

# THE LONG BEACH-LOS ANGELES RAIL TRANSIT PROJECT

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Los Angeles County Transportation Commission  
Staff Report

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## Alternatives Evaluation

- DOWNTOWN LOS ANGELES
- MID CORRIDOR

Prepared with the Assistance of  
Parsons Brinckerhoff/Kaiser Engineers



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# EXECUTIVE SUMMARY



November 13, 1984

Community Organizations  
Elected Officials  
Government Agencies  
Interested Persons and Businesses

This Alternatives Evaluation Report Executive Summary represents the recommendations of the staff of the Los Angeles County Transportation Commission for the alignment and profile alternatives to be adopted by the Commission for the downtown Los Angeles and mid-corridor segments of the Long Beach-Los Angeles rail transit project.

In May, 1984, the Commission issued a Draft Environmental Impact Report (DEIR) addressing a range of alignment alternatives for the project in downtown Los Angeles, the mid-corridor, and Long Beach. Six public hearings were held on the DEIR in June, 1984 and numerous written comments on the DEIR were received. In the case of the project's Long Beach segment, this review resulted in an August 15, 1984 decision by LACTC to prepare a Supplemental EIR (SEIR) addressing several additional alignment alternatives, to be issued early in December, 1984. The Commission will undertake evaluation of all Long Beach alternatives for a selection recommendation after consideration of comments on the SEIR. At this time, then, this staff evaluation of the downtown Los Angeles and mid-corridor alternatives permits officials of government and community representatives to be informed of the scope of the project being recommended to the Commission along most of the project corridor.

We welcome comments on the recommendations contained in this Executive Summary, but request that all comments be received no later than December 21, 1984 to permit consideration of such comments in the Commission's action on the recommendations. The Commission intends to issue a Final EIR for the project in March, 1985, and formally adopt specific alignments for construction at that time.

A copy of the full Alternatives Evaluation Report may be obtained from LACTC by written request or by calling 620-RAIL.

Sincerely,

A handwritten signature in black ink that reads "Rick Richmond". The signature is written in a cursive, slightly slanted style.

RICK RICHMOND  
Executive Director

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# The Long Beach-Los Angeles Rail Transit Project

## **ALTERNATIVES EVALUATION REPORT**

### EXECUTIVE SUMMARY

#### BACKGROUND

The proposed Long Beach-Los Angeles Rail Transit Project now under development by the Los Angeles County Transportation Commission (LACTC) is part of an ongoing transportation planning process for Los Angeles County. The transportation corridor it will serve and several others in the county have been identified as candidates for transit improvements.

The Long Beach-Los Angeles Rail Transit Project has been designated by the LACTC as the first project to be financed from local funds. The project will connect with the federally-assisted Southern California Rapid Transit District (SCRTD) Metro Rail Project, and together they will be the first projects to be implemented in the thirteen transportation corridors specified by Proposition A. SCRTD will be the operator of both systems when construction is completed.

The Long Beach-Angeles Rail Transit Project will operate as a conventional light rail system from downtown Los Angeles to downtown Long Beach and will serve in excess of 50,000 passengers per day upon reaching normal operating levels. The proposed line will pass through the cities of Compton and Carson and through the unincorporated areas of Florence-Graham, Willowbrook, and Dominguez Hills in Los Angeles County. The total route will be approximately 21 miles in length, with about 16 miles of it following an existing Southern Pacific Transportation Company (SPTC) right-of-way (Wilmington and East Long Beach Branches). Much of the project route will be essentially the same as the last line operated by the Pacific Electric Railway's "Red Cars," which ceased operation in 1961. Design and service characteristics, however, will be upgraded and modernized to meet today's transit standards and to satisfy both present and anticipated needs.

For purposes of evaluating alternative routes ("alignments"), the Long Beach-Los Angeles corridor was divided into three segments: downtown Los Angeles, the Mid Corridor, and Long Beach. A number of alternative alignments were considered within each of the three segments. A summary description of the proposed project, including alternative alignments and stations, vehicles, yards and shops, and fare collection, can be found in Chapter 2.0 of this report. Additional detail can be found in the Draft Environmental Impact Report (DEIR).

The project has received extensive study over the past 18 months with the intent of defining the proposed system in sufficient detail to meet key requirements of the planning and development process. These are:

- (1) Determination of basic feasibility of the project from the perspectives of service, cost, and environmental impact;
- (2) Documentation of all possible significant impacts of the project and mitigation measures in Draft and Final Environmental Impact Reports; and;
- (3) Selection of a final "preferred" alignment for the system prior to initiation of detailed engineering and construction.

Pursuant to the California Environmental Quality Act (CEQA), a Draft Environmental Impact Report (DEIR) was released on May 30, 1984 for public review and comment. As a result of written and oral comments received from the Long Beach area, three new alignment alternatives in Long Beach were identified for study. A Supplemental EIR addressing those alternatives will be issued in early December, 1984; it is anticipated that comments will be received through January 9, 1985.

The present schedule calls for certification of the Final Environmental Impact Report for the full project (Long Beach to Los Angeles) in mid-March, 1985. The Commission expects to formally authorize the project and file a Notice of Determination with the County Clerk and the State Resources Agency shortly thereafter.

## **PURPOSE OF THIS REPORT**

With the documentation of alignment alternatives complete in the downtown Los Angeles and Mid Corridor segments of the corridor, project development has reached the point where it is now possible to select a preferred alternative in each of those two corridor segments. To assist in the meeting of the twin objectives of (1) maximizing public participation in the alternatives selection process and (2) maintaining the overall project schedule, this Alternatives Evaluation Report (AER) has been prepared and issued by the staff of the Los Angeles County Transportation Commission as a preliminary recommendation for final alternative selection in downtown Los Angeles and the Mid Corridor.

The Commission will consider comments on this report, as well as the content of the Final EIR (which responds to comments on the Draft EIR), prior to formally adopting the preferred alternative. The Commission will evaluate the various Long Beach alternatives during February, 1985 after review of public hearing and written comments on the Supplemental EIR. At the time of issuance of the Final EIR (scheduled for mid-March, 1985), the Commission expects to indicate the preferred project alignment it intends to adopt in all three segments of the project corridor. Jurisdictions throughout the project corridor will then have an opportunity to concur with or comment on this intention prior to the formal adoption of the project alignment, scheduled for late March, 1985.

## **FINDINGS AND RECOMMENDATIONS**

The project alternatives recommended by the Commission staff are the outgrowth of the joint consideration of principal findings from (1) the technical evaluation of alternatives (Chapter 4.0) and (2) the summary of public and agency comment on the Draft EIR for the project (Chapter 5.0). Selection of an alignment in downtown Los Angeles has focused on maximizing service efficiency while minimizing adverse environmental impact. Consideration in the Mid Corridor segment has been toward identifying a way to address existing adverse environmental conditions in the corridor--that is, rail freight impacts which are incidental to the rail transit system itself--while maintaining the integrity of the project.

The recommended alternatives have been identified from among the competing options as those best meeting the goals and objectives established for the Long Beach-Los Angeles Project by the Commission. The recommendations for each of the two corridor segments and the findings supporting them are now summarized. Additional discussion can be found in Chapter 6.0 of the main volume.

### Downtown Los Angeles

The three alternatives considered in downtown Los Angeles are: LA-1 (Broadway/Spring Couplet, At Grade), LA-2 (Flower Street Subway), and LA-3 (Figueroa/9th Aerial). The Commission staff recommends that the LA-2 alternative be adopted as the project alignment at the time of project authorization. The basis for this recommendation lies in the findings summarized in Table S.1. The following conclusions can be drawn from that information:

- (1) There are significant differences among the three alternatives in the degree to which they would create adverse and unmitigable environmental impacts. The LA-2 alignment is superior to the others with respect to virtually every measure of environmental impact.
- (2) By contrast, differences among the alternatives in the quality and efficiency of transit service, total transit ridership in the project corridor, and service energy savings are not significant.
- (3) The LA-2 alignment results in a slightly lower capital cost for the project.
- (4) The LA-2 alignment is the only downtown alternative to receive consistent support from government agencies and the general public, while suffering only limited criticism.

There is agreement among study participants that a fully at-grade transit alignment (Alternative LA-1) will not be adequate as the permanent downtown segment of an expanded, countywide light rail transit system. That view is strongly endorsed by the Los Angeles City Council, which is on record as opposing LA-1. The projected level of auto and truck traffic strongly calls for the system to operate off of city streets such as Broadway and Spring Street. The LA-3 (aerial) alternative was designed to capture

**TABLE S.1  
SUMMARY EVALUATION OF ALTERNATIVES**

**DOWNTOWN LOS ANGELES**

<b>CONSIDERATION</b>	<b>MOST DESIRABLE</b>	<b>LEAST DESIRABLE</b>	<b>COMMENTS</b>
<b>RIDERSHIP</b>			
Rail System	LA-3	LA-1/LA-2 equal	50% difference. Related to running time.
<u>Total Corridor (Rail and Bus)</u>	No significant differences.	--	--
<b>COST</b>			
System Capital Cost	LA-2	LA-3	Figures from Draft EIR.
Operating Cost Recovery	LA-3	LA-1	Related to ridership.
<b>SERVICE</b>			
Running Time	LA-3	LA-1/LA-2 equal	Related to ridership.
Accessibility/Mobility	LA-1	LA-2/LA-3 equal	Minor differences.
Reliability/Safety	No significant differences.	--	--
<b>PLANS/POLICIES</b>			
Conformity with RTP	LA-2	LA-1	Somewhat better links with Metro Rail and Harbor Transitway.
Conformity with Development Plans	LA-2	LA-3	See impacts discussion.
<b>IMPACT</b>			
Visual	LA-2	LA-3	Unmitigable adverse impact on historic and residential property. LA-1 impact partially mitigable.
Historic	LA-2	LA-3	
Noise	LA-2	LA-3	
Traffic	LA-2	LA-1	
Other	No significant differences.	--	
<b>ENERGY</b>	LA-1/LA-2	LA-3	Minor differences.
<b>AGENCY/PUBLIC RESPONSE</b>			
City of Los Angeles	No position.	LA-1	On record opposing LA-1.
Public Agencies	LA-2/LA-3 equal	LA-1	Consistent opposition to LA-1.
Private Groups	LA-2	LA-3	Support for LA-2; Strong opposition to LA-3; Mixed reaction to LA-1.

ridership and eliminate traffic impacts on surface streets, goals which were both met. The result of building an aerial structure, however, would be to create a significant adverse environmental impact on redeveloping residential areas and historic districts in the downtown. Moreover, the recommended subway alternative (LA-2) effectively minimizes conflict with vehicular traffic through a combination of compatible at-grade treatment (on Washington Boulevard) and a subway section as it enters the financial district.

The recommendation of the subway alternative in this case is not intended as a statement of policy affirming the superiority of subway alignments over aerial guideway alignments. Rather, it represents the judgement that the LA-2 alignment best achieves the objectives of providing cost-effective transit service to downtown Los Angeles with a minimum of delay and environmental impact. Aerial alignments will continue to receive consideration in all other transit guideway projects throughout the region.

#### Mid Corridor

Three alternatives were considered in the Mid Corridor, all variations of the same basic rail transit alignment. Alternative MC-1 provides for generally at-grade service using existing Southern Pacific Transportation Company right-of-way. No significant changes would be made to rail freight service. Alternative MC-2 provides for an open cut through central Compton to place both the freight and transit tracks below ground level. This alternative is otherwise similar to MC-1. Alternative MC-3 calls for a diversion of rail freight service off of the Wilmington Branch through downtown Compton and onto the now unused West Santa Ana Branch and active San Pedro Branch through the cities of Los Angeles and Compton. The MC-3 alternative is otherwise similar to MC-1, but includes an aerial structure near historic Watts Station to carry the rail transit trains over the relocated freight trains.

The evaluation of the Mid Corridor alternatives is summarized in Table S.2 and is discussed in detail in Chapter 6.0 of the main volume. Based on that analysis, the Commission staff recommends that the MC-1 alternative (Compton At Grade) be adopted as the project definition in the Mid Corridor. The MC-1 alternative is considered superior in two ways: (1) it provides transit service to the Mid Corridor at a level at least equal to the other alternatives, at considerably less cost; and (2) from



**TABLE S.2  
SUMMARY EVALUATION OF ALTERNATIVES**

**MID CORRIDOR**

<b>CONSIDERATION</b>	<b>MOST DESIRABLE</b>	<b>LEAST DESIRABLE</b>	<b>COMMENTS</b>
RIDERSHIP	No differences.	--	--
COST			
<u>System</u> Capital Cost	MC-1	MC-2	Cost Difference - MC-2: +\$135 million Cost Difference - MC-3: +\$ 12 million*
Operating Cost Recovery	No differences.	--	--
SERVICE			
Safety - Transit Riders	MC-3	MC-1	Differences are minimal.
Safety - Vehicular Traffic	MC-1/MC-2 equal	MC-3	Differences are minimal.
Other	No significant differences.	--	--
PLANS/POLICIES			
RTP	No differences.	--	--
Compton	MC-3 (modified)	MC-1	Supports only modified MC-3 (rail freight in depressed section).
CRA/Watts Junction	MC-1/MC-2 equal	MC-3	--
Rail Consolidation	MC-3	MC-2	MC-2 renders rail consolidation unlikely.
IMPACT			
Traffic	MC-2	MC-1/MC-3 equal	Superiority of MC-2 for traffic, noise, and visual is minimal. MC-3 merely shifts MC-1 traffic and noise impacts from one location to another, and adds vibration as an impact.
Noise	MC-2	MC-1/MC-3 equal	
Visual	MC-2	MC-3	
Historic	MC-1/MC-2 equal	MC-3	
Vibration	MC-1/MC-2 equal	MC-3 (mitigable)	
Other	No significant differences.	--	
ENERGY	MC-1	MC-2	--
AGENCY/PUBLIC RESPONSE			
City of Compton	MC-3 (modified)	MC-1	Supports only modified MC-3 (rail freight in depressed section). On record opposing MC-3.
City of Los Angeles	No position.	MC-3	
County of Los Angeles	No position.	No position.	--
SPTC	MC-1/MC-2 equal	MC-3	Requires service and insurance guarantees for MC-3.
Public Agencies	Mixed positions.	No positions.	Limited response.
Public Groups	No positions.	No positions.	Limited response.

\* Does not include additional right-of-way or other enhancements (see text).

the perspective of the Southern Pacific Transportation Company and a majority of public agencies, it offers the best opportunity for early implementation.

The principal drawbacks to the MC-2 alternative (Compton Grade Separation) are its very high cost and potential impact on emerging plans to consolidate rail freight service in the corridor. The additional cost of constructing the open cut in Compton would exceed \$135 million, which represents over 30 percent of the cost of the basic project. This project element has been considered to address existing adverse environmental conditions in Compton—conditions which result from rail freight traffic and which are not the result of the rail transit project. In addition, this investment in the Wilmington Branch of the SPTC railroad would effectively preclude implementation of the region's port-rail freight service consolidation plan, which ultimately seeks to route through freight service off of the Wilmington Branch and onto the San Pedro Branch (Alameda Street rail corridor). Given the limited availability of Proposition A funding and its defined purpose of providing a countywide rail transit system, inclusion of the Compton grade-separation in the project definition is not recommended.

The MC-3 alternative (SPTC Railroad Relocation) has been proposed as an alternative solution to the rail freight traffic problem in downtown Compton. However, while removing traffic, noise, and visual intrusion impacts from the center of Compton, it adds these impacts to three other sensitive areas: (1) Watts Junction, which is the site of redevelopment efforts centered on historic Watts Station; (2) the now unused West Santa Ana Branch, which is bordered by residential areas and runs adjacent to the historic Watts Towers, and (3) the San Pedro Branch, which runs parallel to Alameda Street in eastern Compton.

Both the City of Compton and the City of Los Angeles have objected to the MC-3 alternative as it is now defined. The Compton City Council has issued a resolution finding MC-3 acceptable only if the section of rail freight line along Alameda Street is placed in an open cut ("depressed trainway"). The City Council of Los Angeles has gone on record opposing the alternative due to its noise, visual and historic impacts. The Southern Pacific Transportation Company has expressed serious reservations about MC-3 as well, citing the need for guarantees that their service levels on the San Pedro Branch will not be challenged by the cities, and the need for indemnification for use of the West Santa Ana Branch.

Proposed design enhancements to mitigate these adverse consequences of MC-3 are only partly successful, and add significantly to the project cost. The Commission staff does not propose to modify the MC-3 alternative to the extent of fully grade-separating the Alameda Street freight route, believing this to be far beyond the scope of the light rail project.

The Commission staff acknowledges that the recommended adoption of Alternative MC-1 carries with it an interest by the Commission in seeing that the Wilmington Branch rail freight traffic is ultimately consolidated with traffic using the Alameda Street rail corridor (San Pedro Branch). This interest derives not only from the Commission's overall role in addressing transportation mobility in Los Angeles County (here, helping to reduce or eliminate rail freight/auto traffic congestion) but also from the benefits to the operation and safety of the light rail transit system by removing freight trains from proximity to transit tracks and stations. Accordingly, the Commission staff recommends that the Commission continue its active participation in the region's port rail consolidation effort, moving toward interagency adoption of facilities and funding plans. Timely resolution of funding and other institutional issues should result in effective mitigation of potential rail freight/auto conflicts.

