Final Environmental Impact Report

LOS ANGELES COUNTY
TRANSPORTATION COMMISSION

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AUGUST 1989

Coastal Corridor Rail Transit Project-Northern Segment

FINAL ENVIRONMENTAL IMPACT REPORT
COASTAL CORRIDOR RAIL TRANSIT PROJECT
NORTH SEGMENT
STATE CLEARINGHOUSE NO. 88090721

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ABSTRACT

The Final EIR includes a revised summary; patronage, costs, summary of impacts by project alignment variations; responses to comments received on the Draft EIR; a list of agencies, organizations and businesses/individuals commenting on the DEIR; and Engineering Drawings with revised plans and profiles. The summary of the Draft EIR has been revised to clarify impacts and mitigation measures per comment received on the Draft EIR and to be more responsive to recent legislation requiring preparation of mitigation monitoring programs. Substantial changes have been footnoted. The revisions do not result in substantial changes to the Draft EIR findings. The summary of impacts by project alignment variations provides a direct comparison of environmental impacts for the Westchester Parkway southside and center median variations and Lincoln Boulevard center median and eastside variations near Jefferson Boulevard. The revisions to the Engineering Drawings only represent minor changes to those previously provided as part of the Draft EIR. The Draft EIR is incorporated by reference as part of this Final EIR. For further information on the Final EIR or to obtain a copy of the Draft EIR, contact:

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SECTION 1
SUMMARY
(REVISED FROM DEIR BASED ON COMMENTS)

1.1 SUMMARY DESCRIPTION OF THE PROPOSED PROJECT

The proposed Coastal Corridor-North Segment would connect with the Norwalk-El Segundo Rail Transit Project located within the right-of-way of the Glenn Anderson Freeway (formerly named the Century Freeway and hereinafter referred to as I-105). The project is proposed as a fully automated transit facility with power supplied by a third rail or possibly by an overhead catenary wire. The project alignment would run along the west side of Aviation Boulevard on a combination of aerial structure and exclusive right-of-way grade segments at ground level. It would turn onto Century Boulevard and run on an aerial guideway along the south side of Century Boulevard to the west property line of Dollar Rent-A-Car, where it would turn, cross Century Boulevard, and proceed north over 96th Street into Los Angeles International Airport (LAX) Lot C. The alignment would continue through Lot C on an aerial guideway and turn onto Westchester Parkway, where it would run either in the median or along the south side of the proposed Westchester Parkway.

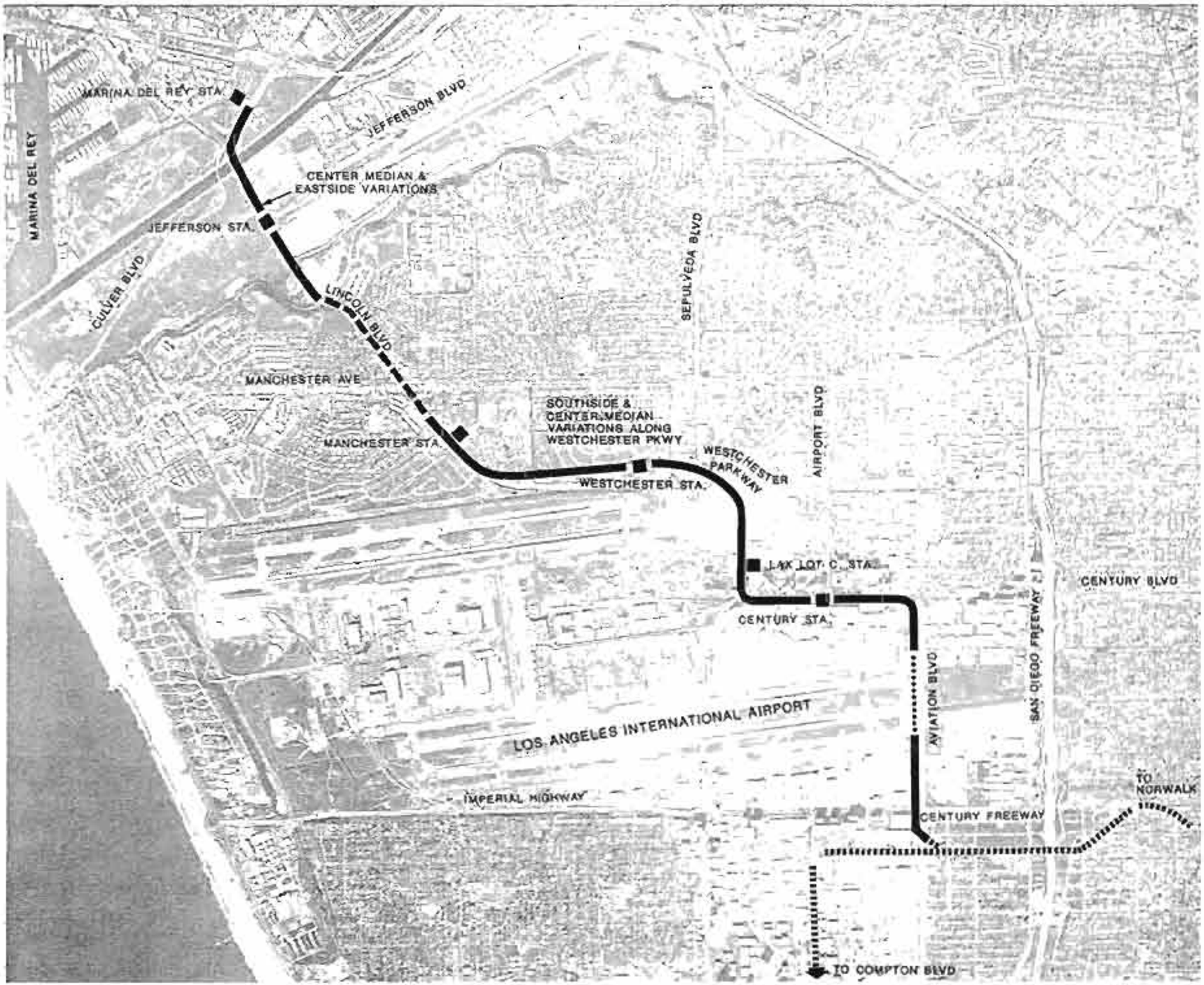
From Westchester Parkway, continuing on an aerial structure, the project would run along the east side of Lincoln Boulevard to approximately Loyola Boulevard where it would transition to a subway. It would continue under Manchester Avenue to approximately Hughes Terrace where it would emerge from another portal. The alignment would continue along Lincoln Boulevard in either a median or side-running aerial structure alignment to Culver Boulevard where it would cross and turn east along the north side of Culver Boulevard, where the line would terminate. This project stops at this location on Culver Boulevard. (Refer to Exhibit 1.)

1.2 ENVIRONMENTAL EFFECTS AND MITIGATION MEASURES

Section 4 details the environmental impacts that would result if the proposed project is implemented. Table 1-1 summarizes impacts of the proposed alignment and mitigation measures for these impacts. Impacts that are noted in Table 1-1 as "unavoidable adverse impacts" after mitigation would be significant if the proposed project is approved as proposed (CEQA Section 21081).

Impacts of the proposed project are rated in Table 1-1 according to the following designations: (1) NS, not significant (adverse effects that are not substantial according to CEQA, but should be mitigated to the extent feasible); (2) S, significant (substantial adverse changes to the environment as defined by CEQA); and (3) B, beneficial impacts. Mitigation measures are listed for each impact; those that have been adopted as part of the project by the LACTC are noted with an asterisk (*). Others are recommended for incorporation into the project by the EIR prior to project approval.

Substantial changes from information previously supplied in the Draft EIR have been footnoted with an explanation.



Legend

- GENERAL STATION LOCATION
- SUBWAY
- AERIAL
- AT GRADE
- NORWALK - EL SEGUNDO LINE (UNDER DESIGN; CONSTRUCTION)

Project Location

Coastal Corridor Rail Transit Project– North Segment

North

0 1250 2500 FEET

Exhibit 1

TABLE 1-1

SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

LAND USE (SECTION 4.1)

Environmental Impacts	Land use impacts include the displacement of existing land uses, possible land use conflicts between the project and existing and proposed land uses, and consistency with plans and policies of the City of Los Angeles. Displacement and right-of-way impacts follow; however, property owners and tenants will be compensated for property acquisition and relocation costs.
	Relocation of railroad spur; removal of siding, and acquisition of railroad and LAX right-of-way on Aviation Boulevard (NS).
	Acquisition of land on southwest corner of Aviation and Century Boulevards (NS).
	Acquisition of land for the Century Station and support facilities (NS).
	At the Dollar Rent-A-Car, displacement of one existing structure and acquisition of right-of-way for aerial structure, 5-20 parking spaces will be removed (NS).
	Acquisition of right-of-way for aerial structure resulting in the removal of 4-16 spaces at the monthly parking lot south of 96th Street (NS).
	Modifications to the existing layout of the SCRTD Transit Station (NS).
	Acquisition of right-of-way for aerial structure at LAX Lot C resulting in the loss of 16-64 parking spaces (NS).
	Land acquisition on the southeast and southwest corners of Sepulveda Boulevard and Westchester Boulevard for aerial structures (both alignments) (NS).
	Along Westchester Parkway, acquisition of additional right-of-way for both alignments. Since widening Westchester Parkway to seven lanes is needed to accommodate future traffic growth without LRT, acquisition for both street widening and LRT would be done in coordination with the City of Los Angeles.[1] (NS).

	Acquisition of additional right-of-way for the Manchester Station at the Hughes Corporation resulting in the loss of approximately 4-16 parking spaces (NS). At the Westchester Recreation Center, acquisition of additional right-of-way for portal entry, resulting in loss of a driveway for the Senior Citizens Center and 4 to 6 parking spaces (S). Along Lincoln Boulevard, dedicated easement for guideway with both alignments[2] (NS). Acquisition of land for Jefferson Station and support facilities (NS). Acquisition of land for Marina del Rey Station, support facilities and storage tracks (NS).
Mitigation Measures	Additional access to the Senior Citizens Center will be provided along with replacement parking for spaces lost at the Westchester Recreation Center.* Property owner and tenants will be compensated for property acquisition and relocation costs.
Significance After Mitigation	Implementation of the proposed mitigation measure would reduce land use impacts to a level that is not significant.
CIRCULATION (4.2)	
Environmental Impacts	The proposed project will have a beneficial impact on a regional scale through an overall reduction in vehicle miles travelled (B). Impacts include the reduction of roadway capacity along some portions of the alignment and increased traffic at and near stations (NS). WESTCHESTER PKWY/EAST OF SEPULVEDA WESTWAY The existing right-of-way width is 80 feet. Without LRT, Westchester Parkway would need to be widened to seven lanes to accommodate future traffic. The City of Los Angeles in its Coastal Transportation Corridor Specific Plan EIR (1985) recommended a right-of-way of 100 feet. With LRT, the project would require approximately 35 feet of additional right-of-way along Westchester Parkway[4] (NS).

TABLE 1-1 (continued)

	WESTCHESTER PKWY - WEST OF SEPULVEDA WESTWAY
	A median-running alignment would require the widening of planned median islands to accommodate the aerial structure columns. The city's proposed curb-to-curb width of 108 feet on Westchester Parkway west of Sepulveda Westway would be sufficient to accommodate the expanded median plus the proposed cross-section consisting of three-through lanes in each direction plus double left-turn lanes and the LRT guideway. This could be accomplished by narrowing the city's proposed lanes. Therefore, widening of the median would not require widening the roadway beyond the curb-to-curb width shown in the city's plans (NS).
	LINCOLN BLVD/JEFFERSON BLVD
	The ultimate roadway design for the median alternative should accommodate guideway columns and allow room for double left-turn lanes in the northbound and southbound directions (NS).
Mitigation Measures	Coordinate right-of-way along state highways with Caltrans.*
	Coordinate right-of-way needs along Westchester Parkway with the City of Los Angeles's North Side Development plans.*
	Coordinate right-of-way needs along Lincoln Boulevard, north of the bluffs with the City of Los Angeles and Playa Vista Development during the redesign of Lincoln Boulevard to super major highway status.*
Significance After Mitigation	No significant adverse impacts are anticipated. Coordinate right-of-way needs along Culver Boulevard east of Lincoln Boulevard with the City of Los Angeles and Playa Vista Development during the redesign of Culver Boulevard to a divided major highway status.*[5]
GEOLOGIC AND HYDROLOGIC RESOURCES (SECTION 4.3)	
Environmental Impacts	Potential seismic effects of earthshaking may impact operations (S).
	Cut and cover and grading activities and transport of materials may result in significant risks (S).
Mitigation Measures[6]	Subsequent geotechnical analysis will be conducted along subway segments to determine the stability of subsurface materials.*

TABLE 1-1 (continued)

	Disturbed areas will be revegetated after construction to reduce the potential for erosion in areas of weak soil and steep topography.*
	All structures above and underground will be constructed in anticipation of a major earthquake.*
	The structures and facilities will conform to the City of Los Angeles Seismic Safety Plan.*
	Ground rupture may occur on or nearby the Charnock Fault, or places not previously affected by recent faulting. In the event of ground rupture, all rail activities shall be halted. In the event of a major earthquake, rail activity shall be stopped until it is ascertained that no damage to the rail has been incurred.*
	Site-specific engineering studies will be conducted at all sites where subsequent geotechnical studies indicate there is an increased potential for seismic risk.*
	A comprehensive emergency preparedness/evacuation plan will be prepared prior to operations of the Coastal Corridor-North Segment.*
	Applicable grading provisions of the Los Angeles Municipal Code and recommendations of the City Engineer/Department of Building and Public Safety will be followed during construction.*
	Recommendations of a qualified geotechnical engineer concerning appropriate procedures to follow during grading and excavation shall be adhered to.*
	Haul routes shall be approved by the City of Los Angeles. No transport of excavated material will be permitted in residential neighborhoods.*
	All trailers carrying earth and debris shall be covered and transported to the appropriate Class I or III landfill.*
Significance After Mitigation	Implementation of the proposed mitigation measures would reduce geologic and hydrologic resource impacts to a level that is not significant.
AIR QUALITY (SECTION 4.4)	
Environmental Impacts	Mobile and stationary emissions would be offset by the overall reduction in vehicle miles traveled. There would be no significant adverse impact on air quality with implementation of the project (NS). The project would contribute to a reduction in vehicle emissions (B).

Mitigation Measures	No mitigation measures are required.
Significance After Mitigation	The project would not result in any significant adverse air quality impacts.

BIOLOGICAL RESOURCES (SECTION 4.5)

Environmental Impacts	Removal of nonsignificant vegetation along sections of the proposed alignment would be necessary. No wetlands will be impacted as a result of this project[7] (NS).
Mitigation Measures[8]	While no significant adverse impacts have been identified, the following measures are proposed to provide guidance for landscaping replacement. Where existing landscaping must be removed, new landscaping shall be planted as specified in an established landscaping plan. The landscape plan shall include a master list which shall call for new vegetation that is designed to conform with the surrounding environment.* Landscaping shall extend to the system's right-of-way, station parking, and public areas, as well as other areas of fixed system facilities.* A program shall be developed as part of the overall operating procedures to provide for the regular maintenance of system-related landscaping.*
Significance After Mitigation	No significant adverse biological impacts are anticipated.

NOISE AND VIBRATION (SECTION 4.6)[9]

Environmental Impacts	Noise impacts have been identified at Fire Station Number 95. In addition, potential noise impacts may occur at future development at the existing Dollar Rent-A-Car site, LAX North Side, and Playa Vista area (S). No vibration impacts are expected (NS).
Mitigation Measures	Noise mitigation in the form of 3-foot sound barriers at the edge of the aerial guideway will be constructed at STA 69+00 adjacent to Fire Station Number 95.* In addition, barriers will be coordinated with future development where permits have been granted prior to initiation of the design of the facility. The potential future developments are located at the Dollar Rent-A-Car site, LAX northside, and Playa Vista area.

	If the south-side option is adopted in the LAX North Side development area, then barriers will be constructed between STA 156 and 183 where low-density residential uses are within 75 feet, medium-density residential uses are within 50 feet, and other uses are within 40 feet.* The vibration analysis did not document any adverse impacts. However, there are certain precautionary measures recommended to ensure that no vibration impacts occur. For subway segments, the subway box structure shall have at least two feet of soil between the subway structure and any building structure or foundation. In cases where this is not possible, an elastomer element shall be placed between the subway box and the building or foundation to prevent direct transmission of groundborne noise and vibration into the building.*
Significance After Mitigation	Implementation of the proposed mitigation measures would reduce noise and vibration impacts to a level that is not significant.

RISK OF UPSET (SECTION 4.7)

Environmental Impacts	No long-term risk of upset impacts are anticipated during operation of the project (NS).
Mitigation Measures	No mitigation measures are required.
Significance After Mitigation	The project would not result in any significant adverse risk of upset impacts.

POPULATION AND HOUSING (SECTION 4.8)

Environmental Impacts	There is a potential for some increase in densities in the vicinity of stations where this is permitted under local land use and development controls (NS). Further growth in these and other areas can be kept to appropriate levels by the city's application of zoning and other land use development controls.
Mitigation Measures	No mitigation measures are required.
Significance After Mitigation	The project would not result in any significant adverse population and housing impacts.

PUBLIC SERVICES (SECTION 4.9)

a. Police

Environmental Impacts	Increased commuter and pedestrian traffic at stations may result in increased number of crimes or accidents and transit police may require back-up support from the Los Angeles Police Department (S).
Mitigation Measures[10]	Two-way voice communication shall be provided between patrons and central control personnel at selected points throughout the route, such as fare-vending areas, platforms, and shelter stops. In addition, two-way voice communications on-board the trains between the passengers and the train operator shall be installed. This will be accomplished by a combination of public address and telephone systems. Communication between employees, operators, security personnel, and the central control will be accomplished by hand-held radios. It is important that provisions for hand-held radio communications be made in the subway portions of the route. An antenna-repeater system will be compatible with police, fire, and security communications and extend through entire tunnels, as well as subway stations. Antenna-repeater systems shall be compatible with those used in other rail transit systems (i.e., Red Line, Blue Line, Green Line).* Closed-circuit television shall be provided at high-risk and security areas throughout the system. It is recommended that these areas include fare-vending areas, loading platforms, and entrances and exits to elevators and escalators. Surveillance cameras shall be linked to a central control area for display on video monitors.* An alarm and telephone system shall be installed to protect unauthorized entry and tampering with equipment, such as fare-vending machines, equipment rooms in the stations, traction power substations, and money-counting rooms. The alarms shall alert the central control and/or local authorities.* In order to eliminate dark or obscured areas, the design of all passenger stations and shelter stops shall be open with long, unbroken lines of sight. In addition, stations and shelters shall be illuminated during hours of darkness.* Where practical, guideways shall be protected from encroachment of people, thrown objects, or unauthorized vehicles. Barriers shall be of a height to prevent intrusion and deter hauling of objects into the guideway.*

	Walkways with a 30-inch clearance shall be provided along the guideway. Crossovers shall have a minimum clearance of 44 inches at all egress and access locations.*
	Power substation access shall be limited to authorized personnel only. Power substations shall be enclosed by nonscalable barriers of a height to discourage hurling of objects into the enclosure. Power substations shall have burglar alarms.*
	Parking lots associated with the project shall be designed to maximize visibility within the lots and from surrounding areas. Lighting shall be designed to avoid the creation of dark corners.*
	Interior finish of the vehicle shall be of vandal-resistant material. Seats, seat backs, equipment access panels, etc. shall be removable with the use of special tools.*
	A "silent alarm" device shall be installed so the car operator may summon police or alert the central control to a problem on the train.*
Significance After Mitigation	Implementation of the proposed mitigation measures would reduce police impacts to a level that is not significant.
b. Fire Protection	
Environmental Impacts	The project would cause the Los Angeles Fire Department an insignificant increased demand for fire fighting and paramedic units, increased inspection load, and increased incidences of false alarms. (NS)
Mitigation Measures	While a significant impact has not been identified in the area of fire hazard, the following mitigation measures are recommended.
	As required by the fire department, access for fire equipment shall be maintained during operation of the system.*
	Use of fire-retardant material on trains and non-combustible material in stations shall be required.*
	Telephones shall be provided at stations to report emergencies to the fire department.*
	Communication devices shall be provided on-board the trains to alert operators about emergencies.*
	Automatic sprinkler systems shall be installed within substations.*

	Hand-held fire extinguishers shall be available on trains and substations.*
Significance After Mitigation	The proposed project would not result in any significant adverse fire protection impacts.
c. Schools	
Environmental Impacts	Because of the distance of the proposed project to schools in the project vicinity, no significant impacts are anticipated (NS).
Mitigation Measures	While a significant impact has not been identified in the area of school impacts, the following list of safety features is recommended where applicable during the construction and operation of the project:
	Trespass attractions of construction sites, stations, and parking lots shall be reduced by security measures and barriers. *
	Power substations shall be secured to prevent unauthorized access and warning signs conspicuously posted.*
	Rail tracks on overhead bridges and grade separations shall be inaccessible to pedestrian traffic.*
	Warning signs shall be posted around all crossings, power substations, and construction sites.*
Significance After Mitigation	The proposed project would not result in any significant adverse school impacts.
AESTHETICS (SECTION 4.10)	
Environmental Impacts	The introduction of aerial structure along much of the route will significantly alter the appearance of the areas being traversed. Catenary poles and wires may be installed along the length of the light rail alignment[11] (S).
Mitigation Measures	A significant adverse impact has been identified in the area of aesthetics. However, the alignment follows either existing or proposed roadways and no existing visually sensitive uses would be adjacent to the alignment. The following measures are recommended to improve the aesthetic setting.

	Stations shall be designed to be attractive and nonintrusive on surrounding areas. Station design and building materials used in their construction shall emphasize low maintenance and graffiti resistance.*
	Landscaping shall be used to shield or enhance stations, traction power substation sites and the right-of-way. Plants and ground cover compatible with the Southern California climate and the architecture of the surrounding area shall be selected.*
	Specific landscape design considerations shall be given to the portions of the line adjacent to the Parkview Apartment Complex. Landscape design as a visual buffer and the inclusion of walls shall help to reduce aesthetic impacts.*
Significance After Mitigation	The proposed project would not result in any significant adverse aesthetic impacts.

LIGHT AND GLARE/SHADE AND SHADOW (SECTION 4.11)

a. Light and Glare

Environmental Impacts	Light and glare impacts that would be common to all aerial portions of the route include minor impacts from lighting along the rail line and from the rail cars as they pass by. High beam front lights on the transit vehicle could affect vehicles on adjacent roadways when at-grade or transitioning through this zone. Because of the elevation difference between the roadway and the aerial portions of the system, no light impacts are expected from the high-beam front lights of the train (NS).
	The greatest emittance of light and glare would occur at the proposed stations. Due to the existing non-sensitive type of land uses and the distances of sensitive receptors in the vicinity of the proposed stations, impacts will be minimal. Impacts on proposed uses at both the Jefferson station and the Marina del Rey Station would depend on the siting of the development and cannot be determined at this time (NS).
Mitigation Measures	No mitigation measures are required.
Significance After Mitigation	The project would not result in any significant adverse light and glare impacts.

b. Shade and Shadow

Environmental Impacts	Shadows from the proposed transit stations and structures would not cast shadows on sensitive uses such as existing residences and recreational uses. The transit station and structure would primarily extend over vacant land, areas currently used for parking, and planned streets (NS).
Mitigation Measures	No mitigation measures are required.
Significance After Mitigation	The project would not result in any significant adverse shade and shadow impacts.

RECREATION (SECTION 4.12)

Environmental Impacts	While the southernmost portion of the Westchester Golf Course is impacted, the extension of Westchester Parkway as part of the LAX North Side Development may require redesign of the golf course. Parking spaces will be lost at the Westchester Recreation Center.[12] The loss of one of the two driveways to the Senior Citizens Center along Lincoln Boulevard is a significant impact (S).
Mitigation Measures	Replacement parking will be provided for those spaces lost at the Westchester Recreation Center.*[13] Additional access to the Senior Citizens Center shall be provided to compensate for the loss of the southernmost driveway.*
Significance After Mitigation	Implementation of the proposed mitigation measures would reduce recreational impacts to a level that is not significant.

CULTURAL RESOURCES (SECTION 4.13)

Environmental Impacts	Several recorded archaeological sites are found within the northern portion of the project vicinity. In addition, there have been several archaeological field surveys and investigations conducted in the study zone. The greatest potential for the destruction of archaeological sites and/or artifacts is in those areas where excavation activities of the project would be undertaken (S).
Mitigation Measures	In the event that artifacts and/or remains are found in the course of construction of the proposed project, the lead agency shall make the determination whether or not the resource is significant and require salvage according to CEQA and/or city guidelines.*

	If the resource is found to be significant, proper and appropriate salvage of the resources shall commence in a timely manner to the provisions outlined in Section VII of Appendix K of the CEQA law and guidelines.*
Significance After Mitigation	Implementation of the proposed mitigation measures would reduce cultural resource impacts to a level that is not significant.

4.14 ENERGY (SECTION 4.14)

Environmental Impacts	The proposed alternative would use approximately 172,824 kWh per day. However, energy consumed by the rail transit system would be offset by energy savings from reduced vehicle trips. In order to reduce energy consumption as part of the final design activities, energy conservation features and operating procedures shall be developed for operating systems and subsystems.
Mitigation Measures	No mitigation measures are required.
Significance After Mitigation	The project would not result in any significant adverse energy impacts.

CONSTRUCTION IMPACTS (SECTION 4.15)

a. Land Use/Business Disruption

Environmental Impacts	The greatest impact of construction to businesses would be along the cut-and-cover segment of Lincoln Boulevard from La Tijera Boulevard to the Westchester Bluffs. However, there is limited on-street parking and most of the businesses have parking in the rear that accessible by local roadways other than Lincoln Boulevard (S).
Mitigation Measures	While a significant adverse impact has been identified, it is short term. Construction activities shall be programmed as expeditiously as possible to minimize disruptions to adjacent land uses. In addition, specific construction mitigation measures to minimize adverse impacts on access to roads and commercial establishments will be pursued. Such measures will include a public information campaign that will provide prior notice to affected property owners and the public on specific dates and locations of construction and visible road signs. Access to driveways and shops will be kept open and, whenever necessary, appropriate signs indicating entry, name of establishment and hours/days of operation will be provided. *

b. Traffic

Environmental Impacts	Since the proposed alignment would be routed through urban areas, motors and pedestrians would at times be delayed and inconvenienced during the construction period. Factors such as the presence of a large number of heavy duty construction vehicles on the streets, narrow lane widths and unusual detour configuration, uneven or poor roadway surfaces, and even signal timing which is inefficient for construction conditions would also contribute to the reduction in capacity (S).
Mitigation Measures	Prior to the start of construction, traffic control plans, including detour plans shall be formulated with the City of Los Angeles and other affected jurisdictions. Unless unforeseen circumstances dictate, no major roadways would be closed to vehicular or pedestrian traffic. *

c. Air Quality

Environmental Impacts	Implementation of the proposed project would result in short-term emissions being generated during the course of construction. The emissions would come from two sources: fugitive dust emissions due to excavation and grading activities and emissions from heavy equipment involved in construction (NS).
Mitigation Measures	While a significant adverse impact has not been identified, construction activities shall be programmed as expeditiously as possible to minimize disruptions to adjacent land uses.*

d. Noise

Environmental Impacts	The daily CNEL for construction activities are all below 80dB, and would be considered acceptable for noise-sensitive land uses if construction were to last for a short period of time. However, the annual average CNEL values are high, indicative of the long time frame during which construction would be underway. These annual CNEL values demonstrate the need to consider noise mitigation where conflicts with noise sensitive land uses exist. The CNEL would diminish with distance from the construction site; however, many land uses along the alignment are within 50 feet of potential construction sites (S).
Mitigation Measures	Noise specifications for subsequent inclusion in the construction documents to which contractors must comply shall be prepared to ensure compliance with local noise ordinances. Whenever construction-generated noise exceeds acceptable CNEL standards during evenings and weekdays, affected residents will be offered free alternative lodging accommodations.*

e. Risk of Upset

Environmental Impacts	Based on public information, it does not appear that there are any significant hazardous material sites that would preclude the construction of the proposed project (NS).
Mitigation Measures	While a significant adverse impact has not been identified, the hazardous materials may be encountered during construction. Therefore, the following mitigation measures are recommended. Detailed geotechnical investigations conducted as part of precise alignment selection and engineering shall address the potential for contamination within planned excavations. Boring logs shall note and address any foreign materials encountered, as well as soils having odors or visible signs of potential contamination. Suspect materials shall be analyzed and further assessment conducted as appropriate.* Should dewatering operations be required for the project, water samples shall be analyzed to account for potential contaminants in ground water. The need for water treatment prior to discharge shall be evaluated as appropriate.* Any hazardous materials/wastes encountered during grading and construction activities shall be handled and disposed of in accordance with federal, state, and local hazardous materials/wastes regulations.*

f. Utility

Environmental Impacts	Utility impacts depends on the location and type of these facilities and the engineering design of the system. Prior to construction, it would be necessary to relocate or modify utilities which would conflict with at-grade and underground track, stations, and other ancillary facilities (S).
Mitigation Measures	The relocation and in-place support of utilities shall require coordination and careful design and construction phasing of the project. Each utility along the project alignment shall be evaluated in detail to determine the exact mitigation measure.*

TABLE 1-1 (continued)

	A process currently utilized in on-going LACTC light rail projects will be similarly applied. This process calls for an identification of all potential conflicts with existing utilities and their operators, and an evaluation of their impact during the preliminary engineering phase. These specific findings become the basis of a cooperative agreement whose goal is to identify necessary utility rearrangements and responsible parties, and specify a plan leading to the least interference to all concerned parties.*
Significance After Mitigation	Mitigation measures would reduce construction impacts to a level that is not significant.

NS = Not Significant Impact
S = Significant Impact
B = Beneficial Impact
* = Mitigation measures adopted by LACTC as part of the project

FOOTNOTES (TABLE 1-1)

1. Explanation of impact to City of Los Angeles's proposed Westchester Parkway.

2. Easements would be required for both alignments and not just east-side alignment as stated in Draft EIR.

3. Mitigation for Senior Citizen's Center proposed to reduce impacts.

4. Explanation of right-of-way requirements.

5. While a significant impact to Culver Boulevard was not identified. This mitigation measure was adopted by the LACTC as part of the project.

6. Complete mitigation measure statements provided from Draft EIR whereas previously they were summarized.

7. Project redesigned to eliminate any impacts to wetlands.

8. Mitigation measure for Ballona Creek deleted since new bridge crossing would be constructed by City of Los Angeles as part of widening Lincoln Boulevard to divided major highway status.

9. Summary rewritten to clarify impacts and mitigation measures to existing and future developments (those planned or proposed but without development permits).

10. Mitigation measures restated, whereas Draft EIR provided summary.

11. While catenary poles and wires are now being considered to provide power to the system, significant aesthetic impacts have not been identified to any existing land uses along the proposed alignments.

12. Loss of parking spaces at Westchester Recreation Center restated (previously identified in Land Use, Section 4.1).

13. Replacement parking mitigation added.

SECTION 2
PATRONAGE

Estimated future ridership (Year 2010) was developed by the Southern California Association of Governments (SCAG) working with LACTC staff. The forecasting model used was the regional LARTS model. The patronage figures shown in Table 2-1 are representative; actual patronage for a specific station site would vary. The table assumes the operation of the Blue, Red, and Green lines as well as lines along EIR Corridors. Further additions to the rail transit network would increase the patronage levels indicated below.

As indicated in Table 2-1, it is estimated (with an automated system) that the Coastal LRT - North Segment route will attract 10,095 daily boardings to LAX Lot C and an additional 4,088 daily boardings if the line continues to the Marina del Rey Station.

Mode of access to the Coastal Light Rail - North Segment stations is expected to be primarily from the following sources: bus/shuttle vans (55 percent on average); automobile (parking plus drop-off, about 34 percent); and walk-ons (about 11 percent).

TABLE 2-1

DAILY STATION BOARDINGS

Station	Unautomated[a]		Automated[b]	
	To Northside	To Lot C	To Culver Blvd.	To Lot C
Aviation	1975	1967	3087	2514
Century	857	822	1583	1361
LAX - Lot C	4075	4694	4799	6220
Westchester	1514	n/a	2487	n/a
Manchester	n/a	n/a	216	n/a
Jefferson	n/a	n/a	862	n/a
Marina Del Rey	n/a	n/a	1149	n/a
TOTAL BOARDINGS	**8421**	**7483**	**14,183**	**10,095**

a Only Norwalk to El Segundo plus phased North Coastal Line. Six-minute headway on branch lines. "Wye" connection included with through connection between North and South Coastal lines.

b North to El Segundo phases, plus phased North Coast Line. Four minute peak headways on branch lines.

c Adjustment factor (+2500) above SCAG projection to account for airport special generator characteristics.

Source: SCAG 1989 and LACTC 1989.

SECTION 3
COSTS

The cost estimates for the Coastal Light Rail Project - North Segment, excluding cost of publicly owned right-of-way are given in Table 3-1.

TABLE 3-1

PROJECT COSTS[a]
(in rounded millions)

SEGMENT	COST
INCREMENTAL COSTS	
I-105 Freeway - LAX Lot C	$ 88
LAX Lot C - Westchester Station	
A. South Side Alternative B. Median Alternative	$ 49[b]
Westchester Station	
A. East Side Alternative B. Median Alternative	$192
CUMULATIVE TOTALS	
I-105 to LAX Lot C Station	$88 million
I-105 to Westchester Station	$137 million
I-105 to Marina Del Rey Station	$329 million

a Cost estimates exclude costs of publicly owned right-of-way.
b Includes private right-of-way costs associated with widening Westchester Parkway, to be shared with the City of Los Angeles.

Source: Bechtel 1989 and LACTC 1989.

SECTION 4

SUMMARY EVALUATION OF ALTERNATIVE ALIGNMENTS

See Tables 4-1 and 4-2 for comparison of Westchester Parkway and Lincoln Boulevard alignment variations.

TABLE 4-1
SUMMARY EVALUATION OF ALTERNATIVE ALIGNMENTS
WESTCHESTER PARKWAY

Evaluation Area	Southside	Center Median
Land Use	The southside alignment would require approximately 10 to 15 additional feet of ROW than the center median alignment because it provides for additional right turn lanes.	The center median alignment would require 10 to 15 feet less than the southside alignment. The median alignment would require redesign of the proposed Westchester Parkway.
Circulation	Less impacts than center median alignment because southside alternative allows for future flexibility in redesign/reconfiguration of roadway and intersections and less visibility obstruction and pedestrian/vehicle conflicts due to placement of the columns on the southside of Westchester Parkway.	The center median alignment would affect Sepulveda Boulevard/Westchester Parkway because aerial structure columns would be located in the center of Westchester Parkway and would utilize some existing capacity. Aerial support columns would restrict traffic visibility for left-turn movements or intersections and would preclude future flexibility in redesign/reconfiguration of roadway and intersections. There is potential for pedestrian/vehicle conflicts if pedestrians attempt to cross street at locations other than signalized intersection.
Geologic and Hydrologic Resources	Similar Impacts for Both Alternatives	
Air Quality	Similar Impacts for Both Alternatives	
Biological Resources	Similar Impacts for Both Alternatives	
Noise and Vibration	Potential for greater noise and vibration impacts to existing and future uses along the southside of existing and proposed portion of Westchester Parkway. The LRT structure is approximately 10 feet from the property line on the southside of Westchester Parkway in the proposed Northside Development Area.	Noise and vibration levels generated by the center median alignment of the LRT will have less of an impact on existing and future uses along the southside of existing and proposed portions of Westchester Parkway. The LRT structure is approximately 100 feet north of the property line on Westchester Parkway in the proposed Northside Development area.
Population and Housing	Similar Impacts for Both Alternatives	

Evaluation Area	Southside	Center Median
Public Services		
a. Police	Similar Impacts for Both Alternatives	
b. Fire Protection	Similar Impacts for Both Alternatives	
c. Schools	Similar Impacts for Both Alternatives	
Risk of Upset	Similar Impacts for Both Alternatives	
Aesthetics	Similar Impacts for Both Alternatives	
Light & Glare/Shade & Shadow		
a. Light & Glare	Similar Impacts for Both Alternatives	
b. Shade &Shadow	Shadows from the Westchester Station would extend over an existing parking lot, a portion of Sepulveda Westway, vacant land, and a portion of the planned alignment of Westchester Parkway. Shadows from the transit structure would extend over 50 percent of the existing portion of Westchester Parkway between Sepulveda Eastway and Sepulveda Westway.	Shadows cast from the median station would extend over the westbound lanes of the planned alignment of Westchester Parkway and over existing vacant land. Shadows cast from the transit structure would extend over the westbound lane of existing and planned Westchester Parkway. These shadows would also extend onto a portion of two bank buildings north of Westchester Parkway and Sepulveda Eastway intersection, parking facilities, and vacant land.
Recreation	Similar Impacts for Both Alternatives	
Cultural Resources	Similar Impacts for Both Alternatives	
Energy	Similar Impacts for Both Alternatives	
Construction		
a. Land Use	Accessibility to existing businesses on the southside of Westchester Parkway will be more disruptive during the construction phase than the center median alignment.	Less impacts than southside alignment.

Evaluation Area		Southside	Center Median
b.	Traffic	Less impacts to circulation because more roadway would be available for through traffic with construction occurring on the southside of Westchester Parkway.	Greater impacts to circulation due to greater reduced width on Westchester Parkway with construction occurring in the median.
c.	Air Quality	Similar Impacts for Both Alternatives	
d.	Noise	Existing land uses located on the southside of Westchester Parkway will be exposed to greater noise levels during construction than with the median alignment due to the proximity of the construction activities.	Existing land uses located on the southside of Westchester Parkway will be exposed to lesser construction noise levels with the median alignment compared to the southside alignment due to the distance between the construction activities and the existing uses.
e.	Risk of Upset	Similar Impacts for Both Alternatives	
f.	Utilities	Similar Impacts for both Alternatives	

TABLE 4-2
SUMMARY EVALUATION OF ALTERNATIVE ALIGNMENTS
LINCOLN BOULEVARD

Evaluation Area	Eastside	Center Median
Land Use*	The eastside alignment will require about 12 feet of additional right-of-way for transit, which is about 18 feet less than what is required for the center median alignment.	The center median alignment of the LRT will require approximately 30 feet of right-of-way for transit, which is about 18 feet more than what is required for the eastside alignment.
Circulation	Less impacts than center median alternative because eastside alternative allows for future flexibility in redesign and reconfiguration of roadway and intersection and less visibility obstruction and pedestrian/vehicle conflicts due to the placement of the columns on the eastside of Lincoln Boulevard. The City of Los Angeles may implement its road widening program through developers as a condition for permit approval and in lieu of transit assessment fees. Timing and completion of road widening would thus tend to be incremental and uncertain. An alignment along the east side could proceed independent of the road widening program by running along the side within given setbacks.	Aerial support columns restrict traffic visibility for left-turn movements of intersections anbd. Preclude future flexibility in redesign/ reconfiguration of roadway and preclude intesections. There is potential for pedestrian/ vehicle conflicts if pedestrians attempt to cross street at locations other than signalized intersections. A center median alignment could result in temporary loss of roadway capacity if the LRT were built before the road widening was completed.
Geologic and Hydrologic Resources	Similar Impacts for Both Alternatives	
Air Quality	Similar Impacts for Both Alternatives	
Biological Resources	Similar Impacts for Both Alternatives	

* There are no definitive development plans and structures might be set back further.

Evaluation Area	Eastside	Center Median
Noise and Vibration	Slight potential for greater noise and vibration impacts at the Playa Vista Development along the eastside of Lincoln Boulevard due to proximity of the LRT structure to the property line. The structure will be located approximately 5-6 feet from the property line on the eastside of Lincoln Boulevard.	Noise and vibration levels generated by the center median alignment at the LRT will have less of an impact on future uses along the eastside of Lincoln Boulevard. The LRT structure will be located approximately 70 feet from the property line.
Population and Housing	Similar Impacts for Both Alternatives	
Public Services		
a. Police	Similar Impacts for Both Alternatives	
b. Fire Protection	Similar Impacts for Both Alternatives	
c. Schools	Similar Impacts for Both Alternatives	
Risk of Upset Similar Impacts for Both Alternatives		
Aesthetics	Greater visual impacts to future land uses on the eastside of Lincoln Boulevard because of proximity of the structure to the property line. The LRT structure will be located approximately 5-6 feet from the property line of the eastside of Lincoln Boulevard.	Less visual impacts to future land uses on eastside of Lincoln Boulevard because of the greater separation from the proposed Playa Vista Development property line. The LRT structure will be located approximately 70 feet from the property line.
Light & Glare/Shade & Shadow		
a. Light & Glare	Similar Impacts for Both Alternatives	

Evaluation Area	Eastside	Center Median
b. Shade & Shadow	The shadows from the station would extend over 100 percent of the northbound lanes of the planned alignment of Lincoln Boulevard, a portion of Jefferson Boulevard, and existing vacant land. Shadows from the transit structure would extend over existing vacant land, and a maximum of 50 percent of the Lincoln Boulevard planned alignment, and over portions of Jefferson Boulevard and Ballona Creek.	Shadows from the station would extend over 100 percent of the planned alignment of Lincoln Boulevard and on existing vacant land. Shadows from the transit structure would extend over 100 percent of the planned alignment of Lincoln Boulevard, a portion of Jefferson Boulevard, and on existing vacant land between Culver Boulevard and the planned portal located east of Hughes Terrace.
Recreation	Similar Impacts for Both Alternatives	
Cultural Resources	Similar Impacts for Both Alternatives	
Energy	Similar Impacts for Both Alternatives	
Construction		
a. Land Use	Similar Impacts to Existing and Permitted Land Uses for Both Alternatives	
b. Traffic	Less impacts to circulation because more roadway would be available for through traffic with construction occurring on the eastside of Lincoln Boulevard.	Greater impacts to circulation due to greater reduced width on Lincoln Boulevard with construction occurring in the median.
c. Air Quality	Similar Impacts for Both Alternatives	
d. Noise	Similar Impacts to Existing and Permitted Land Uses for Both Alternatives	
e. Risk of Upset	Similar Impacts for Both Alternatives	
f. Utilities	Similar Impacts for Both Alternatives	

SECTION 5
RESPONSES TO COMMENTS

The public review period for the DEIR commenced on January 30, 1989, and ended on March 15, 1989. A public hearing was held on February 23, 1989 at the Westchester Community Center. In addition, an open house was held February 16, 1989 at the same location to explain the project and answer questions.

During the course of the public review period, some 50 written communications were received: 1 from an elected official; 15 from public agencies; 4 from private organizations; and 30 from individuals. Some of the letters received raised a single issue or requested additional information. Others contained multiple comments or questions. In addition, 10 letters were submitted in complete support of the proposed Coastal Corridor Rail Transit Project - North Segment.

At the public hearing, 17 speakers testified (34 pages transcribed) before the hearing officer, a California Administrative Law Judge. A few of the speakers duplicated comments which had also been submitted in written form.

Comments have been organized into categories and are listed alphabetically, with the exception of "Miscellaneous" and "Corrections and Additions" which are at the end. Of all the comments (written and oral) received, Traffic/Circulation was the most frequently encountered category, with 15 comments on the subject. Other comment categories heard frequently were: Patronage - 12, Construction - 9, Route Preference - 8, Noise - 6, and Biology - 6.

TOPICAL ISSUE AREAS

1.0 AIR QUALITY

Comment 1.1: Please provide information on the effect that the daily emissions (both fugitive dust and equipment emissions) might have on the school children located one-quarter mile and one-half mile from the source of these emissions.
(Los Angeles Unified School District)

Response 1.1: Due to the project's distance to schools within the project vicinity (over 1000 feet), construction-related emissions will not affect the health of school children. Construction-related mitigation measures for air quality identified in Section 4.15 (page 4-131) are designed to minimize air quality impacts on adjacent uses.

Comment 1.2: Concerned about increased traffic due to rail line added to greater passenger volume at LAX and the Northside Airport Development and its impact on air quality.
(Sischo, C.)

Response 1.2: Please refer to pages 4-50 through 4-56 of the DEIR. Mobile emissions are based on future traffic volumes which include the Northside Development Project and Playa Vista Development. As indicated in the air quality analysis of the proposed project, the overall impacts anticipated to result from the construction and operation of the project are minor. However, mitigation measures discussed on page 4-56 will be implemented during the construction phase.

2.0 BIOLOGY

Comment 2.1: Concerned about the removal of the small pocket of wetlands adjacent to Teale Street at Lincoln Boulevard discussed on page 2-5 (Table 2-1) and in Section 4.5 (Biological Resources) on page 4-68.
(Councilwoman Galanter, State of California DOHS, State of California Department of Fish and Game, Cope D.).

Response 2.1: The alignment as shown in the DEIR assumed that the City of Los Angeles would widen Lincoln Boulevard keeping its centerline as it presently exists. Therefore, the proposed street widening was shown to encroach the wetland area to the west. However, the city can choose to widen on the eastside of Lincoln Boulevard only, which would minimize impacts to the wetlands. The project will either be in the median or on the eastside of Lincoln Boulevard with its exact location dependent on the location of the right-of-way provided by the City of Los Angeles.

Comment 2.2: Page 4-63 of the DEIR lists one endangered insect species and three endangered bird species present on or near the project. The DEIR also states that "the project is restricted in size and adequately separated from these sensitive receptors. Therefore, it should not affect these resources." Data to justify this statement is completely lacking, and needs to be included in the report.
(State of California Department of Health Services.)

Response 2.2: The project site is in the vicinity of Ballona Wetlands and Ballona Creek flood control channel. **California Least Terns** (Sterna antillarum browni) nest in Dockweiller State Beach and occasionally forage for fish in Ballona Creek flood control channel and Ballona Wetlands (Atwood and Minsky 1983). If implemented, the Coastal Corridor Rail Transit Project - North Segment would pass directly over Ballona Creek flood control channel, approximately 0.75 miles from Ballona Wetlands and approximately 2 miles from least tern nesting habitat.

Anticipated impacts to least tern populations using foraging habitats are noise emanating from rail use and increases in human activity associated with cumulative development in the vicinity of the rail project. These impacts will not affect the current status of the species and are not considered significant, as discussed below.

Currently, least tern forage in Ballona Creek flood control channel is only occasional. The proximity of this channel to industry and the generally poor water quality of the channel discourage its frequent use by most marine birds. Changes in noise associated with the rail project will not affect the use of the channel by least terns. Furthermore, nesting habitat for this species is approximately 2 miles from the site and will not be affected by rail activity.

As stated in the cumulative impacts section of the DEIR, (Section 5.2 - Related projects Adjacent to the Proposed Alignment, Playa Vista Development) the Playa Vista Development will encroach upon the Ballona Wetlands and may affect nesting habitat for least terns.

The **California brown pelican** (Pelecanus occidentalis californicus) may occasionally use Ballona Creek flood control channel and Ballona Wetlands for resting and foraging. This species nests on offshore islands, including several of the channel islands. The brown pelican primarily forages in near shore waters for surface feeding fish.

Currently, the incidence of brown pelicans foraging over the Ballona Creek flood control channel is infrequent. The proximity of this channel to industry and the generally poor water quality of the channel discourage its use. Changes in noise associated with the rail project will not affect the use of the channel by pelicans. Further, there is no potential nesting habitat for this species in the region. The project will not affect populations of brown pelicans.

Belding's savannah sparrow (Passerculus sandwichensis beldingi) are restricted to pickle weed marsh habitats. A small population of this species resides in Ballona Wetlands approximately 1 mile from the site. The rail project will not impact any potential habitat for this species and the distance from the project site creates a buffer from the indirect impacts of the rail project.

The Playa Vista Development will affect acreage within Ballona Wetlands and may affect nesting and foraging habitat for savannah sparrows (see DEIR cumulative impacts section, Section 5.2). This indirect impact should be addressed in the environmental documentation of the Playa Vista project.

The **El Segundo blue** (Euphilotes battoides allyni) occurs only on the El Segundo dunes at the western end of Los Angeles International Airport and sparingly in the Palos Verdes region. The larvae feed on sea cliff buckwheat (Eriogonum parvifolium) and mature to adulthood during July and August (Emmel and Emmel 1973).

Part of the rail line passes along the northeast end of Los Angeles International Airport where it is approximately 2 miles northeast of the main population of the El

Segundo blue. Since the rail line is not near the colony, neither rail construction nor operation will disturb the butterflies or their foodplants.

Nagon et al. (1981) state that they have searched the Ballona Wetlands area for the butterfly but have never found it, though a small population of the food plant does occur in the vicinity. It is probable that the butterfly does not occur in the Ballona Wetlands area, therefore, construction and operation of the rail will not affect the insect in that region.

Comment 2.3: On page 4-66 the report states that a number of sensitive raptor species are present in the ruderal fields adjacent to the project corridor. There is no mention of possible impact to these species in the subject report.
(DOHS)

Response 2.3: Sensitive raptor species foraging in the ruderal fields adjacent to the northwestern segment of the alignment will not be affected by the project. No foraging or nesting habitat is proposed to be removed by the project, and indirect impacts such as noise will not be significantly increased over current levels.

According to the cumulative impacts section of the DEIR (Section 5.2) the Playa Vista Development will lead to the removal of raptor foraging habitat in these fields. These impacts should be addressed in the environmental documentation of the Playa Vista project.

Comment 2.4: On page 4-66 the Ballona Creek Wetlands, the Westchester Bluffs, and the El Segundo dunes are listed as sensitive habitats. However, there is no description in the report of how this project will impact these sensitive habitats.
(DOHS)

Response 2.4: The sensitive habitats listed on Exhibit 4-7 are separated by substantial distance from the rail project. No significant removal of habitat is proposed from any of these areas. Furthermore, the project is separated in distance from these areas and indirect impacts will not affect these areas. Sensitive species using these habitats will not be affected by the project.

Comment 2.5: There must be assurance that flora and fauna at the sensitive resources, Ballona Creek Wetlands and Westchester Bluffs will not be adversely affected. (Downing, P., Cope, D., Crockett, M.)

Response 2.5: Please refer to Response 2.1 and 2.4.

3.0 CONSTRUCTION

Comment 3.1: The impacts of any long term detours required during construction need to be more fully analyzed and addressed for critical intersections, and segments of adjacent streets. (LADOT)

Response 3.1: The exact location of proposed long term lane closures or traffic diversions which may be necessary due to light rail construction are not known at this time. Construction impacts shall be fully addressed and appropriate plans shall be developed to handle traffic detours during later design phases of the project. As preliminary design of the project proceeds, LACTC will work with the City of Los Angeles Department of Transportation to develop mitigation plans for all potential detour related impacts. Whenever necessary, the LACTC will also work with affected transit providers.

Comment 3.2: If the final alignment of the rail transit line is parallel to and located easterly of Vicksburg Avenue, as shown in Exhibit 4-1 of the DEIR, then it appears that it would not conflict with the proposed 96th Street Bridge over Sepulveda Boulevard. However, a careful study should be made prior to finalizing the alignment. Potential impacts to the 96th Street Bridge over Sepulveda Boulevard should be discussed in Section 5.2 of the Final EIR, under related projects. Design coordination of the two projects may be needed. (City of Los Angeles Department of Public Works)

Response 3.2: Comment noted. The proposed 96th Street Bridge is hereby included as a related project in Section 5.2 of the Final EIR. Staff will coordinate with the City of Los Angeles Department of Public Works during the design phase of the project.

Comment 3.3: The Final EIR should discuss the impacts of the project on three existing (North Outfall Sewer, Central Outfall Sewer and North Central Outfall Sewer) and one proposed (North Replacement Sewer) major sewers which the project will pass over or under. (City of Los Angeles Department of Public Works)

Response 3.3: Project impacts on existing and proposed sewer lines are discussed in Construction Impacts (Section 4.15) under Utility Impacts of the DEIR. Mitigation measures include coordination with the affected agencies and careful design and construction phasing of the project (see page 4-135).

Comment 3.4: Construction on Lincoln Boulevard and connection with the I-105 transitway would require encroachment permits from Caltrans. To reduce the possibility of delays during permit processing and to insure compatibility with the I-105 transitway construction, plans should be submitted for review to this office as early as possible in the planning stage. (Caltrans)

Response 3.4: Comment noted. Coordination with Caltrans and other affected agencies will occur during the design phase.

Comment 3.5: Our home faces west on Campion Drive and the elevated light rail will be directly in front of our homes on the 7900 block of Campion Drive. We are concerned about the construction impacts of the light rail facility. (Neill, E.)

Response 3.5: The structure will be in a subway facility in the vicinity of your home. However, residences in this area will be subjected to short-term noise impacts during the construction phase. As stated on page 4-133 of the DEIR, contractors must comply with local noise ordinances. Page 4-131 states that fugitive dust emissions during the construction phase will be controlled with regular watering or other airborne dust reduction measures in compliance with SCAQMD Rule 403.

Comment 3.6: Every effort should be made to minimize the impact of construction on traffic and businesses along Lincoln Boulevard. (Cope, D.)

Response 3.6: Section 4.15, Construction Impacts, addresses impacts on traffic and businesses along Lincoln Boulevard and discusses mitigation measures to reduce these impacts.

Comment 3.7: The project, as described, does not detail the work proposed for streambed alteration activity. The project sponsor must identify specific streambed alterations and flood control structures in order for the Department of Fish and Game to properly comment on this document. The applicant should be aware that if mitigation measures are not provided in this document, the Department may require such mitigation measures through jurisdiction established under Fish and Game Sections 1601-1603. (State of California Department of Fish and Game)

Response 3.7: The proposed project will not require any streambed alteration.

Comment 3.8: Diversion, obstruction of the natural flow, or changes in the bed channel, or bank of any river, stream, or lake will require notification (with fee) and the subsequent agreement must be completed prior to initiating any such changes. Notification should be made after the project is approved by the lead agency. (State of California Department of Fish and Game)

Response 3.8: The proposed project will not require any diversion, obstruction of the natural flow, or changes in the bed channel, or bank of any river, stream or lake.

Comment 3.9: Send construction detour plans to the School District prior to the start of construction. Ample time should be allowed for the District to review and provide input to these detour plans. The District will also have to provide adequate notice to students of any temporary alternate District bus stops. (Los Angeles Unified School District)

Response 3.9: Construction of the proposed project will not impede access to schools within the project vicinity because no roadways will be completely closed during project construction. The LACTC will notify the District if District bus stops along the alignment will be impacted during the construction phase. The closest schools to the project alignment are located more than 1,000 feet from the project alignment and would not experience adverse increases over existing noise levels during project construction. The District has not identified any potentially blocked pedestrian routes. If prior to construction an impacted pedestrian route is identified, LACTC will work with the District to identify alternative routes.

4.0 CULTURAL IMPACTS/HISTORIC PROPERTY

Comment 4.1: Please note that this project may have some affect on two Historic-Cultural Monuments (HCM). The Loyola Theater and Hangar No. 1, HCM 259 and HCM 44 respectively, are both near the rail line. (City of Los Angeles Cultural Affairs Department, P. Downing)

Response 4.1 As noted on page 4-116 and indicated on Exhibit 4-15 of the DEIR, no environmental impacts are anticipated to either Hangar No. 1 Building or the Loyola Theater. They are at least a quarter-mile from the proposed alignment and not exposed to adverse noise, vibration, air quality or visual impacts.

5.0 ENERGY

Comment 5.1: Table 4-29 of the DEIR states that the projected power consumption of the project will be 172,824 Kwh per day. If this assumption is wrong, what will be the impact? (Downing, P.)

Response 5.1: The calculations are based on the best available information and assumed to be reasonable projections. However, if the projected power consumption of the project exceeds the estimated amount discussed in the DEIR, additional power is available from the LADWP.

6.0 GEOLOGIC RESOURCES

Comment 6.1: The State of California Department of Conservation's Division of Mines And Geology recommends that detailed geotechnical investigation be completed before the Final EIR is prepared. (The Resources Agency of California)

Response 6.1: The Initial Alternative Evaluation Report (IAER) and the DEIR discuss geotechnical conditions based on research of existing data in the project area and concludes that design can adequately deal with any geotechnical seismic problems. It is customary on rail and highway projects to proceed into preliminary design with the adopted route prior to doing field geotechnical exploration and testing. The preferred alignment would then be selected and sufficient preliminary alignment and structural engineering accomplished to determine appropriate locations for boring activities.

7.0 HAZARDOUS MATERIALS

Comment 7.1: Specification should be made as to which regulatory and health officials were contacted and which documents were reviewed to determine if a complete records search was performed. (California Department of Health Services)

Response 7.1: The regulatory and health officials contacted for the hazardous materials assessment are included in Section 10.2, Persons and Departments Consulted and the documents reviewed for the assessment are included in Section 10.3, References. The full report also lists all the above information and is on file with the LACTC. (California Department of Health Services)

Comment 7.2: The DEIR should explain why Ogden Allied was not found to be problematic and should reference the preliminary assessment report. (State of California Department of Health Services)

Response 7.2: Further investigation and discussion with William Wren of EPA Region 9 on May 2, 1989 indicated that Ogden Allied was not officially on any CERCLIS List for Region 9 nor do they have any files for the site.

Comment 7.3: A Brief summary of the Hughes Aircraft Facility should be included. Hughes Aircraft is also listed in the California Bond Expenditure Plan and is near the project alignment. (State of California Department of Health Services)

Response 7.3: Hughes Helicopters, Inc., now called McDonnell Douglas Helicopter Company, covers an area of approximately 120 acres in Culver City, California. The Hughes site is located east of Lincoln Boulevard and south of Jefferson Boulevard. The site is identified on both the CERCLIS list for Region 9 and in the California Bond Expenditure Plan.

The Regional Water Quality Control Board (RWQCB) is the lead agency for Hughes site. Mr. Elijah Hill, a Water Quality Control Engineer with RWQCB, indicated the site is currently undergoing soil and groundwater remediation. Mr. Hill indicated the contamination is limited to the eastern portion of the site and the flow of contaminants is away from Lincoln Boulevard.

Comment 7.4: If hazardous waste is encountered during construction, assessment and possible mitigation will be necessary pursuant to the Health and Safety Code, Article 5, Section 25355.5. (State of California Department of Health Services)

Response 7.4: As noted in Section 4.15 under Risk of Upset Mitigation Measures (page 4-134 of the DEIR), any hazardous materials/wastes encountered during grading or construction activities shall be handled and disposed of in accordance with federal, state, and local hazardous materials/wastes regulations.

8.0 NOISE

Comment 8.1: Noise impacts may be substantial in the area of the Loyola Village Elementary School due to the portal, descending aerial alignment, and station traffic. Noise in the vicinity of the 98th Street Elementary School may be substantial due to the aerial alignment. (Los Angeles Unified School District)

Response 8.1: Both the Loyola Village and the 98th Street Elementary Schools are located more than a 1,000 feet from the project alignment and screened by numerous intervening structures. Given the distance and barriers between the school properties and the project alignment, the schools would not be affected by noise due to project implementation.

Comment 8.2: Sound barriers and special landscaping to mitigate the impact on residential areas should be erected especially near Westchester Parkway/Sepulveda Eastway and Lincoln/Loyola Boulevard intersections. (Cope, D., Saunders, J., Crockett, M.)

Response 8.2: The results of the systemwide noise exposure analysis are provided in Table 4-20 (page 4-79) of the DEIR. The noise impact exposure impact is given by the change in future CNEL resulting from project implementation. In cases where the increase is less than 3 dB, the impact is not significant, since a 3 dB increase is the threshold where the average human ear can detect change. Where the increase is 3 to 5 dB, the noise impact may be significant. An increase in CNEL of more than 5 dB is generally considered to be adverse. Table 4-20 indicates there are no areas along the alignment where the increase in CNEL is expected to reach 3dB.

Therefore, project implementation would not significantly affect noise sensitive land uses and no barriers would be required.

Comment 8.3: Provide information on maximum noise levels on and across Lincoln Boulevard at the Manchester Station. (Law, William)

Response 8.3: Please refer to Table 4-15 on page 4-74 of the DEIR. Location 3 (Interval 3) indicates the maximum noise monitored at the proposed Manchester Station. Table 4-20 indicates there will not be a significant noise increase at this station after project implementation.

Comment 8.4: Discuss impact of continuous noise of rail line added to the airport noise and Northside Development noise. (Sischo, C.)

Response 8.4: Please refer to pages 4-75 - 4-80 of the DEIR. Table 4-19 provides a comparison of transportation noise impacts with Table 4-20 comparing existing and future noise levels. Aircraft noise dominates much of the alignment with the majority of the alignment south of Manchester Avenue located within the 70 CNEL noise contour from Los Angeles International Airport. Table 4-16 provides a comparison of the project with other transportation modes. The noise generated by the LRT is comparable to a city bus.

Comment 8.5: Concerned about the noise impact of the LRT on my residence located at 8957 Kittyhawk Avenue. (Beck, Mr.)

Response 8.5: The near rail of the LRT alignment is more than 300 feet from the nearest residential property at the corner of Kittyhawk and Westchester Parkway. At this distance, the CNEL due to aircraft operations at LAX is more than 10 dB greater than the projected LRT CNEL. This indicated no noise impact on a 24-hour exposure basis. For individual train passbys, the maximum A-weighted sound level will be about the same as a single passenger car passby along Kittyhawk at 30 miles per hour. As a result, no adverse impacts are expected in this area.

Comment 8.6: Only a Shell Service Station separates our home from Lincoln at 83rd Street, if trucks caused vibrations in "early days" (before the 405 Freeway) what may we expect from the subway so near? (Oakley, B. & G)

Response 8.6: As stated on page 4-81 of the DEIR, no vibration impacts are expected. The impact assessment was made based on measurements of the San Diego Trolley LRT. The projections show that vibration levels will be well below the "No Impact - Any Condition" curve shown in Appendix E.

9.0 PATRONAGE

Comment 9.1: Discuss patronage projections for each of the stations and costs associated with each of the various options considered. (L.A. City Planning, City of Los Angeles, Southern California Rapid Transit District, Department of Airports, County of Los Angeles Department of Beaches and Harbors, Downing, P., Neill, E., Oakley, B. & G., Thomas, L.)

Response 9.2: Please refer to Section 1 of the Final Environmental Impact Report.

10.0 POPULATION AND HOUSING

Comment 10.1: If the population increase between 1980 and 1986 was less than 10% and we only expect 2.6 to 16.8% increase by 2010, where's the problem? (Downing, P.)

Response 10.1: While population increases in certain areas within Los Angeles County are projected at 2.6 percent, it is projected at 16.8 percent in the project area. Housing growth is projected at 42.2 percent, almost twice the 28.5 percent growth projected county-wide. In addition, results of the studies leading to the LACTC's identification of rail transit as a solution were derived using assumptions and methodologies deemed adequate for the purpose and currently used by agencies responsible for such studies. The Proposition A ordinance requires that a rail transit line serve this area.

11.0 PUBLIC SERVICES

Comment 11.1: The Pacific area has a very responsive police force and a crime rate lower than the city wide average. We must maintain this level of service. (Downing, P.)

Response 11.1: Please refer to the police and law enforcement mitigation measures proposed on page 4-96 and 4-97 of the DEIR.

Comment 11.2: Page 8 of the Executive Summary states there will be no impact on population and housing. The system will bring more people into the area and more police and fire protection will be required. (Grammitico, S)

Response 11.2: Please refer to pages 4-95 to 4-98 of the DEIR which discusses the impacts to police and fire protection in the project area. Mitigation measures discussed on these pages would diminish the impacts to a less than significant level.

12.0 RAIL COORDINATION

Comment 12.1: My client has completed plans and a rendering for an office development on the block bounded by Sepulveda, 92nd Street, Sepulveda Westway, and Westchester Parkway. Mr. Drollinger is contemplating the possibility of proposing the development of his property in concert with the construction of the rail station. While not necessarily a joint development, such a complementary and simultaneous development would have its own unique environmental impacts. In such a coordinated, side-by-side development, the issues of noise, visual aesthetics, vibration, and again, vehicular and pedestrian traffic should be considered. (Ryavec, M.)

Response 12.1: The LACTC routinely considers opportunities for "joint development" as well as coordination of development with affected property owners. While Drollinger-proposed development plans are not addressed in this EIR, should their final plans be formally submitted to LACTC, the agency will evaluate the opportunities for joint development.

Comment 12.2: I own two residential apartment buildings located at 8050 and 8100 Lincoln Boulevard. During the construction phase of the project what arrangements would be made to reimburse me for any loss of rent due to tenants who vacate because of the construction or loss of rent because of the difficulty of renting any vacant apartments during the construction? (Romeo, P.)

Response 12.2: Reimbursement for loss of rent to the property owner during construction is not proposed as part of the project. However, LACTC will provide tenants temporary hotel rooms during nights in which construction noise exceeds City of Los Angeles's noise ordinance criteria.

13.0 ROUTE PREFERENCE

Comment 13.1: The City of Los Angeles Department of Transportation (LADOT) supports the east-side alignment along Lincoln Boulevard in Playa Vista. (Los Angeles Department of Transportation (LADOT)

Response 13.1: Comment Noted.

Comment 13.2: During the circulation period for the Notice of Preparation (NOP) concerning the DEIR, Playa Vista submitted three letters (September 30, 1988, October 7, 1988 and October 25, 1988) requesting that the DEIR present impact analyses of the alternate "median" and "east side" assessments relative to each of the impact issues identified in the initial study. In addition, we requested that the comparative analyses be prepared regarding five general environmental issues not cited in the Initial Study, including physical impact on adjacent development opportunities, maintenance of light rail and adjoining facilities, user access and convenience, user health and safety, and economic impacts upon light rail construction costs and adjoining real estate values. (Latham & Watkins)

Response 13.2: The DEIR included comparative discussions in the Section 4.1 (Land Use), Section 4.2 (Traffic), Section 4.6 (Noise and Vibration), Section 4.10 (Aesthetics), Section 4.11 (Light and Glare/Shade and Shadow), and Section 5.3 (Cumulative Impacts). Section 4, Table 4-2 of the Final EIR provides a comparison of environmental impacts in a table format.

Comment 13.3: Playa Vista requested that the "east side" alignment specifically be evaluated with respect to 23 specific impacts identified in Playa Vista's last correspondence. These impacts include:

1. Noise impacts on adjacent residential and commercial buildings and public spaces.

2. View blockage from adjacent residential and commercial buildings and public spaces.

3. View blockage of buildings and public spaces from adjacent roadways.

4. Mitigation impacts on adjacent residential and commercial buildings and public spaces.

5. Interference with construction of buildings and public spaces.

6. Interference with relocation of the existing oil line located adjacent to Lincoln Boulevard.

7. Interference with access for maintenance and repair of each oil line.

8. Interference with access for maintenance and repair of adjacent residential and commercial buildings.

9. Interference with the location and arrangement of street lighting.

10. Interference with landscaping along right-of-way and adjacent property.

11. Elimination of street trees along the eastern side of Lincoln Boulevard.

12. Interference with access to residential and commercial buildings and public spaces.

13. Interference with fire protection and emergency vehicle access to residential and commercial buildings.

14. Impact on the property line, building line and facade alignment as required for wider light rail structures at station locations and transition alignment of the tracks.

15. Interference with the location and visibility of traffic control signalization and safety devices at vehicular and pedestrian crossings.

16. Blockage of light to adjacent residential and commercial buildings.

17. Diminished utility of building areas adjacent to the transit.

18. Diminished value of building areas to the transit structure.

19. Impact of additional shoring protection and reinforcement required for construction adjacent to transit structure.

20. Additional coordination of construction, sequencing and equipment access for construction adjacent to the transit structure.

21. Additional sound proofing and vibration dampening necessary for residential and commercial building proximate to the transit structure.

22. Interference with the location of curb cuts, driveways and stacking and turning lanes accessing Playa Vista's property.

23. Adverse aesthetic impact on the quality of Lincoln Boulevard which has been proposed as a major urban boulevard with generously landscaped pathways and special lighting. (Latham & Watkins)

Response 13.3:

1. Please refer to Section 4.6.2 (Noise Impacts) pages 4-76 through 4-79 of the DEIR.

2. The DEIR addressed impact on existing adjacent residential and commercial buildings and public spaces in Section 4.10, pages 4-100 to 4-104. Exhibits 4-12 and 4-13 provide line drawings with approximate dimension indicating size and mass of proposed project for both median and eastside alignments along Lincoln Boulevard. Since circulation of the Draft EIR, an overhead catenary power supply has been considered as an alternative to power by a third rail. This would introduce overhead poles and wires along the aerial structure. However, no existing or permitted developments have been identified that would be exposed to significant visual impacts.

3. Please refer to mitigation measures proposed on pages 4-104 to 4-105. In addition to these mitigation measures, staff shall consider existing development at the time of construction and coordinate with concerned agencies to minimize any adverse impacts or develop mitigation measure during the preliminary engineering/design phase.

4. Please refer to mitigation measures proposed on pages 4-104 and 4-105 of the DEIR.

5. Please refer to impacts and mitigation measures discussed on pages 4-125 to 4-36 of the DEIR.

6. Please refer to construction impacts and mitigation measures on pages 4-134 and 4-135 of the DEIR. The relocation and in-place support of utilities will require coordination and careful design and construction phasing of the project. Each utility along the project alignment will have to be evaluated in detail to determine the exact mitigation measures required.

7. Please refer to Response #6.

8. Please refer to Section 4.15 (Construction Impacts). Preliminary engineering/design will consider existing and known future development in the area.

9. Please refer to Response #6.

10. Please refer to mitigation measures on page 4-104 and 4-105 of the DEIR.

11. Please refer to Section 4.5 (Biological Resources) mitigation measures on page 4-69 of the DEIR which states: "Where existing landscaping must be removed, new landscaping shall be planted as specified in an established landscaping plan."

12. Section 4.1 (Land Use) discussed project impacts on access to existing development and sufficiently acknowledged the Playa Vista Development to the degree the specific plans are known.

13. Please refer to mitigation measures proposed on page 4-98 for fire protection purposes.

14. Please refer to Section 4.10, Exhibit 4-13 and Appendix B of the DEIR.

15. All LRT structures will be designed to ensure adequate sight distance is maintained and traffic control devices are free of obstruction per City of Los Angeles Department of Transportation standards.

16. Please refer to Section 4.11 (Light and Glare/Shade and Shadow) of the DEIR.

17. As a result of the light rail system, the density and orientation of buildings located close to the rail may need to be re-evaluated. To date, however, specific site plans have not been approved; thus, the issue of "diminished utility" cannot be directly addressed.

18. Please see response #17 which also applies to "diminished value."

19. Construction adjacent to an existing transit structure would be the same as for construction of any new facility adjacent to existing facilities. LACTC staff will review the design of the developer. If impacts are identified, coordination will be initiated to determine appropriate actions.

20. Please refer to Section 4.15 (Construction Impacts) of the DEIR.

21. Please refer to Response 13.3:1. The noise analysis conducted for the proposed project indicated no additional noise mitigation measures required at this location beyond those identified on pages 4-82 and 4-83 of the DEIR. However, these mitigation measures would only be required if development approvals are secured prior to selection of an alignment and project approval.

22. The DEIR discussed the project in relationship to Playa Vista recognizing that an EIR has not been certified nor a plan approved for Playa Vista development. Coordination with all concerned agencies in the future if both projects are approved would occur during preliminary engineering and design phase.

23. Impacts on aesthetics and mitigation measures were discussed in Section 4.10 of the DEIR. Some adjustments to previously held concepts of development and design may be necessary but efforts to minimize adverse impacts will be actively pursued once more specific plans both for the rail project and the Playa Vista development are known.

Comment 13.4: Why was the Lincoln Boulevard alignment chosen? A direct route to Westwood via Sepulveda Boulevard would more effectively serve commuters, airport passengers and general shopping trips. (L.A. City Planning Dept., Councilwoman Galanter, Sischo, C., Sischo, D.)

Response 13.4: In November 1980, the voters of Los Angeles County passed Proposition A, an LACTC sponsored measure which raised the sales tax in the county by a half-cent to improve public transportation. Subsequently, corridors on the Proposition A map were evaluated in order to identify high priority rail lines for development. In 1983, the LACTC selected the Coastal Corridor as one of its high priority corridors for rail construction. In October 1983, after evaluating several route options along this corridor (including the Sepulveda alignment), the LACTC adopted the Lincoln Boulevard alignment. This decision was made in cooperation with the City of Los Angeles Departments of Planning and Transportation. The L.A. City Community Plan adopted in 1985 shows the route on Lincoln Boulevard.

The decision to adopt the Lincoln Boulevard alignment resulted from a long process of joint deliberations with the city, including endorsements by the City Council. It was subsequently incorporated by the City Council into a number of official planning documents. In 1984 a route refinement study of this corridor was undertaken by LACTC. The report summarizing the results was published in December 1984 by LACTC entitled Coast Route Refinement Study, Century Freeway to Marina Area. The rail alignment that resulted from this study was incorporated into the Coastal Transportation Corridor Specific Plan for the purposes of reserving the physical requirements for the route. Since this route had been formally designated as the selected transit corridor, our Notice of Preparation of an EIR reflected the Lincoln Boulevard alignment and the substantial planning work that had already been completed and approved.

In a September 16, 1988 letter, Councilwoman Ruth Galanter requested that the Commission study a Sepulveda Boulevard alignment to Westwood in its Coastal Corridor Rail Transit Project - North Segment EIR. Subsequently, LACTC staff met with the Councilwoman's staff to discuss the issue. In response to the Councilwoman's request, the LACTC prepared a preliminary technical analysis of this alternative to identify some of the engineering, cost and environmental issues associated with building the Sepulveda Boulevard alignment (see Appendix A).

Extending the Sepulveda line to Westwood would be far more costly than the current study limits.

The primary drawback of the Sepulveda alignment is the disruption to the Westchester Business District. On an order of magnitude cost basis, both alignments are approximately the same between Aviation/Imperial and Culver/Lincoln or Sepulveda/Jefferson. However, it is unclear at this point how or if the alignment can continue north within the San Diego Freeway right-of-way, especially through the Marina Freeway interchange. This area is replete with columns which the subway would have to weave through. In any case, continuing north under the freeway would be very costly. LACTC staff recommended that the Sepulveda Boulevard alignment not be pursued in the EIR because much further work would be needed to refine the route, which would substantially delay the EIR process.

As discussed on page 3-10 of the DEIR, the construction of the Coastal Corridor Rail Transit Project - North Segment can occur in phases. Termination of the line at Lot C would allow additional time to study the Sepulveda Route before committing to the Westchester Parkway/Lincoln Boulevard route.

Comment 13.5: We request that the EIR address the potential negative effects on the Westchester community of terminating Phase One construction of the North Segment in Lot C, rather than at a station located in the Westchester Business District. We support extension of the line to Westchester community. (Ryavec, M.)

Response 13.5: Phased development to Lot C would not preclude light rail in the Westchester community and would not cause negative effects to the Westchester community. Extension to the Westchester Station would better serve the Westchester Business District but may preclude use of the Sepulveda route. Determining the financial benefit of the phasing alternatives is beyond the scope of this EIR.

Comment 13.6: Why is the chosen rail alternative directed around, but not into LAX? (Falick A., Moser, P., Hunter, B.)

Response 13.6: An alignment to directly serve LAX and provide a LAX Terminal Station was examined in the Initial Alternatives Evaluation Report prepared in

1980. The LAX alignment is also discussed in Section 6.2 of the DEIR. Please refer to pages 6-2 to 6-4 of the DEIR which indicates significant environmental impacts associated with this alignment.

Comment 13.7: The North Segment Rail Transit Project should end at Lot C (Blackaller, C.)

Response 13.7: Comment noted. Please refer to Section 3.6 of the DEIR which discusses phased development of the project with the first phase extending to LAX Lot C.

Comment 13.8: Termination of the project at Lot C would be detrimental to the overall project and especially the businesses in the Westchester community. (Drollinger, H.)

Response 13.8: Comment noted. Please refer to Comment 13.5.

14.0 ROUTE PURPOSE

Comment 14.1: Define the purpose of the route and the transportation problem it is designed to address. The project description should explain more fully the population growth and traffic area problems to be targeted. (L.A. City Planning, County of Los Angeles Department of Beaches and Harbors, Coalition for Rapid Transit, Downing, P.; Thomas, L.; Beck)

Response 14.1: The objectives of the project are highlighted on pages 3-1 and 3-2 of the DEIR. The primary purpose of the project is to provide an alternative transit mode for commuters to their work place. As indicated in attached revised Table 4-5, six major intersections along the proposed alignment are currently at Level of Service (LOS) C (light congestion) or D (congestion on critical approaches, but intersection functions). However, by the year 2010, all six intersections will be at LOS F (total breakdown with stop and go operation) except Century Boulevard and Airport Boulevard which will be at LOS D (severe congestion with some long-standing lines on critical approaches). Substantial increases in travel times will result from this congestion. The proposed project will provide an alternative for the commuter along with reducing congestion on roadways and is also part of the overall regional system development of rail transit.

TABLE 4-5

EXISTING AND YEAR 2010 VOLUME/CAPACITY
RATIO AND LEVEL OF SERVICE

Intersection	Existing			Year 2010 Base Case			Year 2010 with Project		
	Period	V/C	LOS	Period	V/C	LOS	Period	V/C	LOS
Century Blvd./ Airport Blvd.	AM	0.73	C	AM	0.81	D	AM	0.83	D
	PM	0.82	D	PM	0.91	E	PM	0.93	E
Sepulveda Blvd./ Westchester Pkwy.	AM	0.68	B	AM	1.17	F	AM	1.22	F
	PM	0.55	A	PM	1.60	F	PM	1.66	F
Lincoln Blvd./ Manchester Ave.	AM	0.74	C	AM	1.11	F	AM	1.11	F
	PM	0.93	E	PM	1.39	F	PM	1.39	F
Lincoln Blvd./ Jefferson Blvd.	AM	0.81	D	AM	1.22	F	AM	1.22	F
	PM	0.94	E	PM	1.40	F	PM	1.40	F
Culver Blvd./ Marina Fwy. EB	AM	0.86	D	AM	1.11	F	AM	1.12	F
	PM	0.88	D	PM	1.14	F	PM	1.15	F
Culver Blvd./ Marina Fwy. WB	AM	0.84	D	AM	1.09	F	AM	1.10	F
	PM	1.11	F	PM	1.45	F	PM	1.47	F

15.0 SAFETY

Comment 15.1: Safety is the primary consideration in planning how the project will impact the School District. Provide a safe route that school children can take between Loyola Village Elementary School and the Westchester Recreation Center. Include safety factors to protect school children from potentially dangerous situations arising from project implementation for children attending nearby schools. (Los Angeles Unified School District)

Response 15.1: A traffic signal is currently being installed at the intersection of La Tijera Boulevard and Lincoln Boulevard. Signalization at this intersection will provide a safe route across Lincoln Boulevard to the Westchester Recreation Center. Rail transit operations would not add significantly to traffic congestion, nor would they contribute to increased danger to school children because of the safety features which are included in project design and discussed on pages 4-98 and 4-99 of

the DEIR. The presence of the light rail is not expected to impede the effective operation of school transportation services.

Comment 15.2: We stress the importance of security at all stations and urge the best use of the best design possible to construct stations which will be pleasant and secure to use and maintain. (Saunders, J.)

Response 15.2: Public safety has been an important issue in the development of the project and a number of security features have been incorporated, including closed-circuit television at the stations, alarm and telephone systems in both the stations and vehicles, deployment of transit police and security guards, and participation of other public safety jurisdictions.

16.0 SOCIOECONOMICS

Comment 16.1: A discussion of the project's social and economic impacts should be included in the FEIR. Of interest are the general social groups benefiting or harmed by the project. The Department also recommends some investigation into the impacts of the system on the surrounding neighborhood, and impacts the system will have on existing and planned community cohesion. For example, it is important to know changes in travel patterns resulting from the project as well as the impacts on beach accessibility. (L.A. City Planning Department)

Response 16.2: Social and economic impacts are discussed on pages 4-90 and 4-91 of the DEIR. The social groups benefiting from the project are commuters who will be provided with an alternative transportation mode. No social groups have been identified that will be harmed by the project. Since the project is in subway configuration from north of Manchester Avenue to the bluffs, the project will not disrupt neighborhood cohesion. There are no other locations where residential uses would be bisected by the project.

The project will not significantly change travel patterns since the project does not include any at-grade road crossings that would disrupt existing traffic flows. The project does provide an alternative transit mode for beach accessibility to Marina del Rey and Playa del Rey assuming interconnecting bus service is established.

17.0 TRANSPORTATION AND CIRCULATION

Comment 17.1: With respect to cut-and-cover on Lincoln Boulevard, the LADOT feels it would severely impair traffic circulation, and seriously impact adjacent land uses. Lincoln Boulevard is the only major north-south thoroughfare in the area, with an average daily traffic in excess of 50,000 vehicles. Given these conditions, tunnel boring appears to be the only viable and realistic option for construction of the subway section.

LADOT is also concerned about the proposed northerly portal being located inside the existing curbline on Lincoln Boulevard, as stated on page 4-28 of the DEIR. More detailed information and illustration is needed for adequate review of this concept, since it has the potential of severely impacting the street capacity. Finally, the proposed restriping of Lincoln Boulevard in the Playa Vista area, as depicted in Appendix B (Sheet 20), does not clearly demonstrate how left turn movements could be made with the median alignment. Also, the total right-of-way of 136 feet shown in the drawing is incorrect, the correct width is 134 feet. (LADOT)

Response 17.1: The DEIR addressed cut-and-cover impacts and provided mitigation measures to reduce the associated impacts in Section 4.2 (Traffic and Circulation), page 4-28, and 4.15 (Construction Impacts), pages 4-128 and 4-129 of the DEIR. The north portal would be located inside the existing curb line on Lincoln Boulevard and would therefore impact existing roadway capacity if Lincoln Boulevard is not widened to a Super Major Highway status as currently planned. However, any portal-related impacts would be avoided under the proposed plan to widen Lincoln Boulevard, which locates the portal entirely within an expanded roadway median. If the portal is incorporated into an expanded Lincoln Boulevard as a result of the Playa Vista project, potential impacts would be eliminated as no roadway capacity would be lost due to portal location. It is hereby incorporated into the FEIR that the total right-of-way for Lincoln Boulevard is 134 feet.

Comment 17.2: Will reduction of roadway along Lincoln Boulevard impact traffic at the Manchester Station, the intersection of Lincoln Boulevard and Manchester Boulevard, parking space at the park and municipal building? (Sischo, C.)

Response 17.2: Please refer to page 4-26 of the DEIR which discusses traffic/circulation impacts at the Lincoln Boulevard/Manchester Avenue and the proposed Manchester Station. Analysis shows the proposed project will not impact traffic in this area. Page 4-8 of the DEIR discusses the impact to the parking lot at the Westchester Recreation Center. Replacement parking will be provided for any lost parking spaces at the Recreational Center.

Comment 17.3: LADOT believes the proposed south-side option on Westchester Parkway would provide for a more unconstrained flow of traffic with no capacity impacts. This south-side alignment would result in a more flexible operation and not require widening of the median island, as currently designed. (LADOT)

Response 17.3: Comment noted.

Comment 17.4: Westchester Parkway, between Sepulveda East Way and Sepulveda Westway, has an ultimate right-of-way width of 100 feet. Any proposed widening would be in addition to, and outside of the 50-foot half-width ultimate right-of-way. (LADOT)

Response 17.4: Comment noted. Land use impacts and mitigation measures along Westchester Parkway are discussed on pages 4-8, 4-10, 4-12 and 4-13 of the DEIR. Traffic/Circulation impacts and mitigation measures are discussed on pages 4-25, 4-26, 4-29, 4-30 and 4-31 of the DEIR.

Comment 17.5: The DEIR on page 4-30 indicates that along the proposed Westchester Parkway, the proposed curb-to-curb roadway width of 108 feet will be sufficient to accommodate the proposed expanded median in connection with the rail line together with necessary traffic lanes without additional roadway widening. Tentative Tract No. 34836 (Los Angeles International Airport Northside Development) approved by the Advisory Agency on August 6, 1984, required that a 100-foot wide roadway within a 120-foot wide street dedication be provided along this portion of the proposed Westchester Parkway. The Final EIR should verify the correctness of the 108 feet curb-to-curb roadway width as stated in the Draft EIR. In addition, the Final EIR should clarify the proposed median island expansion, and a traffic analysis should be included to justify the no-impact conclusion on roadway capacity. (LA Department of Public Works)

Response 17.5: Based upon existing City policy, the segment of Westchester Parkway west of Emerson Avenue will have a 100-foot roadway within a 120-foot-right-of-way. The 108-foot roadway width mentioned in the Draft EIR applies for a short segment just east of Emerson Avenue, based upon preliminary street plans being prepared for the Los Angeles City Department of Airports. For midblock sections along Westchester Parkway west of Emerson Avenue, the 100-foot roadway width should be adequate to maintain three lanes of traffic in each direction with support columns for the aerial LRT structure in the median. Each roadway would be 38 feet wide, and the median would be 24 feet wide according to the most recent plans available to DKS and Walter Okitsu Engineering Services.

At the intersection of Westchester Parkway and Emerson Avenue, the median islands would need to be arranged to allow double left turn lanes in both the eastbound and westbound direction, while providing for an LRT track alignment with minimal curvature. The width of the east-west curb lanes would be reduced from 15 to 12 feet, but this would not significantly impact roadway capacity.

At the ramp leading to Lincoln Boulevard, known as Ramp "B" on the proposed street plans, the median island would need to be modified to accommodate LRT. The roadway would still be able to accommodate three through-lanes in each direction along Westchester Parkway, as well as double westbound left turn lanes. This is the same number of lanes as being proposed by the Department of Airports on their own plans without the LRT project, although introduction of the LRT project would reduce the width of these lanes. The impact on available roadway capacity would not be significant since lanes would only be narrowed to 12 feet, not lost.

Comment 17.6: Culver Boulevard easterly of Lincoln Boulevard will be developed as a Divided Major Highway in connection with the proposed developments northerly and southerly of Culver Boulevard. The proposed alignment and the Marina Del Rey Station should be located outside of the ultimate Culver Boulevard right-of-way. (City of Los Angeles Department of Public Works)

Response 17.6: Comment noted.

Comment 17.7: The LADOT has reservations about the current volume/capacity ratios and levels of service stated in the DEIR when compared to other studies done within the study area. (LADOT) 1-4

Response 17.7: The levels of service and volume/capacity ratios listed in the DEIR are based upon the city's standard methodology (i.e., critical movement analysis utilizing a capacity of 1,500 vehicles per hour per lane). The traffic counts used in the analysis were taken by the city during 1987 and 1988. The 1987 counts were factored upwards to reflect growth which occurred between 1987 and the date of analysis (November 1988).

Forecast levels of service for the scenario of "Year 2010 Base Case" are E or F at every intersection during the PM peak hour and F for every intersection except one during the AM peak hour. Thus, impacts of the project, which are measured relative to the Year 2010 Base Case instead of relative to the existing case, are not underestimated.

Comment 17.8: The background traffic growth rates shown in Table 2, Traffic Impact Analysis Section, of the DEIR are underestimated. This under estimation affects the volume/capacity ratios projected for the year 2010, shown in Table 4 of the DEIR Traffic Impact Analysis Section. Thus, the future level of service with the light rail is also under estimated. Additionally, the projections for the year 2010 Base Case appear to be underestimated. (LADOT)

Response 17.8: The methodology used to calculate future traffic growth is the same as that used for previous light rail EIR studies for the Pasadena and Long Beach lines. The methodology utilizes projected traffic volumes from the SCAG regional model and is considered to be acceptable for a regional project such as a light rail line. The regional model results are also used as the basis of patronage projections for the EIR and thus the traffic growth rates are consistent with the patronage forecasts.

Comment 17.9: Peak traffic activity at LAX generally occurs between 12 noon and 1:00 pm and 9:00 pm to 10:00 pm. During these time periods access to LAX along major and secondary streets is critical. In formulating the traffic control plan and detour plans, consideration should be given to minimizing construction activities and

lane closures along major LAX roadways during these time periods. (City of Los Angeles Department of Airports)

Response 17.9: Comment noted. The LACTC will consult with the City of Los Angeles during the formulation of the traffic control plans.

Comment 17.10: Table 4-3 of the DEIR states that the traffic growth rate for 2010 at Lincoln and Manchester Boulevards is 50 percent. I question the methodology for projecting future traffic volumes and the SCAG Regional Model. (Downing, P.)

Response 17.10: The SCAG Regional Model is an accepted model by the City of Los Angeles for predicting future traffic.

Comment 17.11: Sources of information (individuals, agencies, etc.) concerning State highways (Route 1 and I-105) should be identified. (CALTRANS District 7)

Response 17.11: Extensive coordination with Caltrans will occur during the design phase of the project. References for the study are listed on pages 10-5 through 10-8.

Comment 17.12: Will parking be provided at all of the proposed stations? (Charadwa, R., Rector, P.)

Response 17.12: Parking will be provided at the Westchester Station and Manchester Station. The provision of parking at the Marina Del Rey Station is recommended. However, the land requirements for parking would have to be coordinated with development plans for the area between Culver Boulevard and Marina development. Please refer to pages 3-4 through 3-9 of the DEIR for description of the stations.

Comment 17.13: I am concerned about the amount of traffic congestion around the parking facilities at the stations. (Lavenberg, S.) 31-1

Response 17.13: Please refer to Section 4.2 (Transportation and Circulation), pages 4-24 to 4-32 of the DEIR. No significant impacts are anticipated at the Century, Manchester, Jefferson, or Lot C stations, and impacts at the Westchester Station and Marina del Rey Station will be mitigated through roadway improvements to a level that is less than significant.

Comment 17.14: There is no discussion of future bus service projected for this area and no plan for a feeder bus interface program, which will be needed to support this project. (Southern California Rapid Transit District)

Response 17.14: Comment noted. Extensive coordination with SCRTD and other bus providers will occur during the design phase of the project.

Comment 17.15: Parking is a problem in the area that must be addressed. (Southern California Rapid Transit District)

Response 17.15: Initial assessment of the project area indicated a very limited amount of available parking area. Because there is limited long-term parking opportunity, the LACTC will work with SCRTD and other bus providers to develop bus interface between bus and light rail.

18.0 MISCELLANEOUS

Comment 18.1: The Growth-Inducing and/or environmental impact sections should evaluate the ability to expand the transit system beyond that presently proposed to accommodate increased ridership, in terms of additional track segments, stations, increased size of stations and number of transit cars. (Department of Beaches and Harbors)

Response 18.1: Please refer to Exhibit 3-1 which indicates extension of the proposed Coastal Line to be studied in the future. The system is designed to accommodate increased patronage and more frequent service.

Comment 18.2: A "Kiss and Ride" facility at transit stations implies that at least two am and two pm peak hour local trips will occur, somewhat defeating the trip reduction of the project concept. A "kiss and ride" facility may not be practical if riders really need to park their cars at the station because they do not have direct access to a shuttle. (L.A. County Department of Beaches and Harbors)

Response 18.2: The purpose of the Coastal Corridor Rail Transit Project - North Segment project is to reduce vehicular congestion and overall vehicle miles traveled within the project vicinity. The trip length to the "Kiss and Ride" facility will be substantially shorter than a job commute, thereby reducing total vehicle miles traveled.

Comment 18.3: A specific site for the proposed Westchester Station has not been identified. (Ryavec, M.)

Response 18.3: Section 3.4 of the DEIR describes each of the stations and their respective locations. Pages 3-5 and 3-6 discuss the two locations under consideration for the Westchester Station: south of Westchester Parkway and in its median. As indicated in Appendix B, Sheet numbers 22 and 24, ingress to parking areas will be provided via eastbound on Westchester Parkway and ingress/egress will be provided via Sepulveda Westway. Traffic circulation is similar for both station locations. Regarding pedestrian access, the southside station location will provide closer access to commercial uses on Sepulveda Boulevard, whereas the median alternative would provide closer access to proposed Northside Development uses.

Comment 18.4: With regards to self service fare machines, what has been other major cities' experience with the feasibility of the honor system? (Downing, P.)

Response 18.4: Based on other cities' transit systems, self-service fare machines have proven to be cost-effective. The LRT system will also have roaming fare inspectors to encourage compliance. (Downing, P.)

Comment 18.5: The possible pathways to extend the alignment north should be addressed in the EIR. (Cope, D., Christensen, C.)

Response 18.5: Exhibit 3-1 of the DEIR depicts proposed transit development in Los Angeles County including an extension of the project to the north.

Comment 18.6: The Marina Del Rey Station should be relocated away from the Villa Marina residents. (Cope, D., Crockett, M.)

Response 18.6: The proposed Marina Del Rey Station will be located 400 feet southeast of the Villa Marina residences. This separation would provide a substantial buffer and station activities are not expected to result in a significant impact to existing residences.

Comment 18.7: Who will the Marina Del Rey Station serve? (Ach, J., Ach, A., Oakley, B. & G.)

Response 18.7: The Marina Del Rey Station will serve areas to the north including Marina Del Rey, Mar Vista, Venice and other portions of Los Angeles.

Comment 18.8: The DEIR states that the Marina Del Rey Station supports facility and storage tracks. Does this mean there will be a maintenance yard? (Grammatico, S.)

Response 18.8: No maintenance yard is planned at this location.

Comment 18.9: The DEIR indicates that the proposed Manchester Station will be located on the easterly side of Lincoln Boulevard. This portion of Lincoln Boulevard is classified as a Super Major Highway on the Coastal Corridor Transportation Specific Plan, with an ultimate half street dedication of 67 feet from the street centerline. The proposed rail alignment and station should be designed in a manner to allow room for the future widening of Lincoln Boulevard as a Super Highway in this area. (City of Los Angeles, Department of Public Works)

Response 18.9: Comment noted.

Comment 18.10: I would like to see the rail line include a bike path along Aviation Boulevard area, around the airport, and leading to and from the El Segundo business district. (Schnauss, E.)

Response 18.10: The proposed project will be primarily aerial in configuration in this area and will not include ground level in-street improvements such as a bikeway.

Comment 18.11: Concerned about the electro-magnetic technology the rail lines will be utilizing and the effect it would have on radios, television and other electronic items. (Grammatico, S.)

Response 18.11: During the design phase of the project, electro-magnetic interference will be examined and mitigation measures will be developed.

Comment 18.12: Encouragement should also be given to employers to get them to cooperate in providing vans or shuttles to and from light rail stations. (Cope, D., Crockett, M.)

Response 18.12: Comment noted.

Comment 18.13: What type of power system will be used for the light rail system? (Christensen, C., Irwin, J.)

Response 18.13: Please refer to pages 2-1 , 3-9 and 3-10 of the DEIR. The project is proposed as a fully automated system with power supplied by a third rail or possibly by an overhead catenary wire. Electrical substations would be situated along the alignment and would draw power from the utility grids of the Los Angeles Department of Water and Power. The overhead catenary system (OCS) will maintain a continuous voltage of at least 550V at the light rail vehicle. The OCS distributes the 750-Vdc power by overhead wires from the traction power substations to the light rail vehicles. A pantograph collector on the top of the vehicle will maintain the contact with the overhead wires.

The project was initially intended to be a fully automated system with power supplied by a third rail. However, LACTC is now considering an OCS.

Comment 18.14: Are rail car wheels made of rubber or bare steel to reduce noise? (Irwin, J.)

Response 18.14: The wheels are made of steel. Long-term operational and maintenance costs indicate that steel is more cost-effective.

Comment 18.15: How is the tunnel portion of the alignment ventilated? (Irwin, J.)

Response 18.15: Ventilation is through fans and dampers and ventilation structures near the portal structures.

Comment 18.16: How deep is the tunnel at Lincoln and Manchester? (Irwin, J.)

Response 18.16: The top of the tunnel is approximately 15 feet deep at the intersection of Lincoln and Manchester. The top of the rail track is approximately 30 feet below street level.

Comment 18.17: I would like to see the half cent sales tax raised if it would provide the funds to complete more of the proposed lines sooner. (England, R.)

Response 18.17: Comment noted.

Comment 18.18: Provide more parking for the Senior Citizens at the parking next to the swimming pool at the Westchester Recreation Center. (Jahn, F.)

Response 18.18: The project does not include additional parking beyond replacement parking for spaces removed to provide areas for project facilities.

Comment 18.19: Concerned about the "Kiss and Ride" lot that adjoins the Westchester Recreation Center. The lot should be replanned so it will not be so easy for people to park in the Westchester Recreation Center parking lot to ride the LRT. Perhaps LACTC could use the land on the south side of the Hughes building. This might include working with Hughes to move their parking lot to the north side of their building. (McKeegan, J.)

Response 18.19: The land to the north of Hughes's parking lot is proposed for the Kiss-and-Ride Parking Lot. Parking controls will have to be implemented in the Recreation Center Parking Lot to discourage long-term commuter parking.

Comment 18.20: The Manchester Station impacts parking spaces for the Senior Citizens Center and the Westchester Park and swimming pool. Page 2-6 of the DEIR states that increased commuter traffic increases the likelihood of crime? Why would you subject potentially more crime on a senior citizens center and a park where young and old gather to have fun? Relocate the station further north if you have to have a station. (Sischo, D.)

Response 18.20: As discussed in Section 4.9 of the DEIR, increased crime resulting from increased commuter and pedestrian traffic will be mitigated to a level that is less than significant by implementation of the mitigation measures discussed on pages 4-96 and 4-97. Relocating the Manchester Station further to the north would not be as effective in benefiting senior citizens and recreation facility users.

19.0 CORRECTIONS AND ADDITIONS

Comment 19-1: Page 4, Table 1, third paragraph reads "Acquisition of land on southeast corner of Aviation and Century Boulevards...." This should read "Acquisition of land on southwest corner of Aviation and Century Boulevards. (Keiter, G.)

Response 19-1: Comment noted and the DEIR is hereby revised.

Comment 19-2: In the DEIR under Persons and Departments Consulted (Section 10.2) it should read LA City Council, 6th District. (Downing, P.)

Response 19-2: Comment noted and the DEIR is hereby revised.

Comment 19-3: Referring to page 4-9 of the DEIR we submit the following corrections to the description of our Continental City Project: Continental Development Corporation is the developer of the referenced project, not "Continental City Development." Continental City has been approved for 3,100,000 square feet of development which will include two 1,200 room hotels totaling approximately 1 million square feet, and 100,000 square feet of retail space. (Saunders, J.A.)

Response 19-3: Comment noted and the DEIR is hereby revised.

SECTION 6

LIST OF PUBLIC AGENCIES, ORGANIZATIONS, AND BUSINESSES/INDIVIDUALS

PUBLIC AGENCIES

City of Los Angeles
- Councilwoman Ruth Galanter
- Department of Transportation
- Department of City Planning
- Cultural Affairs Department
- Department of Public Works - Bureau of Engineering
- Department of Airports
- Department of Water and Power

Los Angeles Unified School District

County of Los Angeles
- Department of Beaches and Harbors
- Small Craft Harbor Commission

Southern California Rapid Transit District

State of California
- Office of Planning and Research
- Department of Fish and Game
- Department of Health Services
- Department of Transportation
- Department of Conservation
- Regional Water Quality Control Board - Los Angeles Region

United States Department of Transportation
- Federal Aviation Administration

ORGANIZATIONS

Coalition for Rapid Transit

Marina Del Rey Chamber of Commerce

Westchester LAX Chamber of Commerce

BUSINESSES/INDIVIDUALS

Ann Ach

James Ach

Carrie Ann Blackeller

Mr. Beck

Allan Borstein

Paul Casey

Raj Charadwa

Charles Christiansen

Danna Cope

Mary Lou Crockett

Continental Development Company

John B. Cumming

Valerie Cumming

Delphi Associates (Representing Howard Drollinger)

Patricia A. Downing

Howard Drollinger

Robert England

Dr. Abraham Falick

Salvador Grammatico

John R. Irwin

Frank Jahn

Latham & Watkins (Representing Macguire - Thomas Partnership-Playa Vista)

Sharon Lovenberg

William Law

Lee & Kieter Development Company

John McKeegan

Pat Moser

Ben & Gerry Oakley

Albert O'Neill

John R. Prewitt

Pamela Rector

Paul Romeo

John Ruhlen

Joy Semson - Ebersole

Catherine Sischo

Dick Sischo

Ed Schnauss

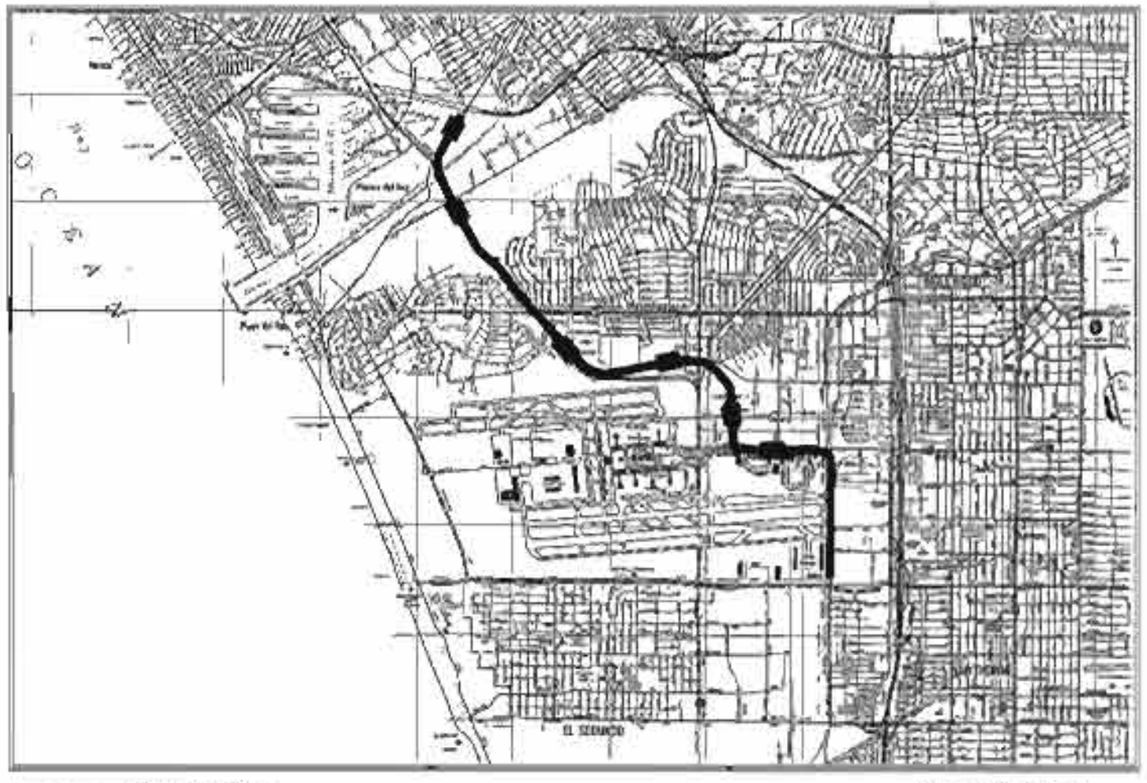
SECTION 7
ENGINEERING DRAWINGS

Engineering Drawings depicting the project alignment are provided in succeeding pages. Some drawings have been modified to reflect refinements and explanatory notes, and indicate minor changes from those previously provided as Appendix B of the Draft EIR.

LOS ANGELES COUNTY TRANSPORTATION COMMISSION

COASTAL CORRIDOR RAIL TRANSIT PROJECT

(NORTH SEGMENT)



STATION SITE

PROJECT SITE PLAN

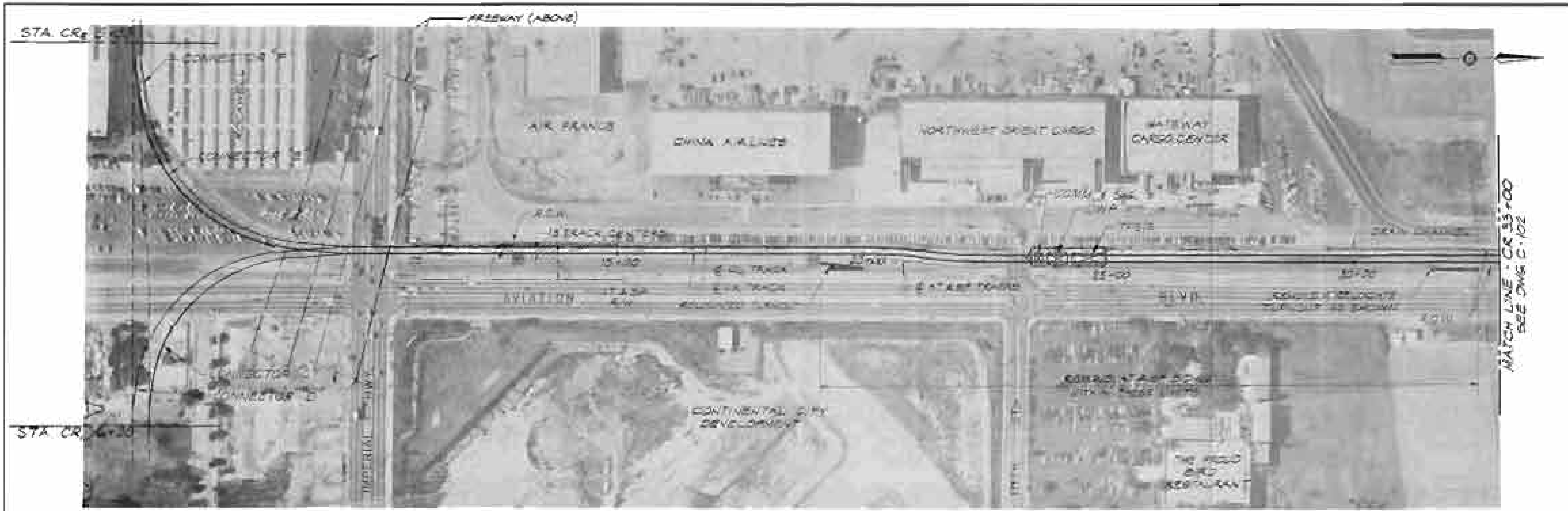
GRAPHIC SCALE
0 1 2
MILES

DRAWING INDEX

CONSULTANTS: BECHTEL CIVIL, INC.
IN ASSOCIATION WITH
ACOUSTICAL ANALYSIS ASSOCIATES
D K S ASSOCIATES
MANUEL PADRON ASSOCIATES
MICHAEL BRANDMAN ASSOCIATES, INC.
P G H WONG ENGINEERING, INC.
RALPH STONE AND COMPANY, INC.

* DRAWING REVISED AFTER DESIGN CERTIFICATION

SHEET NUMBER
T-1



PLAN

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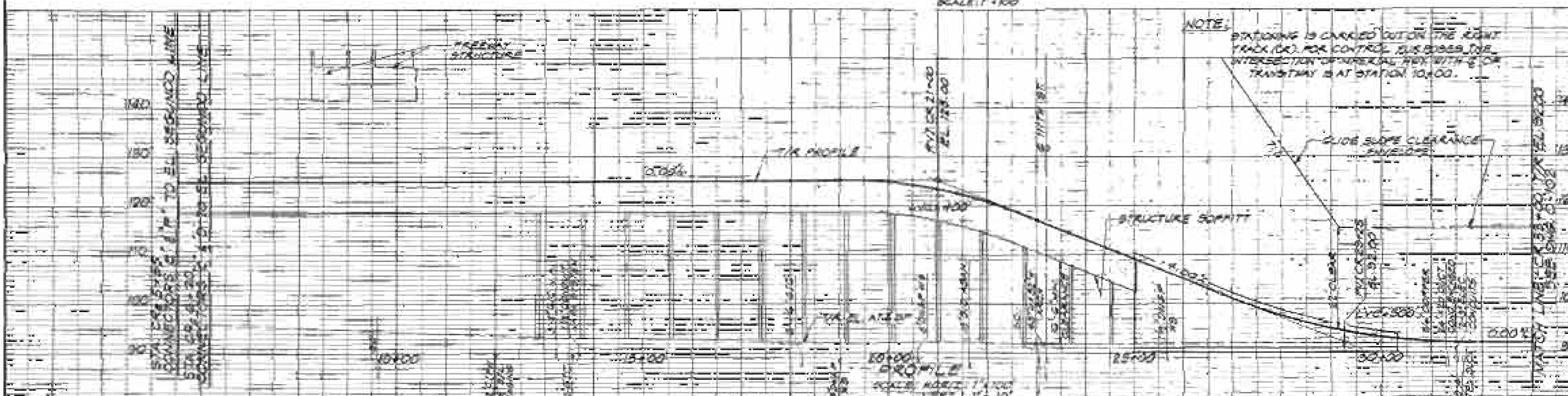
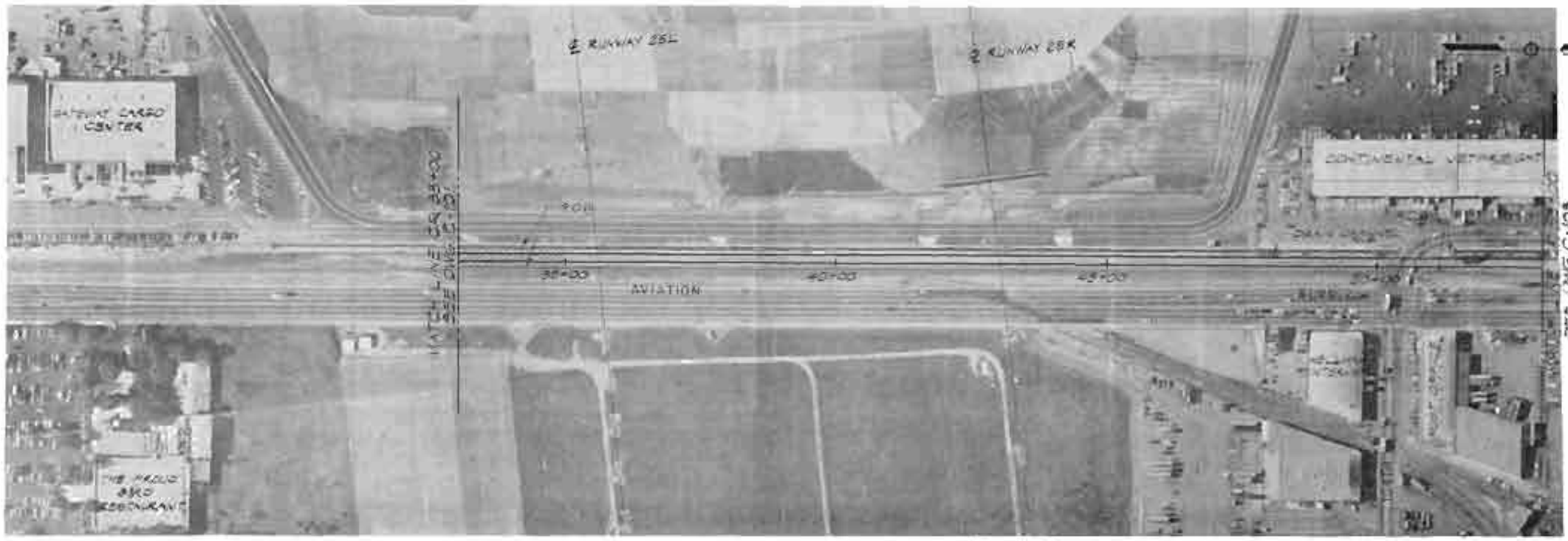


PROFILE

SCALE: HORIZ. 1" = 100'
VERT. 1" = 10'

NOTE: STATIONING IS CARRIED OUT ON THE RIGHT TRACK (CR) FOR CONTROL. SUS BOSSE THE INTERSECTION OF IMPERIAL HWY WITH ¢ OF TRANSITWAY IS AT STATION 10+00.

DRAWN: PNM	LOS ANGELES COUNTY TRANSPORTATION COMMISSION COASTAL CORRIDOR RAIL TRANSIT PROJECT	PLAN & PROFILE STA CR 12+40 TO CR 33+00	CONTRACT NO. DRAWING NO. C-101
DESIGNED: AJM	BECHTEL CIVIL, INC. IN ASSOCIATION WITH: ACOUSTICAL ANALYSIS ASSOCIATES DKS ASSOCIATES MANUEL PADRON ASSOCIATES MICHAEL BRANDMAN ASSOCIATES, INC. PBM NORS ENGINEERING, INC. RALPH STONE AND COMPANY, INC.		SCALE: AS SHOWN DATE
APPROVED: BOB			SHEET NUMBER 1



PLAN
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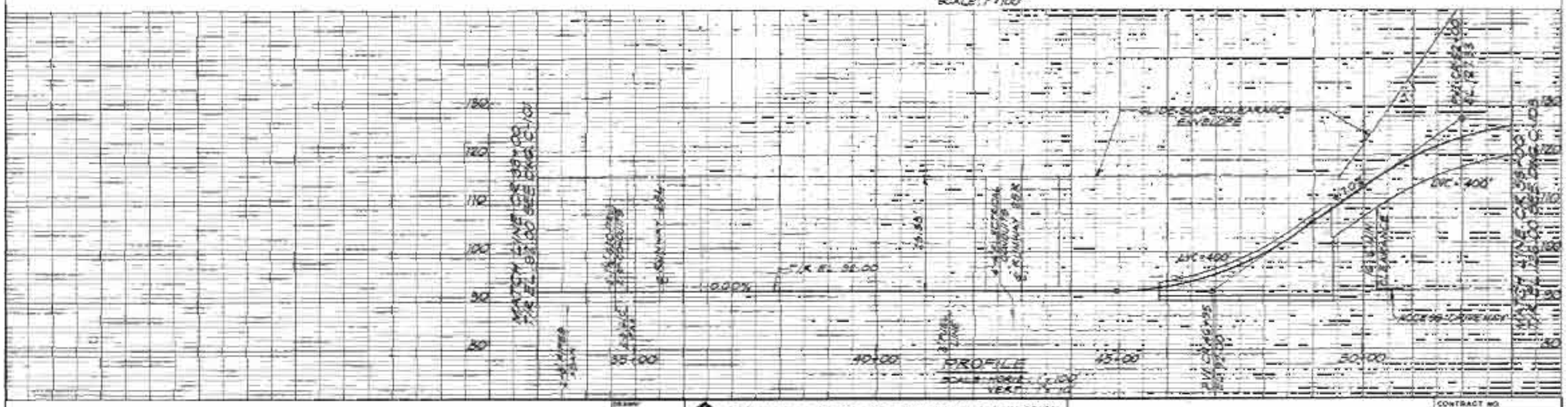

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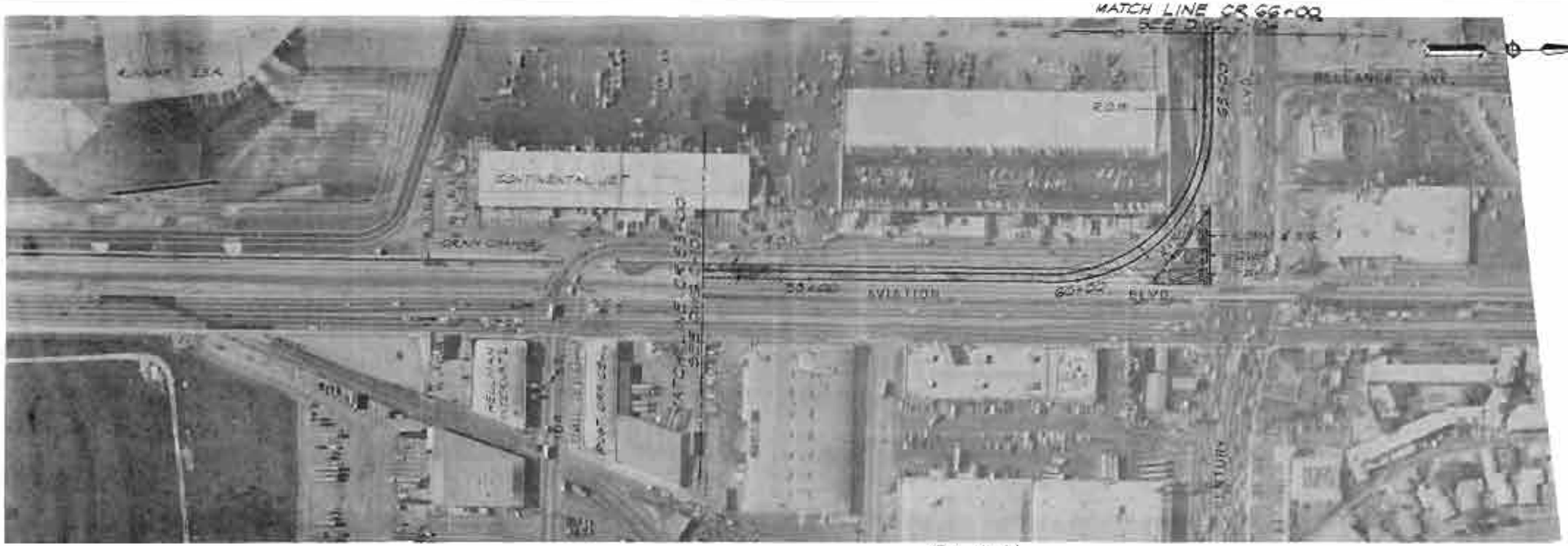
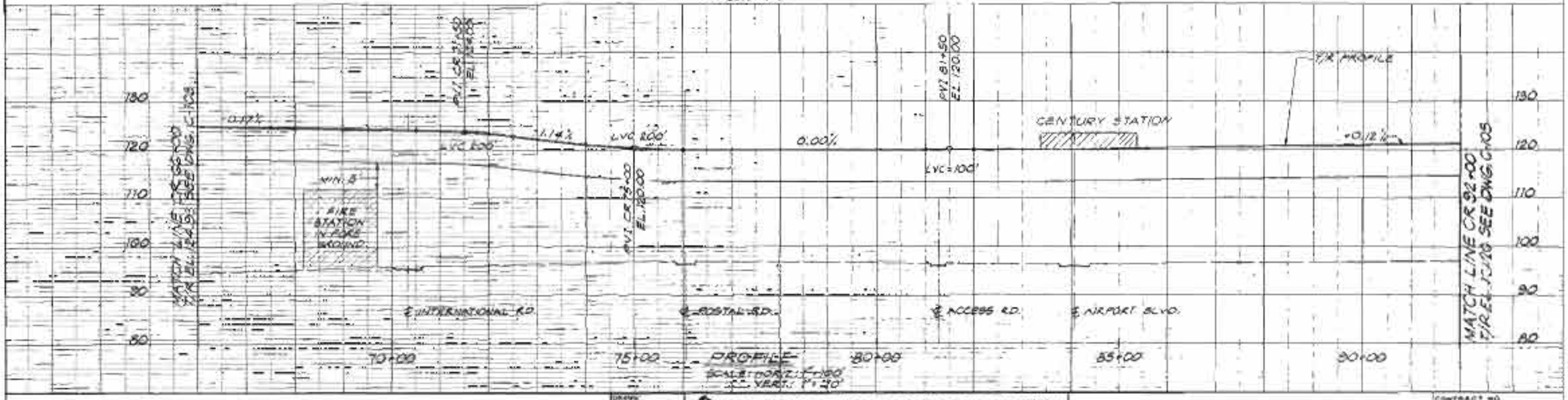


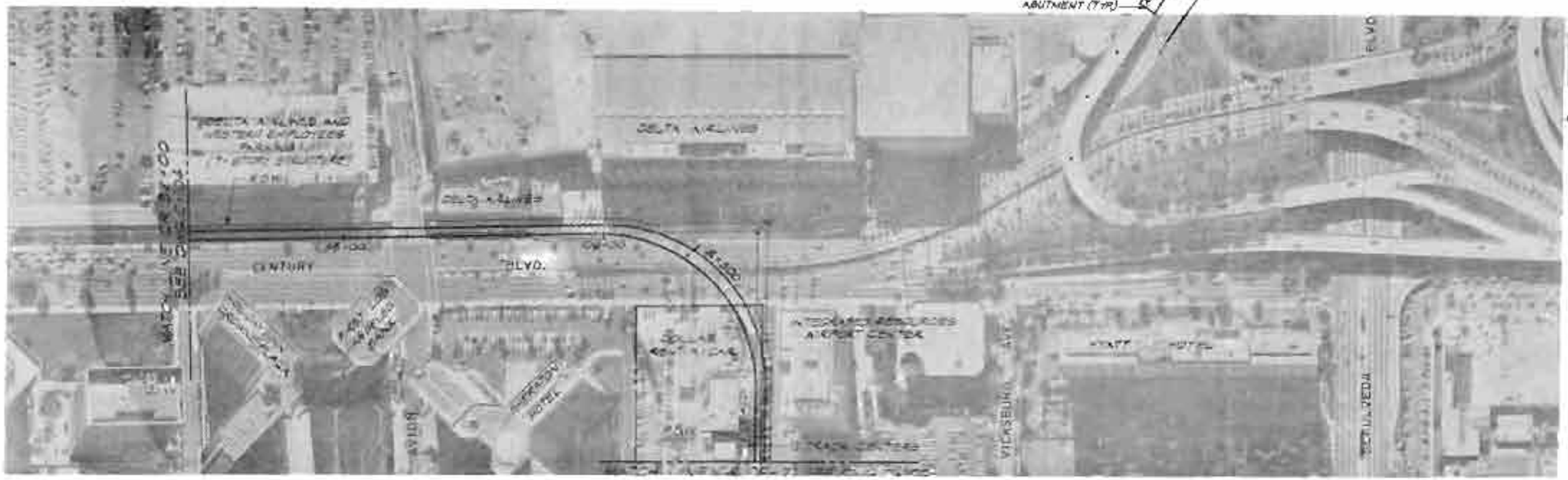
DRAWN: PNM DESIGNED: AJM APPROVED: BOB	LOS ANGELES COUNTY TRANSPORTATION COMMISSION COASTAL CORRIDOR RAIL TRANSIT PROJECT BECHTEL CIVIL, INC. IN ASSOCIATION WITH: ACOUSTICAL ANALYSIS ASSOCIATES DES ASSOCIATES MANUEL PADROV ASSOCIATES MICHAEL BRANDMAN ASSOCIATES, INC PSOMAS ENGINEERING, INC. RALPH STONE AND COMPANY, INC.	PLAN & PROFILE BTA CR 53+00 TO CR 66+00	CONTRACT NO. DRAWING NO. C-103 SCALE AS SHOWN DATE 12-10-85 SHEET NUMBER 3

PLAN
SCALE: 1" = 100'

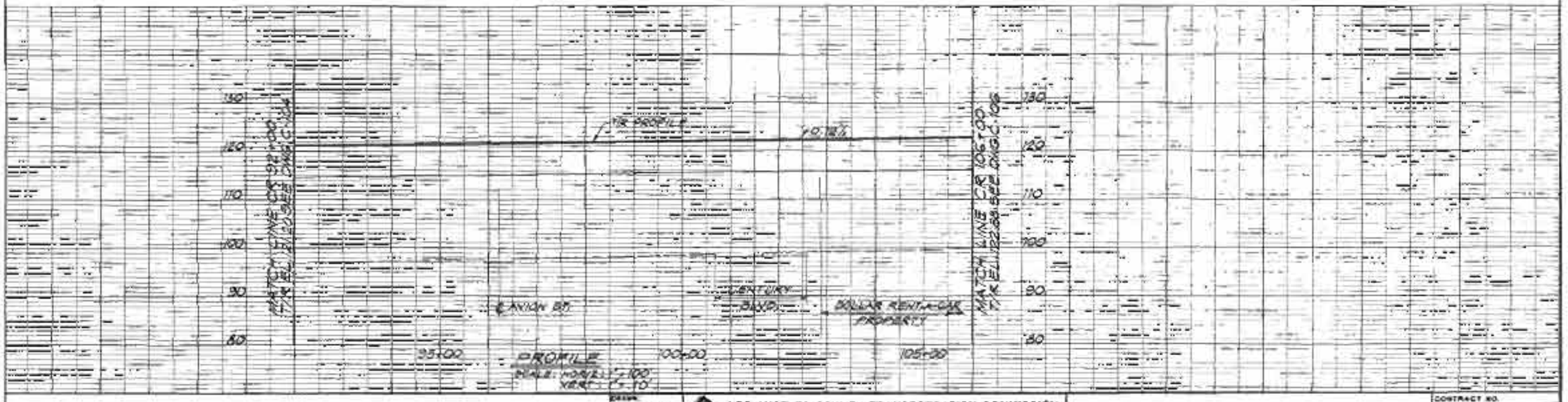


PROFILE
SCALE: HORIZ. 1" = 100'
VERT. 1" = 30'

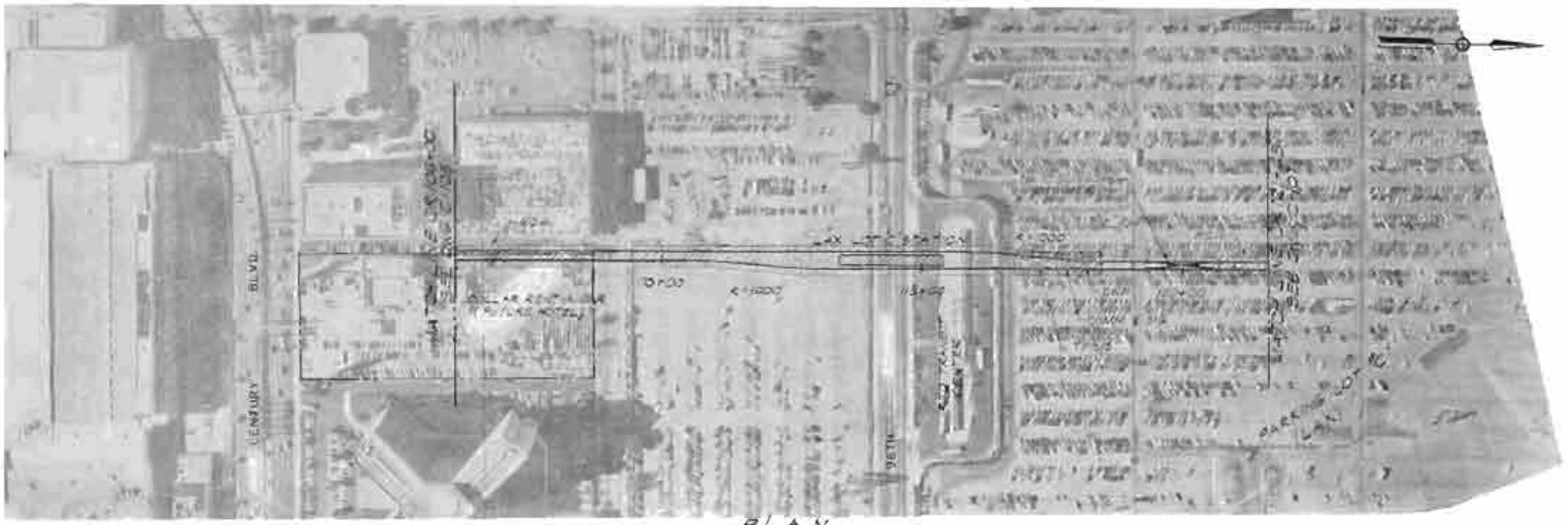
DRAWN: PNM	LOS ANGELES COUNTY TRANSPORTATION COMMISSION COASTAL CORRIDOR RAIL TRANSIT PROJECT	PLAN & PROFILE STA CR 66+00 TO CR 92+00	CONTRACT NO. DRAWING NO. C-104
DESIGNED: AJM	BECHTEL CIVIL, INC.	IN ASSOCIATION WITH: ACOUSTICAL ANALYSIS ASSOCIATES DKS ASSOCIATES MANUEL PEDRON ASSOCIATES MICHAEL BRANDMAN ASSOCIATES, INC. PSOMAS ENGINEERING, INC. RALPH STONE AND COMPANY, INC.	SCALE: AS SHOWN DATE SHEET NUMBER 4
APPROVED: BCB			



PLAN
SCALE: 1" = 100'

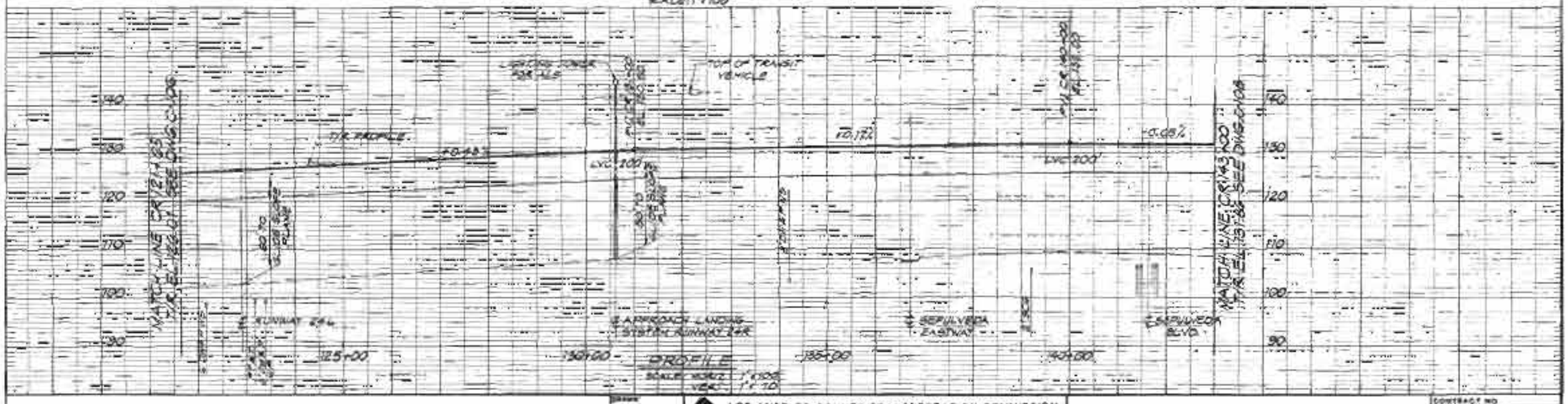


DRAWN: PNM DESIGNED: AJM CHECKED: BOB	LOS ANGELES COUNTY TRANSPORTATION COMMISSION COASTAL CORRIDOR RAIL TRANSIT PROJECT BECHTEL CIVIL, INC. IN ASSOCIATION WITH: ACOUSTICAL ANALYSIS ASSOCIATES GKS ASSOCIATES MANUEL PADRON ASSOCIATES MICHAEL SHANKMAN ASSOCIATES, INC. PON WONG ENGINEERING, INC. RALPH STONE AND COMPANY, INC.	PLAN & PROFILE STA CR 92+00 TO CR 106+00	CONTRACT NO. DRAWING NO. C-105 SCALE: AS SHOWN DATE: 9-10-68 SHEET NUMBER: 5



DESIGNED PNM DESIGNED AJM APPROVED BOB	LOS ANGELES COUNTY TRANSPORTATION COMMISSION COASTAL CORRIDOR RAIL TRANSIT PROJECT BECHTEL CIVIL, INC. IN ASSOCIATION WITH: ACOUSTICAL ANALYSIS ASSOCIATES DKS ASSOCIATES MANUEL PADRON ASSOCIATES MICHAEL BRANDMAN ASSOCIATES, INC PIN WONG ENGINEERING, INC. RALPH STONE AND COMPANY, INC.	PLAN & PROFILE STA CR 106+00 TO CR 121+65	CONTRACT NO. DRAWING NO. C-106 SCALE AS SHOWN DATE 6-17-88 SHEET NUMBER 6

REVISED JUNE 2, 1989



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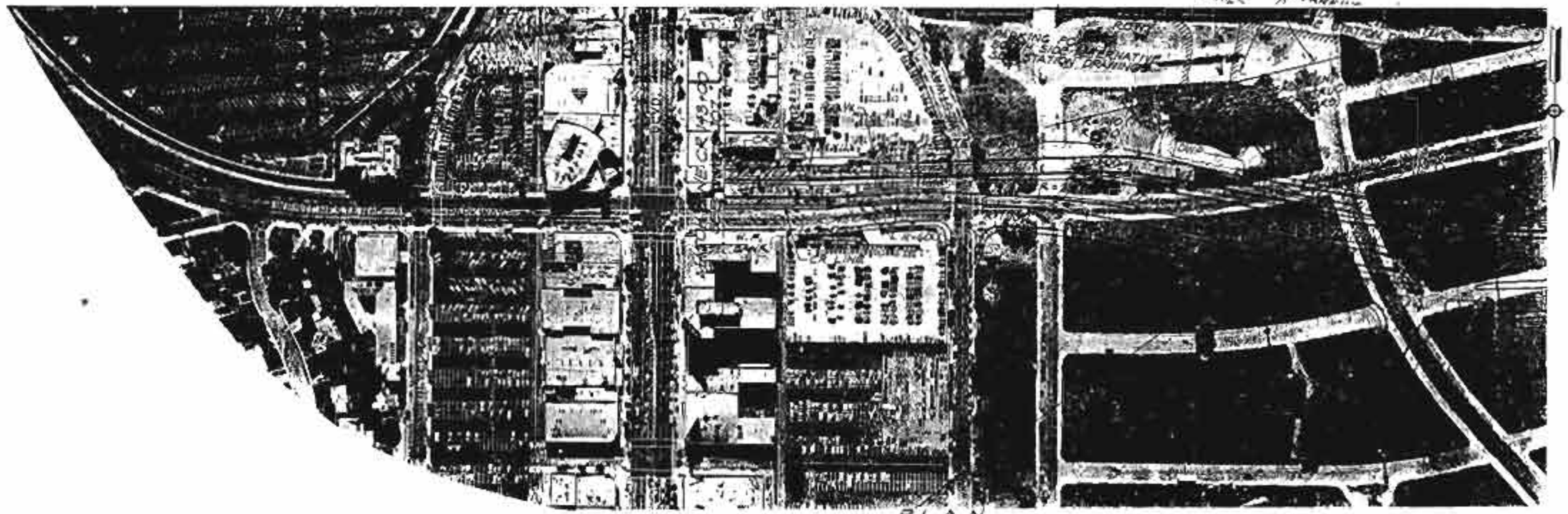
DESIGNED AJH	BECHTEL CIVIL, INC.	PLAN & PROFILE STA CR 121+65 TO CR 143+00	SCALE AS SHOWN DATE 6-3-88
APPROVED BCB	IN ASSOCIATION WITH: GEOTECHNICAL ANALYSIS ASSOCIATES DMJM ASSOCIATES MANUEL PADRON ASSOCIATES MICHAEL BRANDMAN ASSOCIATES, INC. PGA WORLD ENGINEERING, INC. RALPH STONE AND COMPANY, INC.		SHEET NUMBER 7



DRAWN: PHM DESIGNED: AJM APPROVED: BOB	LOS ANGELES COUNTY TRANSPORTATION COMMISSION COASTAL CORRIDOR RAIL TRANSIT PROJECT BECHTEL CIVIL, INC. IN ASSOCIATION WITH: ACOUSTICAL ANALYSIS ASSOCIATES DKJ ASSOCIATES MANUEL PADRON ASSOCIATES MICHAEL BRANDMAN ASSOCIATES, INC. PAR WORD ENVIRONMENTAL INC. RALPH STONE AND COMPANY, INC.	PLAN & PROFILE STA CR 143+00 TO CR 156+00	CONTRACT NO. DRAWING NO. C-108 SCALE: AS SHOWN DATE: 2-9-88 SHEET NUMBER: A

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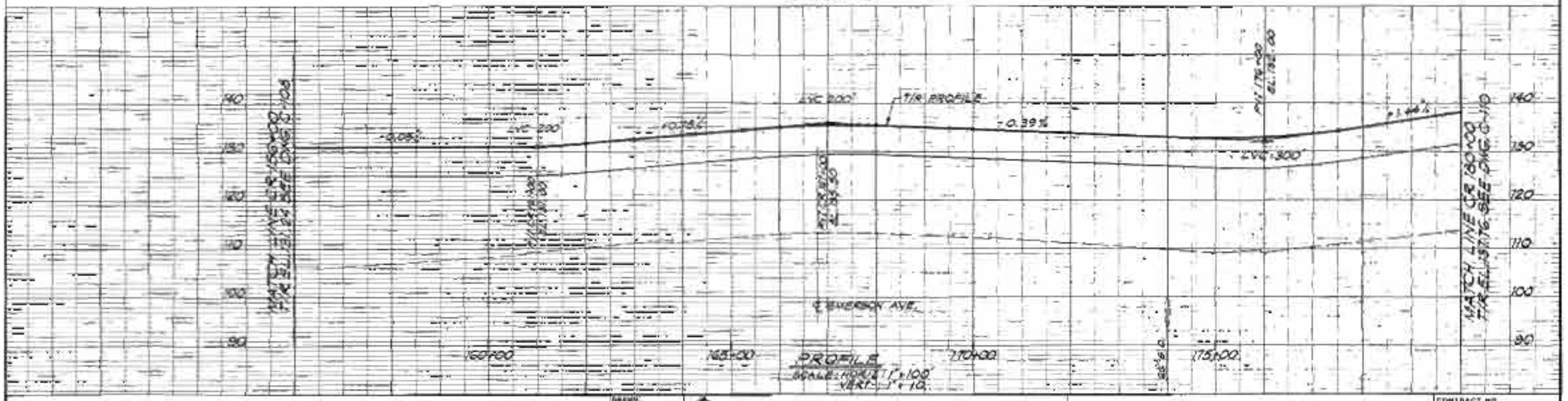
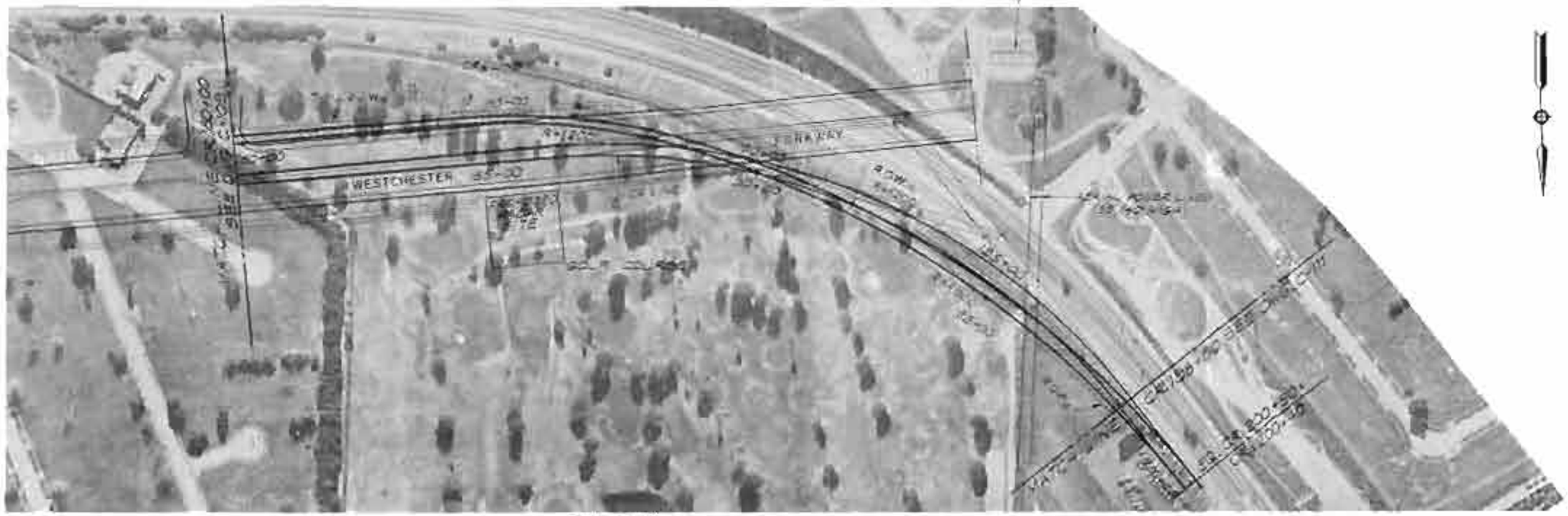
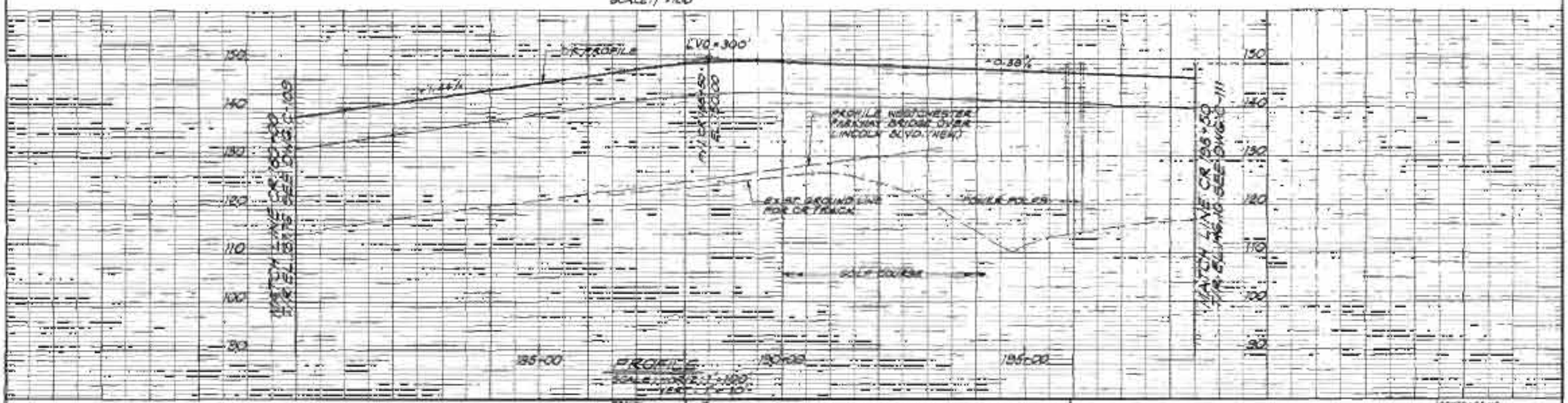


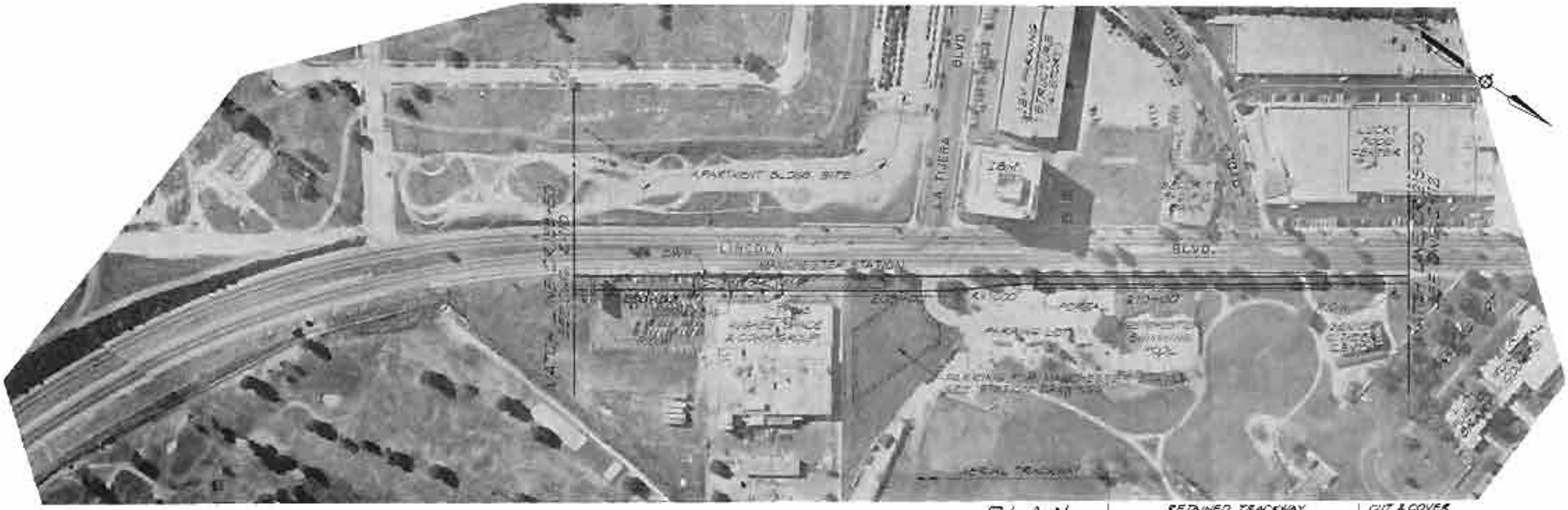
DRAWN: PNK DESIGNED: AJM APPROVED: BOB	LOS ANGELES COUNTY TRANSPORTATION COMMISSION COASTAL CORRIDOR RAIL TRANSIT PROJECT BECHTEL CIVIL, INC. IN ASSOCIATION WITH: ACOUSTICAL ANALYSIS ASSOCIATES DKS ASSOCIATES MANUEL PADRON ASSOCIATES MICHAEL BRANDMAN ASSOCIATES, INC PCM WOMO ENGINEERING, INC. RALPH STONE AND COMPANY, INC.	PLAN & PROFILE STA CR 156+00 TO CR 180+00	CONTRACT NO. DRAWING NO. C-109 SCALE AS SHOWN DATE 6-10-88 SHEET NUMBER 9

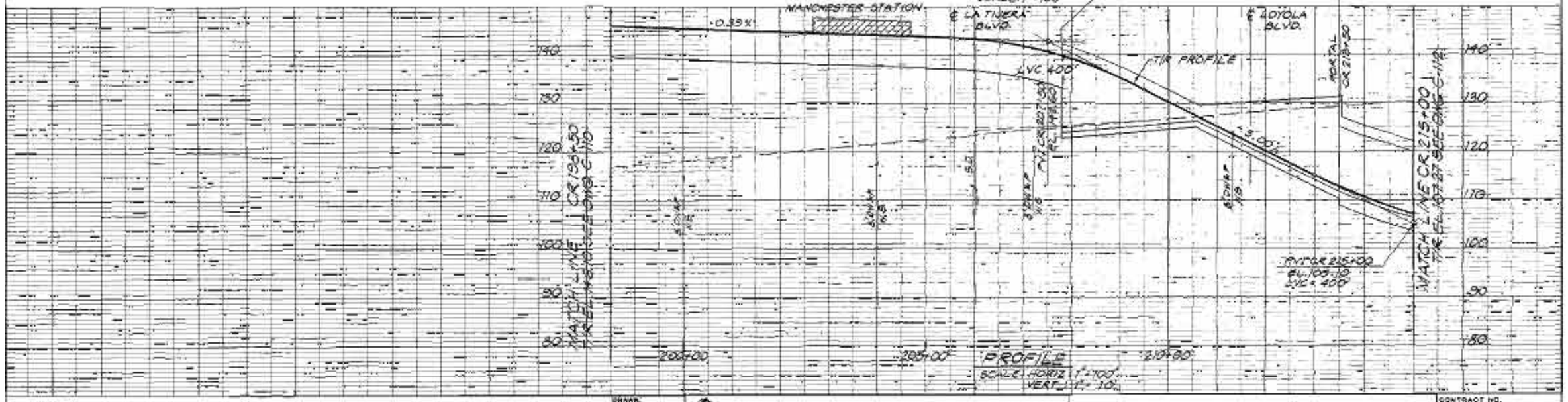


PLAN
SCALE 1" = 100'



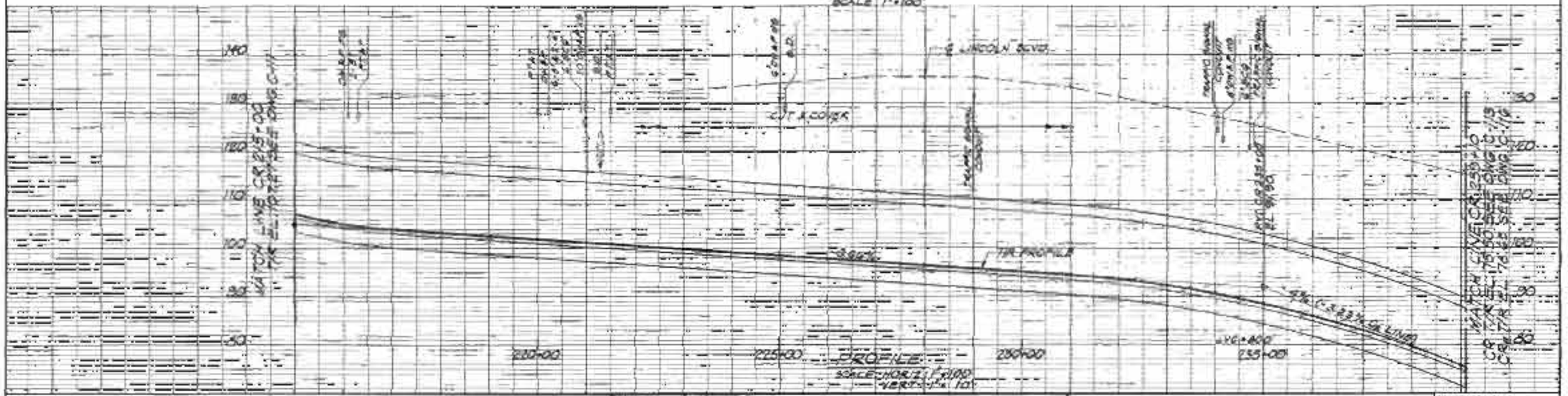
DESIGNED: PMM DRAWN: AJM CHECKED: BDB	LOS ANGELES COUNTY TRANSPORTATION COMMISSION COASTAL CORRIDOR RAIL TRANSIT PROJECT BECHTEL CIVIL, INC. IN ASSOCIATION WITH: ACOUSTICAL ANALYSIS ASSOCIATES DKS ASSOCIATES MANUEL PADRON ASSOCIATES MICHAEL BRANDMAN ASSOCIATES, INC. FISH WONG ENGINEERING, INC. RALPH STONE AND COMPANY, INC.	PLAN & PROFILE BTA CR 180+00 TO CR 198+50	CONTRACT NO. DRAWING NO. C-110 SCALE AS SHOWN DATE 6-17-68 SHEET NUMBER 10





DRAWN: PNM	LOS ANGELES COUNTY TRANSPORTATION COMMISSION COASTAL CORRIDOR RAIL TRANSIT PROJECT	PLAN & PROFILE STA CR 198+50 TO CR 215+00	CONTRACT NO. DRAWING NO. C-111
DESIGNED: AJM	BECHTEL CIVIL, INC.		SCALE: AS SHOWN DATE
APPROVED: BOB	IN ASSOCIATION WITH: ACOUSTICAL ANALYSIS ASSOCIATES OKS ASSOCIATES MANUEL PADRON ASSOCIATES MICHAEL BRANDMAN ASSOCIATES, INC. PGW WONG ENGINEERING, INC. RALPH STONE AND COMPANY, INC.		SHEET NUMBER 11

PLAN
SCALE 1"=100'



DRAWN PNM DESIGNED AJM APPROVED SCRTA	LOS ANGELES COUNTY TRANSPORTATION COMMISSION COASTAL CORRIDOR RAIL TRANSIT PROJECT LACTC BECHTEL CIVIL, INC. IN ASSOCIATION WITH ACOUSTICAL ANALYSIS ASSOCIATES DKS ASSOCIATES MANUEL PADRON ASSOCIATES MICHAEL BRANDMAN ASSOCIATES, INC PSH PONG ENGINEERING, INC. RALPH STONE AND COMPANY, INC.	PLAN & PROFILE STA CR 215+00 TO CR 239+10	CONTRACT NO. DRAWING NO. C-112 SCALE AS SHOWN DATE 6-28-85 SHEET NUMBER 12

NOTE:
WIDENING OF LINDERO AVENUE ON BOTH SIDES AS SHOWN IS BASED ON THE COASTAL CONSERVATION AND OPEN SPACE PLAN AS ADOPTED BY THE CITY OF LOS ANGELES (1975). THE FINAL PROJECT WILL NOT ENCROACH ON THE WETLANDS.

7 LA I

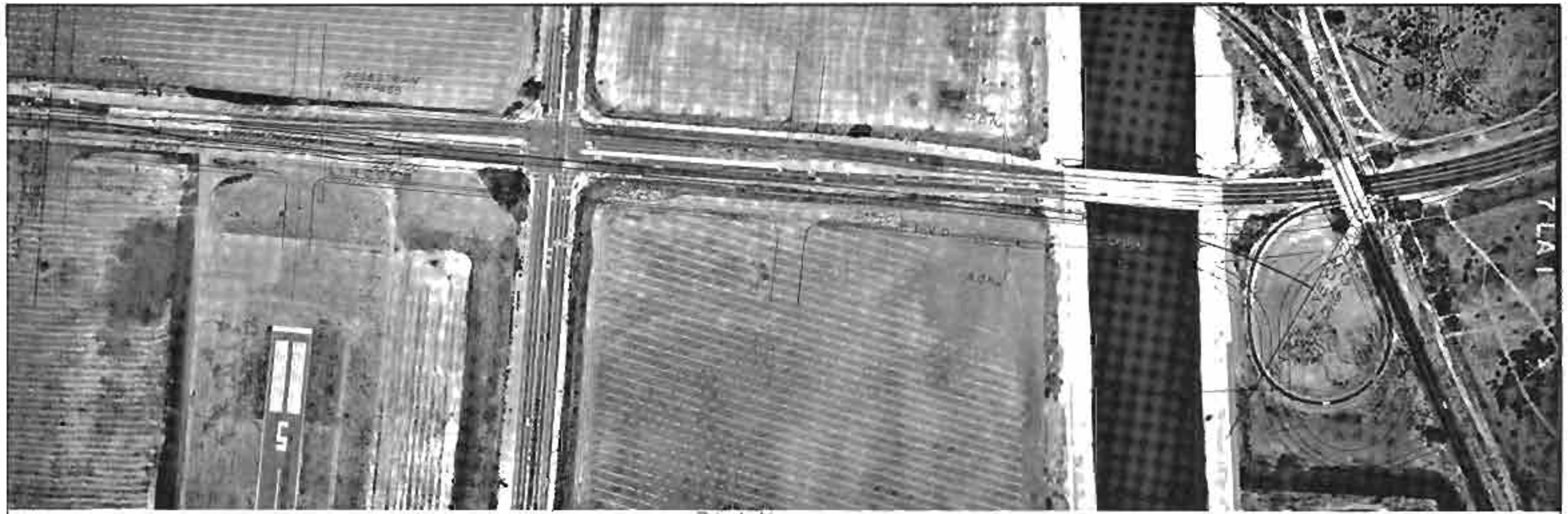
PLAN
SCALE: 1"=100'

PROFILE
SCALE: HORIZ. 1"=100'
VERT. 1"=10'

MATCH LINE CR 239+10 TIR EL 36.65 SEE DWG. C-114

MATCH LINE CR 267+70 SEE DWG. C-114

DRAWN: FNM	LOS ANGELES COUNTY TRANSPORTATION COMMISSION COASTAL CORRIDOR RAIL TRANSIT PROJECT		CONTRACT NO.
DESIGNED: AJM	BECHTEL CIVIL, INC.	PLAN & PROFILE STA CR 239+10 TO CR 267+70 (MEDIAN ALIGNMENT)	DRAWING NO. C-113
APPROVED: BCB	IN ASSOCIATION WITH ACOUSTICAL ANALYSIS ASSOCIATES DAS ASSOCIATES MANUEL PADRON ASSOCIATES MICHAEL BRANDMAN ASSOCIATES, INC. PARSONS BRINCKERHOFF QUADE & DOUGLAS, INC. RALPH STONE AND COMPANY, INC.		SCALE: AS SHOWN DATE: SHEET NUMBER: 13



PLAN
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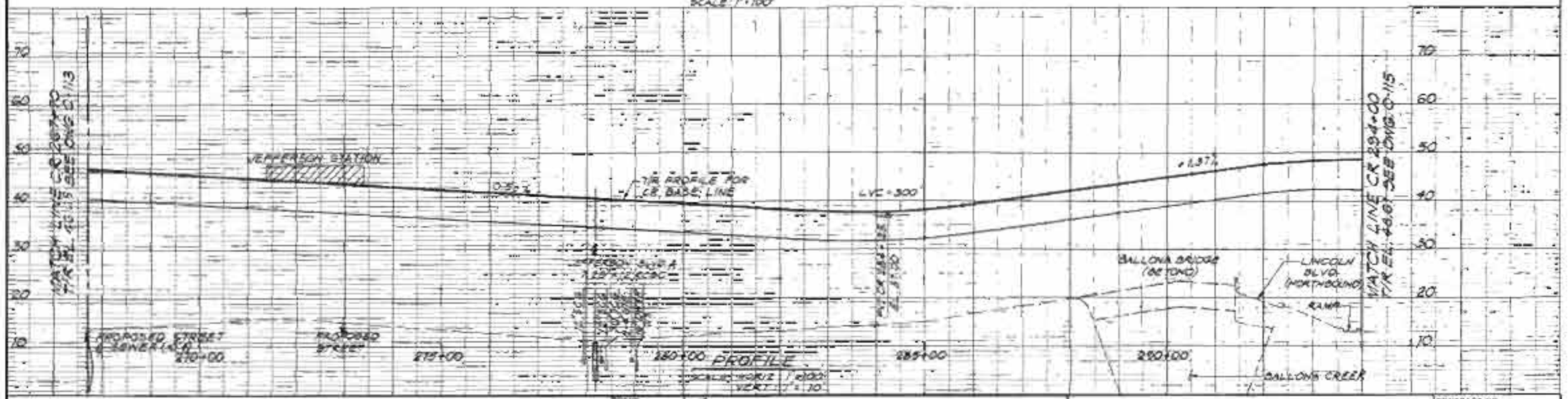
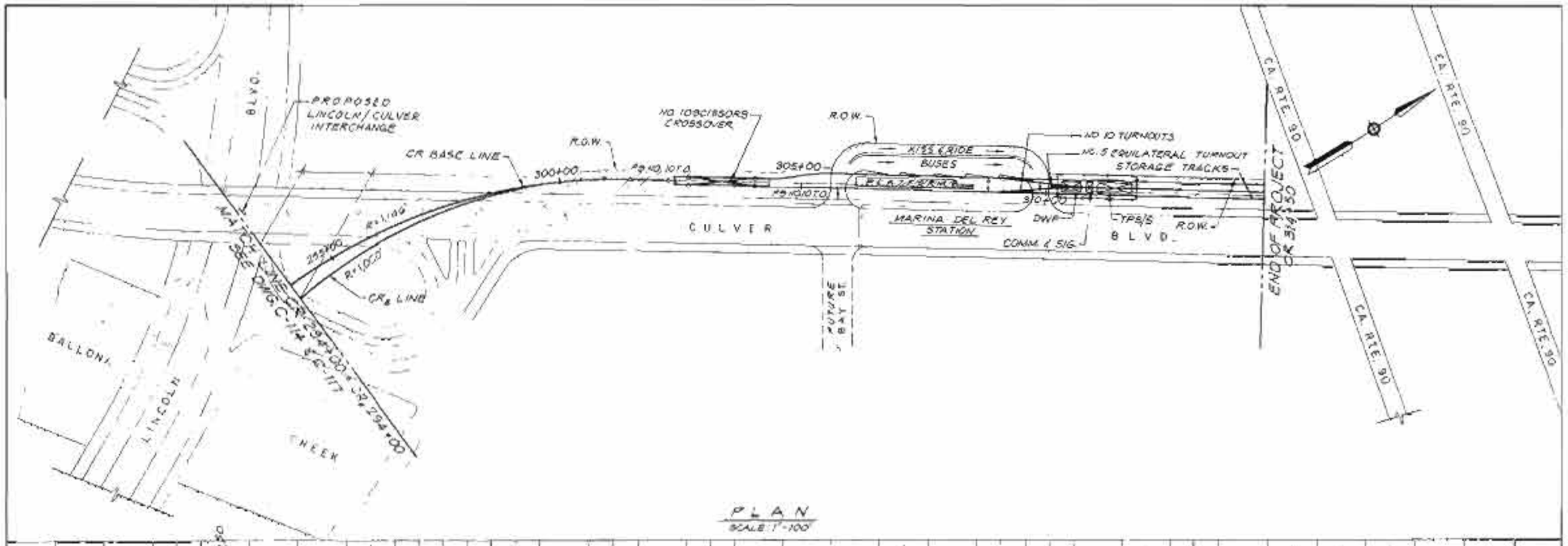
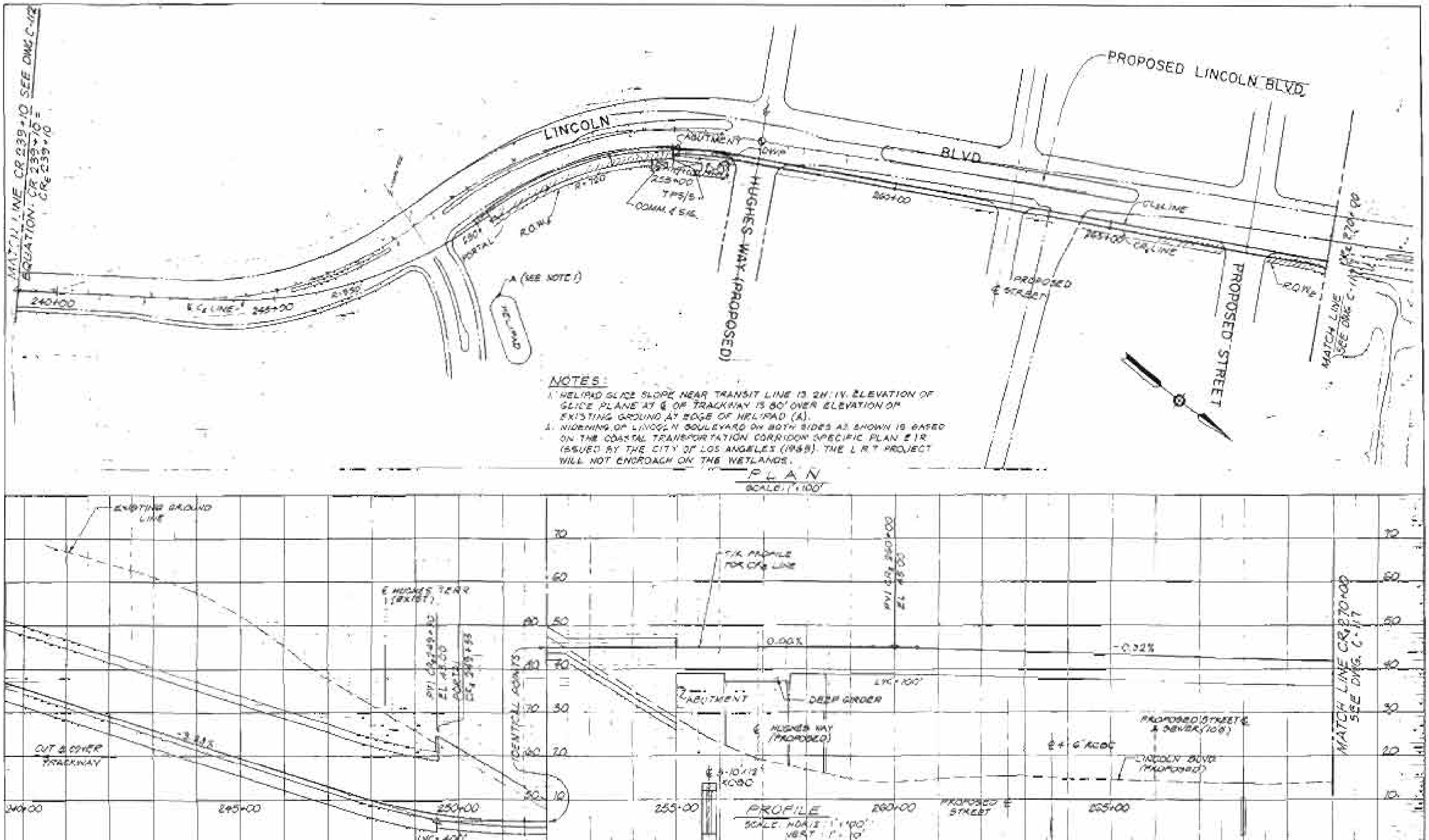


DRAWN: PNM DESIGNED: JLM APPROVED: BOB	LOS ANGELES COUNTY TRANSPORTATION COMMISSION COASTAL CORRIDOR RAIL TRANSIT PROJECT BECHTEL CIVIL, INC. IN ASSOCIATION WITH: ACOUSTICAL ANALYSIS ASSOCIATES DMJM ASSOCIATES MANUEL PADRON ASSOCIATES MICHAEL BRANDMAN ASSOCIATES, INC. PAN WOMB ENGINEERING, INC. RALPH STONE AND COMPANY, INC.	PLAN & PROFILE STA CR 267+70 TO CR 294+00 (MEDIAN ALIGNMENT)	CONTRACT NO. DRAWING NO. C-114 SCALE AS SHOWN DATE SHEET NUMBER 14



DESIGN PMK	LOS ANGELES COUNTY TRANSPORTATION COMMISSION COASTAL CORRIDOR RAIL TRANSIT PROJECT	PLAN & PROFILE STA CR 294+00 TO CR 314+50	CONTRACT NO. DRAWING NO. C-115
DESIGNED ALM	BECHTEL CIVIL, INC.		SCALE AS SHOWN DATE
CHECKED BOB	IN ASSOCIATION WITH: ACOUSTICAL ANALYSIS ASSOCIATES CHS ASSOCIATES HAMEL, PACKER ASSOCIATES MICHAEL BRANDMAN ASSOCIATES, INC PAN WONG ENGINEERING, INC RALPH STONE AND COMPANY, INC.		SHEET NUMBER 15



LOS ANGELES COUNTY TRANSPORTATION COMMISSION
PASADENA - LOS ANGELES ROUTE REFINEMENT STUDY

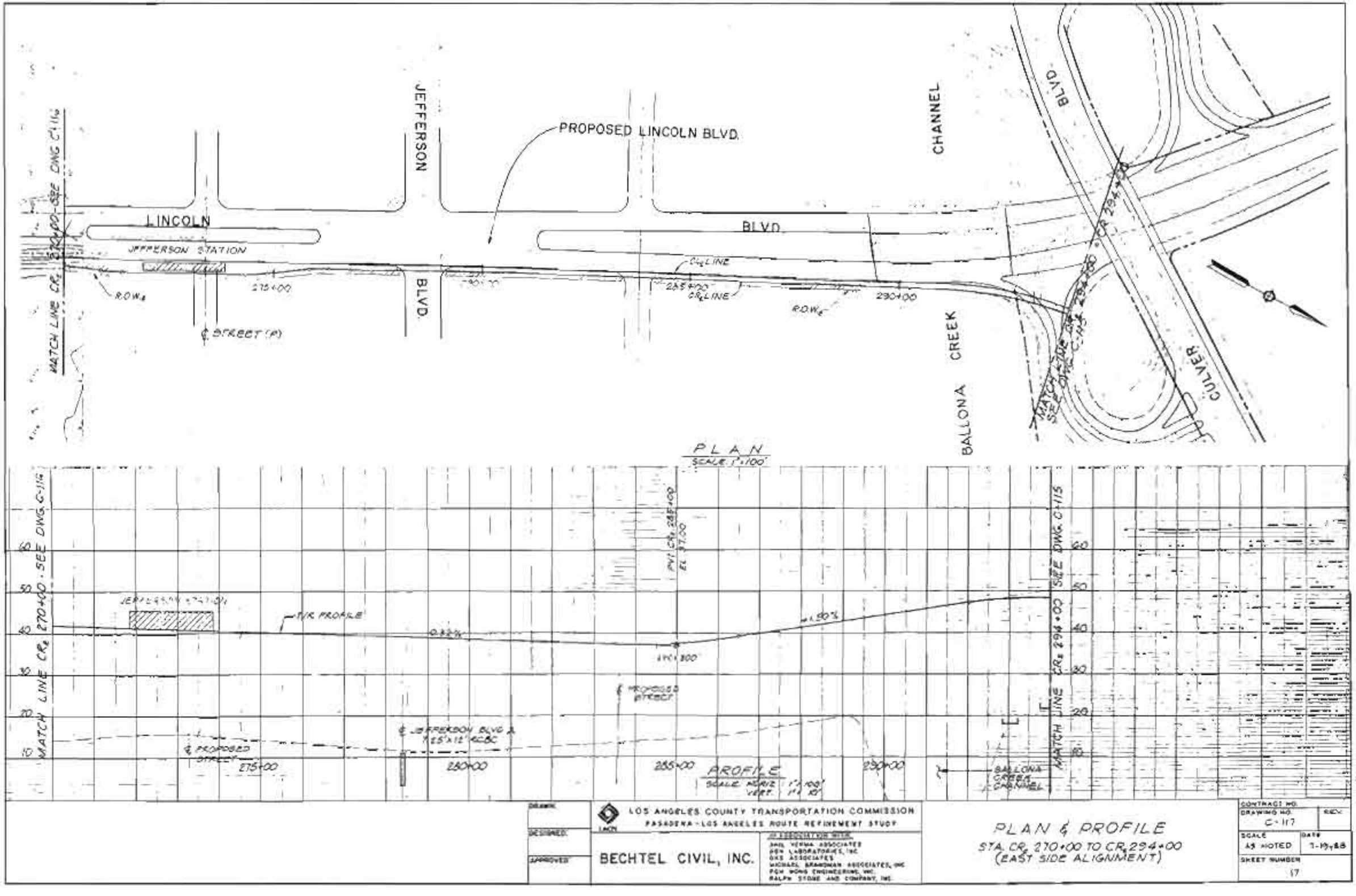
DRAWN:
DESIGNED:
APPROVED:

BECHTEL CIVIL, INC.

IN ASSOCIATION WITH:
DKS ASSOCIATES
MICHAEL BRANDMAN ASSOCIATES, INC.
RALPH STONE AND COMPANY, INC.

PLAN & PROFILE
STA. CR$_E$ 239+10 TO CR$_E$ 270+00
(EAST SIDE ALIGNMENT)

CONTRACT NO.
DRAWING NO. C-116
REV.
SCALE: AS NOTED
DATE: 7-19-88
SHEET NUMBER: 16



LOS ANGELES COUNTY TRANSPORTATION COMMISSION
PASADENA - LOS ANGELES ROUTE REFINEMENT STUDY

DRAWN:
DESIGNED:
APPROVED:

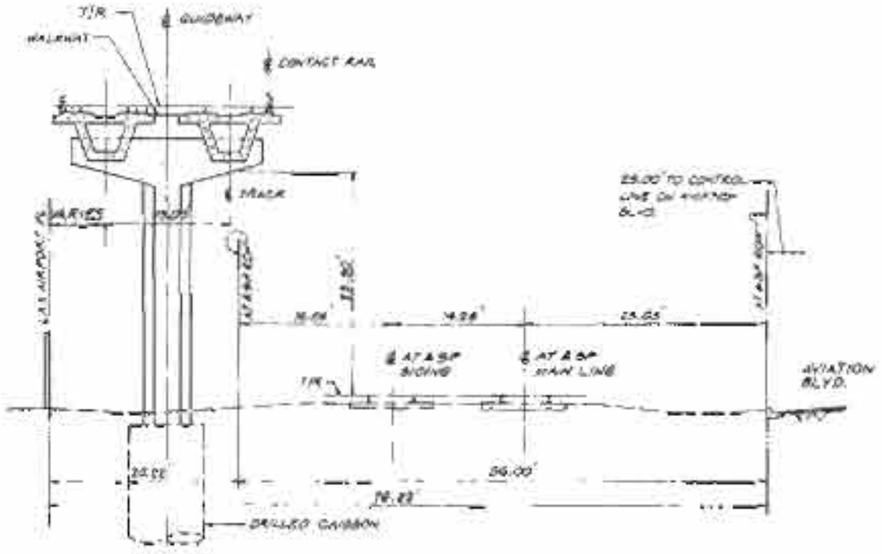
BECHTEL CIVIL, INC.

IN ASSOCIATION WITH:
JAMES VERMA ASSOCIATES
GEO LABORATORIES, INC
GKE ASSOCIATES
MICHAEL BRANDMAN ASSOCIATES, INC
PCH WONG ENGINEERING, INC.
RALPH STONE AND COMPANY, INC.

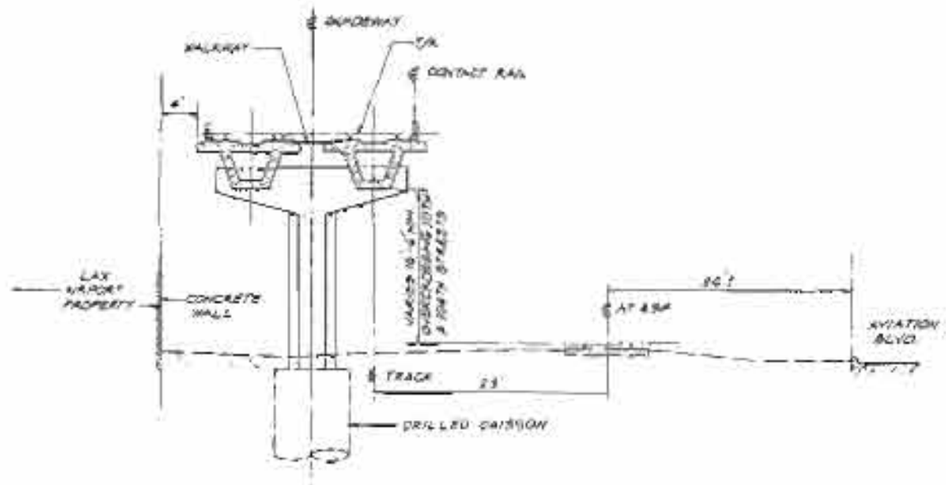
PLAN & PROFILE

STA. CR. 270+00 TO CR. 294+00
(EAST SIDE ALIGNMENT)

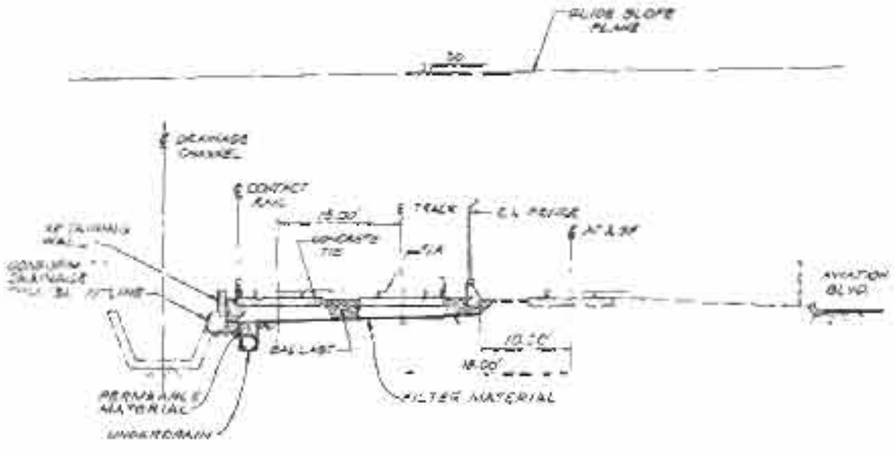
CONTRACT NO.
DRAWING NO. C-117
REV.
SCALE AS NOTED
DATE 7-19-88
SHEET NUMBER 17



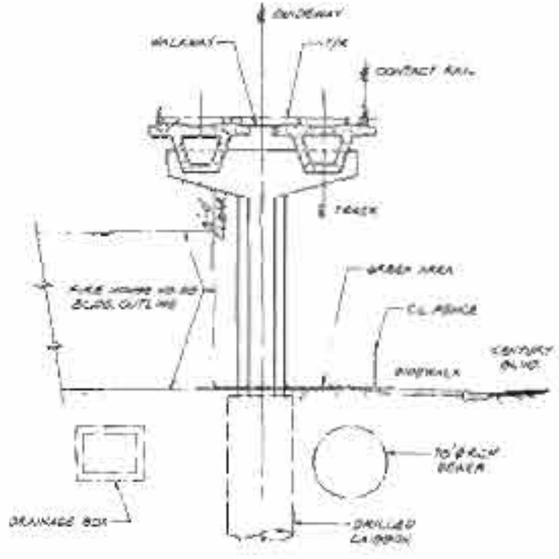
AVIATION BLVD. NORTH OF IMPERIAL HIGHWAY



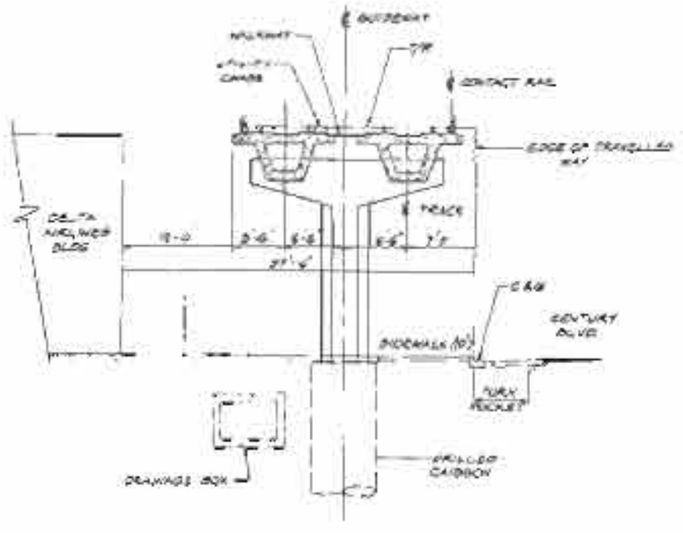
AVIATION BLVD. AT 104TH & 111TH STREETS



AVIATION BLVD. AT RUNWAYS 25L & 25R



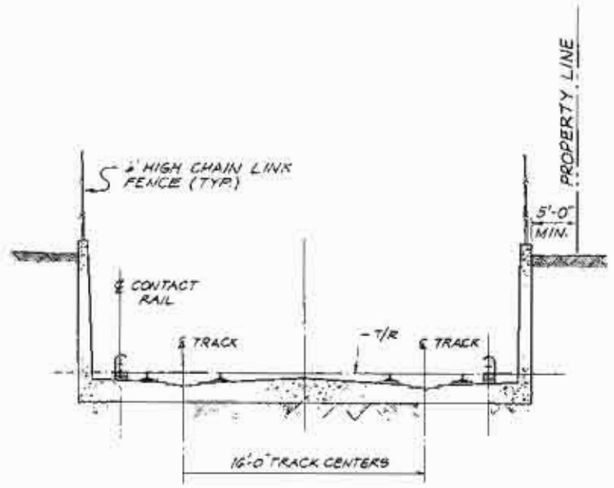
CENTURY BLVD. AT POSTAL ROAD



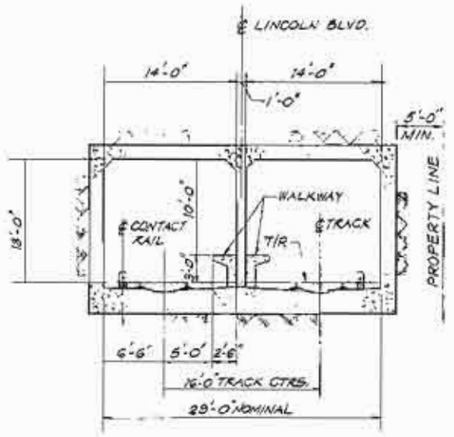
CENTURY BLVD. AT AVION DRIVE
(LOOKING WEST)

DRAWN: F. G. MONTALVAN DESIGNED: A. J. MORALES APPROVED: B. BRADLEY	LOS ANGELES COUNTY TRANSPORTATION COMMISSION COASTAL CORRIDOR RAIL TRANSIT PROJECT BECHTEL CIVIL, INC. ASSOCIATION WITH: ACOUSTICAL ANALYSIS ASSOCIATES DMJM ASSOCIATES HARRIS, PRUNICK ASSOCIATES MICHAEL BRANDMAN ASSOCIATES, INC PSOMAS ENGINEERING, INC. RALPH STONE AND COMPANY, INC.	CROSS SECTIONS 1	CONTRACT NO. DRAWING NO. C-401 SCALE 1/8" = 1'-0" DATE 8-10-88 SHEET NUMBER 18

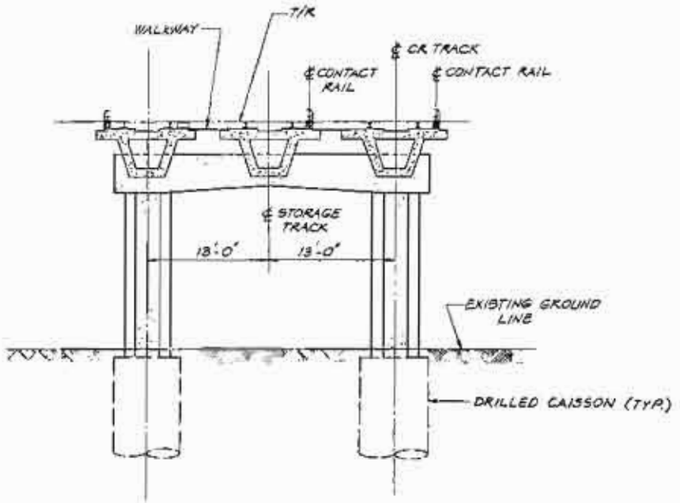
REVISED JUNE 2, 1989



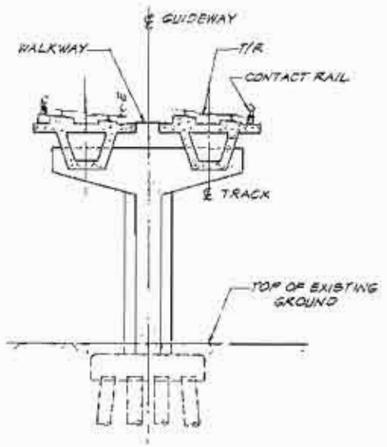
RETAINED SECTION



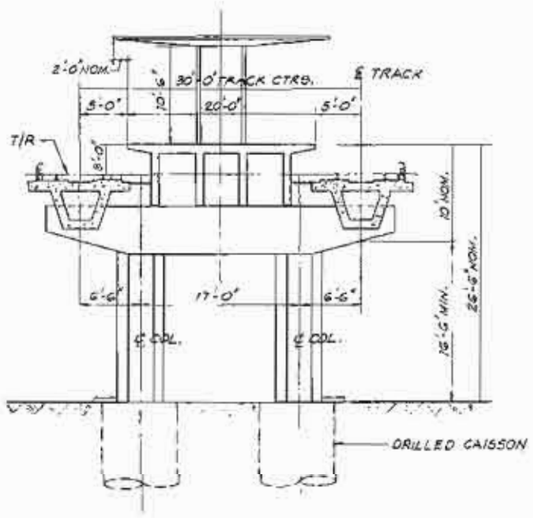
SUBWAY



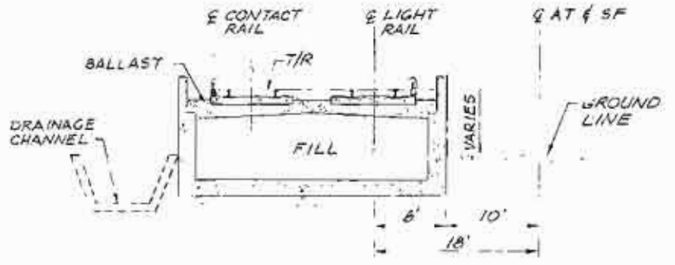
STORAGE TRACK



CURVED GUIDEWAY SUPERELEVATED
(WETLAND AREA)



PASSENGER STATION
CROSS SECTION

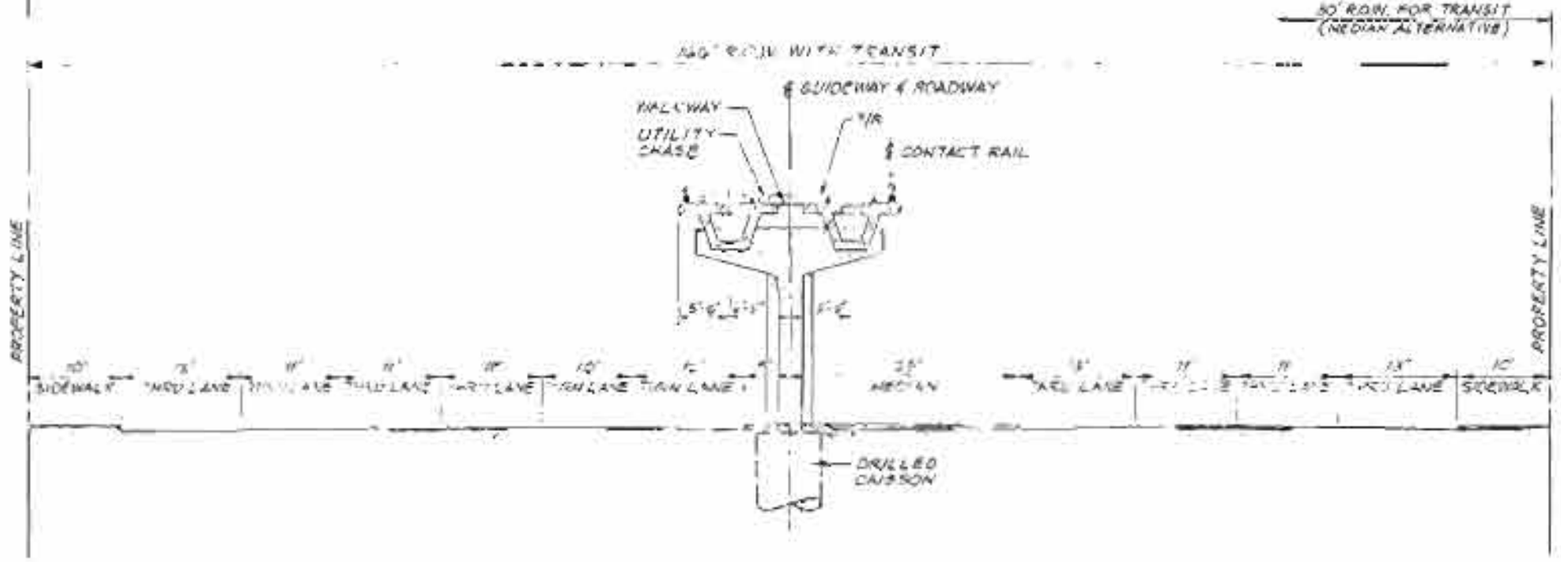


STA. 46+00 TO STA. 49+00
STA. 25+00 TO STA. 30+00

RETAINED EARTH FILL
(TRANSITION BETWEEN AERIAL ℄ AT-GRADE)

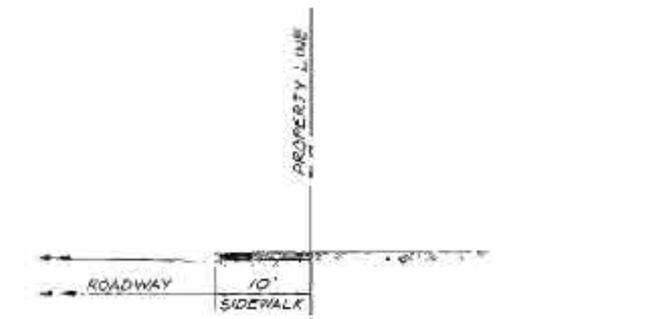
DRAWN: P.N. MONTALLANA DESIGNED: A.J. MORALES APPROVED: B. BEASLEY	LOS ANGELES COUNTY TRANSPORTATION COMMISSION COASTAL CORRIDOR RAIL TRANSIT PROJECT BECHTEL CIVIL, INC. IN ASSOCIATION WITH: ACOUSTICAL ANALYSIS ASSOCIATES DKS ASSOCIATES MANUEL PADRON ASSOCIATES MICHAEL BRANDMAN ASSOCIATES, INC. PGH WONG ENGINEERING, INC. RALPH STONE AND COMPANY, INC.	CROSS SECTIONS II	CONTRACT NO. DRAWING NO. C-402 SCALE 1/8" = 1'-0" DATE 8-12-88 SHEET NUMBER 19

LINCOLN BLVD. WITHOUT TRANSIT



LINCOLN BLVD. WITH TRANSIT

MEDIAN ALTERNATIVE



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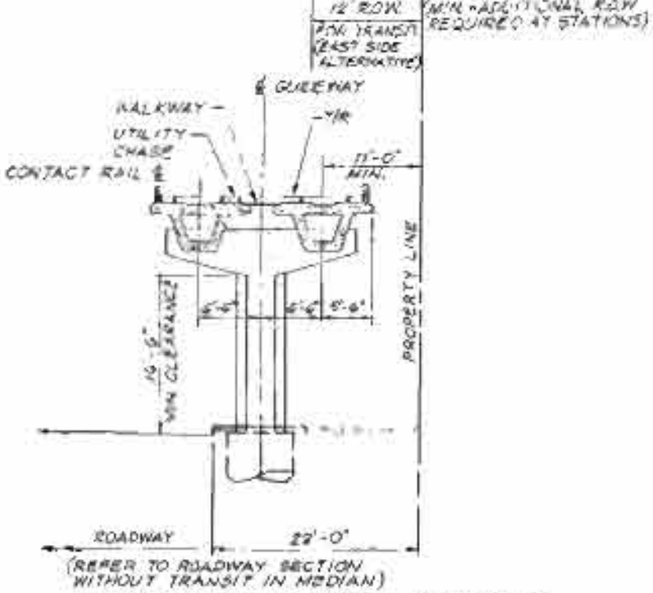


LINCOLN BLVD. WITH TRANSIT

EAST SIDE ALTERNATIVE

DRAWN: R. DE LEON
DESIGNED: J. FLANNIGAN
APPROVED: B. BEASLEY

LACTC

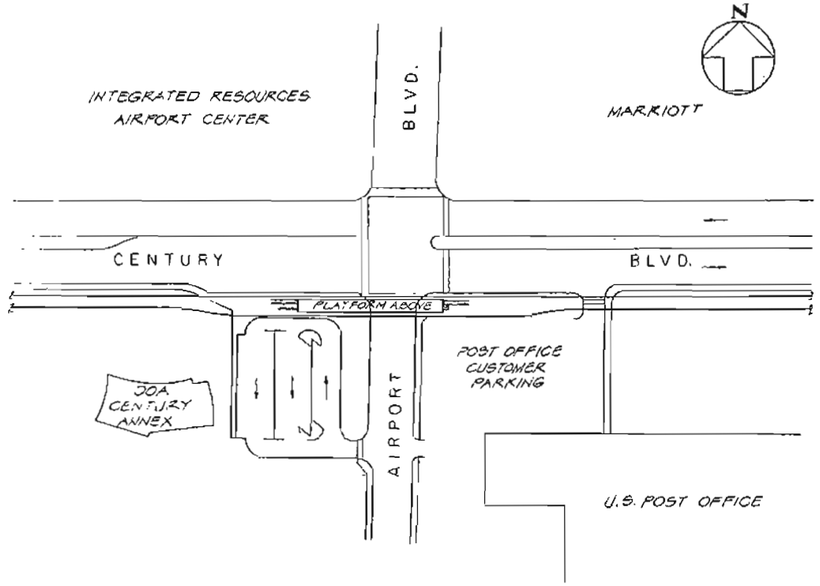
LOS ANGELES COUNTY TRANSPORTATION COMMISSION
COASTAL CORRIDOR RAIL TRANSIT PROJECT

BECHTEL CIVIL, INC.

IN ASSOCIATION WITH:
ACOUSTICAL ANALYSIS ASSOCIATES
DKE ASSOCIATES
MANUEL PADRON ASSOCIATES
MICHAEL BRANDMAN ASSOCIATES, INC
PAUL MOND ENGINEERING, INC.
RALPH STONE AND COMPANY, INC.

CROSS SECTIONS III

CONTRACT NO.
DRAWING NO. C-403
SCALE 1/8" = 1'-0"
DATE
SHEET NUMBER 20

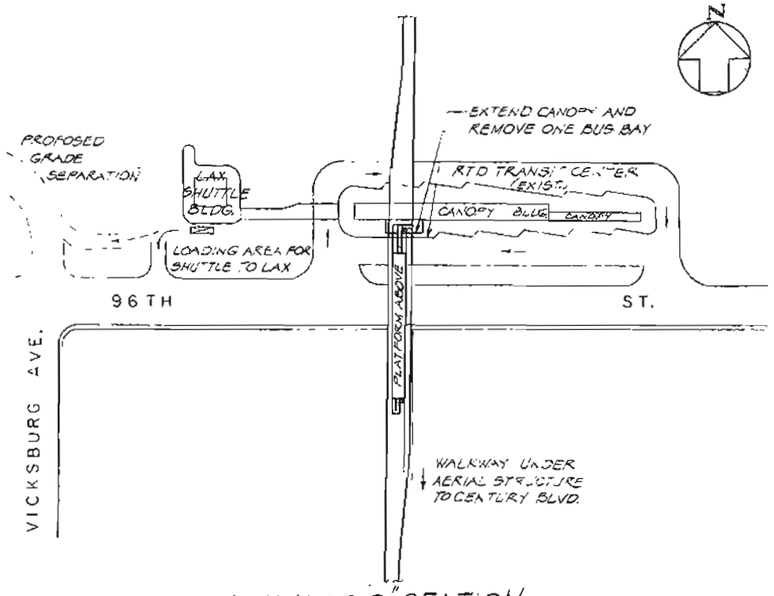


CENTURY STATION

SCALE: 1" = 100'

NOTE :

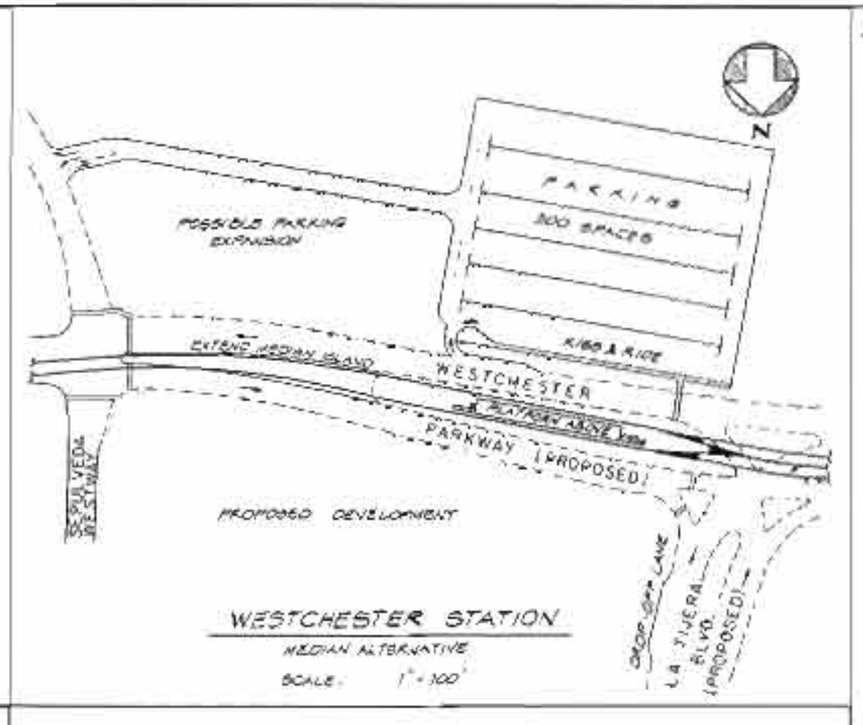
SPECIFIC DESIGN OF STATION SITES SUBJECT TO CHANGE.



LAX/LOT C" STATION

SCALE: 1" = 100'

DRAWN: PNM DESIGNED: BE APPROVED: BOB	LOS ANGELES COUNTY TRANSPORTATION COMMISSION COASTAL CORRIDOR RAIL TRANSIT PROJECT BECHTEL CIVIL, INC. IN ASSOCIATION WITH: ACOUSTICAL ANALYSIS ASSOCIATES ORS ASSOCIATES MANUEL PADRON ASSOCIATES MICHAEL BRANDMAN ASSOCIATES, INC PGH WONG ENGINEERING, INC. RALPH STONE AND COMPANY, INC.	STATION SKETCHES I	CONTRACT NO. DRAWING NO. FIGURE 3A SCALE AS SHOWN DATE SHEET NUMBER 21



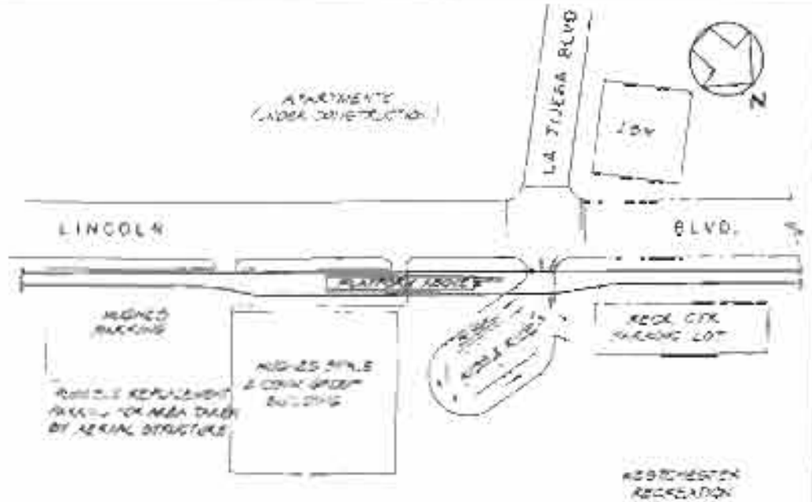
WESTCHESTER STATION

MEDIAN ALTERNATIVE

SCALE: 1" = 100'

NOTE:

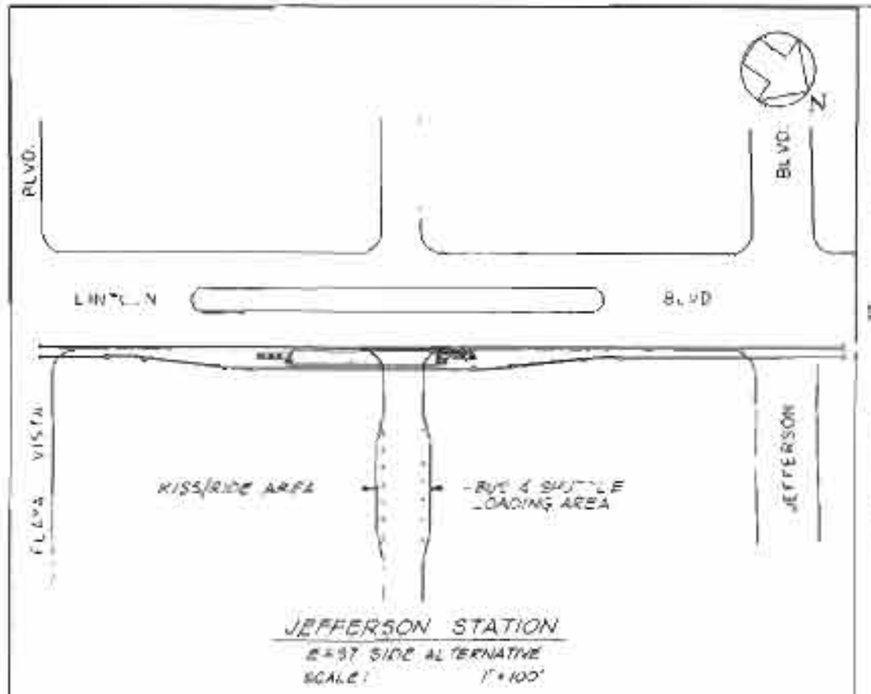
SPECIFIC DESIGN OF STATION SITES SUBJECT TO CHANGE.



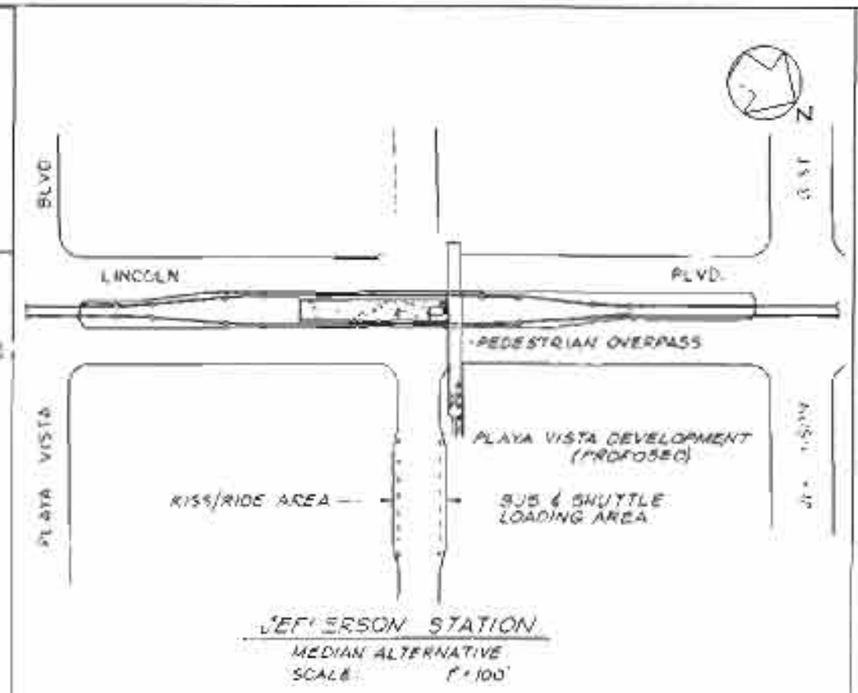
MANCHESTER STATION

SCALE 1"=100'

DRAWN: PNM DESIGNED: BE APPROVED: BOB	LOS ANGELES COUNTY TRANSPORTATION COMMISSION COASTAL CORRIDOR RAIL TRANSIT PROJECT LACTC BECHTEL CIVIL, INC. IN ASSOCIATION WITH: ACOUSTICAL ANALYSIS ASSOCIATES DAS ASSOCIATES MANUEL PADRON ASSOCIATES MICHAEL BRANDMAN ASSOCIATES, INC. PDN WONG ENGINEERING, INC. RALPH STONE AND COMPANY, INC.	STATION SKETCHES II	CONTRACT NO. DRAWING NO. FIGURE 3D SCALE: AS SHOWN DATE: SHEET NUMBER: 22

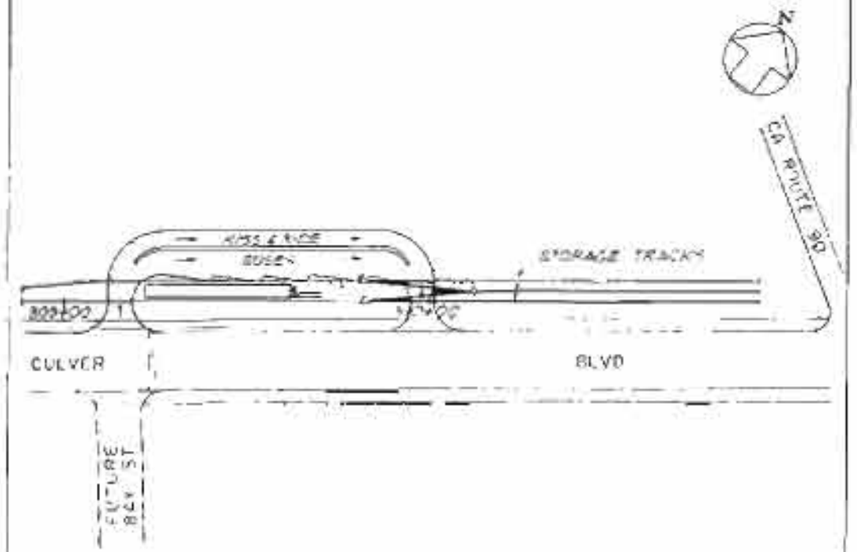


JEFFERSON STATION
EAST SIDE ALTERNATIVE
SCALE: 1" = 100'



JEFFERSON STATION
MEDIAN ALTERNATIVE
SCALE: 1" = 100'

NOTE:
SPECIFIC DESIGN OF STATION SITES SUBJECT TO CHANGE



MARINA DEL REY STATION
SCALE: 1" = 100'

LOS ANGELES COUNTY TRANSPORTATION COMMISSION
COASTAL CORRIDOR RAIL TRANSIT PROJECT

DESIGNED
DRAWN
CHECKED

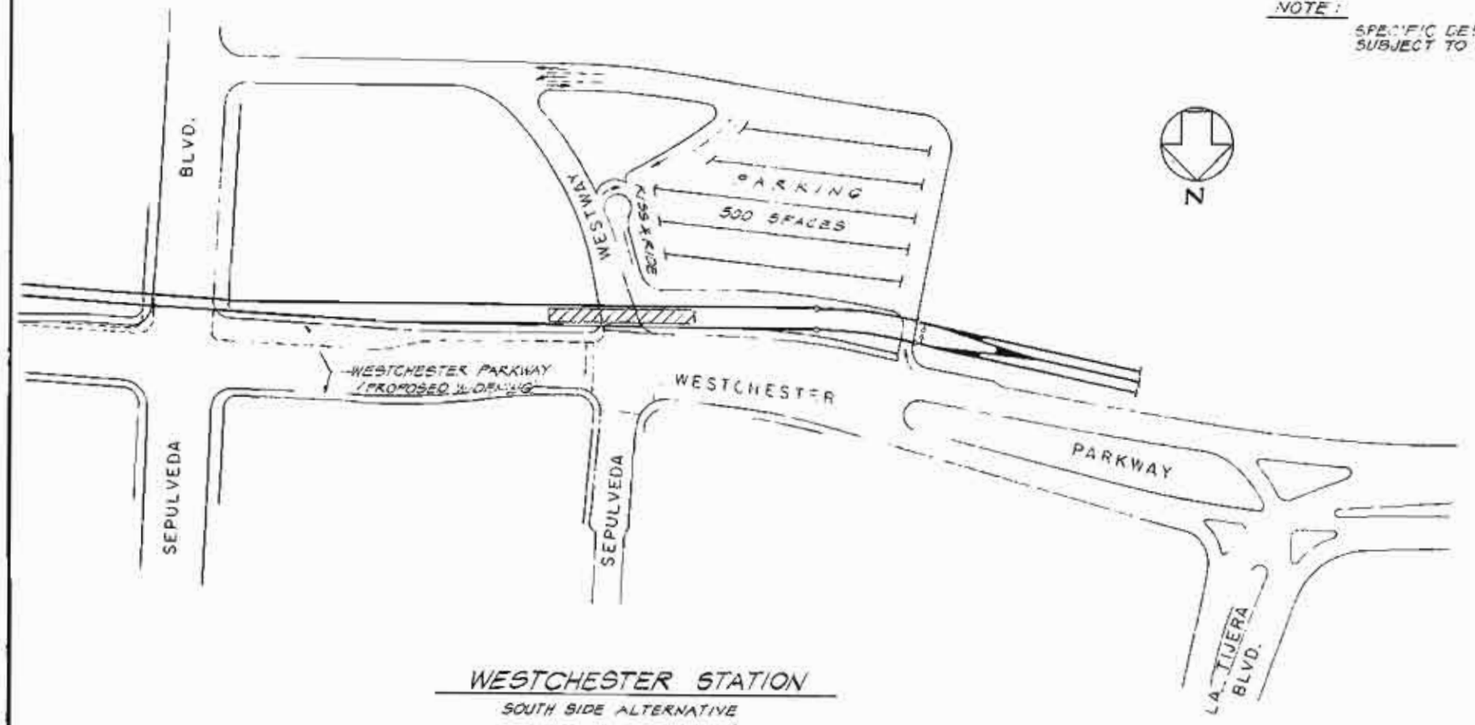
BECHTEL CIVIL, INC.

ASSOCIATION WITH:
ACOUSTICAL ANALYSIS ASSOCIATES
DMJM ASSOCIATES
MANUEL PARDON ASSOCIATES
MICHAEL BRANDMAN ASSOCIATES, INC
PCH NOMS ENGINEERING, INC.
RALPH STONE AND COMPANY, INC.

STATION SKETCHES III

CONTRACT NO.
DRAWING NO. FIGURE 3C
SCALE AS SHOWN
DATE
SHEET NUMBER 23

NOTE:
SPECIFIC DESIGN OF STATION SITE SUBJECT TO CHANGE.



WESTCHESTER STATION

SOUTH SIDE ALTERNATIVE

SCALE: 1" = 100'

DRAWN: PHM DESIGNED: AJM APPROVED: BOB	LACTC LOS ANGELES COUNTY TRANSPORTATION COMMISSION COASTAL CORRIDOR RAIL TRANSIT PROJECT	BECHTEL CIVIL, INC.	IN ASSOCIATION WITH: ACOUSTICAL ANALYSIS ASSOCIATES DKS ASSOCIATES MANUEL PADRON ASSOCIATES MICHAEL BRANDMAN ASSOCIATES, INC. PGH WONG ENGINEERING, INC. RALPH STONE AND COMPANY, INC.	STATION SKETCHES IV	CONTRACT NO. DRAWING NO. FIGURE 3D SCALE AS SHOWN DATE SHEET NUMBER 24

APPENDIX A

Los Angeles County
Transportation
Commission
403 West Eighth Street
Suite 500
Los Angeles
California 90014-3096
(213) 626-0370

TECHNICAL EVALUATION OF THE SEPULVEDA BOULEVARD ALIGNMENT FOR THE NORTH COASTAL ROUTE EIR

INTRODUCTION

In a September 16, 1988 letter, Councilwoman Ruth Galanter requested that the Commission study a Sepulveda Boulevard alignment in its Coastal Corridor, North Segment Environmental Impact Report (EIR). Subsequently, LACTC staff met with the Councilwoman's staff to discuss the issue. We agreed to do a preliminary technical analysis of this alternative to identify some of the engineering, cost and environmental issues associated with building the Sepulveda Boulevard alignment. This memo summarizes the initial review.

ANALYSIS

The purpose of the Sepulveda alignment is to serve the Westchester Business District and the eastern perimeter of the Playa Vista Project/Howard Hughes Development Center. It would then continue north within the San Diego Freeway right-of-way to Westwood. The portion of the alignment that travels through a residential area would be in subway.

LACTC staff and Bechtel carried out a field investigation to study alignment options for the Sepulveda route. We studied two approaches to Sepulveda Blvd. from LAX Lot C; an aerial structure that uses the parking lot behind the buildings on the east side of Sepulveda and one that crosses Sepulveda and would use the new La Tijera road proposed for the LAX Northside Project.

In addition to the field visit, Bechtel did a conceptual engineering drawing of the alignment as it transitions from Lot C to Sepulveda Boulevard. We also gathered material about the master plan for the Howard Hughes Center and construction contract drawings for the new San Diego on-off ramps at Sepulveda and La Tijera Boulevards and the freeway.

ENGINEERING ANALYSIS

Transition from Aerial Structure to Subway under Sepulveda Blvd.

In the Westchester Business District alternative, the aerial structure in Lot C continues north across Westchester Parkway to the parking lot behind stores fronting on the east side of

Sepulveda Boulevard (see Exhibit 1). An aerial station would be located at about 89th Street. Beyond the station the alignment continues north above the parking lot. It begins its transition to a subway south of Manchester Boulevard. To change from aerial to subway to get into the middle of Sepulveda Boulevard and before crossing under Manchester, the subway portal structure will require removal of at least two and probably three buildings at the southeast corner of Manchester and Sepulveda Boulevards. It is possible that the Loyola Office Building (Theatre) would be inpacted. Land acquisition costs have not been evaluated.

We do not know the number of businesses located in these buildings. However, LACTC would have to compensate both the building owners and business tenants to vacate these premises in addition to acquiring the property. An appraisal of both the property value (land and improvements) and business value would have to be done to determine the cost of demolishing the three buildings.

In addition to business displacement impacts, the aerial alignment in the parking lot will remove parking spaces and would not provide any park-and-ride spaces for the rail line. It will also cause traffic conflicts between rail patrons accessing the 89th Street Station and business patrons using the parking lot. Construction impacts would disrupt business activities for at least a year. From an operations perspective, the transition from aerial to subway will require a steep grade and reverse curve which will cause excessive wheel and rail wear.

The other alternative, aerial structure on the proposed La Tijera Boulevard, has a major operational and engineering problem. The alignment would begin at the aerial station located between La Tijera Boulevard and Sepulveda Westway. The LACTC is studying two alignment alternatives for this station; one in the median of Westchester Parkway and the other on its southside.

It is not possible to turn north on La Tijera from the station located in the median of Westchester Parkway. The turn from the southside is also extremely difficult and would violate the Commission's design criteria for curves on aerial structures. In addition, another tight curve is necessary to turn from La Tijera to Sepulveda, complicated by the requirement to drop into a tunnel section under the street. For these reasons it is not feasible to use the La Tijera approach to Sepulveda Boulevard.

We also evaluated the option of beginning the subway section in Lot C and crossing under Westchester Parkway to reach Sepulveda Boulevard below grade. This alignment may require removal of three buildings at the northeast corner of Westchester Parkway and Sepulveda Boulevard. In addition, a costly subway station would be built approximately at 89th Street to serve the Westchester Business District. This would be a cut-and-cover excavated station in the middle of Sepulveda Boulevard creating major business and traffic disruption during construction for 2-3 years. The potential building displacement, prohibitive subway cost and traffic and business disruption did not warrant further consideration of this option.

Sepulveda Boulevard and the San Diego Freeway

Once the alignment is under the median of Sepulveda Boulevard boring a tunnel under the street is relatively straightforward. However, several problems arise in making the transition from Sepulveda Boulevard to the San Diego Freeway to continue north to Westwood.

In order to determine possible aerial or subway alignments in the vicinity of the San Diego Freeway and Sepulveda Boulevard, one has to have a good idea of where the alignment proceeds from this point north toward Westwood. The topographic features, street configuration, existing and proposed freeway ramps, and existing and proposed developments make this decision very difficult.

To pass under the San Diego Freeway, Sepulveda Boulevard begins to descend at the existing southbound freeway on-off ramp. This leaves two options for the subway to transition from Sepulveda Boulevard to the freeway; in aerial structure or subway. Aerial structure does not appear feasible in this general vicinity. The major obstacles are the new freeway ramps, the existing and proposed developments at Howard Hughes Center, the Marina Freeway interchange, and lack of street capacity to support columns. The turn north onto the San Diego Freeway would be in subway. It would remain underground north of the Marina Freeway interchange and perhaps further, depending on right-of-way conditions within I-405.

The only likely location for a station at this point in the analysis would be somewhere in the vicinity of the Lucky Market building adjacent to the freeway near the Sepulveda/ Centinela intersection. This site provides ample parking. However, auto access to the site would be difficult as it cannot be easily reached from either the San Diego or Marina Freeways. This parcel is also in a prime real estate area and would be costly to purchase.

The Marina Freeway interchange presents a unique engineering problem in defining how the line would proceed north to Westwood. If the rail alignment is aerial, it would have be the fourth level of this interchange, 80-100 feet above grade. Although this structure is theoretically possible, the difficulties of building it and maintaining existing traffic on the Marina and San Diego Freeways would be a major engineering challenge. If the rail alignment is subway, it would have to weave its way through the underground support columns for the interchange.

Although both aerial and subway options to traverse the Marina interchange have difficulties, we would recommend the latter. The engineering problems confronting the subway are more readily resolved than with the aerial structure. This would require continuation of subway towards Westwood. The exact amount of subway would have to be studied in determining how the alignment would reach Westwood.

Cost

We provide a very conceptual cost analysis to illustrate the difference in construction costs between the Lincoln Boulevard alignment and the Sepulveda Boulevard alignment. These costs do not include design, engineering, right-of-way acquisition, utility relocation, insurance, administration, vehicles, inflation and other items that would normally be included in a project budget. They would most likely be at least double the estimates provided below.

The construction cost of the two alignments are approximately equal. However, the uncertainties associated with subway construction are much greater than with building aerial structures. Consequently, the cost of the subway alignment would most likely be greater than aerial once further engineering work was completed and better information about the site specific aspects of construction are known.

Lincoln to Culver		Sepulveda to Centinela	
(millions of 1988 $)		(millions of 1988 $)	
aerial 13,500' @ $3,500/ft	= 47.3	aerial 1,700' @ $3,500/ft	= 6.0
tunnel 4,000' @ $4,000/ft	= 16.0	tunnel 7,800' @ $6,500/ft	=50.7
4 aerial stations @$4MM ea	= 16.0	1 aerial station @ $4MM ea	= 4.0
	Total = 79.3	1 subway station @ $20MM ea	=20.0
			Total =80.0

Conclusions

The primary drawback of the Sepulveda Alignment is the disruption to the Westchester Business District and the engineering difficulties in continuing the line north to Westwood within the San Diego Freeway right-of-way. On an order of magnitude cost basis, both alignments are approximately the same. However, it is unclear at this point as to the ability of the alignment to continue north within the San Diego Freeway right-of-way, especially at the Marina Freeway interchange. This area is replete with columns which the subway would have to weave through. In any case, continuing north under the freeway would be very costly.

LACTC staff recommends that we not pursue this alignment in the EIR because of displacement impacts and engineering difficulties. We continue to believe that the Lincoln Blvd. alignment better serves the regional rail transit needs of Los Angeles County.