** "Air Quality Handbook for **EIRs"** (Oct. 1980). **Based upon California State Moving Exhaust** Emissions, Heavy Trucks, 19841990 **Emission** Factors.

Table-A-7

TRUCK EMISSIONS
PORT OF LONG BEACH TO ICTF

Year	ROUND TRIPS[a] PER DAY	EMISSIONS (lbs/day)[b] CO	HC	NO_x	SO_x	PART
PHASE I						
				50		
1983	160	55	9	54	9	6
I.984	176	61	9		9	7
1985	196	67	lo	55	11	7
1986	217	7s	10	56	12	8
1987 .	241	81	11	56	13	9
I.988	269	88	I.2	57	14	10
I.989	298	98	13	58	16	11
I.990	330	108	14	59	18	12
PHASE II						
			15			
1991	356	116	16	64	19	13
1992	385	l26		69	21	15
1993	416	I.36	18	74	22	16
1994	449	147	I.9	80	24	17
I.995	486	159	2l	87	26	18
PHASE III						
I.996	524	171	24	94	28	20
I.997	566	182	30	100	30	21
I.998	612	200		109	33	23
1999	660	216	28	118	36	2s
2000	714	234	30	128	38	27

a. Assumes a round trip distance of 8.7 miles at an average speed of 30 mph. Based upon heavy diesel trucks.

b. Source: SCAQMD "Air Quality Handbook for EIRs" (Oct. 1980). Based upon California State Moving Exhaust Emissions, Heavy Trucks, 1984l.990 Emission Factors.

Table A-8

ADDITIONAL SITES TO ICTF

Year	ROUND TRIPS[a] PER DAY	EMISSIONS (lbs/day)[b] CO	HC	NO_x	SO_x	PART
PHASE I						
	62	62	10	55	10	7
1984	69	69	11	60	11	7
1985	76	76	11	61	12	8
1986	84	84	12	62	13	9
1987	94	91	13	63	15	10
1988	104	98	14	63	16	11
1989	115	108	15	65	18	12
1990	127	119	15	65	20	14
PHASE II						
1991	137	129	17	70	21	15
1992	148	139	18	76	23	16
1993	161	151	20	83	25	17
1994	174	164	21	90	27	19
1995	188	177	23	97	29	20
PHASE III						
1996	202	190	25	104	31	22
1997	218	205	27	112	34	24
	235	221	29	121	36	25
1998	255	240	31	131	40	28
2000	274	258	33	141	42	30

a. Assumes a **round** trip distance of 25 miles at an average speed of 30 **mph.** Based upon heavy diesel trucks.

b. Source: **SCAQMD** "Air **Quality Handbook** for **EIRs"** (Oct. 1980). **Based upon California** State Moving Exhaust **Emissions,** Heavy **Trucks,** 1983 1990 **Emissions** Factors

Table A-9

TRUCK EMISSIONS
COMBINED PORTS h **ADDITIONAL** SITES TO L.A.

Year	ROUND TRIPS[a] PER DAY	EMISSIONS (lbs/day)[b] CO	HC	NO_x	SO_x	PART
PHASE1						
1983	413	548	82	1339	128	90
1984	458	608	86	1474	142	99
1985	S07	645	90	I.509	157	110
1986	563	685	93	1538	174	122
1987	626	762	104.	I.568	194	136
1988	694	844	115	1581	215	150
I.989	771	938	119	1625	239	167
I.990	854	1039	123	1653	265	185
PHASE II						
1991	922	1122	l33	1928	286	200
I.992	996	I.212	143	2083	308	216
I.993	1076	1309				
l994	1162	1414	155	2249	333 360	233 2S2
1995	1258	I.531	181	2435	390	273
PHASE III						
1996	1355	1649	195	2623	420	294
1997	1463	1780	227	2832	453	317
I.998	1580	l923	241	3059	489	343
I.999	1678	2042		3248	520	364
2000	1844	2244	265	3570	571	400

a. **Assumes a** round tripdistance of **50 miles at an average** speed of **55 mph with freeway use.** Baseduponheavydfeseltrudcs.

b. **Source: SCAQMD.** "Air **Quality Handbook** for **EIRs".** Ckt. 1980. Based **upon** California State Moving Exhaust **Emissions,** Heavy Trucks, 1983-1990 **Emission** Factors.

TABLE' A10

AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards[1] Concentration[3]	Method[4]	National Standards[2] Primary[3,5]	Secondary[3,6]	Method[7]
Oxidant[10]	1 hour	0.10 ppm (200 ug/m³)	Ultraviolet Photometry	—	—	—
Ozone	1 hour	—	—	240 ug/m³ (0.12 ppm)	Same as Primary Standard	Chemiluminescent Method
Carbon Monoxide	12 hour	10 ppm (11 mg/m³)	Non-Dispersive Infrared Spectroscopy	—	Same as Primary Standards	Non-Dispersive Infrared Spectroscopy
	8 hour	—		10 mg/m³ (9 ppm)		
	1 hour	40 ppm (46 mg/m³)		40 mg/m³ (35 ppm)		
Nitrogen Dioxide	Annual Average	—	Saltzman Method	100 ug/m³ (0.05 ppm)	Same as Primary Standards	Gas Phase Chemiluminescence
	1 hour	0.25 ppm (470 ug/m³)		—		
Sulfur Dioxide	Annual Average	—	Conductimetric Method	80 ug/m³ (0.03 ppm)	—	Pararosaniline Method
	24 hour	0.05 ppm (131 ug/m³)[9]		365 ug/m³ (0.14 ppm)	—	
	3 hour			—	1300 ug/m³ (0.5 ppm)	
	1 hour	0.5 ppm (1310 ug/m³)		—	—	
Suspended Particulate Mater	Annual Geometric Mean	60 ug/m³	High Volume Sampling	75 ug/m³	60 ug/m³	High Volume Sampling
	24 how	100 ug/m³		260 ug/m³	150 ug/m³	
Sulfates	24 hour	25 ug/m³	AIHL Method No. 61			
Lead	30 day Average	1.5 ug/m³	AIHL Method No. 54	—	—	—
	Calendar Quarter	—	—	1.5 ug/m³	1.5 ug/m³	Atomic Absorption
Hydrogen Sulfide	1 hour	0.03 ppm (42 ug/m³)	Cadmium Hydroxide Stractan Method	—	—	—
Hydrocarbons (Corrected for Methane)	3 hour (6-9 a.m.)	—	—	160 ug/m³ (0.24 ppm)	Same as Primary Standards	Flame Ionization Detection Using Gas Chromatography
Vinyl Chloride (Chloroethene)	24 hour	0.010 ppm (26 ug/m³)	Gas Chromatography (ARB staff report 78-8-3)			
Ethylene	8 hour	0.1 ppm	—	—	—	—
	1 hour	0.5 ppm				
Visibility Reducing Particles	1 observation	In sufficient amount to reduce the prevailing visibility to less than 10 miles when the relative humidity is less than 70%	(8)	—	—	—
APPLICABLE ONLY IN THE LAKE TAHOE AIR BASIN:						
Carbon Monoxide	8 hour	6 ppm (7 mg/m³)	NDIR			
Visibility Reducing Particles	1 observation	In sufficient amount to reduce the prevailing visibility to less than 30 miles when the relative humidity is less than 70%	(8)			

See next page for footnotes.

FOOTNOTES: FOR TABLE A-10. (AMBIENT AIR QUALITY STANDARDS)

1. California standards are values that are not to be equal or exceeded.

2. National standards, other than those based on annual averages or annual geometric means, are not to be exceeded more than once per year.

3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 mm of mercury. All measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 mm of Hg (1,013.2 millibar); ppm in this table refers to ppm by volume, or micrcmoles of pollutant per mole of gas.

4. Any equivalent procedure which can be shown to the satisfaction of the Air Resources Board to give equivalent results at or near the level of the air quality standard may be used.

5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health. Each state must attain the primary standards no later than three years after that state's implementation plan is approved by the Environmental Protection Agency (EPA).

6. National Secondary Standards: The levels of air quality necessary to protect the public welfare frcun any known or anticipated adverse effects of a pollutant. Each state must attain the secondary standards within a "reasonable time" after the implementation plan is approved by the EPA.

7. Referencemethod as described by the EPA. An "equivalent method" of measurement may be used but must have "amsistent relationship to the reference method" and must be approved by the EPA.

8. Prevailing visibility is defined as the greatest visibility which is attained or surpassed around at least half of the horizon circle, but not netessarily in continuous sectors.

9. At locations where the state standards for oxidantand/or suspended particulate matter are violated. National standards apply elsewhere.

10. Measured as ozone.

TABLE A-11

MAXIMUM POLLUTANT CONCENTRATION AVERAGES AND VIOLATIONS OE' STATE - - IN THE LONG BEACH AREA DURING 1980

SOURCE	Concentration (No. of Days State Standard Violated) 1 Hour	8Hour	12 Hour	24 Hour	3 Months
Oxidant & Ozone (ppm)	0.10 (57 days) 0.12 (17 days)				
Carbon Monoxide (ppm)		9.3 (18 days) 10 (4 days)			
Nitrogen Dioxide (ppm)		0.25 (10 days)			
Sulphur Dioxide (ppm)		0		0	
Total Suspended Particulates (mg/m^3)				100 (21) 150 (8) 260 (1)	
Lead (mg/m^3)					Quarter 1.57
Sulphate (mg/m^3)				25 (4) 30 (3)	

6.3B NOISE TECHNICAL APPENDIX

A·WEIGHTED SOUND LEVEL

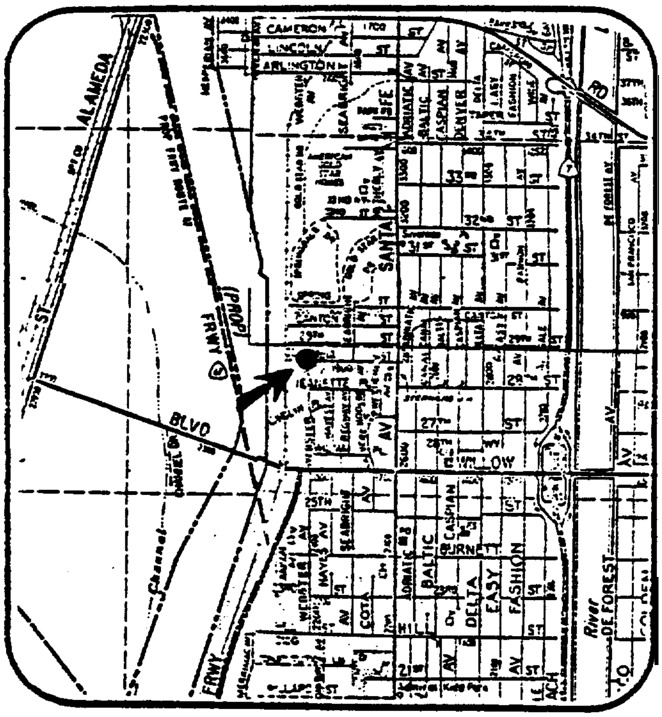
POSITION NO.: 2

PROJECT ICTF - Ports of Los Angeles & Lone Reach

MEASUREMENT POSITION Columbia St., E of UPRR

DATE December 28, 1981 TIME 11:00 - ☒ A.M. / P.M.

SOURCE Traffic Movements and Aircraft



N	L_N
1	65.4
10	63.2
50	57.3
90	50.0
99	49.7
Leq	60.0

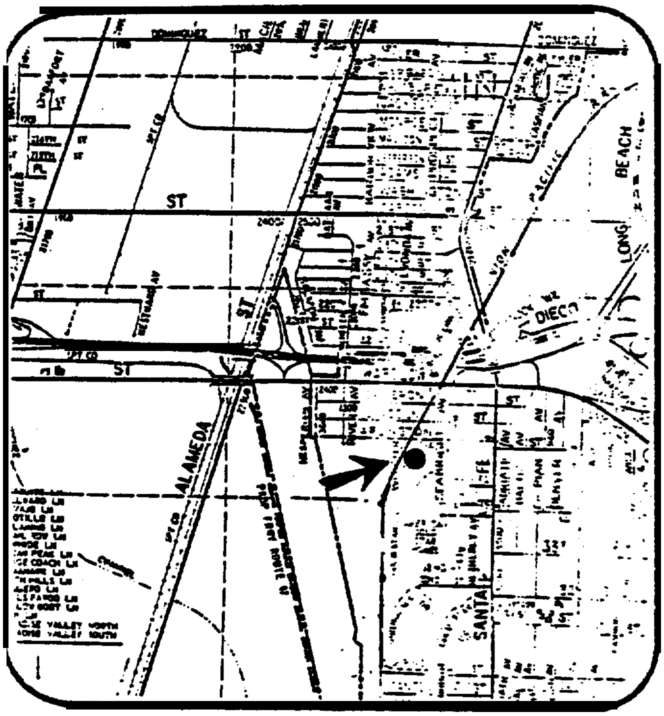
REMARKS:

Figure Bl

A·WEIGHTED SOUND LEVEL

POSITION NO.: 4

PROJECT: PORT OF LOS ANGELES & LONG BEACH
POSITION: WINDWARD VILLAGE MOBILE HOME PARK, UNIT #93
SOURCE: ACTIVITY ON THE UNION PACIFIC RAILROAD
DATE: DEC. 28, 1981 PEAK HOUR: 11:00-12:00 p.m.
SOUND LEVELS: L_{90}= 49.0 L_{50}= 51.0 L_{10}= 53.0 L_{eq}= 65.6 dB(A)



Time From	To	Sound Level, dB(A)
07:00	08:00	59.6
08:00	09:00	55.5
og :oo	10 :oo	55.3
10:00	11:00	63.0
11:00	12:00	59.8
12 :co	13 :oo	54.0
13 :oo	14:oo	53.6
14:00	15:00	55.5
15 :00	16:oo	64.3
16:00	17:00	57.9
17:00	18:00	54.3
18:00	19:00	64.8
19:00	20:00	53.2
20:00	21:00	54.9
21:00	22:00	56.0
22 :00	23:00	53.4
23:00	24:00	65.6
24:00	01:00	48.9
01 x-00	02:00	--48.3
02:00	03:00	49.3
03:00	04:00	51.0
04:00	05:00	62.0
05:00	06:00	52.6
06:00	07:00	54.1

COMMUNITY NOISE EQUIVALENT LEVEL: 65.1 dB

REMARKS:

A 5-1/2 foot concrete block wall exists between the measurement site and the railroad.

Figure 132.

A-WEIGHTED SOUND LEVEL

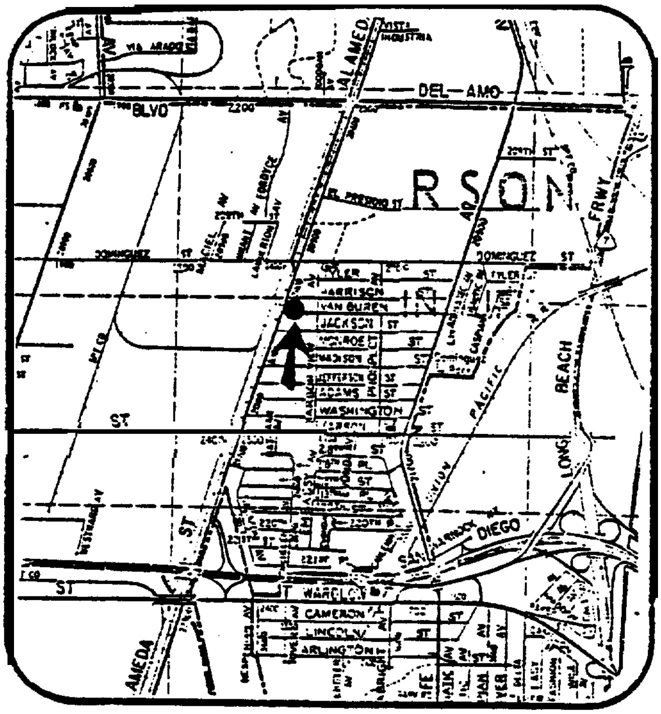
POSITION NO.: 8

PROJECT ICTF - Ports of Los Angeles & Long Beach

MEASUREMENT POSITION - Homes Nearest Alameda on Van Buren

DATE December 28, 1981 TIME 2:00 A.M. / P.M.

SOURCE Traffic on Alameda Street



N	L_N
1	50.5
10	52.8
50	61.3
90	70.5
99	72.8
Leq	67.3

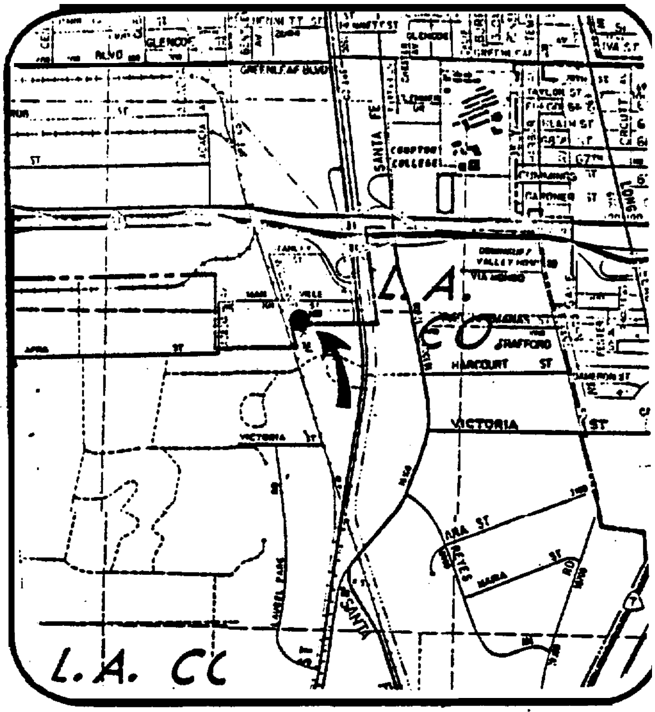
REMARKS:

Figure B3

A-WEIGHTED SOUND LEVEL

POSITION NO.: 9

PROJECT: PORT OF LOS ANGELES & LONG BEACH
POSITION: DOHINCUEZ SEHINARY, 18127 S. ALAMEDA
SOU RCE : ACTIVITY ON SOUTHERN PACIFIC RAILROAD
DATE: JAN. 13, 1982 PEAK HOUR: 11 :00-12:00 a.m.
SOUND LEVELS : L_{90}= 48. O L_{50}= 51.0 L_{10}= 67.0 L_{eq}= 70.6 dB(A)



COMNUNITX NOISE EQUIVALENT LEVEL: 66.1 dB

Time From	Ta	Sound Level, dB( )
07:00	08:00	60.0
08:00	09:00	57.0
09:00	10:00	51.3
10:00	11:00	53.0
11:00	12:00	70.6
12:00	13:00	56.0
13:00	14:00	53.8
14:00	15:00	53.4
15:00	16:00	52.8
16:00	17:00	51.9
17:00	18:00	52.6
18:00	19:00	54.7
19:00	20:00	54.5
20:00	21:00	61.1
21:00	22:00	56.0
22:00	23:00	54.5
23:00	24:00	54.5
24:00	01:00	64.8
01:00	02:00	63.9
02:00	03:00	57.0
03:00	04:00	51.5
04:00	05:00	51.9
05:00	06:00	54.9
06:00	07:00	57.9

Figure R4

A-WEIGHTED SOUND LEVEL

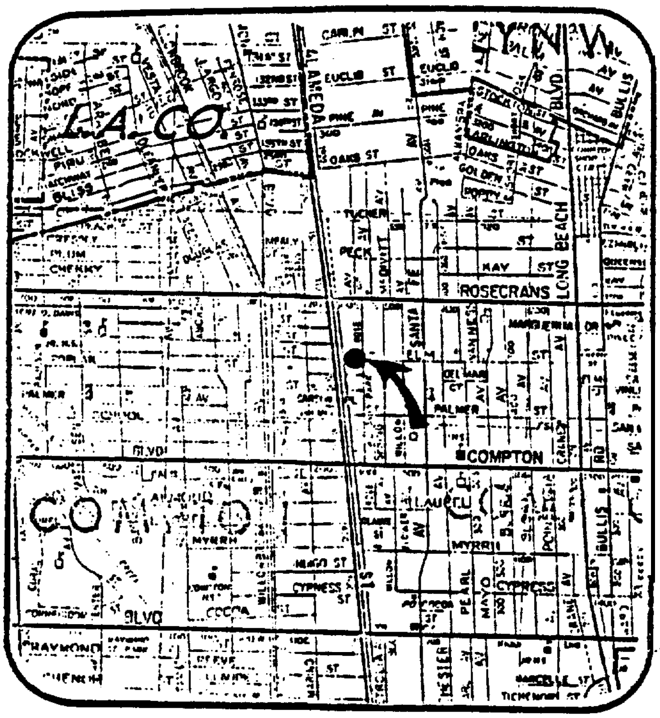
POSITION NO.: 11

PROJECT - ICTF - Ports of Los Angeles & Long Beach

MEASUREMENT POSITION Alameda St. & Elm St.. SPRR

DATE January 6, 1982 TIME 2:00 ☐ A.M. ☒ P.M.

SOURCE Traffic Movements



N	L_N
1	66.8
10	62.3
50	52.0
90	43.0
99	40.0
Leq	56.8

REMARKS:

Figure B5

A·WEIGHTED SOUND LEVEL

POSITION NO.: 20

PROJECT ICTF - Ports of Los Angeles and Long Beach

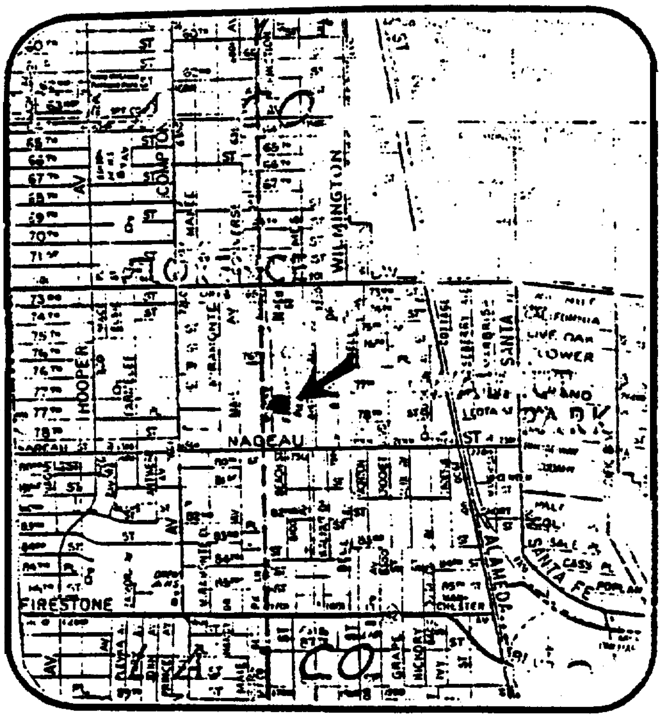
MEASUREMENT POSITION Roosevelt Park, LOO' East of SPRR

DATE January 4. 1982 TIME 12:30 o A.M. ☒ P.M.

SOURCE Hauler on the Wilmington Branch. SPRR

PEAK HOUR SOUND LEVELS (WITHOUT TRAINS):

A-weighted sound Level: L_{90} 43.1 L 52.5 L_{10} 62.3 L 57.8 dB(A)



Single Event Data

SEL: 103.8 dB

Leq: 82.5 dB(A)

Duration: 134.5 secs.

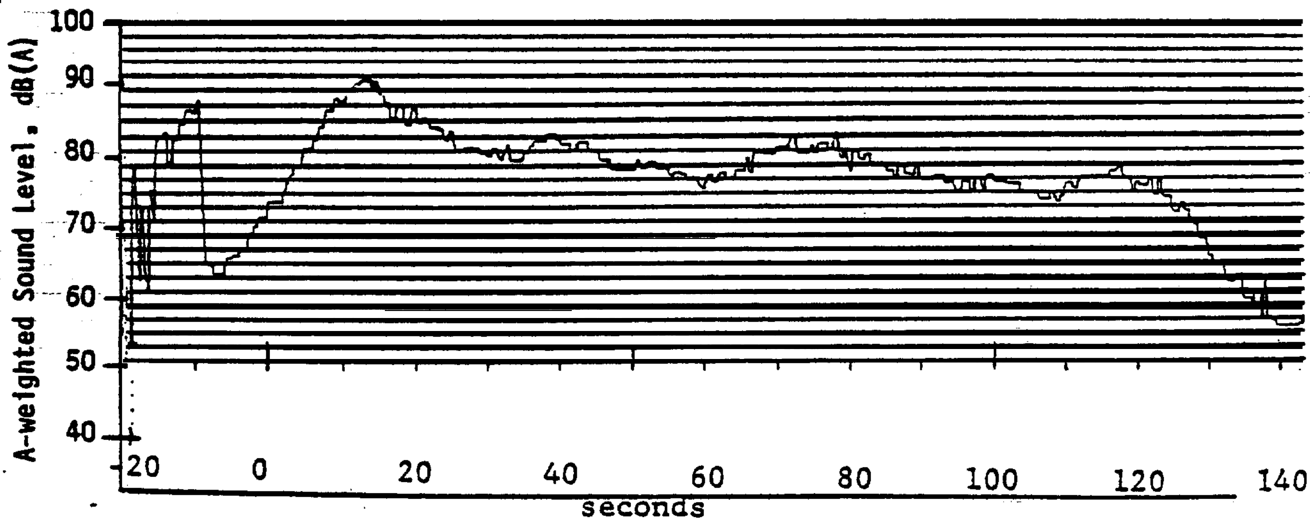


Figure B6

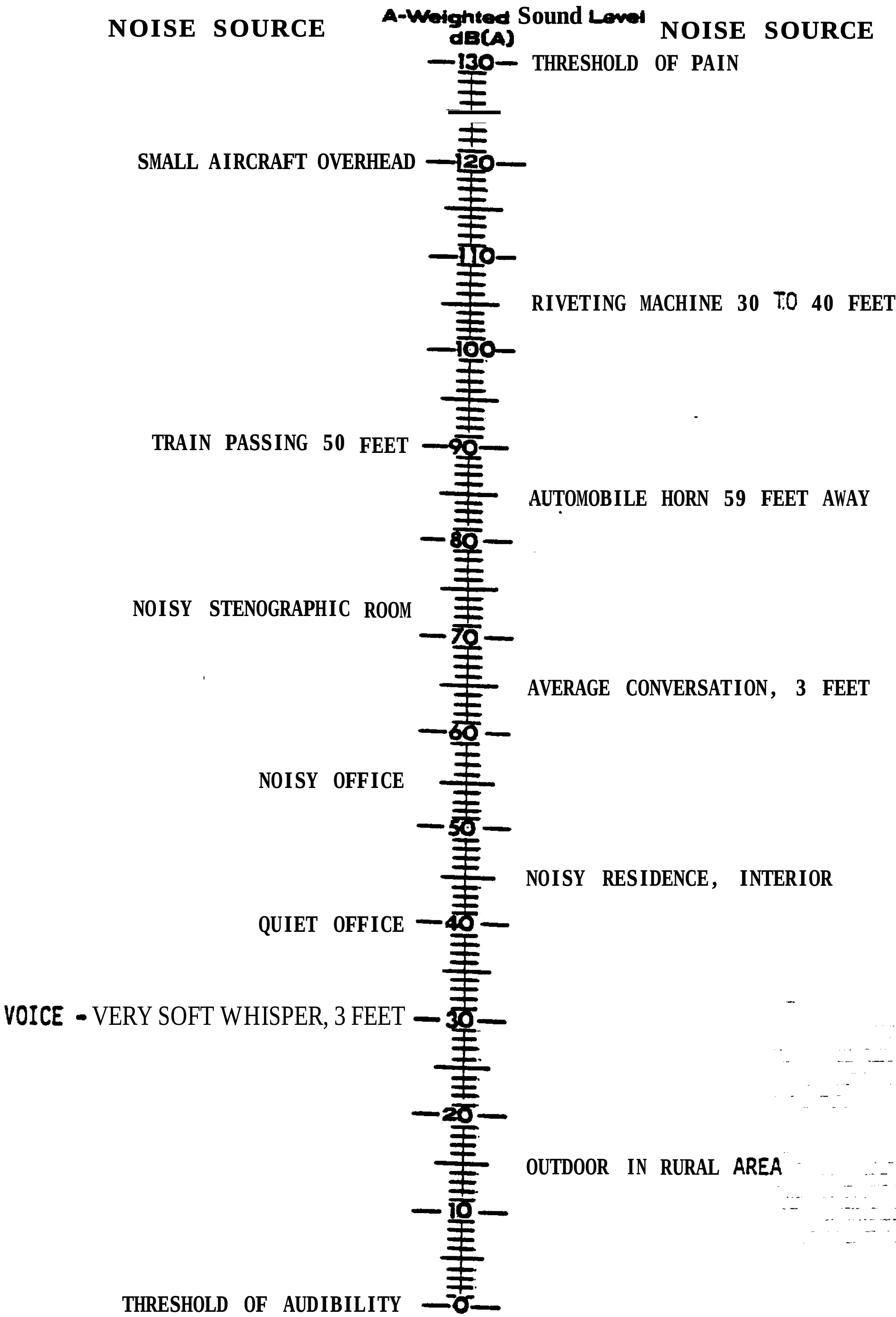
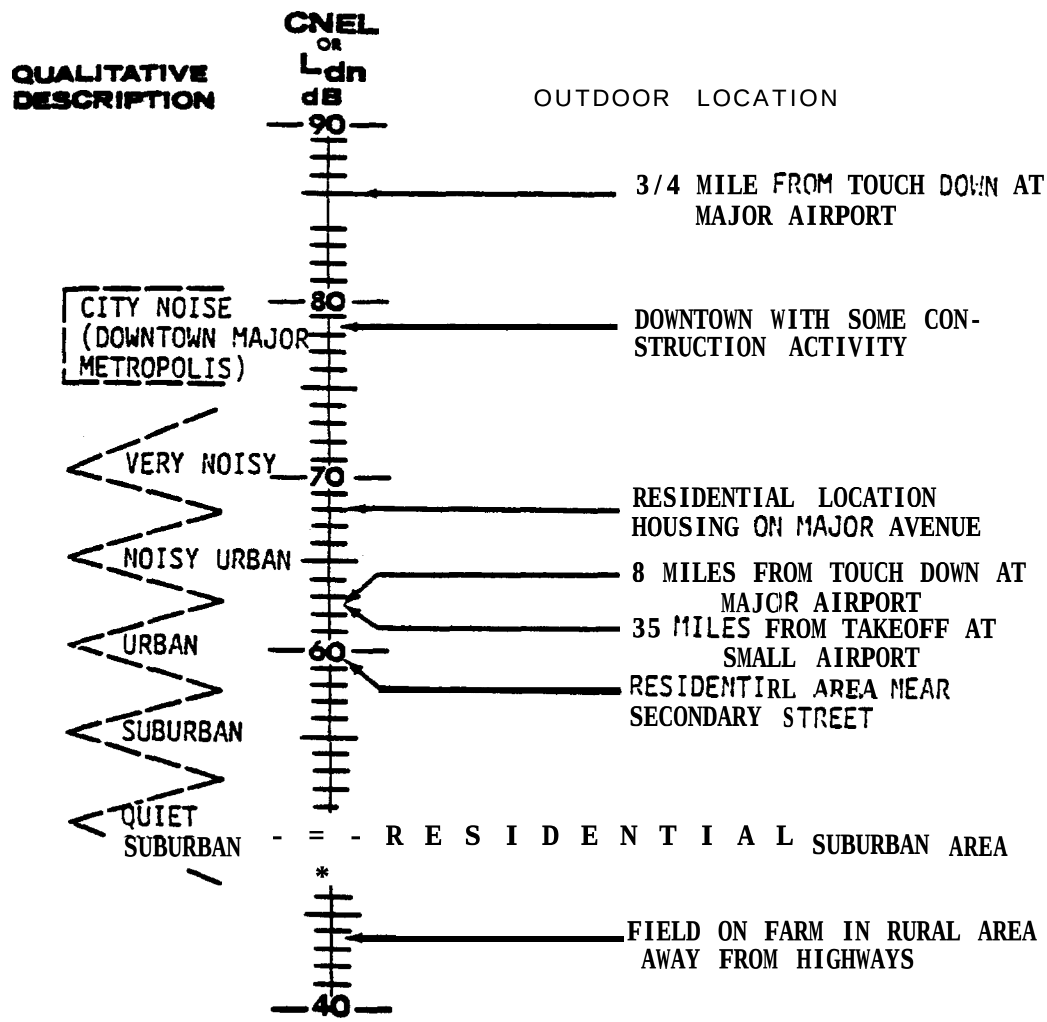


Figure B7 - Representative Noise Sources and Sound Levels

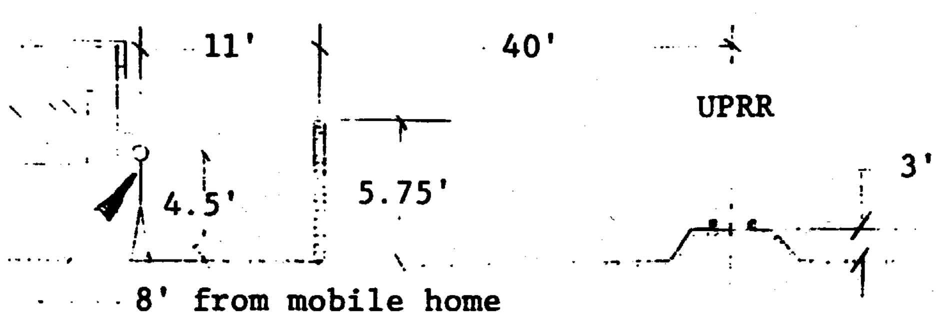


SOURCE: In part taken from, "Information on Levels of Environmental Noise...", U.S. Environmental Protection Agency, 550/g-74-004, March 1974.

Figure B8 - Outdoor Noise Exposures at Various Locations

Table B1 - Summary of Train Noise Measurements Adjacent to the Union Pacific Railroad at Measurement Position #4

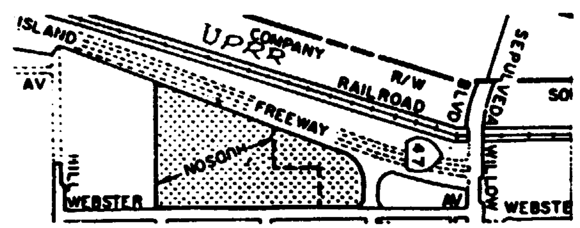
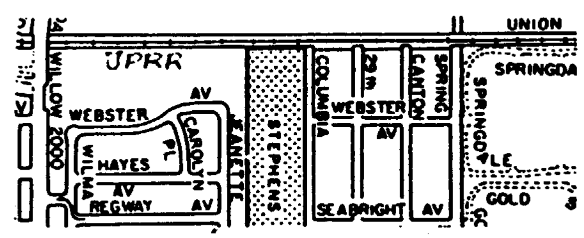
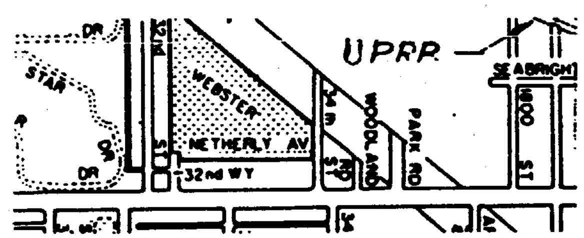
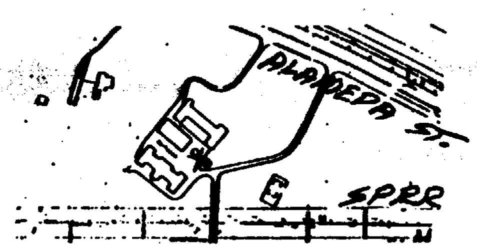
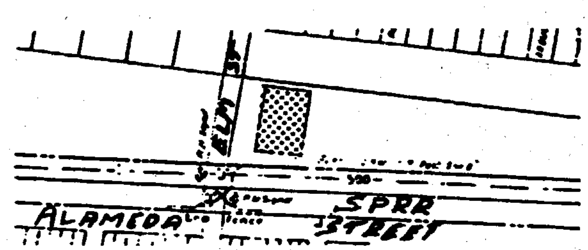
Date	Time	Type of Train	Duration	Switcher SEL*	Switcher MAX*	Hauler SEL*	Hauler MAX*
December 28, 1981	1516	Coal/South	144 sec.	---	---	89.6 dB	80.8 dB (A)
28	1520	Freight/North	187	---	---	93.8	81.0
28	1608	Switcher	2	76.6 dB	75.1 dB (A)	---	---
28	1613	Switcher	4	82.1	77.2	---	---
28	1626	Switcher	5	83.6	82.3	---	---
28	1845	Grain/South	135	---	---	99.5	84.0
28	2303	Switcher	4	87.0	82.5	---	---
28	2331	Train	143	---	---	100.5	82.6
29	0459	Freight/North	41	---	---	96.7	82.8
29	0730	Freight/South	20	---	---	92.8	81.1
29	0949	Switcher	3	82.1	77.4	---	---
29	1045	Switcher	28	88.5	76.5	---	---
29	1152	Train	22	---	---	93.1	82.8
January 7, 1982	1324	Train	36	---	---	95.8	83.2
7	1458	Switcher	79	80.9	79.3	---	---
7	1522	Switcher	7	88.3	81.9	---	---
7	1534	Switcher	5	84.3	77.8	---	---
7	1537	Switcher	72	79.2	76.1	---	---
7	1642	Grain/North	40	---	---	96.9	84.0
7	1715	Switcher	7	85.1	78.5	---	---
7	1748	Switcher	2	75.0	75.1	---	---
7	1805	Switcher	13	79.6	77.8	---	---
7	1808	Switcher	3	84.5	82.6	---	---
7	1832	Switcher	50	88.8	81.1	---	---
7	1833	Coal/South	195	---	---	98.4	81.1
7	1959	Switcher	3	83.6	81.0	---	---
7	2006	Switcher	2	80.4	77.0	---	---
7	2058	Switcher	51	80.5	78.3	---	---
8	0847	Switcher	5	84.1	78.5	---	---
8	0903	Switcher	11	90.7	83.8	---	---
8	1028	Switcher	9	89.8	81.7	---	---
Average:				85.4	79.9	96.8	82.5



*SEL: Sound Equipment Level
MAX: Maximum A-weighted Sound Level

Table B2- Representative Noise Sensitive Locations, Noise Levels, and Sound Levels for the ICTF Noise Study

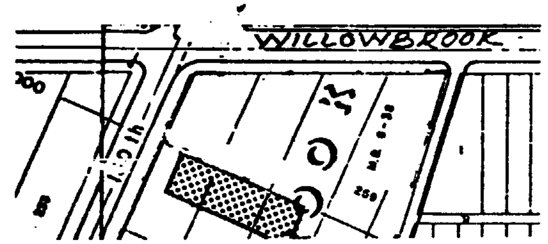
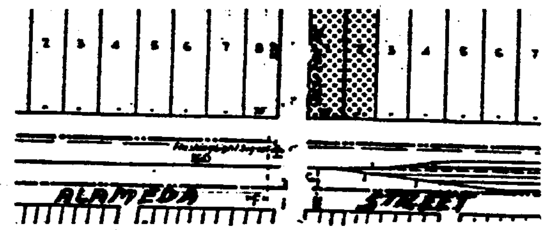
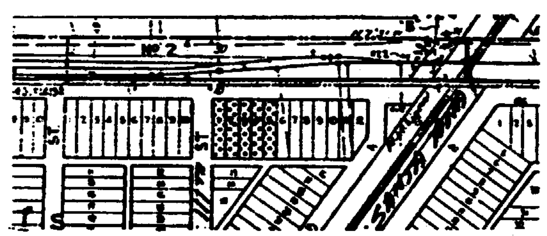
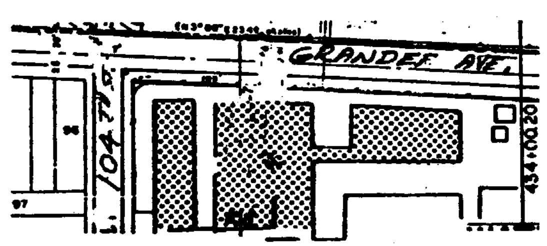
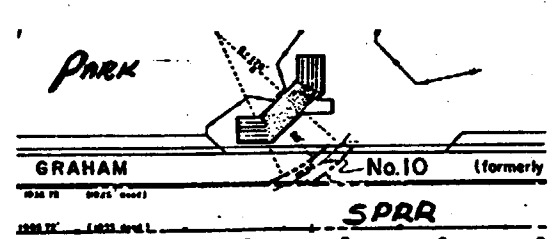
Existing: 1982 — With and Without ICTF; Year 2000

School	Location Map	Case	Near Maximum Sound Levels, L_1*: Exterior	Interior Windows Open	Interior Windows Closed
Elizabeth Hudson Elementary School Adjacent to the Rt. 47 Fwy. & UPRR, 320' to RR		Existing	70 dB (A)	55 dB (A)	50 dB (A)
		Without ICTF	71	56	51
		With ICTF	73	58	53
Stephens Jr. High School, Columbia Street Adjacent to the UPRR, 500' to RR		Existing	62	47	42
		Without ICTF	62	47	42
		With ICTF	63	48	43
Webster School Playground Adjacent to the UPRR, Greater Than 500' to RR		Existing	62	47	42
		Without ICTF	62	47	42
		With ICTF	63	48	43
Seminary Adjacent to Alameda Street and the Wilmington Branch of the SPRR, 120' to RR		Existing	71	56	51
		Without ICTF			
		Without Century Freeway	74	59	54
		With Century Freeway	59	44	39
		With ICTF			
		Without Century Freeway	81	66	61
		With Century Freeway	59	44	39
Compton Neighborhood Center Adjacent to Alameda Street and the San Pedro Branch of the UPRR, 100' to RR		Existing	65	50	45
		Without ICTF			
		Without Century Freeway	66	51	46
		With Century Freeway	82	67	62
		With ICTF			
		Without Century Freeway	67	52	47
		With Century Freeway	83	68	63

* The near maximum sound level, L1, is established by averaging the L1 values measured for each hourly period during which at least one train passed the measurement position

Table B3 - Representative Noise Sensitive Locations and Sound Levels for the ICTF Noise Study (Continued)

Existing: 1982, With and Without ICTF: Year 2000

School	Location Map	Case	Near Maximum Sound Levels, L_1: Exterior	Interior, Windows Open	Interior, Windows Closed
Marian Anderson School, Willowbrook and 130th St. Adjacent to the Wilmington Branch of the SPRR, 140' to RR		Existing	70 dB (A)	55 dB (A)	50 dB (A)
		Without ICTF			
		Without Century Freeway	73	58	53
		With Century Freeway	68	53	48
		With ICTF			
		Without Century Freeway	80	65	60
		With Century Freeway	68	53	48
Exceptional Adult Center, Alameda St. and El Segundo Blvd., Adjacent to the San Pedro Branch of the SPRR, 120' to RR		Existing	64	49	44
		Without ICTF			
		Without Century Freeway	65	50	45
		With Century Freeway	81	66	61
		With ICTF			
		Without Century Freeway	66	51	46
		With Century Freeway	82	67	62
Ritter School, Alameda St. and Hitch St., Adjacent to the San Pedro Branch of the SPRR, 120' to RR		Existing	70	55	50
		Without ICTF			
		Without Century Freeway	71	56	51
		With Century Freeway	81	66	61
		With ICTF			
		Without Century Freeway	72	57	52
		With Century Freeway	82	67	62
Edward Markham Jr. High School, Grandee Ave., and 104th St., Adjacent to the Wilmington Branch of the SPRR, 140' to RR		Existing	67	52	47
		Without ICTF			
		Without Century Freeway	73	58	53
		With Century Freeway	68	53	48
		With ICTF			
		Without Century Freeway	80	65	60
		With Century Freeway	68	53	48
F. D. Roosevelt Playground, Graham Ave. Adjacent to the Wilmington Branch of the SPRR, 100' to RR		Existing	70	55	50
		Without ICTF			
		Without Century Freeway	75	60	55
		With Century Freeway	70	55	50
		With ICTF			
		Without Century Freeway	82	67	62
		With Century Freeway	66	51	46

6.3 C TRAFFIC TECHNICAL APPENDIX

The highway improvement plan for the Ports area contained in this Appendix Table C7, was formulated by the Southern California Association of Governments (SCAG) Ports Advisory Committee This Phased Program of Highway Improvements was based upon accepted projections of future Ports' area development and traffic movement. This improvement plan was found to be a viable alternative to the proposed Terminal Island Freeway extension (to the San Diego Freeway) in meeting future transportation needs in the Ports area.

TABLE Cl

ICTF - DAILY TO/FROM CONTAINER MOVEMENT

Year	lbtal Annual **Quantity**[a]	lbtal **Daily Average**[b]	lb **Port** of **Los Angeles**[c] San **Pedro**[d] **Wilmington**	**Terminal Island**[d]	Fran **Port** of **Los Angeles**[c] San Pedro **Wilmington**	Island **Terminal**	lb **Port** of Long **Beach**[e]	Fran mrt of **Long Beach**[e]	Local lb **ICTF**[f]	**Local** Fran **ICTF**[f]
1983	174,460	560	50	56	75	84	88	133	44	30
1984	193,670	621	55	63	83	94	98	147	49	32
1985	214,940	689	**62**	69	92	104	109	163	54	36
1990	362,260	1,161	**103**	117	156	175	184	275	91	60
1995	532,272	1,706	152	171	228	257	270	405	134	89
2000	782,184	2,506	224	252	335	378	396	595	196	131

[a]**Source** Ports of IDS Angeles and **Long** Beach - either cne 40-foot or two 20-foot containers.
[b]**Average** daily based on sixth day per week - includes **allowance** for Sunday operation.
[c]**Port** of **Los** Angeles handles 55 percent and **Long** Beach 45 percent of marine mntainers.
[d]**Port** of **Los Angeles** containers **distributed** 47 percent to San Pedro/Wilmington and 53 percent to Terminal Island.
[e]**At** both ports the imported containers are 60 percent of the total and 40 percent exported. **Therefore,** 60 **percent** frcm port to ICTF and 40 percent to port **from ICTF.** This includes return of **empties** to countries of origin.
[f]**Local** containers, 13 percent of total, are from Southern California **industry. To/from** the east or “Atlantic Bridge. are 60 percent **eastbound** and 40 percent westbound.

TABLE C2

ICTF- DAILY TO/FROM TRUCK ROUND TRIPS

Year	Port of Los Angeles: San Pedro[a] Wilmington	Terminal[a] Island	Fort of Long Beach[a]	Local Destination+
I.983	90	113	160	62
1984	100	125	176	69
I.985	110		196	76
I.990	187	210	330	I.27
1995	274	308	486	182
2000	402	454	714	274

[a]Includes allowance of 20 percent for tractor only.
[b]Includes allowance of 40 percent for tractor only:

TABLE C3

ICTF - HOURLY TO/FROM TRUCK ROUND TRIPS

	Average Hourly Trips[a]			
Year	San Pedro Wilmington	Terminal Island	Long Beach	Local[b]
			20	
1983	11	13	22	8
1984	13	14		9
I.985	14	16	25	10
1990	23	26	41	16
I.995	34	39	61	23
2000	50	57	89	[illegible]

[a]Hourly traffic calculated at 1/8 of daily traffic. Actual operations will be longer, even 24 hours per day.
[b]All local container movements assigned to/from the west via Alameda Street and Sepulveda Boulevard.

TABLE C4

ICTF-DIRECTIONAL DISTRIBUTION OF TRUCK TRAFFIC

Year	Average Hour[a]		Peak Hour[b]	
	m/Fran west	To/From East	lb/Fran west	To/From East
1983	19	33	38	66
1384	22	36	44	72
1985	24	41	48	82
I.990	39	67	78	I.34
1995	s7	100	114	200
2000	84	146	168	292

[a]Peak truck movement will occur between 9 a.m. and 4 p.m. as normal marine terminal hours are 8 a.m. and 12 noon and 1 p.m. to S p.m.

[b]The truck peak hcur reflects seasonal daily variations due to shipping activity. The historical daily peak is 1.7 to 1.8 average daily traffic For designof the intersection of the ICTF and Sepulveda Boulevard assume peak hcur of twice average hour andpeak 15 minutes 1.18 times average 15 minutes.

Table C5

FUTURE VOLUME/CAPACITY RELATIONSHIPS (NULL ALTERNATIVE)

			A.M. PEAK HOUR				P.M.PEAK HOUR			
			TRAFFIC VOLUME		V/C RATIO*		TRAFFIC VOLUME		V/C RATIO*	
INTERSECTION	DIRECTIONAL MOVEMENT	CAPACITY[1]	ICTF	TOTAL	W/ICTF	W/O ICTF	ICTF	TOTAL	W/ITCF	W/O ICTF
223rd St	SB	3000	10	290	0.10*	0.10*	10	140	0.05*	0.05*
@ the SBD	EB	3000	5	405	0.14	0.14	5	1490	0.50*	0.50*
San Diego	EB Lt[4]	2700	10	240	0.09,	0.09*	10	735	0.28	0.27
Fwy Ramps	WB	4500	-	1405	0.31*	0.31*		370	0.08	0 . m
	Yellow				0.10*	0.10*			0.10*	0.10*
	Total ICU:				n.60	0.60			0.65	0.65
	Level of Service:				A	A			B	B
Alameda St 6 Sepulveda Bl	NB[6]	3000		310	0.10*	0.10*		570	0.19*	0.19*
	SB[6]	3000		680	0.23	0.23		465	0.16	0.16
	SB Lt	1500	30	410	0.29*	0.27*	3n	135	0.11*	0.09*
	EB[6]	3000	5	465	n.16	n.16	5	1120	0.38*	0.37
	EB Lt	1500		140	0.09*	0.09*		380	0.25	n. 25*
	WB[6]	3000	5	1075	0.36*	0.36*	5	54n	0.18	0.18*
	WB Lt	1500	50	115	n.11	0.08	50	90	0.09*	
	Yellow				0.10*	0.10*			0.10*	o.In*
	Total ICU:				0.94	0.92			0.87	0.81
	Level of Service:				E	E			D	D
Terminal Island Pwy @ Willow St	NB Rt[7]	3000		300	0.10	n.10	-	1915	0.64*	0.64*
	NB Lt4	2700	146	210	0.13*	0.08*	146	1010	0.43	0.37
	SB	3000		10	-			45	0.02	0.02
	EB[6]	3000		385	0.13*	0.13*	-	1135	0.38*	0.38*
	WB[6]	3000	-	1060	0.35	0.35		530	n.IB	0.18
	WE Lt	2880	-	1270	0.44*	0.44*		245	0.09	0.09
	Yellow				0.10*	0.10*			0.10*	n.lo*
	Total ICU:				0.00	0.75			1.12	1.12
	Level of Service:				C	C			F	F

Table C5 (cont.)

FUTURE VOLUME/CAPACITY RRLATIONSHIPS (NULL ALTERNATIVE)

INTERSECTION	DIRECTIONAL MOVEMENT	CAPACITY[1]	A.M. PEAK HOUR TRAFFIC VOLUME ICTF	TOTAL	V/C RATIO2 W/ICTF	W/O ICTF	P.M. PEAK HOUR TRAFFIC VOLUME ICTF	TOTAL	V/C RATIO2 W/ITCF	W/O ICTF
Alameda St. @ Anaheim St.	NB	3000	50	160	0.07	0.05	50	140	0.07	0.05
	NB Rt[7]	1500		480	0.32	0.32		918	0.61*	0.61*
	SB[6]	3000	50	570	0.21*	0.19*	50	250	0.10	0.08
	EB	3000		1130	0.38*	0.38*		1085	0.36	0.36
	WB	3000		1050	0.35	0.35		1100	0.37*	0.37*
	WB Lt	1500		65n	0.43*	0.43*		260	0.17	0.17
	Yellow				0.10*	0.10*				0.10*
	Total ICU:				1.12	1.10			1.08	1.08
	Level of Service:				F	F			F	Y
Anaheim St. @ Santa Fe Ave.	NB[6]	3000		300	0.10	0. in		295	0. in	u. in
	NB Lt	1500		390	0.26*	0.26*		240	0.16*	0.16*
	SB[6]	3000		295	0.10*	0.10*		330	0.11*	0.11*
	SB Lt	1500		110	0.07	0.07		225	0.15	0.15
	EB[6]	3noo	90	1050	n. 38	0.35	90	1860	0.65	0.62*
	EB Lt	1500		80				135	0. in	0. in
	WB[6]	3000	90	1900	0.66*	0.63*	90	995	0.36	0.33
	WB Lt	15no		165	0.11	n. 11		20		
	Yellow				0.10*	0. in*			0.10*	0. in*
	Total ICU:				1.12	1.09			1.02	0.99
	Level of Service:				F	F			F	E

[1]Thru or turn lane capacity assumed to be 1500 UphG and 1600 UphG where percentage of trucks is minimal.
[2]Critical V/C ratios denoted by an asterisk.
[3]Lef t turn volumes in one lane only.
[4]Assumed double left turn lanes; capacl ty = 1.8 times single lane capacity.
[5]Left turn traffic in excess of 100 Uph treated as having a separate left turn signal phase.
[6]Excludes right turn traffic in separate RTO lane(s).
[7]Assumes double right turn lanes.

Table C6

FUTURE VOLUME/CAPACITY RELATIONSHIPS (WITH PROGRAM IMPROVEMENTS)

INTERSECTION	DIRECTIONAL MOVEMENT	CAPACITY[1]	A.M. PEAK HOUR TRAFFIC VOLUME ICTF	A.M. PEAK HOUR TRAFFIC VOLUME TOTAL	A.M. PEAK HOUR V/C RATIO[2] W/ICTF	A.M. PEAK HOUR V/C RATIO[2] W/O ICTF	P.M. PEAK HOUR TRAFFIC VOLUME ICTF	P.M. PEAK HOUR TRAFFIC VOLUME TOTAL	P.M. PEAK HOUR V/C RATIO[2] W/ITCF	P.M. PEAK HOUR V/C RATIO[2] W/O ICTF
Alameda St. @ the NBD San Diego Fwy Ramp	NB[6]	4500	5	805	0.18	0.18	5	1565	0.35*	0.35*
	SB	4500	5	1690	0.38*	0.38*	5	1390	0.31	0.31
	SB Lt	1500		75		-	-	85		
	WB[3, 6]	3000	15	835	0.28*	0.28*	15	215	0.08*	0.07*
	Yellow				0.10*	0.10*			0.10*	0.10*
	Total ICU:				0.76	0.76			1J.53	0.52
	Level of Service:				C	C			A	A
Alameda St @ the 223rd St. Connector Rd.	NB[6]	4500	15	585	0.13	0.13	15	1915	0.43*	0.43*
	SB	4500	20	22513	0.51*	n. 50*	20	1330	0.30	0.30
	SE Lt[5]	1500		330	0.22	0.22		330	0.22*	0.22*
	WB[3, 6]	1500	in	540	0.37*	0.36*	in	85	0.06*	0.06*
	Yellow				0.10*	0.10*			0.10*	n. 10*
	Total ICU:				0.98	0.96			0.81	0.81
	Level of Service:				E	E			D	D
223rd St. @ the Alameda St. Connector Rd.	SB	3000	15	445	0.15*	0.15*	15	925	0.31*	0.31*
	EB	4500		445	0.10	0.10		1615	0.36*	n . 36*
	EB Lt	1500		125	0.08*	0.08*		165	0.11	0.11
	WB	4500		1030	0.23*	0.23*		280	0.06	0.06
	Yellow				0.108	n. 10*			0.10*	0.10*
	TOTAL ICU:				0.56	0.56	-		(1.77	0.77
	Level of Service:				A	A			C	C

TABLE **C6** **(cont.)**

FUTURE VOLUME/CAPACITY RELATIONSHIPS (WITH PROGRAM IMPROVEMENTS)

			A.M. PEAK HOUR				P.M. PEAK HOUR			
			TRAFFIC **VOLUME**		V/C RATIO[2]		TRAFFIC VOLUME		V/C RATIO[2]	
INTERSECTION	DIRECTIONAL MOVEMENT	CAPACITY1	ICTF	TOTAL	W/ICTF	W/O ICTF	ICTF	TOTAL	**W/ITCF**	W/O ICTF
223rd St. @ the SBD San Diego Fwy Ramps	SB	3000	10	305	**0.11***	**0.10***	10	150	**0.05***	**0.05***
	EB	3000	5	445	0.15	0.15	5	1620	**0.54***	**0.54***
	EB **Lt**[4]	2700	10	245	**0.10***	*0.09,*	10	775	0.29	0.29
	WB	4500		1515	0.34,	**0.34***		375	0.08	0.08
	Ye 1 low				**0.10***	**0.10***			**0.10***	**0.10***
	Total ICU:				Q.65	*0.63*			0.69	0.69
	Level of Service:				B	B			**B**	**B**
Alameda St @ Sepulveda Bl.	**NB**[6]	4500		375	**0.08***	**0.08***		695	**0.15***	**0.15***
	SB[6]	4500		940	0.21	n.21		640	0.14	n.14
	SB Lt4	2100	**30**	390	**0.15***	**0.14***	**30**	115	**0.05***	**0.04***
	EB[6]	**3000**	5	500	0.17	0.17	5	1200	0.40	0.40
	EB Lt	**1500**		211	**0.14***	**0.14***		560	**0.37***	**0.37***
	WB[6]	3000	5	1145	0.38,	**0.38***	5	**610**	**0.21***	**0.20***
	WB **Lt**	1500	50	95	0.10	-	50	75	**0.08**	-
	Yellow				**0.10***	**0.10***			o.ln*	**0.10***
	Total ICU:				(1.85	0.84			O.RA	**0.86**
	Level of Service:				D	n			n	n
Terminal Island **Fwy @** Willow **St.**	NB Rt7	3200		**190**	0.06	**0.06**		1225	**0.38***	**0.38***
	NH **Lt**[4]	2700	146	**90**	**0.09***	**0.03***	146	*600*	**0.28***	11.22
	SB	3200		10	**0.01***	**0.01***		*45*	**0.02**	**0.02**
	EB[6]	3000		385	**0.13***	**0.13***		1140	**0.38***	**0.38***
	WB[6]	**3000**		*875*	*0.29*	0.29		*435*	0.15	**0.15**
	WB **Lt**[4]	2880		*685*	**0.24***	**0.24***		130	**0.05**	0.05
	Yellow				**0.10***	**0.10***			**n.10***	**0.10***
	TOTAL ICU:				**0.57**	0.51			**0.86**	**0.86**
	Level of Service:				**A**	A			**n**	**n**

Table C6(cont.)

FUTURE VOLUME/CAPACITY RELATIONSHIPS (WITH PROGRAM IMPROVEMENTS)

			A.M. PEAK HOUR				P.M. PEAK HOUR			
			TRAFFIC VOLUME		V/C RATIO[2]		TRAFFIC VOLUME		V/C RATIO*	
INTERSECTION	DIRECTIONAL MOVEMENT	CAPACITY1	ICTF	TOTAL	W/ICTF	W/O ICTF	ICTF	TOTAL	W/ITCF	W/O ICTF
Anaheim St. @ Alameda St.	NB	4500	50	160	0.05	0.04	50	425	0.11	0.09
	SB[6]Rt[7]	3000	50	675	0.16*	0.15*		910	0.30*	0.30*
							50	305	0.08	(1.07
	EB	4500		1035	0.23*	0.23*		995	0.22*	0.22*
	WB	4500		960	0.21	0.21		1005	n.22	n-22
	WB Lt[4]	2700		545	0.21*	0.21*		220	0.08	0.08
	Ye1 low				0.10*	0.10*			0.10*	0.10*
	Total ICU:				11.70	0.69			0.62	0.69
	Level of Service:				B	B			B	B
Anaheim St. @ Santa Fe Ave.	NB[6]	3000	-	300	0.10	0. 10		295	0.10	0. I0
	Nn Lt	1500	-	390	0.26*	0.26*		240	0.16*	0.16*
	SB[6]	3000	-	295	0.10*	0. 10*		330	0.1 l*	0.11*
	SB Lt	1500	-	150	0.10	0 . 1 0		95		
	EB[6]	4500	90	1035	0.25	n.23	90	1815	0.42*	0.40*
	EB Lt	1500	-	70				135	0.09	0.09
	WB[6]	4500	90	1860	0.43*	0.41*	90	25		
	wn Lt	1500	-	165	0.11	0.i1		970	n.24	0.22
	Yellow				0.10*	0.10*			0. 10*	n. lo*
	Total ICU:				0.09	0.07			u*79	0.77
	Level of Service:				D	D			C	C

[1]Thru or turn lane capacity assumed to be 1500 UphG and 1600 UphG where percentage of trucks is minimal.
*Critical V/C ratios denoted by an asterisk.
[3]Lef t turn volumes in one lane only.
[4]Assumed double left turn lanee; capacity = 1.8 times single lane capacity.
[5]Left turn traffic in excess of 100 Uph treated as having a separate left turn signal phase.
[6]Ex[illegible]es 1 [illegible] tu[illegible] raf[illegible] in [illegible]rat[illegible] 3 la[illegible]).

Table C7

Traffic Assumptions for SCAG Port Access Study

Regional growth forecast is SCAG 82-A.

Naval homeporting will increase military personnel by 10,000 and dependents by 13,000.

Net port employment growth (independent of known expected changes such as Navy) of 1.16 percent simple growth rate; equivalent to 1.01 percent per year canpounded annually.

Downtown Long Beach Redevelopment will increase employment by 31,500.

Los Angeles Harbor Industrial Center Redevelopment Project will increase employment by 5000.

Year 2000 traffic estimates assume full development of plans.

Year 2000 traffic estimates assume no major changes in travel behavior due to external events (i.e., gasoline shortage, major transit improvements, etc.),

All Year 2000 traffic forecasts assume that the Century Freeway has been completed.

Port-related cannodities moving by truck will double: from 29,780,000 metric revenue tons in 1981 to 61,775,000 metric revenue tons by the year 2000.

Daily heavy-duty truck movements of port-related cargo will increase from 12,898 in 1981 to 26,326 by the year 2000.

Intermodal Container Transfer Facility will be operational by year 2000.

Port-related truck movements were assigned to primary truck routes-

It is assumed that if no improvements to the highway system are made, trucks will continue to use the routes they are presently using.

Estimates of the impacts of various highway improvements on automobile traffic are based on a computerized model developed specifically for the Port Access Study.

6.4 INITIAL STUDY AND ENVIRONMENTAL CHECKLIST

SAN PEDRO BAY PORTS TRUCK MOVEMENTS

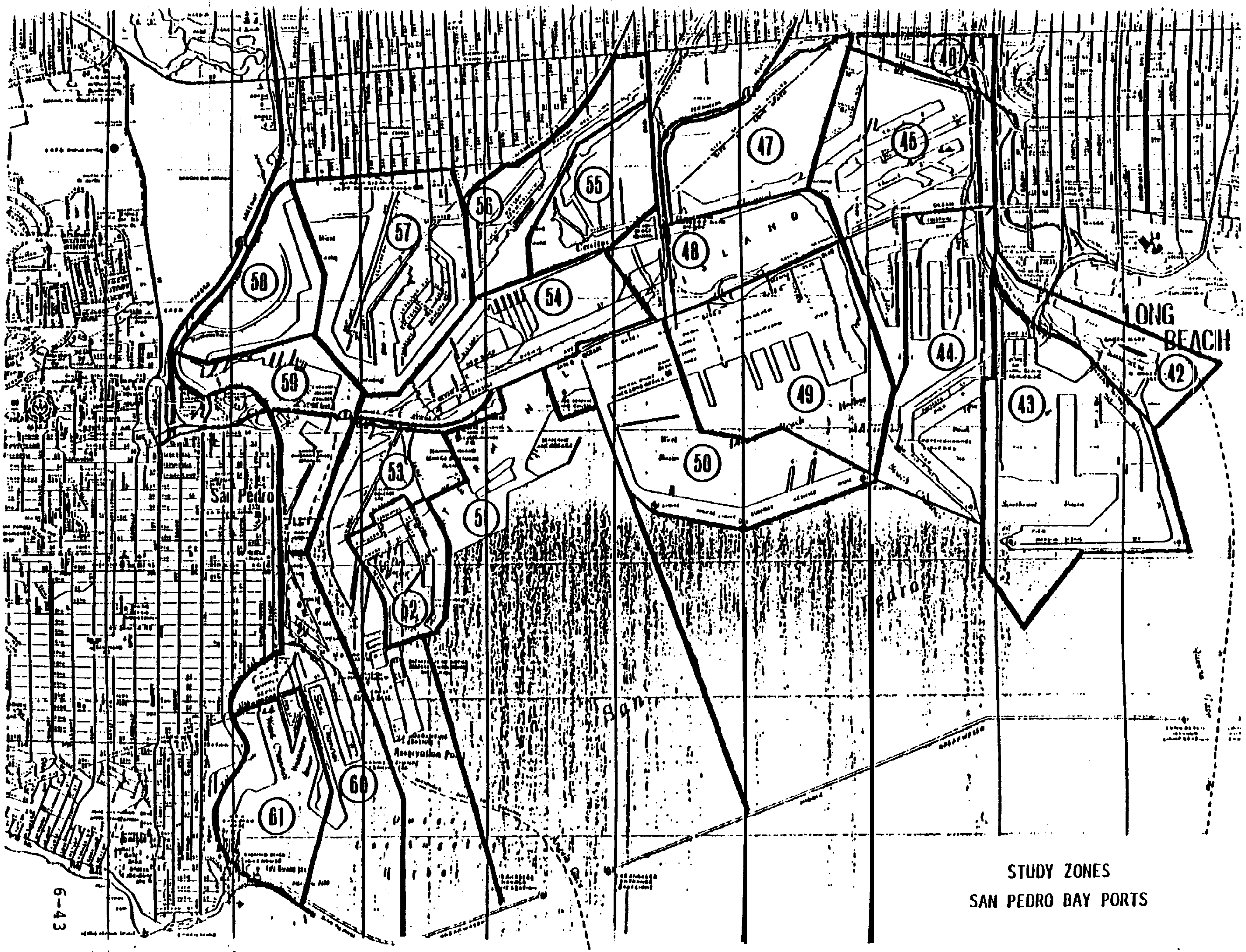
	1981-82	2000	Percent Change
Truck related cargo, in thousands of metric revenue tons	29,780	61,775	107%
Total annual truck trips, in thousands*	3,303	6,741	104%
Average daily truck trips**	12,898	26,326	104%

*Estimates of annual truck trips are consistent with methodology of the VTN Goods Movement Report, 1981.

** 256 working days per year.

Source : SCAG, in cooperation with the Ports of Los Angeles and Long Beach, February, 1982.

PRELIMINARY DRAFT



STUDY ZONES
SAN PEDRO BAY PORTS

SAN PEDRO BAY PORTS' ZONES
EMPLOYMENT FORECASTS

Study Zone	Location[a]	Employment 1980	Employment 2000
42	Queensway Bay	567	1700
43	Southeast Harbor	1998	2167
44	Middle Harbor .	1163	1446
45	Northeast Harbor	1232	1520
46	North Harbor	498	614
47	Northwest Harbor (N)	246	906
48	North/Northwest Harbor (S)	86	183
49	Naval Shipyard	7620	al75
50	Naval Station	4260	14093
51	Terminal Island/Seaward	647	1047
52	Fish Harbor	5099	6282
53	Terminal Island/Main Channel (S)	1305	1608
54	Terminal Island/Main Channel (N)	746	919
55	Cerritos Channel	63	78
56	East Basin	183	361
57	Wilmington District	828	1569
58	West Basin	252	346
59	West Turning Basin	4149	5996
60	West Bank	1377	1779
61	West Channel/Cabrillo Beach	165	369
Total:		32,474[b]	51,158[c]

Notes :

(a) Although these designations are taken from Port Planning District names, Port Access Study Zones are not strictly congruent with Port Planning District boundaries. See accompanying map.

(b) Total does not include approximately 3000 sailors of ships in drydock, 284 employees at the L.A. Harbor Administration Building in San Pedro, nor approximately 3000 longshoremen available to both ports.

(c) Total does not include approximately 4500 sailors of ships in drydock, 350 employees at the L.A. Harbor Administration Building in San Pedro, nor approximately 3700 longshoremen avail able as needed to both ports.

Source: SCAG, February, 1982

PRELIMINARY DRAFT

Interpretation of Ports Study Analysis Results

Existing Conditions

There is currently excess Capacity in the north-south travel corridor between and including the Long Beach Freeway and the Harbor Freeway.

There is short-term peak period congestion at several points in the study area, caused primarily by commuter trips.

System Results

By Year 2000 the Terminal Island transportation system (Ocean/Seaside and the three access bridges) will need to accomodate approximately 36,000 additional vehicle trips, including 4500 additional heavy-duty truck cargo movements.

By Year 2000 the north-south transportation system between and including the Long Beach Freeway and Harbor Freeway will need to accomodate approximately 114,000 additional vehicle trips, including 12,300 additional heavy-duty truck cargo movements.

Analysis of Null Highway Alternative

The null (i.e., do nothing) highway alternative implies the following traffic conditions in the year 2000:

The Long Beach Freeway would be at capacity near the intersection of the San Diego Freeway.

The San Diego Freeway will be saturated even with completion of the Century Freeway.

The Harbor Freeway would operate at under capacity near the intersection of the San Diego Freeway.

The Terminal Island Freeway would be operating at under capacity.

Alameda St. traffic volumes will be double today's volumes, the result of diversion from a congested Long Beach Freeway.

Pacific Coast Highway, Anaheim St., and Willow St. would be at capacity between the Terminal Island Freeway and the Long Beach Freeway.

Anaheim St between Alameda St. and the Terminal Island Freeway will be at capacity.

Terminal Island *would* experience extreme congestion during peak periods: Ocean/Seaside would be saturated.

General Conclusions: Fran the analysis of the Null alternative, highway improvements will be needed by the Year 2000 to accomodate expected additional travel across Terminal Island, in the north-south corridor, and in the east-west corridor between Alameda St. *and* the Long Beach Freeway. No new freeway segments will be required by the year 2000. Grade separations at intersections or freeway style interchanges may be required at critical locations. Arterial highway improvements will be sufficent to accomodate traffic increases.

Analysis of Needed Highway Improvements

SEASIDE/OCEAN TRAVEL CORRIDOR:
Our projections show 44,000 ADT On Seaside/Ocean in Year 2000, a 50= increase over 30,000 ADT in 1980.

Rideshare program and other TSM measures could help reduce peak hour congestion.

> Conclusion: A rideshare program and other TSM measures should be implemented to mitigate impact of increased commuting. Arterial road improvements will be necessary in addition to a ridesharing program. ADT level suggests that 3 through lanes in each direction should be sufficient to accomodate demand. ADT levels do not suggest the need for a freeway-style (limited access, possibly elevated) facility along Seaside/Ocean by the year 2000.

Travel patterns of military personnel to and from the Naval Center will remain predominantly in an east-west direction.

ADT level on the Vincent Thomas Bridge will approach, but will not exceed existing capacity by the year 2000. Projected demand on Gerald Desmond Bridge will exceed existing 2-lane capacity by year 2000.

> Conclusion: Projected demand on Gerald Desmond Bridge suggests need for peak period operational improvements by the year 2000.

Port-related employment growth will be largest at Naval Center, Terminal Island/Seaward, and the Fish Harbor (study zones 50,51,52).

> Conclusion: Locus of employment growth coupled with recognized deficiencies at Vincent Thomas Bridge toll plaza suggests immediate priority of improving traffic flow at that point.

NORTH-SOUTH TRAVEL CORRIDOR:
Nearly all of the projected traffic (34,000, or 94% of the total) on the Terminal Island Freeway extension would use the segment of I-405 between the extension and the Long Beach Freeway.

> Conclusion: To the extent that the San Diego Freeway cannot absorb additional traffic, volumes on the Terminal Island Freeway extension would be lower than estimated. Traffic would divert to Alameda St. and the Long Beach Freeway, resulting in a traffic pattern similar to the Null Alternative.

If Alameda Street were improved, approximately 2000 additional vehicles would need to be absorbed by the San Diego Freeway.

> Conclusion: Many vehicles on Alameda St. would continue in--the North-South direction on Alameda St., thereby reducing traffic on the Long Beach Freeway north of I-405 as well as south of I-405.

If Alameda St. were an expressway up to the Artesia Freeway it could attract up to 50,000-60,000 vehicles a day by the year 2000.

Assuming arterial improvements only, Alameda St. could attract up to 42,000 vehicles a day by the year 2000.

The Terminal Island Freeway extension could attract to to 37,800 vehicles a day by the year 2000.

> Conclusion: Alameda St. improvements would carry essentially the same amount of traffic as the Terminal Island *Freeway extension.' Volumes of 42,000 vehicles a day can be handled by appropriate arterial and intersection improvements.

Much of the projected traffic on the Terminal Island Freeway extension would originate in the Wilmington area and would enter the freeway at Anaheim St., assuming a good northbound connection. Currently, however, the connection consists of a narrow one-lane street from Anaheim St. to "I" St., plus a narrow ramp from "I" St. to the freeway.

> Conclusion: The estimate of 37,800 daily trips on the Terminal Island Freeway extension is probably high. To achieve these volumes, a new interchange at Anaheim St. and the freeway would be needed. The cost of the-interchange should be added to the cost of the extension itself to obtain a total project cost.

Truck traffic is not destined for the San Diego Freeway, but primarily to the north-south corridor and east to North Orange County/South-East L.A. County and beyond.

> Conclusion: The Terminal Island and Freeway extension would not attract a significant number of truck trips.

EAST-WEST TRAVEL CORRIDOR:

-In the Null alternative Willow St. will experience a 230 percent increase in heavy-duty truck traffic by the year 2000. The Long Beach Freeway will experfence a 100 percent increase by the year 2000.

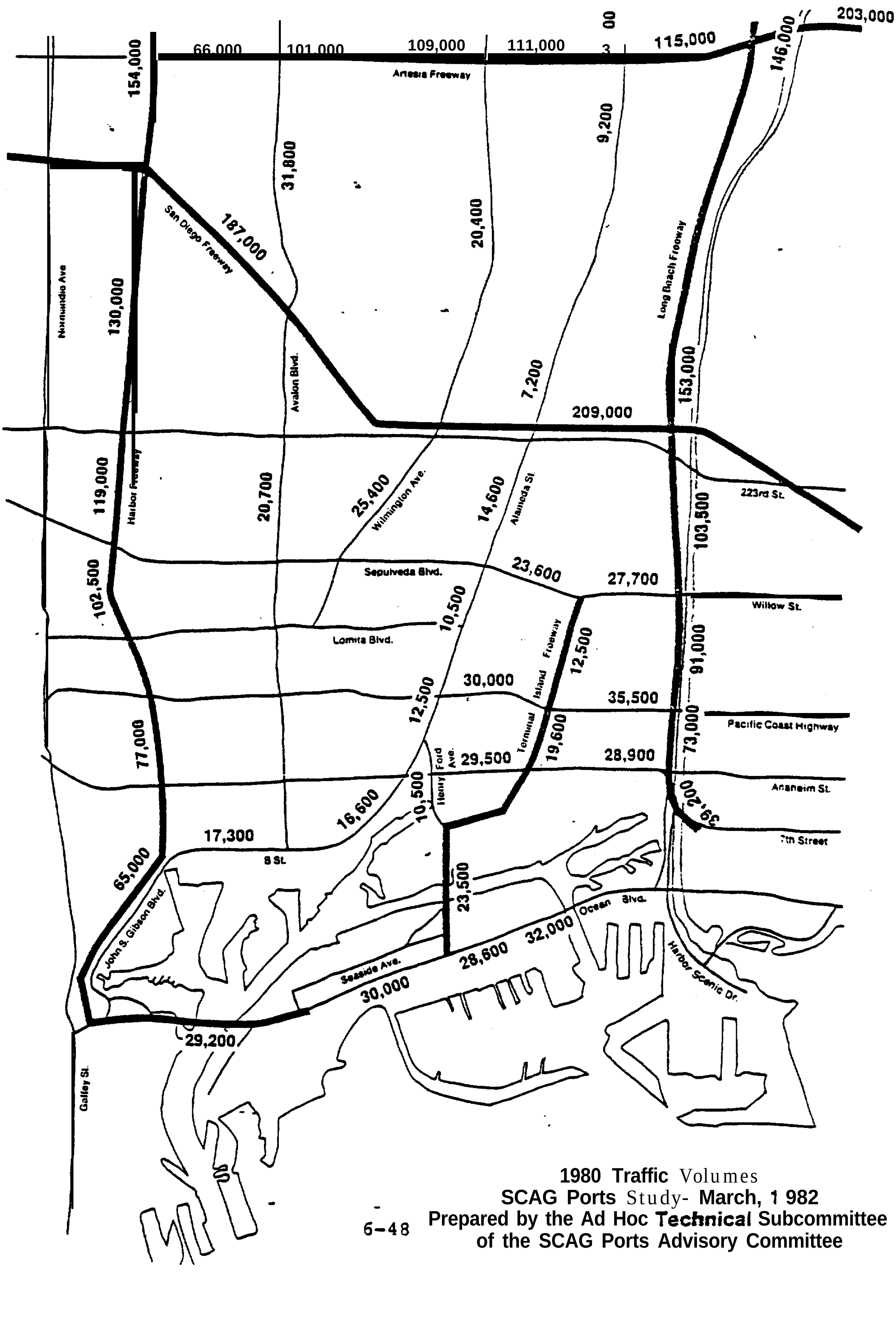
To divert heavy-duty truck traffic from the Long Beach Freeway and Willow St. an alternative east-west route to the Terminal Island Freeway and Alameda St. must be improved.

Anaheim St. can provide a good east-west connection between the Long Beach Freeway, the Terminal Island Freeway, and Alameda St.

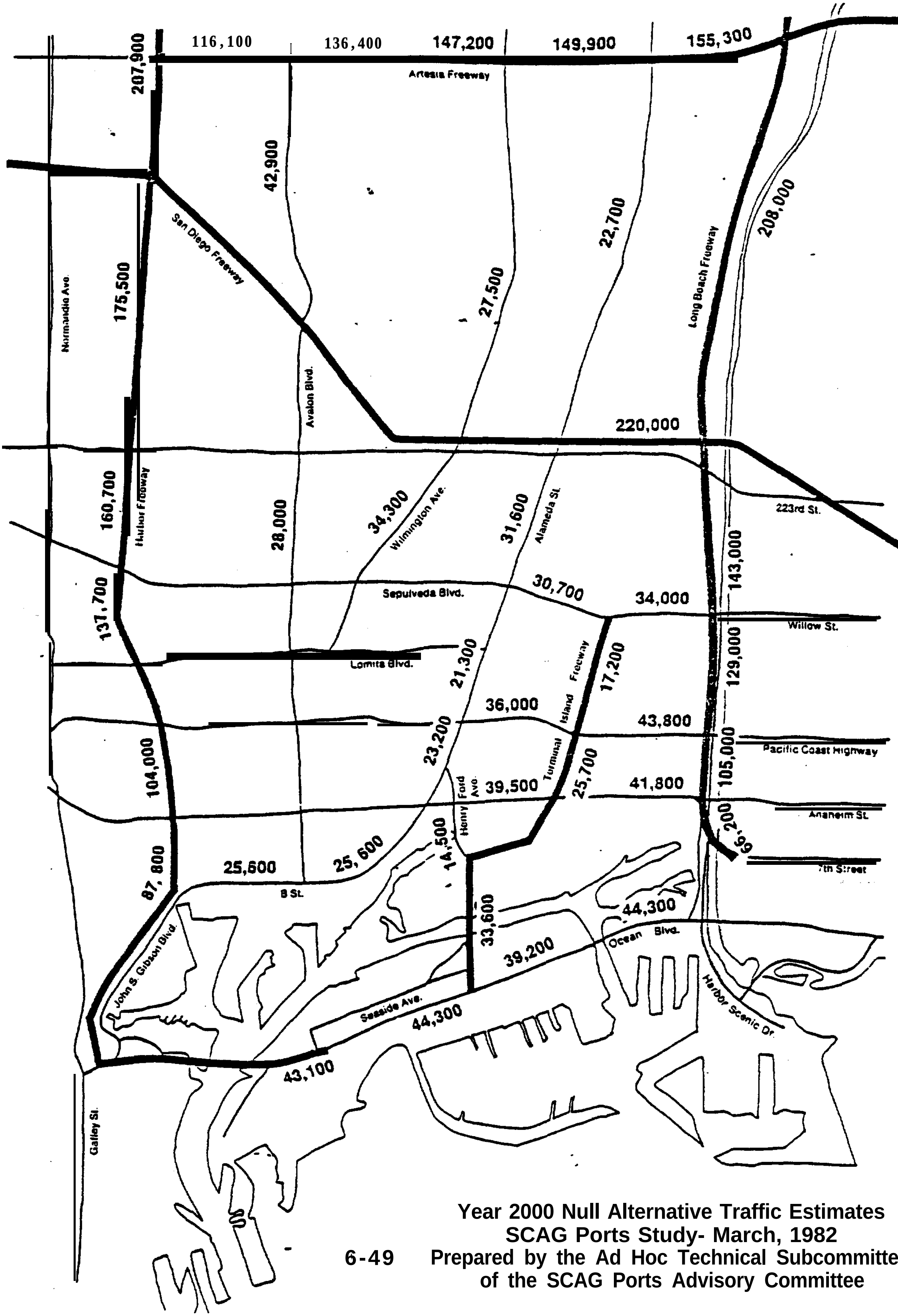
> Conclusion: Improve Anaheim St. between the Long Beach Freeway and Alameda St. to divert heavy-duty truck traffic.

Our projections show 38,000 ADT on Anaheim St. by year 2000.

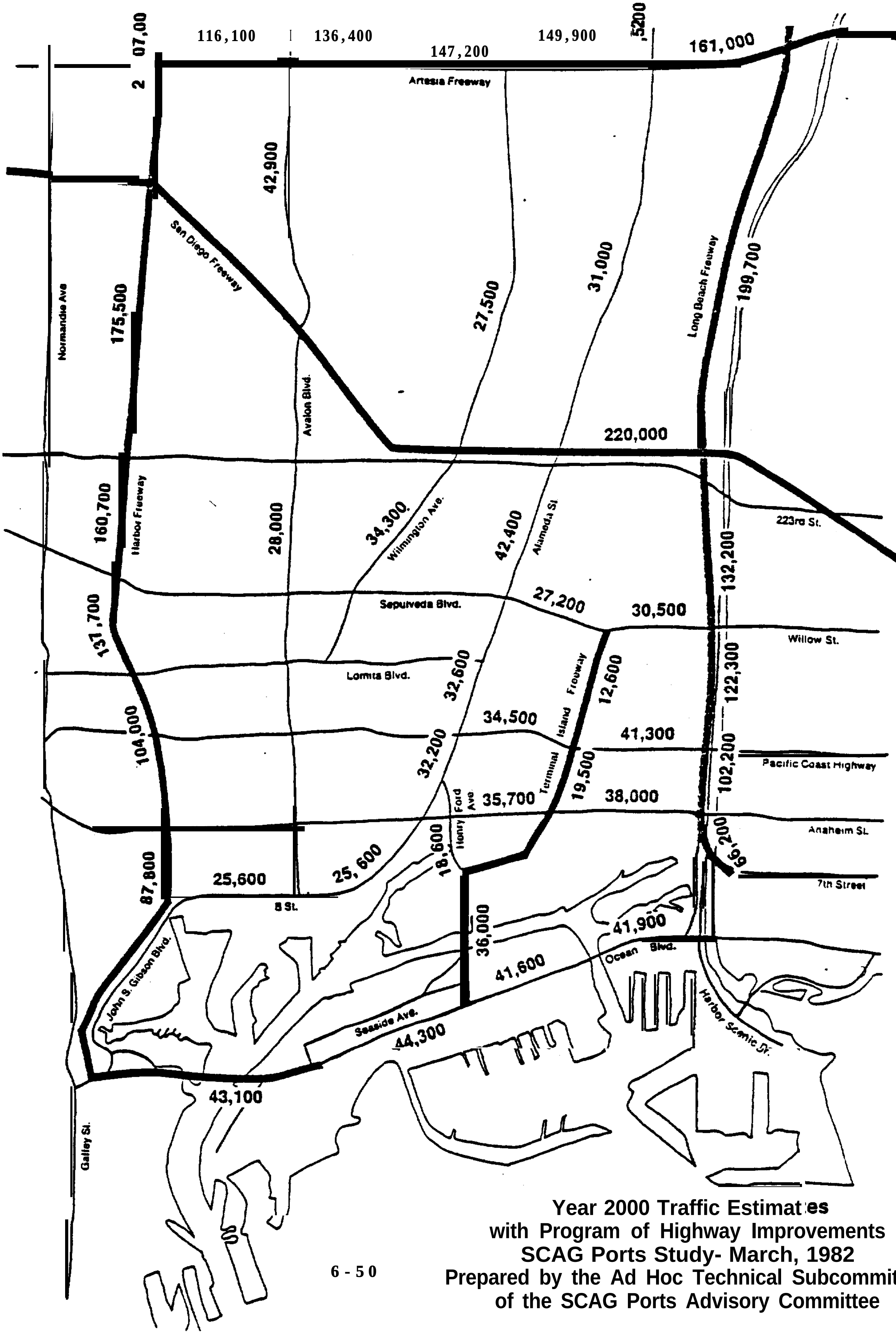
> Conclusion: Arterial improvements to Anaheim St are indicated. A freeway segment along Anaheim St. between the Terminal Island Freeway and the Long Beach Freeway would not be necessary.



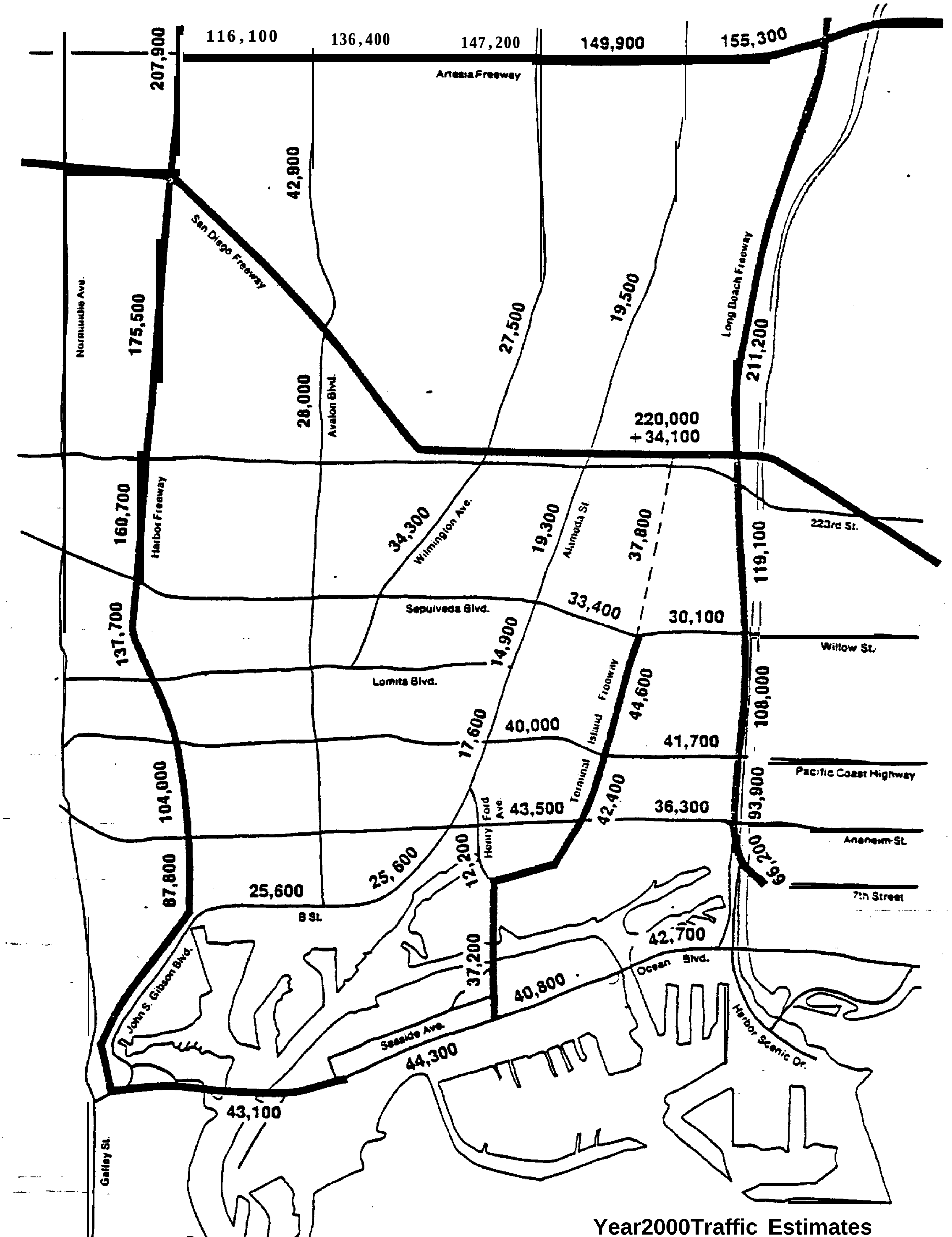
1980 Traffic Volumes
SCAG Ports Study- March, 1 982
Prepared by the Ad Hoc Technical Subcommittee
of the SCAG Ports Advisory Committee



Year 2000 Null Alternative Traffic Estimates
SCAG Ports Study- March, 1982
Prepared by the Ad Hoc Technical Subcommittee
of the SCAG Ports Advisory Committee



Year 2000 Traffic Estimates
with Program of Highway Improvements
SCAG Ports Study- March, 1982
Prepared by the Ad Hoc Technical Subcommittee
of the SCAG Ports Advisory Committee



Year2000Traffic Estimates
with Route 47 Extension
SCAG Ports Study-Match, 1982
Prepared by the Ad Hoc Technical Subcommit
of the SCAG Ports Advisory Committee

Attachment 1

PHASED PROGRAM OF HIGHWAY IMPROVEMENTS
(As Amended, January 15, 1982)

1. Transportation Systems Management (TSM)

Promote ridesharing and staggered work hours.

2. Seaside Avenue/Ocean Boulevard

Phase I
a. Provide three through lanes in each direction with channelization.
b. Improve signalization and channelization at Vincent Thomas Bridge toll plaza, and at gates 2, 3, and 5.
c. Study potential for operational improvements at Gerald Desmond Bridge.
d. Construct interchange at Harbor Scenic Drive (Long Beach Freeway Extension).

Phase II
a. Construct grade separation at intersection of Ocean Boulevard and the Terminal Island Freeway.
b. Construct grade separation at Navy Access Road.
c. Add two lanes to the Gerald Desmond Bridge.

3. Anaheim Street

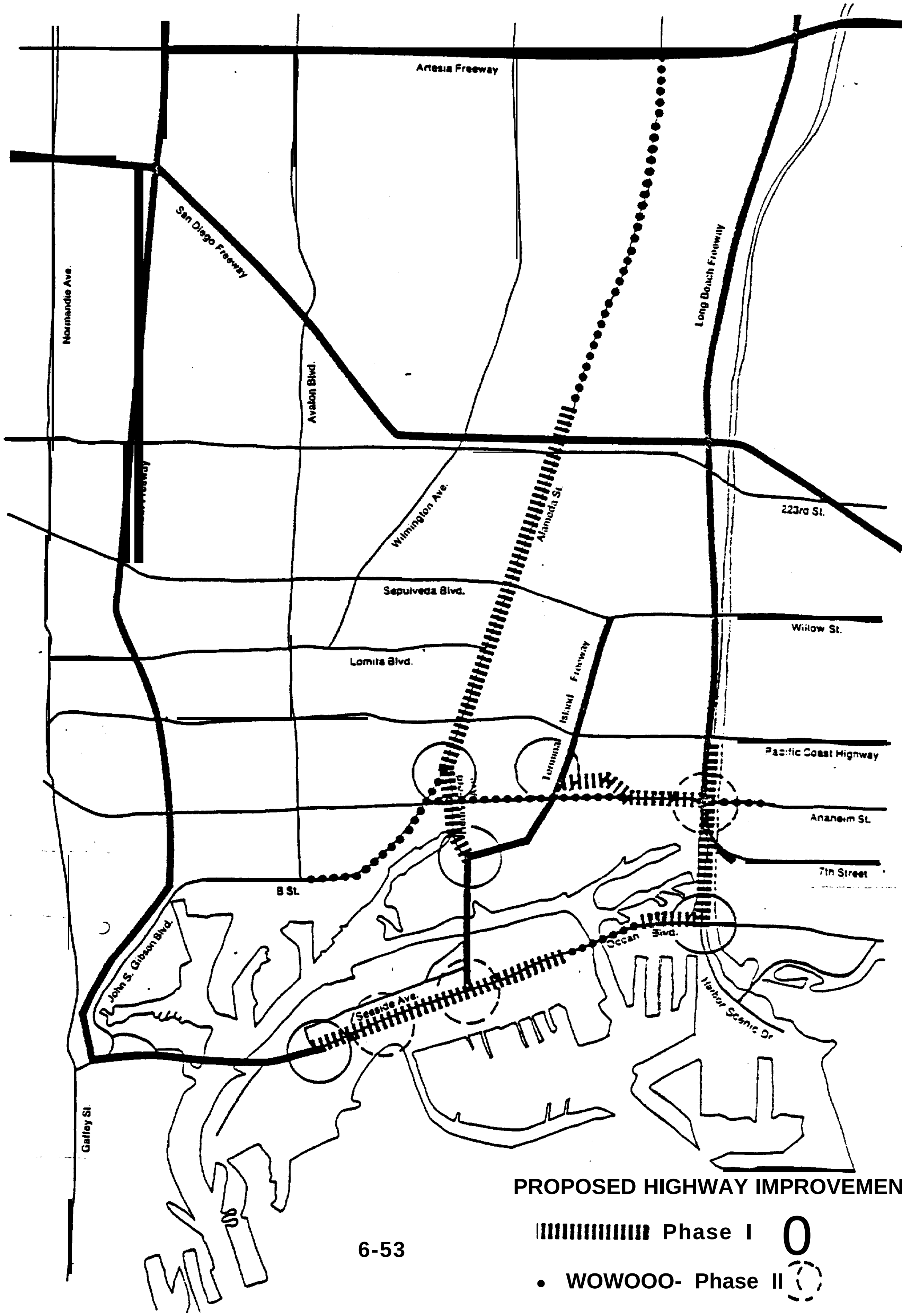
Phase I
a. Provide three. through lanes in each direction with channelization between "I" Street and the Long Beach Freeway.
b, Improve "I" Street between Anaheim street and the Terminal Island Freeway, and its connections with the Terminal Island Freeway.
c. Prohibit through truck traffic on Willow Street between the Terminal Island Freeway and the Long Beach Freeway.

Phase II
a. Reconstruct interchange at the Long Beach Freeway and Anaheim Street.
b. Improve Anaheim Street between "I" Street and Alameda Street, including railroad grade separation.
c. Improve Anaheim Street between Oregon Avenue and the Long Beach Freeway.

4. Henry Ford Avenue/Alameda Street

Phase I
a. Improve Henry Ford Avenue between the Terminal Island Freeway and Alameda Street, and its connections to those facilities.
b. Improve Alameda Street between Henry Ford Avenue and I-405.

Phase II
a. Improve Alameda Street north of I-405 to Artesia Freeway.
b. Improve "B" Street/Alameda Street between Avalon Boulevard and Henry Ford Avenue.



PROPOSED HIGHWAY IMPROVEMENTS

IIIIIIIIIIIIIII Phase I O

• WOWOOO- Phase II

Attachment 2

PROPOSED CHANGES TO STATE HIGHWAY SYSTEM

ADD TO STATE HIGHWAY SYSTEM:

1. The extension of the Long Beach Freeway south of Pacific Coast Highway, Harbor Scenic Drive to Ocean Boulevard, and Ocean Boulevard between the extension of the Long Beach Freeway and the Terminal Island Freeway.*

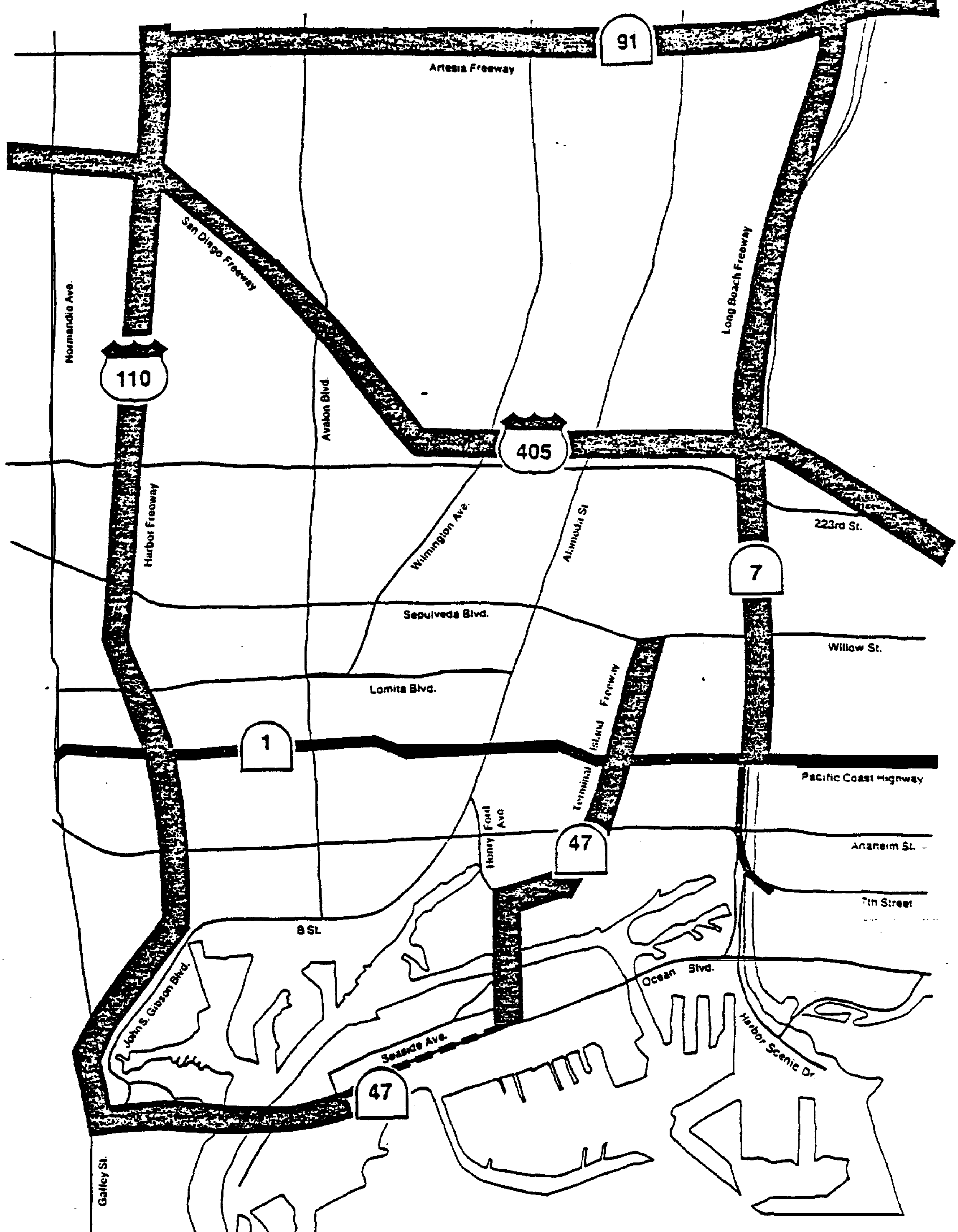
2. Henry Ford Avenue from the Terminal Island Freeway to Alameda Street; Alameda Street from Henry Ford Avenue to Artesia Freeway.*

3. Seaside Avenue from Vincent Thomas Bridge Toll Plaza to intersection Of Ocean Boulevard and the Terminal Island Freeway. (This segment is already in the State Highway System as part of SR47, but it is maintained locally. CTC action is required before State can assume responsibility for maintenance.)

Delete from State Highway System:

Segment of Terminal Island Freeway north of Pacific Coast Highway to Willow Street and the portion of the adopted alignment of SR 47 from Willow Street to I-405.*

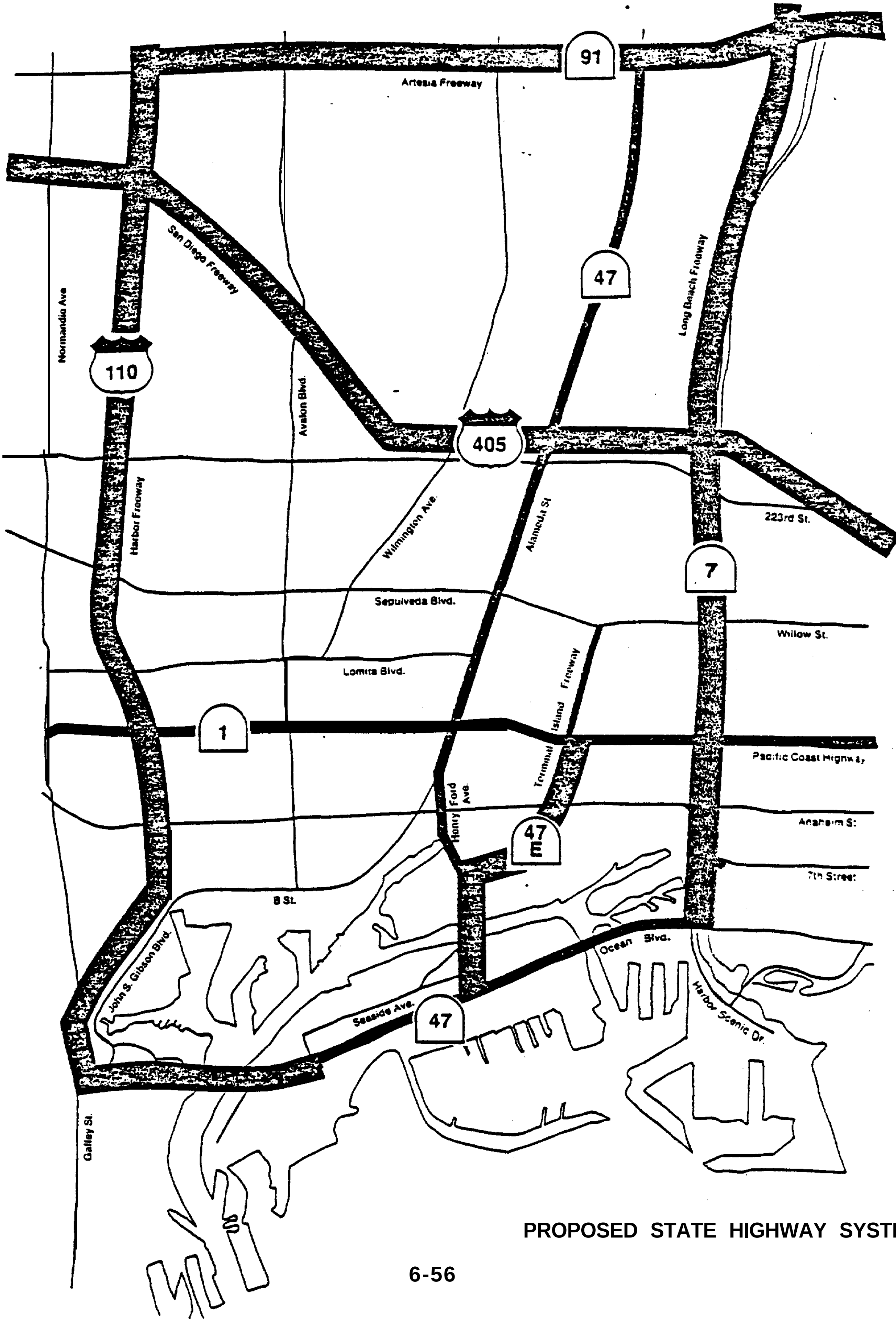
*Act of State Legislature is required to add or delete segments of the State Highway System. Once the Legislature has acted, then CTC action is required before the State can assume responsibility for maintenance.



EXISTING STATE HIGHWAY SYSTEM

State Operated

Locally Operated



PROPOSED STATE HIGHWAY SYSTEM

CITY OF LOS ANGELES
OFFICE OF THE CITY CLERK
ROOM 395, CITY HALL
LOS ANGELES, CALIFORNIA 90012

CAUFORNIA ENVIRONMENTAL QUALITY ACT

INITIAL STUDY AND CHECKLIST

(Article IV - City CEQA Guidelines)

LEAD CITY AGENCY	COUNCIL DISTRICT	DATE
Long Beach Harbor Department Los Angeles Harbor Department	75th	9-15-81
PROJECT TITLE/NO. Proposed Intermodal Container Transfer Facility		CASE NO.

PREVIOUS ACTIONS CASE NO.

- ☐ DOES have significant changes from previous actions.
- ☐ DOES NOT have significant changes from previous actions.

PROJECT DESCRIPTION:

See Attachment No. 1

PROJECT LOCATION Northern end of the Port of Los Angeles "Classification Yard.!' Proposed site is bounded by Sepulveda Blvd. on the south; 223rd Street on the north; City of Long Beach on the east and City of Cqrson on the west.

PLANNING DISTRICT		STATUS: ☐ PELIMINARY ☐ PROPOSED ______ ☐ ADOPTED date
EXISTING ZONING M-3	MAX. DENSITY ZONING	PROJECT DENSITY
PLANNED LAND USE	MAX. DENSITY PLAN	☐ DOES CONFORM TO PLAN ☐ DOES NOT CONFORM TO PLAN
PLAN DENSITY RANGE	PROJECT DENSITY	

DETERMINATION (to be completed by Lead City Agency)

On the basis of the attached initial study checklist and evaluation:

NEGATIVE DECLARATION	☐ I find the proposed project COULD NOT have a significant effect on the environmel and, a NEGATIVE DECLARATION will be prepared.
CONDITIONAL NEGATIVE DECLARATION	☐ I find that although the proposed project could have a significant effect on the envirc ment, there will not be a significant effect in this case because the mitigation meası described on an attached sheet have been added to the project. A CONDITIOI NEGATIVE DECLARATION WILL BE PREPARED. (Seeattachedcondition(s))
ENVIRONMENTAL IMPACT REPORT	☒ I find the proposed project MAY have a significant effect on the environment, and ENVIRONMENTAL IMPACT REPORT is required.

SIGNATURE	TITLE
[signature]	Director of Port Planning Harbor Environmental Scientist

Form Gen. 159 — Page 1 of 4 (8-80) (Appendices B and I)

APPENDIX I

INITIAL STUDY CHECKLIST (To be completed by Lead City Agency;

BACKGROUND

PROPONENT NAME
Los Angeles Harbor Department

PHONE
(213) 519-3675

PROPONENT ADDRESS
P. O. Box 151
San Pedro, CA 90733-0151

DATE SUBMITTED

AGENCY REQUIRING CHECKLIST

PROPOSAL NAME (If applicable)
Proposed Intermodal Container Transfer Facility

ENVIRONMENTAL IMPACTS

(Explanations of all "yes" and "maybe" answers are required to be attached on separate sheets.)

	YES	MAYBE	NO
1. EARTH. Will the proposal result in:			
a. Unstable earth conditions or in changes in geologic substructures?			X
b. Disruptions, displacements, compaction or overcovering of the soil?	X		
c. Change in topography or ground surface relief features?			X
d. The destruction, covering or modification of any Unique geologic or physical features?			X
e. Any increase in wind or water erosion of soils, either on or off the site?			X
f. Changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake?			X
g. Exposure of people or property to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards?			
2. AIR. Will the proposal result in:			
a. 'Air emissions or deterioration of ambient air quality?	X		
b. The creation of objeciionable odors?			
c. Alteration of air movement, moisture or temperature, of any change in climate, either locaffy or regionally?			X
d. Expose the. project residents to severe air pollution conditibns?			X
3. WATER. Will the proposal result in:			
a. changes in currents, or the course or direction of water movements, in either marine or fresh waters?			X
b. Changes in absorption rates, drainage patterns, or the rate and amounts of surface water runoff? ..r.........................	X		
c. Alterations to the course or flow of flood waters?			
d Change in the amount of surface water in any water body?			X
e. Oischarge into surface waters, or in any alteration of surface water quality, including but not limited to temperature. dissolved oxygen or turbidity? ....?	X		
f. Alteration of the direction or rate of flow of ground waters?			X
g. Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations7			X
h. Reduction in the amount of water otherwise available for public water supplies?			
i. Exposure of people or property to water related hazards such as tiooding or tidal waves?			
j. Significant changes in the temperature, flow, or chemical content of surface thermal springs.			X
4. PLANT LIFE. Will the proposal result in:			
a. Change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops and aquatic plants)?			X
b. Reduction of the numbers of any unique, rare or endangered srecies of piants?			X
c. introduction of new species of piants into an area, or is a barrier to the normal replenishment of existing species?			X
d. Reduction in acreage of any agricultural crop?	X		

	YES	MAYBE	NO
5. ANIMAL LIFE. Will the proposal result in:			
t Change in the diversity Of Species. or numbers of any species of. animals (birds, land animals including reptiles, fish and shellfish, benthic organisms or insects)?			X
b. Reduction of the numbers Of any unique, rare or endangered species of animals?			X
c. Introduction of new species Of animals into an area, or result in a barrier to the migration or movement of animals?			X
d. Deterioration to existing fish or wildlife habitat?			X
6. NOISE. Will the proposal result in:			
a. Increases in existing noise levels?	x		
b. Exposure of people to severe noise levels?		X	
7. LIGHT AND GLARE. Will the proposal produce new light or glare from street lights or other sources?	X		
8. LAND USE. Will the proposal result in an alteration of the present or planned land use of an area?	X		
9. NATURAL RESOURCES. Will the proposal result in:			
a. Increase in the rate of use of any natural resources?	X		
b. Depletion of any non-renewable natural resource?			X
10. RISK OF UPSET. Will the proposal involve:			
a. A risk of an explosion or the release of hazardous substances (including, but not limited to, oil, pesticides, chemicals or radiation) in the event of an accident or upset conditions?		X	
b. Possible interference with an emergency response plan or an emergency evacuation plan.			X
11. POPULATION. Will the proposal result in:			
a. The relocation of any persons because of the effects upon housing, commercial or industrial facilities?			X
b. Change in the distribution, density or growth 'rate of the human population of an area?			X
12. HOUSING. Will the proposaf:			
a. Affect existing housing, or create-a demand for additional housing?			X
b. Have a significant impact on the available rental housing in the community?			X
c. Result in demolition, relocation or remodeling of residential, commercial, or industrial buildings or other facilities?		X	
13. RIGHT OF WAY. Will the proposal result in:			
a. Reduced front/side lot area?			X
b. Reduced access?			X
c. Reduced off-street parking7			X
d. Creation of abrupt grade differential between public and private property?			X
14. Transportation/Circulation. Will the proposal result in:			
a. Generation of additional vehicular movement?	X		
b. Effects on existing parking facilities, or demand for new parking?	X		
c. Impact upon existing transportation systems?	X		
d. Alterations to present patterns of circulation or movement of people and/or goods?	X		
e. Alterations to waterborne, rail or air traffic?	X		
f. Increase in traffic hazards to motor vehides, bicyclists or pedestrians?		X	
15. PUBLIC SERVICES. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas:			
a. Fire protection?	X		
b. Police protection? a			X
c. Schools?			X
d. Parks or other recreational facilities?			Y A
e. Maintenance of public f&Sties, including roads? 6-59		X	
f. Other governmental services?	X		

	YES	MAYBE	NO
16. ENERGY. Will the proposal result in:			
a. Use of exceptional amounts of fuel or energy?			x
b. Increase in demand upon existing sources of energy, or require the development of new sources of energy?.......... , ...	x		
17. UTILITIES. Will the proposal result in a need for new systems, or alterations to the following utilities:			
a. Power or natural gas?.............*...	X		
b. Communications systems?...............................	x		
c. Water?			
d. Sewer or septic tanks? a........:........................	X		
e. storm water drainage?-................................	X		
f. Solid waste and disposal?	X		
18. HUMAN HEALTH. Will the proposal result in:			
a. Creation of any health hazard or potentiai heaith hazard (excluding mental health)?		X	
b. Exposure of people to potential health hazards?		x	
19. AESTHETICS. Will the proposed project result in:			
a. The obstruction of any scenic vista or view open to the public?			x
b. The creation of an aesthetically offensive site open to public view?		X	
c. The destruction of a stand of trees, a rock outcopping or other locally recognized desirable aesthic natural feature?			x
d. Any negative aesthetic effect?	X		
20. RECREATION. Will the proposal result in an impact upon the quality or quantity of existing recreational opportunities?			x
21. CULTURAL RESOURCES:			
a Will the proposal result in the alteration of or the destruction of a prehistoric or historic archaeological site?			X
b. Will the proposal result in adverse physical or aesthetic effects to a prehistoric or .historic building, structure, or object?			X
c. Does the proposal have the potential to cause a physical change which would affect unique ethnic cultural values?			x
d. Will the proposal restrict existing religious or sacred uses within the potential impact area?			X
22. MANDATORY FINDINGS OF SIGNIFICANCE.			
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eiiminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? ....*...........			X
b. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals.			x
C. Does the project have impacts which are individually limited, but cumulatively considerable?'		X	
d. Does the project have environmental effects which cause substantial adverse effects on human beings, either directly or indirectly'?		x	

. "Cumulatively considerable" means that the incremental effects of an Individual project are conridrrable when viewed in connection with the effects of past projects, the effects of other current projects. and the effects of probable future projects.

DISCUSSION OF ENVIRONMENTAL EVALUATION (Attach additional sheets if necessary)

See Attachment No. 2

PREPARED BY	TITLE	TELEPHONE	DATE
Lillian Y. Kawasaki	Asst. Environmental Scientist	519-3680	9-15-81

Attachment No. 1

INTERMODAL CONTAINER TRANSFER FACILITY

Scope of Project

The Ports of Los Angeles and Long Beach propose to construct an Intermodal Container Transfer Facility (ICTF). The ICTF will provide a closer, more centralized location for the transfer of marine-oriented containers from the ocean shipping mode to the rail mode of transportation* Presently, these containers are trucked 22 to 26 miles from the Port areas to one of the three existing downtown rail yards. With the ICTF, marine containers will be trucked only 4 to 6 miles. Once inside the facility, the container will be loaded on to a railcar for direct shipment. The ICTF will be operated by the Southern Pacific Transportation Company.

Site Location and Features

The ICTF is to be built on a 135-acre site owned by the Port of Los Angeles (See Figure 1). The site is bounded on the south by Sepulveda Boulevard and the north by 223rd Street near the San Diego Freeway (I-405) - Alameda Street intersection. The east and west boundaries are the City of Los Angeles city limits. Property to the east of the site is within the City of Long Beach and on the west it is in the the City of Carson. The ICTF site is zoned for heavy industrial use as is the majority of adjoining properties.

The site is approximately 7000 feet long with a variable width from 450 feet to 900 feet (See Figure 2). It is flat, vacant land except for several areas that have been leased on a short term basis for the storage of steel pipe and other temporary uses. The property to the east of the site is owned by the Southern California Edison Company, and contains a power substation and high voltage transmission towers. The area adjoining the northeast corner of the site is a residential development. Most of the property to the west of the site is vacant land owned by the Watson Land Company. Macmillan Oil Company has a tank farm on the north side of Sepulveda Boulevard on property leased from the Watson Land Company. There are several smaller parcels of land under separate ownership on the east side of Alameda Street that are used for storage of containers, a scrap metal yard, and a trucking terminal.

ICTF Characteristics

The project will be constructed in three phases (See Figure 3) to meet. the increasing demand for shipment of marine containers. The initial phase would be operational in late 1983 with the second phase in 1990 and third phase in 1995 or sooner. The second and third phasing Plan are totally dependent on the throughput demands placed on the facility and when it would be economically feasible to construct the subsequent phases.

Initial Phase

The initial phase would construct eight sets Of railroad tracks with the two outside sets used for return tracks and the six interior sets used for working tracks. The interior tracks would have effective working lengths of between 4800 to 5500 feet. These are sufficiently long to hold a 50 railroad car unit train without having to break the unit train down on separate tracks within the facility. Railcars will remain joined together and will not be switched between tracks in the yard. Widening of the narrow southwesterly end of the site to increase the working length of tracks will require the acquisition of approximately 13 acres of property from Watson Land Company.

A unit train would 'enter the ICTF from the north, proceed southerly along a working track until the railcars are within the working limits of that track, then the locomotive power would be disconnected. Once the locomotive is detached from the rail cars, it would proceed north along one of the outer return tracks and leave the facility. After the railcars have been unloaded and reloaded with outbound containers, the locomotive power would reenter the ICTF, connect to the north end of the railcars and pull that train out of the facility.

The trucks with containers-on-chassis from the Ports will enter the facility from Sepulveda Boulevard on the south. After being checked through the entrance gate, a truck will drop off the container-on-chassis in an assigned stall in the center storage area. The initial phase will be constructed to provide three-wide center storage areas between pairs of working tracks. This storage method allows the containers to be stored adjoining the working track areas and lessens the handling costs within the facility. A yard "hostler" would tow the container-on-chassis from center storage to trackside where a bridge crane would pick up the container and place it on a railcar. The reverse operation would occur when unloading an in-bound train.

An administration and U.S. Customs building will be built adjoining the entrance/exit gates on the south side of the facility. A railroad control tower will also be located in this area. A maintenance building will be located in the northeasterly area of the ICTF site. The maintenance facility will be used to maintain the ICTF operating equipment. Railroad equipment will not be serviced or refueled within the facility.

A drainage system, yard lighting and other utilities will be constructed to serve facility. Water, sewer, electrical power, telephone gas services are available in the immediate vicinity of the site. The Port of Los Angeles previously constructed a 78" storm drain from the west side of the site with an outfall structure into Dominguez Channel. The line has not been used to date, but has sufficient capacity to provide adequate drainage for the ICTF. The entire ICTF site will be paved with either asphalt or portland cement concrete pavement depending on the type of activity to occur in a particular area. A security fence with other security measures will be required.

Pail access to the site will be provided from the Southern Pacific's tracks on the west side of Alameda Street north of I 405. To eliminate traffic interference from unit trains entering the ICTF across Alameda Street, a full rail grade separation of Alameda Street will be constructed. Alameda Street will be depressed for approximately 1200 feet with the trackage remaining at the existing elevation. This grade separation requires that the northbound I 405 on and off ramps to Alameda Street be realigned and reconstructed. Once the access trackage has crossed Alameda Street, it will proceed under the freeway through an open cell provided for this purpose. The existing access roadway between Alameda Street and the elevated roadway of 223rd Street will require removal. A replacement roadway structure will be built on the south side of 223rd Street to provide a connection between 223rd Street and Alameda Street. This will be built on Port of Los Angeles property. After this replacement roadway is constructed, a railroad tunnel through the fill section that supports 223rd Street will be built. This railroad access plan will provide unrestricted rail access to the ICTF from the Southern Pacific main line track.

Second Phase

The second phase for the ICTF would include installing two additional sets of working tracks within the easterly center storage area. This would eliminate center storage within that area of the facility. Approximately 32 acres of land would be leased from the Southern California Edison Company on the east side of facility for remote storage use. Storage of movable cargo, such containers-on-chassis is a permited use of land under power transmission lines. Additional entrance/exit gate lanes would be required to support the increased throughput capacity of the ICTF.

Third Phase

The third phase would construct four additional working sets of tracks within the two remaining center storage areas of the facility. This would convert the facility from a center Storage operation to a remote storage type of facility. The entrance/exit gates would require additional lanes. The land required for the remote storage areas is available on the east from the Edison Company by lease or on the West from Watson Land Company. Furthermore, the Port of Los Angeles owns land southerly of Sepulveda Boulevard that could be used for remote Storage of containers.

-In summary, the ultimate development of the ICTF would include construction of twelve working tracks with two outside return tracks a phased development. All support facilities will be installed in the initial phase. The second and third phases will only be constructed if additional throughput capacity is *required.*

#11

Attachment No. 2

Discussion of Environmental Evaluation

lb. The entire ICTF site will be paved with either asphalt concrete or concrete pavement= The soil cover may also require compaction and consolidation. These activities are not considered to be environmentally significant.

lg. Although the proposed site is located near the Cherry Hill segment of the Newport-Inglewood fault, the project will not expose people and property to any particular geologichazard. There is no indication that any faults or fault-related features underlie the site. The site is not shown to lie within a Fault Rupture Study Area as described in the L.A. City Planning Seismic Safe Plan. The structures associated with the project will be built to City Building Code and should not require any special seismic consideration. ~~The site will be~~ compacted and consolidated, if necessary prior to any construction.

2a. Project will result in air emissions from both construction and meration of the facility. Construction-related emissions will be temporary and insignificant in nature. Operation of the facility will result in a very localized increase inair emissions from rail and vehicular traffic and container transfer equipment. However, the project will result in an improvement to the ambient air quality of the Source-Receptor Area. It is not anticipated that an air quality permit will be required for this project. Air emission calculations will be quantified and discussed in the EIR.

3b. Since the Site will be covered with A.C. and/or concrete paving and a drainage system installed, the existing absorption rate and drainage patterns will be altered.

3e. Storm water from the site is proposed to be drained into a previously constructed storm drain with an outfall into Dominguez Flood Control Channel. A significant effect on *water* quality in the Channel is not anticipated.

The project will not result in the change in diversity or number of plant species. Afield survey showed that the site is characterizedby extensive bare areas of asphalt, rock, or sandy dredged material covering. There are scattered patches of vegetation that can be described as "weedy" species which are characteristic of highly disturbed environments. portions of the site have been used in the past for dredged material disposal and as a drag strip. The lack of species diversity is also substantiated by a flora survey conducted at the project area for a proposed tank farm project (Macmillan Oil Company) in 1974.

Covering of the site with paving will result in tie permanent loss of the individual plants. However, none are unique, and there will not be a significant impact on overall plant species diversity or number of these organisms. Landscape plants may be installed which would increase species diversity and provide habitats for animal life.

4d. There will be some reduction in agricultural crop acreage. Presently, some crops are being cultivated under the Southern California Edison powerline and have to be removed with project implementation. The reduction in agricultural crop acreage is considered to be insignificant.

Very few animals have been observed at the site. There is evidence of the presence of rabbits, ground squirrels, gophers and mice. Birds, such as mourning doves and mockingbirds, do frequent the area. There are no reports of any unique rare or endangered species of animals at the site. Some Of the animal life presently at the site would be able to move to adjacent areas. Loss of habitat will result in the permanent loss of sane animals. However, the proposed project will not significantly alter species diversity or numbers of these organisms in the area.

6a,b. Ambient noise levels will increase over existing levels during both construction and operation. Primary sources of noise generation will be from rail and truck activity and from onsite container transfer equipment. There is a potential for noise impact to the ICTF workers and to residential areas adjacent to the site. A noise survey will be conducted to characterize existing ambient noise levels, determine project-generated noise levels, identify noise-sensitive areas and recommend appropriate mitigations. The results will be discussed in the EIR.

7. The ICTF will be installed with a yard lighting system to provide safety and security at the site. This will produce a new source of light and glare. The ICTF yard will be designed to minimize the impacts of light and glare to adjacent areas.

8. The proposed ICTF site is zoned M-3 for heavy industrial use, as is the majority of adjoining properties. The ICTF is a permitted use. While this project is outside the coastal zone, it was included in and is consistent with the adopted Port of Los Angeles Fort Vaster Plan.

9a. Natural resources including non-renewable mineral resources will be committed in the construction and operation of the project. The increase in the rate of use of natural resources will not, be significant. It is anticipated that the project will reduce the overall consumption of fossil fuels in transporting marine-oriented containers.

10. A risk of unset may exist since the transport of hazardous substances in containers is permitted by law. It is, however, generally accepted that greater safety is afforded by transporting hazardous substances in containers than by other transportation means such as by breakbulk handling. It will be necessary to develop segregation and separation of hazardous materials in containers at the facility and work in cooperation with the Fire Department to develop those plans.

12c. It is anticipated that any existing buildings on the proposed site will have to be demolished/removed prior to construction of the ICTF.

14a,b,c,d. The objective of this facility is to meet an existing transportation need due to the steady and significant growth in the movement of mini-land/bridge cargo through the Ports of Los Angeles and Long Beach. The protect will accommodate the potential for increased container volume. There will he a localized impact of increased vehicular traffic (to/from the ports and the ICTF) with a significant decrease in the overall vehicle miles-travelled (by trucks to/from Forts and downtown rail classification yard). A traffic survey and analysis of the impact of the ICTF on vehicular movement will be conducted. The EIR will discuss the existing and projected traffic volumes and the corresponding levels of service, inventory rail at-grade crossings, and recommend mitigation measures and route alternatives.

14e. The amount of rail traffic to the Port area will increase. It will be necessary to study alterations to the rail traffic and pattern of movement.

14f. The additional rail and vehicular traffic to/from the ICTF and adjoining areas may increase the traffic hazard potential. The traffic study to be conducted for this project proposes to analyze affected at-grade crossings of rail lines servicing the ICTF.

15a. The ICTF will have to meet the provisions of the L.A. City Fire Code. plans will be developed in consultation with the Fire Department. The project my result in a need for expanded fire protection services.

15e. Truck travel to/from the ICTF may result in a need for greater maintenance of the public roads along the routes servicing the site.

15f. The ICTF Will require participation from the U.S. Customs Service. Accommodations in the administration building will be allocated for the Customs Inspector. A customs inspection area and dock will be constructed. The need for Customs Services will be minor and primarily for inspection of westbound *containers* (arriving to ICTF from the Atlantic/Gulf Coasts).

16b. The project will impose greater energy utilization such as electrical consumption. The increased demand will not be significant.

17a-f. The ICTF will require hookups from the site to existing utility service lines. Utility requirements of the project appear to be well within the supply capabilities of the utility companies, and there is no need for significant changes distribution facilities. Project utility demands will be discussed in the EIR.

18a,b. A potential health hazard may exist, since there is a potential for a risk of upset from hazardous substances in containers. The new facility will have to meet provisions for container separation and segregation and installation of adequate fire protection systems. Exposure of employees at the facility and adjoining residents to noise generated from rails, transfer equipment, etc. my create a potential health hazard. Precautions to meet O.S.B.A. and EPA/other governmental noise standards must be taken. Significant noise impacts will require mitigation.

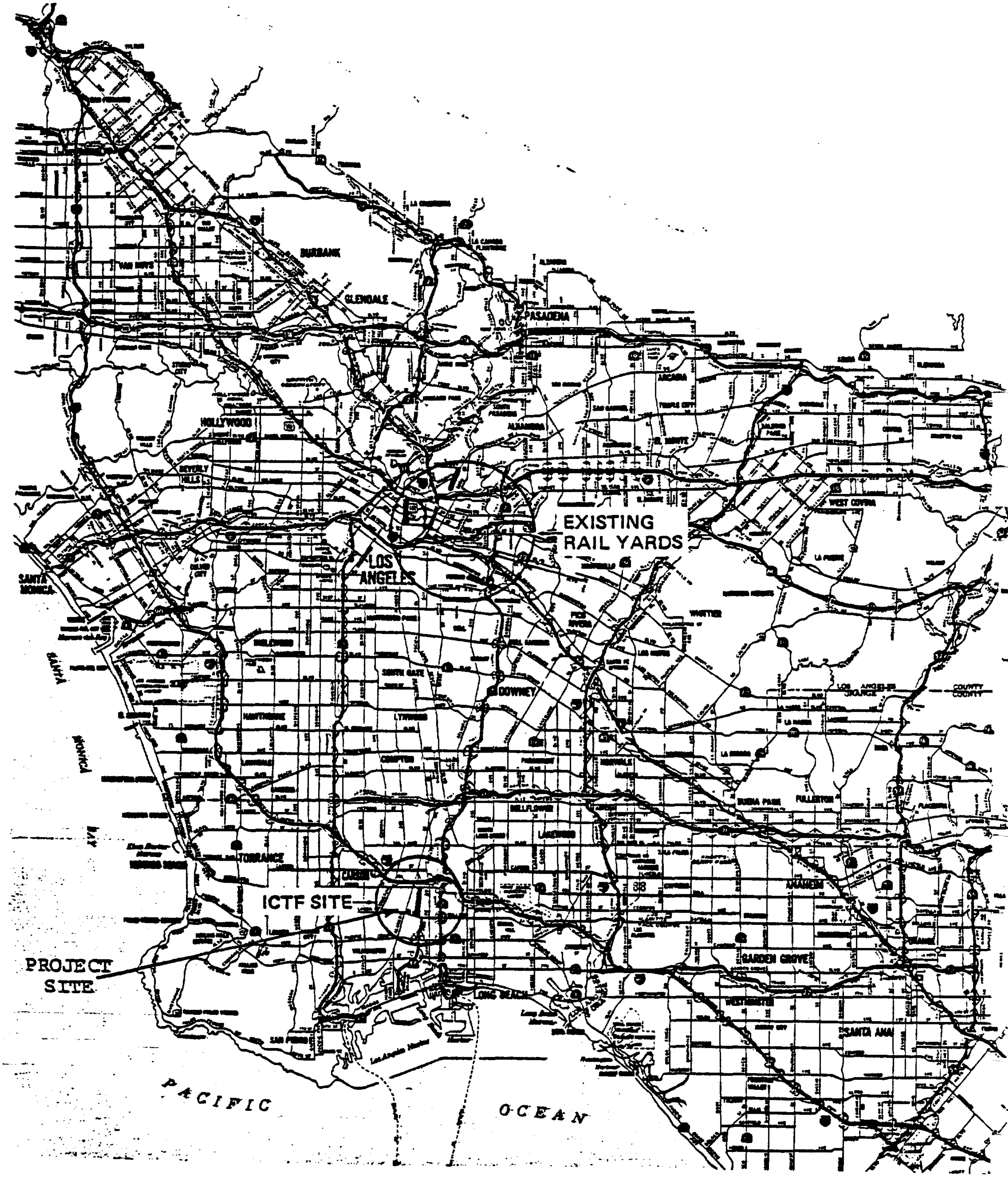
l9b,d. Construction of tie ICTF may have to some a negative aesthetic effect. Much of the area is how vacant and an pen expanse of bare land with some sandblasting and pipe storage activity. However, the ICTF site is zoned for heavy industrial use and adjoining properties contain a petroleum tank farm, container storage area, electrical transmission lines and other industrial uses.

21. A cultural resource survey and evaluation of the proposed ICTF site was conducted by Dr. E.B. Weil of California State University Dominguez Hills, Department of Anthropology in July 1981. Records check showed that there are no previously recorded archaeological sites within the project boundaries. In addition to a records check, a field inspection survey was conducted. indication of cultural resourceswere discovered. The cultural resource evaluation is on file with the Port of Los Angeles, Environmental Management Division.

22c. The project will reduce the overall vehicle miles-travelled by trucks with a concomitant decrease in fuel consumption and air emissions. There may be, however, a potential for cumulatively considerable impacts particularly from rail-related impacts on the surface street system. Both Ports of Los Angeles and Long Beach propose to construct dry bulk handling terminals. The proposed coal terminals anticipate principally Union Pacific Railroad trackage whereas the ICTF will use Southern Pacific Railroad trackage. Potential cumulative impacts of these projects must be studied.

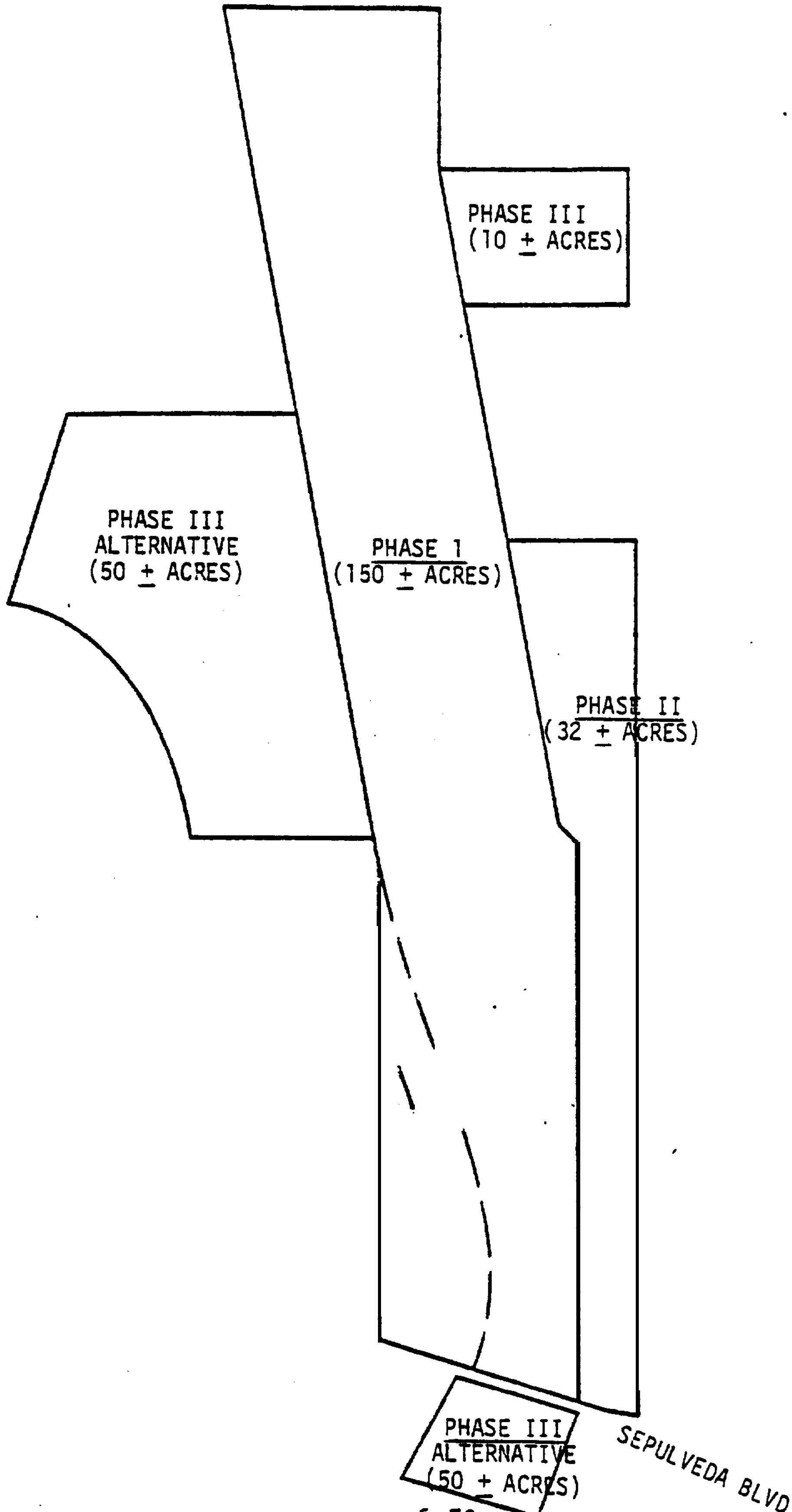
22d. Further studies of Project-related noise and traffic impacts will be conducted to evaluate potential adverse effects on human beings. If substantial adverse effects are identified, appropriate mitigation measures must be developed.

LYK:rw
9-14-81



Site Vicinity Ma
FIGURE 1

SAN DIEGO FREEWAY



PHASING PLAN

6.5 ORGANIZATIONS AND PERSONS CONTACTED *

Transportation and Circulation

H. Heckeroth	California Department of Transportation (Caltrans)
A.H. Hendrix	Caltrans
A. Barkley	Caltrans
B. Miller	Caltrans
R. Kabel	Caltrans
T. Sudeck	Caltrans
J. Danley	Caltrans
P. Merrill	Caltrans
K. D. Steel	caltrans
A. Fischer	caltrans
I. Barrow	Caltrans
F. O. Haymond	California Public Utilities Commission (PUC)
W. R. Schulte	PUC
W. L. Oliver	PUC
F. Haymond	PUC
E. Stewart	PUC
P. Taylor	Los Angeles County Transwrtation Comnission (LACTC)
D. Patterson	LACTC
G. Hicks	Southern California Association of Governments (SCAG)
R. Harter	SCAG
T. Tidemanson	Los Angeles County Road Dept. (LACRD)
D. Mosher	LACRD
R.L. Lewin	LACRD
Captain D. M. Taub	U. S. Coast Gaurd
Capt. J.Gildea	Long Beach Naval Shipyard (LBNS)
Capt. R. D. Eber	LBNS
S. Ho	LBNS
R: L. King	Southern Pacific Transportation co. (SPTC)
W. Bourque	SPTC
T. Studcey	SPTC
W. Hollingswcrth	SPTC
K. Gale	SPTC
C. Levie	SPTC
D. R. Petersen	Union Pacific Railroad (UPRR)
G. J. Clark	UPRR
L.A. Kirkeby	UPRR
P. Walker	UPRR
T. Shepard	UPRR
D. Reis	Mi-Jack Products
F. Boone	Le Tourneau Railroad Services, Inc.

* Includes persons/organizations receiving Notice of Preparation and also those attending the scoping meting.

8. Grifffith	City of Los Angel&, Dept of Public Works
D. Bowery	City of L. A., General Manager of Transportation Dept.
J. Pullen	Maritime Administration
E. Meyer	Federal Maritime Commission
J. T. Pott	City of Long Beach, Director of Public Works
R. Bakus	City of Long Beach, Transportation
S. Spitz	City of Long Beach, Transportation
J. P. Chen	City of Long Beach, Transportation
D. Bowers	City Of Long Beach, Public Works Dept.
G. Greeks	Eagle Marine Services
C. G. Brown	Los Angeles Container Co., Inc.
R. S. Bliss	Matson Terminals, Inc.
M. Karmelich	Overseas Shipping Co.
C. R. Redlich	Marine Terminals Inc.
O. Rozen	Evergreen Marine Corp.

California United Terminals
International Transportation Services
Long Beach Container Terminal
Maersk Line Agency
Pacific Container Terminal
Sealand Service, Inc.
United States Lines, Inc.

Utilities/Public Services

R. L. Jensen	Southern California Edison Co. (SCE)
C. J. Lowerison	SCE
D. M. Stevenson	SCE
R. White	SCE
L. V. Lund	City of L. A., Dept of Water & Power
M. Frankel	City of L. A., Dept of Water & Power
D. Tillmann	City of L. A., Bureau of Engineering
J. M. Betz	City of L. A., Bureau of Sanitation
C. Justice	City of L. A., Fire Department
V. Begley	City of L. A., Fire Department
L. Hawkes	City of L. A., Fire Department
R. Shouse	City of L. A., Fire Department
F. Forsberg	Dominguez Water Company
R. Y. D. Chun	California Dept of Water Resources
J. E. Brady	U. S. Customs
P. S. Bellah	U. S. Customs
W. Tsuda	L. A. County Health Services
S. Russin	L. A. County Health Services
A. E. Lowe	California Dept. of Health Services

Land Use/Planning

Hon. Tom Bradley	Mayor of City of Los Angeles
Councilman G. W. Lindsay	City of Los Angeles, 19th District
Councilman R. C. Farrell	City of Los Angeles, 18th District
Council- Joan Mike Flores	City of Los Angeles, 15th District
C. S. Hamilton	City of Los Angeles Director of Planning Dept.
Hon. E. sat0	Mayor of City of Long Beach
J. E. Dever	Long Beach City Manager
R. Paternoster	City of Long Beach, Director of Planning
B. Craw	City of Long Beach, Planning Dept.
H. L. Henshaw	City of Long Beach Planning Ccmission, Chairman
G. Felgemker	City-of Long Beach, Environmental Planning
L. Krupka	City of Long Beach, Environmental and Community Planning
G . Economides	Long Beach Chamber of Commerce
L. Cain	Long Beach Community Planning
K. Fickett	Governor's Office of Planning c Research
J. B. Miller	City of Carson, Principal Planner
T. Fushushima	state Lands Commission

Planning/Community Services Departments of the Cities of Lynwood, Compton, Vernon, Huntington Park, Southgate, Carson, and Los Angeles County

Habitats & Biota

J. Slawson	National Marine Fisheries Service
R. Pisapia	U. S. Fish and Wildlide Service
R. Mall	California Dept. of Fish and Game (CFG)
J. L. Baxter	CFG

Air Quality/Water Quality/Energy

G. Lew	State Air Resources Board (ARB)
S. Oey	ARB
B. Lovelace	ARB
J. Nevitt	South Coast Air Qulaity Mgmt. District (SCAQMD)
B. Farris	SCAQMD
M. Lawrence	SCAQMD
B. Julien	Energy Commission
R. Hertel	California Regional Water Quality Control Board (CRWQCB)
L. Schinazi	CRWQCB

Environmental Protection Agency

Interersted Persons/Organizations

M. S. Genewick	Watson Industrial Properties
R. C. Wilson	Macmillan Oil Co.
J. Engelhardt	Macmillan Oil Co.
C. Greenberg	Ball, Hunt, Xart, Brown, and Baerwitz Law Office
L. Pryor	Beach Area Concerned Citizens
M. Bergman	Long Beach Homowners Association
H. Friedman	Wrigley Association
L. Lae	Sierra Club
J. William	Homeowners of Windward Village Yobile Home Park
M. M. Reichert	Continental Mobile Housing, Inc.
W. Harwood	Long Beach Area Citizens Involved
E. Leonard	American Gold Star Manor
T. Molinari	Dept. of Economic & Business Development
E. Keeley	League of Women Voters
G. Jacobson	Carson Auto Wrecking Inc.
H. Lewinson	State Salvage
R. D. Kerick	Shell oil co.
J. D. Downing	Imported Auto Transport, inc.
P. Shaw	Cal State University Long Beach
L. Brandt	Cal State University Long Beach
S. Podesta	Harbor Assoc. of Industry & Commerce
D. Winkel	Long Beach Press Telegram
B. Gore	Los Angeles Times
T. Morris	Bright & Associates
S. Diamond	Bright & Associate&
C. Gibbs	VIN Consolidated Inc.
J. Kelly	VIN Consolidated Ind.
R. Evans	VIN consolidated Inc.

Residents of Windward Village Mobile Home. Park
Atlantic Richfield Co.
Intercoastal Equipment Services, Inc.
Texaco, Inc.
Vorelco, Inc.
Powerine Oil Co.
Louis & Martini Farms, Inc.
Crosby de Overton, Inc.
Davies Transportation Co., Inc.
Commercial Carriers, Inc.
Port Pipe & Steel Storage
Import Dealer Services Corp.
Harbor Sandblasting Co.
Desser Enterprises, Inc.
Super Service, Inc.
Matlock Brite-Sol
W. Evans
F. Rilliet
L. Denevan
B. Allen
C. Morton
N. Conte
D. Utter
B. Shoag
S. E. Whitney
V. V. Songcayauon