Southern California Rapid Transit District

Metro Rail Project

Second Tier Environmental Impact Statement / Report

TASK 18CAA21

FINAL PROJECT REPORT
TRAFFIC ANALYSIS

CITY OF LOS ANGELES
Department Of Transportation

JUNE 1983

RTO 37-11
REV 5/82

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DEPARTMENTAL

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT

DO NOT INCLUDE MORE THAN ONE SUBJECT IN THIS COMMUNICATION

DATE: June 13, 1983
18BAH11, 12, 13

TO: Files

FROM: R. Vance RVance

SUBJECT: Explanation of Calculations Done for DEIS - Transportation Section

There are a number of tables and text references in the June, 1983, Draft EIS for which the basic data or calculations do not appear, yet, in any of the technical reports done by the various EIS consultants. This memo explains how these data were derived for the traffic and parking sections. A separate technical report covers the travel time calculations used in both the transportation and Social/Community Impacts sections.

Traffic

1. Freeway Travel

Freeway capacities in Table 1-2 were projected by multiplying the number of lanes at each location by 1,800, which is the theoretical capacity at LOS E. Information on the number of lanes was obtained from Larry Hega of CalTrans (phone number, 620-4537) using aerial photos from 1978. To be more exact, we then changed the identified locations to be just beyond (i.e., further from the CBD than) the intersecting street, rather than at it. This changes a number of the lane volumes, which were then checked against our own aerial photographs as well as field observations.

The freeway rush-hour travel speeds shown on maps in the Traffic section are based on CalTrans data for current operation, and a combination of CalTrans data and both SCAG and SCRTD projections for the Year 2000. The SCAG report used was "Transportation Implications of Alternative Future Growth Forecasts in the Year 2000", which indicated the degree of expansion needed on each section of the regional freeway system.

2. VMT Impacts

LADOT had calculated current VMT in the Metro Network and the Regional Core, and allocated this VMT among freeways, arterials and local streets. They then took Year 2000 VMT projections from RTD and allocated these

among roadway types. When the VMT decreased based on new patronage projections, however, it was necessary to adjust the LADOT forecasts. This was done as follows:

- o 50 percent of the VMT reduction was projected to be in the Regional Core.
- o Within the Regional Core, the reduction was allocated among roadway types as follows: 70 percent arterials, 20 percent freeways, and 10 percent local/collector streets. (Outside the Regional Core, the percentage would be higher on freeways and lower on the others.)

3. Intersection Vehicle/Capacity (V/C) Ratios for MOS

While LADOT had calculated intersection V/C ratios at over 250 key intersections in the Regional Core for the current, No Project and LPA conditions, they were not contracted to do these for the MOS. Since it was necessary to at least estimate these for the intersections requiring traffic mitigation measures, SCRTD staff made these estimates using the traffic volumes projected for the MOS by LADOT. This was done by assuming that the changes in V/C ratios among No Project, LPA and MOS alternatives would be proportional to the changes in peak-direction traffic volumes.

Parking

Everything in the text is relatively straightforward, except that the volumes of park-and-ride demand at the five affected stations bear explanation. The patronage projections in Chapter 2 of the DEIS show volumes of people, while the parking demand figures in Table 3-9 indicate cars. These data are products of the UTPS process used for the patronage projections, and reflect an average auto occupancy for park-and-ride trips of 1.09.

Attachments: DEIS Tables 1-2, 3-4, 3-7, 3-9, 3-36
DEIS Figures 3-3, 3-4, 3-5

2.3 TRAFFIC

The freeways that skirt the Regional Core are loaded to capocity and are severely congested during peak commuter periods. In spite of present congested conditions, by year 2000 the demand for daily travel on freeways in the Regional Core is expected to increase nearly 1.5 million vehicle miles, a 24.2 percent increase over 1980 estimates. Existing and projected peak traffic volumes at selected points along the freeways within the Regional Core are compared against the capacity of the freeway in Table I-2. Without major transit improvement, traffic congestion will worsen on all freeways in the area. Two proposed freeways which would have provided direct regional access to the Regional Core were canceled because of public oppositon and potential disruption to the community.

TABLE I-2

COMPARISON OF ESTIMATED PEAK HOUR TRAFFIC VOLUMES AND FREEWAY CAPACITY IN THE REGIONAL CORE

Freeway	Estimated Peak Hour Capacity[1]	1980 Peak Hour Volume (am/pm)	2000 Peak Hour Volume[2]
Harbor/Pasadena Freeway			
north of First Street	9,000	9,200 (am)	9,200
north of Wilshire Boulevard	9,000	8,900 (pm)	10,100
south of Santa Monica Freeway	7,200	7,800 (pm)	11,500
Hollywood Freeway			
north of Burbank Boulevard	7,200	7,100 (pm)	8,400
north of Barham Boulevard	9,000	8,800 (am)	11,700
north of Franklin Avenue	9,000	8,600 (am)	12,100
west of Western Avenue	9,000	6,400 (am/pm)	9,700
west of Harbor Freeway	9,000	7,800 (am/pm)	13,500
Santa Monica Freeway			
west of La Cienega Avenue	7,200	7,500 (am)	15,100
west of Western Avenue	9,000	7,300 (am)	14,200
west of Harbor Freeway	7,200	7,000 (am)	13,700

Source: Los Angeles City Department of Transpartation, 1980 and Year 2000 Base Condition, Traffic Volume Flow Maps; Caltrans

[1]Assumes 1,800 vehicles per hour, corresponding to Level of Service E, multiplied by the number of lanes in the direction of the peak hour flow.

[2]Peak hour volume is derived by multiplying average daily traffic volumes by a peak hour factor and by a factor for the direction of the peak hour flow.

- vehicle miles traveled (VMT) in the Regional Core

In addition, the intersections near each station were selected for special traffic analyses. A summary of traffic impacts for each alternative is provided in Table 3-4. Traffic impacts at intersections at station locations are shown in Table 3-5, while intersection V/C ratios at these locations are given in Table 3-6. The impacts for the Locally Preferred Alternative and the Aerial Option are the same. Impacts are discussed by alternative below.

TABLE 3-4

SUMMARY OF TRAFFIC IMPACTS, 1980 and 2000*

	1980 Existing Condition	No Project Alternative		Minimum Operable Segment		Locally Preferred Alternative and Aerial Option	
		Volume	Change[1]	Volume	Change[2]	Volume	Change[2]
Screenline Traffic Volumes, 24-Hour Two-Way Totals							
Crossing Wilton/Arlington	784,700	1,015,600	29%	999,700	-2%	983,800	-3%
Crossing Hollywood Blvd.	370,400	486,400	31%	486,400	0	469,100	-4%
Peak Hour Traffic Volumes, Entering/Leaving L.A. CBD From/To Local Streets to the West							
Inbound-a.m. Peak Hour	14,350	20,030	40%	20,480	2%	18,860	-6%
Outbound-p.m. Peak Hour	17,380	22,610	30%	22,740	1%	22,930	1%
Number of Key Intersections in Regional Core at or Near Capacity (V/C more than 0.90, LOS E or F)							
Either a.m. or p.m. Peak Hour	46	156	239%	163	+4%	156	0
Vehicle Miles Traveled (VMT) Daily in Regional Core (thousands)							
Freeways	6,092	7,566	24%	7,397	-2%	7,393	-2%
Major/Secondary Streets	7,384	9,369	27%	8,735	-7%	8,720	-7%
Collector/Local Streets	709	891	26%	849	-5%	848	-5%
Total	14,185	17,826	26%	16,981	-5%	16,961	-5%

Source: City of Los Angeles Department of Transportation; SCRTD.

*No Project Alternative, Minimum Operable Segment, and the Locally Preferred Alternative and Aerial Option impacts reflect Year 2000 projections.

[1]Year 2000 No Project Alternative is measured against existing conditions.

[2]Minimum Operable Segment, Locally Preferred Alternative, and Aerial Option are measured against the No Project Alternative.

No Project Alternative. Projections of traffic volumes and intersection V/C ratios were made by LADOT for the year 2000 for the No Project Alternative. To project directional splits of daily traffic and a.m. and p.m. peak hour volumes it was assumed that current patterns would continue. Street widenings associated with the city's Capital Improvement Program, Community Redevelopment Agency projects, and private development were assumed to exist. In addition, possible operational

TABLE 3-7

EFFECTS OF TRAFFIC MITIGATION MEASURES

Station Area and Intersection	Worse Case V/C Ratio: No Project	Minimum Operable Segment[1]	Locally Preferred Alternative/ Aerial Option	Mitigated	Time Period
Union Station					
Alameda*/Macy	.83	1.15	1.09	.88	pm
Macy/Mission	.86	.95	.99	None	am
Macy*/Vignes*	.95	1.02	1.05	.97[2]	am
Macy*/Vignes*	.88	1.07	1.10	.89	pm
Ramirez*/Vignes*	No Signal	1.04	1.08	.92	pm
Fifth/Hill					
Olive/Fifth	1.08	1.06	1.05	None	am
Wilshire/Vermont					
Vermont/Sixth*	1.17	1.22	1.21	1.18	pm
Vermont/Wilshire*	.88	.93	.93	None	pm
Virgil*/Third	1.18	1.28	1.23	1.23[2]	am
Virgil*/Third	1.15	1.34	1.22	1.07	pm
Virgil/Sixth*	.97	1.12	1.07	.93	pm
Wilshire/Normandie					
Irola/Eighth*	.86	.98	.98	.93[2]	pm
Normandie*/Wilshire	.96	1.01	1.01	.96	pm
Normandie/Third	1.13	1.17	1.17	None	pm
Normandie/Sixth	1.02	1.08	1.06	None	pm
Wilshire/Fairfax					
Fairfax*/Olympic	1.04	1.06	1.11	.91	am
Fairfax*/Olympic	1.09	1.17	1.17	1.17[2]	pm
Fairfax*/San Vicente	.97	.98	1.03	.84	am
Fairfax/Beverly					
Beverly*/Gardner	.96	1.02	.99	.83	pm
Fairfax/Santa Monica					
Crescent Hts.*/Fountain	1.06	N.A.	1.08	.91	pm
Hollywood/Cahuenga					
Cahuenga*/Hollywood	1.13	N.A.	1.23	.98	pm
Cahuenga/Sunset	1.00	N.A.	1.02	None	pm
Universal City					
Bluffside*/Lankershim*	.74	N.A.	.92	.82	pm
Cahuenga/Hollywood Fwy/Regal	.94	N.A.	.96	.94	am
Cahuenga/Lankershim*	.89	N.A.	1.01	.81	am
Hollywood Fwy/Lankershim*/ Universal Place	.87	N.A.	1.08	.86	am
Lankershim*/North Gate	.54	N.A.	.81	.64	am
Lankershim only	.67	N.A.	1.06	.83	am
Lankershim/Tour Center	1.16	N.A.	1.31	1.31	am
North Hollywood					
Burbank*/Lankershim/Tujunga	.82	N.A.	1.41	1.28[2]	am
Chandler*/Lankershim(S)	.57	N.A.	1.27	.79	pm
Chandler*/Tujunga (N)	.54	N.A.	.96	.55	am
Chandler*/Tujunga (N)	.71	N.A.	.92	.68	pm
Chandler*/Fair	N.M.	N.M.	N.M.	N.A.	N.A.

Source: City of Los Angeles Department of Transportation, Technical Report—Traffic Mitigation Measures, March 1983.

Note: No traffic mitigation measures are required in the following station areas: Civic Center, Seventh/Flower, Wilshire/Alvarado, Wilshire/Western, Wilshire/La Brea, La Brea/Sunset, and the optional Wilshire/Crenshaw Station.

N.A. = Not Applicable.

N.M. = Not Measured.

*Street to be improved.

[1]Estimated by SCRTD.

[2]Project-related traffic impact is not fully mitigated, i.e. LOS E or F still exists and V/C increase of at least .02 over No Project Alternative still exists.

Table 3-9 shows the number of spaces to be supplied at each park and ride station under each alternative and the number needed based on demand. The demand exceeds the number of spaces being supplied at each of the stations. Potential for spillover parking to the surrounding neighborhood will exist. Although the potential for spillover is greatest at the Union Station, it is considered more adverse at the Wilshire/Fairfax and Fairfax/Beverly Stations. Union Stotion is located in a mixed land use area af industriol and commercial uses, whereas the oreas oround the Wilshire/Foirfax ond Foirfox/Beverly Stotions are more residential.

TABLE 3-9

RAIL ACCESS PARKING DEMAND AND SUPPLY BY STATION

	Minimum Operable Segment			Locally Preferred Alternative and Aerial Option		
		Supply			Supply	
Station	Demand	Initial	Ultimate	Demand	Initial	Ultimate
Union Station	4,363	300	2,500	4,352	300	2,500
Wilshire/Fairfax	1,875	200	1,000	1,894	200	1,000
Fairfax/Beverly	1,251	250	1,000	1,281	250	1,000
Universal City	N.A.	N.A.	N.A.	3,272	1,175	2,500
North Hollywood	N.A.	N.A.	N.A.	2,732	1,180	2,500

Source: SCRTD, Schimpeler-Corradino Associates.
N.A. = Not Applicable

1.4.5 MITIGATION

Mitigation measures will be needed to control the spillover parking from the stotions. The difference between the demand for parking spaces and the amount to be supplied does not represent the total number of spillover parkers. Some of these potential riders would be lost to Metro Rail due to the unavoilability of readily accessible parking. However, the potential for spillover parking will exist ond mitigation measures are discussed below.

The stations with significant adverse parking impacts are divided into two distinct groups. The first group includes the CBD stations (Civic Center, Fifth/Hill and Seventh/Flower) where the year 2000 parking condition is already crowded even without Metro Rail. These stations are not adjacent to residential neighborhoods that may be impacted by parking usage overflow. As noted above, the impacts ot these stations are based not on Metro Rail itself, but on the increased development accommodoted by a roil transit system.

The secand group of stations are the Fairfax/Beverly, Universal City, and North Hollywood Stations, have a relatively high park and ride demand, and are adjacent to residential neighborhoods that may be impacted by parking usage overflow.

calculated using trip generation factors for each alternative developed from traffic modeling tasks. Trip characteristics, such as hot start/cold start emissions and trip speeds, were obtained from Caltrans. The microscale analysis, examining carbon monoxide concentrations at each proposed parking structure, used a combination of methodologies including CALINE3, and Gaussian dispersion. Carbon monoxide concentrations pertinent to both the federal one-hour and eight-hour standards were assessed.

9.3.2 SUBREGIONAL ANALYSIS

The No Project Alternative is predicted to have a VMT level within the air quality study area of 35,254,000 in the year 2000. These VMT include only light-duty vehicles associated with commuter home-to-work trips. The Locally Preferred Alternative with and without the Aerial Option is expected to divert 1,730,000 VMT per average workday. The Minimum Operable Segment is expected to divert 1,690,000 VMT per day in the study area. According to the preliminary traffic modeling results, the average trip length does not change as a result of implementing any Project alternative.

Table 3-36 shows that the resulting direct air quality benefit is substantial. The rail project will have a major impact on reducing the incidence of air quality nonattainment in the region. Even when taking into account the pollutants resulting from project-related power generation, net impacts are still favorable in all cases except sulfur dioxide, for which the small net increase would not result in any air quality standards being exceeded.

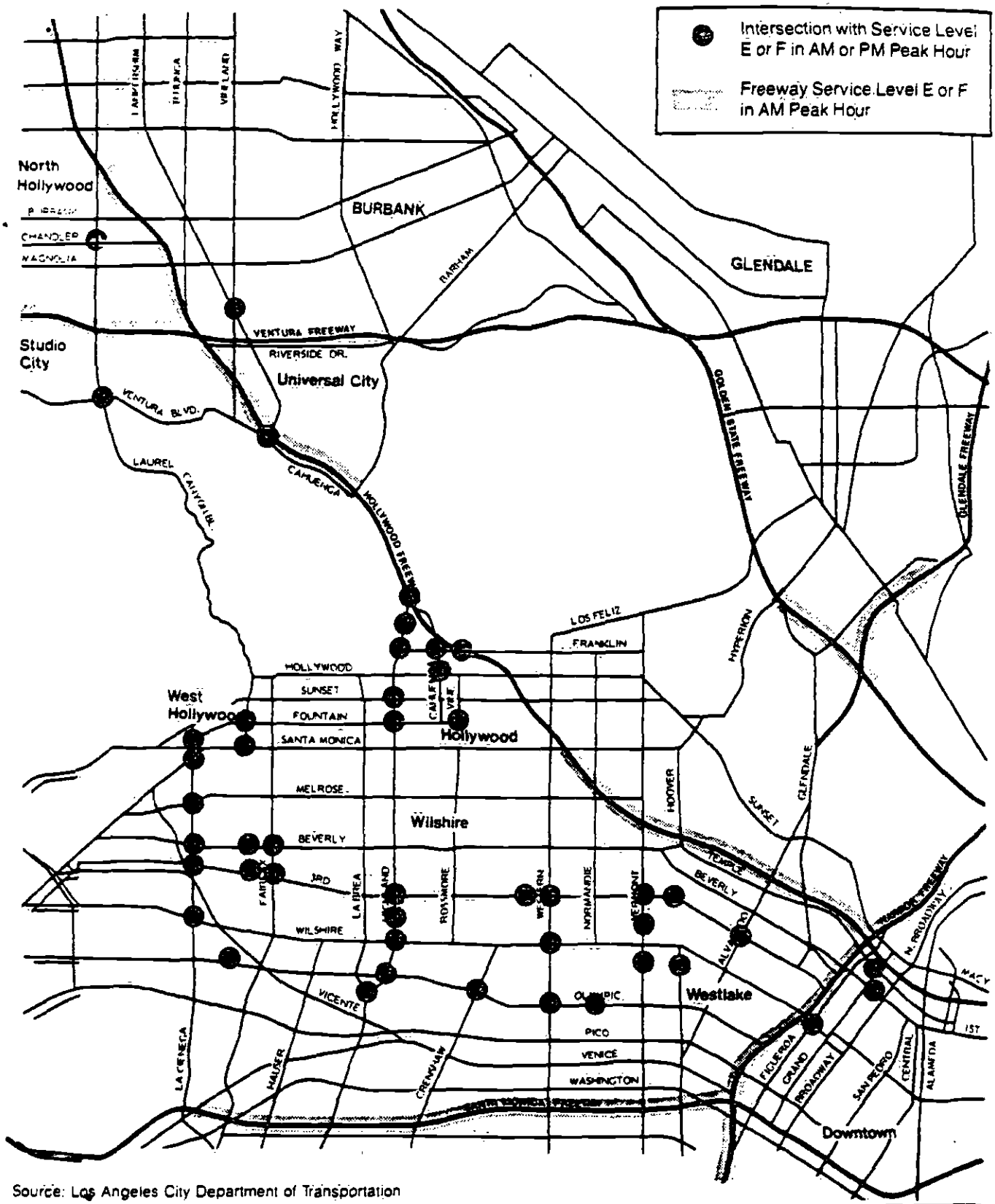
TABLE 3-36

DIRECT REGIONAL AIR QUALITY BENEFITS
FROM THE METRO RAIL ALTERNATIVES, YEAR 2000

	No Project Alternative	Locally Preferred Alternative[1]		Minimum Operable Segment	
Pollutant	Regional Vehicular Emissions (tons/day)	Regional Vehicular Emissions (tons/day)	Regional Emissions Benefit (tons/day)	Regional Vehicular Emissions (tons/day)	Regional Emissions Benefit (tons/day)
Carbon Monoxide	461.3	438.8	22.5	439.3	22.0
Reactive Hydrocarbons	37.7	35.9	1.8	35.9	1.8
Oxides of Nitrogen	57.9	55.0	2.9	55.0	2.9
Sulfur Dioxide	8.9	8.4	0.5	8.4	0.5
Suspended Particulates	12.4	11.7	0.7	11.7	0.7

Source: WESTEC Services, Inc.; SCRTD.

[1]Locally Preferred Alternative and Aerial Option have the same impact.



Source: Los Angeles City Department of Transportation

Southern California Rapid Transit District

Metro Rail Project

PRELIMINARY ENGINEERING PROGRAM

Figure 3-3
Regional Core Traffic Conditions Year 1980

SEDWAY/COOKE

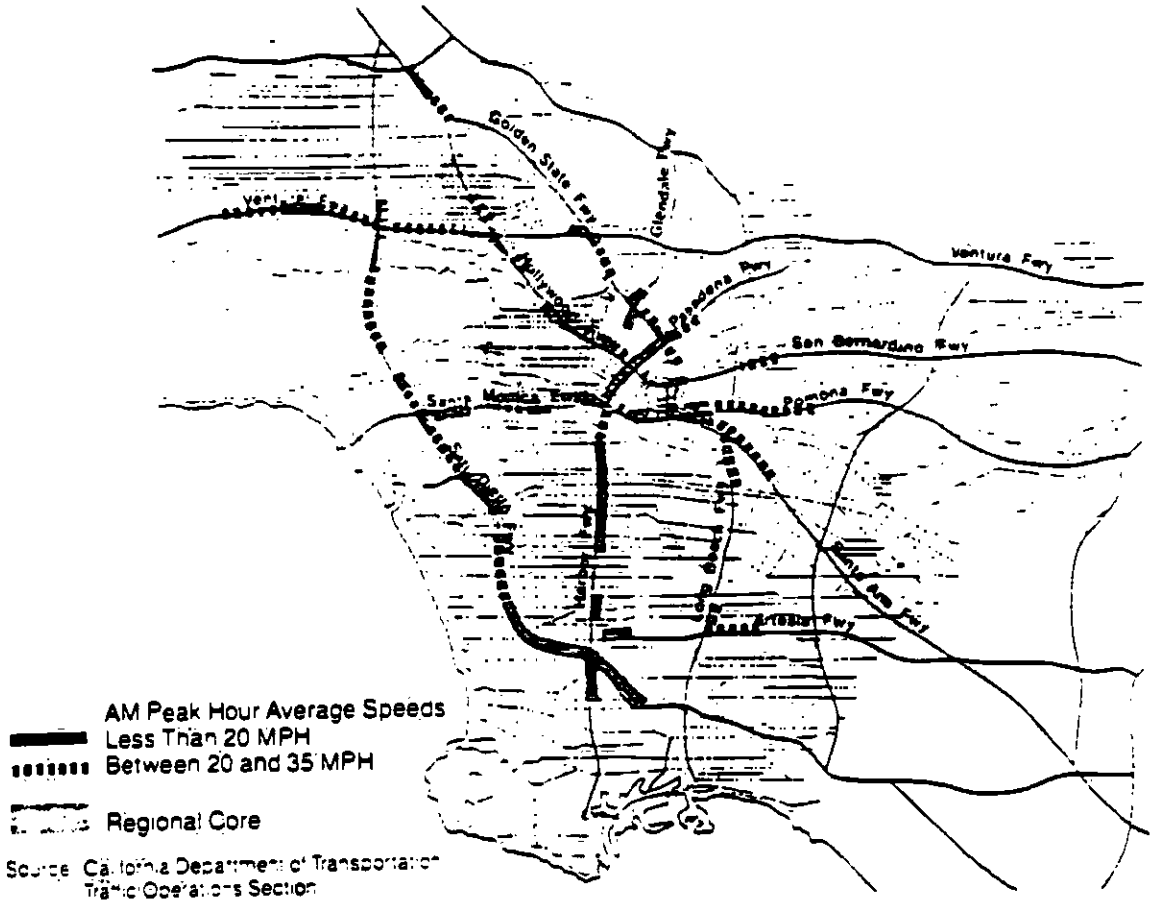
Urban and Environmental Planners and Designers

TRAFFIC ANALYSIS REPORT
TASK 18CAA21
JUNE, 1983

Prepared as Part of the
Preliminary Engineering Work for the
Southern California Rapid Transit District
Metro Rail Department

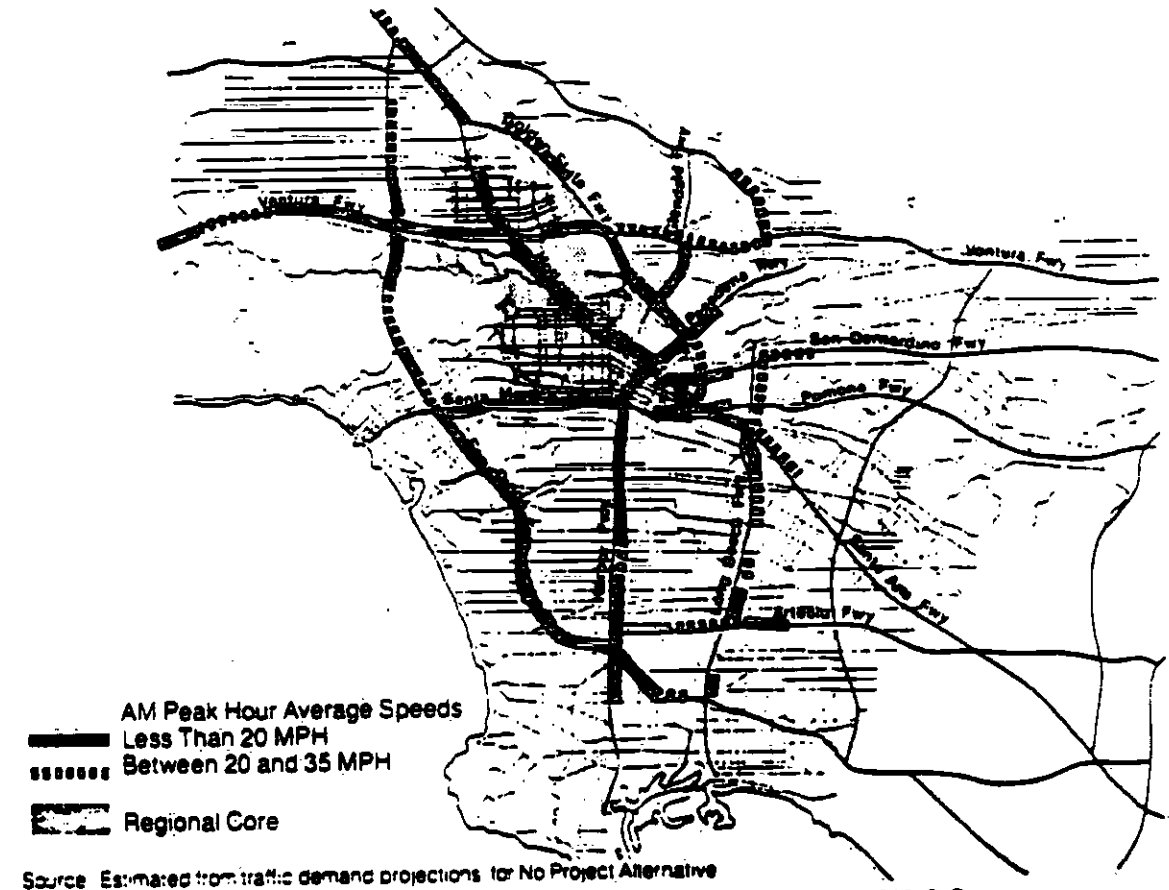
Prepared by the
Metro Rail Section, Transportation Studies Section
Transportation Engineering Division
Department of Transportation
City of Los Angeles

Donald R. Howery
General Manager



Source: California Department of Transportation, Traffic Operations Section

Figure 3-4 Freeway Congestion, 1981



Source: Estimated from traffic demand projections for No Project Alternative

Figure 3-5 Estimated Freeway Congestion, 2000

Table of Contents

LIST OF TABLES

CHAPTER 1 - INTRODUCTION

1.1 Background

In June, 1978, while under contract to the Southern California Rapid Transit District (SCRTD), the City of Los Angeles Department of Traffic (now Department of Transportation - LADOT) produced traffic analysis reports for use by the SCRTD in the Draft AA/EIR/EIS prepared for the Regional Core Transit Alternatives. Under the current City-SCRTD contract the Department of Transportation is providing staff assistance for tasks involving traffic volumes, circulation analysis, parking conditions, traffic control during construction, development of mitigation measures and draft/final task reports for use in preparation of the Second Tier EIR/EIS and during Preliminary Engineering.

The Existing (1980) Condition for traffic volumes, intersection evaluation, and parking condition was established under WBS Tasks 18BAH1141, 18BAH1241 and 18BAH1341, respectively. The methodology and results are documented in working papers prepared for each task. Year 2000 Base (Null) Condition traffic volumes, intersection evaluation and parking conditions were established under WBS Tasks 18BAH1142, 18BAH1242 and 18BAH1342, respectively. The methodology and results are presented in working papers or technical reports for each task. The year 2000 With Project Condition (Locally Preferred Alternative - LPA) traffic volumes, intersection evaluation and parking conditions were addressed under WBS Tasks 18BAH1143, 18BAH1243 and 18BAH1342, respectively. The year 2000 With Project Condition (Minimum Operable Segment - MOS) traffic volumes were developed under WBS Task 18BAH1143; intersection evaluation and parking analysis were not performed by LADOT for the MOS. The methodology and results are presented in working papers or technical reports for each task. Mitigation measures for intersections adversely impacted by the Metro Rail system (LPA) were identified in the technical report for WBS Task 18BAH15. Traffic impacts at stations during construction and recommendations were presented in the technical report for WBS Task 18BAH14.

1.2 Purpose

The purpose of WBS Task 18CAA21 is to combine the working papers and technical reports for the tasks identified in the introduction into a Project Report. Material included in the appendices of the various working papers and technical reports will generally not be included in this report but may be referenced. For example, this material might include traffic volume flow maps, block-by-block parking inventory maps and tabular summaries.

Additional analysis, not presented in the draft report, is being performed for the Los Angeles Department of City Planning (LADOP) and will be included in the final report developed under 18CAA21. LADOP is developing a Transit Corridor Specific Plan for selected the Metro Rail stations. For the Plan, three levels of development are being examined; one level has been set by LADOP to correspond with the SCAG 82B growth forecast since that forecast was utilized by LARTS and the SCRTD in both the transit patronage forecasts and the vehicle trip tables provided to LADOT for use in WBS Tasks

18BAH1142 and 18BAH1143. Selected demographic and land use data will be used that have been established by LADOP for SCAG 82B and two additional levels of development. These data will be used to generate traffic volume adjustments for the other two levels of development and for which V/C ratios will be calculated for selected Specific Plan intersections. The 1980 Specific Plan parking inventory will also be included; a working paper on this was prepared under WBS Task 18BAH1345.

1.3 Study Area/Intersections

Descriptions of the area established for modeling traffic assignments and developing traffic volume flow maps is provided in the working paper for WBS Task 18BAH1141 (March, 1982); Figures 1.3-1 and 1.3-2 show the boundaries for the two areas. Five subareas were established within the Regional Core to show ADT and AM and PM peak-hour traffic volumes. Figure 1.3-3 shows the approximate boundaries of each subarea.

Under WBS Task 18BAH1241, 1980 V/C Ratios, 263 intersections were selected for evaluation; this was increased to 275 during the performance of WBS Task 18BAH1242, 2000 Base (Null) Condition V/C Ratios. With the deletion of stations at Laurel Canyon/Chandler, Wilshire/Witmer and Flower/Third from further study by the SCRTD Board, 19 intersections were deleted from the 275 evaluated as part of WBS Task 18BAH1242. Seventy-six intersections have been reevaluated due to station and alignment variations.

The intersections evaluated under WBS Task 18BAH1243 are shown on Figures 1.3-4 and 1.3-5. These intersections were selected based upon proximity to proposed station locations (See Figure 1.3-6) and are generally contained within (1) a one-half mile radius of the proposed stations in the San Fernando Valley and at Union Station; (2) a one-mile wide corridor following the proposed alignment from Hollywood to the Harbor Freeway; and (3) a one-fourth mile radius of the proposed stations in the Central Business District (CBD).

For the 1980 station area parking analysis (WBS Task 18BAH1341) all blocks within a quarter-mile radius of each station were inventoried for both on-street and off-street parking space supply, usage and cost. These blocks were also included in the analysis performed for the 2000 Base (Null) and With Project Conditions. (WBS Task 18BAH1342)

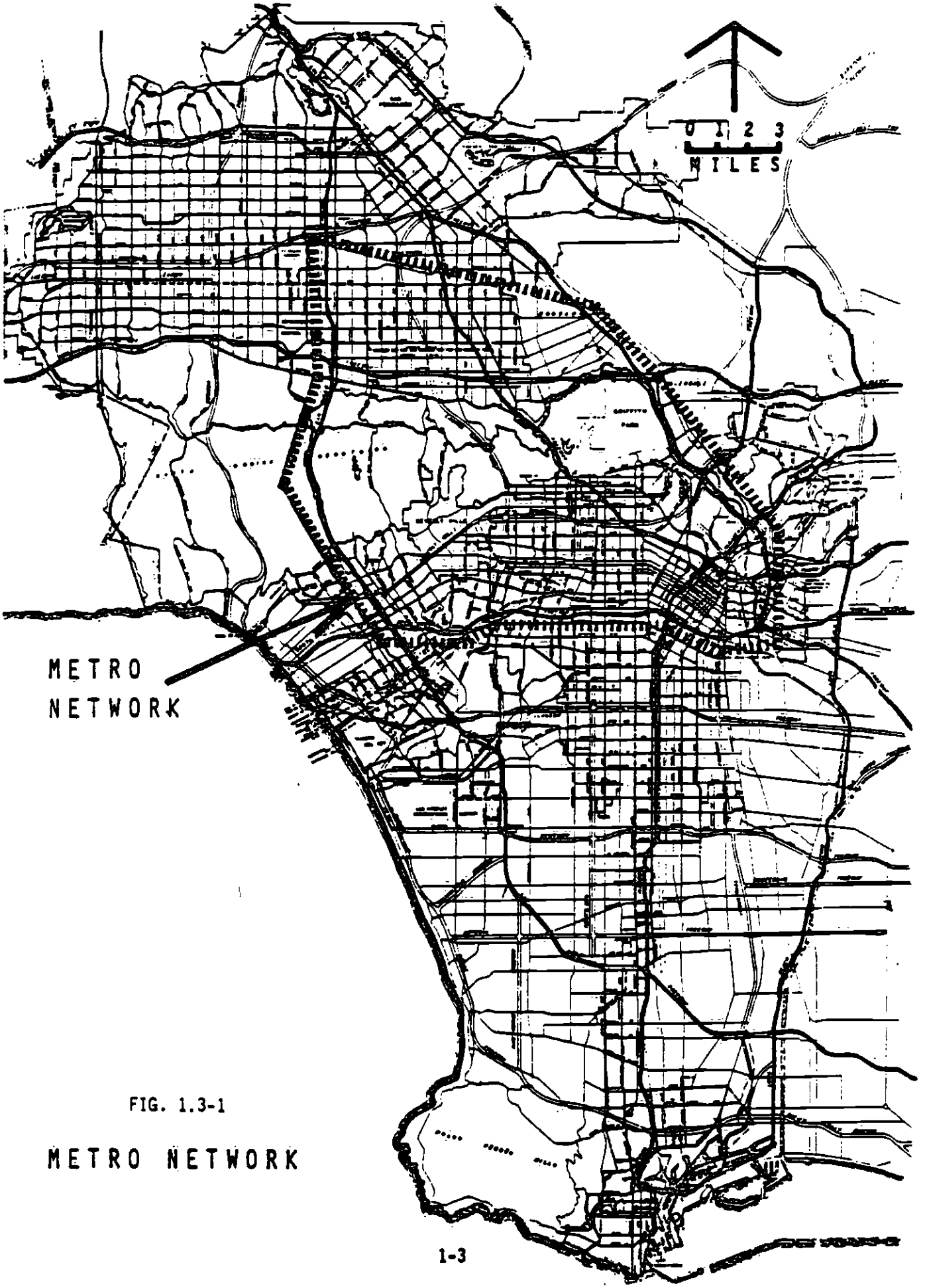


FIG. 1.3-1

METRO NETWORK

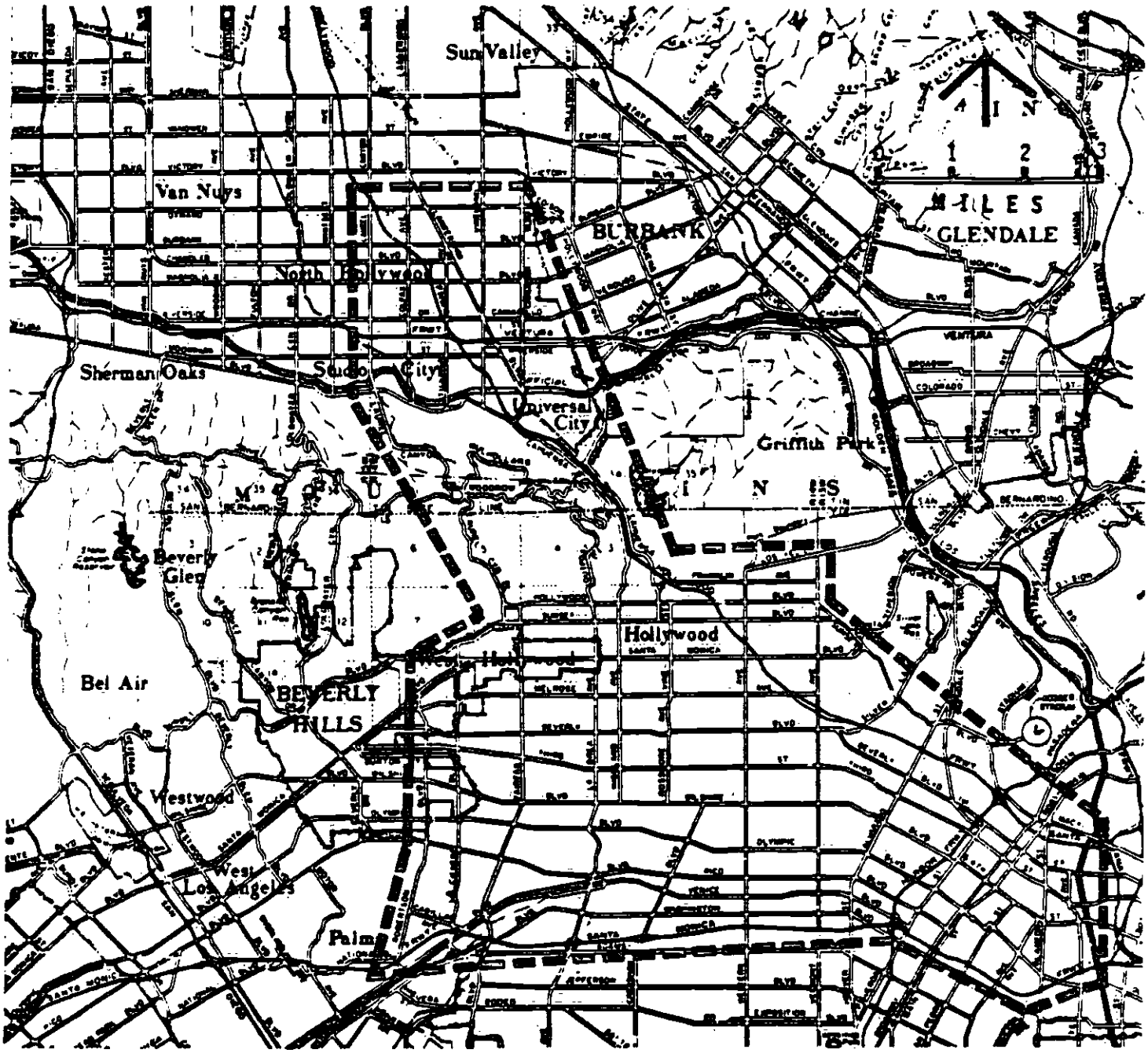


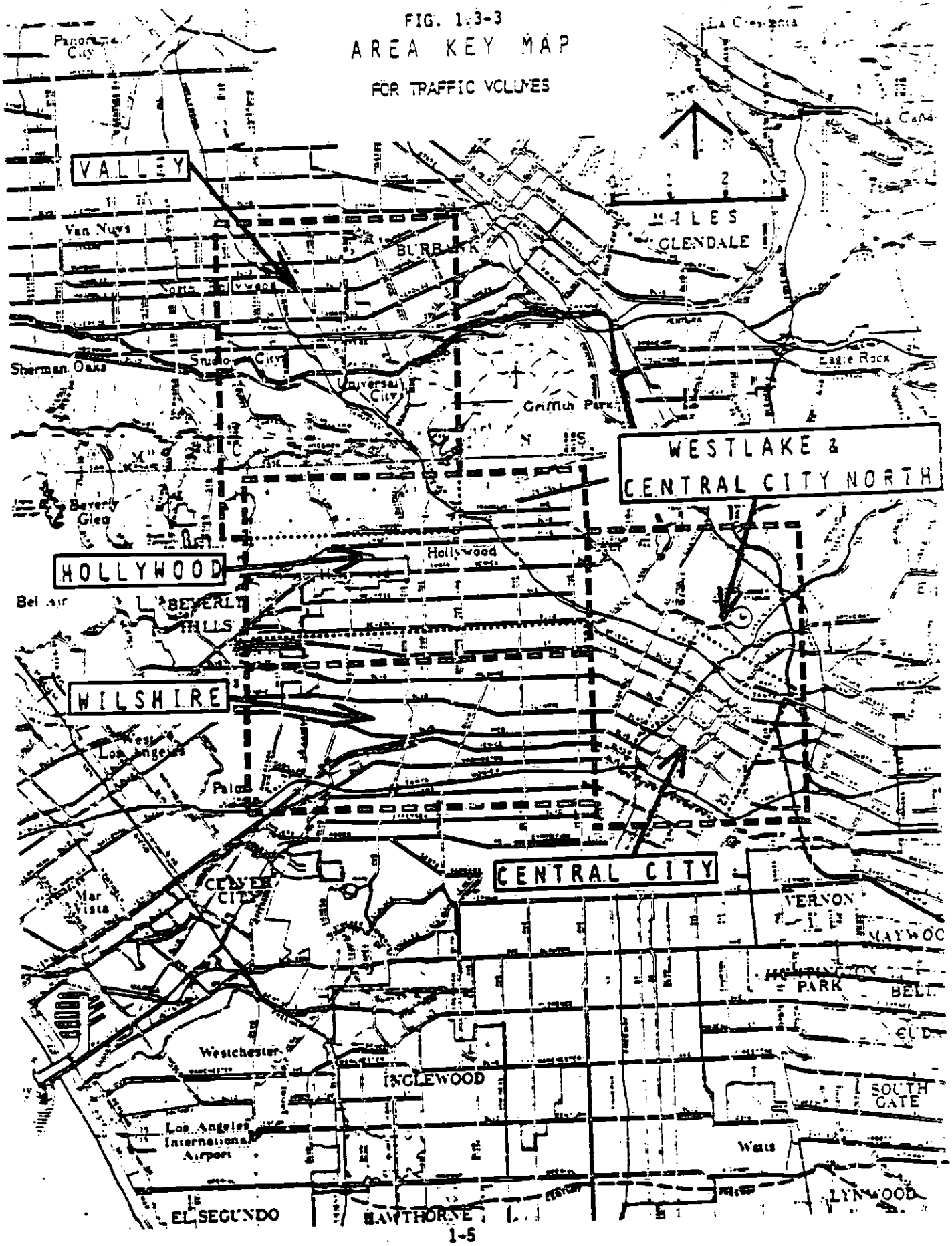
FIG. 1.3-2

REGIONAL CORE

FIG. 1.3-3

AREA KEY MAP

FOR TRAFFIC VOLUMES



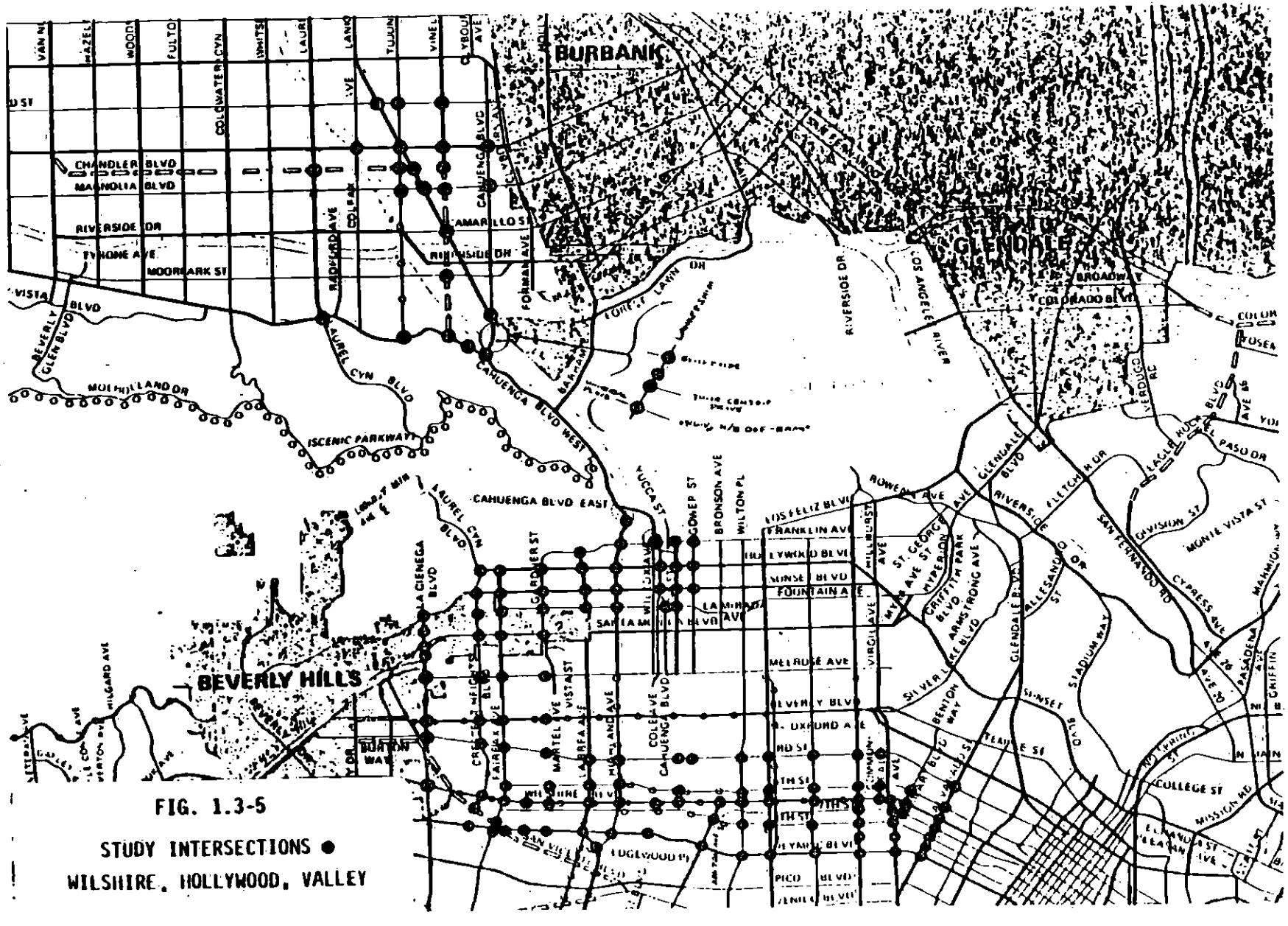


FIG. 1.3-5

STUDY INTERSECTIONS ●

WILSHIRE, HOLLYWOOD, VALLEY

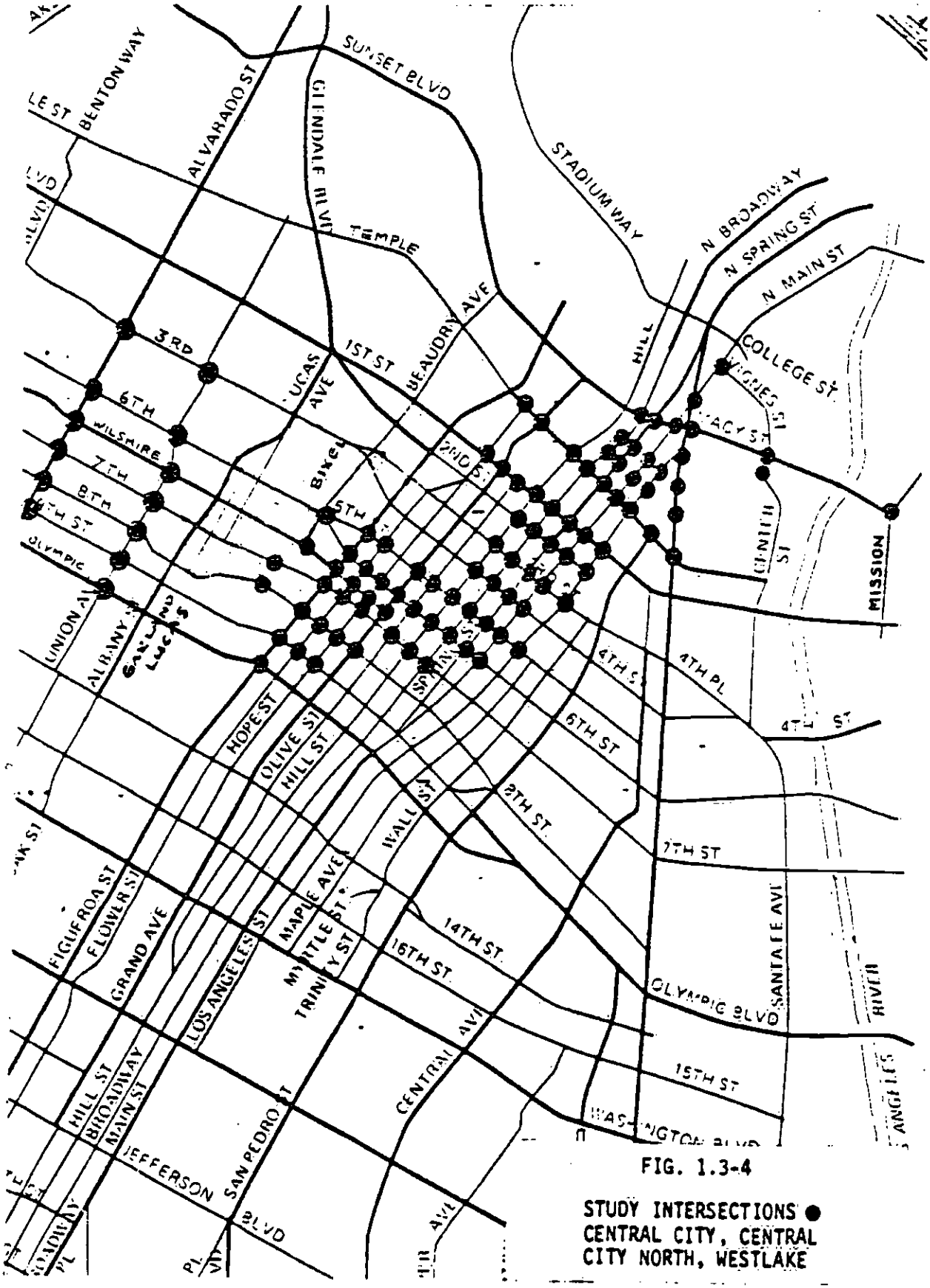


FIG. 1.3-4

STUDY INTERSECTIONS ●
CENTRAL CITY, CENTRAL
CITY NORTH, WESTLAKE

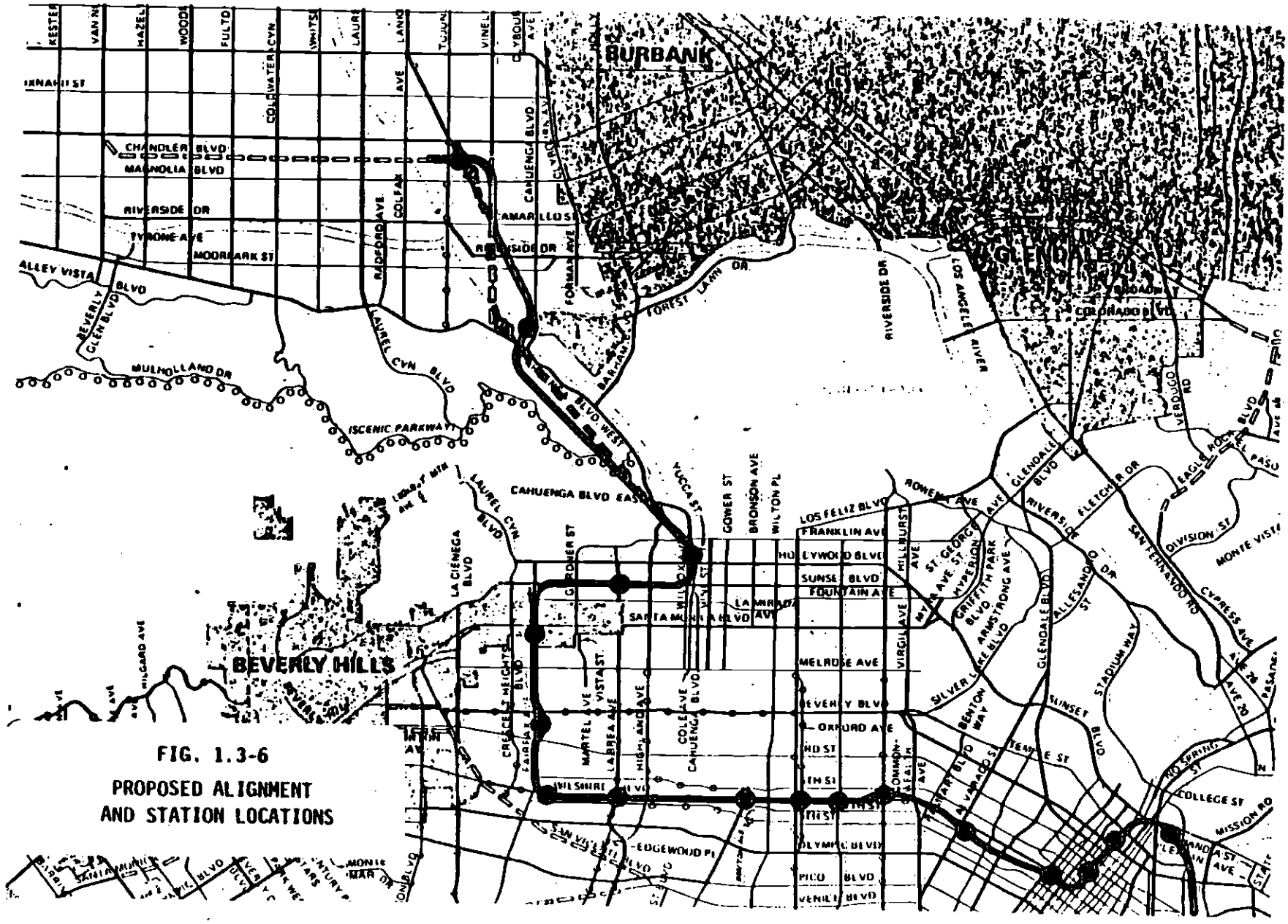


FIG. 1.3-6

PROPOSED ALIGNMENT
AND STATION LOCATIONS

CHAPTER 2 - METHODOLOGY

2.1 1980 - Existing Condition

2.1.1 Traffic Volumes and VMT

In the City of Los Angeles, there are 156 miles of freeways and 6,415 miles of surface streets. Two-thirds of all surface street mileage are intended for local circulation. During a typical weekday, almost half of the City-wide vehicle miles travelled (VMT) occurs on the freeway system (47 percent), and about the same amount of travel (48 percent) occurs on major and secondary highways. Only about five percent of the travel is estimated to occur on the local and collector street system. Therefore, traffic volume data have been identified for freeways, major and secondary highways and some collector streets in the Regional Core. The selected streets and freeways were submitted to the SCRTD for prior review and approval and are shown on the traffic volume flow maps developed for the 1980, 2000 Base (Null) and 2000 With Project Conditions.

In 1980, approximately 2,500 24-hour machine traffic counts and 1,500 6-hour "manual" counts were conducted City-Wide. Approximately 10 percent of the counts involved the Regional Core selected street system. It was apparent that the 1980 counts alone were insufficient to depict the traffic flow picture for the Regional Core. However, review of available 1979 and 1981 counts disclosed that the use of these counts would establish an expanded data base that would generally be sufficient and that the data were relatively compatible. In addition, approximately 100 six hour manual counts were made at intersections within the station impact areas.

Initially the AM and PM peak hour and ADT directional volumes from the traffic counts were plotted on a 1" = 2000' scale basic index map with the year of the count noted. When counts were available for several years at the same location, the 1980 figure was utilized. When more than one count was available for the same year an average was plotted.

The individual counts were then compared with adjacent link volumes and the data were adjusted to provide a reasonable area-wide flow pattern. During this process, volumes for links not having data were determined through interpolation. Finally, the volumes were checked for relative consistency with the previous AA/EIR/EIS work, and with the "City-Wide Traffic Inventory" and the "City-Wide Screenline Study". The inventory and screenline reports are published by the City of Los Angeles, Department of Transportation.

Smoothing of peak hour and ADT volumes by direction was performed separately for the entire Reigonal Core area. The final volumes are presented separately by time period and in map form. The Regional Core flow maps are organized into five separate areas: (1) Valley, (2) Hollywood, (3) Wilshire, (4) Westlake-Central City North, and (5) Central City. The AM peak-hour volumes are shown on the first sheet of each area, followed by PM peak-hour and then ADT. The traffic volume flow maps for 1980 are contained in the

working paper for WBS Task 18BAH1141 (March 1982) as Appendices 1-5. Traffic volumes on a station-by-station basis are presented in Chapters 3 and 4 of this report.

The preceding methodology described the development of 1980 traffic volumes for surface streets. A different methodology was utilized for the development of similar information for freeways.

Initially, the Traffic Support Branch of the Californa Department of Transportation (Caltrans), District 7, was contacted for detailed information on "mainline" directional volumes. From the available counts, factors for directional splits in the AM and PM peak hours, and ADT, and for relating AM to PM peak-hour volumes were established. These factors were then applied to the non-directional 1980 traffic volumes, as reported by Caltrans in the "1980 Traffic Volumes on California State Highways" to establish freeway volumes for AM and PM peak hour and ADT on a directional basis. However, the available information was insufficient to totally describe the freeway flow characteristics. Therefore, LADOT requested Caltrans' assistance and was provided with traffic count data for 42 additional locations on freeways within the Metro Area Network. These data included AM peak hour (7-9), PM peak hour (3-6) and AADT (Annual ADT) mainline volumes by direction. These freeway volues have been included on the flow maps in Appendices 1-5 of the working paper for WBS Task 18BAH1141.

One method of describing the overall regional impact of the Metro Rail project is to calculate the expected change in vehicle miles of travel (VMT), since there is expected to be a mode shift from automobiles to rail. For the purposes of this traffic analysis, VMT for both the Regional Core and the Metro Area Network were computed.

A transportation model was utilized in computing the VMT for the two areas. The Department of Trasportation used as a basis the LARTS 1980 vehicle trip interchanges and assigned the trips to a detailed highway network using the Urban Transportation Planning System (UTPS) programs. Detailed discussion of the forecasting methodology are contained in the working paper for WBS Task 18BAH1142. UROAD is the UTPS' Highway Traffic Assignment Program; Report 6 of UROAD summarizes travel (VMT) and environmental impacts for selected zones. Essentially, Report 6 multiplies the computer assigned daily volumes with highway links (in miles) and summarizes the VMT by highway type.

2.1.2 Intersection Evaluation

Based upon proximity to proposed station locations or the rail corridor, 229 intersections were initially selected in consultation with the SCRTD for analysis. Later, the number of study intersections was increased to 275 and then decreased to 256 under WBS Task 18B4H1243. These intersections are generally contained within: (1) a one-half mile radius of the proposed stations in the San Fernando Valley and at Union Station; (2) a one-mile wide corridor following the proposed alignment from Hollywood to the Harbor Freeway; and, (3) a one-fourth mile radius of the proposed sations in the Central Business District (CBD).

The "Planning" application of the Critical Movement Analysis (CMA), as presented in "Transportation Research Circular Number 212, Interim Materials on Highway Capacity" and amended in the NCHRP Project 3-28 Draft Report "Signalized Intersection Capacity and Level of Service," was utilized to calculate V/C ratios (CMA Index Number) for the 1980 Existing, 2000 (Null) and 2000 With Project Condition (LPA). The results have been tabulated in Appendix A and are also summarized on a station-by-station basis in Chapters 3 and 4 of this report.

The data requirements of the "Planning" application are lane geometry, approach volumes, turn volumes and traffic signal timing/phasing. As part of the data collection effort, it was decided to include information regarding lane widths, pedestrian volumes and bus volumes, since the additional effort would be minimal. Parking restriction data were also considered necessary to supplement lane geometry information.

The term "Level of Service" (LOS) is used to describe the quality of traffic flow. Levels of Service A to C mean that traffic is flowing quite well. LOS C normally is taken as the desirable design level in urban areas outside a regional core. LOS D, typically the maximum level at which a metropolitan area street system is designed, is characterized by relatively heavy traffic on the intersection approaches. Short peaks in traffic volumes may develop queues which will clear during later cycles. Excessive back-up does not occur. LOS E represents volumes at or near the capacity of the intersection. This condition is characterized by unstable flow with long queues and stoppages of several signal cycles. LOS F occurs when an intersection is overloaded (demand exceeds intersection capacity) and is characterized by stop-and-go traffic with stoppages of long duration. Theoretically, this condition cannot be measured by using the methods of counting the traffic moving through the intersection, since information regarding number of vehicles arriving is also needed to determine when demand exceeds capacity.

While the concept of Level of Service deals with discrete steps (i.e., LOS A, B, C, etc.), the quality of flow at an intersection is a continuous function according to the sum of critical volumes. In order to facilitate comparison of intersection Levels of Service, the CMA Index Number was developed. This number is defined as the calculated sum of critical volumes divided by the maximum sum of critical volumes at Level of Service E. Table 2.1.2-1 shows the relationship between Level of Service, sum of critical volumes and CMA Index Number.

Table 2.1.2-1

Relationship between Level of Service, Sum of Critical Volumes and CMA Index Number

	SUM OF CRITICAL VOLUMES			CMA INDEX NUMBER		
LOS	2 PHASES	3 PHASES	4 OR MORE PHASES	2 PHASES	3 PHASES	4 OR MORE PHASES
A	0 - 850	0 - 800	0 - 750	0.0 -.59	0.0 - .57	0.0 - .54
B	851-1000	801-950	751-900	.60 - .69	.58 - .68	.55 - .64
C	1001-1150	951-110	901-1050	.70 - .79	.69 - .79	.65 - .75
D	1151-1300	1101-1250	1051-1150	.80 - .89	.80 - .89	.76 - .82
E	1301-1450	1251-1400	1151-1250	.90 - 1.0	.90 - 1.0	.83 - 1.0
F	- - - - -	- - - - -	- -NOT- - - -	APPLICABLE - - - - -		- - - - - -

As an example, the quality of flow at an intersection controlled by a two-phase signal and with a sum of critical lane volumes of 1300 (Level of Service D, CMA Index Number .89) is essentially the same as the quality of flow at the same intersection with a sum of critical volume of 1301 (Level of Service E, CMA Index Number .90).

For the Existing Condition (1980) most of the required data were gathered from LADOT records. Timing charts for each study intersection as well as computer printouts of both the roadway characteristics and traffic sign files for the primary and secondary highways within the Regional Core study area were obtained from the LADOT's Data Systems Division. Traffic signal plans for each study intersection and approximately 275 geometric plans were researched from the LADOT's Signal Design and Geometric Design Sections' files, respectively. County and State data were requested for those intersections not under Los Angeles City jurisdiction. Where intersection data were not available from Departmental records, aerial photographs of the Regional Core (furnished by SCRTD) and/or field checks were used to provide the needed information.

The 1980 Peak Hour volumes used in the CMA calculations were assembled in WBS Task 18BAH1141. Right and left turn percentages were determined through review of LADOT, County or State manual traffic counts. The intersection LOS was derived by comparing the calculated sum of critical volumes for the study intersection with the maximum sum of critical volumes for each level of service, as obtained from the draft report "Signalized Intersection Capacity and Level of Service" (See Table 2.1.2-1). The methodology and results were presented in the working paper for WBS Task 18BAH1241.

2.1.3 Station Area Parking

The first activity to be undertaken for the 1980 Parking Inventory was the identification of the City blocks to be surveyed. A location map (scale: 1"=800') was prepared for each transit station. Each City block within a quarter-mile radius of the station was assigned an identification number.

The second step was development of a parking inventory form that would standardize and simplify actual data collection. The format included standard symbols for data to be surveyed and each identified City block was assigned a parking inventory form.

The third step in the 1980 Parking Inventory was collection of data. Generally, two methods were utilized for data collection. Data for the stations outside the CBD were collected by field survey. Part of the data for the Hollywood/Cahuenga station was taken from the Hollywood Central Business District Parking and Traffic Study (1981) by Associated Parking Consultants. Data for the stations in the Central Business District were taken from the Central City Parking Study (CCPS) (1981) by Wilbur Smith and Associates. Data for most of the Union Station area was collected by field survey.

When the block diagrams for each station were completed, the field survey was conducted. The curb and individual off-street facility parking information was manually-counted when possible. In a few instances, access to an off-street facility was not allowed. In those instances the parking supply and usage was estimated according to the facility type, size and location. Parking cost information was generally taken from posted signs.

The parking supply data for the CBD transit stations were obtained from Figures 4 and 5 of the CCPS. That study utilized different designations for off-street facilities than was used on the parking inventory forms. The two sets of designations are related as follows:

Central City Parking Study	Parking Inventory Form
Public Facility	Public Commercial Facility
Private Facility	Public Patron or Other Parking Facility

The usage information contained in the CCPS was presented only on an area basis. In order to provide approximate usage information, it was assumed that the usage for each block was proportional to the appropriate area's usage (Table 10, CCPS), except where a parking supply surplus was indicated in Table CC-4 (1979 Balanced Surpluses and Deficiencies) of the CCPS. In those cases, the occupancy rates were adjusted to take the surpluses into account. The assumption is justified by the overall high occupancy rates in the areas covered by the 1980 Parking Inventory.

Parking Cost information was found in Figure 6 of the CCPS. The mid-point of each range in the legend was assumed to be the appropriate 1980 Median Parking Cost.

2.2 2000 Base (Null) Condition

2.2.1 Traffic Volumes and VMT

The horizon year of 2000 was used for all traffic projection tasks. The 1982B edition of the Southern California Association of Government's (SCAG's) long range (year 2000) socio-economic and land use forecasts was used as model input for the LARTS year 2000 person-trip generation, trip distribution, and modal choice models for the person-trip generation, trip distribution and modal choice models for the home-based works, home-based nonwork and non-home-based trip purposes.

The year 2000 regional travel projection, which is used in this study, is made for the entire LARTS study area which encompasses portions of five counties within the SCAG area. This area, however, is much too large for a meaningful traffic analysis and thus a smaller "Metro Area Network" is used as the analysis area.

The Metro Area Network and the even smaller Regional Core area were described in detail in the working paper for WSB Task 18BAH1141 and are shown on Figures 1.3-1 and 1.3-2. The Metro Area Network is the analysis area utilized in this report, and the 2000 projection of traffic will be identified for the same selected streets in the Regional Core as in the working paper for WBS 189AH1141.

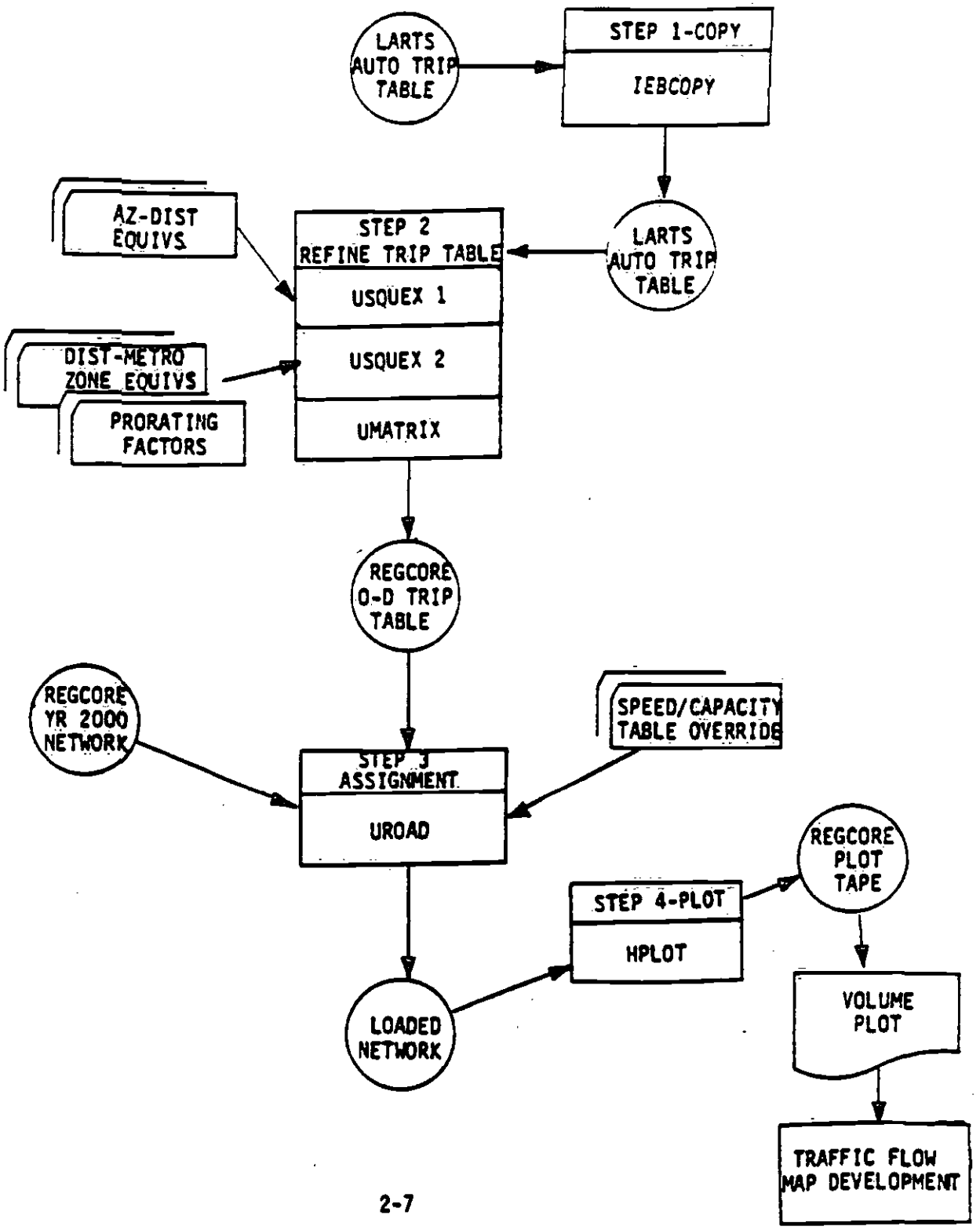
The primary input to LADOT's traffic projection process was a year 2000 twenty-four hour (daily) auto-driver trip table that is output from the LARTS model. SCRTD/LARTS performed the person-trip generation, trip distribution and/mode split portions of the travel demand estimation process for the SCAG region using UTPS and LARTS programs. The appropriate outputs of the mode choice model (daily auto-driver trip tables for work and non-work trips) were combined by LARTS for assignement by LADOT to the Metro Area Network.

The projections were made using the 1979 release of the UTPS computer program packages developed and distributed by the Federal Highway Administration (FHWA) and the Urban Mass Transportation Administration (UMTA). Figure 2.2.1-1 illustrates the steps taken by LADOT in the travel demand estimation process. The steps are discussed in detail in the working paper for WBS Task 18BAH1141.

To calibrate the assignment model, the LARTS-generated 1979 vehicle trip table was assigned to the 1980 Metro Area Network using the the parameters of the computer program, UROAD, included in the UTPS package. Traffic volumes (two-way ADT) from 46 screenlines throughout the study area were used to compare the actual ground counts with traffic volumes estimated by the model. There were some variations between actual counts and model estimates on a link-by-link and street-by-street basis; however, the accumulated screenline volumes were relatively consistent and fell within 5-10 percent of observed volumes. Therefore, no adjustments were made to the LARTS trip table, the Metro Area highway network or the assignment procedure. Based on a thorough review of all the screenlines, 32 were selected as "representive" screenlines for measuring the overall effects of future travel demand.

FIG. 2.2.1-1

SCRTD REGIONAL CORE-TRAVEL DEMAND ESTIMATION PROCESS



Screenlines were used to develop the initial year 2000 projections from the UROAD Model output. Thirty-two screenlines were drawn consistent with those used for model calibration. The percentage change between the 1980 assignment volumes and the 2000 assignment volumes for each screenline was assumed to represent the traffic volume growth rate for that screenline. This growth rate was applied to the 1980 observed one-way link volume for each street segment crossing the screenline. Growth rates for all segments were derived by interpolating between screenlines to prevent unreasonable changes in volumes in short distances.

In applying screenline growth rates to the current one-way ADT, it was assumed that the current directional splits will continue in the future. Actual directional split varies on a block-by-block basis and in about 1 percent of the cases, there is a 40/60 or 45/55 split in traffic. Generally speaking, however, there is a balance in daily traffic flow in each direction (50/50 split) on both surface streets and freeways. It does not seem unreasonable to assume this condition will remain.

Year 2000 peak-hour volumes were developed by applying the existing (1980) peak-hour factors to the year 2000 ADT. The peak-hour factors were developed by dividing the 1980 peak-hour volume at each intersection approach by the 1980 one-way ADT at that intersection. In some cases where the peak-hour factors were very high, they were adjusted downward to reflect the diversion of traffic to parallel routes that would occur due to congestion.

The initial traffic volume projections for the year 2000 Base Condition were revised by SCRTD/PBQ&D/LADOT to reflect greater vehicular traffic volumes and reduced bus transit volumes for a "Null" transit condition. The trip tables output by the LARTS Model showed a very small reduction in auto trips between the Base Condition and the Build Condition, representing a small diversion (3.9 percent) from auto to Metro Rail. Data from other cities with rail transit indicate that a 20 to 30 percent diversion has typically been experienced.

Two causes of the low projection of diversion to rail were found by SCRTD/ PBQ&D/LADOT. First, the initial transit-to-auto mode split was based on an unconstrained bus fleet. More transit trips were assigned to the bus mode than could be accommodated by a bus fleet limited to 2,435 vehicles, the limit given in the SCRTD short range plan. The excess transit demand that could not be carried on the expected maximum bus fleet would divert to the auto mode and should be added to the highway volumes previously projected for the Base Condition. An additional 20,500 vehicle trips were added through this process.

Second, based on experiences in other cities, the percentage of park-n-ride and kiss-n-ride mode of access trips transfering to rail in the Build Condition, which were diverted from auto trips in the Base Condition, should have been larger. In order to represent this while keeping total trip constant, an additional 36,400 auto trips were added to the Base Condition and taken off of transit. This represents the additional auto trips in the Base Condition that become park-n-ride or kiss-n-ride trips accessing rail in the Build Condition.

Parsons, Brinckershoff, Quade and Douglass (PBQ&D) staff, consultants to SCRTD, calculated the amount of trip diversion from bus to auto, and also the number of additional auto trips crossing each of the screenlines used to do the previous Base Condition work. For a detailed explanation of the methodology used, refer to two memoranda titled "Null Alternative Revisions" from Bob Bramen (PBQ&D), dated September 8 and September 24, 1982.

The initial year 2000 Base (Null) Condition traffic volumes were adjusted based on the additional trips crossing screenlines previously established by LADOT. For ADT volumes this was done by calculating the percentage increase in traffic at each screenline and applying a growth rate to the volumes previously calculated for the Base Condition for all street segments in screenline. The growth rates were graduated between screenlines to obtain as smooth a transition as possible. The peak-hour volumes were adjusted by dividing the number of additional peak-hour trips at each screenline by the number of streets crossing that screenline and adding the resulting number of trips to the Base Condition peak-hour volumes. This method was chosen to prevent overloading streets and to simulate normal diversion to less congested parallel routes. The final traffic volume flow maps for the 2000 Base (Null) Condition are contained in the working paper for WBS Task 18BAH1142, dated October, 1982. Traffic volumes are also presented on a station-by-station basis in Chapters 3 and 4 of this report.

The same UROAD Report 6 described in the working paper for WBS Task 18BAH1141 was utilized in determining the initial VMT for the 2000 Base (Null) Condition. The VMT was then adjusted to incorporate the additional vehicle trips by multiplying the number of additional trips by the average trip length and adding the result to the VMT previously calculated for the Base Condition. Separate average trip lengths were used for internal-external Regional Core trips and internal-internal Regional Core trips.

2.2.2. Intersection Evaluation

The method used to calculate the Year 2000 V/C ratios for this task is identical to that utilized in WBS Task 18BAH1241. A description of the Critical Movement Analysis (CMA) methodology is contained in the 1980 Traffic V/C Ratios working paper dated April, 1982, and in section 2.1.2, of this report.

The Base (Null) Condition presumes the existence of a "Null" bus transit system and that the Metro Rail Starter Line has not been constructed. The arterial street system includes capital improvements that may reasonably be expected by the base year. The sources of these improvements were the City's five-year Capital Improvement Program, Community Redevelopment Agency (CRA) projects and private development projects involving street widening. The intersections impacted by these improvements and the nature of the improvements are identified in Appendix B of the technical report for WBS Task 18BAH1243. As projected traffic volumes are realized, additional operational (TSM) improvements that would likely be considered and implemented as part of LADOT'S annual work program are identified in Appendix C of the technical report for WBS Task 18BAH1243. TSM measures were only developed at intersections projected to operate at Level of Service E or F.

The projected peak-hour approach traffic volumes utilized for the Base (Null) Condition were developed under WBS Task 18BAH1142, 2000 Base Condition Traffic Volumes. The working papers for that task document the methodology used. Two major items of interest are that the vehicle trip tables developed by SCRTD/LARTS for utilization by LADOT for traffic assignment were based on the SCAG 82B growth forecast and that the orignal flow maps were adjusted to reflect a "Null" bus transit system. The turning movements (percentages) at each study intersection were assumed to remain essentially unchanged from those used for the 1980 V/C calculations, except where site specific EIR's or circulation studies were available. Examples are the North Hollywood Commercial Core Redevelopment (Gruen Assoc. Report), Universal City Bridge Circulation Study, and the California Center and Pacific Plaza studies in the CBD (these also included impacts of other proposed construction in the CBD). In addition to the preceding, the signal timing at study intersections was assumed to be optimized within pedestrian timing constraints. Since this task deals with traffic projections based upon a policy forecast (rather than measured traffic volumes as used in 18BAH1241), a CMA Index Number greater than 1.0 represents the condition where anticipated demand would exceed the currently expected intersection capacity.

The results of the intersection evaluation were presented in Appendix A of the working paper for WBS Task 18BAH1242 and are summarized on a station-by-station basis in Chapters 3 and 4, of this report.

2.2.3. Station Area Parking

The 2000 Base Parking Supply for each station was determined as follows:

1. The number of parking spaces to be provided by future development was added to the number of existing parking spaces as surveyed in the 1980 Parking Inventory (WBS Task 18BAH1341).

2. The number of existing parking spaces that are to be removed by future development was subtracted from the above total to determine the final 2000 Base Parking Supply.

The 2000 Base Parking Usage was determined as follows:

1. Except for stations within the CBD, the square footage of future development was multiplied by 3/1000 sq. ft. to determine projected parking usage for the development.

2. For stations within the CBD, a factor of 1.5/1000 sq. ft. was used to account for the high transit mode split and high auto occupancy rate in the CBD.

3. The projected parking usage was added to the existing parking usage from the 1980 Parking Inventory (WBS Task 18BAH1341).

4. Estimated usage from existing buildings that were to be removed by future development was subtracted from the above total to determine the unbalanced 2000 Base Parking Usage.

In order to determine the 2000 Base Parking Condition, the parking usage had to be balanced with the available parking supply. The balancing was done within a three-block radius of any block deficient in parking supply.

It was assumed that 90 percent of off-street parking spaces and 100 percent of curb parking spaces would be utilized under normal at-capacity conditions. The 90 percent capaciy factor was only applied to off-street parking in blocks where future development created deficiencies or in blocks that were assigned parking in the balancing process. Existing off-street facilities that were found to already exceed 90 percent in the 1980 Parking Inventory were not balanced.

If parking supply and usage could not be balanced within a three-block radius of a deficient block, the deficiency was not balanced. The unbalanced deficiency is an indication of a block with significant adverse parking impacts.

The parking supply, balanced parking usage and occupancy rates were tabulated on a block-by-block basis and summarized on 400-scale maps of the station areas.

2.3 2000 With Project Condition

2.3.1 Traffic Volumes and VMT (LPA and MOS)

Traffic volume flow maps and VMT estimates were developed for essentially two different Metro Rail systems and revised traffic volumes for minor station variations along the two systems. The first system was 18.6. miles in length and had 17 stations (a combination of Options I and XII), referred to as the Locally Preferred Alternative (LPA). The second system was 8 miles in length and had 11 stations (Option VII), referred to as the Minimum Operable Segment (MOS). The LPA, including several station variations, will be discussed first, then the MOS with one station variation.

Traffic volume projections for the LPA in the year 2000 were developed in two steps. The first step was to develop maps which show "background" volumes for the year 2000 with the Metro Rail Option I/XII configuration in place, but did not include kiss-n-ride and park-n-ride trips to the Metro Rail stations. The second step, was to develop "overlay" maps for the station auto access trips (park-n-ride, kiss-n-ride) which were to be added to the background maps.

Background traffic volume flow maps for the LPA were generated for the year 2000 utilizing LARTS vehicle trip tables and UTPS computer programs. The procedure was discussed in Chapter 2.2.1 and in the working paper for WBS Task 18BAH1143. These background maps do not include "mode-of-access" trips, i.e,. park-n-ride and kiss-n-ride automobile traffic generated by the Metro Rail stations. It was therefore necessary to develop "overlay" traffic volume flow maps that showed only the traffic generated by the stations. The traffic volumes on the overlays were then added to the year 2000 background volumes to create the final traffic volume flow maps.

Park-n-ride and kiss-n-ride trip distribution information was available for Option XII in the form of output from VASSIGN, a computer program developed by Barton-Aschman Associates. The output listed the number of mode-of-access trips between every LARTS zone ("AZ") and every station. Option XII includes the Crenshaw/Wilshire, Sunset/La Brea, and Laurel Canyon/Chandler Stations. To obtain trip distributions for system variations having fewer stations, the Option XII VASSIGN output was adjusted manually to reflect the deletion of the Crenshaw/Wilshire and Laurel Canyon/Chandler Stations. Other minor adjustments are discussed in the working paper for WBS Task 18BAH1143.

Next, it was determined where the park-n-ride and kiss-n-ride trips were to park or load/unload patrons. Station site plans were analyzed to determine what parking or loading facilities were to be constructed. Additional discussions were held with SCRTD staff to identify likely off-street kiss-n-ride lots. If more than one facility was available, each facility was assigned a percentage of relative attraction, based on the facility's surplus parking supply, the walking distance from the station, and the cost of parking; if only one facility was available then all trips were destined to this facility (presuming sufficient capacity). For some stations, however, no new facilities are planned. Therefore, park-n-ride and kiss-n-ride patrons must use existing on-street and off-street parking locations nearby. Parking inventory maps prepared in WBS Task 18BAH1341 were used to determine where park-n-ride trips would likely park. Station vicinity maps showing surplus off-street commercial parking locations, kiss-n-ride lots, station platforms, access points, bus facilities and RTD parking structures are contained in Appendix P of the working paper for WBS Task 18BAH1143 and Appendix B of this report.

Once the distribution of origin zones and destination areas had been determined, the park-n-ride and kiss-n-ride trips were manually assigned to the street network links.

The number of mode-of-access (park-n-ride, kiss-n-ride) trips were taken from the computer output labeled "Mode-of-Arrival and Mode-of-Departure, Option XII with Parking at All Stations, Constrained", except for three stations. The mode-of-access overlays for the two Valley stations used Option I output instead of Option XII, since Option I does not include a Laurel Canyon/Chandler Station. An adjustment was made for Union Station because of changes in the proposed SCRTD parking lot capacity (increased from 1,000 to 2,500). The number of trips for all stations had to be adjusted to account for the fact that kiss-n-ride arrival trips (i.e., drop-offs) also involve a return trip, and that the same is true for kiss-n-ride departure trips (i.e., pick-ups). Appendix D in the working paper for WBS Task 18BAH1143 contains the complete mode-of-access output listing.

The final step was to add the volumes from the overlay maps to the volumes of the background traffic volume maps to create the final traffic volume flow maps for the year 2000. Volumes were rounded to the nearest hundred for the 24-hour period, and to the nearest ten for the AM and PM peak hours. The Option I/XII traffic volume flow maps are in Appendices A through E in the working paper for WBS Task 18BAH1143. Traffic volumes on a station-by-station basis are contained in Chapter 3.

The two Valley stations involved a number of different alignments. In the Universal City area, the two possible alignments were: (1) along the west side of Lankershim Boulevard north of Universal Place, called "Universal City" in this report; and (2) along the north side of Ventura Boulevard east of Vineland Avenue, called "Studio City". For the North Hollywood area, the three alignments under consideration were: (1) beneath the median of Chandler Boulevard at Lankershim Boulevard, called "Chandler at Lankershim-Subway"; (2) above the median of Chandler Boulevard at Lankershim Boulevard, called "Chandler at Lankershim Aerial"; and (3) in the proposed CRA site along the east side of Lankershim Boulevard south of Chandler Boulevard called the "Lankershim at Chandler-Off Street". The percentage of trips from the AZ's and the number of mode-of-access trips remain the same for all of these options, but the parking and loading locations differ. As a result, separate trip assignment maps were prepared for each of the options. Mode-of-access overlays were then made and the overlays were added to the background volumes to get the final volume maps. A set of final traffic volume flow maps was generated for each option and are contained in Appendices F and G of the working paper for WBS Task 18BAH1143. Traffic volumes on a station-by-station basis are contained in Chapter 4.

One of the options (IX) under analysis did not include the Crenshaw/Wilshire Station. Without this station, mode-of-access trips would increase for the two nearest stations, Western/Wilshire and La Brea/Wilshire. The method used for the deletion of the Crenshaw Station was to first generate overlay maps for those mode-of-access trips diverted from the Crenshaw Station to the Western/Wilshire and La Brea/Wilshire Stations. This set of overlays was added to the final Option XII maps. Finally, the Option XII mode-of-access trips overlay for the Option XII Crenshaw Station was subtracted. Final traffic volume flow maps are contained in Appendix H of the working paper for WBS Task 18BAH1143 and in Chapter 4 of this report for each station.

The same UROAD Report 6 described in the working paper for Task 18BAH1141 was utilized in determining the VMT for the 2000 Background Option I/XII Condition.

Vehicle Miles of Travel (VMT) for park-n-ride and kiss-n-ride trips were calculated for surface streets and for freeways within the Metro Area Network and within the Regional Core.

The total number of kiss-n-ride and park-n-ride trips generated per day by the stations were obtained by adding all of the mode-of-access trips from the Option XII output. To correct the overcount of kiss-n-ride trips caused by drivers who do not make a round trip but continue on to work, the total number of kiss-n-ride trips was reduced by one-third.*

The average trip length was calculated for each of the two modes utilizing the trip length distribution table available with the VASSIGN output. Barton-Aschman indicated that trips over five miles long were considered to be bus feeder trips, not valid auto access trips, and were, therefore, not included in the calculations. The average park-n-ride trip length was calculated to be

*Source: Memo from DMJM/PBQ&D, December 13, 1982

2.71 miles and the average kiss-n-ride trip length 2.27 miles. The daily auto access VMT was obtained by multiplying the number of trips by the average trip length.

Freeway VMT - Auto access trips were assigned to the freeways for only five of the stations: Union Station, the combined 5th/Hill and 7th/Flower Stations, Hollywood/Cahuenga Station, Universal City/Studio City Station and North Hollywood Station. The percentage assignment maps discussed earlier were used to estimate the mode-of-access volume on each freeway segment. The volumes were multiplied by the freeway segment length and the sum of these products was the total VMT on the freeways.

As in the development of Option I/XII flow maps, a computer assignment of the Option VII (MOS) trip/table (vehicle trips) was done using the technique and parameters standard for all Metro Rail runs. Analysis of the assignment model output by screenline showed that the standard screenline analysis methodology used to produce the Option I maps would not be adequate for Option VII for two reasons. First, in the CBD the model did not appear to adequately represent the increase in vehicle traffic from Option I volumes that could be expected due to the reduction in the Metro Rail service area and the resulting loss of patronage. Second, because Metro Rail service is eliminated from the Valley and Hollywood in Option VII, traffic volumes in these areas should approach or equal Base (Null) Condition volumes. The Base (Null) Condition flow maps, however, were adjusted and volumes were increased from those obtained from the model output (see Working Paper, L.A. City DOT, 'Revised 2000 Base Condition Traffic Volumes' Task 18BAH1142). Therefore, comparison of the Option VII model output to that for Option I by screenline would not be sufficient to produce an accurate flow map in those areas where the Base (Null) Condition is approached. The Base (Null) Condition adjustments have to be incorporated into Option VII projections. Because of these factors, separate methodologies were developed for the CBD, the Valley and the Hollywood-Wilshire-Westlake maps.

It was assumed that the Valley will not be influenced by the 8-mile Metro Rail System. All volumes on this map were made equal to the adjusted Base (Null) Condition volumes.

The Hollywood, Wilshire and Westlake maps are variably affected by the elimination of stations in Option VII. The Hollywood map close to Fairfax Avenue is expected to approach the Base (Null) Condition, while the Wilshire and Westlake maps would likely be closer to Option I background volumes. Adjacent areas should have volumes somewhere between Base (Null) Condition and Option I volumes.

The maps were developed by first identifying those portions of screenlines with a small percentage change from the Base (Null) Condition screenlines based on the model output. For these screenlines the percentage increase from Option I to Option VII was adjusted to incorporate the Base (Null) Condition adjustments by adding the actual Base Condition screenline adjustment volumes to the Build Option I screenline totals and calculating the percent change that these volumes represent to each Option I screenline. From this value,

the percentage change between the Base and Option VII was subtracted, to provide an adjustment for those screenlines which approach but do not equal the Base Condition volumes. The resulting value was added to the Option I to Option VII percentage increase from the model to get the percentage increase from Option I to Option VII. For screenline segments closely approximating the Option I Condition, only the Option I to Option VII screenline percentage change derived from the model was used. The screenline percentages developed through this process were mapped and smoothed over the area to reduce drastic changes in volumes along streets at screelines. The percentage increases were then applied to link volumes on the Option I ADT flow maps to produce the Option VII ADT flow maps.

The same screenline percentage increases were applied to get the peak hour maps, with the exception of the Hollywood flow map. The Option VII AM and PM Peak Hour Flow Maps for Hollywood were produced by multiplying the volume added to Option I to produce the Option VII ADT volumes by the peak hour factor (percentage of daily trips in the peak hour) for the deleted Metro Rail Stations, and then adding this product to the Option I peak hour flow map volumes.

The CBD (Downtown) Map

The CBD Option VII flow map volumes were based on mode-of-access data, obtained from SCRTD for the four Metro Rail stations in the CBD. It was assumed that the reduction in mode-of-access trips at these stations between Option I and Option VII runs represents the number of person trips lost from Metro Rail due to the abbreviation of the route. These trips were converted to vehicle trips using mode split information in the 1980 Downtown Cordon Study (L.A. City, DOT, 1981). It was assumed that the mode of access trips diverted from Metro Rail originated or were destined to areas in Hollywood or the Valley within the influence areas of the deleted station. The vehicle trips, except the park-n-ride (P/R) and kiss-n-ride (K/R) trips lost to Metro Rail were therefore distributed among five routes west of the Harbor Freeway, which connect the CBD with the Valley and Hollywood: Sunset Blvd., Hollywood Freeway, Temple Street, First Street and Second Street, based on the distribution at this location in the Base Condition. All P/R and K/R trips lost to downtown stations were assumed to have no origin or destination downtown and would not impact any downtown street. They were therefore all assigned to the Hollywood Freeway in the downtown area. The AM and PM and daily trips were considered separately.

Screenlines were drawn across downtown covering the influence areas of the downtown stations. Trips lost to each station were assigned to screenlines separately by assuming that they had destinations (or origins) within the influence area of that station. The trips crossing each screenline were totaled for all stations and compared to totals for the same screenlines on the Option I map to find the percentage increase in trips from Option I. The percentage increase at each screenline was mapped and the percentages for areas between screenlines were obtained by interpolation. The screenline percentage increase was then applied to the link volumes from the Option I flow map to produce a background flow map for Option VII.

The 18-mile system, Option I/XII was modified to create the new flow maps for the 11-station, 8-mile system, Option VII. Mode-of-access volumes were compared between the two options for the eleven-station system to determine where substantial changes occurred. Substantial differences were found at only four locations: Union Station, the combined 5th-Hill and 7th-Flower stations, the Normandie-Wilshire station, and the Fairfax station. As a result, new overlays were developed for these four stations. The same assignment maps used for Option XII were used for the seven remaining stations under Option VII. These overlays were added to the Option VII background volume maps to produce the final Year 2000 traffic volume flow maps that are contained in Appendices I to M in the working paper for WBS Task 18BAH1143.

The background vehicle miles of travel for the Option VII configuration were derived from UROAD Report 6 in the same manner as for Option I/XII (Chapter IX), however, two adjustments were made to the UROAD output. First, Option VII V.M.T. for zones in the Valley were assumed to be the same as for the Base (Null) Condition. Second, the percentage of Option I Metro Rail riders who would have otherwise traveled by auto, 21.4%, was assumed to apply for Option VII as well. With this diversion rate, 37,500 vehicle miles were added to Option VII Metro Network and Regional Core V.M.T. as calculated by UROAD. For each facility type, the additional V.M.T. was distributed proportionately.

The Vehicle Miles of Travel (VMT) for Option VII mode-of-access trips were calculated in a manner similar to that used for Option I/XII described previously.

2.3.2. Intersection Evaluation (LPA only)

As with the 1980 and 2000 Base (Null) conditions, the intersection analysis for the 2000 With Project Condition (LPA, and four station alternatives) utilized the "Planning Application of the Critical Movement Analysis (CMA) to establish the V/C ratios (CMA index number) for the selected intersections. For each intersection the intersection V/C ratio was calculated for the AM and PM peak hour period. V/C ratios were also calculated for each street at the intersection; this was the same as the intersection V/C ratio if pedestrian timing constraints permitted balancing of signal green time based on vehicular demand.

Based on station site plans and discussions with SCRTD staff, a vicinity map was prepared for each station that displayed the street system, study intersections, station (platform) location with access points, facilities to accommodate park-n-ride or kiss-n-ride activity, surplus off-street commercial parking (from 1980 parking inventory) and bus-bay locations. The figures were included in Chapters Three and Four of the technical report for WBS Task 18BAH1243 and are contained in Appendix B of this report.

The street conditions (physical and operational) established at each intersection under WBS Task 18BAH1242, 2000 Base (Null) Condition, were utilized for the 2000 With Project Conditions. The only operational revisions made

under this task were to optimize signal timing within pedestrian timing constraints; mitigation measures were developed under WBS Task 18BAH15. The projected peak hour approach traffic volumes utilized for the With Project conditions were generated under Task 18BAH1143, 2000 With Project Traffic Volumes. The working paper for that task documents the methodology utilized.

The traffic volumes were initially generated for the alignment and stations of the 18.6-mile 17 station Metro Rail System (LPA). Revised volumes were developed for variations involving the deletion of the Wilshire/Crenshaw station and its impact on the Wilshire/La Brea and Wilshire/Western stations. Revised traffic volumes were also developed for the Studio City station and the Lankershim/ Chandler station (original station location in aerial configuration) and the off-street station east of Lankershim in the North Hollywood Redevelopment Commercial Core area.

Intersections that had a V/C increase of 0.02 or more and a LOS of E or worse were reviewed under WBS Task 18BAH15 for development of possible mitigation measures.

2.3.3 Station Area Parking (LPA ONLY)

The methodology for the 2000 With Project Parking Condition was identical to the methodology for the 2000 Base Parking Condition up to the determination of unbalanced parking usage. The only differences were that the With Project future development projections were used in lieu of the Base future development projections and parking added by the project was added to the parking supply.

For the 2000 With Project Parking Condition, the unbalanced parking usage was modified to account for Metro Rail impacts as follows:

1. To account for reduced parking usage due to a modal shift from auto to transit the unbalanced parking usage within each station area was reduced by a number equivalent to one-half the difference in daily auto trips between the 2000 Base (Null) Condition and the 2000 With Project Condition. The daily auto trips were derived from SCRTD/LARTS Trip Tables disaggregated using the UTPS USQUEX computer model.

2. To account for increased parking usage due to park-n-ride Metro Rail patrons, the peak accumulation of parked vehicles from the station access data was added to the unbalanced parking usage at each station, except the Fifth/Hill and Seventh/Flower Stations. Parking conditions are so congested that it was assumed no one would park-n-ride from these stations. These potential Metro Rail users may divert to other stations or may be lost.

   After the above adjustments were made to the unbalanced parking usage, the parking supply and usage were balanced as in the methodology for the 2000 Base Parking Condition. The tables and maps for the 2000 With Project Parking Condition are attached as Appendix B of the working paper for WBS Task 18BAH1342.

In order to summarize the description of the Parking Conditions, tables for each station area have been prepared with information as follows:

Total Parking Supply
Total Parking Usage
Overall Occupancy Rate
Parking Supply (-) Deficiency/(+) Surplus (0.90 x Supply - Usage)
Number of blocks with an Occupancy Rate less than 0.80.
Number of blocks with an Occupancy Rate between 0.80 and 0.90
Number of blocks with an Occupancy Rate equal to or greater than 0.90

Preceding each table is a summary description of the parking conditions at each station area. Four different conditions (i.e., uncrowded, approaching capacity, at capacity and congested) are used in the summary description. The occupancy rates represented by those conditions are as follows:

Overall Parking:

Uncrowded - less than 0.80
Approaching capacity - 0.80 to 0.90
At capacity - 0.90 to 1.00
Congested - 1.00 or greater

2.3.4 Circulation Impacts - Mitigation

The intersection analysis for the 2000 Base (Null) Condition WBS Task 18BAH1242, was first performed assuming an arterial street system which included the projects in the City's five year CIP, CRA Projects, and private development projects likely to be constructed by the year 2000. Those intersections projected to be operating at Level of Service E or F were then reanalyzed assuming that as projected traffic volumes develop appropriate operational TSM measures would be implemented as part of the Department of Transportation's annual work program. The TSM measures assumed to have been implemented under WBS Task 18BAH1242, therefore, are not considered as measures available to mitigate adverse impacts associated with construction of the Metro Rail Project.

The various mitigation measures considered for the intersections studied under this task are listed below.

- Increase approach capacity through installation of a parking restriction. Usually the installation of a parking restriction accompanies a striping change to provide either an additional through lane or turn lane. This measure is not under the control of SCRTD.

- Restripe approach to provide an additional through lane and/or turn lane. As mentioned above, this measure is usually accompanied by the installation of parking restrictions. There are, however, some instances when additional parking restrictions are not required. This measure is not under the control of the SCRTD.

- Install Left-Turn Restriction - The prohibition of left turns would improve the calculated service level of an intersection by increasing through capacity at the expense of not accommodating the left-turn demand. The resultant change in traffic pattern could impact nearby local/collector streets. This measure is not under the control of the SCRTD.

- Addition or revision of traffic signal phases to accommodate the projected traffic pattern. Even though additional signal phases result in decreased intersection capacity, in cases where warranted by the traffic pattern, an increase in intersection level of service can sometimes be achieved. While authorization of this measure is not under the control of the SCRTD, design, construction and equipment costs could be considered to be under SCRTD control.

- Approach Widening - This measure could be utilized to provide either an additional through-lane or turn-lane. Unless contiguous to property designated for acquisition by SCRTD for station construction, this measure is not entirely under the control of the SCRTD.

- Reversible Lanes - When street widening is not feasible, the use of a reversible lane can sometimes be employed to accommodate highly directional AM and PM peak traffic flows. The method of implementation is an important factor when considering this type of traffic control measure. Manual implementation on a daily basis would result in a major, labor intensive, expense which would probably be incurred by the City of Los Angeles. Implementation by changeable message overhead signs would result, however, in a high initial (capital) expenditure for equipment and construction, with lower operation and maintenance costs thereafter. The authorization of this type of traffic control is not under the control of the SCRTD. The cost of equipment and construction could be considered to be under SCRTD control.

When selecting a measure to mitigate an adverse impact identified in WBS Task 188AH1243, the least restrictive measure which appeared to improve the intersection operating conditions was first considered. An intersection V/C analysis was utilized to estimate the extent of improvement which could be expected with the implementation of the proposed improvement. Where more than one measure was considered feasible, this procedure was repeated accordingly. Generally, the least restrictive measure which would completely mitigate the anticipated adverse impact was chosen. If there were no measure available to completely mitigate an anticipated adverse impact, then that measure which would most effectively improve the intersection Level of Service was selected.

Street widening was not considered feasible at locations where either extensive building demolition or remodeling would be required or in business districts where substandard sidewalks would result. Street widening was considered to be a realistic mitigation measure at locations contiguous to

station sites where property acquisition is contemplated and cut-and-cover construction techniques would require street reconstruction. At these locations any mitigation measures should be constructed as part of the station site development.

At locations where the mitigation measures are not part of the station site plan the mitigation measures should be constructed by the SCRTD under appropriate permits or included in the City's Capital Program with funding provided by the Metro Rail Project.

Costs associated with traffic operations such as signal modifications, signing and restriping should also be provided by the Metro Rail project.

CHAPTER 3 - STATION AREA EVALUATION

The results of the traffic analysis are presented on a station-by-station basis beginning at Union Station and proceeding along the adopted alignment to the station at Chandler and Lankershim in North Hollywood. The presentation for each station is divided into four sections: General Background; Traffic Volumes; Intersection Evaluation; and Parking.

The General Background contains information on the routes providing direct access to the station and station characteristics. The second section, Traffic Volumes, furnishes information on station boardings, mode-of-arrival, and traffic volumes (AOT, AM and PM peak hours) for the 1980, 2000 Base (Null) and 2000 With Project Conditions. The third section, Intersection Evaluation, summarizes the existing (1980) levels of service and the projected levels of service for the 2000 Base (Null) and 2000 With Project Conditions. In the last section, a summary of the parking supply, usage and occupancy rates are provided for the existing, 2000 Base (Null) and 2000 With Project Conditions.

3.1 Union Station

3.1.1 General Background

Th Metro Rail station at Union Station will be an end and beginning point of the initial 18-mile rail line. The proposal studied shows the station platform constructed underneath the existing railroad track yard east of the Union Station building, as well as a large parking structure with 2,500 spaces built between the railroad track, Macy Street, Vignes Street and the proposed El Monte Busway Extension. Also included would be bus parking (approximately 43,000 sq. ft. at grade) and 65 kiss-n-ride parking spaces, all off-street. Vehicular access to this new structure is proposed to be from one point on Vignes Street at Ramirez Street.

Due to the projected demand for parking, it is assumed that other parking facilities (in addition to the new structure) would be available to Metro Rail patrons to some extent. These include existing off-street parking for Union Station on Union Station property, plus a limited number of commercial off-street parking spaces at various locations relatively close to Union Station. On-street parking was not considered a factor in the analysis.

The Union Station property is part of the Central City North Community. Surrounding it are industrial, manufacturing, community, commercial and public and quasi-public uses. It is well served by the Santa Ana Freeway and a network of arterials such as Alameda and Macy Streets (both designated major highways) and Center/Ramirez/Vignes Streets (designated secondary highways) as well as several other connecting streets.

3.1.2 Traffic Volumes

This Metro Rail station is projected to function as a major auto intercept. The SCRTD is proposing a 2,500 space parking structure and there were approximately 700 surplus off-street commercial parking spaces in 1980. An off-street bus facility is also proposed; however, the projected bus volumes

and routings were not available. This information may be generated by the SCRTD in conjunction with Milestone 9 - Supporting Services Plan or Milestone 12.

Daily boardings at this station are projected to range from 36,000 to 37,000 for Option I, IX or XII. Detailed information on boardings and mode-of-arrival for numerous Options were generated by Barton-Aschman for the SCRTD and are contained in the working paper prepared by LADOT for WBS Task 18BAH1143. The AM and PM peak hour park-n-ride trips are projected to be approximately 2200 and 2800 while the auto trips for kiss-n-ride boardings are projected to be 95 and 152 for the same time periods.

Current traffic volumes on Alameda, Macy and Vignes Streets generally range between 14,000 and 26,000 vehicles per day in both directions. Other supporting arterial streets such as Sunset Boulevard, North Main Street and Mission Road also carry traffic volumes generally within the same range. The heaviest directional peak-hour volumes are experienced on Macy Street-Sunset Boulevard and Mission Road. Nearly 175,000 vehicles per day pass by on the Santa Ana Freeway.

In the Year 2000, traffic volumes on these arterials are projected to have generally increased 15 to 21 percent above their 1980 levels, assuming a moderate level of development will have occured but without any Metro Rail project being constructed. With the implementation of Metro Rail and the same level of projected development, traffic volumes will remain at a fairly high level on most of these streets in the vicinity of the station. In fact, due to the large number of Metro Rail park-n-ride and kiss-n-ride patrons forecast for this station, traffic volumes are expected to increase by a few hundred to a few thousand on the nearby streets for the year 2000. More importantly, with the Metro Rail line operation, the directional peak hour volumes will increase much more significantly due to the fact that the park-n-ride and kiss-n-ride patronage trips have much sharper peaking characteristics compared to normal background traffic.

Link volumes for 1980, 2000 Base (Null), 2000 With Project - LPA and MOS (ADT, AM and PM peak hours) on all major and secondary highways and selected collector streets were generated under WBS Taks 18BAH1141, 1142 and 1143 and are shown on flow maps included with the working papers prepared for each task. Volumes for selected locations near Union Station are shown on Figure 3.1-1.

3.1.3 Intersection Evaluation

Twenty four of the more important intersections in the vicinity of Union Station were evaluated (Volume/Capacity index calculated) for the 1980, 2000 Base (Null) and 2000 With Project (LPA) conditions. The levels of service for the intersections under each condition are shown below in Table 3.1-1.

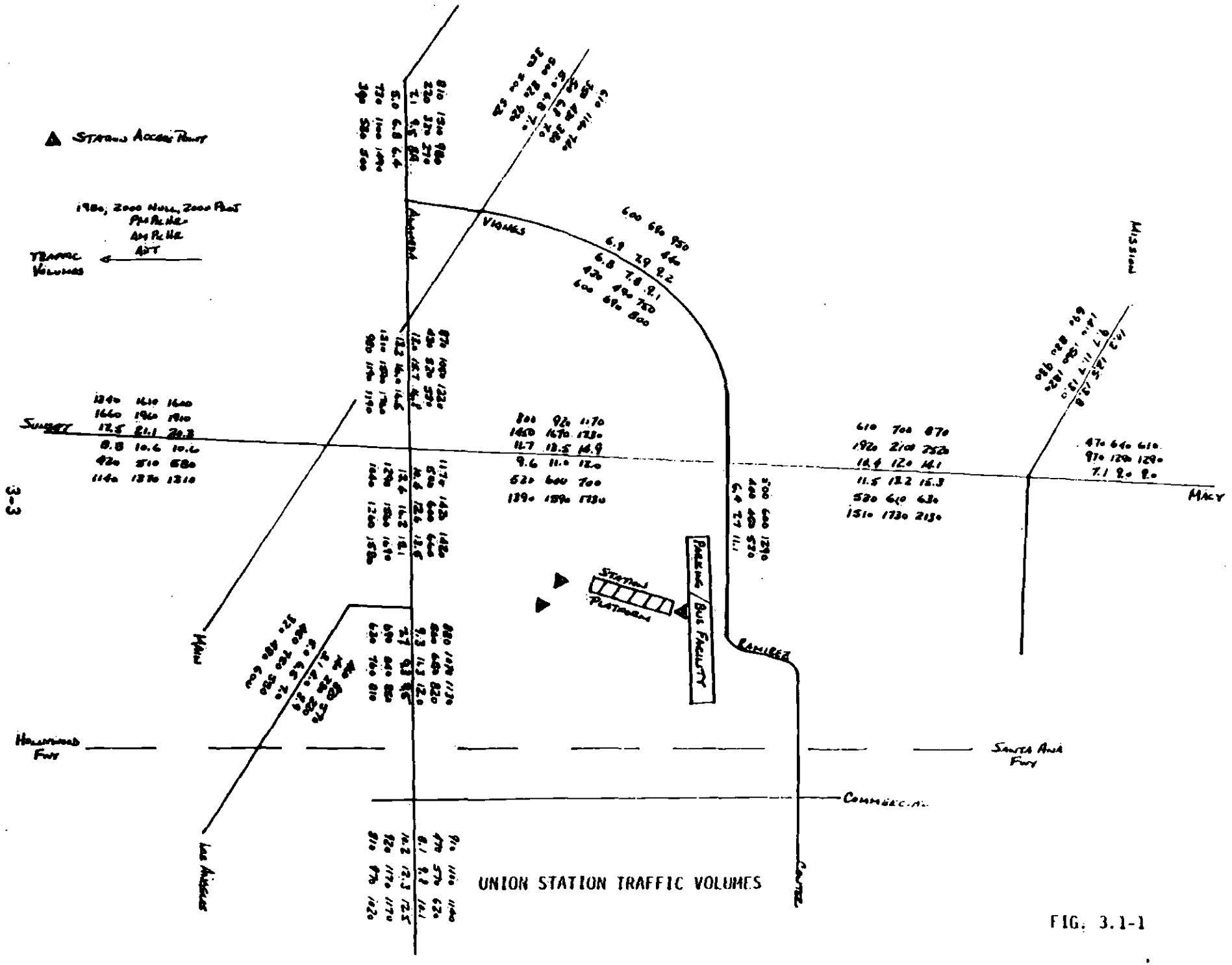

STATION ACCESS POINT
1980, 2000 NOM., 2000 PROJ
PM PEAK HR.
AM PEAK HR.
ADT
TRAFFIC VOLUMES
ALAMEDA
VIGNES
MISSION
SUNSET
MACY
MAIN
HOLLYWOOD FWY
SANTA ANA FWY
COMMERCIAL
LOS ANGELES
CENTRAL
STATION PLATFORMS
PARKING / BUS FACILITY
UNION STATION TRAFFIC VOLUMES

FIG. 3.1-1

Table 3.1-1

LOS Summary

Condition	Peak Hour	Level of Service					
		A	B	C	D	E	F
1980 Existing	AM	16	5	1	1	-	-
	PM	15	6	2	-	-	-
2000 Null	AM	11	4	3	4	1	
	PM	4	6	7	3	2	1
2000 W/ Project	AM	13	2	5	-	2	2
	PM	6	9	2	1	3	3

The 2000 Base (Null) and With Project Conditions included street improvements associated with two City CIP projects. The first project added left turn pockets and a northbound and southbound through lane to Alameda at Aliso/ Commercial and at Arcadia; it also added a right turn only and a left turn only lane eastbound on Aliso at Alameda. The second City CIP project added northbound and southbound left turns pockets on Mission at Macy; also added on Mission was a southbound right turn only lane.

Of the twenty-four intersections evaluated, six were projected to have an increase in the V/C index of 0.02 or more from the 2000 Null to the 2000 With Project conditions and also have a 2000 With Project LOS D or worse. The six intersections are Alameda/Aliso-Commercial, Alameda/Los Angeles, Alameda/Macy, Macy/Mission, Macy/Vignes and Ramirez/Santa Ana Freeway ramps - Vignes. A few of the remaining intersections that were evaluated are expected to experiencing decreases generally in 0.03 to 0.08 range. More detailed information is contained in the working papers and/or technical reports prepared for WBS Tasks 188AH1241, 1242 and 1243.

Of the six intersections identified above, four had 2000 With Project LOS E or worse. These intersections were evaluated further for development of possible mitigation measures. The results of this additional evaluation are presented in Chapter 6, Traffic Circulation - Mitigation Measures.

3.1.4 Parking

The 1980 Condition is uncrowded. Because there is no future development projected, the 2000 Base (Null) Condition should be similiar to the 1980 Condition.

The Metro Rail Project will provide 2,500 parking spaces to the supply, while increasing daily, parking usage by 1,721. The Project is projected to induce development of the Union Station property. Because the park-n-ride parking supply was limited to 1000 parking spaces, while unconstrained park-n-ride usage is close to 10,000, the parking surplus indicated in Table 3.1-2 will probably be filled to capacity with a corresponding increase in patronage.

Table 3.1-2

Parking Summary

Parking Condition	Station Parking Supply	Station Parking Usage	Overall Occupancy Rate	Parking (-)Deficit (+)Surplus	Number of Blocks W/Occupancy Rate		
					<0.80	0.80-0.90	> 0.90
1980 Existing	5,158	3,020	0.59	+1,622	17	4	1
2000 Null	5,158	3,020	0.59	+1,622	17	4	1
2000 W/ Project	7,206	5,644	0.78	+841	15	3	4

3.2 First and Hill Station (Civic Center)

3.2.1 General Background

This station is one of the three Metro Rail stations proposed for the Central Business District. The station platform will be constructed directly under Hill Street between First and Temple Streets, with cut and cover construction likely extending beyond First Street. The station will

primarily serve the Civic Center, commercial office and retail uses, medium and high-rise residential development, and activities such as the Music Center. In addition to the three arterials mentioned above, several other streets furnish close access to the proposed station; these include Second and Third Streets, Olive Street, Grand Avenue, Broadway and Spring Street. Freeway access is provided by the Harbor and Hollywood-Santa Ana Freeways.

No parking facilities are proposed to be built in conjunction with this station or with the other two proposed CBD stations. Nor is it assumed that any on-street parking or commercial off-street parking facilities will be used or be available in any significant amount for Metro Rail purposes. Hence, no park-n-ride or kiss-n-ride activity was projected at the First and Hill Station.

3.2.2 Traffic Volumes

It is estimated that this station will experience between 16,300 and 16,900 daily boardings for Options I, IX and XII. Mode-of-access data show bus feeder and walk as the major station access modes. Hardly any park-n-ride and kiss-n-ride trips to the station are indicated. More detailed information regarding boardings and mode-of-access trips for the various options can be found in the LADOT working paper for WBS Task 18BAH1143 and other SCRTD/ Barton-Aschman reports.

Presently, traffic volumes on the main streets serving the station--Hill, Temple and First Streets--range between 14,000 and 25,000 vehicles per day in both directions. Other nearby arterials paralleling these streets also carry approximately the same amount of daily traffic. In general, directional peak-hour volumes are similarly high on both the north-south and east-west arterials, approximately 1,200 to 1,300 vehicles per hour in the AM or PM peak hour.

In the year 2000, under the Base (Null) Condition it is forecast that daily traffic volumes will have increased from 27 to more than 60 percent above their 1980 volumes, based upon a high level of development and growth in the downtown area. Under the With Project Condition, assuming the same level of development in the CBD, a reduction in daily and peak-hour traffic volumes of approximately four to six percent is anticipated on most of the streets near the station site.

Street volumes (ADT, AM and PM peak hours) for the year 1980, 2000 Null and 2000 With Project - Conditions for selected locations near the proposed First and Hill Station site are presented on Figure 3.2-1. More comprehensive volume information is available in the the working papers for WBS Tasks 18BAH1141, 1142 and 1143.

3.2.3 Intersection Evaluation

Twenty-five intersections around the First and Hill Station were studied for the 1980, 2000 Base (Null) and 2000 With Project Conditions. None of them showed any increase in their intersection V/C index or a worsening in the LOS when comparing the With Project and Base (Null) Conditions. The number of

intersections within each level of service under these conditions during the AM and PM peak hours is shown below. Completed analysis will need to be reviewed upon the generation of detailed bus operation revisions for the Metro Rail condition and when new forecasts or revised site plans are developed.

Table 3.2-1

LOS Summary

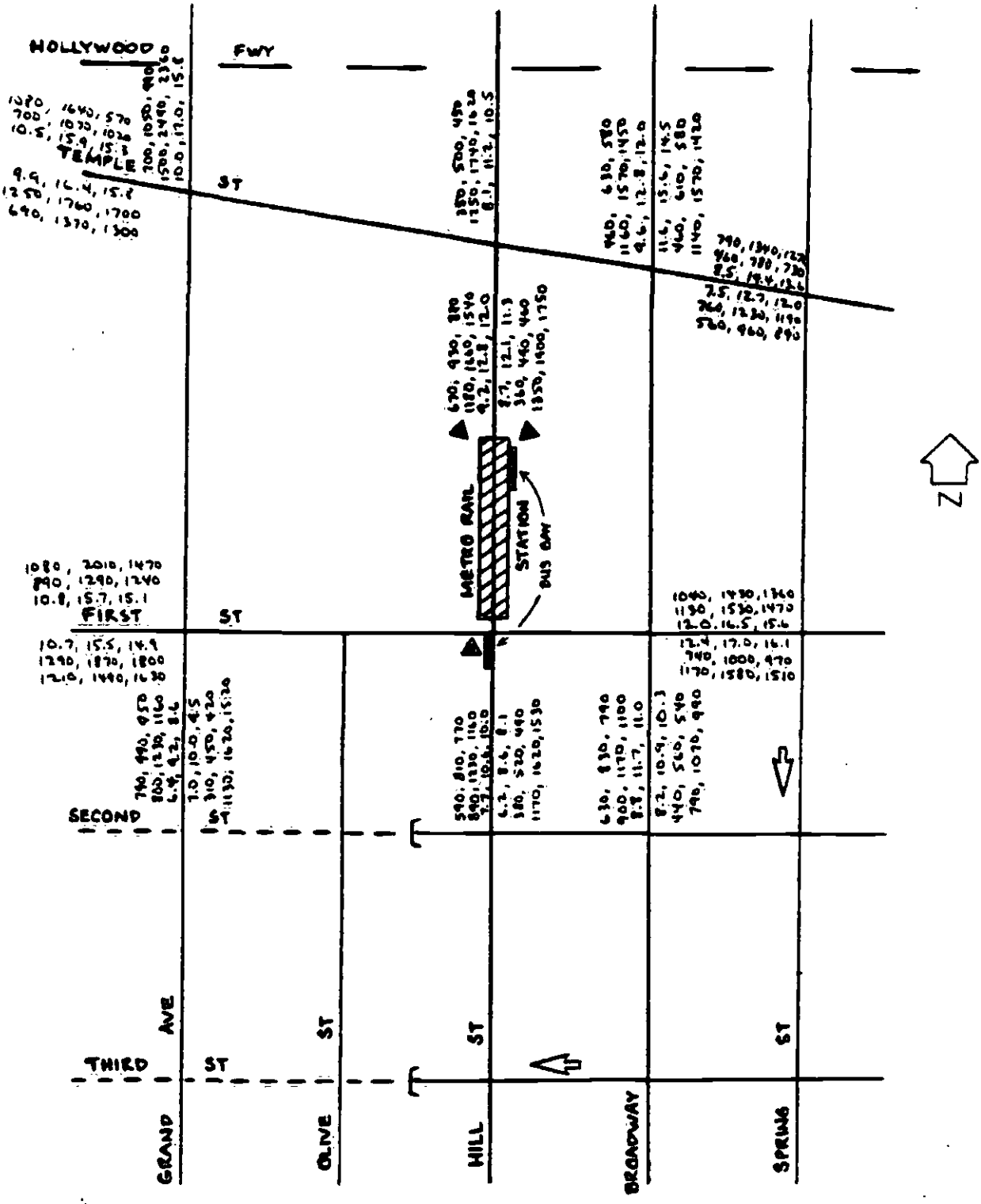
Condition	Peak Hour	Level of Service					
		A	B	C	D	E	F
1980 Existing	AM	9	9	2	4	1	-
	PM	11	5	6	2	1	-
2000 Null	AM	4	2	3	6	5	5
	PM	3	3	3	2	7	7
2000 W/ Project	AM	4	1	5	5	4	4
	PM	2	4	3	3	5	6

The 2000 Base (Null) Condition included consideration of two CIP street improvement projects and one potential operational (TSM) measure. The two CIP projects would add a W/B right-turn only lane on Temple Street at Grand Avenue and at Hill Street. The TSM improvement would prohibit left turns S/B on Hill Street at First Street during the PM peak hour.

None of the evaluated intersections were found to have deteriorated in service level under the With Project Condition; therefore, no further evaluation was warranted.

3.2.4 Parking

The 1980 Condition is approaching capacity. Due to protected development and overflow from the Fifth/Hill Station area, the 2000 Base Condition will be at normal capacity.



FIRST/HILL STATION TRAFFIC VOLUMES FIG. 3.2-1

The Metro Rail Project will reduce parking usage by 580; however, because development is expected to intensify adjacent to the station and the developments are projected to provide less parking supply per floor area, the 2000 With Project Condition will be extremely congested.

Table 3.2-2

Parking Summary

Parking Condition	Station Parking Supply	Station Parking Usage	Overall Occupancy Rate	Parking (-)Deficit (+)Surplus	Number of Blocks W/Occupancy Rate		
					<0.80	0.80-0.90	> 0.90
1980 Existing	16,443	13,829	0.84	+970	4	10	10
2000 Null	17,166	15,517	0.90	-68	0	0	24
2000 W/ Project	15,203	15,859	1.40	-2,176	0	0	24

3.3 Fifth and Hill Station

3.3.1 General Background

The platform for this station will also be built underneath Hill Street and will be between Fourth and Fifth Streets, with cut and cover construction extending beyond both Fourth and Fifth Streets. The station will serve existing and new commercial office and retail uses and residential developments. In addition to Fourth and Fifth Streets, Third and Sixth Streets connect with Hill Street for convenient access to the station; these four streets are all one-way, east-west streets. North-south streets paralleling Hill Street include Olive Street, Grand Avenue, Broadway and Spring Street. The Harbor and Hollywood Freeways are one-half to three-fourths mile from the station site.

New SCRTD parking facilities for Metro Rail patrons are not proposed at the Fifth and Hill Station. However, some commercial off-street parking facilities are expected to be available and used by some Metro Rail park-n-ride patrons. It appears that without any kiss-n-ride parking areas, kiss-n-ride patrons will be dropped off and picked up at curbside locations nearest the station.

3.3.2 Traffic Volumes

It is forecast that this station will have 35,200 to 36,200 daily boardings under Options I, IX and XII due to park-n-ride, kiss-n-ride, bus feeder and walk modes of access. Although no Metro Rail parking is specifically planned for this station, it and the adjacent station, Seventh and Flower, are projected to attact in combination a substantial number of park-n-ride trips and some kiss-n-ride trips. For example, together these two stations will generate approximately 800-plus and 1,700-plus park-n-ride trips in the AM and PM peak hours, respectively, while 100-plus and 300-plus kiss-n-ride trips are projected for the same time periods.

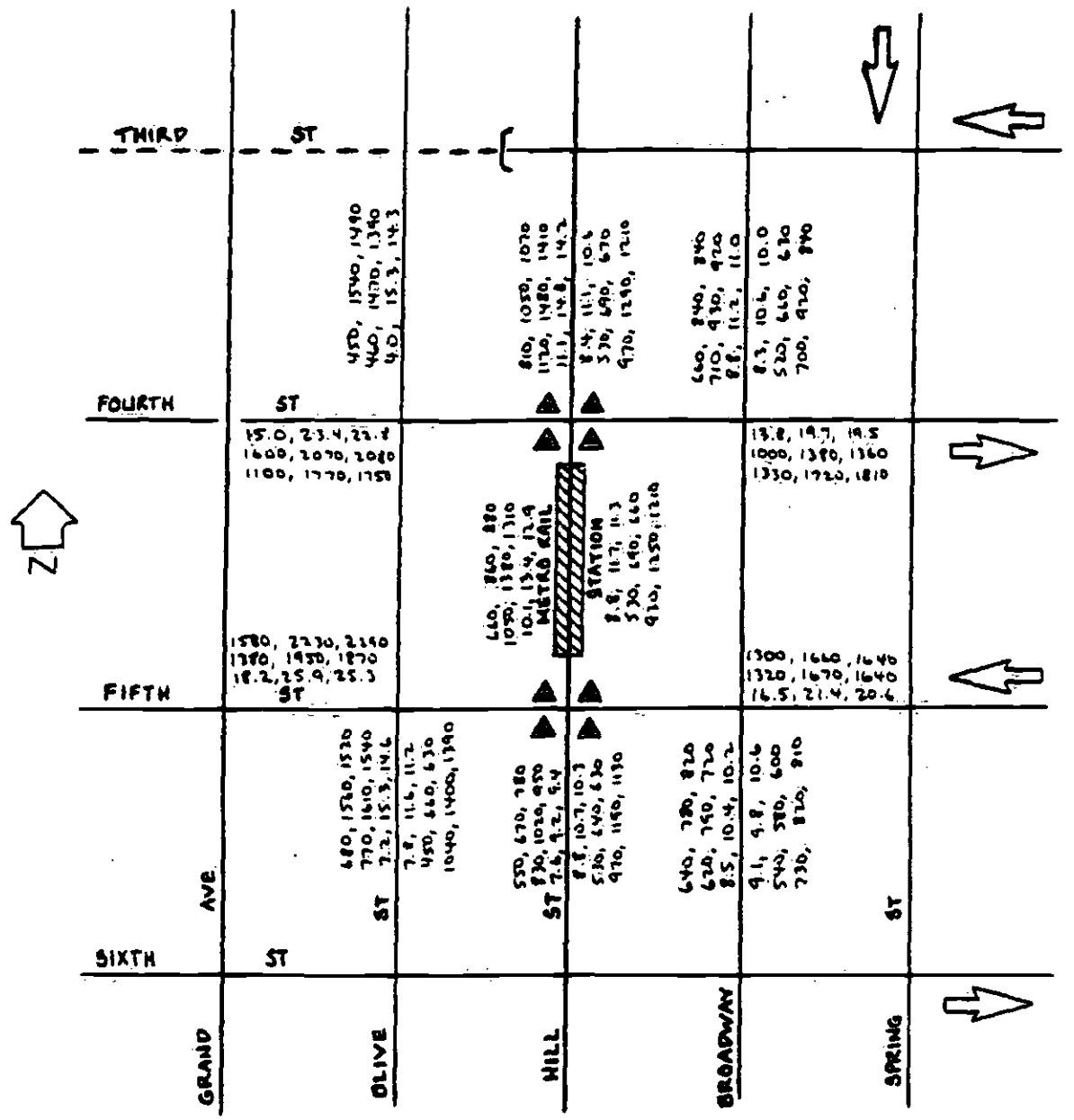
Fourth and Fifth Streets, both one-way streets, carry approximately 14,000 to 18,000-plus vehicles per day at the present time, while Hill Street and Broadway handle daily volumes in the 15,000-to-19,500 range. Olive Street currently experiences slightly less traffic, about 14,000-to-15,000 vehicles per day. Peak-hour volumes on Fourth and Fifth Streets are generally higher west of Hill Street than east of Hill Street, 1,100 to 1,600 versus 1,000 to 1,330 vehicles per hour. Directional peak-hour volumes are significantly lower on the three north-south streets (Hill, Broadway and Olive); of the three, Hill Street carries the highest directional volume, 1,120 vehicles per hour.

Traffic volumes for the 2000 Base (Null) Condition are projected to increase by 15 to 33 percent above their 1980 levels on the north-south arterials, except for Olive Street, which will have a 79 percent growth. Volumes on Fourth and Fifth Streets are expected to increase by 30 to 56 percent for the same condition, with the largest growth occurring on Fourth Street. With the implementation of the Metro Rail project, the 2000 Base (Null) traffic volumes will generally decrease by one to four percent around the Fifth and Hill Station.

Figure 3.3-1 depicts traffic volumes for selected segments near this station. Other volumes can be found in the working papers prepared for WBS Tasks 18BAH1141, 1142 and 1143.

3.3.3 Intersection Evaluation

Volume/capacity indexes were calculated for 27 important intersections around the proposed station site. The service levels for these intersections under the 1980, 2000 Base (Null) and 2000 With Project Conditions were determined and have been summarized below in Table 3.3-1. Completed analysis will need to be reviewed upon the generation of detailed bus operation revisions for the Metro Rail condition and when new forecasts or revised site plans are developed.



FIFTH/HILL STATION TRAFFIC VOLUMES FIG. 3.3-1

Table 3.3-1

LOS Summary

Condition	Peak Hour	Level of Service					
		A	B	C	D	E	F
1980 Existing	AM	16	8	2	1	-	-
	PM	13	5	9	-	-	-
2000 Null	AM	6	6	7	4	2	2
	PM	3	5	7	2	8	2
2000 W/ Project	AM	6	6	8	4	1	2
	PM	4	5	7	1	8	2

The 2000 Base (Null) Condition assumed the implementation of one traffic flow improvement. This was the installation of a through lane eastbound on 4th Street at Olive Street. This measure is presumed to be carried out under the B-Permit procedure. No other measures envisioned for this area would materially benefit capacity on the nearby streets.

One of the 27 intersections was projected to have both an increase in its V/C index of more than 0.02 and a LOS of D or worse. Other intersections showed an increase in the V/C index of as much as 0.08 but the LOS remained at C or better. A majority of the intersections experienced no change in the V/C index or showed decreases in the range of 0.01 to 0.06. The intersection of Olive and Fifth Streets which experienced LOS E for the Base (Null) and With Project Conditions during the PM peak hour, was evaluated further for development of possible mitigition measures. The results of this additional evaluation are presented in Chapter 6.

3.3.4 Parking

The 1980 Condition is approaching capacity. Due to projected development, the 2000 Base Condition will be extremely congested.

The Metro Rail Project will reduce parking usage by 2,413; however, because development is projected to intensify adjacent to the station and the developments are projected to provide less parking supply per floor area, the already extremely congested condition will be exacerbated.

Park-n-ride users were not added to the parking usage due to the extremely congested condition.

Table 3.2-2

Parking Summary

Parking Condition	Station Parking Supply	Station Parking Usage	Overall Occupancy Rate	Parking (-)Deficit (+)Surplus	Number of Blocks W/Occupancy Rate		
					<0.80	0.80-0.90	> 0.90
1980 Existing	11,828	9,977	0.84	+668	6	16	4
2000 Null	20,457	21,222	1.04	-2,811	1	1	24
2000 W/ Project	19,187	21,359	1.11	-4,091	0	7	19

3.4 Seventh and Flower Station

3.4.1 General Background

Located beneath Seventh Street and extending to the east and west of Flower Street, this station is the last of the CBD stations. Cut and cover construction will likely extend from west of Figueroa to east of Hope Street. The station will be in the heart of high-rise development and will serve primarily commercial office and retail activities. Besides Seventh and Flower Streets, the proposed site will be readily assessible by north-south arterials such as Figueroa and Hope Street and east-west arterials such as Wilshire Boulevard and Sixth and Eighth Streets, the latter two being one-way streets. Proximate to the west is the Harbor Freeway.

As with the other two downtown stations, no parking facilities are proposed for this station. Commercial parking facilities may be used to some extent by Metro Rail patrons, essentially those making park-n-ride trips. Since no off-street kiss-n-ride parking areas are planned, it is assumed that kiss-n-ride patrons will use curbside locations near the station entrances.

3.4.2 Traffic Volumes

The Seventh and Flower Station will experience projected daily boardings of 38,800 to 39,600 persons under Options I, IX and XII. The forecast modes of access are walk and bus feeder, in addition to park-n-ride and kiss-n-ride. It is anticipated that this station and the Fifth and Hill Station will share fairly uniformly the park-n-ride and kiss-n-ride access trips, as was mentioned previously.

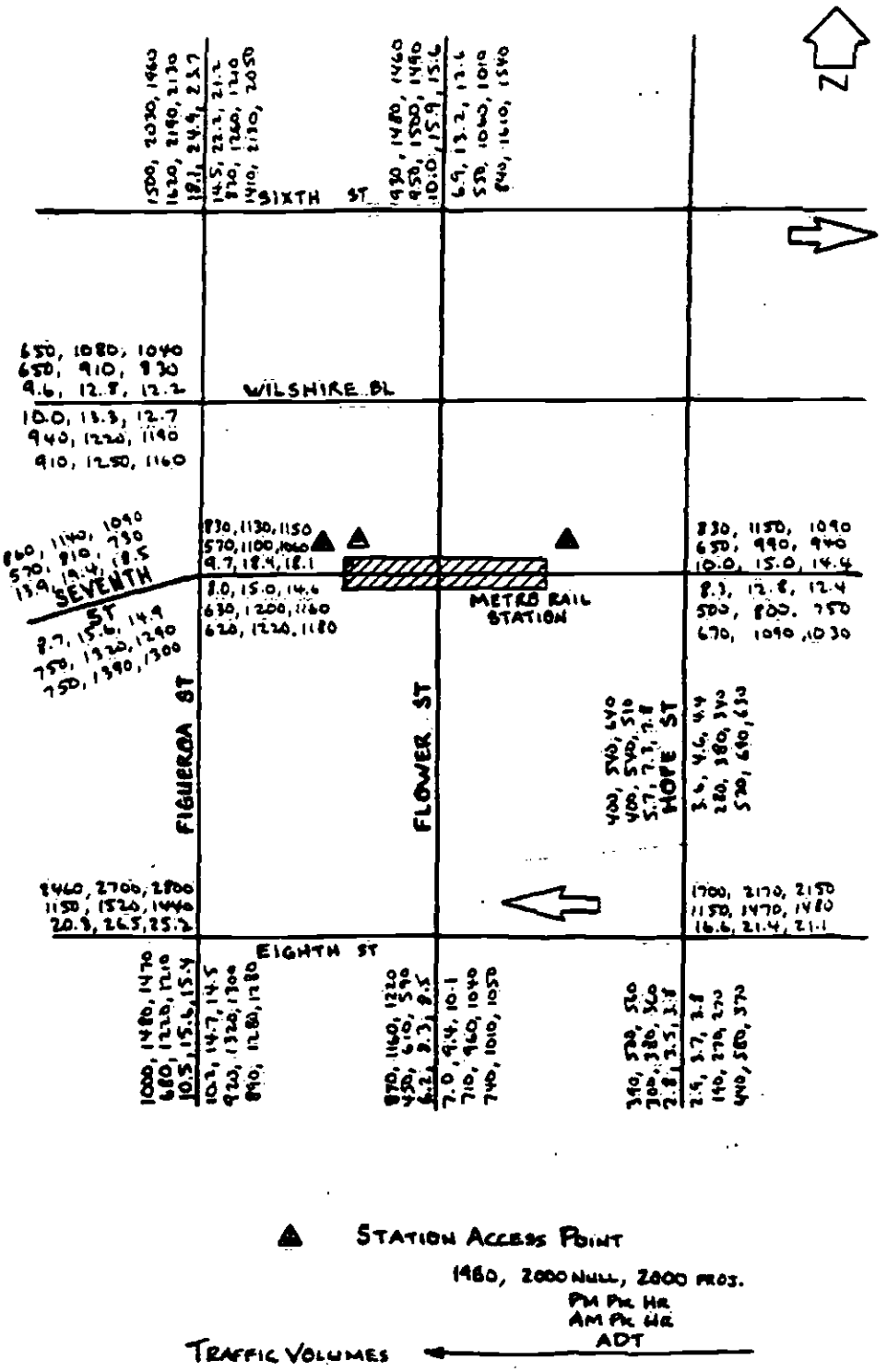
Current traffic volumes on the primary arterials, Seventh Street and Flower Street, vary between 13,000 and 22,000 vehicles per day, and between 450 and 950 vehicles per hour per direction during the peak hours. The highest volumes are found on Figueroa Street, ranging from 20,700 to 32,700 vehicles per day and up to more than 1,600 vehicles per hour in the highest direction.

Assuming a high level of development, traffic volumes by the year 2000 are expected to have grown by 26 to 72 percent above their 1980 levels. Seventh Street between Flower and Figueroa Street is projected to have an even higher increase of 89 percent. Construction of the Metro Rail project will result in a decrease of these 2000 volumes by one to five percent on most of the street segments in the area, but a few will experience a further increase in volumes of three to six percent.

Volumes for selected locations near the Seventh and Flower Station are shown on Figure 3.4-1. Other volumes can be found on the flow maps for the working papers for WBS Tasks 18BAH1141, 1142, and 1143.

3.4.3 Intersection Evaluation

Twenty-five important intersections around this proposed station have been evaluated for the 1980, 2000 Base (Null) and 2000 With Project Conditions. Table 3.4-1 shows the levels of service for the intersections under each condition. Completed analysis will need to be reviewed upon the generation of detailed bus operation revisions for the Metro Rail condition and when new forecasts or revised site plans are developed.



SEVENTH/FLOWER STATION TRAFFIC VOLUMES FIG. 3.4-1

Table 3.4-1

LOS Summary

Condition	Peak Hour	Level of Service					
		A	B	C	D	E	F
1980 Existing	AM	16	5	2	1	1	-
	PM	9	6	6	3	1	-
2000 Null	AM	5	3	3	9	3	2
	PM	3	4	3	4	7	4
2000 W/ Project	AM	8	1	8	4	1	1
	PM	3	4	6	4	4	4

The 2000 Base (Null) Condition included street improvements associated with eight City CIP projects as follows:

Figueroa/Wilshire	Add left-turn pocket N/B and S/B; remove right-turn pocket N/B
Figueroa/Sixth	Add through lane N/B; delete right-turn pocket N/B
Figueroa/Seventh	Add left-turn pockets N/B and S/B
Figueroa/Eighth	Add right-turn-only lane S/B
Flower/Eighth	Add left-turn pocket N/B
Flower/Ninth	Add left-turn pocket S/B
Grand/Wilshire	Add through lane E/B
Grand/Seventh	Add right-turn-only lane S/B

In addition, four potential operational (TSM) improvements were considered in the evaluation. They included the following:

Flower/Wilshire	No left turn N/B in PM peak hour; add right-turn-only lane E/B
Flower/Fifth	Restripe W/B approach to add through lane
Flower/Seventh	No left turn N/B and S/B
Grand/Seventh	No left turn N/B in PM peak hour

Some of the intersections evaluated showed slight increases in their V/C indexes, no change or, in some cases, decreases generally in the range 0.01 to 0.09. None of these intersections were evaluated further for development of possible mitigation measures.

3.4.4 Parking

The 1980 Condition is approaching capacity. Due to projected development, the 2000 Base Condition will be congested.

The Metro Rail Project will reduce parking usage by 1,326; however, because development is projected to intensify adjacent to the station and the developments are projected to provide less parking supply per floor area, the already congested condition will be exacerbated.

Park-n-ride users were not added to the parking usage due to the extremely congested condition.

Table 3.4-2

Parking Summary

Parking Condition	Station Parking Supply	Station Parking Usage	Overall Occupancy Rate	Parking (-)Deficit (+)Surplus	Number of Blocks W/Occupancy Rate		
					<0.80	0.80-0.90	> 0.90
1980 Existing	17,344	14,866	0.86	+744	4	17	9
2000 Null	22,029	22,010	1.00	-2,184	0	1	29
2000 W/ Project	18,932	22,808	1.21	-5,769	0	0	30

3.5 Alvarado and Wilshire Station

3.5.1 General Background

The proposed Alvarado/Wilshire Station will be the first station located to the west of the downtown area. The station platform, aligned diagonally in a northwest-southeast direction, will not pass under Wilshire Boulevard but will be about one-half block south of Wilshire Boulevard from Alvarado Street to

west of Bonnie Brae Street. A crossover adjoins the station to the east. Kiss-n-ride parking is provided midblock on the west side of Westlake Avenue between Wilshire Boulevard and Seventh Street. Some park-n-ride spaces may be available in commercial off-street facilities nearby.

The proposed station would serve the Westlake community in an area largely developed to commercial office, commercial retail and multiple-family uses. Near the station entrance is MacArthur Park. In addition to Wilshire Boulevard and Seventh Street, Sixth Street and Eight Street furnish good east-west access proximate to the station. Continuous north-south arterial access in the area is limited to Alvarado Street.

3.5.2 Traffic Volumes

Under Options I, IX and XII the daily boardings at the station were forecast to range between 22,000 and 23,400 persons. The combined park-n-ride and kiss-n-ride volumes during the AM and PM peak hours project to approximately 680 and 1,190 vehicles, respectivley.

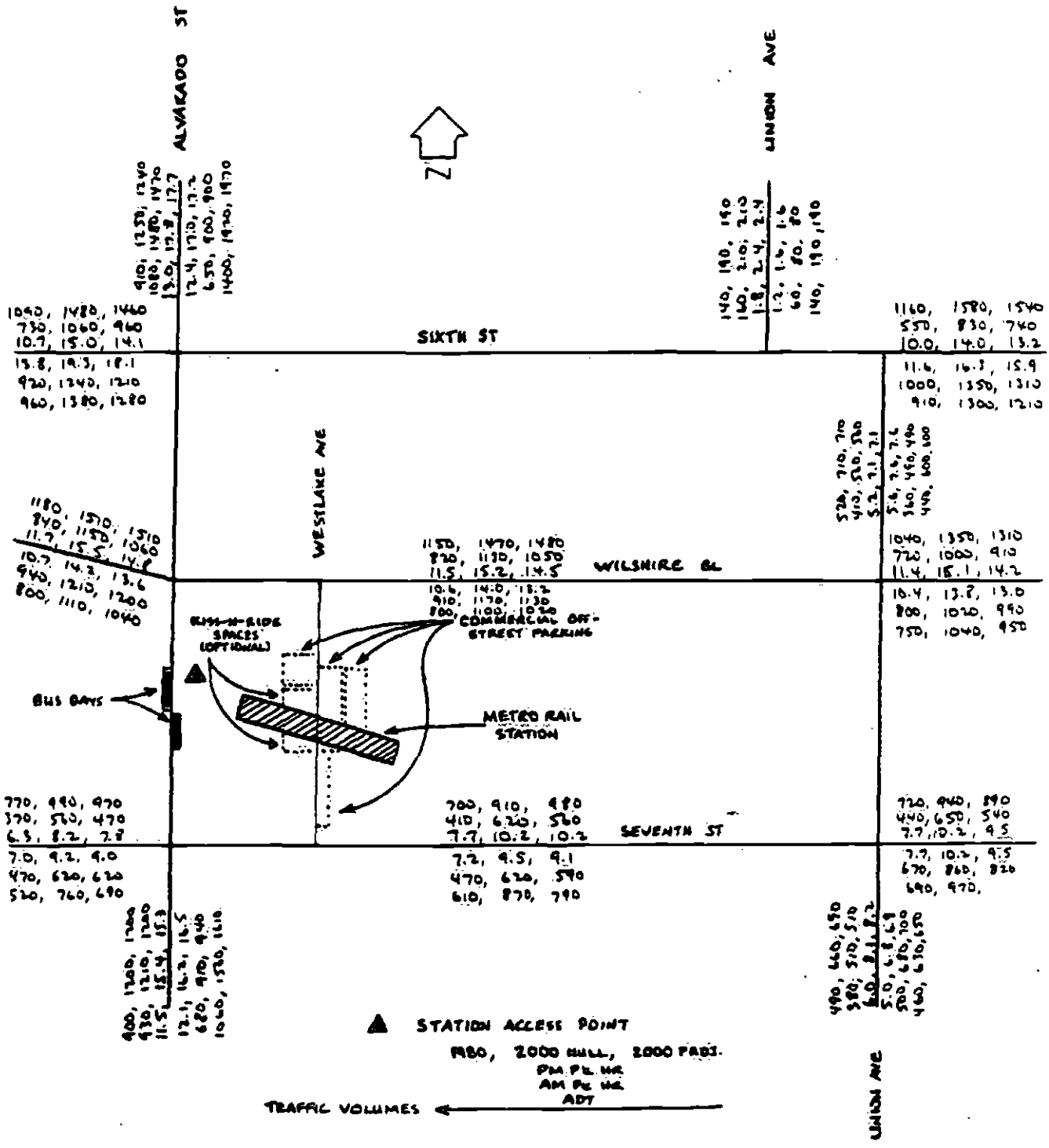
Current traffic volumes on Wilshire Boulevard and Sixth Streets are similar, between 21,500 and 24,500 vehicles per day. Seventh Street is presently handling 13,000 to 15,000-plus vehicles daily. Approximately 23,000 to 25,000-plus daily trips are being carried on Alvarado Street. During the peak traffic periods, Wilshire Boulevard, Sixth Street and Alvarado Street are experiencing directional volumes between 550 and 1,400 vehicles per hour, while Seventh Street is experiencing directional volumes between 370 and 770 vehicles per hour.

2000 Base (Null) Condition traffic volumes on the major east-west streets are forecast to increase about 31 to 40 percent above their 1980 volumes, based upon a fairly high level of development in the community and no Metro Rail Project being implemented. Assuming the same development and Metro Rail operation in the area, daily volumes are projected to generally decrease up to seven percent on these arterials by the year 2000. In a few cases, however, the directional peak-hour volumes will increase slightly under the With Project Condition relative to the Base (Null) Condition.

Figure 3.5-1, which follows, depicts traffic volumes for selected street segments near the Alvarado/Wilshire Station. Volumes for other links are in the working paper flow maps for WBS Tasks 18BAH 1141, 1142 and 1143.

3.5.3 Intersection Analysis

Twenty-two intersections were examined in the area of this station for the 1980, 2000 Base (Null) and 2000 With Project Conditions. The levels of service for the intersections under each condition are summarized in Table 3.5-1. Completed analysis will need to be reviewed upon the generation of detailed bus operation revisions for the Metro Rail condition and when new forecasts or revised site plans are developed.



ALVARADO/WILSHIRE STATION TRAFFIC VOLUMES FIG. 3.5-1

Table 3.5-1

LOS Summary

Condition	Peak Hour	Level of Service					
		A	B	C	D	E	F
1980 Existing	AM	13	2	5	2	-	-
	PM	4	5	5	6	2	-
2000 Null	AM	4	6	4	6	1	1
	PM	-	-	4	8	7	3
2000 W/ Project	AM	5	7	3	5	1	1
	PM	1	1	6	7	5	2

The 2000 Base (Null) condition assumed one CIP improvement and eleven potential operational (TSM) improvements in the vicinity of the Alvarado/Wilshire Station. The CIP project would add a right-turn-only lane eastbound on Fourth Street at Beaudry Avenue. The TSM measures are listed below:

Alvarado/Olympic	Add PM peak-hour lane W/B
Alvarado/Third	Add AM and PM peak-hour lane W/B and PM peak-hour lane S/B
Alvarado/Sixth	Add AM and PM peak-hour lanes E/B and W/B
Hoover/Olympic	Add AM and PM peak-hour lane N/B
Hoover/Eighth	Add PM peak-hour lanes N/B and S/B; add left-turn pockets E/B and W/B
Hoover/Ninth	Add AM and PM peak-hour lanes N/B and S/B
Lucas/Third	Add AM and PM peak-hour lane S/B and PM peak-hour lane N/B
Rampart/Sixth	Add AM peak-hour lane N/B
Union/Wilshire	Add AM and PM peak-hour lane S/B
Union/Sixth	Add left-turn pockets E/B and W/B
Union/Eighth	Add left-turn pockets E/B and W/B

One of the 22 intersections evaluated, Hoover Street and Seventh Street, was found to have both its V/C index increase by 0.02 or more and have a With Project LOS of D or worse in the year 2000. This change would be due to the anticipated increase in vehicular traffic on Hoover Street. None of the 22 intersections were evaluated further for potential mitigation measures.

3.5.4 Parking

The 1980 Condition is uncrowded. Due to projected development, the 2000 Base Condition will be slightly worse, but still uncrowded.

The Metro Rail Project will reduce parking usage by 1,100. Although development is projected to intensify adjacent to the station, the relatively high (1,559) auto-to-transit mode shift will cause an improvement to the already uncrowded parking condition.

Table 3.5-2

Parking Summary

Parking Condition	Station Parking Supply	Station Parking Usage	Overall Occupancy Rate	Parking (-)Deficit (+)Surplus	Number of Blocks W/Occupancy Rate		
					<0.80	0.80-0.90	> 0.90
1980 Existing	4,899	3,231	0.66	+1,178	20	5	0
2000 Null	5,265	3,681	0.70	+1,057	17	5	3
2000 W/ Project	5,847	3,617	0.62	+1,645	20	4	1

3.6 Vermont and Wilshire Station

3.6.1 General Background

The Vermont/Wilshire Station will also not be an off-street station. The underground platform station is to be built between Sixth Street and Wilshire Boulevard and extend from west of Vermont Avenue to west of Shatto Place. A crossover adjoins the station to the east. The station will be at the eastern

edge of the Wilshire District and will serve commercial retail and office and multiple-family uses. Streets such as Virgil Avenue, Hoover Street, Third Street, Eighth Street, Ninth Street and Olympic Boulevard provide additional arterial access near the station site.

No parking facilities have been proposed to accommodate the park-n-ride demand, although some commercial off-street parking facilities are available in the neighborhood. A kiss-n-ride parking lot is proposed for construction for the station west of Vermont Avenue and south of Sixth Street. A bus facility is also proposed for the same location.

3.6.2 Traffic Volumes

It is forecast that the Vermont/Wilshire Station will experience the fourth highest boardings, ranging from 33,000 to 33,900 persons under Option I, IX and XII. These patrons will access the station via walk, bus, park-n-ride and kiss-n-ride modes. Comparatively speaking, the kiss-n-ride and park-n-ride activity will be low relative to the walk and bus trips for this station.

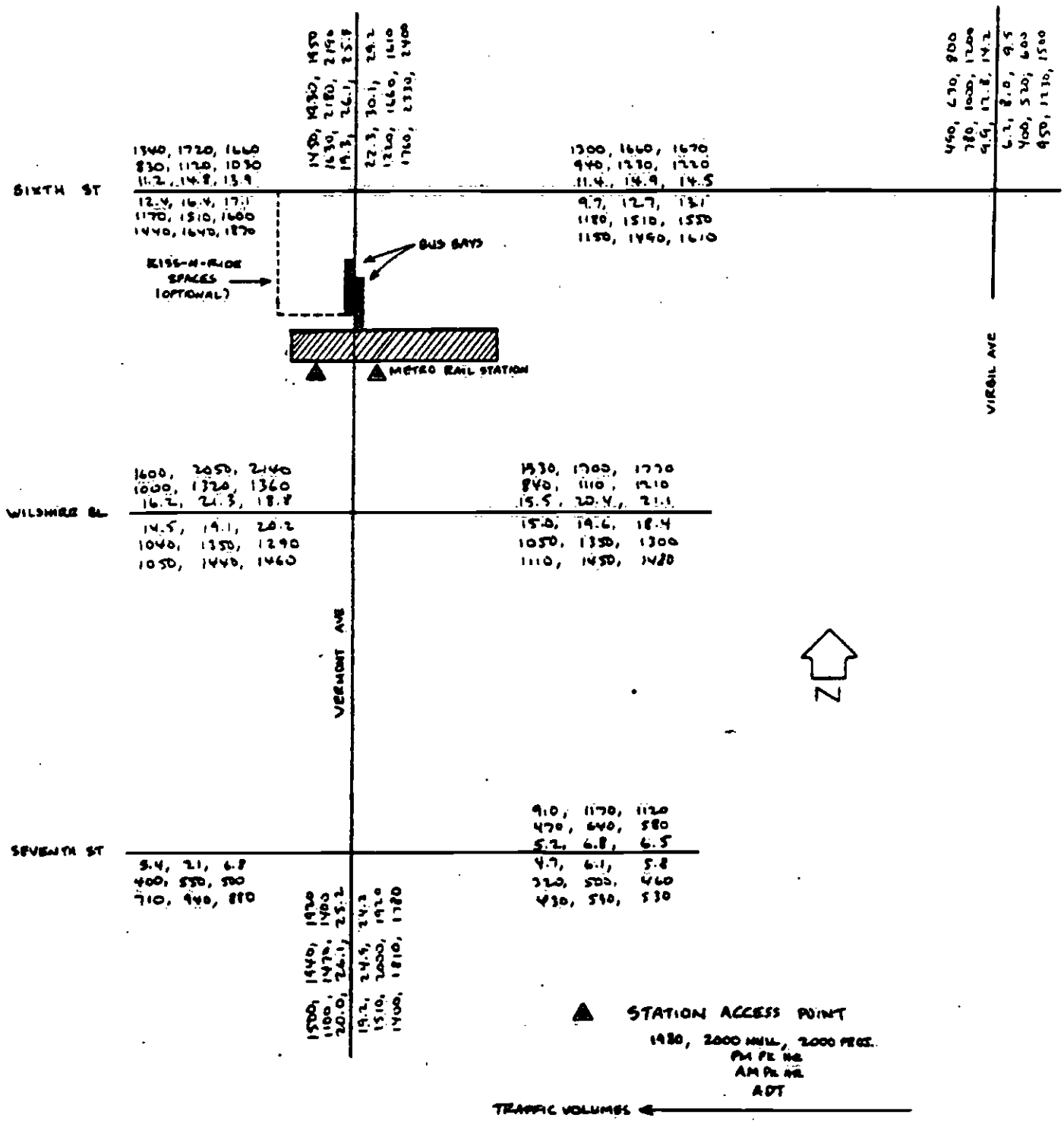
Currently, Wilshire Boulevard carries between 30,500 and 31,000 vehicles per day near Vermont Avenue. The volume on Vermont Avenue is larger, approximately 39,000 to almost 42,000 vehicles per day. Sixth Street handles approximately 21,000 to 23,000-plus trips per day nearby. Peak-hour directional volumes are heaviest on Vermont Avenue, between 1,100 and 1,760 vehicles per hour, followed by Wilshire Boulevard with 840 to 1,600 vehicles per hour and Sixth Street with 830 to 1,440 vehicles per hour.

2000 Base (Null) Condition traffic volumes on these streets will have generally increased 30 to 35 percent compared to their 1980 volumes, assuming fairly high level of development but with no Metro Rail in operation. With that same level of development and Metro Rail operation, the traffic volumes will decrease up to three percent, except for Virgil Avenue, which shows an increase of fourteen percent.

Some typical traffic volumes near the Vermont/Wilshire Station are shown on Figure 3.6-1. Volumes for other segments are available on the flow maps for the working papers prepared for WBS Tasks 188AH 1141,1142, and 1143.

3.6.3 Intersection Evaluation

For this station, ten important intersections were examined for the 1980, 2000 Base (Null) and 2000 With Project Conditions, The levels of service for the intersections under each condition are summarized in Table 3.6-1. Completed analysis will need to be reviewed upon the generation of detailed bus operation revisions for the Metro Rail condition and when new forecasts or revised site plans are developed.



VERMONT/WILSHIRE STATION TRAFFIC VOLUMES FIG. 3.6-1

Table 3.6-1

LOS Summary

Condition	Peak Hour	Level of Service					
		A	B	C	D	E	F
1980 Existing	AM	3	1	2	3	1	-
	PM	-	-	4	3	2	1
2000 Null	AM	-	1	1	3	2	3
	PM	-	-	1	2	2	5
2000 W/ Project	AM	-	2	1	2	2	2
	PM	-	-	1	1	2	6

The 2000 Base (Null) Condition included two CIP-type projects and two potential operational (TSM) improvements in the area of the Vermont/Wilshire Station. The CIP projects would add left-turn pockets eastbound and westbound on Sixth Street at Vermont Avenue and left-turn pockets northbound and southbound on Virgil Avenue at Sixth Street; in addition, the westbound approach on Sixth Street at Virgil Avenue would be widened. The two TSM measures would provide a southbound lane on Vermont Avenue at Olympic Boulevard during the AM peak hour and left-turn pockets eastbound and westbound on Seventh Street at Vermont Avenue.

Four of the ten intersections evaluated were found to have an increase in the intersection V/C rates of at least 0.02 and a With Project LOS of E or worse. These four intersections were carried over for additional evaluation and development of mitigation measures under WBS Task 18BAH15. The results of the additional evaluation are presented in Chapter 6.

3.6.4 Parking

The 1980 Condition is uncrowded. Due to projected development, the 2000 Base Condition will be approaching capacity.

The Metro Rail Project will reduce parking usage by 2,340. Although development is projected to intensify adjacent to the station, the 2000 With Project Condition will be uncrowded due to the relatively high (3,010) auto-to-transit mode shift.

Table 3.6-2

Parking Summary

Parking Condition	Station Parking Supply	Station Parking Usage	Overall Occupancy Rate	Parking (-)Deficit (+)Surplus	Number of Blocks W/Occupancy Rate		
					<0.80	0.80-0.90	> 0.90
1980 Existing	13,333	10,131	0.76	+1,869	17	7	2
2000 Null	15,482	12,366	0.80	+1,568	11	11	4
2000 W/ Project	15,463	11,365	0.74	+2,552	17	7	2

3.7 Normandie and Wilshire Station

3.7.1 General Background

The Normandie/Wilshire Station platform is to be built directly under Wilshire Boulevard from west of Normandie Avenue to just west of the south leg of Ardmore Avenue in the Wilshire community. Cut and cover construction will extend from east of Normandie Avenue to the south leg of Kingsley Drive. The station will serve commercial retail, office and other commercial activities along Wilshire Boulevard as well as multiple-family residential uses to the north and south. In addition to Wilshire Boulevard and Normandie Avenue, nearby arterials such as Third Street, Sixth Street, Eighth Street and Olympic Boulevard will provide access to the station area. Several connecting north-south and east-west local streets provide intermediate station access.

Off-street parking specifically for Metro Rail patrons is not programmed for the Normandie/Wilshire Station. Kiss-n-ride and park-n-ride parking will have to utilize available on-street parking or nearby commercial off-street parking facilities.

3.7.2 Traffic Volumes

Approximately 17,000 to 18,300 daily boardings are forecast for this station under Options I, IX and XII. All four modes of access will again be used to reach this station according to the mode-of-access data. Park-n-ride and kiss-n-ride trips are projected to be moderate. During the AM and PM peak hours park-n-ride trips will number approximately 170 and 300 vehicles, respectively, while kiss-n-ride trips will be 400 and 560 in the respective AM and PM peak hours.

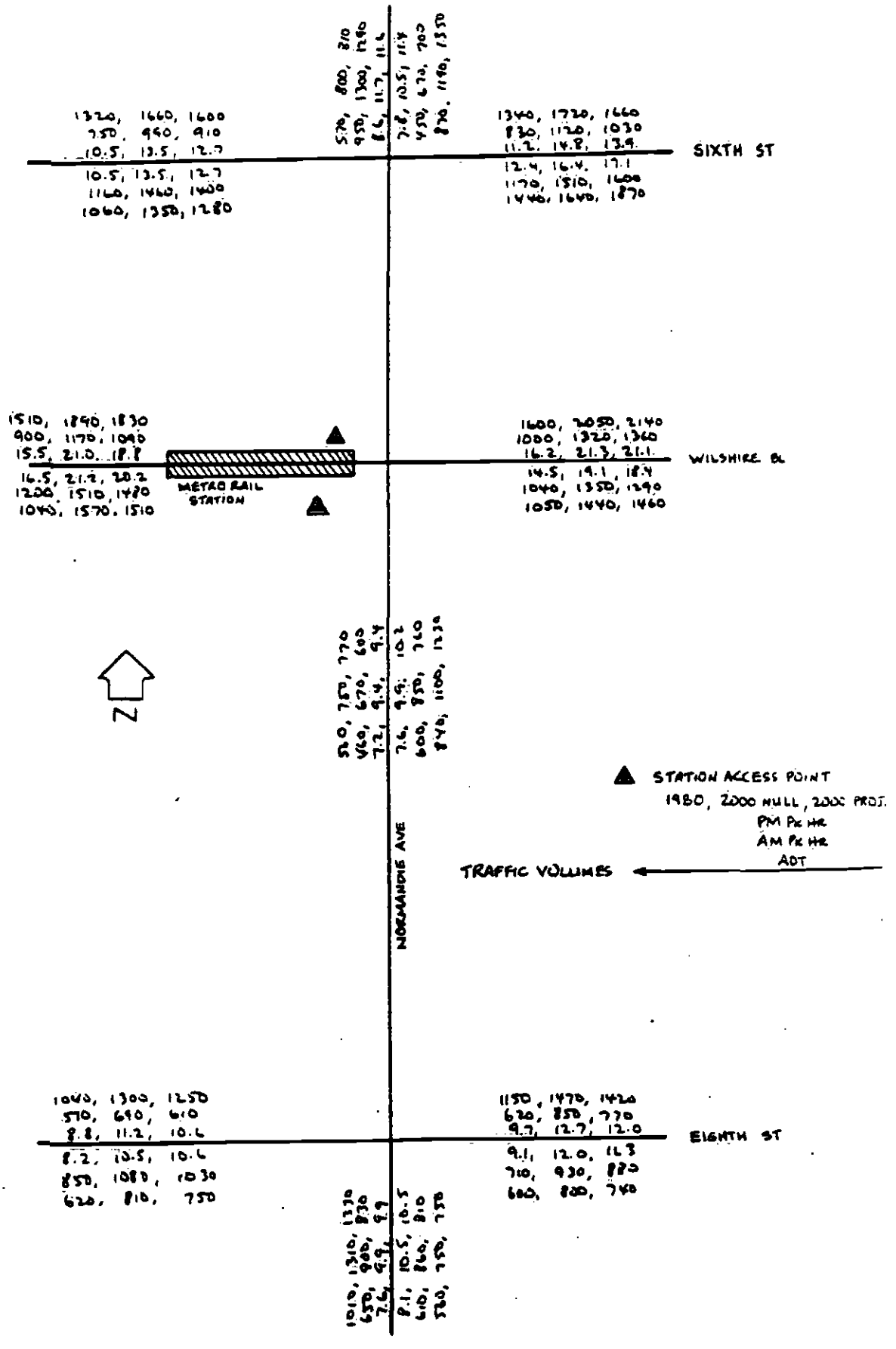
At the present time Wilshire Boulevard carries 30,700 to 32,000 vehicles per day and Normandie Avenue handles 14,000 to 16,400 vehicles daily near the station site. Sixth Street currently has daily volumes ranging from 21,000 to 23,600 while Eighth Street has about 20 percent less volume than Sixth Street. Similarly, directional peak hour volumes are heaviest on Wilshire Boulevard (900 to 1,600 per hour) and Sixth Street (750 to 1,440 per hour) and least on Normandie Avenue (450 to 1010 per hour) and Eighth Street (510 to 1,150 per hour).

Projecting to the year 2000 Base (Null) Condition, traffic volumes will have increased roughly 28 to 35 percent above their 1980 volumes, assuming development in the area will be fairly high but without the Metro Rail project. With the implementation of the Metro Rail and the same level of development, traffic volumes will decrease six percent or more on the east-west arterials (Wilshire, Sixth and Eighth) and increase up to four percent on Normandie Avenue. Several of the links will experience modest increases in directional peak-hour volumes under the 2000 With Project Condition even though their daily volume will have decreased. This increase would be attributed to the sharper peak-hour character of both park-n-ride and kiss-n-ride trips.

Figure 3.7-1 shows traffic volumes for selected locations near the Normandie/ Wilshire Station. Volumes for other segments are available on the flow maps for the working papers prepared for each task.

3.7.3 Intersection Evaluation

Five of the more important intersections in the area of the station were evaluated for the 1980, 2000 Base (Null) and 2000 With Project Conditions based on the volume/capacity index determined for each intersection. The levels of service for the intersection under each condition are shown below. Completed analysis will need to be reviewed upon the generation of detailed bus operation revisions for the Metro Rail condition and when new forecasts or revised site plans are developed.



NORMANDIE/WILSHIRE STATION TRAFFIC VOLUMES FIG. 3.7-1

Table 3.7-1

LOS Summary

Condition	Peak Hour	Level of Service					
		A	B	C	D	E	F
1980 Existing	AM	-	1	1	2	1	-
	PM	-	-	-	3	1	-
2000 Null	AM	-	-	1	-	2	2
	PM	-	-	-	1	1	3
2000 W/ Project	AM	-	1	-	1	1	2
	PM	-	-	-	-	2	3

The 2000 Base (Null) scenario included two CIP projects and two potential operational (TSM) improvements in the vicinity of the proposed station. The two CIP proposals would add left-turn pockets northbound and southbound on Normandie Avenue-Irolo Street at Eighth Street and a left-turn pocket northbound on Normandie Avenue-Irolo Street as Olympic Boulevard. The first TSM measure would add a right-turn-only lane southbound on Normandie Avenue at Third Street. The other TSM improvement would allow a southbound departure lane during the AM and PM peak hours on Normandie Avenue at Sixth Street and prohibit all left turns at the intersection during the peak hours.

Of the five intersections evaluated, four were found to have both an increase in the intersection V/C ratio of at least 0.02 and a With Project LOS of E or worse. These four intersections were further evaluated for potential mitigation measures under WBS Task 18BAH15. The results of this additional evaluation are presented in Chapter 6.

3.7.4 Parking

The 1980 Condition is uncrowded. Due to projected development, the 2000 Base Condition will be slightly worse, but still uncrowded.

The Metro Rail Project will reduce parking usage by 1,121; however, because development is projected to intensify adjacent to the station and the developments are projected to provide less parking supply per floor area, the 2000 With Project Condition will be approaching capacity.

Table 3.7-2

Parking Summary

Parking Condition	Station Parking Supply	Station Parking Usage	Overall Occupancy Rate	Parking (-)Deficit (+)Surplus	Number of Blocks W/Occupancy Rate		
					<0.80	0.80-0.90	> 0.90
1980 Existing	13,358	9,933	0.74	+2,089	14	5	3
2000 Null	15,917	12,623	0.79	+1,702	11	6	5
2000 W/ Project	16,964	15,060	0.89	+162	3	5	14

3.8 Western and Wilshire Station

3.8.1 General Background

This station's platform is proposed to be constructed from east of Oxford Avenue to Western Avenue directly under Wilshire Boulevard. The station will provide rail service to commercial retail, office and other commercial uses in this part of the Wilshire Corridor. The station will also serve residential uses to the north and south. Continuous access to the station will be furnished by the same east-west arterials as for the Normandie/Wilshire Station-Third Street, Sixth Street, Wilshire Boulevard, Eighth Street and Olympic Boulevard. North-south station access will be provided by Wilton Place as well as Western Avenue. Local streets can also be used for limited access to the station.

Off-street parking has been proposed to be constructed for use by Metro Rail kiss-n-ride patrons. No other parking has been indicated specifically for Metro Rail users. Some surplus commercial off-street parking may be available on the surrounding blocks for use by Metro Rail patrons. In addition, on-street parking may be available nearby for varying durations.

3.8.2 Traffic Volumes

Under Options I and XII this station is projected to have 21,400 to 21,600 daily boardings and to have 25,400 daily boardings under Option IX. The increase in Option IX boardings, compared to Options I and XII is due to the deletion of the Crenshaw/Wilshire Station under Option IX. Walk, bus feeder, park-n-ride and kiss-n-ride modes will be used to access the station. The level of kiss-n-ride and park-n-ride activity will be one-half to one-third of that at the Alvarado, Vermont and Normandie Stations. In the AM and PM peak hours the number of park-n-ride trips are projected to be 50 and 120, respectively. Kiss-n-ride trips will be approximately 70 and 130 during the AM and PM peak hours, respectively

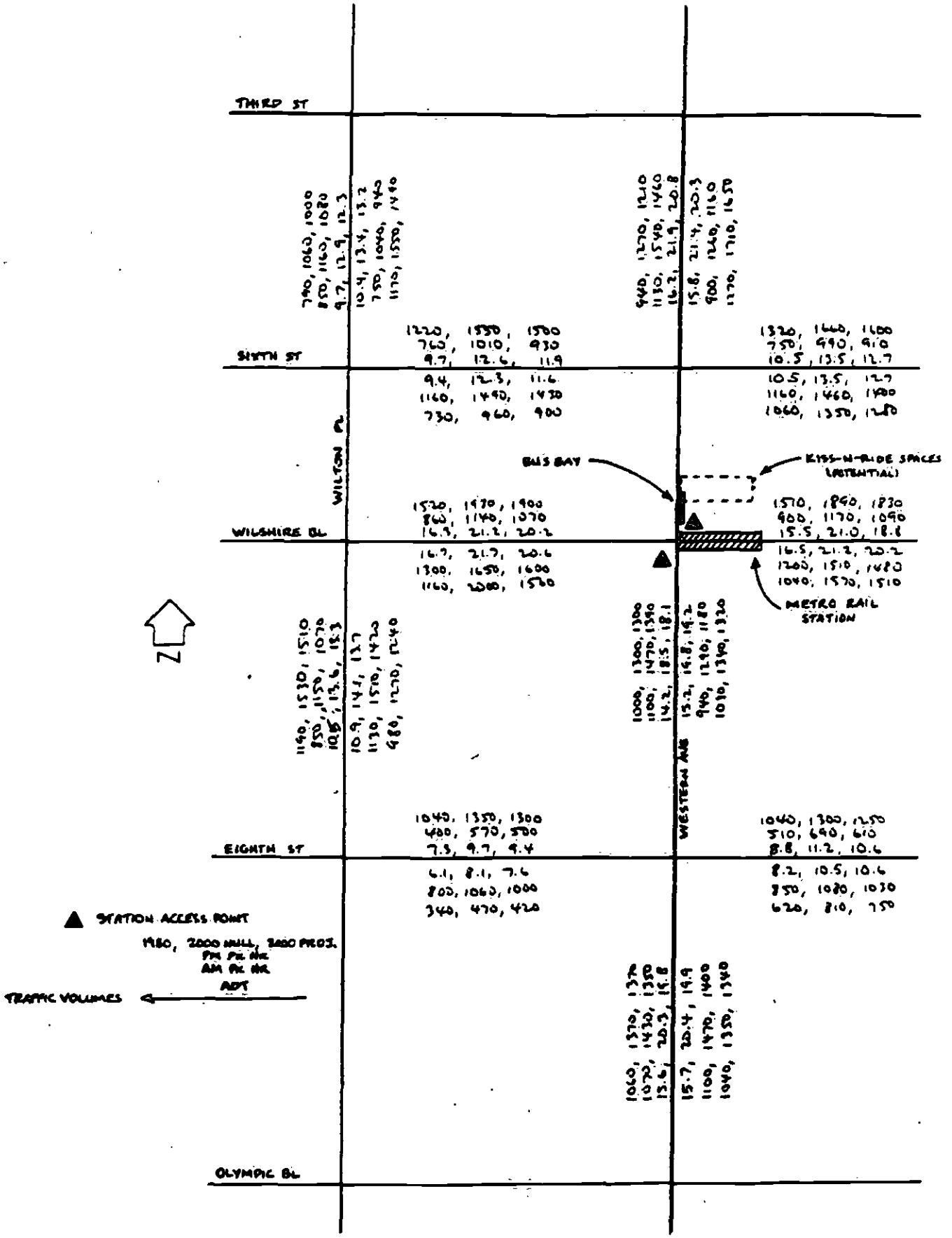
Wilshire Boulevard presently has an ADT of 32,000 to 33,000 vehicles per day and directional peak-hour volumes in the 860-to-1,520 range. Western Avenue carries between 29,000 and 32,000 vehicles daily with directional peak-hour volumes between 900 and 1,270 vehicles per hour. Parallel east-west arterials such as Sixth Street and Eighth Street are handling one half to more than twice as much daily volume as Wilshire Boulevard. Wilton Place currently has an ADT roughly two-thirds of that on Western Avenue, the parallel north-south route.

Traffic volumes in the year 2000 Base (Null) condition will have increased approximately 28 to 35 percent on these streets relative to their 1980 volumes, assuming the occurrence of a fairly high level of development in the interim but without the Metro Rail Project being constructed. With the Metro Rail implemented, and the same level of development, the daily projected volumes will decrease two to eight percent, with the greatest reduction evident on the street segments nearest the proposed station. In addition, all of the directional peak-hour volumes are forecast to decreases or, in a few cases, remain unchanged.

Figure 3.8-1, shows traffic volumes for selected street segments near the Western/Wilshire Station. Volumes for other links are on the flow maps for the working papers prepared for WBS Tasks 188AH1141, 1142, 1143.

3.8.3 Intersection Evaluation

For this station, ten intersections were evaluated for the 1980, 2000 Base (Null) and 2000 With Project conditions using the volume/capacity index calculated for each intersection. The levels of service for the intersections under the three conditions are summarized in Table 3.8-1. Completed analysis will need to be reviewed upon the generation of detailed bus operation revisions for the Metro Rail condition and when new forecasts or revised site plans are developed.



WESTERN/WILSHIRE STATION TRAFFIC VOLUMES

FIG. 3.8-1

Table 3.8-1

LOS Summary

Condition	Peak Hour	Level of Service					
		A	B	C	D	E	F
1980 Existing	AM	-	2	3	4	1	-
	PM	-	-	4	2	3	1
2000 Null	AM	-	-	-	2	4	4
	PM	-	-	-	1	3	6
2000 W/ Project	AM	-	-	1	2	4	3
	PM	-	-	-	1	4	5

The 2000 Base (Null) Condition considered three potential operational (TSM) improvements near the Western/Wilshire Station. These included adding an eastbound lane in the AM and PM peak hour and a westbound lane in the AM peak hour on Wilshire Boulevard at Western Avenue; prohibiting left turns westbound on Sixth Street at Western Avenue in the AM peak hour; and adding AM and PM peak hour lanes northbound and southbound on Wilton Place at Sixth Street.

Of the ten intersections evaluated, none experienced an increase in its V/C index; therefore, none of the ten intersections were carried over for further evaluation.

3.8.3 Parking

The 1980 Condition is uncrowded. Due to projected development, the 2000 Base Condition will be approaching capacity.

The Metro Rail Project will reduce parking usage by 1,301. Although development is projected to intensify adjacent to the station, the 2000 With Project Condition will be uncrowded due to the relatively high (1,442) auto-to-transit mode shift.

Table 3.8-2

Parking Summary

Parking Condition	Station Parking Supply	Station Parking Usage	Overall Occupancy Rate	Parking (-)Deficit (+)Surplus	Number of Blocks W/Occupancy Rate		
					<0.80	0.80-0.90	> 0.90
1980 Existing	8,670	6,269	0.72	+1,534	22	3	3
2000 Null	12,015	10,360	0.86	+453	13	4	11
2000 W/ Project	11,628	9,059	0.78	+1,406	20	5	3

3.9 Crenshaw and Wilshire Station

3.9.1 General Background

If constructed, the Crenshaw/Wilshire Station will be the midpoint station along the initial 18-mile alignment. The station platform would be underneath Wilshire Boulevard between Crenshaw and Lorraine Boulevards. A crossover track adjoins the station to the east. Cut and cover construction would extend from Lorraine Boulevard to Norton Avenue. Off-street parking for kiss-n-ride patrons would most likely be located on the south side of Wilshire Boulevard between Crenshaw and Lorraine Boulevards. Otherwise, any Metro Rail patronage parking demand is expected to utilize adjacent public streets.

Like the other stations along Wilshire Boulevard, this station is part of the Wilshire District. It will serve some commercial activities along Wilshire Boulevard and single-family and multiple-family developments beyond Wilshire Boulevard. Besides Wilshire Boulevard, continuous east-west access near the station is offered by Sixth Street, Olympic Boulevard and Third Street.

Semicontinuous east-west access in available on Eighth Street. The north-south streets, including Crenshaw Boulevard, are discontinuous or jogged at Wilshire Boulevard but provide station access.

3.9.2 Traffic Volume

Daily boardings at the station are projected to range between 13,600 and 13,800 persons for Options I and XII. Under Option IX this station is deleted. The park-n-ride and kiss-n-ride mode-of-access results for this

station are similar to those for the Western/Wilshire Station, that is, a low level of kiss-n-ride and park-n-ride activity is anticipated. The AM and PM peak hour park-n-ride auto trips are forecast to be approximately 20 and 60 trips, respectively, while kiss-a-ride trips are projected to be 80 and 140 trips for the same time periods.

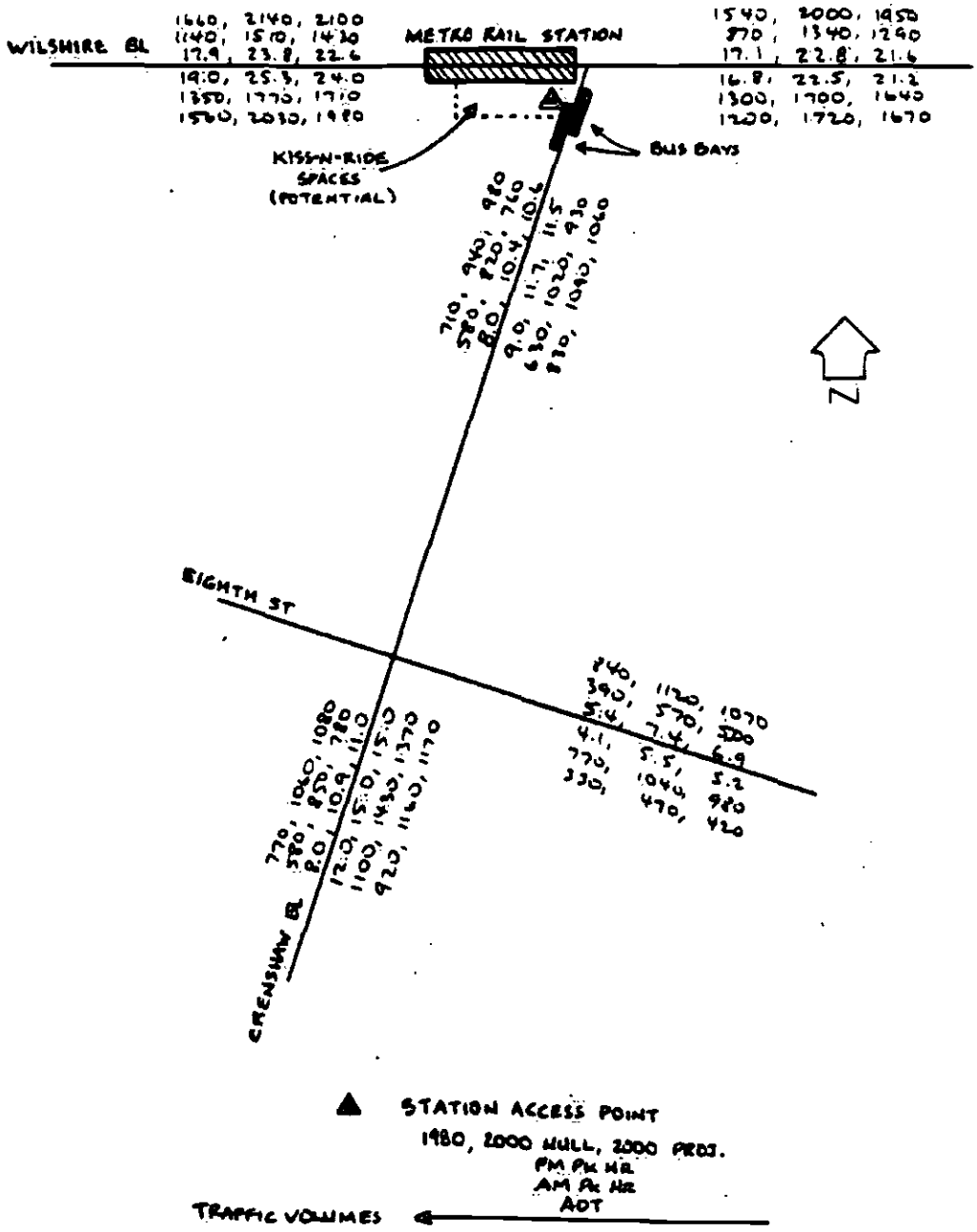
Current traffic volumes along Wilshire Boulevard vary between 33,000 and 37,000 vehicles per day. Volumes on Crenshaw Boulevard are much less, about 17,000 to 20,000-plus trips per day. Eighth Street carries approximately 9,500 vehicles daily. Likewise, directional peak hour volumes are heaviest on Wilshire Boulevard, 870 to 1,560 per hour, and least on Eighth Street, 330 per hour.

For the year 2000 Base (Null) Condition, traffic volumes on these arterial streets are projected to have generally increased 30 to 36 percent above their 1980 volumes, assuming a fairly high level of development will have occurred but without the Metro Rail being constructed. With the implementation of Metro Rail and the same level of development, traffic volumes will decrease up to six percent on Wilshire Boulevard and Eighth Street. Crenshaw Boulevard's 24-hour volumes are projected to change very little in the year 2000, but its directional peak-hour volumes will vary to some extent.

Traffic volumes for selected locations near the Crenshaw/Wilshire Station are shown on Figure 3.9-1. Volumes for other segments are available on the flow maps for the working papers prepared for each task.

3.9.3 Intersection Evaluation

Twelve of the more important intersections in the vicinity of the station site were evaluated for the 1980, 2000 Base (Null) and 2000 With Project Conditions, based on the volume/capacity index calculated. The levels of service for the intersections under each condition are shown in Table 3.9-1. Completed analysis will need to be reviewed upon the generation of detailed bus operation revisions for the Metro Rail condition and when new forecast or revised site plans are developed.



CRENSHAW/WILSHIRE STATION TRAFFIC VOLUMES FIG. 3.9-1

Table 3.9-1

LOS Summary

Condition	Peak Hour	Level of Service					
		A	B	C	D	E	F
1980 Existing	AM	-	5	4	2	1	-
	PM	-	1	5	5	1	-
2000 Null	AM	-	-	1	4	2	5
	PM	-	-	-	2	4	6
2000 W/ Project	AM	-	1	2	2	3	4
	PM	-	-	-	3	3	6

The 2000 Base (Null) Condition included two potential operational (TSM) improvements in the area of the Crenshaw/Wilshire Station. The first improvement would install an optional southbound left-turn lane and pedestrian-actuated signal at the Rossmore/Wilshire intersection. The second measure at Rossmore Avenue and Sixth Street would prohibit left turns southbound in the AM and PM peak hours.

Of the twelve intersections examined, none were found to have an increased V/C index values or worsened level of service after Metro Rail operation. In all cases for the year 2000, implementation of the Metro Rail Project would result in traffic operating conditions being better or unchanged compared to the Base (Null) Condition. Therefore, no intersections have been evaluated for development of any additional mitigation measures.

3.9.4 Parking

The 1980 Condition is uncrowded. Due to projected development the 2000 Base Condition will be worse, but still uncrowded.

The Metro Rail Project will reduce parking usage by 90%. Although development is expected to intensify adjacent to the station, the relatively high (1,008) auto-to-transit mode shift will cause an improvement in the already uncrowded parking condition.

Table 3.9-2

Parking Summary

Parking Condition	Station Parking Supply	Station Parking Usage	Overall Occupancy Rate	Parking (-)Deficit (+)Surplus	Number of Blocks W/Occupancy Rate		
					<0.30	0.30-0.90	>0.90
1980 Existing	3,254	1,521	0.47	+1,408	25	0	0
2000 Null	4,294	2,601	0.61	+1,264	23	0	2
2000 W/ Project	4,158	2,132	0.51	+1,610	25	0	0

3.10 La Brea and Wilshire Station

3.10.1 General Background

The proposed La Brea/Wilshire Station is to be constructed from Sycamore Avenue to west of La Brea Avenue under Wilshire Boulevard. Adjoining the station to the east would be a long section of pocket tracks that terminate just west of Highland Avenue. Cut and cover construction would extend from west of La Brea Avenue to just west of Highland Avenue. The station would be one of two proposed stations within the Miracle Mile Center in the Wilshire District. It would serve commercial retail, office and other business activities along Wilshire Boulevard as well as multiple- and single-family developments in the area. Arterials providing proximate access to the station are Third Street, Sixth Street, Olympic Boulevard and Highland Avenue, as well as Wilshire Boulevard and La Brea Avenue. A network of local streets also furnish limited station access.

3.10.2 Traffic Volumes

Approximately 14,300 to 14,400 boardings per day are projected at this station for the year 2000 under Options I and XII. These boardings would increase to 16,300 per day under Option IX due to the deletion of the Crenshaw Station and the reassignment of that station's patronage to adjacent stations such as the La Brea Station. All four modes are expected to be used to access the station, with bus feeder being the predominant access mode used under Options

I, IX and XII. Park-n-ride and kiss-n-ride trips would be significantly less. The numbers of park-n-ride trips would be 20 and 50 in the AM and PM peak hours, respectively; kiss-n-ride would total 120 and 210 trips in the same respective periods.

Near the proposed station site, Wilshire Boulevard presently accommodates approximately 28,500 to 29,500 vehicle per day, including directional peak-hour volumes of 940 to 1,340 vehicles per hour. Current volumes on La Brea Avenue range from 31,700 to 39,900 daily vehicles and from 370 to 1,690 per direction in the peak hour. Olympic Boulevard, which parallels Wilshire Boulevard, now carries more traffic than Wilshire Boulevard, approximately 17 percent more during the day. The daily volume on Sixth Street near La Brea Avenue is about 24 percent less than that on Wilshire Boulevard, but the directional peak-hour volumes are fairly comparable.

For the year 2000 Base (Null) Condition, traffic volumes will have increased 31 to 40 percent on La Brea Avenue and 38 to 46 percent on the east-west arterials above their 1980 levels. This is assuming that a fairly high level of development will have occurred but that no Metro Rail will be operating. With the operation of the Metro Rail, Options I and XII ADT volumes are projected to generally decrease two to six percent on these streets compared to the 2000 Base (Null) Condition. Directional peak-hour volume also will generally decrease.

Traffic volumes for selected street segments near the La Brea/Wilshire Station are shown on Figure 3.10-1. Other volumes may be found on the flow maps for the working papers completed for WBS Task 18BAH1141, 1142, and 1143.

3.10.3 Intersection Evaluation

Fourteen important intersections were evaluated for this station under the 1980, 2000 Base (Null) and 2000 With Project Conditions. The corresponding levels of service for the V/C indices calculated at these intersections for the three conditions are summarized in Table 3.10-1. Completed analysis will need to be reviewed upon the generation of detailed bus operation revisions for the Metro Rail condition and when new forecasts or revised site plans are developed.

Table 3.10-1

LOS Summary

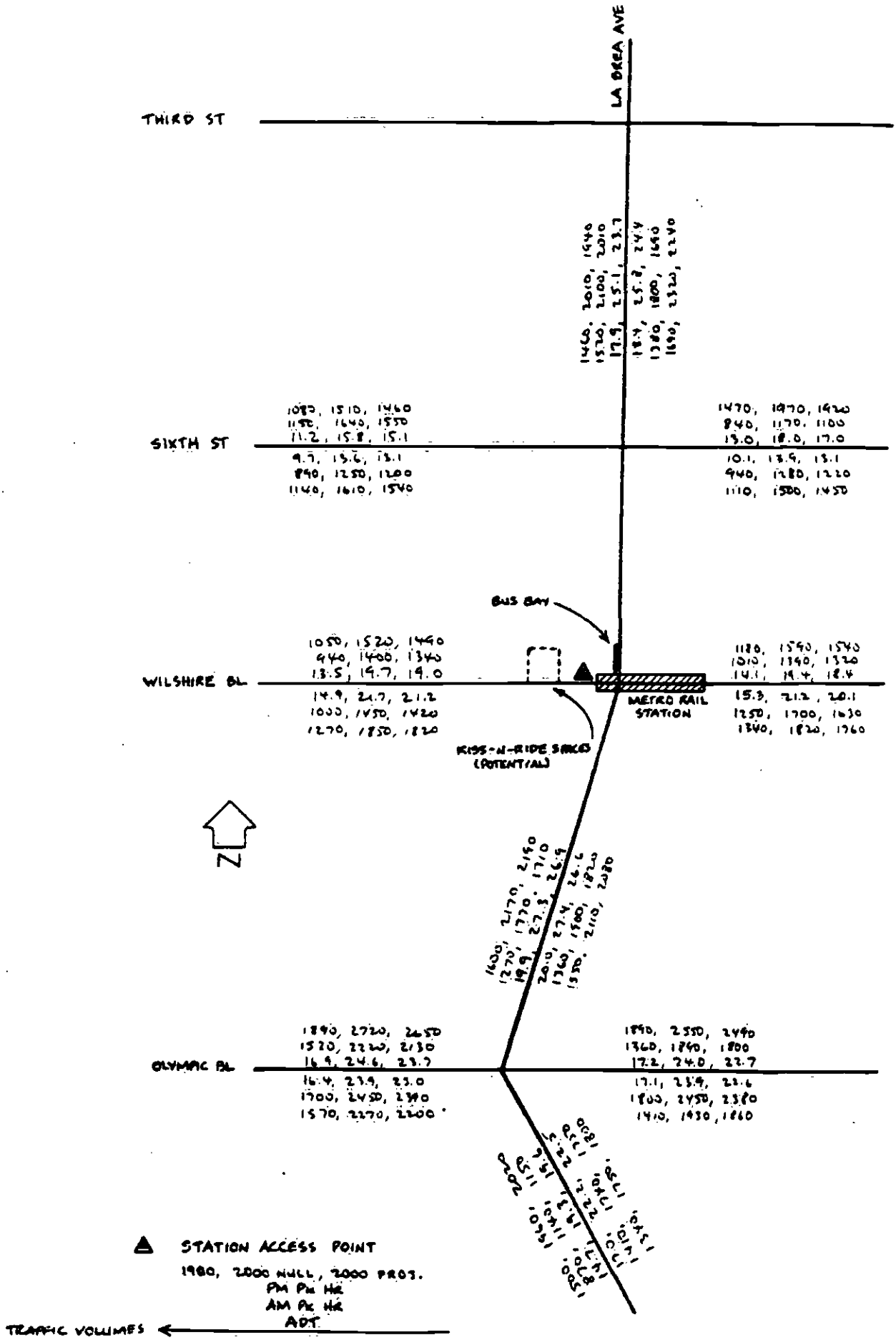
Condition	Peak Hour	Level of Service					
		A	B	C	D	E	F
1980 Existing	AM	3	1	2	6	2	-
	PM	1	2	-	6	5	-
2000 Null	AM	-	-	1	4	1	8
	PM	-	-	-	3	1	10
2000 W/ Project	AM	-	-	4	2	2	6
	PM	-	-	-	3	1	10

Included in the 2000 Base (Null) Condition analysis were one CIP project and three potential operational (TSM) improvements around the La Brea Station. The CIP improvement had left-turn pockets installed eastbound and westbound on Wilshire Boulevard at La Brea Avenue. The TSM improvements considered prohibiting left turns northbound and southbound on La Brea Avenue at Edgewood Place; restriping La Brea Avenue northbound at Edgewood Place for three through lanes and a right-turn-only lane; adding a northbound lane on Hauser Boulevard at Sixth Street during the PM peak hour; adding left-turn pockets eastbound and westbound on Sixth Street at Hauser Boulevard; prohibiting left turns northbound and southbound and providing two lanes northbound on Highland Avenue at Olympic Boulevard; installing a southbound lane on Rimpau Boulevard at Olympic Boulevard during the AM and PM peak hours; and installing a right-turn-only lane northbound on Rimpau Boulevard at Olympic Boulevard.

None of the evaluated intersections showed both an increase in the volume/capacity index of at least 0.02 and a With Project level of service of D-or-worse. Therefore, no further study was made of these intersections.

3.10.3 Parking

The 1980 Parking Condition is uncrowded. Due to projected development, the 2000 Base Condition will be slightly worse, but still uncrowded.



LA BREA/WILSHIRE STATION TRAFFIC VOLUMES

FIG. 3.10-

The Metro Rail Project will reduce parking usage by 1,109. Although development is projected to intensify adjacent to the station, the relatively high (1,248) auto-to-transit mode shift will cause a slight improvement in the already uncrowded parking condition.

Table 3.10-2

Parking Summary

Parking Condition	Station Parking Supply	Station Parking Usage	Overall Occupancy Rate	Parking (-)Deficit (+)Surplus	Number of Blocks W/Occupancy Rate		
					<0.80	0.80-0.90	> 0.90
1980 Existing	4,152	2,964	0.71	+773	24	4	8
2000 Base	4,780	3,596	0.75	+706	23	4	9
2000 W/ Project	5,544	4,112	0.74	+878	24	5	7

3.11 Fairfax (Curson) and Wilshire Station

3.11.1 General Background

The Metro Rail alignment changes direction west of this station. East of the station the alignment follows Wilshire Boulevard while just west of the station it curves northerly to align under Fairfax Avenue. The proposal studied shows the station platform constructed underneath Wilshire Boulevard from Curson Avenue westerly to Spaulding Avenue. Also included were a 1,000-space parking structure and an off-street bus terminal, both situated southerly of Wilshire Boulevard and extending from Curson Avenue to Spaulding Avenue. Bus terminal access would be provided from Spaulding Avenue while the parking structure would be accessed via Curson Avenue.

The surrounding area is heavily residential but also contains major public attractions. The Los Angeles County Museum of Art, the Rancho La Brea Tar Pits, and the Page Museum of Natural History are along the north side of Wilshire Boulevard adjacent to the station. The area is served by Fairfax Avenue, Sixth Street and Eighth Street (all designated secondary highways) and Wilshire and Olympic Boulevards (both designated major highways). Curson Avenue, a collector street, will also provide direct access to the

parking structure. The location of the proposed parking structure and bus terminal would require the closure of Stanley Avenue from Wilshire Boulevard to south of the parking structure.

3.11.2 Traffic Volumes

This is the last outbound station before the alignment turns north along Fairfax Avenue. Thus, the station would be a major receptor for patrons arriving by auto and bus from the south and west. The SCRTD is proposing a 1,000-space parking structure and off-street kiss-n-ride facility at this station. There were approximately 300 surplus off-street commercial parking spaces in 1980. In addition, a major off-street bus facility is planned; however, the projected bus volumes by route and line were not available. This information will be generated by the SCRTD in conjunction with Milestone 9 - Supporting Services Plan and Milestone 12.

Daily boardings at this station are projected to range from 37,000 to 38,400 for Options I, IX or XII and would be the second highest projected daily boardings in the system. Detailed information on boardings and mode-of-arrival for numerous other options were generated by Barton-Aschman for the SCRTD and are contained in the working paper prepared by LADOT for Task 18BAH1143. The AM and PM peak-hour park-n-ride trips are projected to be approximately 270 and 440, respectively, while the auto trips for kiss-n-ride boardings are projected to be 120 and 180 for the same time periods.

Current traffic volumes on Wilshire and Olympic Boulevards and Fairfax Avenue range between 26,000-plus and 33,00-plus vehicles per day in both directions. Supporting arterial streets such as Sixth Street and Hauser Boulevard have much smaller traffic volumes, one-half to one-third less than the major arterials. By far the heaviest peak-hour directional volumes are experienced on Olympic Boulevard.

For the year 2000 Base (Null) Condition, traffic volumes on these arterials are projected to have generally increased 37 to 45 percent above their 1980 levels, assuming a moderately high level of development will have occurred but without any Metro Rail project being constructed. With the implementation of Metro Rail and the same level of projected development, traffic volumes will remain at a fairly high level on most of the streets in the vicinity of the station, although the percentage increase over 1980 levels would generally be less. The location of and access to the station parking and kiss-n-ride facilities would concentrate the projected park-n-ride and kiss-n-ride activity at the intersection of Curson Avenue and Wilshire Boulevard. This would result in an increase in traffic volumes on the Wilshire

Boulevard link between Fairfax and Curson Avenue of 61 percent for the year 2000 With Project Condition versus 45 percent for the year 2000 No Build Condition. More importantly, with the Metro Rail line installed, the directional peak-hour volumes will increase much more significantly due to the fact that the park-n-ride and kiss-n-ride patronage trips have much sharper peaking characteristics compared to normal background traffic.

Link volumes for 1980, 2000 Base (Null) and 2000 With Project Conditions (LPA and MOS) on all major and secondary highways and selected collector

streets are shown on flow maps included with the working papers prepared for WBS Tasks 188AH1141, 1142, 1143. Volumes for selected locations near the Fairfax (Curson) and Wilshire Station are shown on Figure 3.11-1.

3.11.3 Intersection Evaluation

Thirteen of the more important intersections in the vicinity of the Fairfax (Curson)/Wilshire Station were evaluated (volume/capacity index calculated) for the 1980, 2000 Base (Null) and 2000 With Project (LPA) Conditions. The levels of service for the intersections under each condition are shown in Table 3.11-1.

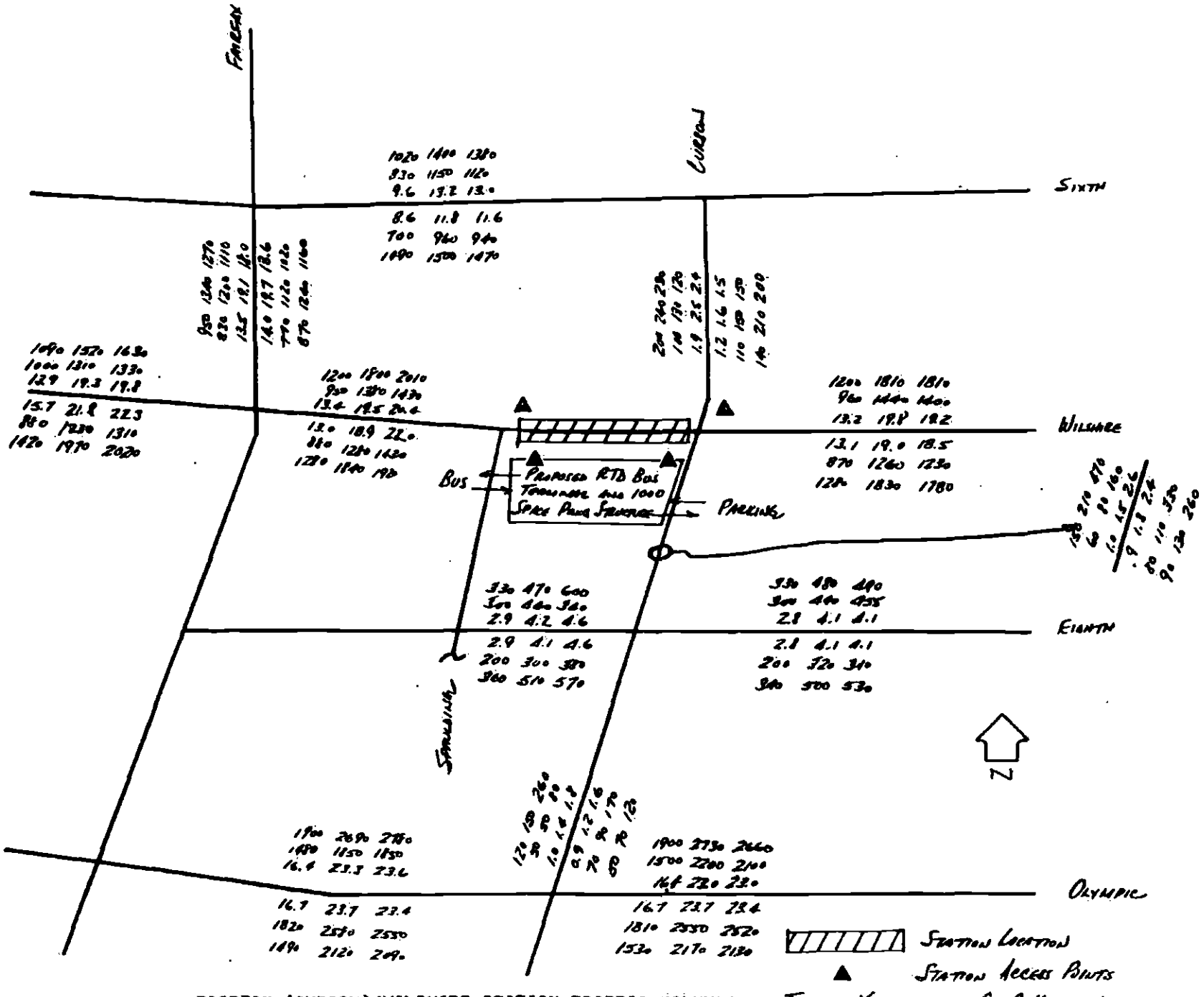
Table 3.11-1

LOS Summary

Condition	Peak Hour	Level of Service					
		A	B	C	D	E	F
1980 Existing	AM	6	1	6	-	-	-
	PM	4	3	2	2	2	-
2000 Null	AM	2	1	-	3	3	4
	PM	1	1	1	2	2	6
2000 W/ Project	AM	2	1	2	1	3	4
	PM	1	-	1	3	1	7

The 2000 Base (Null) and With Project Conditions included street improvements associated with one City CIP candidate project. This project would add a left-turn pocket westbound on Wilshire Boulevard at Fairfax Avenue.

Of the thirteen intersections evaluated, three were projected to have an increase in the V/C index of 0.02 or more from the 2000 Base (Null) to the 2000 With Project Condition and also to have a 2000 With Project LOS of D-or-worse. The three intersections are Curson/Olympic (PM peak only), Fairfax/Olympic and Fairfax/San Vicente. Four of the other ten intersections that



FAIRFAX (CURSON)/WILSHIRE STATION TRAFFIC VOLUMES

were evaluated are expected to experience slight increases in the V/C indices; the remaining six would experience no change or a decrease ranging from 0.01 to 0.06. More detailed information is contained in the working papers and/or technical papers prepared for WBS Tasks 188AH1241, 1242 and 1243.

Of the three intersections identified above, two had 2000 With Project LOS of E-or-worse. These intersections were evaluated further for development of possible mitigation measures. The results of this additional evaluation are presented in Chapter 6.

3.11.4 Parking

The 1980 condition is uncrowded. Due to projected development, the 2000 Base surplus will be less, but conditions will still be uncrowded.

The Metro Rail Project will provide 1,000 parking spaces, while decreasing parking usage by 1,754. Because development is projected to intensify adjacent to the station and the developments are projected to provide less parking supply per floor area, the 2000 With Project Condition will be slightly worse than the 2000 Base Condition, but will remain within an uncrowded range.

Table 3.11-2

Parking Summary

Parking Condition	Station Parking Supply	Station Parking Usage	Overall Occupancy Rate	Parking (-)Deficit (+)Surplus	Number of Blocks W/Occupancy Rate		
					<0.80	0.80-0.90	> 0.90
1980 Existing	8,221	3,963	0.48	+3,436	22	2	1
2000 Base	11,268	7,633	0.68	+2,508	19	3	3
2000 W/ Project	10,844	7,876	0.73	+1,884	19	6	0

3.12 Beverly and Fairfax Station

3.12.1 General Background

The Fairfax/Beverly Station will be located off street on a north-south axis east of and parallel to Fairfax Avenue. The north end of the station will

be just south of Beverly Boulevard. The proposed station site is currently used as surface parking for CBS Television City. A crossover is proposed south of the station. Also included are a 1,000-space parking structure and a bus turnout lane on the south side of Beverly Boulevard east of Fairfax Avenue. The parking structure would be accessed from both Beverly Boulevard and Fairfax Avenue.

Immediately to the south of the station is the historic landmark, Farmer's Market--a major tourist and retail attraction. Other properties in the area are developed to retail, commercial and mixed uses along Fairfax Avenue and Beverly Boulevard, with an immediate shift to residential housing on other streets. The land use west of the station is primarily low-density, single-family housing; to the east are medium- and high-density apartments. Pedestrian activity is high throughout the area, particularly during the daytime hours. The area is served by Beverly Boulevard, a designated major highway; Fairfax Avenue, Third Street and Crescent Heights Boulevard (all designated secondary highways); and Gardner Avenue, a local/collector street.

3.12.2 Traffic Volumes

The SCRTD is proposing a 1,000-space parking structure and off-street kiss-n-ride facility at this station. In 1980, there were slightly less than 100 surplus off-street commercial parking spaces. A bus turnout lane on the south side of Beverly Boulevard east of Fairfax Avenue is proposed adjacent to the station entry to serve bus lines on Beverly Boulevard and for a possible neighborhood shuttle bus service (Park La Brea).

Daily boardings at this station are projected to range from 9,000 to 9,300 under Options I, IX and XII and would be the second lowest projected boardings in the system. Detailed information on boardings and mode-of-arrival for numerous other options were generated by Barton-Aschman for the SCRTD and are contained in the working paper prepared by LADOT for WBS Task 188AH1143. The AM and PM peak-hour park-n-ride trips are projected to be approximately 240 and 370, respectively, while the auto trips for kiss-n-ride boardings are projected to be approximately 190 and 280 for the same time periods.

Current traffic volumes on Fairfax Avenue and Beverly Boulevard range between 26,000-plus and 32,000 vehicles per day in both directions. Supporting arterial streets such as Third Street and Crescent Heights Boulevard have only slightly smaller traffic volumes, 19,000 to 25,000-plus. The largest peak hour volumes are experienced on Beverly Boulevard.

For the year 2000 Base (Null) Condition, traffic volumes on these arterials are projected to have generally increased 32 to 42 percent above their 1980 levels, assuming a moderately high level of development will have occurred but without the Metro Rail being in operation. With the implementation of Metro Rail and the same level of projected development, traffic volumes will remain at a fairly high level on most of these streets in the vicinity of the station, although the percentage increase over 1980 levels would generally be less. The two exceptions are Beverly Boulevard and Gardner Avenue, which would have greater volumes under the 2000 With Project

Condition due to park-n-ride and kiss-n-ride trips concentrated on these arterials. The volumes on Beverly Boulevard would be only three percent greater in the year 2000 with Metro Rail than in the year 2000 without Metro Rail; however, the volumes on Gardner Avenue would be 22 percent greater. This is due in large part to the small base volumes on Gardner Avenue and the impact of even moderate station generated traffic on the 2000 With Project volumes. More importantly, with the Metro Rail line installed, the directional peak-hour volumes will increase much more significantly due to the fact that the park-n-ride and kiss-n-ride patronage trips have much sharper peaking characteristics compared to normal background traffic.

Link volumes for the years 1980, 2000 Base (Null) and 2000 With Project (ADT, AM and PM peak hours) on all major and secondary highways and selected collector streets are shown on flow maps included with the working papers prepared for WBS Tasks 18BAH1141, 1142, and 1143. Volumes for selected locations near the Beverly and Fairfax Station are shown on Figuer 3.12-1.

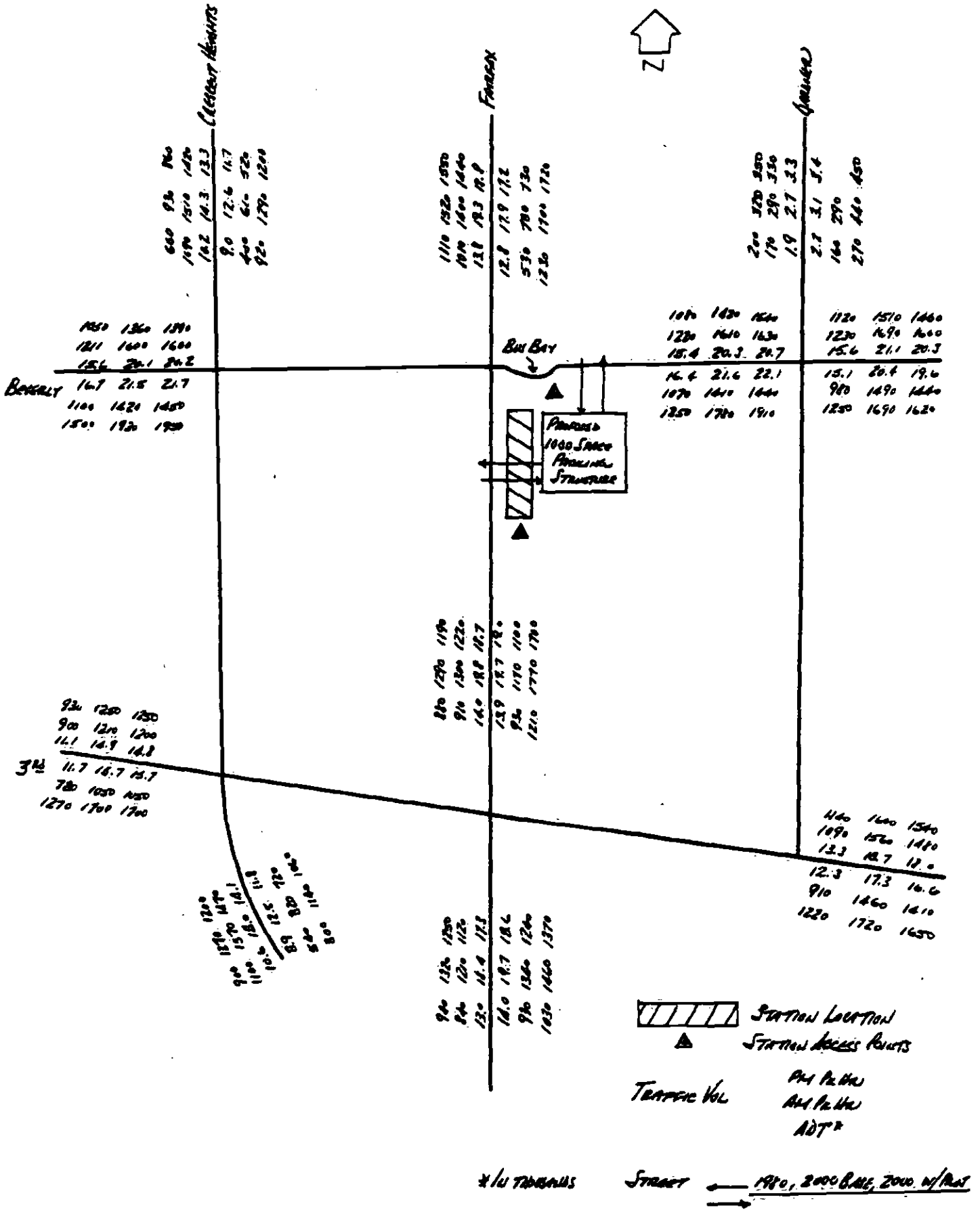
3.12.3 Intersection Evaluation

Nine important intersections in the vicinity of the Beverly/Fairfax Station were evaluated (volume/capacity index calculated) for the 1980, 2000 Base (Null) and 2000 With Project Conditions. The levels of service for the intersections under each condition are shown below.

Table 3.12-1

LOS Summary

Condition	Peak Hour	Level of Service					
		A	B	C	D	E	F
1980 Existing	AM	2	1	1	3	2	-
	PM	-	1	2	1	3	2
2000 Null	AM	1	-	-	2	4	2
	PM	-	-	-	-	3	6
2000 W/ Project	AM	-	-	1	4	3	1
	PM	-	-	-	2	2	5



BEVERLY/FAIRFAX STATION TRAFFIC VOLUMES

FIG. 3.12-1

The 2000 Base (Null) and With Project Conditions included street improvements relating to one City CIP project. This project would add left-turn pockets northbound and southbound on Crescent Heights Boulevard at Beverly Boulevard.

Of the nine intersections evaluated, one, Beverly Boulevard and Gardner Avenue, was projected to have an increase in the V/C index of 0.02-or-more from the 2000 Base (Null) to the 2000 With Project Condition and also to have a 2000 With Project LOS of D or worse. One of the other eight intersections that were evaluated is expected to experience a slight increase in the V/C index; the remaining seven would experience no change or a decrease ranging from 0.01 to 0.18. More detailed information is contained in the working papers and/or technical papers prepared for WBS Tasks 18BAH1241, 1242 and 1243.

The Beverly/Gardner intersection had a 2000 With Project LOS of E in the PM peak period and was evaluated further for development of possible mitigation measures. The results of this additional evaluation are presented in Chapter 6.

3.12.4 Parking

The 1980 condition is uncrowded. Due to projected development, the 2000 Base Condition will be worse, but still uncrowded.

The Metro Rail Project will provide 1,000 parking spaces, while decreasing parking usage by 1,356. Because development is projected to intensify adjacent to the station and the developments are projected to provide less parking supply per floor area, the 2000 With Project Condition will be at normal capacity.

Table 3.12-2

Parking Summary

Parking Condition	Station Parking Supply	Station Parking Usage	Overall Occupancy Rate	Parking (-)Deficit (+)Surplus	Number of Blocks W/Occupancy Rate		
					<0.80	0.80-0.90	> 0.90
1980 Existing	5,560	3,357	0.60	+1,647	24	1	0
2000 Base	8,660	6,612	0.76	+1,182	22	2	1
2000 W/ Project	12,754	11,653	0.91	-174	16	0	9

3.13 Santa Monica and Fairfax Station

3.13.1 General Background

For the 18-mile starter system, the proposed Santa Monica/Fairfax Station will be the only station not within the City of Los Angeles. It will serve a portion of the West Hollywood and Hollywood communities, mainly strip commercial office and retail activities along Santa Monica Boulevard and Fairfax Avenue and interior residential uses. The station itself will be built underneath Fairfax Avenue, extending from north of to south of Santa Monica Boulevard. No off-street parking facilities for Metro Rail-related trips have been proposed for the Santa Monica/Fairfax Station. Instead, parking probably will have to be accommodated on neighboring streets and any nearby commercial parking lots.

Besides Santa Monica Boulevard and Fairfax Avenue, other arterials provide close station access. Paralleling Santa Monica Boulevard are Fountain Avenue (to the north) and Melrose Avenue (to the south), two well-travelled east-west arterials. Crescent Heights Boulevard, a north-south arterial, is to the west of Fairfax Avenue and is also well-travelled. Gardner Avenue, to the east, is much less utilized.

3.13.2 Traffic Volumes

It is estimated that approximately 13,500 to 14,100 boardings per day will occur under Options I, IX and XII. Kiss-n-ride, bus feeder and walking are the projected modes-of-access for this station; no park-n-ride trips were projected due to the lack of convenient parking facilities.

However, even the number of kiss-n-ride trips are forecast to be rather low. For example, during the AM and PM peak hours kiss-n-ride trips would only total 126 and 158, respectively, and only account for approximately 290 trips per day. The majority of trips to this station, therefore, are projected to be made by bus and, to a lesser degree, by walking.

Traffic volumes on the major arterials adjacent or proximate to the proposed station are similar except for Santa Monica Boulevard, which is currently carrying about 32,700 to 33,400 vehicles daily. The other arterials are handling less traffic, roughly 22,000 to 25,000 vehicles daily. Gardner Avenue, due to its jogged alignment, narrow width and residential character, experiences relatively light traffic volumes on the order of 4,000 to 6,000 trips per day.

It is projected that for the year 2000 Base (Null) Condition, assuming a fairly high level of development in the area but with no Metro Rail system operating, daily traffic volumes will have increased 29 to 41 percent on the north-south arterials and 16 to 30 percent on the east-west arterials. With the implementation of the Metro Rail system, it is forecast that these volumes will drop by up to eight percent relative to the 2000 Base (Null) Condition, with the largest decreases evident on the north-south segments. Directional peak-hour volumes will also have decreased in general.

Link volumes for the 1980, 2000 Base (Null) and 2000 With Project Conditions are included in the working paper flow maps prepared for WBS Tasks 18BAH1141, 1142, and 1143. Volumes for selected locations near the Santa Monica/ Fairfax Station are shown on Figure 3.13-1

3.13.3 Intersection Evaluation

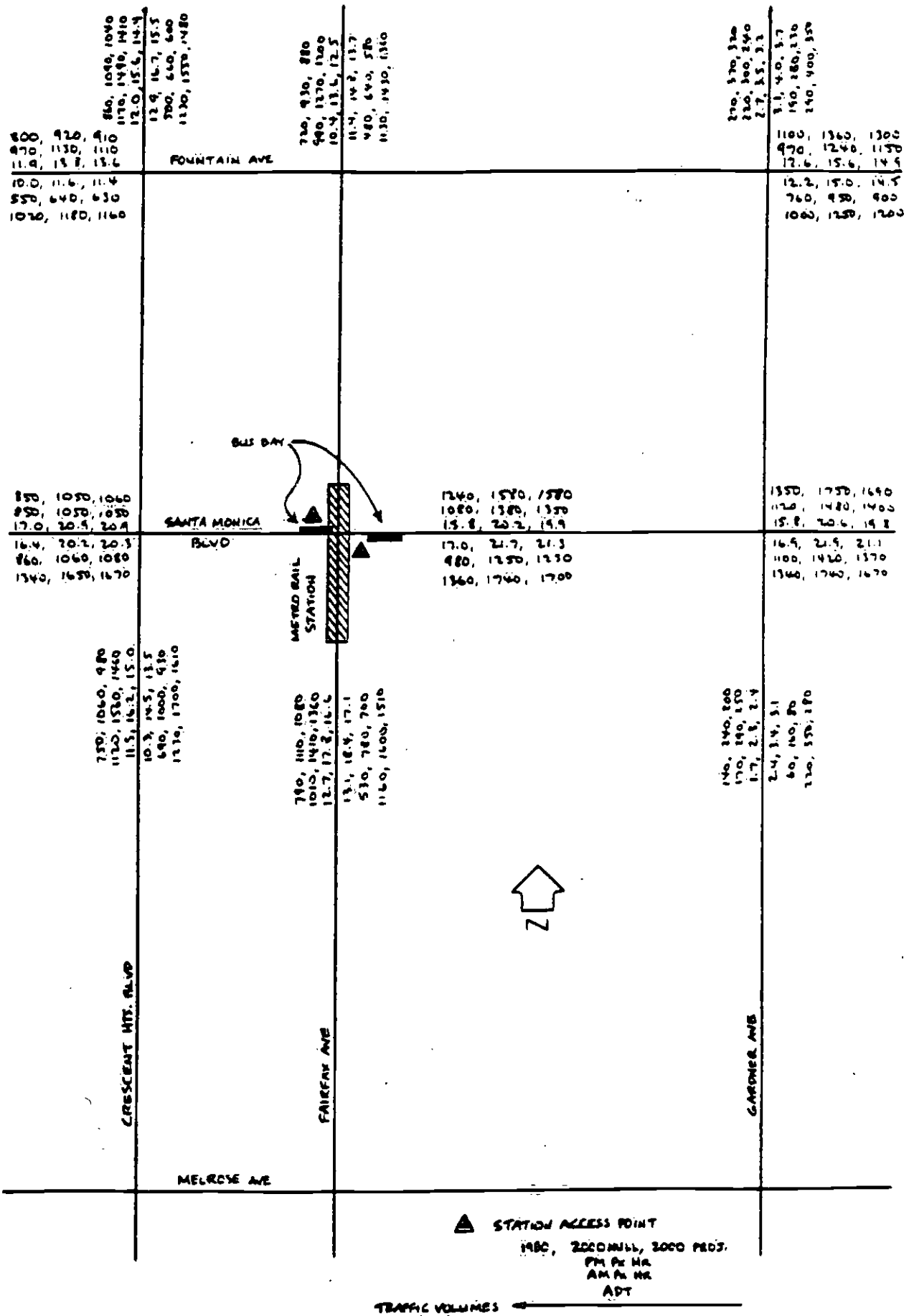
For this station 18 intersections were examined under the three conditions: 1980, 2000 Base (Null) and 2000 With Project. The levels of service for the studied intersections under each condition are presented below. Completed analysis will need to be reviewed upon the generation of detailed bus operation revisions for the Metro Rail condition and when new forecasts or revised site plans are developed.

Table 3.13-3

LOS Summary

Condition	Peak Hour	Level of Service					
		A	B	C	D	E	F
1980 Existing	AM	2	5	5	6	-	-
	PM	-	3	2	8	4	1
2000 Null	AM	-	2	3	4	7	2
	PM	-	-	1	4	5	8
2000 W/ Project	AM	2	1	3	4	7	1
	PM	-	-	3	2	7	6

The 2000 Base (Null) Condition included street improvements associated with one CIP project and five potential operational (TSM) improvements near the Santa Monica/Fairfax Station. The CIP project would add left-turn pockets on all approaches at Crescent Heights Boulevard and Melrose Avenue.



SANTA MONICA/FAIRFAX STATION TRAFFIC VOLUMES

FIG. 3.13-1

The five TSM projects considered included the following:

Fairfax/Fountain	Add PM peak-hour lane N/B
Fairfax/Santa Monica	Add right-turn-only lane S/B
Fairfax/Sunset	Add PM peak-hour lane N/B; add right-turn-only lane S/B
Gardner/Melrose	Add left-turn pockets E/B and W/B
La Cienega/Santa Monica	Add PM peak-hour lane W/B

One of the 18 intersections, Crescent Heights Boulevard and Fountain Avenue, experienced both an increase in the volume/capacity index of at least 0.02 and a With Project LOS of E or worse. This intersection was further evaluated for potential mitigation measures under Task 18BAH15. The results of this additional evaluation are presented Chapter 6.

3.13.4 Parking

The 1980 Condition is uncrowded. Due to projected development, the 2000 Base Condition will be worse, but still uncrowded.

The Metro Rail Project will reduce parking usage by 1,058. Although development is projected to intensify adjacent to the station, the relatively high (1,094) auto-to-transit mode shift will cause a slight improvement in the already uncrowded parking condition.

Table 3.13-4

Parking Summary

Parking Condition	Station Parking Supply	Station Parking Usage	Overall Occupancy Rate	Parking (-)Deficit (+)Surplus	Number of Blocks W/Occupancy Rate		
					≤0.80	0.80-0.90	> 0.90
1980 Existing	2,753	1,523	0.55	+955	29	1	0
2000 Base	3,233	2,067	0.64	+843	26	4	0
2000 W/ Project	3,838	2,386	0.62	+1,068	29	1	0

3.14. La Brea and Sunset Station

3.14.1 General Background

This Metro Rail station is to be constructed underneath Sunset Boulevard between La Brea Avenue to a point west of Detroit Street and a crossover adjoining the station to the west. Cut and cover construction will extend from east of La Brea to just east of Poinsettia. It would be one of two stations strictly within the Hollywood community and would serve nearby commercial and retail activities. It would also be accessible to multiple-family residences in the surrounding neighborhoods. Arterial streets furnishing access to the station would be Hollywood Boulevard, Fountain Avenue and Highland Avenue, as well as La Brea Avenue and Sunset Boulevard. A series of local streets could also be used to a lesser extent for access to the station.

Due to the projected kiss-n-ride demand, off-street parking spaces are proposed adjacent to the station site. No other parking facility is contemplated to be developed for station access purposes. Therefore, it could be assumed that any large scale parking demand would have to be managed on neighboring streets and any available commercial parking facilities.

3.14.2 Traffic Volumes

The La Brea/Sunset Station is projected to have the least number of passenger boardings per day, accounting for approximately 2,800 daily boardings under Option IX and XII. (This station was deleted under Option I.) Mode-of-access data indicates that park-n-ride, kiss-n-ride, walk and bus feeder modes will be used to access the station. During the AM and PM peak hours, 117 and 230 vehicle trips will be attributible to park-n-ride, respectively. For kiss-n-ride, 156 and 242 trips are expected during the same respective hours. However, it is projected that bus feeder will be the mode used most, especially since parking for vehicles near the station is expected to be severely constrained.

Daily traffic volumes on the surrounding arterial streets are about equally heavy on Sunset Boulevard and Highland Avenue, followed by La Brea Avenue, Hollywood Boulevard and Fountain Avenue in that order. These volumes currently range from 20,500 vehicles (Fountain Avenue) to more than twice that, 45,000 vehicles, (Sunset Boulevard and Highland Avenue). Similarly, peak-hour volumes are highest on Sunset Boulevard and Highland Avenue.

Assuming substantial growth in area development, these traffic volumes are also expected to increase. For the year 2000 Base (Null) Condition, the daily volumes are projected to increase 21 to 29 percent on the east-west streets and 30 to 35 percent on the north-south streets with no Metro Rail system in operation. These year 2000 volumes would decline approximately three to six percent, assuming Metro Rail operation and the same level of development. It is predicted that in either case, the traffic demand on Highland Avenue will be substantially more than on any of the other arterials serving this station.

Traffic volumes for some of the links near the La Brea/Sunset Station are shown on Figure 3.14-1. Other traffic volumes may be found on the flow maps included in the working papers completed for WBS Tasks 18BAH1141, 1142, and 1143.

3.14.3 Intersection Evaluation

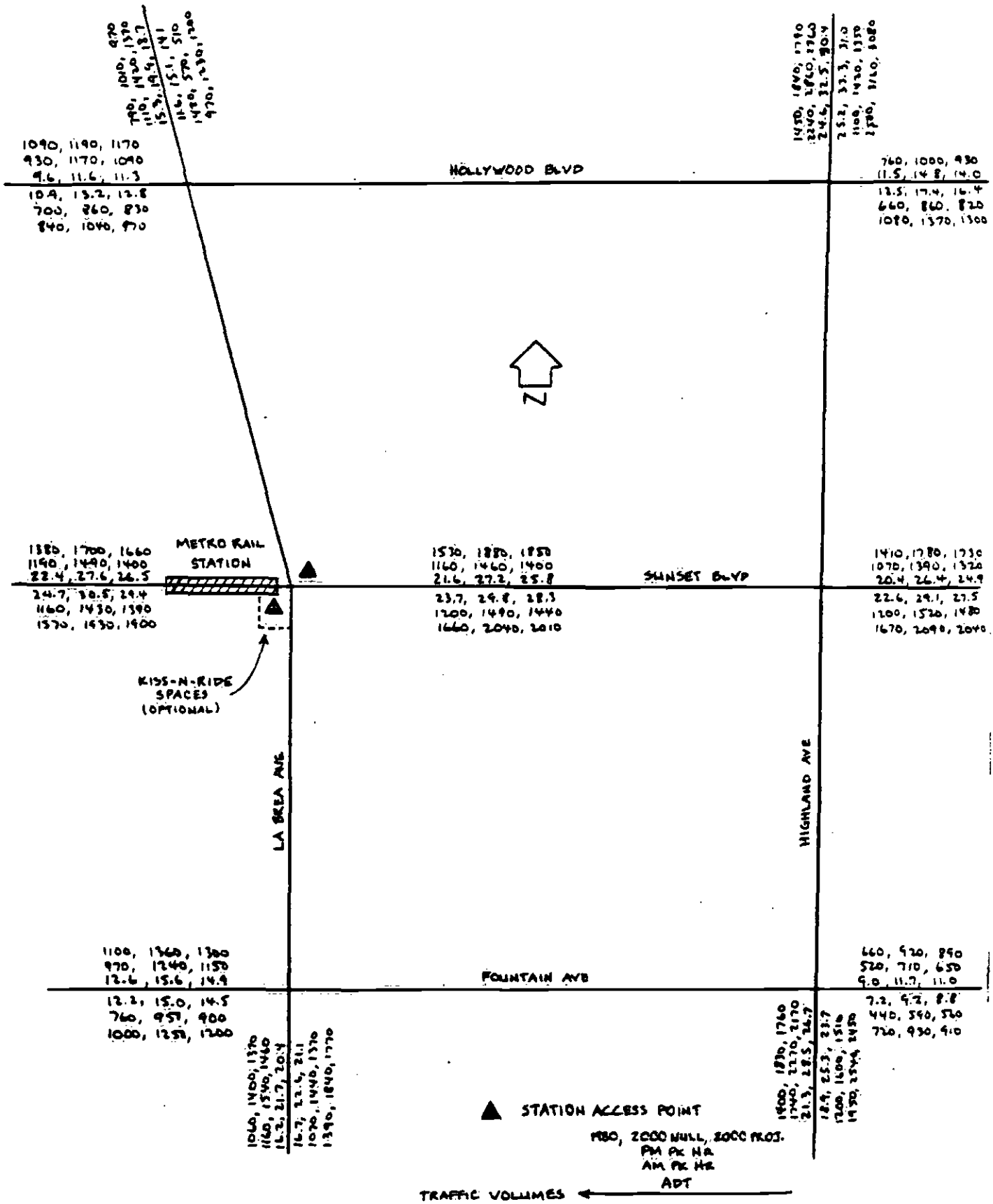
A volume/capacity index analysis was made of 16 important intersections around the station site for the 1980, 2000 Base (Null) and 2000 With Project Conditions. The corresponding service levels for the V/C indices calculated for these conditions are summarized in Table 3.14-1. Completed analysis will need to be reviewed upon the generation of detailed bus operation revisions for the Metro Rail condition and when new forecasts or revised site plans are developed.

Table 3.14-1

LOS Summary

Condition	Peak Hour	Level of Service					
		A	B	C	D	E	F
1980 Existing	AM	4	4	2	2	4	-
	PM	2	3	3	5	2	1
2000 Null	AM	1	3	3	2	3	4
	PM	-	1	1	2	6	6
2000 W/ Project	AM	3	1	4	2	4	2
	PM	0	1	2	2	6	5

The 2000 Base (Null) Condition assumed completion of two CIP projects and two potential operational (TSM) improvements near the La Brea/Sunset Station. The CIP improvements were as follows:



SUNSET/LA BREA STATION TRAFFIC VOLUMES

FIG. 3.14-1

Franklin/Highland (N I/S)	Add N/B and S/B through lanes; add W/B right-turn-only lane.
Franklin/Highland (S I/S)	Add N/B through lane; add S/B and E/B right-turn-only lanes.

The two proposed TSM measures would restripe Fountain Avenue for two lanes westbound at Highland Avenue and prohibit left turns northbound and southbound on Highland Avenue at Sunset Boulevard during the AM peak hour.

None of the evaluated intersections were found to have both a projected increase in the V/C index of at least 0.02 and a With Project LOS of D or worse. Therefore, none of these intersections were further evaluated for potential mitigation measures.

3.14.4 Parking

The 1980 Condition is uncrowded. Due to projected development, the 2000 Base Condition will be slightly worse, but still uncrowded.

The Metro Rail Project will reduce parking usage by 445; however, because development is projected to intensify adjacent to the station and the developments are projected to provide less parking supply per floor area, the 2000 With Project Condition will be slightly worse than the 2000 Base Condition, but will remain within an uncrowded range.

Table 3.14-2

Parking Summary

Parking Condition	Station Parking Supply	Station Parking Usage	Overall Occupancy Rate	Parking (-)Deficit (+)Surplus	Number of Blocks W/Occupancy Rate		
					<0.80	0.80-0.90	> 0.90
1980 Existing	5,592	3,649	0.65	1,384	24	2	1
2000 Base	6,089	4,173	0.69	+1,307	23	3	1
2000 W/ Project	6,017	4,327	0.72	+1,088	20	2	5

3.15 Cahuenga and Hollywood Station

3.15.1 General Background

The Cahuenga/Hollywood Station is proposed to be constructed off-street west of and parallel to Cahuenga Boulevard and north and south of Hollywood Boulevard. Adjoining it to the north is a pocket track. Cut and cover construction would extend from south of Hollywood Boulevard to north of Franklin Avenue. It would be near the commercial, retail and office activity center of Hollywood and would also serve multiple-family development further away. In addition to Cahuenga and Hollywood Boulevards, the following arterial streets would offer close access to the station: Franklin Avenue, Sunset Boulevard and Vine Street. Several local streets could be used for limited access to the station.

Kiss-n-ride parking spaces may be provided off-street near the north end of the station. However, no other new off-street parking facility for station access purposes is presently proposed. Some surplus commercial off-street parking within a two-to-three block radius of the station may be available for use by Metro Rail patrons. Given the intense demand for parking in the area, there is little likelihood that any significant amount of street parking will be available for Metro Rail purposes.

3.15.2 Traffic Volumes

The Metro Rail patronage forecast for the Cahuenga/Hollywood Station ranges from 24,400 to 25,000 boardings per day under Options I, IX and XII. Mode-of-access data indicate fairly high kiss-n-ride and park-n-ride patronage activity at this station. The number of kiss-n-ride vehicle trips projected during the AM and PM peak hours are 652 and 900, respectively. Park-n-ride peak hour vehicle trips are estimated to be 283 (AM) and 509 (PM). The other two access modes, walk and bus feeder, are also expected to be busy.

Presently, Sunset Boulevard handles the most traffic in the area, approximately 43,000 to 49,000 vehicles per day, followed by Hollywood Boulevard, 25,000 to 33,000 vehicles per day, and Cahuenga Boulevard and Franklin Avenue, 16,700 to 31,800 vehicles per day. Vine Street currently carries 18,600 to 28,300 vehicles daily at this location. Directional peak-hour volumes are highest on Sunset Boulevard and Cahuenga Boulevard and generally lowest on Franklin Avenue.

The volumes on these streets would increase significantly, assuming moderately high growth in the area. Under the 2000 Base (Null) Condition, these volumes are forecast to grow 35 to 37 percent on the north-south arterials and 29 to 30 percent on the east-west arterials. With the Metro Rail system in operation in the year 2000, these volumes are expected to decrease two to five percent relative to the Base (Null) Condition.

For the arterial streets proximate to the Cahuenga/Hollywood Station, some selected link volumes are depicted on Figure 3.15-1. Other link volumes may be found in the working paper flow maps prepared for WBS Tasks 10BAH1141, 1142 and 1143.

3.15.3 Intersection Evaluation

Eighteen intersections were analyzed for this station. Volume/capacity indexes were determined for each intersection and related to the appropriate level of service for the 1980, 2000 Base (Null) and 2000 With Project Conditions. Table 3.15-1 presents the levels of service for each condition. Completed analysis will need to be reviewed upon the generation of detailed bus operation revisions for the Metro Rail condition and when new forecasts or revised site plans are developed.

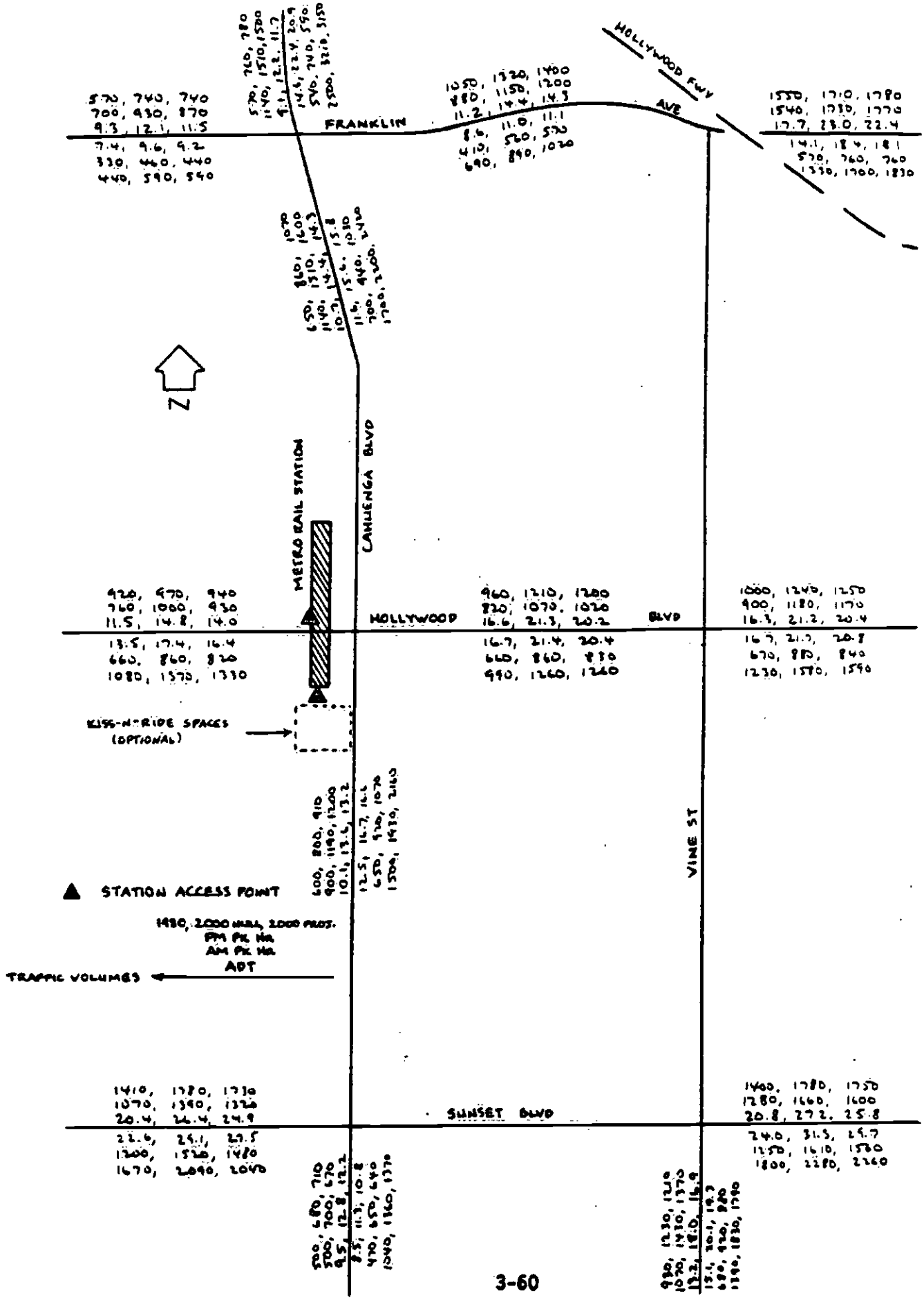
Table 3.15-1

LOS Summary

Condition	Peak Hour	Level of Service					
		A	B	C	D	E	F
1980 Existing	AM	2	4	5	3	4	-
	PM	-	1	4	6	6	1
2000 Null	AM	1	1	2	7	5	2
	PM	-	-	2	1	6	9
2000 W/ Project	AM	2	2	2	7	3	2
	PM	-	-	3	-	6	9

The 2000 Base (Null) Condition included six potential operational (TSM) street improvement measures around the Cahuenga/Hollywood Station. The TSM measures are summarized as follows:

Cahuenga/Franklin	Add AM peak-hour lane S/B and PM peak-hour lane N/B
Fountain/Vine	Add AM and PM peak-hour lane S/B and PM peak-hour lane N/B, E/B and W/B.
Gower/Hollywood	Restripe S/B approach for right-turn-only lane and left-turn pocket



CAHUENGA/HOLLYWOOD STATION TRAFFIC VOLUMES FIG. 3.15-1

Gower/Sunset	Add AM peak-hour lane S/B and PM peak-hour lane N/B
Hollywood/Vine & Sunset/Vine	Add AM and PM peak-hour lane S/B and PM peak-hour lane N/B

Of the 18 intersections examined, three were projected to have a 0.02 or greater increase in their V/C indices and a With Project LOS of D or worse. All three intersections include Cahuenga Boulevard and are at Franklin Avenue, Hollywood Boulevard and Sunset Boulevard. The Cahuenga/Hollywood and Cahuenga/Sunset intersections were carried over for additional evaluation and development of possible mitigation measures. The results are presented in Chapter 6.

3.15.4 Parking

The 1980 Condition is uncrowded. Due to projected development, the 2000 Base Condition will be slightly worse, but still uncrowded.

The Metro Rail Project will reduce parking usage by 1,416; however, because development is projected to intensify adjacent to the station and the developments are projected to provide less parking supply per floor area, the 2000 With Project Condition will be approaching capacity.

Table 3.15-2

Parking Summary

Parking Condition	Station Parking Supply	Station Parking Usage	Overall Occupancy Rate	Parking (-)Deficit (+)Surplus	Number of Blocks W/Occupancy Rate		
					<0.80	0.80-0.90	> 0.90
1980 Existing	7,127	4,530	0.64	+1,884	24	2	2
2000 Base	8,613	6,325	0.73	+1,427	23	2	3
2000 W/ Project	10,352	8,666	0.84	+651	12	6	10

3.16 Universal City Station

3.16.1 General Background

The Proposed Universal City Station will be located off-street on a northeast-southwest axis west of Lankershim Boulevard and north of Universal Place. This station would have a 2,500-space parking structure, a separate kiss-n-ride facility, an off-street bus facility and revised ramp connections to the Hollywood Freeway. The parking structure would be accessed from Lankershim Boulevard and Bluffside Drive, while the separate 35-space kiss-n-ride facility would have an entrance on Universal Place and an exit on Lankershim Boulevard. The bus facility would be accessed from the new station access road extending from Vineland Avenue to the station where it intersects with Willowcrest Avenue.

MCA headquarters and Universal Studios are located immediately east of the proposed station. Areas to the west are either residential or park land. The Campo de Cahuenga - a historic landmark park - is located within the station site boundaries. A 36-story, 700,000 sq. ft. office building, which will be the headquarters for the Getty Oil Corporation, is under construction on the east side of Lankershim adjacent to the Hollywood Freeway. The area is served by Lankershim Boulevard, Vineland Avenue, and Ventura Boulevard-Cahuenga Boulevard West, all designated major highways, and Cahuenga Boulevard, a designated secondary highway. Due to the location of the proposed station, two local streets, Bluffside Drive and Willowcrest Avenue, will carry station-generated traffic. The Hollywood Freeway passes to the south of the proposed station.

3.16.2 Traffic Volume

A 2,500-space parking structure is proposed for this station, as well as a separate 35-space kiss-n-ride Lot. An off-street bus facility is planned; however, bus line volume information at this station was not available.

Daily boardings at this station are projected to range from 13,600 to 14,400 under Options I, IX and XII. Detailed information on boardings and mode-of-access for numerous other options were generated by Barton-Aschman for the SCRTD and several are contained in the working paper prepared by LADOT for WBS Task 188AH1143. The AM and PM peak-hour park-n-ride trips are projected to be approximately 700 and 1,100, respectively, while the auto trips for kiss-n-ride boardings are projected to be 150 and 220 for the same time periods.

Current traffic volumes on Lankershim Boulevard, Vineland Avenue and Ventura Boulevard-Cahuenga Boulevard West range between 19,000 and 31,000 vehicles per day in both directions. The heaviest peak-hour directional volumes are found on Cahuenga Boulevard West in the AM peak hour and on Lankershim Boulevard in the PM peak hour.

For the year 2000 Base (Null) Condition, traffic volumes on these arterials are projected to have generally increased 18 to 53 percent above their 1980 levels. With the implementation of Metro Rail and the same level of projected development, traffic volumes will remain at a fairly high level on most of these streets in the vicinity of the station, although the percentage increase

over 1980 levels generally will be less. The exceptions are Lankershim Boulevard between Universal Place and Ventura-Cahuenga Boulevard West and Lankershim Boulevard between Bluffside Drive and Cahuenga Boulevard. These links will have higher volumes under the 2000 With Project Condition due to the addition of park-n-ride and kiss-n-ride trips, which will be concentrated on Lankershim Boulevard. More importantly, with the Metro Rail line installed, the directional peak-hour volumes will increase much more significantly due to the fact that the park-n-ride and kiss-n-ride patronage trips have much sharper peaking characteristics compared to normal background traffic.

Volumes for the 1980, 2000 Base (Null) and 2000 With Project Condition on the arterial network were generated under WBS Tasks 18BAH1141, 1142 and 1143 and are shown on flow maps included with the working papers prepared for each task. Volumes for selected locations near the Universal City Station are shown on Figure 3.16-1.

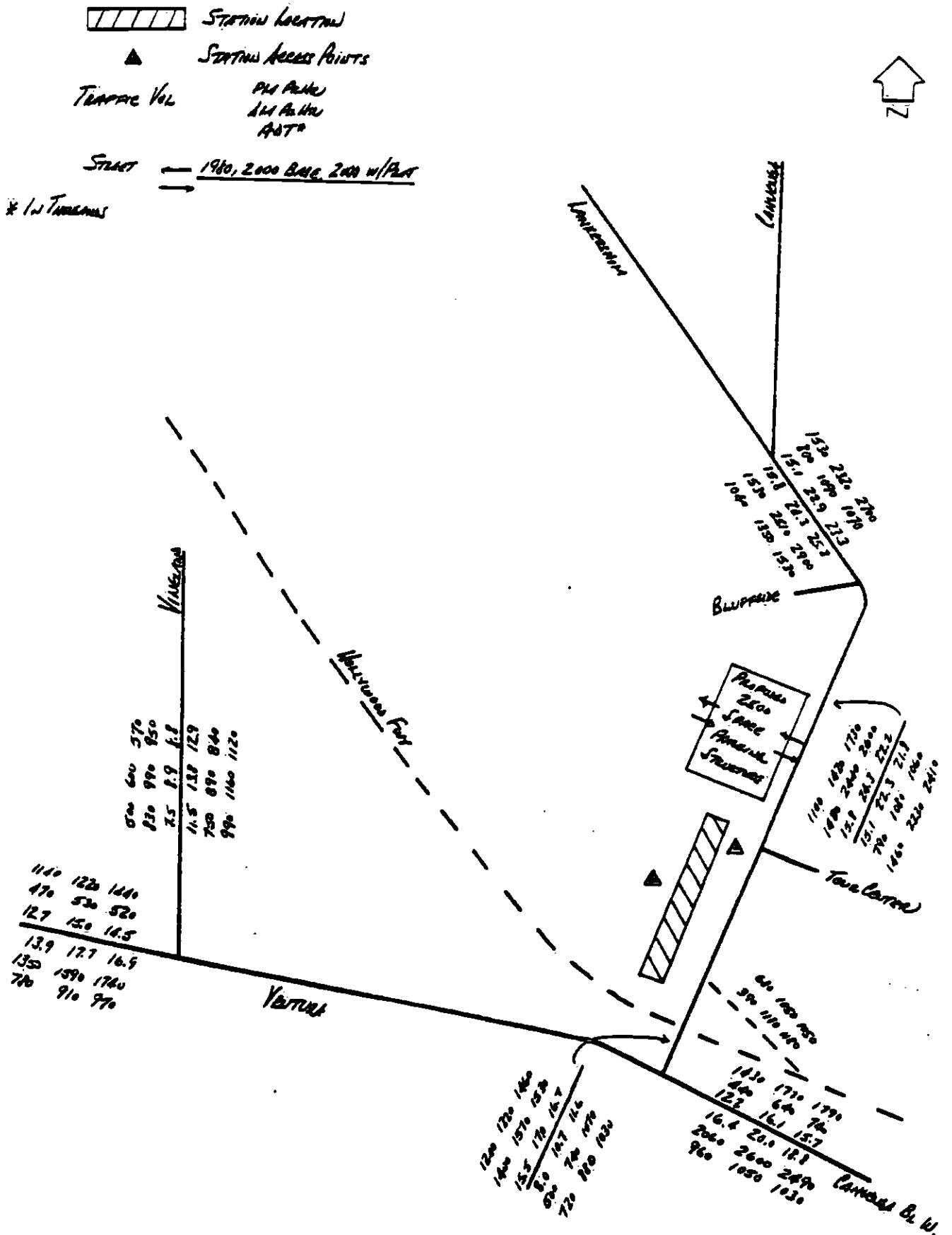
3.16.3 Intersection Analysis

Thirteen intersections in the vicinity of the Universal City Station were evaluated for the 1980, 2000 Base (Null) and 2000 With Project (LPA) Conditions. The levels of service for the intersections under each condition are shown in Table 3.16-1.

Table 3.16-1

LOS Summary

Condition	Peak Hour	Level of Service					
		A	B	C	D	E	F
1980 Existing	AM	6	2	2	2	1	-
	PM	5	2	3	2	-	1
2000 Null	AM	2	1	2	5	2	1
	PM	1	1	4	6	-	1
2000 W/ Project	AM	1	1	2	4	2	3
	PM	-	-	3	6	1	3



UNIVERSAL CITY STATION TRAFFIC VOLUMES

FIG. 3.16-1

The 2000 Base (Null) and With Project Conditions did not include any improvements associated with City CIP projects.

Of the thirteen intersections evaluated, seven were projected to have an increase in the V/C index of 0.02 or more from the 2000 Base (Null) to the 2000 With Project Condition and also to have a 2000 With Project LOS of D or worse. Of the other six intersections that were evaluated, five are expected to experience slight increases in the V/C indices; the remaining one would experience a slight decrease. More detailed information is contained in the working paper and/or technical papers prepared for WBS Tasks 18BAH1241, 1242 and 1243.

Of the seven intersections identified above, five had 2000 With Project LOS of E or worse; the other two had 2000 With Project LOS of D. All seven intersections were evaluated further for development of possible mitigation measures. The results of this additional evaluation are presented in Chapter 6.

3.16.4 Parking

The 1980 Condition is uncrowded. Due to projected development, the 2000 Base Condition will be approaching capacity. The Metro Rail Project will provide 2,500 parking spaces, while increasing parking usage by 1,557. Because development is projected to intensify adjacent to the station and the developments are projected to provide less parking supply per floor area, the 2000 With Project Condition will be extremely congested.

Table 3.16-2

Parking Summary

Parking Condition	Station Parking Supply	Station Parking Usage	Overall Occupancy Rate	Parking (-)Deficit (+)Surplus	Number of Blocks W/Occupancy Rate		
					<0.80	0.80-0.90	> 0.90
1980 Existing	5,902	4,132	0.70	+180	12	1	1
2000 Base	13,978	12,208	0.87	+372	10	2	2
2000 W/ Project	13,743	14,432	1.05	-2,063	0	0	14

3.17 North Hollywood Station (Chandler at Lankershim - Subway)

3.17.1 General Background

The North Hollywood Station would be located under Chandler Boulevard straddling Lankershim. The proposal studied includes two parking structures with a

total of 2,500 spaces, an off-street bus facility and a kiss-n-ride lot. The parking structures, the larger of which would be west of Tujunga Avenue and the smaller of which would be east of Tujunga Avenue, would be accessed from Chandler Boulevard, north and south roadways. The kiss-n-ride lot would be accessed from Chandler Boulevard, south roadway.

The area around the station has many different land uses. Auto dealerships are located along Lankershim Boulevard to the north. Low-rise commercial-retail space predominates along Lankershim Boulevard to the south. The area along Chandler Boulevard is used for industrial and warehousing purposes. An office/warehouse facility extending from Tujunga Avenue westward along Chandler Boulevard was recently completed. The station lies within the boundaries of the North Hollywood redevelopment area. The first phase of redevelopment is planned for the area south of Chandler Boulevard and east of Lankershim Boulevard. Residential land use exists to the north and east of the station. The area is served by Lankershim and Chandler Boulevards (both designated major highways) and Tujunga and Magnolia Avenues (both designated secondary highways).

3.17.2 Traffic Volumes

The SCRTD is proposing two parking structures with a total of 2,500 spaces, an off-street bus facility and a kiss-n-ride Lot. Bus line volume information for this station was not available. In 1980, there were approximately 230 surplus off-street commercial parking spaces.

Daily boardings at this station are projected to be 16,600 and 17,000 under Option I and IX respectively. Detailed information on boardings and mode-of-access for numerous other options were generated by Barton-Aschman for the SCRTD and are contained in the working paper prepared by LADOT for WBS Task 18BAH1143. The AM and PM peak-hour park-n-ride trips are projected to be approximately 930 and 1,490 respectively, while the auto trips for kiss-n-ride boardings are projected to be 370 and 560 for the same time periods. Current traffic volumes on Chandler Boulevard, Lankershim Boulevard and Tujunga Avenue range between 4,000 to 18,000-plus vehicles per day in both directions. The heaviest peak-hour volumes are experienced on Lankershim Boulevard.

For the year 2000 Base (Null) Condition, traffic volumes on these arterials are projected to have generally increased 20 to 69 percent above their 1980 levels, assuming a moderately high level of development will have occurred but without any Metro Rail in operation. The 69 percent increase on the Chandler link between Tujunga Avenue and Lankershim Boulevard is somewhat deceptive because the 1980 two-way volume is only 4,500 vehicles and the 2000 volume is 7,600. With the implementation of Metro Rail and the same level of development, the percentage increase of traffic volumes over 1980 levels will generally be greater than without Metro Rail in operation. This is due to the large number of park-n-ride and kiss-n-ride trips projected at this station, which have the most impact on Chandler Boulevard. More importantly, with the Metro Rail line operational, the directional peak-hour volumes will increase much more significantly due to the fact that the park-n-ride and kiss-n-ride patronage trips have much sharper peaking characteristics compared to normal background traffic.

Traffic volumes for the 1980, 2000 Base (Null) and 2000 With Project Conditions for the Regional Core network are shown on flow maps included with the working papers prepared for each task. Volumes for selected locations near the North Hollywood Station are shown on Figure 3.17-1.

3.17.3 Intersection Analysis

Seventeen of the more important intersections in the vicinity of the North Hollywood Station were evaluated (volume/capacity index calcuated) for the 1980, 2000 Base (Null) and 2000 With Project (LPA) Conditions. The levels of service for the intersections under each condition are summarized in Table 3.17-1.

Table 3.17-1

LOS Summary

Condition	Peak Hour	Level of Service					
		A	B	C	D	E	F
1980 Existing	AM	10	4	2	1	-	-
	PM	9	2	4	-	1	1
2000 Null	AM	7	5	3	2	-	-
	PM	4	3	6	3	1	-
2000 W/ Project	AM	6	4	4	1	1	1
	PM	3	-	6	4	2	2

The 2000 Base (Null) and With Project Conditions included street improvements associated with three City CIP projects and three North Hollywood redevelopment projects. The first CIP project would add left-turn pockets northbound and southbound on Vineland Avenue at Burbank Boulevard and left-turn pockets and one through lane eastbound and westbound. The second would install a through lane northbound on both Lankershim Boulevard and Vineland Avenue, left-turn pockets southbound on both Lankershim Boulevard and Vineland Avenue and a through lane westbound on Camarillo Street at Lankershim Boulevard and Vineland Avenue. The third project would add a northbound through lane on

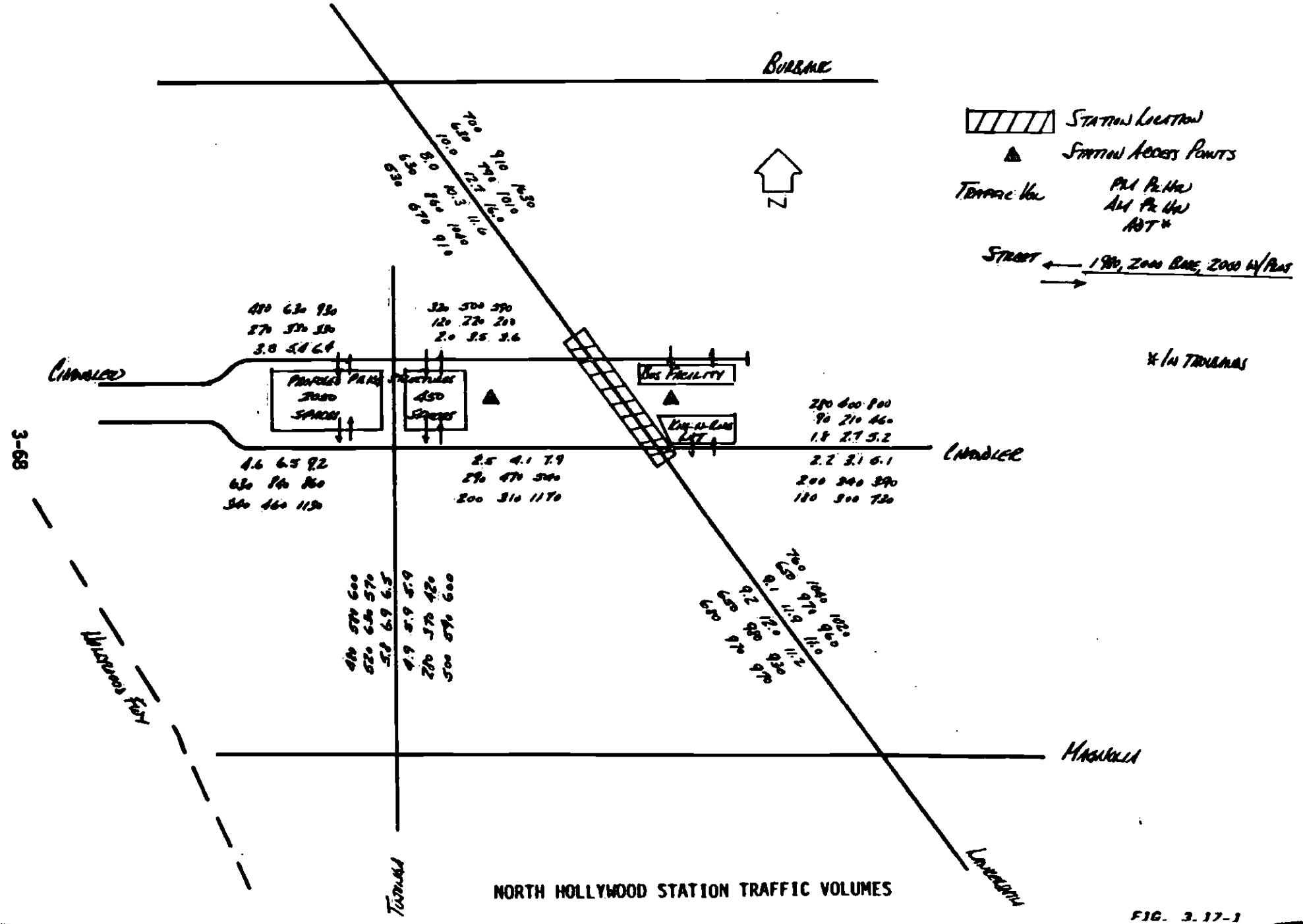

BURBANK
CHANDLER
CHANDLER
MAGNOLIA
LANKERSHIM
TUJUNGA
HOLLYWOOD FWY
3-68
N
STATION LOCATION
STATION ACCESS POINTS
TRAFFIC VOL
PM PEAK HR
AM PEAK HR
ADT*
STREET
1980, 2000 BASE, 2000 W/PROJ
* IN THOUSANDS
BUS FACILITY
PARKING PLAN
3000 SPACES
450 SPACES
NORTH HOLLYWOOD STATION TRAFFIC VOLUMES

FIG. 3.17-1

Vineland Avenue at Chandler Boulevard. The first North Hollywood Redevelopment Project improvement provides right-turn lanes eastbound and westbound on Magnolia Boulevard at Cahuenga Boulevard. The second would add through lanes northbound, southbound and westbound at the south intersection of Chandler and Lankershim Boulevards, while the third project would add right-turn lanes eastbound and westbound on Magnolia Boulevard at Vineland Avenue.

Of the seventeen intersections evaluated, four were projected to have an increase in their V/C index of 0.02 or more from the 2000 Base (Null) to the 2000 With Project Condition and also to have a 2000 With Project LOS of D or worse. Of the other thirteen intersections evaluated, seven would experience slight increases in the V/C indices, five are expected to experience slight decreases in the V/C indices and one would remain unchanged. More detailed information is contained in the working papers and/or technical papers prepared for WBS Tasks 18BAH1241, 1242 and 1243.

Of the four intersections identified above, three had 2000 With Project LOS of E or worse and were evaluated further for development of possible mitigation measures. The results of the additional evaluation are presented in Chapter 6.

3.17.4 Parking

The 1980 Condition is uncrowded. Due to projeced development, the 2000 Base Condition will be worse, but still uncrowded.

The Metro Rail Project will provide 2,500 parking spaces, while increasing parking usage by 1,928. Because development is projected to intensify adjacent to the station and the developments are projected to provide less parking supply per floor area, the 2000 With Project Condition will be at capacity.

Table 3.17-2

Parking Summary

Parking Condition	Station Parking Supply	Station Parking Usage	Overall Occupancy Rate	Parking (-)Deficit (+)Surplus	Number of Blocks W/Occupancy Rate		
					<0.80	0.80-0.90	> 0.90
1980 Existing	4,804	2,307	0.48	+2,017	25	1	0
2000 Base	6,229	4,313	0.69	+1,293	21	0	1
2000 W/ Project	8,048	7,476	0.93	-233	0	0	22

CHAPTER 4 - STATION VARIATIONS

4.1 Oeletion of Crenshaw and Wilshire Station

4.1.1 General Background

The SCRTD has considered several station and alignment variations for which revised ADT and AM and PM peak-hour traffic volumes were developed. One variation is the deletion of the Crenshaw and Wilshire Station (Option IX); the circulation impacts in the vicinity of this location are evaluated in this section while the impacts on the Western/Wilshire and La Brea/Wilshire Stations are evaluated in Sections 4.2 and 4.3, respectively.

4.1.2 Traffic Volumes

Daily boardings at the Crenshaw and Wilshire Station were projected to be 13,600 under Options I and XII. No park-n-ride facility was planned; however, kiss-n-ride spaces and bus bays were to be provided. The AM and PM peak-hour park-n-ride trips were projected to be approximately 20 and 50, respectively, while the auto trips for kiss-n-ride boardings were projected to be 70 and 140 for the same time periods.

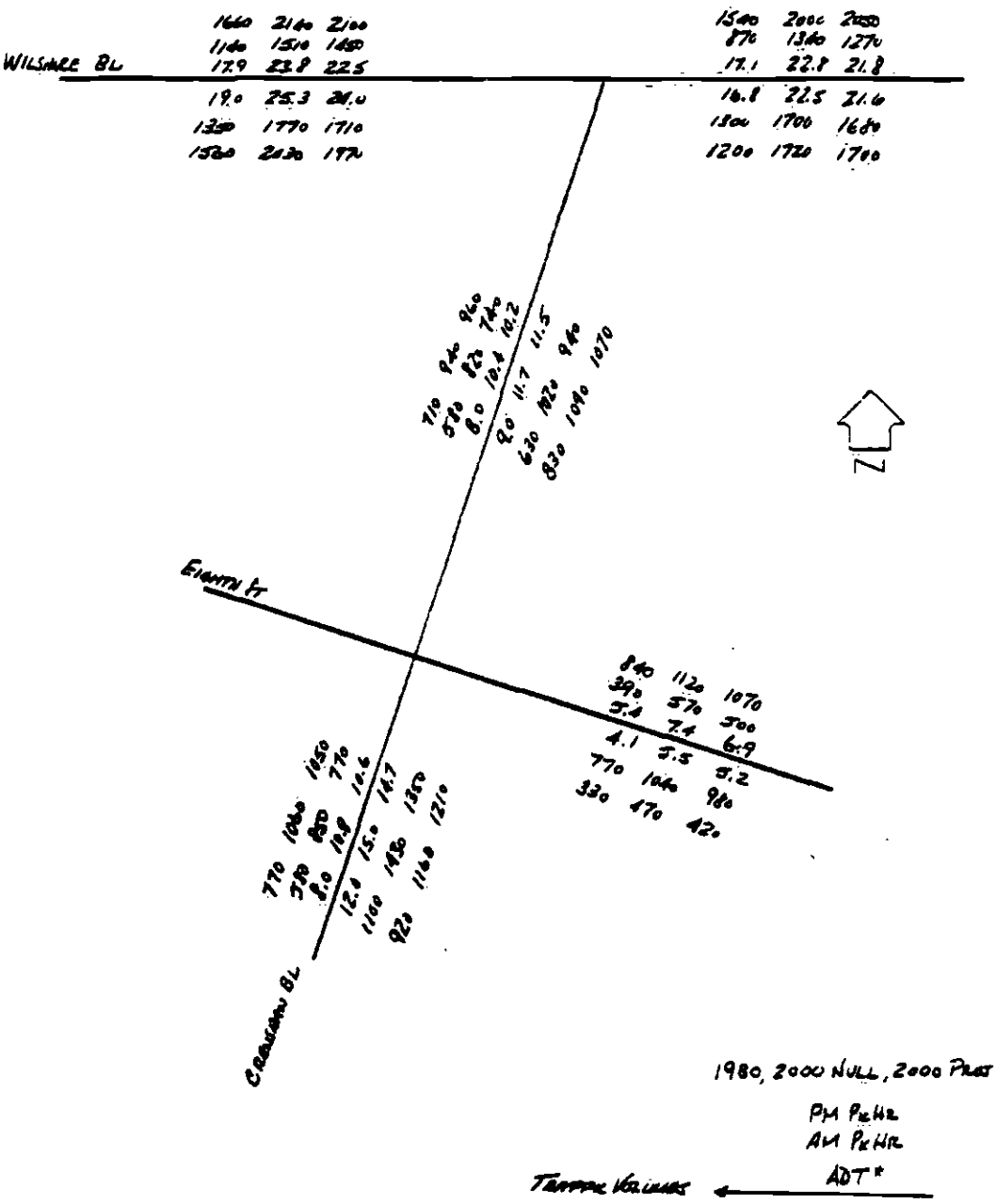
Current traffic volumes on Crenshaw Boulevard, Wilshire Boulevard and Eighth Street range between 9,500 and 36,900 vehicles per day in both directions. The heaviest peak-hour directional volumes are found on Wilshire Boulevard.

In the year 2000 Base (Null) Condition, traffic volumes on these arterials are projected to have generally increased between 30 and 36 percent above their 1980 levels, assuming a moderately high level of development will have occurred but without any Metro Rail project being constructed. With the Metro Rail in operation and the same projected development, but without a station at Crenshaw and Wilshire Boulevards, traffic volumes would remain at a fairly high level on these streets, although the percentage increase over 1980 would be less. There would be very little difference in traffic volumes in the year 2000 whether or not the Crenshaw and Wilshire Station is deleted.

Traffic volumes for the 1980, 2000 Base (Null) and 2000 With Project (Option IX) (ADT, AM and PM peak hours) on all major and secondary highways were generated under WBS Tasks 18BAH1141, 1142 and 1143 and are shown on flow maps included with the working papers prepared for each task. Volumes for selected locations near the intersection of Crenshaw and Wilshire Boulevards are presented in Figure 4.1-1.

4.1.3 Intersection Evaluation

Twelve intersections in the vicinity of Crenshaw and Wilshire Boulevards were evaluated (volume/capacity index calculated) for the 1980, 2000 Base (Null) and 2000 With Project (Option IX) Conditions. The levels of service for the intersections under each condition are shown in Table 4.1-1. Completed



CRENSHAW AREA WITHOUT STATION TRAFFIC VOLUMES FIG. 4.1-1

analysis will need to be reviewed upon the generation of detailed bus operation revisions for the Metro Rail condition and when new forecasts or revised site plans are developed.

Table 4.1-1

LOS Summary

Condition	Peak Hour	Level of Service					
		A	B	C	D	E	F
1980 Existing	AM	-	5	4	2	1	-
	PM	-	1	5	5	1	-
2000 Null	AM	-	-	1	4	2	5
	PM	-	-	-	2	4	6
2000 W/ Project	AM	-	1	3	1	4	3
	PM	-	-	-	4	2	6

The 2000 Base (Null) and With Project Conditions did not include any improvements associated with City CIP projects.

Of the twelve intersections evaluated, none were projected to have an increase in the V/C index of 0.02 or more from the 2000 Base (Null) to the 2000 With Project (Option IX) Condition. One intersection would experience an increase in the V/C Index of 0.01 in the PM peak period; the remainder would all experience modest decreases. More detailed information is contained in the working papers and/or technical reports prepared for WBS Tasks 18BAH1241, 1242 and 1243.

4.2 Western and Wilshire Station (Crenshaw Deleted - Option IX)

4.2.1 General Background

Daily boardings at Crenshaw and Wilshire Station were projected to be 13,600. Of these, approximately 4,000 would be diverted to the Western and Wilshire

Station if the Crenshaw and Wilshire Station were deleted. Eighty-five percent of the anticipated increased boardings would utilize bus feeder rather than auto park-n-ride or kiss-n-ride to access the station. This station would not have any park-n-ride facilities, but is proposed to accommodate a 60-space kiss-n-ride lot and a bus bay.

4.2.2 Traffic Volumes

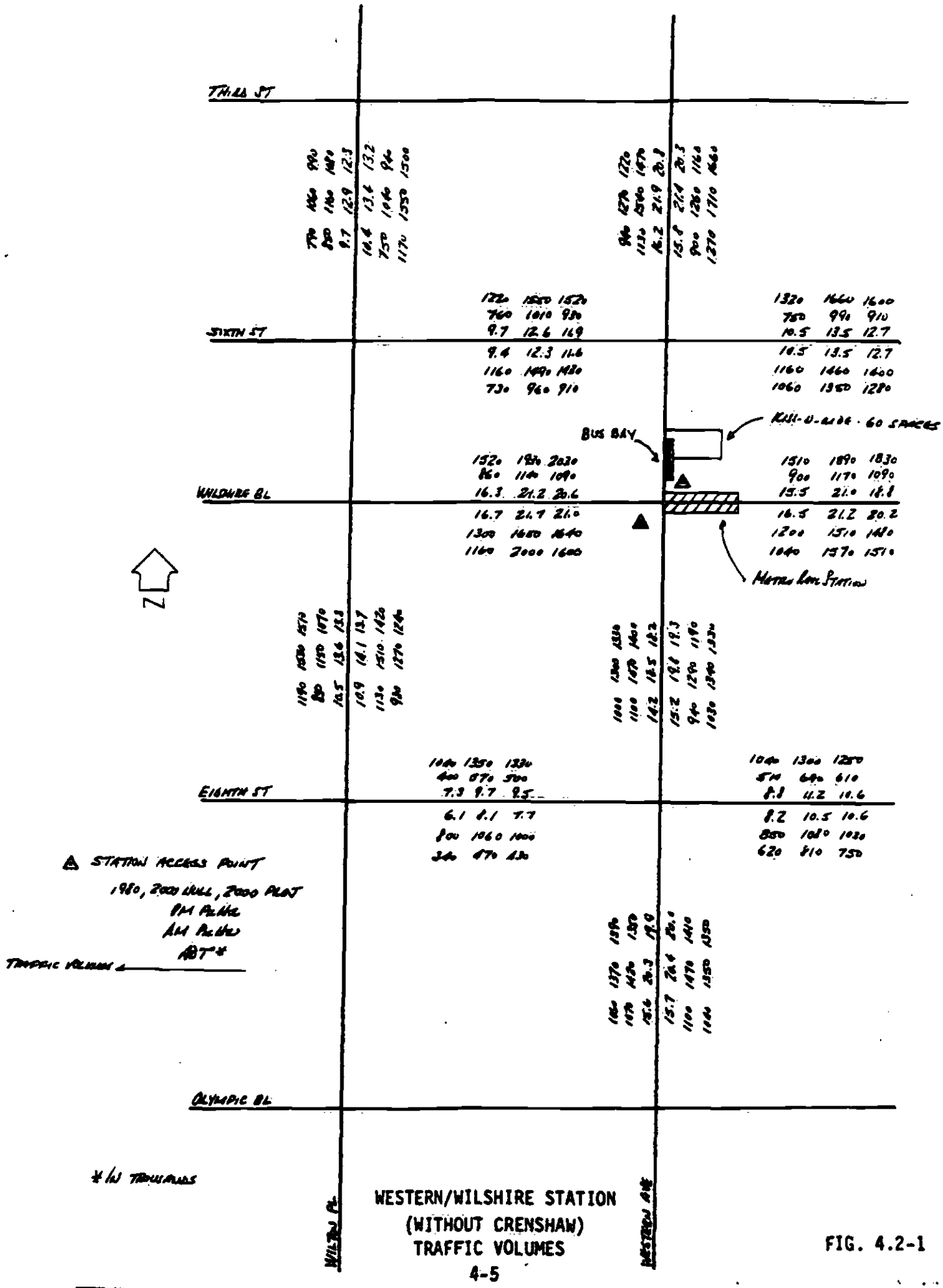
With the Crenshaw/Wilshire Station deletion, daily boardings at the Western/Wilshire Station are projected to increase from approximately 21,400 to 25,400. Park-n-ride trips would increase to 86 and 304, respectively, during the AM and PM peak hours, while kiss-n-ride trips would be 144 and 262 during the same periods. By comparison, park-n-ride trips were 49 and 127 and kiss-n-ride 70 and 132 during the AM and PM peak hours, respectively, under Options I and XII. Current ADT on Western Avenue, Wilton Place, Wilshire Boulevard and Sixth Street ranges between 19,100 and 33,900 vehicles. The heaviest peak-hour directional volumes are found on Wilshire Boulevard in both the AM and PM peak periods.

In the year 2000 Base (Null) Condition, traffic volumes on these arterials are projected to have generally increased 28 to 35 percent above their 1980 levels, assuming a fairly high growth in development but with no Metro Rail system in operation. With the implementation of Metro Rail (Option IX) and the same growth in development, traffic volumes will remain at a fairly high level on most of these streets in the vicinity of the station, although the percentage increase will be less, ranging from 21 to 28 percent. The directional peak-hour volumes also will be generally less under the 2000 With Project Condition, reflecting the relatively small number of park-n-ride and kiss-n-ride trips. The exception is Wilshire Boulevard westbound west of Western Avenue in the PM peak period.

Link volumes for 1980, 2000 Base (Null) and 2000 With Project (Option IX) Conditions are shown on flow maps included with the working papers prepared for each task. Selected volumes near the Western and Wilshire Station (Option IX) are shown on Figure 4.2-1.

4.2.3 Intersection Evaluation

Ten of the more important intersections in the vicinity of the Western and Wilshire Station were evaluated (volume/capacity index calculated) for the 1980, 2000 Base (Null) and 2000 With Project (Option IX) Conditions. The levels of service for the intersections under each condition are given in Table 4.2-1. Completed analysis will need to be reviewed upon the generation of detailed bus operation revisions for the Metro Rail condition and when new forecasts or revised site plans are developed.



WESTERN/WILSHIRE STATION
(WITHOUT CRENSHAW)
TRAFFIC VOLUMES

FIG. 4.2-1

Table 4.2-1

LOS Summary

Condition	Peak Hour	Level of Service					
		A	B	C	D	E	F
1980 Existing	AM	-	2	3	4	1	-
	PM	-	-	4	2	3	1
2000 Null	AM	-	-	-	2	5	3
	PM	-	-	-	1	3	6
2000 W/ Project	AM	-	-	2	1	4	3
	PM	-	-	-	1	3	6

The 2000 Null and With Project (Option IX) Conditions did not include any improvements associated with City CIP Projects that would change capacity.

Of the ten intersections evaluated, all showed projected decreases in the V/C index from the 2000 Base (Null) to the 2000 With Project (Option IX) Condition. More detailed information is contained in the working papers and/or technical papers prepared for WBS Tasks 18BAH1241, 1242 and 1243.

4.2.4 Parking

The 1980 condition is uncrowded. Due to projected development, the 2000 Base Condition will be approaching capacity.

The Metro Rail Project will reduce parking usage by 1,301. Although development is projected to intensify adjacent to the station, the 2000 With Project Condition will be uncrowded due to the relatively high (1,442) auto-to-transit mode shift.

Table 4.2-2

Parking Summary

Parking Condition	Station Parking Supply	Station Parking Usage	Overall Occupancy Rate	Parking (-)Deficit (+)Surplus	Number of Blocks W/Occupancy Rate		
					<0.80	0.80-0.90	> 0.90
1980 Existing	8,670	6,269	0.72	+1,534	22	3	3
2000 Base	12,015	10,360	0.86	+453	13	4	11
2000 W/ Project	11,628	9,059	0.78	+1,406	20	5	3

4.3 La Brea and Wilshire Station (Crenshaw Deleted - Option IX)

4.3.1 General Background

The SCRTD has considered several station and alignment variations for which revised ADT and AM and PM peak hour traffic volumes were developed. One variation is the deletion of the Crenshaw and Wilshire Station. Daily boardings at Crenshaw and Wilshire were projected to be 13,600. Of these, approximately 2,000 would be diverted to La Brea and Wilshire. Eighty-five percent of the anticipated increased boardings would utilize bus feeder rather than auto park-n-ride or kiss-n-ride to access the station. The station would not have any park-n-ride facilities, but may include a kiss-n-ride lot and bus bay.

4.3.2 Traffic Volumes

With the deletion of the Crenshaw and Wilshire Station, daily boardings at the La Brea/Wilshire Station are projected to increase from approximately 14,300 to 16,300. Park-n-ride trips would increase to 54 and 241 during the AM and PM peak hours respectively. Kiss-n-ride trips would be 188 and 338 during the same respective periods.

Current daily traffic volumes on La Brea Avenue, Sixth Street, Wilshire Boulevard and Olympic Boulevard range between 20,900 and 39,900 vehicles. The heaviest peak-hour volumes are on Olympic Boulevard in both the AM and PM peak hours.

In the year 2000 Base (Null) Condition, traffic volumes on these streets are projected to have generally increased 31 to 46 percent above their 1980 levels, based upon a moderately high level of development and no Metro Rail system. Assuming the same level of development and a Metro Rail system (Option IX) in operation, traffic volumes will remain at a fairly high level on these streets in the vicinity of the station, although the percentage increase will generally be less, ranging from 30 to 42 percent. The exception is La Brea Avenue south of Olympic Boulevard, which will experience a modest increase. The directional peak-hour volumes also will generally be less under the 2000 With Project (Option IX) Condition, reflecting the relatively small number of park-n-ride and kiss-n-ride trips.

The 1980, 2000 Base (Null) and 2000 With Project (Option IX) volumes are on flow maps included with the working papers prepared for each task. Volumes for selected locations near the La Brea and Wilshire Station (Option IX) are on the following sketch, Figure 4.3-1.

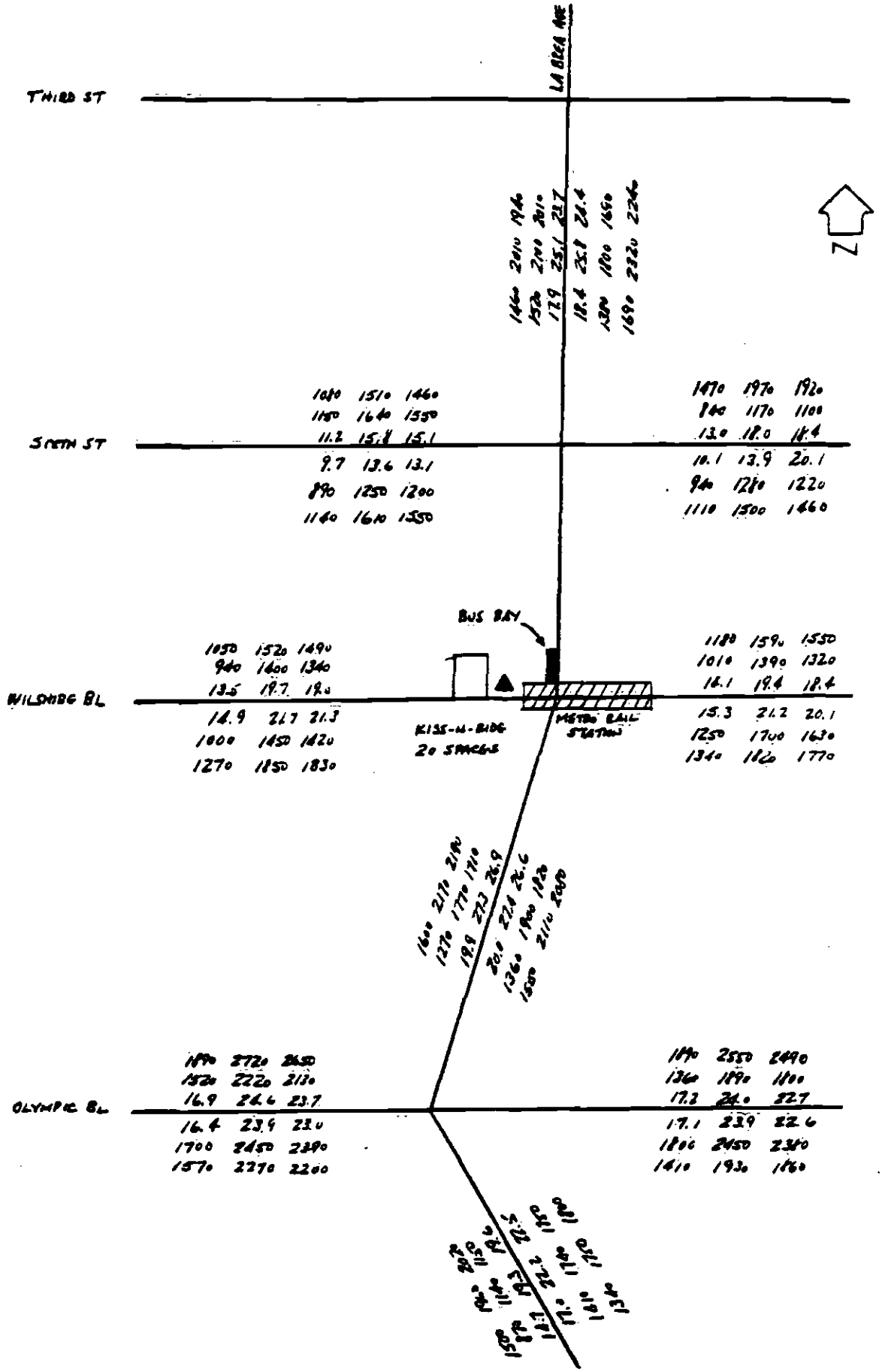
4.3.3 Intersection Evaluation

Fourteen intersections in the vicinity of the La Brea and Wilshire Station were evaluated for the 1980, 2000 Base (Null) and 2000 With Project (Option IX) Conditions. The levels of service for the intersections under each condition are shown in Table 4.3-1. Completed analysis will need to be reviewed upon the generation of detailed bus operation revisions for the Metro Rail condition and when new forecasts or revised site plans are developed.

Table 4.3-1

LOS Summary

Condition	Peak Hour	Level of Service					
		A	B	C	D	E	F
1980 Existing	AM	3	1	2	6	2	-
	PM	1	2	-	6	5	-
2000 Null	AM	-	-	1	4	1	8
	PM	-	-	-	3	1	10
2000 W/ Project	AM	-	-	4	2	2	6
	PM	-	-	-	3	1	10



LA BREA/WILSHIRE (WITHOUT CRENSHAW) TRAFFIC VOLUMES

FIG. 4.3-1

The 2000 Base (Null) and With Project Conditions included street improvements produced by one City CIP candidate project. That candidate project would add left-turn pockets eastbound and westbound on Wilshire Boulevard at La Brea Avenue.

Of the fourteen intersections evaluated, none showed a projected increase in the V/C index of 0.02 or more from the 2000 Null to the 2000 With Project Condition. One intersection would experience an increase of 0.01 while all of the others would experience a decrease in the V/C index. More detailed information is contained in the working papers and/or technical papers prepared for WBS Tasks 18BAH1241, 1242 and 1243.

4.3.4 Parking

The 1980 Parking Condition is uncrowded. Due to projected development, the 2000 Base Condition will be slightly worse, but still uncrowded.

The Metro Rail Project will reduce parking usage by 1,109. Although development is projected to intensify adjacent to the station, the relatively high (1,248) auto-to-transit mode shift will cause a slight improvement in the already uncrowded parking condition.

Table 4.3-2

Parking Summary

Parking Condition	Station Parking Supply	Station Parking Usage	Overall Occupancy Rate	Parking (-)Deficit (+)Surplus	Number of Blocks W/Occupancy Rate		
					<0.80	0.80-0.90	> 0.90
1980 Existing	4,152	2,964	0.71	+773	24	4	8
2000 Base	4,780	3,596	0.75	+706	23	4	9
2000 W/ Project	5,544	4,112	0.74	+878	24	5	7

4.4 Studio City

4.4.1. General Background

The Studio City Station would be located off-street at south of Bluffisde Drive, southwest of the Hollywood Freeway, north of Ventura Boulevard and east

of Vineland Avenue. This station would have a 2,500-space parking structure, a separate kiss-n-ride facility and an off-street bus facility. Both the park-n-ride and kiss-n-ride facilities would be accessed from Ventura Boulevard and a driveway north of the facilities would be reached via Vineland Avenue. The bus facility would be accessed from Ventura Boulevard.

The area immediately around the proposed station location is primarily residential and recreational except for commercial development along Ventura Boulevard. Across the Hollywood Freeway northeast of the proposed site are MCA Headquarters and Universal Studios. A 36-story, 700,000 sq. ft. office building, which will be the headquarters for the Getty Oil Corporation, is under construction on the east side of Lankershim Boulevard adjacent to the Hollywood Freeway. The area is served by Lankershim Boulevard, Vineland Avenue and Ventura Boulevard-Cahuenga Boulevard West, all designated major highways, and Cahuenga Boulevard, a designated secondary highway. The Hollywood Freeway passes to the north of the proposed station.

4.4.2 Traffic Volume

A 2,500-space parking structure is proposed for this station, as well as a separate 35-space kiss-n-ride lot. An off-street bus facility is planned; however, bus line volume information at this station was not available. It is forecast that daily boardings at this station will range from 13,600 to 14,400 under Options I, IX and XII. Detailed information on boardings and mode-of-access for numerous other options were generated by Barton-Aschman for the SCRTD and are contained in the working paper prepared by LADOT for WBS Task 18BAH1143. The AM and PM peak-hour park-n-ride trips are projected to be approximately 700 and 1,100, respectively, while kiss-n-ride boardings are expected to account for 150 and 220 auto trips for the same periods.

Current traffic volumes on Lankershim Boulevard, Vineland Avenue and Ventura Boulevard-Cahuenga Boulevard West range between 19,000 and 31,000 vehicles per day in both directions. The heaviest peak-hour directional volumes are found on Cahuenga Boulevard West in the AM peak-hour and on Lankershim Boulevard in the PM peak hour.

For the year 2000 Base (Null) Condition, traffic volumes on these arterials are projected to have generally increased 18 to 50 percent above their 1980 levels, based upon a fairly high level of development but without the implementation of Metro Rail. With Metro Rail in operation and the same level of projected development, traffic volumes will remain at a fairly high level on most of these streets in the vicinity of the station, although the percentage increase over 1980 levels will generally be less. The exceptions are Lankershim Boulevard between Tour Center Drive and Ventura Boulevard-Cahuenga Boulevard West and Vineland Avenue north of Ventura Boulevard. These links will have higher volumes under the 2000 With Project Condition due to park-n-ride and kiss-n-ride trips.

More importantly, with the Metro Rail line installed, the directional peak-hour volumes will increase much more significantly due to the fact that the park-n-ride and kiss-n-ride vehicle trips have much sharper peaking characteristics relative to normal background traffic.

Link volumes for the years 1980, 2000 Base (Null) and 2000 With Project for all major and secondary highways in the Regional Core were generated under WBS Tasks 18BAH1141, 1142 and 1143 and are shown on flow maps included with the various working papers. Volumes for selected locations near the Studio City Station are shown on Figure 4.4-1.

4.4.3 Intersection Analysis

Twelve intersections near the Studio City Station were evaluated (volume/capacity index calculated) for the 1980, 2000 Base (Null) and 2000 With Project Conditions. The levels of service for the intersections under each condition are presented in Table 4.4-1.

Table 4.4-1

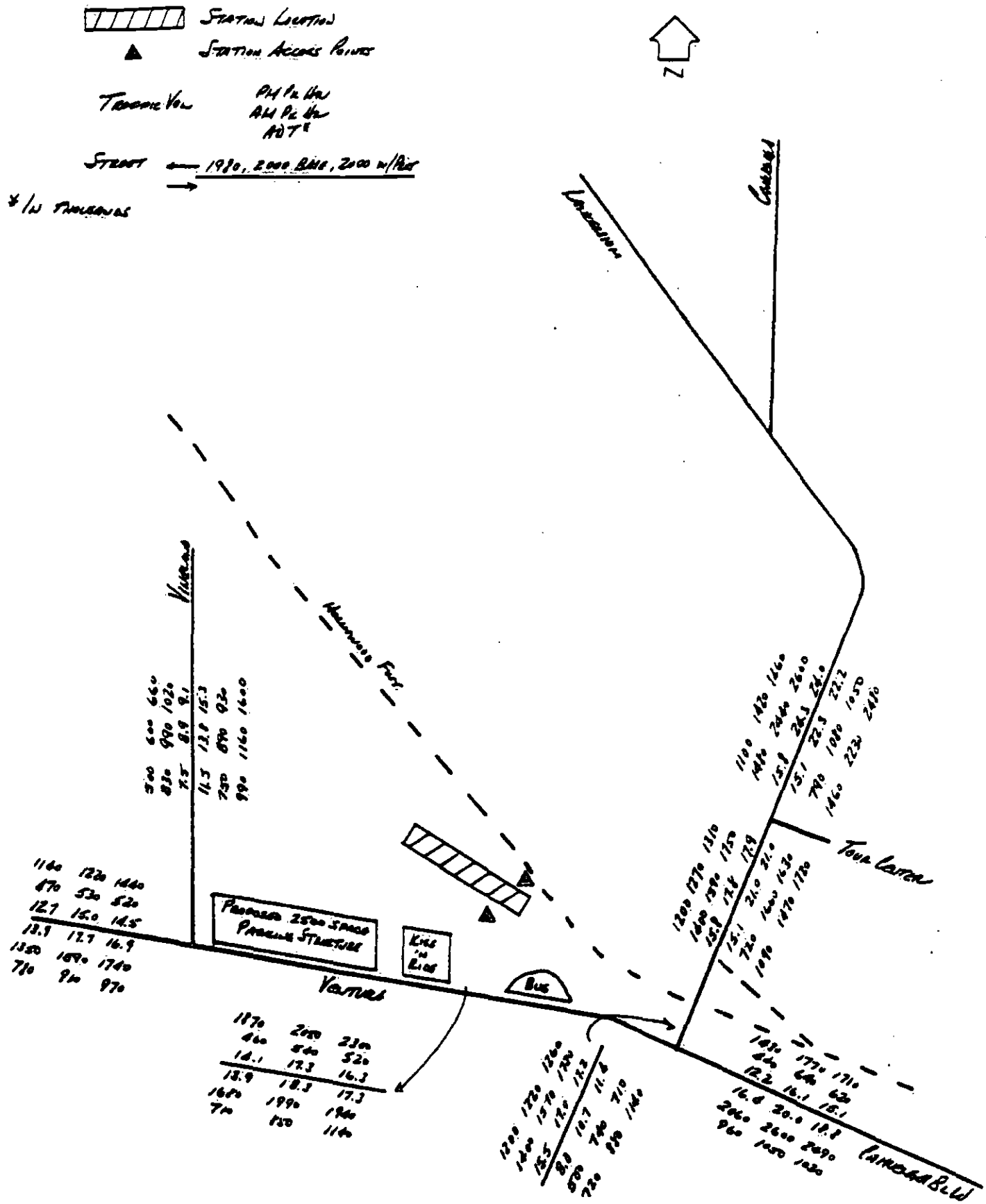
LOS Summary

Condition	Peak Hour	Level of Service					
		A	B	C	D	E	F
1980 Existing*	AM	4	2	2	2	1	-
	PM	3	2	3	2	-	1
2000 Null*	AM	1	1	1	5	2	1
	PM	-	1	3	6	-	1
2000 W/ Project	AM	2	-	2	2	5	1
	PM	-	-	4	2	3	3

*Only eleven signalized intersections existed in 1980 and under the 2000 Base (Null) Condition.

The 2000 Base (Null) and With Project Conditions did not include any improvements associated with City CIP projects.

Six of the twelve intersections evaluated were projected to have an increase in their V/C index of 0.02 or more from the 2000 Base (Null) to the 2000 With Project Condition and also to have a 2000 With Project LOS of D or worse. Of



STUDIO CITY STATION TRAFFIC VOLUMES

FIG. 4.4-1

the other six intersections evaluated, four are expected to experience a slight increase in the V/C indices; one would experience a slight decrease, and, one, the station access at Ventura Boulevard, would exist only under the 2000 With Project Condition. More detailed information is contained in the working papers and/or technical papers prepared for WBS Tasks 18BAH1241, 1242 and 1243.

Of the six intersections identified above, five had 2000 With Project LOS of E or worse; the other one had 2000 With Project LOS of D. The five intersections were evaluated further for development of possible mitigation measures. The results of this additional evaluation are presented in Chapter 6.

4.4.4 Parking

The 1980 condition is uncrowded. Due to projected development, the 2000 Base Condition will be approaching capacity.

The Metro Rail Project will provide 2,5000 parking spaces, while increasing parking usage by 1,557. Because development is projected to intensify adjacent to the station and the developments are projected to provide less parking supply per floor area, the 2000 With Project Condition will be extremely congested.

Table 4.4-2

Parking Summary

Parking Condition	Station Parking Supply	Station Parking Usage	Overall Occupancy Rate	Parking (-)Deficit (+)Surplus	Number of Blocks W/Occupancy Rate		
					<0.80	0.80-0.90	> 0.90
1980 Existing	5,902	4,132	0.70	+1,180	12	1	1
2000 Base	13,978	12,208	0.87	+372	10	2	2
2000 W/ Project	13,743	14,432	1.05	-2,063	0	0	14

4.5 North Hollywood (Chandler at Lankershim - Aerial)

4.5.1 General Background

The North Hollywood Station (aerial) would be located east of Lankershim Boulevard between the Chandler Boulevard north and south roadways and would

have an east-west orientation. The proposal studied included two parking structures with a total of 2,500 spaces, an off-street bus facility and a kiss-n-ride lot. The parking structures, east and west of Tujunga Avenue, would be accessible from Chandler Boulevard, north and south roadways. The kiss-n-ride lot would be accessed from Chandler Boulevard, south roadway. The bus facility would be accessed from Chandler Boulevard, north roadway.

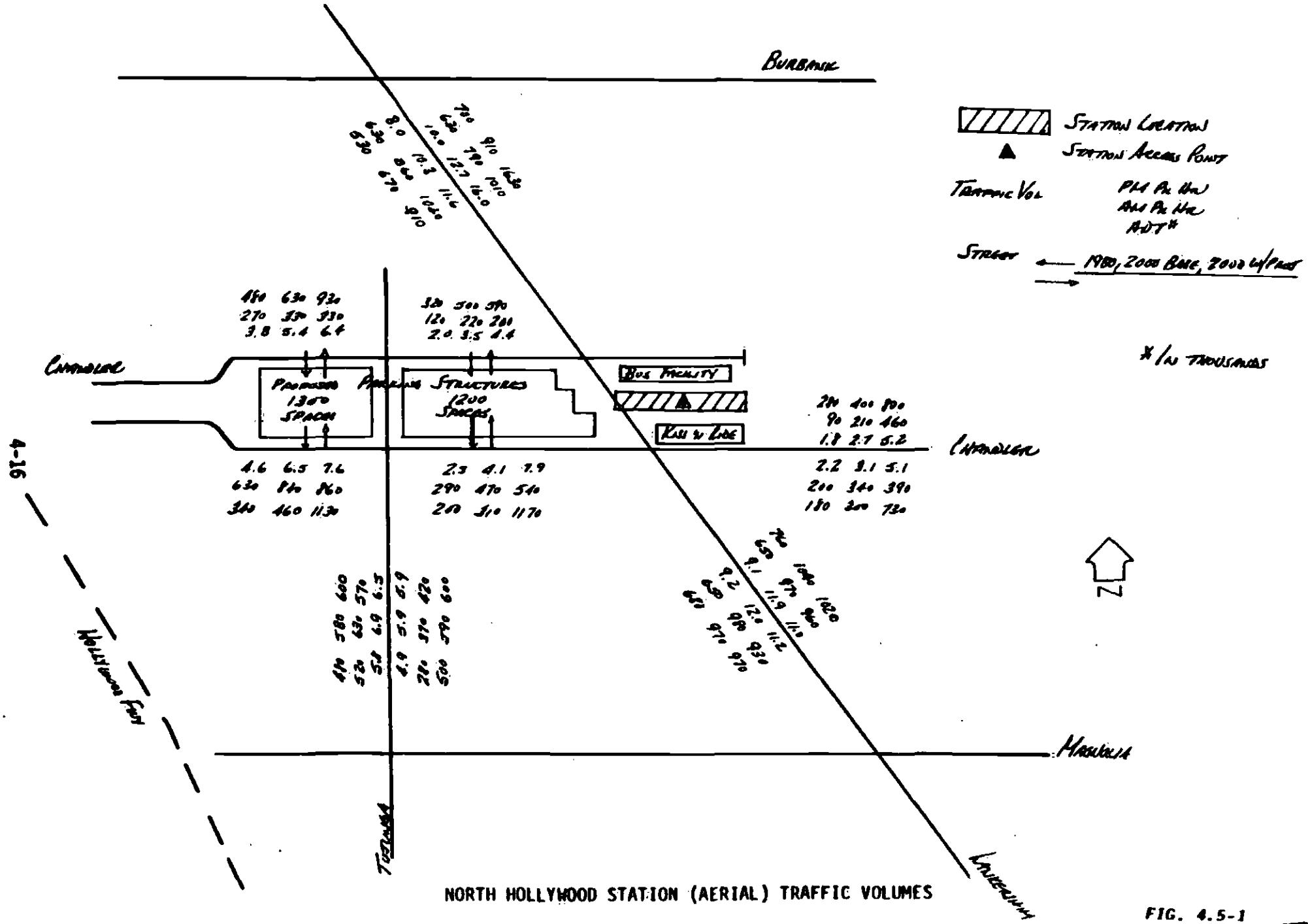
The area around the station has many different land uses. Auto dealerships are located along Lankershim Boulevard to the north. Low-rise commercial retail uses predominate along Lankershim Boulevard to the south. The area along Chandler Boulevard is used for industrial and warehousing purposes. An office/warehouse facility extending from Tujunga Avenue westward along Chandler Boulevard was recently completed. The station lies within the boundaries of the North Hollywood redevelopment area. The first phase of redevelopment is planned for the area south of Chandler Boulevard and east of Lankershim Boulevard. Residential land use exists to the north and east of the station. The area is served by Lankershim and Chandler Boulevards (both designated major highways) and Tujunga and Magnolia Avenues (both designated secondary highways).

4.5.2 Traffic Volumes

The SCRTD is proposing two parking structures with a total of 2,500 spaces, an off-street bus facility and a kiss-n-ride lot near the station. Bus line volume information for this station was not available. In 1980, there were approximately 230 surplus off-street commercial parking spaces in the area. Daily boardings at this station are projected to be 16,600 and 17,000 under Option I and IX, respectively. Detailed information on boardings and mode-of-access for numerous other options were generated by Barton-Aschman for the SCRTD and is contained in the working paper prepared by LADOT for WBS Task 18BAH1143. The AM and PM peak-hour park-n-ride trips are projected to be approximately 930 and 1,490, respectively; kiss-n-ride auto trips are projected to be 370 and 560 for the same time periods.

Current traffic volumes on Chandler Boulevard, Lankershim Boulevard and Tujunga Avenue range between 4,000 to 18,000-plus vehicles per day in both directions. Lankershim Boulevard experiences the heaviest peak-hour volumes.

For the year 2000 Base (Null) Condition, traffic volumes on these arterial streets are expected to increase 20 to 69 per cent above their 1980 levels, assuming moderately high growth in development but with the Metro Rail project not constructed. The 69 percent increase on the Chandler Boulevard between Tujunga Avenue and Lankershim Boulevard is misleading because the 1980 two-way volume is only 4,500 vehicles and the 2000 volume is 7,600. With the operation of Metro Rail and the same level of projected development, the percentage increase of traffic volumes over 1980 levels will generally be greater than without Metro Rail. This is due to the large number of park-n-ride and kiss-n-ride trips forecast at this station, which will have the most impact on Chandler Boulevard. More importantly, with Metro Rail in operation, the directional peak-hour volumes will increase much more significantly due to the fact that the park-n-ride and kiss-n-ride auto trips have much sharper peaking characteristics compared to normal background traffic.



NORTH HOLLYWOOD STATION (AERIAL) TRAFFIC VOLUMES

FIG. 4.5-1

Link volumes on all major and secondary highways for the 1980, 2000 Base (Null) and 2000 With Project Conditions are shown on flow maps included with the working papers prepared for each task. Volumes for selected locations near the North Hollywood Station are shown on Figure 4.5-1.

4.5.3 Intersection Analysis

As in Section 3.17.3, the same 17 intersections in the vicinity of the proposed North Hollywood Station were evaluated for the 1980, 2000 Base (Null) and 2000 With Project Conditions. The levels of service for the intersections under each condition are listed in Table 4.5-1.

Table 4.5-1

LOS Summary

Condition	Peak Hour	Level of Service					
		A	B	C	D	E	F
1980 Existing	AM	10	4	2	1	-	-
	PM	9	2	4	-	1	1
2000 Null	AM	7	5	3	2	-	-
	PM	4	3	6	3	1	-
2000 W/ Project	AM	5	5	4	1	1	1
	PM	3	1	5	4	2	2

The 2000 Null and With Project Conditions included the street improvements previously mentioned in 3.17.3.

4.5.4 Parking

The 1980 condition is uncrowded. Due to projected development, the 2000 Base Condition will be worse, but still uncrowded.

The Metro Rail Project will provide 2,500 parking spaces, while increasing parking usage by 1,928. Because development is projected to intensify ad-

jacent to the station and the developments are projected to provide less parking supply per floor area, the 2000 With Project Condition will be at capacity.

Table 4.5-2

Parking Summary

Parking Condition	Station Parking Supply	Station Parking Usage	Overall Occupancy Rate	Parking (-)Deficit (+)Surplus	Number of Blocks W/Occupancy Rate		
					<0.80	0.80-0.90	> 0.90
1980 Existing	4,804	2,307	0.48	+2,017	25	1	0
2000 Null	6,229	4,313	0.69	+1,293	21	0	1
2000 W/ Project	8,048	7,476	0.93	-233	0	0	22

4.6 North Hollywood (Off-street East of Lankershim/Commercial Core)

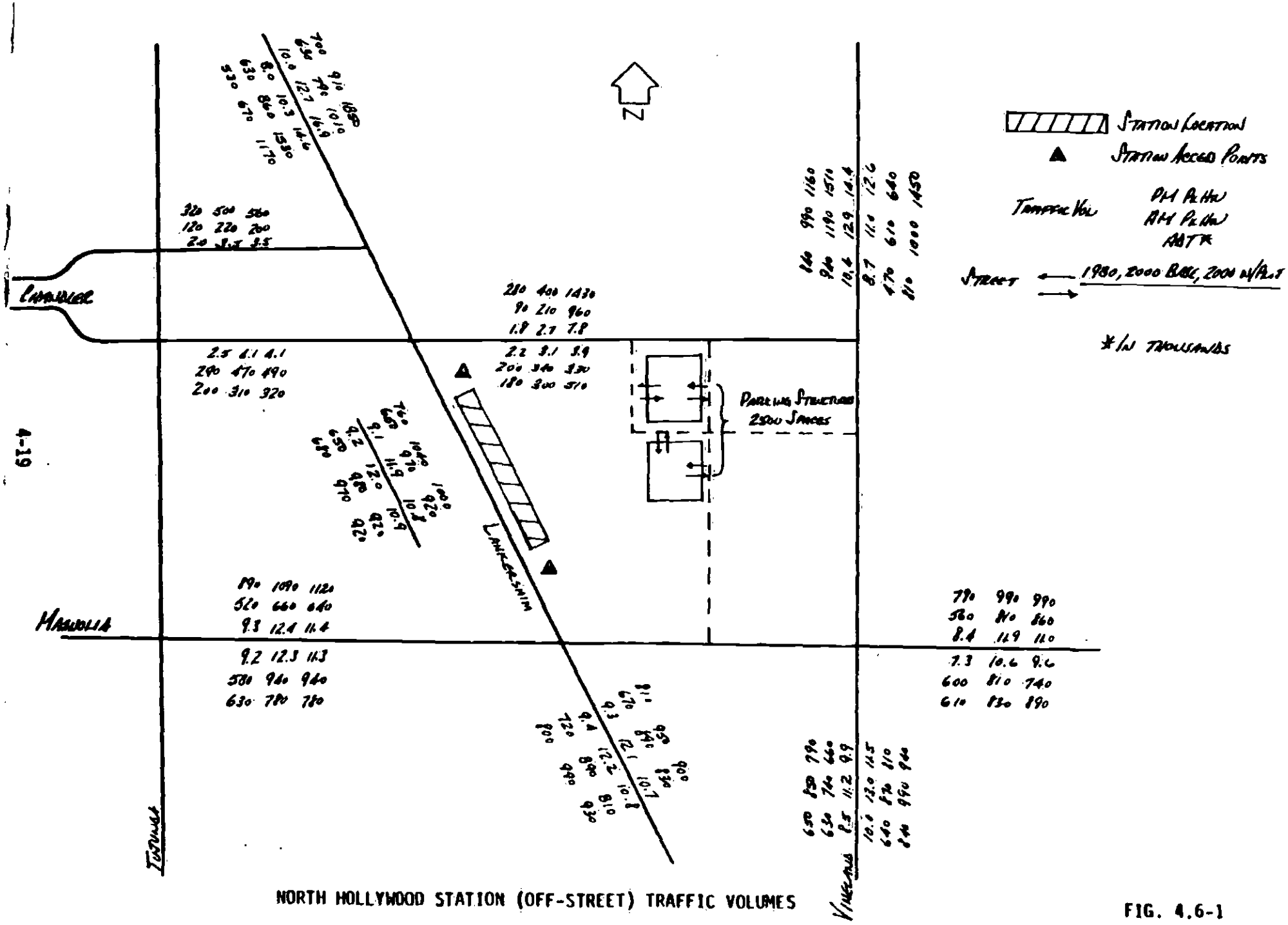
4.6.1 General Background

The North Hollywood Station would be located underground east of and parallel to Lankershim Boulevard between Chandler Boulevard and Magnolia Boulevard. The proposal included two parking structures with a total of 2,500 spaces, an off-street bus facility and a kiss-n-ride lot. All parking facilities located between Chandler Boulevard and Magnolia Boulevard and west of Vineland Avenue, would be accessed from Chandler Boulevard (south roadway), Vineland Avenue and Magnolia Boulevard via Blakeslee Avenue and Weddington Street. The location of the bus facilities was not known.

The land use description around this proposed station is identical to that given in Section 4.5.1.

4.6.2 Traffic Volumes

The information in this section is identical to that described in 4.5.2. Volumes for selected locations near the North Hollywood Station are shown on Figure 4.6-1.



NORTH HOLLYWOOD STATION (OFF-STREET) TRAFFIC VOLUMES

FIG. 4.6-1

4.6.3 Intersection Analysis

As in Section 4.5.3, the same 17 intersections in the vicinity of the proposed North Hollywood Station were evaluated (volume/capacity index calculated) for the 1980, 2000 Null and 2000 With Project Conditions. The levels of service for these intersections under each condition are summarized below.

Table 4.6-1

LOS Summary

Condition	Peak Hour	Level of Service					
		A	B	C	D	E	F
1980 Existing	AM	10	4	2	1	-	-
	PM	9	2	4	-	1	1
2000 Null	AM	7	5	3	2	-	-
	PM	4	3	6	3	1	-
2000 W/ Project	AM	7	4	2	1	1	2
	PM	3	2	6	4	-	2

The 2000 Base (Null) and With Project Conditions included the street improvements previously mentioned in 4.5.3.

Of the seventeen intersections evaluated, four were projected to have an increase in their V/C index of 0.02 or more from the 2000 Base (Null) to the 2000 With Project Condition and also to have a 2000 With Project LOS of D or worse. Of the remaining thirteen intersections, six would experience slight increases in the V/C indices, six are expected to experience slight decreases in the V/C indices and one is expected to remain unchanged. More detailed information is contained in the working papers and/or technical papers prepared for WBS Tasks 18BAH1241, 1242 and 1243.

4.6.4 Parking

The 1980 Condition is uncrowded. Due to projected development, the 2000 Base condition will be worse, but still uncrowded. The Metro Rail Project will provide 2,500 parking spaces while increasing parking usage by 1,928. Because development is projected to intensify adjacent to the station and the developments are projected to provide less parking supply per floor area, the 2000 With Project Condition will be at capacity.

Table 4.6-2

Parking Summary

Parking Condition	Station Parking Supply	Station Parking Usage	Overall Occupancy Rate	Parking (-)Deficit (+)Surplus	Number of Blocks W/Occupancy Rate		
					<0.80	0.80-0.90	>0.90
1980 Existing	4,804	2,307	0.48	+2,017	25	1	0
2000 Null	6,229	4,313	0.69	+1,293	21	0	1
2000 W/ Project	8,048	7,476	0.93	-233	0	0	22

CHAPTER 5 - VEHICLE MILES OF TRAVEL

One method of describing the overall regional impact of the Metro Rail Project is to calculate the expected change in vehicle miles of travel (VMT) since there is expected to be a mode shift from automobiles to rail. For the purpose of this analysis, VMT for both the Metro Area network and the Regional Core were calculated for the 1980, 2000 Base (Null), 2000 With Project (LPA) and 2000 With Project (MOS) Conditions. The methodology utilized was describe in Chapter 2 and in the working papers for Tasks 18BAH1141, 1142, and 1143.

Based on the output of UROAD Report 6, there were 14,185,000 miles of travel per weekday in the Regional Core area, while 28,325,000 miles of travel occurred in the Metro Area network per weekday in 1980. For the 2000 Base (Null) Condition the Regional Core and Metro Area network weekday VMT totals became 17,826,000 and 35,254,000, respectively. This represents roughly a 25 percent increase in weekday VMT from 1980 to the 2000 Base (Null) Condition.

The methodology utilized for 1980 and 2000 Base (Null) VMT calculations was modified for the With Project calculations. This procedure utilized the UROAD Report 6 output and also an additional series of calculations to identify the VMT associated with station auto access trips. The LPA (Option I/XII) weekday VMT was 17,654,000 and 35,035,000 for the Regional Core and Metro Area Network, respectively. For the MOS (Option VII) the weekday VMT was 17,686,000 and 35,071,000. A detailed breakdown of the VMT by area, facility type and condition is provided in Table 5-1.

Table 5-1

VMT Summary

Total Weekday (Daily) VMT (in Thousands)

Condition	Freeway	Arterial	Local	Total
REGIONAL CORE				
1980	6,092	7,384	709	14,185
2000 Base (Null)	7,566	9,369	891	17,826
LPA (Opt. I/XII)				
Background	7,526	9,138	877	17,541
Station Access	30	78	6	113
TOTAL	7,556	9,216	883	17,654
MOS (Option VII)				
Background	7,542	9,214	881	17,637
Station Access	16	30	2	49
TOTAL	7,558	9,244	883	17,686

METRO AREA NETWORK

1980	13,882	13,027	1,416	28,325
2000 Base (Null)	17,086	16,405	1,763	35,254
LPA (Opt. I/XII)				
Background	17,049	15,991	1,739	34,779
Station Access	107	136	13	256
TOTAL	17,156	16,127	1,752	35,035
MOS (Opt. VII)				
Background	17,050	16,135	1,746	34,931
Station Access	69	64	7	140
TOTAL	17,119	16,199	1,753	35,071

CHAPTER 6 - TRAFFIC CIRCULATION - MITIGATION MEASURES

6.1 Background

It was assumed that by the year 2000, the arterial street system would include certain capital improvements as a result of the implementation of the City's five-year Capital Improvement Program (CIP), Community Redevelopment Agency (CRA) projects and private development projects involving street widening. Additional operational (TSM) improvements that would likely be considered as projected background traffic volumes are realized and implemented as part of the Department of Transportation's annual work program were also considered.

The circulation conditions anticipated to occur with the construction of the 18.6 mile LPA with 17 stations were analyzed and those intersections expected to be adversely impacted due to construction of the Metro Rail Project were identified. This was accomplished through comparison of the results of the 2000 Base (Null) Condition V/C ratios with those of the 2000 With Project V/C ratios. The criteria used to determine if an intersection is expected to be adversely impacted are (1) the intersection would be anticipated to operate at a level of service of E or worse after completion of the Metro Rail Project and (2) a volume/capacity index increase of two percent over the year 2000 Base (Null) Condition was expected.

6.2 Methodology

6.2.1 Types of Mitigation Measures

The various mitigation measures considered for the intersections studied under this task are listed below:

- Increase approach capacity through installation of a parking restriction.
- Restripe approach to provide an additional through lane and/or turn lane.
- Install left-turn restriction.
- Addition or revision of traffic signal phases to accomodate the projected traffic pattern.
- Approach widening.
- Reversible lanes.

6.2.2 Selection of Mitigation Measures

Generally, the least restrictive measure which would completely mitigate the anticipated adverse impact was chosen. If there were no measure which would completely mitigate an anticipated adverse impact, then that measure which would most effectively improve the intersection level of service was selected. More detailed information on methodology is available in Chapter 2.

6.3 Summary of Results of Mitigation

Twenty-nine intersections were identified as being adversely impacted by construction of the Metro Rail Project. The suggested mitigation measures for these intersections are:

- Alameda/Macy — Provide left turn channelization, three through lanes in each direction and a northbound right-turn lane on Alameda Street.

- Beverly/Gardner — Widen Beverly Boulevard to provide three through lanes and left-turn channelization in each direction.

- Bluffside-Universal Exit/Lankershim — Widen southbound Lankershim Boulevard north of Bluffside Drive to provide a right-turn lane; provide signal with Lankershim (ØA) being given every alternate phase and Bluffside (ØB) and the Universal Exit (ØC) alternating between the Lankershim phase (ØA-ØB-ØA-ØC); prohibit pedestrian crossing of the north leg; widen Bluffside to provide two lanes each direction west of Lankershim (two lanes westbound plus an eastbound left-turn-only lane and an eastbound optional left-through-right lane).

- Burbank/Lankershim/Tujunga — Install eastbound right-turn-only and optional right-turn lanes with associated parking restrictions.

- Cahuenga/Hollywood — Install reversible lane on Cahuenga Boulevard; three lanes southbound and two lanes northbound during the morning peak period, two lanes southbound and three lanes northbound during the evening peak period. Prohibit left turns northbound and southbound during the morning peak period (already prohibited in PM). Install AM and PM peak period parking restrictions on both sides of Cahuenga.

- Cahuenga/Hollywood Freeway Ramps-Regal — Construct Bluffside bridge (new westerly access) over the Hollywood Freeway.

- Cahuenga/Lankershim — Provide additional through lane eastbound on Lankershim Boulevard; construct Bluffside bridge (new westerly access).

- Cahuenga/Sunset — No mitigation measure was suggested.

- Chandler/Lankershim (south intersection) — Widen eastbound approach to provide four lanes; two left-turn-only lanes, an optional right-turn/through lane and a right-turn- only lane.

- Chandler/Tujunga (north intersection)	Widen southbound approach to provide a through lane and a right-turn-only lane; install parking restrictions southbound.
- Crescent Heights/ Fountain	Restripe Crescent Heights Boulevard for three through lanes with left-turn channelization in each direction. Install peak-hour parking restrictions southbound in the AM and northbound in the PM.
- Fairfax/Olympic	Widen Fairfax Avenue south of Olympic Boulevard to provide three lanes northbound and two lanes with full-time parking southbound. Install AM peak-period parking restrictions northbound. Between Olympic and San Vicente Boulevard, widen Fairfax to provide three through lanes northbound plus two through lanes and a right-turn-only lane southbound.
- Fairfax/San Vicente	South of San Vicente Boulevard, widen Fairfax Avenue to provide three through lanes northbound and two through plus a right-turn lane southbound. North of San Vicente, install peak period parking restrictions on both sides of Fairfax and restripe Fairfax for three through lanes in each direction.
- Hollywood Freeway Off-Ramp-Universal/ Lankershim	Construct the Bluffside bridge (new westerly access) over the Hollywood Freeway; widen Lankershim Boulevard to provide a southbound right-turn lane.
- Irolo/Eighth	Restripe Eighth Street to provide east- and west-bound left-turn pockets; install peak-hour parking restrictions (westbound in the AM, eastbound in the PM).
- Lankershim/North Gate-P/R Access	Construct the Bluffside Bridge (new westerly access) over the Hollywood Freeway.
- Lankershim/Tour Center	Build Bluffside Bridge (new westerly access) over the Hollywood Freeway; widen southbound approach to provide two left-turn lanes and three through lanes.
- Macy/Mission	No mitigation measure suggested.
- Macy/Vignes	Install right-turn lanes northbound, eastbound and westbound.

- Normandie/Wilshire	Prohibit northbound left turns during the PM peak period.
- Normandie/Third	No mitigation measure suggested.
- Normandie/Sixth	No mitigation measure suggested.
- Olive/Fifth	No mitigation measure suggested.
- Ramirez/Vignes-Santa Ana Freeway Ramps	Construct the entrance/exit to the proposed Metro Rail Union Station parking facility to provide two lanes in and three lanes out (left-turn-only, optional left-turn and through, through and right-turn); construct an island and restripe Vignes to provide a protected right-turn lane into the parking facility, a through-lane and a left-turn lane; restripe Ramirez to provide a right-turn-only lane, a through-lane and a left-turn lane; reconstruct the island in the south leg (freeway ramps) to provide a 250 + foot left-turn lane and two through lanes northbound; install traffic signals with a multi-phase fully actuated controller.
- Ventura/Vineland	Contact the Bluffside bridge (new westerly access) over the Hollywood Freeway.
- Vermont/Sixth	Install eastbound right-turn lane.
- Virgil/Wilshire	No mitigation measure suggested.
- Virgil/Third	Restripe Virgil Avenue to provide three lanes northbound and two lanes southbound. Install a PM peak-period parking restriction on the east side of Virgil and a "No Stopping Any Time" restriction on the west side of Virgil.
- Virgil/Sixth	Widen Sixth Street to provide a 60-foot roadway within existing right-of-way and stripe to provide three through lanes westbound, two through lanes eastbound with east- and westbound left-turn lanes.

More detailed information on the measures suggested above for each intersection may be found in the technical report prepared for WBS Task 18BAH15.

The LOS and volume/capacity index numbers for the 2000 Base (Null), 2000 With Project and Mitigated Conditions are listed in Appendix A.

CHAPTER 7 - TRAFFIC IMPACTS - CONSTRUCTION

7.1 Introduction

The following sections regarding traffic impacts during construction of the Metro Rail 18-mile starter line (LPA) and various options have been largely extracted from the Preliminary Draft EIS/EIR for the project and the LADOT Technical Report, Traffic Control Policies During Construction, Task 18BAH14, dated March, 1983.

Two methods of construction will be used to build the starter system: tunneling and cut and cover. Most of the rail line will be built using tunnel construction techniques and all of the stations will be constructed using cut and cover methods. Cut and cover construction of the line will be used only in limited sections of the alignment and for special structures such as crossovers, pocket tracks and ventilation shafts. Because of the disruptive characteristics of the cut and cover process, it will be minimized for line segments. There are some areas, however, where the underlying soil is not suitable for conventional tunneling methods Therefore, cut and cover may be preferred.

7.2 Line Construction

Tunnel line construction has less impact on surrounding areas than the cut and cover method since the street surface and utilities are not appreciably disturbed and, as a result, there is less dust, noise and traffic disruption. A tunnel staging area will be required at the starting point of each tunnel drive for tunnel segment storage, loading facilities, construction equipment, personnel facilities and offices. Excavated materials will be removed through isolated construction shafts or at cut and cover excavations.

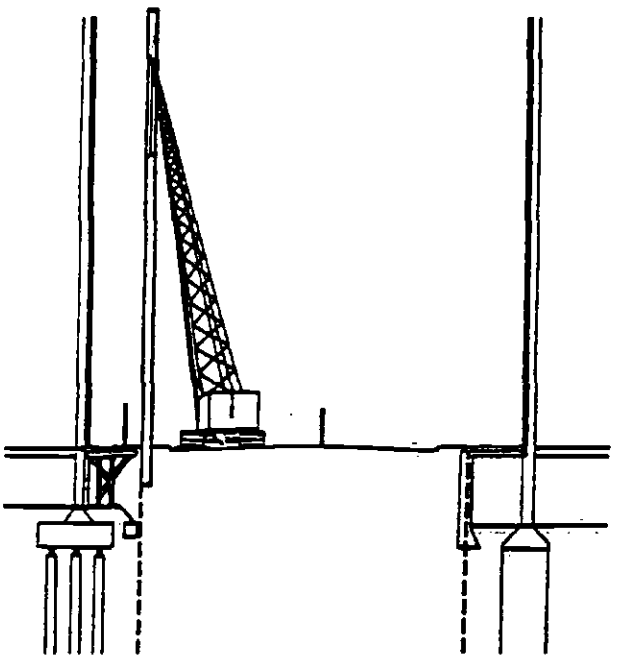
The boring machines for the tunnels will be driven from staging sites selected to minimize disruption of streets and utilities. It is expected that the tunneling effort will proceed at the same time at several points along the alignment. The total time to complete the tunnel construction is estimated to be three to three-and-one-half years for the LPA.

Excavated tunnel material (muck) will be transported from the tunnel faces to areas where it can be raised to the surface by crane or hoist. The muck will be loaded onto trucks for removal to the disposal site. The loading and hauling of tunnel waste for the 18-mile line will involve approximately 766,000 truckloads.

7.3 Station Construction

All Metro Rail stations, pocket tracks, crossover tracks and vent shafts will be built using cut and cover techniques. There are essentially four basic operations in cut and cover construction. Cross-sectional illustrations of these four phases are depicted in Figures 7.3-1 through 7.3-4.

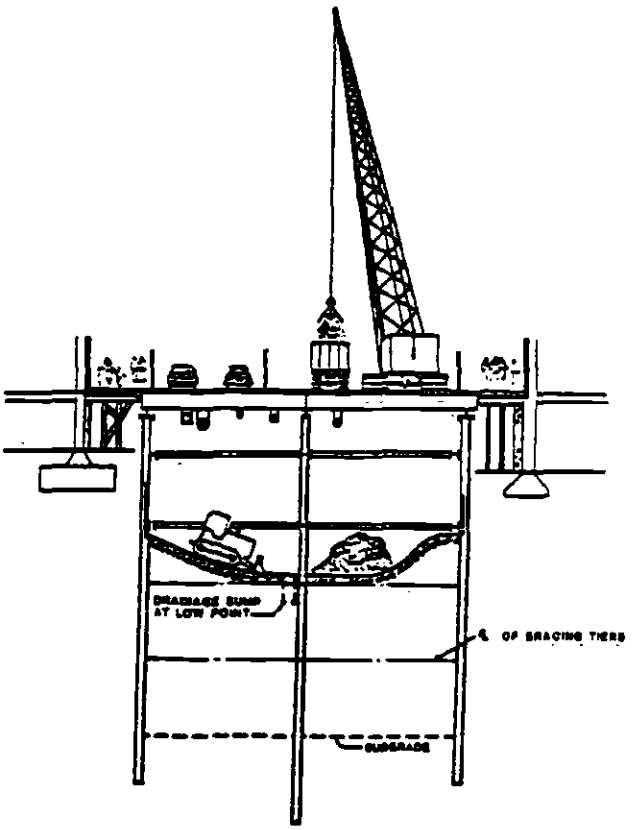
Phase 1 of the operation involves underpinning, building alterations and sheeting, and decking. The second phase is excavation and bracing. The third phase is structure installation followed by bracing removal. Phase 4, back-



SHEETING INSTALLATION REDUCES WIDTH OF PEDESTRIAN WALKWAY

PHASE 1

FIG. 7.3-1

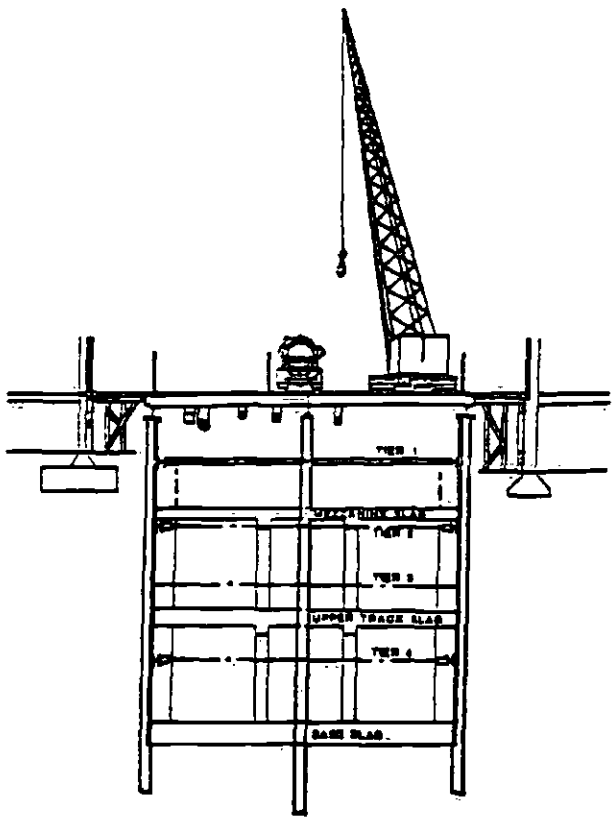


EXCAVATION AND BRACING

PHASE 2

FIG. 7.3-2

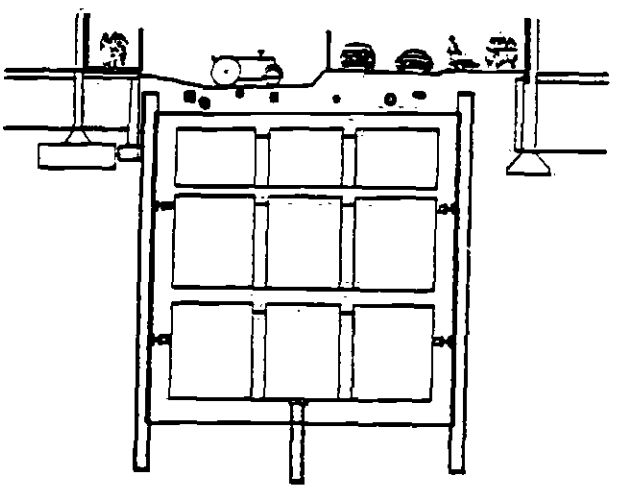
Source: Draft "Report on Construction Methods - Station Construction (WBS 148AF), Part II," September 1982, prepared by DMJM/PBQD.



STRUCTURE INSTALLATION AND BRACING AND REMOVAL

PHASE 3

FIG. 7.3-3



BACKFILLING AND SURFACE RESTORATION

PHASE 4

FIG. 7.3-4

Source: Draft "Report on Construction Methods - Station Construction (WBS 14BAF), Part II," September 1982, prepared by DMJM/PBQD.

filling and restoration, completes the cut and cover operation. The illustrations also depict how typical surface street traffic may operate on reduced roadway width due to construction activity. It is estimated that the duration of construction will be from 29 to 35 months.

Muck excavated from the station cut and cover operation will result in a disposal rate of approximately eight truckloads per hour. Backfilling the station excavation will require transported material at the rate of 15 to 20 truckloads per day for each station. An additional 3,390 truckloads of concrete will be necessary for fabricating the station structures.

7.4 Impacts to Vehicular and Pedestrian Flow

The Metro Rail starter line will be routed through built-up urban areas. The main adverse impact associated the Metro Rail construction, therefore, will be the loss of vehicular and pedestrian mobility for the duration of the construction period. Various types of construction equipment will be operating at and below surface street level, which will interfere with normal traffic operations. Heavy-duty vehicles delivering construction material and carrying away excavated material will also impede the normal traffic flow.

Vehicular and pedestrian traffic impacts during construction will be identical for all Metro Rail project alternatives along the alignment from Union Station to the Fairfax (Curson)/Wilshire Station. The Hollywood and Valley area station would not be affected by the Option VII alternative, the Minimum Operable Segment. Almost all of the adverse effects on traffic circulation will be due to the cut and cover process. By comparison, tunnel construction is expected to impact traffic flow very little. Thus, the following comments are mainly concerned with cut and cover construction.

Some traffic lanes will be closed to vehicles for a short period of time while other lanes will be closed to non-construction vehicles for the duration of the project. However, it is understood that no streets will be closed entirely to either vehicular or pedestrian traffic where station construction occurs. To avoid a street closure, construction activity will be shifted from one side of the street to the other in order to maintain some traffic flow. There will be at least three shiftings of vehicular traffic flow patterns on both the main street and contiguous cross streets. Generally,the greatest impact on vehicular traffic will be on those streets which parallel the long axes of the stations, such as Hill Street, Wilshire Boulevard and Fairfax Avenue.

The closure of traffic lanes, temporary or otherwise, will mean reduced street capacity, likely resulting in traffic congestion along and near the construction corridor. Traffic disruptions will increase around pocket or crossover tracks, currently proposed at Union Station, Alvarado/Wilshire, Vermont/ Wilshire, La Brea/Wilshire, Fairfax (Curson)/Wilshire, La Brea/Sunset, Hollywood/Cahuenga and the North Hollywood Stations. The disruption will also vary depending on whether a station is built on or off-street. Currently the Alvarado/Wilshire, Vermont/Wilshire, Beverly/Fairfax and Hollywood/Cahuenga Stations would be located off-street.

Directly impacted vehicular traffic will probably divert to some extent to other streets, which, in turn, will generally increase or cause congestion on those streets. Inconvenience and delay will be encountered by motorists due to more circuitous routes having to be used to reach their destinations.

Similarly, pedestrians will be incovenienced and delayed, especially in the downtown area. Some sidewalks may be removed or substantially reduced in width in order to provide sufficient area for the adjacent construction zone. During this period pedestrians may have to divert to other sidewalks, which will likely require longer distances and more time to reach their destinations.

In order to quantify the effect of traffic diversion the number of lanes to be available has been assumed for each station during the construction period. The available lanes are based upon the area required for each construction area. These minimimum requirements woud be applicable during Phases 1 and 4 and parts of Phase 3 of cut and cover construction. They would be expected to be increased for Phase 2 and portions of Phase 3 when more decking of the excavation area is possible during peak traffic periods. The resultant diversion of vehicular traffic constrained by minimum traffic lanes is shown in Appendices B and C of the technical report for Task WBS 18BAH14.

Street capacity may be reduced by as much as 50 percent on streets parallel to the long axis of the station and on intersecting streets during decking and removal. As indicated in Appendices B and C, the construction impacts will be most acutely felt in the CBD and the Wilshire Boulevard corridor where stations will be in areas of high auto, bus and pedestrian concentration. For Wilshire Boulevard, the impact will be greater in the PM peak period than the AM. Elsewhere, the impact will be significant around the La Brea/Sunset Station and the Cahuenga/Hollywood Station, particularly in the PM peak period along Sunset Boulevard and Cahuenga Boulevard.

Besides the diversion of traffic onto other streets, other problems can be expected to occur due to the construction activity. In most station construction areas, existing on-street parking will have to be eliminated, at least on the primary street, in order to provide as much roadway width as possible to accommodate vehicular flow and construction requirements. This may result in the parking demand shifting to the surrounding neighborhood where parking space may already be scarce and where residents may resent the spillover. In addition, pedestrians would experience inconvenience and delay at many locations due to the temporary loss or narrowing of sidewalks.

These are some of the more obvious adverse effects of the proposed construction. Other impacts can be anticipated. For example, in order to reduce or eliminate the impediments to travel as much as possible on the streets directly affected, left turns would be prohibited at most or all intersections in the construction zone. Similarly, bus stop locations and bus schedules would likely be changed on the routes obstructed by construction activity. Bus stops may have to be removed or relocated temporarily to the far side of the intersection or elsewhere. Parallel streets may have to be substituted if existing routes are unable to provide adequate service or if those routes cannot accept the extended delays due to buses stopping. Also, curbside deliveries and pick-ups probably would have to be eliminated on streets with

constrained widths, at least during the normal daylight travel period. Instead, delivery and pick-up operations would have to be handled on unobstructed side streets and alleys.

With a reduced width on many of these streets and the shifing of temporary lanes from side to side, traffic control devices will have to be relocated and other temporary or supplemental devices may need to be installed. For example, traffic signal heads and mast arms may have to be relocated in order to provide a satisfactory view of the signals from the modified traffic lanes. Loop detectors for semi- or fully-actuated signals will likely be inoperative, requiring that the signals be reverted to fixed time operation; this could result in less signal efficiency. Regulatory, warning or advisory signs will also have to be removed, replaced or reinstalled as appropriate for the construction conditions. Additional construction signs will also be necessary.

Transitioning the traffic flow from street segments of full width to segments of significantly reduced width may be confusing for many motorists. Bottlenecks and queuing in the traffic stream could be expected even with advance warnings to motorists and adequate lane tapers. Unevenness in roadway surface between the temporary decking surface and the normal pavement may also cause a slowdown in traffic flow.

Lastly, the addition of many heavy-duty vehicles delivering and hauling construction materials at each station site will have a significant effect on street capacity. Their large size, slow acceleration rates and large turning radii make these vehicles incompatible with the mainstream surface street traffic. Their continual presence in the traffic stream on a street already reduced in width will be even more detrimental. Without properly designed truck ramps leading to and from the excavation area, much more delay will be experienced as these vehicles try to maneuver into place. To the extent possible, their operation should be scheduled for other than peak traffic flow periods.

7.5 Conclusions

There will be significant impacts to the normal traffic flow on those streets nearest the construction zones, due essentially to a loss in street capacity. Factors such as the presence of a large number of heavy-duty construction vehicles on these streets; constrained bus operations; narrow lane widths and unusual detour configurations; uneven or poor roadway surfaces; and inefficient signal timing for construction conditions will also contribute to the reduction in capacity.

To avoid using the streets most affected by construction, there will likely be moderate to substantial diversion by motorists to parallel routes. The diversion of traffic from such arterials as Wilshire Boulevard and Fairfax Avenue to other streets will not only broaden the impact of the construction activity but could also cause or worsen traffic congestion on the alternate routes.

The construction-related impacts will be more acutely felt in the downtown area where three stations are proposed in a densely developed and further developing environment. Many of the downtown streets are closely spaced

togetner, have substandard roadway widths and experience relatively high auto, bus and pedestrian volumes. The inconvenience to pedestrians due to the loss of sidewalks for an extended period may, in fact, become a serious problem downtown and a few other locations where pedestrian traffic is heavy. Moreover, on-street parking can be expected to be eliminated in most or all construction zones, which, in turn, could result in the parking demand overflowing over onto adjacent streets.

Other anticipated impacts would be to bus and taxi operations, goods delivery and pick-up, one-way street operations, traffic signal operations, and pavement markings and traffic control signs. These impacts may be mitigated by proper planning and implementation. However, the larger problem of reduced street capacity cannot be readily mitigated.

In conclusion, moderate to severe traffic congestion should be expected on the primary street(s) parallel to the Metro Rail alignment and on many of the major cross streets as well. Furthermore, additional interelated impacts, such as to bus operations, goods movement and parking, are anticipated. The major problem of traffic congestion can be partially mitigated and will have to be accommodated by the public as much as possible.

CHAPTER 8 - LADOP SPECIFIC PLAN ANALYSIS

This chapter has been included inasmuch as the City Transportation Department did analyze various specific plan development proposals for the City Planning Department (LADOP) under WBS Task 18BAH1143. This work resulted in an additional layer of generated vehicle trips that was incorporated with the previously developed year 2000 With Project volumes. A volume/capacity analysis of the specific plan alternatives was also performed and on- and off-street parking was inventoried for the specific plan areas.

A working paper was prepared to describe the methodology used in determining the specific plan volumes. The methodology was rather complicated and lengthy. Rather than attempt a synopsis of the many steps involved, the working paper is presented intact, except for the appendix and some minor reference changes, in Section 8.1 of this chapter. The appendix, which contains the traffic flow maps with specific plan traffic volumes, has not been included because of the bulky nature of the foldout maps. These flow maps can be viewed in the Working Paper, "2000 With Project and Specific Plan Area Development Traffic Volumes (ADT, Pk. Hr.), Task 18BAH1143, June 1983".

Section 8.2 of this chapter was extracted virtually unchanged from Chapter 5 of the Task 18BAH1243 Technical Report. It examines the traffic impact of the increased or decreased traffic volumes projected at key intersections due to the various specific plan development proposals.

Section 8.3 provides a summary of the existing on- and off-street parking and usage at each station included in the Transit Corridor Specific Plan.

8.1 Traffic Volumes

Introduction

The primary purpose of WBS Task 18BAH1143, 2000 With Project Condition Traffic Volumes (ADT, Pk. Hr., VMT), was to project weekday average daily (ADT) and peak-hour traffic volumes and vehicle miles of travel (VMT) in the year 2000 with the Metro Rail System operating in the Regional Core. The projections were made using the UTPS (Urban Transportation Planning System) computer program package developed and distributed by the Urban Mass Transportation Administration and the Federal Highway Administration. The UTPS programs enabled vehicle trip assignments to be made from the 2000 vehicle trip table provided by the SCRTD. The year 2000 trip table was based on the demographic and land use data presented in the regional growth forecast known as SCAG 82B. The SCAG 82B forecast showed moderately high growth in general in most parts of the Regional Core.

A subordinate task under Task 18BAH1143 evolved when the Los Angeles Department of City Planning (LADOP) requested the City Department of Transportation to provide expanded traffic volume information. Due to the influence of the Metro Rail line, LADOP envisioned increased development occurring near each station as a consequence. In order to better control this anticipated development and growth, LADOP will prepare an ordinance for development of

"specific plan areas" around each station within the City of Los Angeles' jurisdiction. Before the ordinance (Transit Corridor Specific Plan) could be drafted, LADOP needed to know the traffic impact on the street system of different growth alternatives for the specific plan areas.

LADOP identified three specific plan area development scenarios for the majority of proposed stations along the initial 18-mile alignment in the City of Los Angeles. These three scenarios were generally categorized as "LOW, MEDIUM, and HIGH", representing alternative levels of development projected to occur between 1980 and 2000. The vehicle trips generated by these growth forecasts were then combined with the year 2000 traffic volume flow maps to arrive at modified year 2000 flow maps. These adjusted flow maps reflected the various specific plan development alternatives as well as the implementation of the Metro Rail and related mode-of-access trips.

This working paper documents the methodology used in developing the traffic volume overlays for the LOW, MEDIUM and HIGH growth forecasts and in integrating those volumes into final map form. The methodology essentially involved seven steps beginning with the manual trip generation calculation and ending with the completion of the year 2000 Option I/XII with specific plan overlay flow maps. The seven-step procedure can be more easily visualized in the flow diagram on the next page, Figure 8.1-1.

Overview

An important element to remember is the assumption that in most cases, one of the three LADOP development scenarios was equivalent or very comparable to the SCAG 82B growth forecast used in creating the 2000 vehicle trip table. This correlation simplified the procedure inasmuch as one of the growth scenarios could then be assumed to have already been analyzed under the year 2000 With Project Condition. By and large, it was found that SCAG 82B corresponded to the LADOP HIGH growth scenario. In a few instances, the correspondence was to the MEDIUM or a LOW-MEDIUM forecast.

Twelve out of seventeen station areas were examined by LADOT in the specific plan work. One of the remaining station areas (Santa Monica/Fairfax) was not studied due to its location in the County of Los Angeles. The other four station areas--First/Hill, Fifth/Hill, Seventh/Flower and North Hollywood--are within redevelopment areas of the City and are being analyzed more thoroughly by Community Redevelopment Agency consultants.

It should be noted that the previously developed 2000 traffic volumes, with and without the Metro Rail, were in each case based on the same SCAG 82B forecast, with no change in the data to account for any implementation of a rail transit line. The only difference was that under the With Project Condition, some vehicle trips were removed from the Without Project (Null) highway network and converted to passenger boardings on the Metro Rail, as would seem logical. However, this process was incorrectly assumed in the other growth scenarios that were less or higher than the SCAG 82B forecast. No new consideration was given to the potential increase or decrease in person trips diverted to the rail mode under the other scenarios; that is, the same mode split ratio of Metro Rail trips to auto trips was inherently assumed to be constant, regardless of any changes in specific plan development. Unfortunately, there was insufficient time to determine the proper mode split for each development alternative.

OVERVIEW OF METHODOLOGY FOR DEVELOPING SPECIFIC PLAN AREA VEHICLE TRIP FLOW MAPS

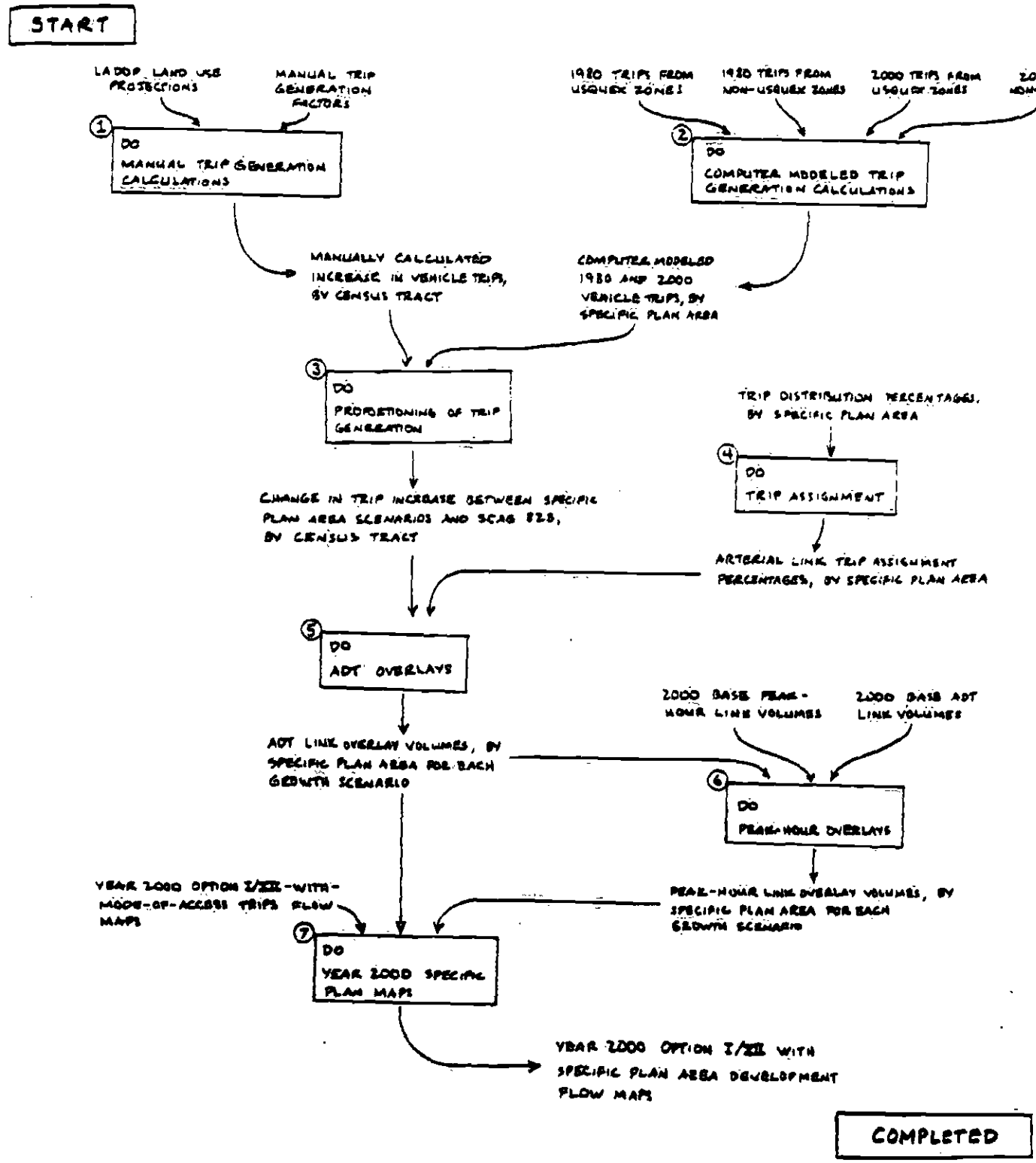


FIG. 8.1-1

It is recognized that the methodology described in this paper is not exact or highly rigorous. Perhaps better results could have been obtained had the computer modeling process begun anew using the most current and correct data for these situations. This would have been, however, an expensive and time-consuming exercise and could not be attempted. Still, despite the unsophisticated, manual nature of this methodology, the results were timely and reasonably accurate for the purposes of the Planning Department's request.

Methodology - Seven-Step Procedure

1. Manual Trip Generation Calculation

   Three development scenarios contemplated by LADOP for census tracts within the specific plan areas around each Metro Rail station were expressed as relative changes in growth. Land use projections were made for the year 2000 relative to the year 1980 in terms of increased (or decreased) office employment, retail and other employment and residential population for census tracts expected to experience growth specifically because of the Metro Rail line nearby.

   Trip generation manuals published by the Institute of Transportation Engineers and by the San Diego Association of Governments and Caltrans were researched for appropriate trip generation factors. Trip generation factors were derived that were a "close fit" for application to the proposed land uses. These factors were as follows: office employment, 3.7 trips per day/person; retail and other employment, 22.4 trips per day/person; and residential (multiple-family), 1.76 trips per day/person.

   These trip generation factors were multiplied against the appropriate land use change projected for a particular census tract, resulting in a change in the number of daily trips anticipated in the 2000 compared to 1980. This procedure was performed for the LOW, MEDIUM, and HIGH specific plan forecasts for 12 station areas.

2. Computer Modeled Trips

   Vehicle trips had been generated previously for the year 2000 by computer modeling of SCAG 82B demographic and land use data. These trips were then distributed, assigned and plotted using various computer programs, eventually resulting in the creation of traffic volume flow maps for the year 2000.

   Theoretically, the number of vehicle trips generated by manual techniques should agree fairly closely with the number generated under computer modeling for the same area and land uses. However, that did not happen in this case and there was some disparity in the results of the two methods. This may be attributable to slightly different factors being used, the greater ability of the computer to consider a variety of land uses as integrated and interdependent generation sources rather than as independent "point" sources, and/or the fact that manual techniques allow more specificity in defining land use boundaries and in categorizing proposed land uses.

   Comparing the results of the two trip generation techniques for the same census tracts and land uses, it was obvious that the number of manually

calculated trips was generally higher than those generated by computer. That is, the number of computer modeled trips accounting for the growth in development between 1980 and 2000 was most often below the number of trips generated manually for the same change in land use. A proportioning technique (Step 3), therefore, was devised to equate the output of both trip generation methods.

To do that, a redetermination of the number of 1980 and 2000 computer modeled vehicle trips for the LADOP specific plan areas had to be first accomplished. This was the most complicated procedure in the seven-step methodology. No computer program had been run that readily identified the number of trips generated according to the specific plan parameters. Some work had been done previously that determined year 2000 daily auto trips for certain census tracts around each station, assuming a 50/50 sharing of trips generated by census tracts common to two adjacent stations. However, that work became invalid when the boundaries of the specific plan areas changed and a more realistic assumption regarding the sharing of trips was indicated.

The procedure used in this methodology can best be seen in the following flow diagrams (Figures 8.1-2 - 8.1-5). Due to time constraints, no new computer outputs were produced. Instead, outputs from previously run computer routines were reanalyzed to obtain the desired information. In this way the 1980 and 2000 computer modeled trips for the applicable specific plan areas were developed. This result was used in the next step to proportion the trips manually generated in Step 1.

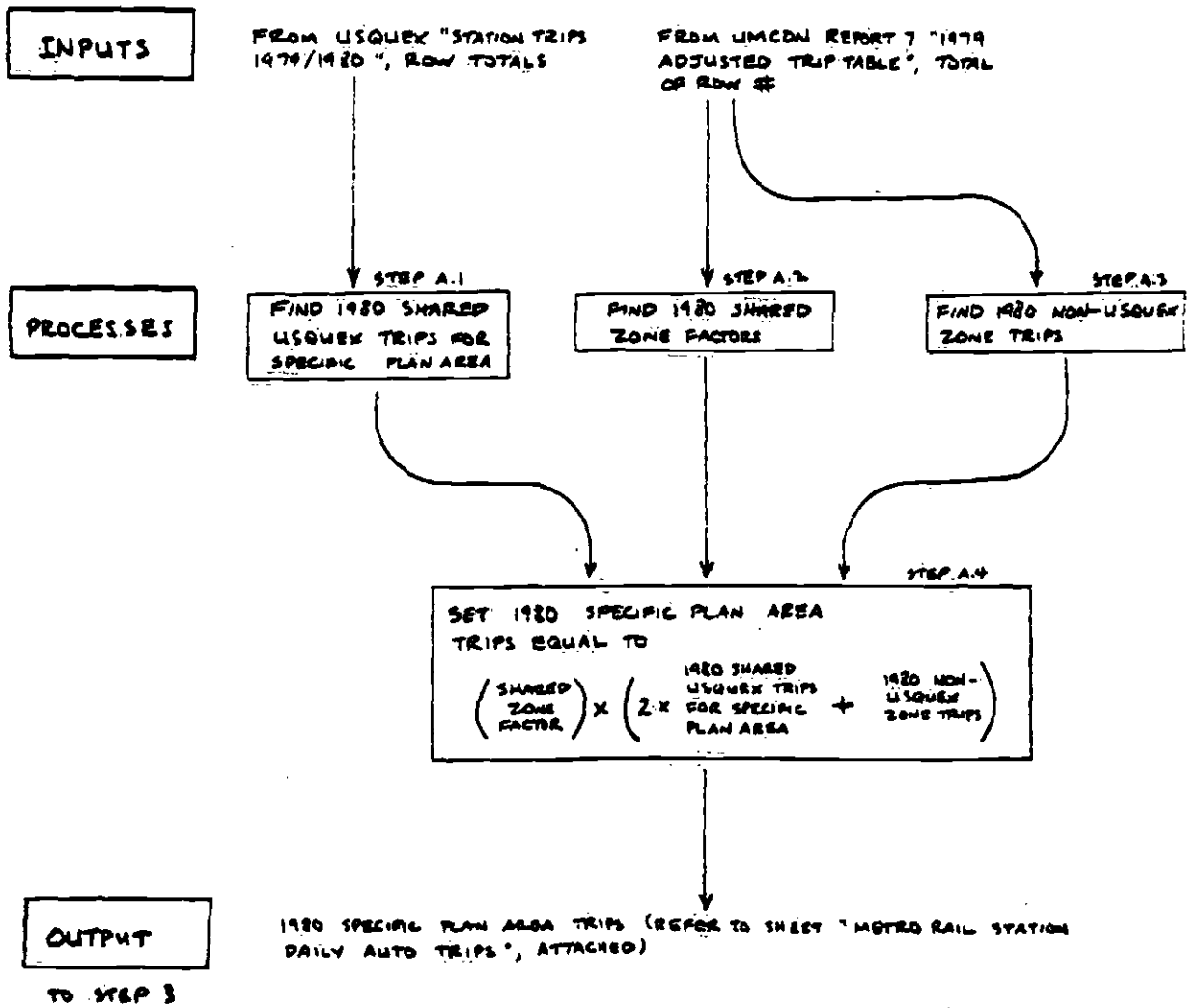
3. Proportioning of Trip Generation

Since all of the previous traffic flow map work was based on computer modeling, computer modeled trips, rather than manually generated trips, were considered the control factor. However, manually calculated trips were used to proportion the change in computer modeled trips for the same census tracts, that is, the difference between the computer modeled trips for the year 2000 With Project Condition and the 1980 Base Condition. This difference was assumed to be the traffic generated due to development occurring in the 20-year span.

Whichever growth forecast as identified by City Planning--LOW, MEDIUM or HIGH--corresponded to SCAG 82B did not require any adjustment to the year 2000 Option I/XII flow maps. The manually calculated trips for the two remaining specific plan scenarios were proportioned at a census tract level using a scale factor as derived below. A scale factor was computed for each specific plan area.

Scale Factor = (Year 2000 Option I computer modeled trips - Year 1980 Base computer modeled trips) - Year 2000 manually generated trips, where it was assumed that the scale factor for the SCAG 82B-equivalent growth scenario and the computer modeled and manually generated trips were totals for the specific plan area census tracts only.

1980 Computer Trips

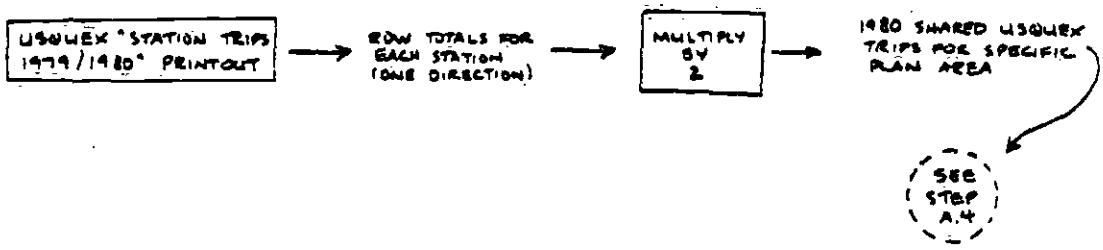


REPEAT PROCEDURE FOR EACH SPECIFIC PLAN AREA.

FIG. 8.1-2

STEP A.1

FIND 1980 SHARED USQUEX TRIPS FOR SPECIFIC PLAN AREA.



STEP A.3

FIND 1980 NON-USQUEX ZONE TRIPS.

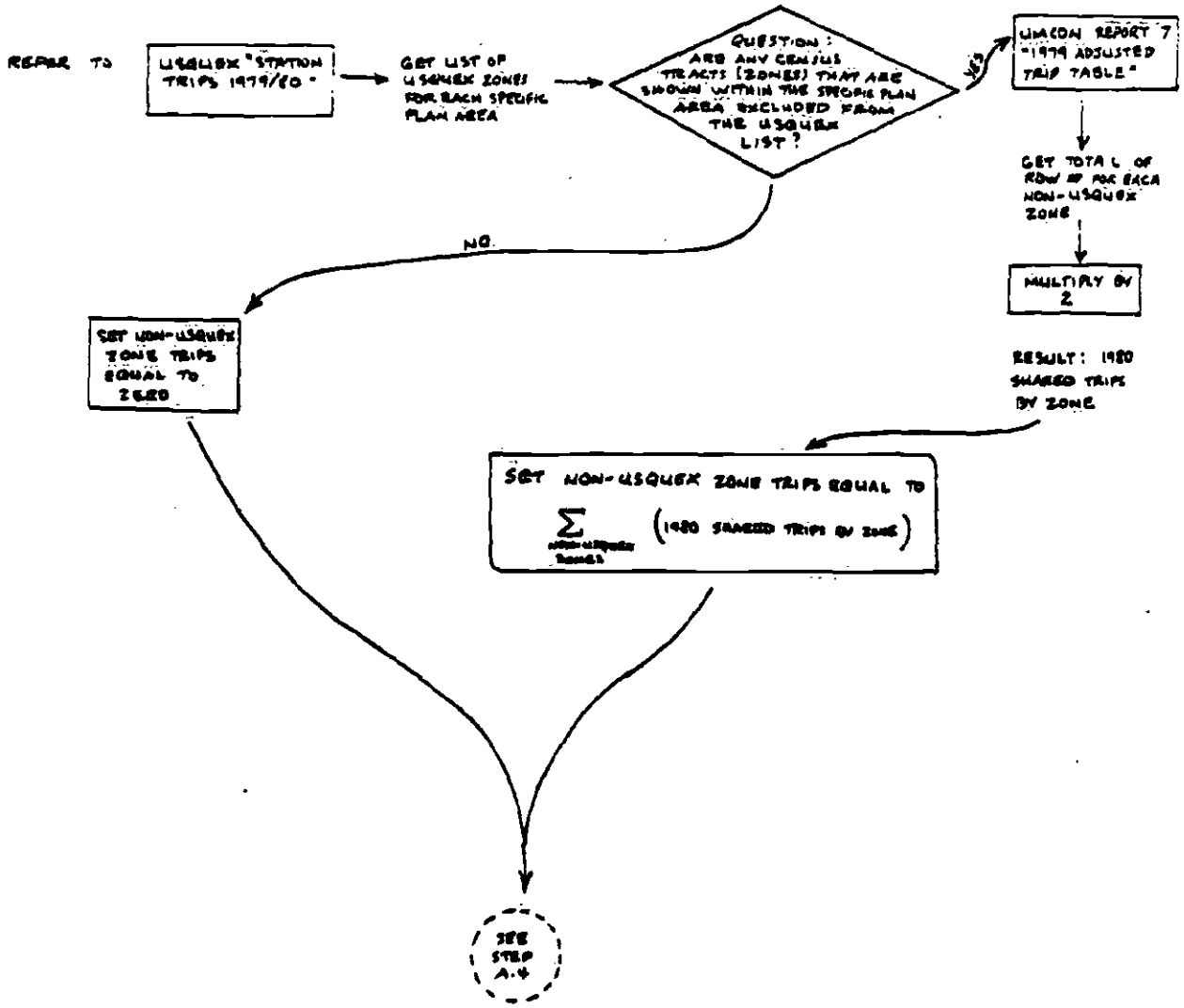


FIG. 8.1-3

STEP A.2

FIND 1980 SHARED ZONE FACTORS.

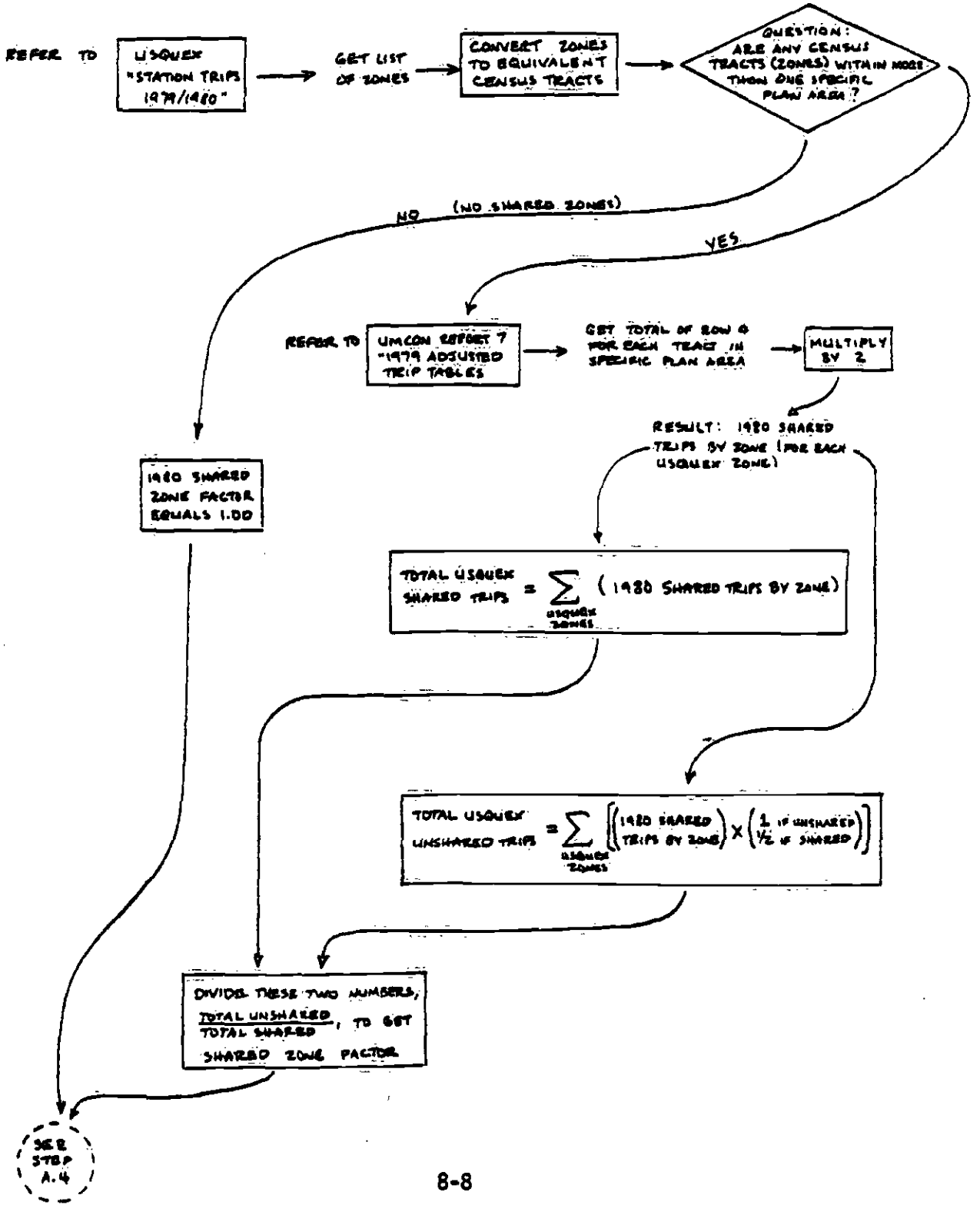
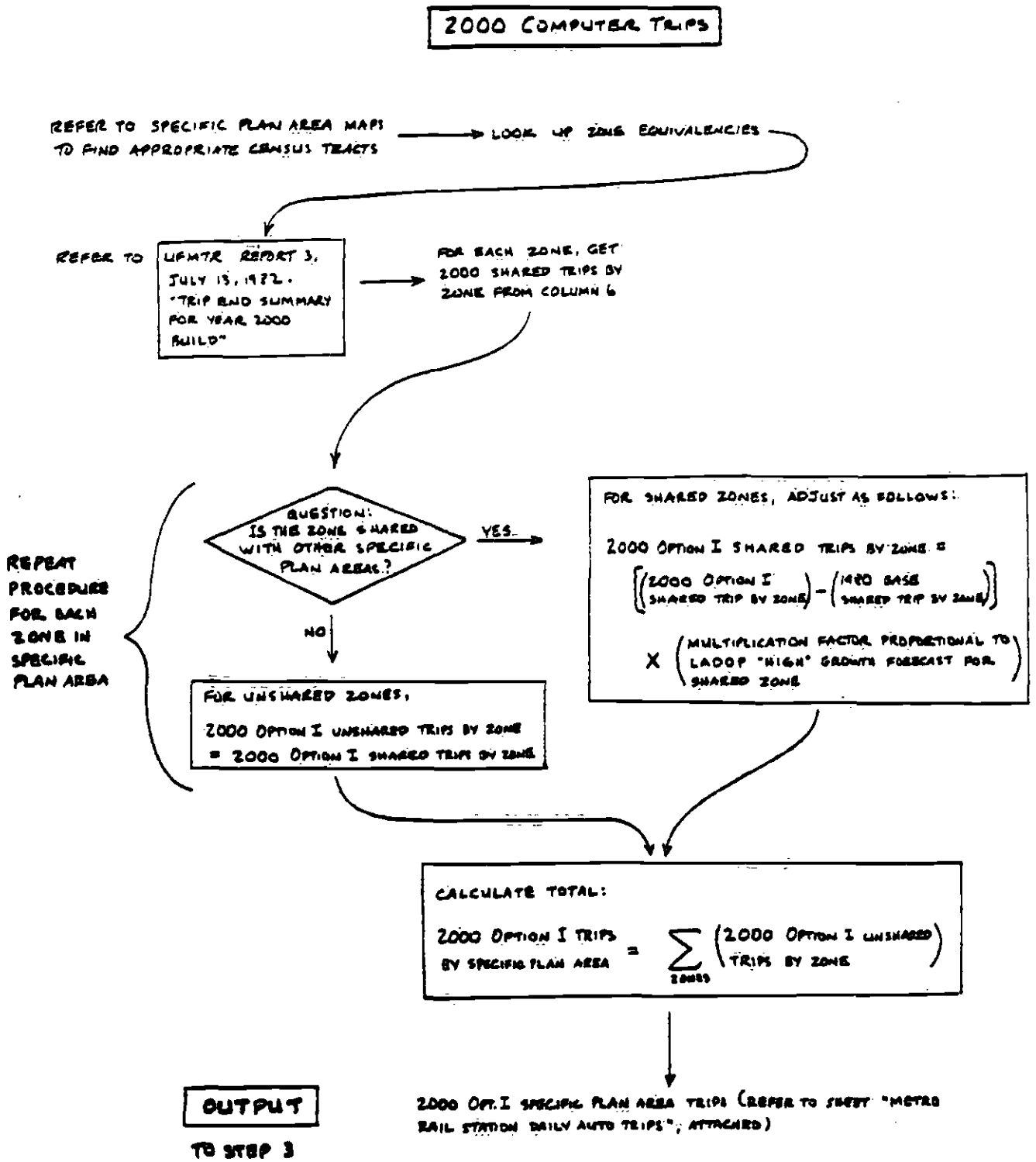


FIG. 8.1-4



EXCEPTION: VERMONT/WILSHIRE STATION AREA DOES NOT INCLUDE NON-USABLE ZONE 357.

FIG. 8.1-5

ATTACHMENT

METRO RAIL STATION DAILY AUTO TRIPS

	STATION	1980[1]	2000 BASE	2000 OPTION I[2]	2000 OPTION VII
1.	Union Station*	42,292	2,624	46,366	2,386
2.	First/Hill	28,158	38,328	37,168	37,092
3.	Fifth/Hill	95,720	124,448	119,622	119,484
4.	Seventh/Flower	39,888	47,008	44,356	44,340
5.	Alvarado/Wilshire*	57,738	68,915	65,797	66,826
6.	Vermont/Wilshire*	115,738	156,541	151,055	152,018
7.	Normandie/Wilshire*	66,964	75,730	71,695	72,206
8.	Western/Wilshire*	52,171	60,556	60,295	60,875
9.	Crenshaw/Wilshire*	71,842	62,594	80,865	81,563
10.	La Brea/Wilshire*	83,540	100,284	119,575	119,949
11.	Fairfax (Curson)/Wilshire*	73,095	110,277	110,395	111,484
12.	Beverly/Fairfax*	148,398	136,433	204,011	
13.	Santa Monica/Fairfax	57,610	65,063	62,864	
14.	Hollywood/Cahuenga*	131,110	112,913	171,215	
15.	Hollywood Bowl	5,308	5,553	5,328	
16A.	Vineland/Ventura	20,012	22,001	21,249	
16B.	Universal City*	55,304	30,773	72,281	
17.	Lankershim/Chandler	38,996	41,509	40,370	
18.	Sunset/La Brea*	59,882	69,963	68,304	

Note: These figures do not include park-n-ride or kiss-n-ride trips to stations. The 2000 Base Condition does include October 1982 PBQ&D revision. All year 2000 projections are based on SCAG 82B forecast.

* Stations around which Department of City Planning identified LOW, MEDIUM and HIGH specific plan development projections for year 2000.

[1] From USQUEX "Station Trips 1979/1980". Equal to "2 X" row totals. If zones were shared between stations, then adjustment was made. If zones in specific plan area were not included in USQUEX output, another adjustment was made.

[2] Equal to summation of all year 2000 Option I unshared trips, where unshared trips were obtained from UFMTR, Column 6, with adjustment for shared zones. (Previously, these trips were obtained from USQUEX "Station Trips Option I Build", equal to "2 X" row total.

Thus determined, the scale factor was multiplied against the manually calculated trips for the year 2000, census tract by census tract, for the LOW, MEDIUM and HIGH forecasts. The scaled down trips for the development scenario corresponding to SCAG 82B were then subtracted from the scaled down trips for the other two scenarios on a census tract basis. This procedure yielded the adjusted trip differences between the proposed specific plan forecasts and SCAG 82B (Option I/XII) for the year 2000. Once assigned, these trip differences were added to or subtracted from traffic volumes for the 2000 With Project Condition.

4. Trip Distribution and Assignment Percentages

The percentage of trips distributed according to the north, south, east and west directions for each station area were derived previously using the USQUEX computer output for Option I. These distribution percentages were used as a guide in estimating the percentage of trips assigned to the links in the arterial network for each census tract near a station.

For the purposes of simplification, only "straight ahead" vehicle movements were omitted. These straight ahead trip assignments were based on logic and knowledge of the area. The assignments were brought only to the edge of each census tract within the boundaries of the specific plan area. Further inroads into the specific plan area were not considered essential for the requirements of this task.

The trip assignment percentages were reversed and assumed to be valid for the opposite direction. The numbers were entered on flow map street networks for convenience and use later.

5. ADT Overlays

The percentage trip assignments for each census tract were multiplied against the computer modeled trips apportioned to each census tract. Dividing the result by two gave the directional ADT volume for that link. Where the same arterial link was used to serve more than one census tract, the specific plan ADT overlay volumes for that link were combined after the above percentage multiplication step had been completed.

This procedure was performed for those development scenarios not corresponding to SCAG 82B. Because of the tedious nature of this procedures, the VISICALC computer program was used to reduce the effort required. These volumes were placed on the arterial network maps for later use in determining the final volumes.

6. Peak Hour Overlays

To arrive at the AM and PM peak-hour overlay volumes, directional peak-hour factors were calculated for each arterial link within and contiguous to the specific plan development areas. These factors were determined by dividing the AM and PM peak-hour volumes by the ADT volumes for the year 2000 Base or Null (Adjusted) Condition. These peak-hour factors were then

applied to the overall specific plan ADT overlay volumes for each link to get the peak-hour overlay volumes. Again, the VISICALC program was used for this procedure. The peak-hour volumes were also placed on the arterial network maps for later use.

7. Final Flow Maps

Once the specific plan ADT and peak-hour overlay volumes were calculated for the LOW, MEDIUM and/or HIGH growth forecasts, the last step was to develop the set of final traffic volume flow maps. For the background maps, the already completed year 2000 Option I/XII flow maps and were either subtracted from or added to the underlying volumes, depending on whether the specific plan scenario was less or greater than the SCAG 82B forecast. Of course, where the specific plan proposal corresponded to SCAG 82B, no changes were made to the Option I/XII maps. The additions and subtractions were generally confined to the specific plan development boundaries around each station.

8.2 Results of Evaluation - Specific Plan

The Los Angeles Department of Planning (LADOP) reviewed the impacts of three different levels of development - low, medium and high - at thirteen Metro Rail Station and developed demographic and land use data which was used by the Los Angeles Department of Transportation (LADOT) to develop revised traffic volume assignments near each station. Daily boardings, mode-of-arrival, platform location and station access points, parking and kiss-n-ride facilities and bus bays were unchanged from the 2000 With Project Condition. Selected intersections at the thirteen stations were evaluated for impacts under the various levels of development. Levels of development were not projected by LADOP for five stations since they are located in redevelopment areas (three CBD stations and North Hollywood) and one is in the County of Los Angeles (Santa Monica).

The results of the intersection evaluation are presented on a station-by-station basis beginning at Union Station and proceding along the adopted alignment to the station at Universal City. LADOP did not project specific plan developments for the stations at 1st/Hill, 5th/Hill, 7th/Flower, Santa Monica/Fairfax and Chandler/Lankershim. No evaluation was required at these stations, except Santa Monica/Fairfax, which is located in Los Angeles County and experienced some of the specific plan traffic from adjacent stations. Included for each station is a table which contains the 2000 With Project (Option I/XII) intersection LOS and V/C indices and the LOS and V/C indices for the various levels of development. For this task report, intersections with both a V/C index increase of 0.02 or more over the 2000 With Project Condition and LOS of D-or-worse will be identified and discussed.

Union Station

Six intersections were evaluated in the vicinity of Union Station for HIGH development only. One, Macy and Vignes Streets, showed an increase in the V/C index of 0.02 in both the AM and PM peak periods and a LOS of F. The V/C

TABLE 8.2-1

LOCATION	CONDITION	SPECIFIC PLAN INTERSECTIONS - UNION STATION											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Alameda/Macy	Option I/X II	E	.92	F	1.09		.92		1.09		.92		1.09
	2000 High	E	.93	F	1.10		.93		1.10		.93		1.10
Alameda/Temple	Option I/X II	A	.53	B	.62		.53		.62		.53		.62
	2000 High	A	.53	B	.62		.53		.62		.53		.62
Macy/Mission	Option I/X II	E	.99	C	.77		.99		.79		.99		.72
	2000 High	E	.99	C	.78		.99		.79		.99		.72
Macy/Vignes	Option I/X II	F	1.05	F	1.10		1.14		1.10		.86		1.10
	2000 High	F	1.07	F	1.14		1.15		1.14		.94		1.14
N. Broadway/ Sunset	Option I/X II	C	.79	E	.96		.79		.96		.79		.96
	2000 High	C	.79	E	.96		.79		.96		.79		.96
N. Main/ Alpine-Vignes	Option I/X II	A	.59	D	.89		.59		.89		.59		.89
	2000 High	B	.60	E	.90		.60		.90		.60		.90

TABLE 8.2-2

LOCATION	CONDITION	SPECIFIC PLAN INTERSECTIONS - ALVARDO/WILSHIRE											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Alvarado/Olympic	Option I/X II	C	.78	E	.95		.59		.70		.90		1.11
	2000 Low	C	.78	E	.95		.59		.68		.90		1.11
	2000 Medium	C	.79	E	.95		.59		.69		.91		1.11
	2000 High	C	.79	E	.95		.61		.71		.91		1.11
Alvarado/Wilshire	Option I/X II	C	.73	E	.90		.73		.90		.73		.90
	2000 Low	C	.72	D	.89		.72		.89		.72		.89
	2000 Medium	C	.73	D	.89		.73		.89		.73		.89
	2000 High	C	.73	E	.90		.73		.90		.73		.90
Alvarado/3rd	Option I/X II	F	1.05	F	1.25		1.05		1.25		1.05		1.25
	2000 Low	F	1.04	F	1.24		1.04		1.24		1.04		1.24
	2000 Medium	F	1.04	F	1.24		1.04		1.24		1.04		1.24
	2000 High	F	1.05	F	1.25		1.05		1.25		1.05		1.25
Hoover/Wilshire	Option I/X II	B	.60	E	.94		.60		.94		.60		.94
	2000 Low	A	.55	D	.88		.55		.88		.55		.88
	2000 Medium	B	.60	E	.94		.60		.94		.60		.94
	2000 High	B	.68	F	1.04		.68		1.04		.68		1.04
Union/Wilshire	Option I/X II	B	.69	C	.78		.69		.78		.69		.78
	2000 Low	B	.69	C	.78		.69		.78		.69		.78
	2000 Medium	B	.69	C	.78		.69		.78		.69		.78
	2000 High	B	.69	C	.78		.69		.78		.69		.78

increase in the AM is due to increased volume eastbound on Macy Street. The remaining five intersections were projected to experience no change or an increase of less than 0.02, as shown in Table 8.2-1.

Alvarado and Wilshire Station

Five intersections in the vicinity of the Alvarado and Wilshire Station were evaluated for LOW, MEDIUM and HIGH development. None of the intersections showed an increase in the V/C index under LOW or MEDIUM development. One intersection, Hoover Street and Wilshire Boulevard, increased 0.10 from 0.94 to 1.04 changed in LOS from E to F in the PM peak period under HIGH development. The increase is due almost entirely to a 20 percent increase in eastbound volume on Wilshire Boulevard. There was a similar increase during the AM peak hour; however, the LOS remained at B. The results of the evaluation for this station are shown in Table 8.2-2.

Wilshire and Vermont Station

Five intersections in the vicinity of the Vermont and Wilshire Station were evaluated for LOW, MEDIUM and HIGH development. All of the intersections showed a decrease in V/C indices when compared to the 2000 With Project Condition under LOW development. The Vermont/Wilshire and Vermont/Sixth intersections showed an increase of 0.02 and LOS of E and F, respectively, in the AM peak period with MEDIUM development, the former intersection due to an increase in westbound volume on Wilshire Boulevard and latter due to increases northbound and southbound on Vermont Avenue.

Under HIGH development, all five intersections increased at least 0.04 and, except for Virgil Avenue and Wilshire Boulevard in the AM peak hour, had LOS of E or F in both peak hours. The four intersections at Vermont Avenue, from Third Street to Olympic Boulevard, were most affected by volume increases on Vermont Avenue, while at Virgil Avenue and Wilshire Boulevard, the increase in the PM was most affected by a 21 percent volume increase on westbound Wilshire Boulevard.

Intersection LOS and V/C index results for the three level of development and Option I/XII are shown in Table 8.2-3.

Normandie and Wilshire Station

For this station, three intersections were evaluated for LOW, MEDIUM and HIGH development. Under the LOW and MEDIUM levels of development, the V/C indices were either less than or the same as for Option I/XII. Under HIGH development, two of the three intersections had V/C index increases of 0.02 or more and a LOS of D or worse during the AM and PM peak periods. At Normandie Avenue and Third Street, the AM V/C index increased by 0.02, while the PM V/C index increased by 0.01, at LOS of F. The increases at all three intersections were due mostly to modest increases in volume on Normandie Avenue, north and southbound. Eastbound and westbound volume increases were significant only on Wilshire Boulevard at Normandie Avenue.

The results of the evaluation are in Table 8.2-4.

TABLE 8.2-3

LOCATION	CONDITION	SPECIFIC PLAN INTERSECTIONS - VERMONT/WILSHIRE STATION											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Olympic/Vermont	Option I & II	E	.99	F	1.09		.99		1.09		.99		1.09
	2000 Low	E	.95	F	1.05		.95		1.05		.95		1.05
	2000 Medium	E	.99	F	1.09		.99		1.09		.99		1.09
	2000 High	F	1.04	F	1.15		1.04		1.15		1.04		1.15
Vermont/Wilshire	Option I & II	D	.89	F	1.05		.89		1.05		.89		1.05
	2000 Low	D	.88	F	1.01		.88		1.01		.88		1.01
	2000 Medium	E	.91	F	1.05		.91		1.05		.91		1.05
	2000 High	E	.96	F	1.10		.96		1.10		.96		1.10
Vermont/3rd	Option I & II	F	1.14	F	1.24		1.14		1.24		1.14		1.24
	2000 Low	F	1.10	F	1.20		1.10		1.20		1.10		1.20
	2000 Medium	F	1.14	F	1.24		1.14		1.24		1.14		1.24
	2000 High	F	1.18	F	1.28		1.18		1.28		1.18		1.28
Vermont/6th	Option I & II	F	1.12	F	1.21		1.12		1.21		1.12		1.21
	2000 Low	F	1.10	F	1.19		1.10		1.19		1.10		1.19
	2000 Medium	F	1.14	F	1.22		1.14		1.22		1.14		1.22
	2000 High	F	1.19	E	1.26		1.19		1.26		1.19		1.26
Virgil/Wilshire	Option I & II	B	.64	E	.93		.64		.70		.64		1.06
	2000 Low	A	.59	D	.86		.59		.67		.59		.96
	2000 Medium	B	.64	E	.93		.64		.70		.64		1.06
	2000 High	C	.75	F	1.05		.64		.74		.81		1.22

TABLE 8.2-4

LOCATION	CONDITION	SPECIFIC PLAN INTERSECTIONS - NORMANDIE/WILSHIRE STATION											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Normandie-Irolo/ Olympic	OptionI/A II	F	1.09	E	1.00		1.09		1.00		1.09		1.00
	2000 Low	F	1.06	E	.97		1.06		.97		1.06		.97
	2000 Medium	F	1.08	E	.99		1.08		.99		1.08		.99
	2000 High	F	1.11	F	1.02		1.11		1.02		1.11		1.02
Normandie/Wilshire	OptionI/A II	D	.81	F	1.01		.81		1.01		.81		1.01
	2000 Low	C	.79	E	.96		.79		.96		.79		.96
	2000 Medium	D	.81	E	1.00		.81		1.00		.81		1.00
	2000 High	D	.83	F	1.04		.83		1.04		.83		1.04
Normandie/3rd	OptionI/A II	F	1.06	F	1.17		1.06		1.17		1.06		1.17
	2000 Low	F	1.04	F	1.14		1.04		1.14		1.04		1.14
	2000 Medium	F	1.06	F	1.16		1.06		1.16		1.06		1.16
	2000 High	F	1.08	F	1.18		1.08		1.18		1.08		1.18

TABLE 8.2-5

LOCATION	CONDITION	SPECIFIC PLAN INTERSECTIONS - WESTERN/WILSHIRE STATION											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Olympic/Western	Option I/X II	F	1.16	F	1.14		1.16		1.14		1.16		1.14
	2000 Low	F	1.14	F	1.14		1.14		1.14		1.14		1.14
	2000 Medium	F	1.14	F	1.14		1.14		1.14		1.14		1.14
	2000 High	F	1.16	F	1.15		1.16		1.15		1.16		1.15
Western/Wilshire	Option I/X II	E	.93	E	.99		.93		.99		.93		.99
	2000 Low	E	.92	E	.97		.92		.97		.92		.97
	2000 Medium	E	.92	E	.98		.92		.98		.92		.98
	2000 High	E	.95	F	1.02		.95		1.02		.95		1.02
Western/3rd	Option I/X II	F	1.11	F	1.27		1.11		1.27		1.11		1.27
	2000 Low	F	1.09	F	1.27		1.09		1.27		1.09		1.27
	2000 Medium	F	1.09	F	1.27		1.09		1.27		1.09		1.27
	2000 High	F	1.11	F	1.28		1.11		1.28		1.11		1.28

Western and Wilshire Station

Three intersections in the vicinity of Western and Wilshire Station were evaluated for LOW, MEDIUM and HIGH development. The V/C indices were less than or equal to those for Option I/XII under LOW and MEDIUM development and under HIGH development for all intersections except Western Avenue and Wilshire Boulevard. At this intersection, the AM and PM indices increased 0.02 and 0.03 with LOS being E and F, respectively. These increases were due to increases in volume on Wilshire Boulevard eastbound and westbound in both peak periods.

The results of the evaluation for the Western and Wilshire Station are shown in Table 8.2-5.

Crenshaw and Wilshire Station

For the Crenshaw and Wilshire Station, three intersections were evaluated for LOW and MEDIUM development. As shown in Table 8.2-6, the V/C indices for all three intersections were lower under the two levels of development compared to Option I/XII.

La Brea and Wilshire Station

Four intersections near this station wereevaluated for LOW and MEDIUM development and none had V/C indices as large as those found for Option I/XII. The results of the evaluation are presented in Table 8.2-7.

Fairfax (Curson) and Wilshire Station

Table 8.2-8 shows the results of the evaluation of six intersections near this station for LOW and MEDIUM development. The V/C indices for all six intersections under both levels of development were less than those for Option I/XII.

Beverly and Fairfax Station

Four intersections were evaluated in the vicinity of the Beverly and Fairfax Station for LOW and MEDIUM development. Traffic volume data were not available for the intersections of Fairfax and Oakwood Avenues and Fairfax and Rosewood Avenues. As shown in Table 8.2-9, the V/C indices for the two levels of development were less than those for Option I/XII.

Fairfax and Santa Monica Station

This station is within the County of Los Angeles and, therefore, was not projected for specific plan development by LADOP. However, four intersections were evaluated inasmuch as they would still be experiencing some specific plan development traffic destined for or leaving adjacent station areas. It was found that all had V/C indices were less than or the same as those under Option I/XII. The results are in Table 8.2-10.

TABLE 8.2-6

LOCATION	CONDITION	SPECIFIC PLAN INTERSECTIONS - CRENSHAW/WILSHIRE STATION											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Crenshaw/Olympic	Option I & II	F	1.23	F	1.13		1.23		1.13		1.23		1.13
	2000 Low	F	1.20	F	1.11		1.20		1.11		1.20		1.11
	2000 Medium	F	1.21	F	1.11		1.21		1.11		1.21		1.11
Crenshaw/Wilshire	Option I & II	E	.96	F	1.08		.84		.91		1.02		1.18
	2000 Low	E	.92	F	1.05		.82		.89		.99		1.14
	2000 Medium	E	.94	F	1.06		.83		.89		1.00		1.16
Rossmore/Wilshire	Option I & II	B	.67	D	.82		.57		.53		.72		.99
	2000 Low	B	.61	C	.76		.49		.46		.68		.93
	2000 Medium	B	.62	C	.78		.51		.50		.69		.95

TABLE 8.2-7

LOCATION	CONDITION	SPECIFIC PLAN INTERSECTIONS - LA BREA/WILSHIRE STATION											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Highland/Wilshire	Option I & II	E	.96	F	1.17		.96		1.17		.96		1.17
	2000 Low	D	.88	F	1.05		.88		1.05		.88		1.05
	2000 Medium	E	.91	F	1.12		.91		1.12		.91		1.12
La Brea/Olympic	Option I & II	F	1.08	F	1.19		1.08		1.19		1.08		1.19
	2000 Low	E	.98	F	1.06		.98		1.06		.98		1.06
	2000 Medium	F	1.03	F	1.11		1.03		1.11		1.03		1.11
La Brea/Wilshire	Option I & II	C	.79	F	1.05		.79		1.05		.79		1.05
	2000 Low	B	.69	E	.94		.69		.94		.69		.94
	2000 Medium	C	.74	E	.99		.74		.99		.74		.99
La Brea/3rd	Option I & II	F	1.12	F	1.16		1.12		1.16		1.12		1.16
	2000 Low	F	1.05	F	1.03		1.05		1.03		1.05		1.03
	2000 Medium	F	1.07	F	1.07		1.07		1.07		1.07		1.07

TABLE 8.2-8

LOCATION	CONDITION	SPECIFIC PLAN INTERSECTION-FAIRFAX (CURSON)/WILSHIRE STATION											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Curson/Olympic	Option I & II	B	.65	D	.82		.65		.82		.65		.82
	2000 Low	A	.57	C	.78		.57		.78		.57		.78
	2000 Medium	A	.59	D	.81		.59		.81		.59		.81
Curson/Wilshire	Option I & II	A	.46	C	.76		.46		.76		.46		.76
	2000 Low	A	.42	C	.70		.42		.70		.42		.70
	2000 Medium	A	.44	C	.73		.44		.73		.44		.73
Fairfax/Olympic	Option I & II	F	1.11	F	1.17		1.11		1.17		1.11		1.17
	2000 Low	F	1.05	F	1.07		1.05		1.07		1.05		1.07
	2000 Medium	F	1.08	F	1.14		1.08		1.14		1.08		1.14
Fairfax/Wilshire	Option I & II	D	.85	F	1.12		.85		1.12		.85		1.12
	2000 Low	C	.76	F	1.01		.76		1.01		.76		1.01
	2000 Medium	D	.81	F	1.07		.81		1.07		.81		1.07
La Cienega/Wilshire	Option I & II	F	1.05	F	1.29		1.05		1.29		1.05		1.29
	2000 Low	F	1.01	F	1.25		1.01		1.25		1.01		1.25
	2000 Medium	F	1.03	F	1.26		1.03		1.26		1.03		1.26
San Vicente/ Wilshire	Option I & II	F	1.02	F	1.14		1.02		1.14		1.02		1.14
	2000 Low	E	.91	F	1.02		.91		1.02		.91		1.02
	2000 Medium	E	.97	F	1.07		.97		1.07		.97		1.07

TABLE 8.2-9

LOCATION	CONDITION	SPECIFIC PLAN INTERSECTIONS - BEVERLY/FAIRFAX STATION											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Beverly/Fairfax	Option I/X II	E	.95	F	1.07		.95		1.07		.95		1.07
	2000 Low	D	.80	E	.95		.80		.95		.80		.95
	2000 Medium	D	.85	E	1.00		.85		1.00		.85		1.00
Beverly/Gardner	Option I/X II	D	.82	E	.99		.86		.99		.74		.99
	2000 Low	C	.72	D	.87		.76		.87		.63		.87
	2000 Medium	C	.76	E	.91		.79		.91		.67		.91
Fairfax/Melrose	Option I/X II	D	.81	F	1.14		.81		1.14		.81		1.14
	2000 Low	C	.71	E	.98		.71		.98		.71		.98
	2000 Medium	C	.75	F	1.03		.75		1.03		.75		1.03
Fairfax/Oakwood					NOT AVAILABLE								
Fairfax/Rosewood					NOT AVAILABLE								
Fairfax/3rd	Option I/X II	F	1.02	F	1.12		1.02		1.12		1.02		1.12
	2000 Low	E	.91	E	1.00		.91		1.00		.91		1.00
	2000 Medium	E	.98	F	1.08		.98		1.08		.98		1.08

TABLE 8.2-10

LOCATION	CONDITION	SPECIFIC PLAN INTERSECTIONS - FAIRFAX /SANTA MONICA STATION											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Fairfax/Santa Monica	Option I/X II	E	.90	F	1.04		.90		1.04		.90		1.04
	2000 Low	D	.88	E	.96		.88		.96		.88		.96
	2000 Medium	D	.88	E	.99		.88		.99		.88		.99
Gandner/Santa Monica	Option I/X II	A	.58	C	.78		.24		.48		.73		.91
	2000 Low	A	.56	C	.75		.23		.44		.71		.88
	2000 Medium	A	.57	C	.76		.23		.44		.71		.90
La Cienega/Melrose	Option I/X II	D	.85	F	1.13		.85		1.13		.85		1.13
	2000 Low	D	.83	F	1.11		.83		1.11		.83		1.11
	2000 Medium	D	.84	F	1.12		.84		1.12		.84		1.12
La Cienega/Santa Monica	Option I/X II	E	.96	F	1.17		.96		1.17		.96		1.17
	2000 Low	E	.93	F	1.17		.93		1.17		.93		1.17
	2000 Medium	E	.94	F	1.17		.94		1.17		.94		1.17

TABLE 8.2-11

LOCATION	CONDITION	SPECIFIC PLAN INTERSECTIONS - LA BREA/SUNSET STATION											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Highland/Odin West Roadway	Option I/X II	F	1.16	C	.74		1.16		.74		1.16		.74
	2000 Low	F	1.16	C	.74		1.16		.74		1.16		.74
	2000 Medium	F	1.16	C	.74		1.16		.74		1.16		.74
Highland/Odin East Roadway	Option I/X II	A	.51	E	.90		.51		.90		.51		.90
	2000 Low	A	.51	E	.90		.51		.90		.51		.90
	2000 Medium	A	.51	E	.90		.51		.90		.51		.90
Hollywood/La Brea	Option I/X II	E	1.00	E	.98		1.00		.98		1.00		.98
	2000 Low	E	.98	E	.96		.98		.96		.98		.96
	2000 Medium	E	.98	E	.96		.98		.96		.98		.96
Franklin/La Brea	Option I/X II	C	.70	D	.84		.70		.84		.70		.84
	2000 Low	B	.69	D	.83		.69		.83		.69		.83
	2000 Medium	B	.69	D	.83		.69		.83		.69		.83
Gardner/Sunset	Option I/X II	A	.55	C	.73		.55		.73		.55		.73
	2000 Low	A	.55	C	.72		.55		.72		.55		.72
	2000 Medium	A	.55	C	.72		.55		.72		.55		.72
La Brea/Santa Monica	Option I/X II	E	.99	F	1.09		.99		1.09		.99		1.09
	2000 Low	E	.97	F	1.05		.97		1.05		.97		1.05
	2000 Medium	E	.97	F	1.07		.97		1.07		.97		1.07
La Brea/Sunset	Option I/X II	C	.78	F	1.06		.78		1.06		.78		1.06
	2000 Low	C	.77	F	1.04		.77		1.04		.77		1.04
	2000 Medium	C	.79	F	1.05		.79		1.05		.79		1.05

TABLE 8.2-12

LOCATION	CONDITION	SPECIFIC PLAN INTERSECTIONS - CAHUENGA/HOLLYWOOD STATION											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Cahuenga/Fountain	Option I & II	B	.69	E	.97		.69		.97		.69		.54
	2000 Low	B	.62	D	.87		.62		.87		.62		.87
	2000 Medium	B	.64	E	.90		.64		.90		.64		.90
Cahuenga/Franklin	Option I & II	D	.88	F	1.09		.88		1.09		.88		1.09
	2000 Low	D	.81	E	.99		.81		.99		.81		.99
	2000 Medium	D	.83	F	1.02		.83		1.02		.83		1.02
Cahuenga/Hollywood	Option I & II	E	.98	F	1.23		.98		1.23		.98		1.23
	2000 Low	D	.88	F	1.14		.88		1.14		.88		1.14
	2000 Medium	E	.90	F	1.16		.90		1.16		.90		1.16
Franklin/Highland (North I/S)	Option I & II	D	.80	F	1.04		.78		.64		.81		1.20
	2000 Low	C	.78	F	1.01		.73		.61		.81		1.17
	2000 Medium	C	.79	F	1.01		.75		.62		.81		1.18
Gower/Hollywood	Option I & II	C	.78	E	.92		.78		.92		.78		.92
	2000 Low	C	.75	E	.91		.75		.91		.75		.91
	2000 Medium	C	.76	E	.90		.76		.90		.76		.90
Highland/Sunset	Option I & II	E	.92	F	1.09		.92		1.09		.92		1.09
	2000 Low	D	.88	F	1.04		.88		1.04		.88		1.04
	2000 Medium	D	.89	F	1.06		.89		1.06		.89		1.06
Sunset/Vine	Option I & II	D	.85	F	1.04		.85		1.04		.85		1.04
	2000 Low	D	.82	E	.99		.82		.99		.82		.99
	2000 Medium	D	.84	F	1.01		.84		1.01		.84		1.01

La Brea and Sunset Station

Of the seven intersections evaluated in the vicinity of the La Brea and Sunset Station for LOW and MEDIUM development, none had V/C indices 0.02 or greater than those under Option I/XII. The results are shown in Table 8.2-11.

Cahuenga and Hollywood Station

Seven intersections near this station were evaluated for LOW and MEDIUM development and all had V/C indices less than those for Option I/XII, as shown in Table 8.2-12.

Universal Station

Seven intersections in the vicinity of Universal Station were evaluated for LOW-MEDIUM and HIGH development. Two, Barham and Cahuenga Boulevards and Laurel Canyon and Ventura Boulevards, had V/C indices 0.02 or more greater than those under Option I/XII and LOS of D or worse under both LOW-MEDIUM and HIGH development. Four of the intersections are along Lankershim Boulevard. The increases are due primarily or exclusively to traffic volume increases on Lankershim Boulevard. The V/C index increases at the fifth intersection, Ventura Boulevard and Vineland Avenue, are due to small and roughly equal increases in volume eastbound and westbound on Ventura Boulevard and southbound on Vineland Avenue.

Evalation results are shown in Table 8.2-13.

8.3 Parking (1980 Inventory)

An inventory of existing parking within the boundaries of each station's specific plan area was conducted. The methodology utilized was identical to the methodology utilized for the 1980 Parking Inventory. Data from the 1980 Parking Inventory was utilized as much as possible. Maps and tables describing the type, supply, usage, and median cost of existing parking on a block-by-block basis were prepared under WBS Task 188AH1345. Table 8.3-1, Specific Plan Parking Summary, summarizes the data collected in the parking inventory.

TABLE 8.2-13

LOCATION	CONDITION	SPECIFIC PLAN INTERSECTIONS - UNIVERSAL CITY STATION											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Barham/Cahuenga	Option I	E	.94	A	.57		.94		.57		.94		.57
	2000Low-Med	E	.95	A	.57		.95		.57		.95		.57
	2000 High	E	.95	A	.57		.95		.57		.95		.57
Bluffside/ Lankershim	Option I	C	.79	E	.92		.26		.92		1.02		.92
	2000Low-Med	D	.86	E	.95		.26		.95		1.12		.95
	2000 High	D	.89	E	.96		.26		.96		1.16		.96
Cahuenga/Lankershim	Option I	F	1.01	D	.85		1.01		.85		1.01		.85
	2000Low-Med	F	1.12	E	.94		1.12		.94		1.12		.94
	2000 High	F	1.16	E	.97		1.16		.97		1.16		.97
Lankershim/ Tour Center Drive	Option I	F	1.31	F	1.01		1.31		1.01		1.31		1.01
	2000Low-Med	F	1.47	F	1.08		1.47		1.08		1.47		1.08
	2000 High	F	1.51	F	1.09		1.51		1.09		1.51		1.09
Lankershim/ Ventura-Cahuenga	Option I	E	.90	D	.84		.90		.84		.90		.84
	2000Low-Med	E	.92	D	.86		.92		.86		.92		.86
	2000 High	E	.93	D	.87		.93		.87		.93		.87
Laurel Canyon/ Ventura	Option I	D	.88	F	1.06		.88		1.06		.88		1.06
	2000Low-Med	D	.88	F	1.06		.88		1.06		.88		1.06
	2000 High	D	.88	F	1.06		.88		1.06		.88		1.06
Ventura/Vineland	Option I	D	.89	D	.88		.89		.92		.89		.80
	2000Low-Med	E	.92	E	.90		.92		.93		.92		.80
	2000 High	E	.93	E	.91		.93		.95		.93		.80

Table 8.3-1

Specific Plan Parking Summary (1980)

Station	Station Parking Supply	Station Parking Usage	Overall Occupancy Rate	Parking (-)Deficit (+)Surplus	Number of Blocks W/Occupancy Rate		
					<0.80	0.80-0.90	>0.90
Union Station	6,265	4,413	0.70	+1,226	17	5	1
First/Hill	12,559	10,492	0.84	+811	3	11	5
Fifth/Hill	12,655	10,188	0.81	+1,202	9	15	0
Seventh/Flower	19,390	16,616	0.86	+835	5	20	13
Wilshire/Alvarado	6,006	3,688	0.61	+1,717	31	5	0
Wilshire/Vermont	16,579	11,937	0.72	+2,984	28	8	3
Wilshire/Normandie	12,920	9,691	0.75	+1,937	19	8	3
Wilshire/Western	10,017	7,086	0.71	+1,929	35	3	4
Wilshire/Crenshaw	2,923	1,387	0.47	+1,244	25	1	1
Wilshire/La Brea	5,693	3,949	0.69	+1,175	35	4	9
Wilshire/Fairfax	11,463	6,705	0.58	+3,612	23	2	3
Fairfax/Beverly	7,148	4,440	0.62	+1,993	38	2	0
Fairfax/S. Monica	2,596	1,471	0.57	+665	29	3	0
Sunset/La Brea	6,745	3,965	0.59	+2,106	36	1	2
Hollywood/Cahuenga	10,354	6,645	0.64	+2,674	42	4	4
Universal City	4,061	2,465	0.61	+1,190	23	1	0
North Hollywood	5,345	2,532	0.47	+2,279	33	1	0

CHAPTER 9 - BIBLIOGRAPHY

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Appendix A

Results of Intersection Analysis (V/C Ratios)

Existing, 2000 Base (Null), 2000 With Project (LPA), and With Mitigation

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Alameda/Aliso - Commercial	1980	A	.52	B	.66		.52		.69		.53		.61
	2000 Base	A	.51	D	.81		.51		.81		.51		.81
	Option I/XII	A	.50	D	.84		.50		.84		.50		.84
Alameda/Arcadia	1980	B	.59	A	.54		.51		.66		.64		.31
	2000 Base	A	.54	A	.45		.54		.45		.54		.45
	Option I/XII	A	.53	A	.46		.53		.46		.53		.46
Alameda/ Los Angeles	1980	A	.37	A	.55		.64		.55		.13		.67
	2000 Base	A	.51	E	.99		.68		.99		.27		.99
	Option I/XII	A	.58	E	.94		.84		.94		.20		.94
Alameda/Macy	1980	C	.72	B	.69		.69		.81		.74		.60
	2000 Base	D	.85	D	.83		.85		.83		.85		.83
	Option I/XII	E	.92	F	1.09		.92		1.09		.92		1.09
	Mitigation	D	.83	D	.88		.83		.88		.83		.88
Alameda/N. Main	1980	A	.40	B	.60		.43		.68		.34		.56
	2000 Base	A	.53	C	.70		.60		.70		.40		.70
	Option I/XII	A	.52	B	.67		.60		.67		.38		.67
Alameda/Temple	1980	A	.41	A	.51		.45		.38		.36		.70
	2000 Base	B	.60	C	.72		.60		.72		.60		.72
	Option I/XII	A	.53	B	.62		.53		.62		.53		.62
Aliso/Los Angeles	1980	A	.35	B	.64		.28		.67		.45		.61
	2000 Base	A	.47	C	.79		.47		.79		.47		.79
	Option I/XII	A	.45	C	.78		.45		.78		.45		.78
Aliso/N. Broadway	1980	A	.40	A	.45		.52		.36		.32		.48
	2000 Base	B	.63	B	.63		.63		.55		.63		.67
	Option I/XII	B	.63	B	.64		.63		.64		.63		.64

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Aliso/N. Main	1980	A	.18	A	.51		.25		.49		.11		.52
	2000 Base	A	.33	B	.68		.33		.68		.33		.68
	Option I/XII	A	.34	B	.65		.34		.65		.34		.65
Aliso/Spring	1980	A	.55	A	.27		.57		.40		.53		.18
	2000 Base	D	.80	A	.43		.80		.43		.80		.43
	Option I/XII	C	.76	A	.41		.76		.41		.76		.41
Alvarado/Olympic	1980	B	.64	D	.82		.45		.69		.76		.90
	2000 Base	D	.87	E	1.00		.77		.83		.92		1.10
	Option I/XII	C	.78	E	.95		.59		.70		.90		1.11
varado/Wilshire	1980	A	.56	C	.79		.49		.78		.65		.79
	2000 Base	C	.74	F	1.02		.74		1.02		.74		1.02
	Option I/XII	C	.73	E	.90		.73		.90		.73		.90
Alvarado/3rd	1980	D	.83	E	.94		.72		.77		.92		1.08
	2000 Base	F	1.14	F	1.26		1.14		1.26		1.14		1.26
	Option I/XII	F	1.05	F	1.25		1.05		1.25		1.05		1.25
Alvarado/6th	1980	A	.57	D	.86		.55		.90		.58		.83
	2000 Base	B	.62	E	.98		.62		.98		.62		.98
	Option I/XII	B	.62	D	.81		.62		.81		.62		.81
Alvarado/7th	1980	A	.40	A	.59		.43		.59		.36		.59
	2000 Base	A	.52	E	.90		.52		.90		.52		.90
	Option I/XII	A	.51	C	.71		.51		.71		.51		.71
Alvarado/8th	1980	A	.50	B	.68		.48		.62		.52		.74
	2000 Base	B	.63	D	.86		.63		.86		.63		.86
	Option I/XII	B	.62	D	.80		.62		.80		.62		.80

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Alvarado/9th	1980	A	.40	A	.48		.36		.47		.48		.51
	2000 Base	C	.70	C	.72		.70		.72		.70		.72
	Option I/XII	A	.50	A	.55		.50		.55		.50		.55
Arcadia/ Los Angeles	1980	A	.52	A	.41		.71		.30		.28		.52
	2000 Base	B	.64	A	.53		.64		.53		.64		.53
	Option I/XII	B	.61	A	.45		.61		.45		.61		.45
Aracdia/ N. Broadway	1980	A	.25	A	.53		.18		.63		.30		.47
	2000 Base	A	.37	C	.71		.27		.71		.42		.71
	Option I/XII	A	.31	B	.65		.24		.65		.35		.65
cadia/N. Main	1980	A	.27	A	.47		.31		.28		.22		.77
	2000 Base	A	.33	B	.60		.33		.60		.33		.60
	Option I/XII	A	.35	A	.57		.35		.57		.35		.57
Arcadia/Spring	1980	B	.63	A	.31		.63		.31		.62		.31
	2000 Base	C	.79	A	.36		.79		.36		.79		.36
	Option I/XII	C	.73	A	.33		.73		.33		.73		.33
Beaudry/Wilshire	1980	A	.43	A	.41		.46		.37		.41		.56
	2000 Base	A	.57	A	.58		.57		.58		.57		.58
	Option I/XII	A	.56	A	.55		.56		.55		.56		.55
Beaudry/3rd	1980	A	.59	B	.63		.78		.65		.44		.62
	2000 Base	F	1.28	D	.82		1.28		.82		1.28		.82
Deleted (Flower/3rd Station)													
Beaudry/4th	1980	A	.55	B	.61		.67		.74		.44		.47
	2000 Base	D	.84	F	1.26		.84		1.32		.84		1.07
Deleted (Flower/3rd Station)													

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Beaudry/6th	1980	A	.46	A	.34		.71		.31		.33		.44
	2000 Base	C	.72	B	.64		.72		.64		.72		.64
	Option I/XII	C	.70	B	.61		.70		.61		.70		.61
Beverly/ Crescent Heights	1980	D	.89	E	.93		.89		1.10		.90		.73
	2000 Base	E	.92	E	1.00		.92		1.00		.92		1.00
	Option I/XII	D	.89	E	.97		.89		.97		.89		.97
Beverly/Fairfax	1980	D	.85	E	.95		.94		1.01		.76		.88
	2000 Base	E	.96	F	1.07		.96		1.07		.96		1.07
	Option I/XII	E	.95	F	1.07		.95		1.07		.95		1.07
verly/Gardner	1980	A	.56	C	.76		.61		.76		.39		.68
	2000 Base	C	.79	E	.96		.79		.96		.79		.96
	Option I/XII	D	.82	E	.99		.86		.99		.74		.99
	Mitigation	B	.64	D	.83		.64		.83		.64		.83
Beverly/La Cienega	1980	E	.91	F	1.11		.86		1.16		.96		1.07
	2000 Base	E	.90	F	1.17		.90		1.17		.90		1.17
	Option I/XII	D	.82	F	1.14		.82		1.14		.82		1.14
Bixel/Wilshire Deleted (Flower/3rd and/or Wilshire/Witmer Sta.)	1980	A	.54	B	.64		.70		.77		.43		.56
	2000 Base	C	.72	D	.87		.72		.87		.72		.87
Bixel/6th Deleted (Flower/3rd and/or Wilshire/Witmer Sta.)	1980	A	.52	A	.59		.43		.63		.59		.56
	2000 Base	C	.71	C	.74		.71		.74		.71		.74
Bixel/7th	1980	B	.62	B	.61		.70		.49		.54		.73
	2000 Base	D	.83	D	.84		.83		.84		.83		.84
	Option I/XII	D	.83	D	.85		.83		.85		.83		.85

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Bixel/8th	1980	A	.59	B	.61		.88		.50		.32		.70
	2000 Base	D	.80	C	.77		.80		.77		.80		.77
	Option I/XII	C	.78	C	.79		.78		.79		.78		.79
Bluffside/ Lankershim	1980	A	.46	A	.47		.17		.55		.58		.44
	2000 Base	C	.71	C	.74		.26		.66		.90		.77
	Option I (4)	C	.79	E	.92		.26		.92		1.02		.92
	Option I (5)	C	.74	C	.79		.26		.66		.94		.85
	Mitigation	B	.63	D	.82		.24		.83		.89		.88 *
N. Broadway/ Temple	1980	D	.84	C	.75		1.07		.49		.59		1.00
	2000 Base	F	1.07	F	1.25		1.07		1.25		1.07		1.25
	Option I/XII	E	.99	F	1.15		.99		1.15		.99		1.15
oadway/1st	1980	C	.76	C	.73		.71		.65		.81		.79
	2000 Base	E	1.00	F	1.07		1.00		1.07		1.00		1.07
	Option I/XII	E	.93	E	1.00		.93		1.00		.93		1.00
Broadway/2nd	1980	B	.60	A	.58		.74		.54		.46		.63
	2000 Base	D	.86	E	.92		.86		.92		.86		.92
	Option I/XII	D	.80	D	.85		.80		.85		.80		.85
Broadway/3rd	1980	A	.48	A	.58		.48		.62		.48		.56
	2000 Base	B	.69	E	1.00		.69		1.00		.69		1.00
	Option I/XII	B	.66	D	.82		.66		.82		.66		.82
Broadway/4th	1980	A	.40	B	.66		.42		.59		.38		.73
	2000 Base	C	.74	E	.98		.74		.98		.74		.98
	Option I/XII	C	.75	E	.98		.75		.98		.75		.98
Broadway/5th	1980	B	.62	B	.60		.50		.50		.74		.70
	2000 Base	D	.84	E	.91		.84		.91		.84		.91
	Option I/XII	D	.84	E	.93		.84		.93		.84		.93

(4) - Universal Station, Subway
(5) - Studio City Station, Subway
* Universal exit - AM: .19, PM: .39

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Broadway/6th	1980	C	.70	C	.79		.62		.91		.77		.72
	2000 Base	D	.88	E	.98		.88		.98		.88		.98
	Option I/XII	D	.83	E	.99		.83		.99		.83		.99
Broadway/7th	1980	A	.56	A	.61		.63		.72		.49		.49
	2000 Base	B	.61	C	.75		.61		.75		.61		.75
	Option I/XII	B	.61	C	.75		.61		.75		.61		.75
Broadway/8th	1980	A	.56	A	.56		.47		.53		.64		.58
	2000 Base	C	.72	D	.84		.72		.84		.72		.84
	Option I/XII	C	.75	D	.85		.75		.85		.75		.85
Burbank/Cahuenga	1980	A	.59	A	.52		.71		.55		.46		.49
	2000 Base	D	.85	C	.77		.85		.77		.85		.77
	Option I (1)	D	.80	C	.79		.80		.79		.80		.79
	Option I (2)	D	.80	C	.79		.80		.79		.80		.79
	Option I (3)	D	.80	C	.79		.80		.79		.80		.79
Burbank/Colfax	1980	A	.51	B	.67		.47		.79		.55		.52
	2000 Base	A	.57	C	.72		.57		.75		.57		.68
	Option I (1)	B	.63	D	.89		.63		.89		.63		.89
	Option I (2)	B	.62	D	.81		.62		.91		.62		.64
	Option I (3)	B	.63	D	.89		.63		.89		.63		.89
Burbank/ Lankershim/Tujunga	1980	B	.66	A	.58		.81		.57		.54		.58
	2000 Base	D	.82	C	.70		.82		.70		.82		.70
	Option I (1)	F	1.41	F	1.08		1.41		1.08		1.41		1.08
	Option I (2)	F	1.21	F	1.16		1.21		1.07		1.21		1.21
	Option I (3)	F	1.41	F	1.08		1.41		1.08		1.41		1.08
	Mitigation	F	1.28	F	1.01		1.28		1.01		1.28		1.01
Burbank/Vineland	1980	C	.78	C	.77		.87		.80		.69		.75
	2000 Base	C	.71	B	.68		.71		.68		.71		.68
	Option I (1)	C	.77	C	.77		.77		.77		.77		.77
	Option I (2)	E	.96	C	.78		.96		.78		.96		.78
	Option I (3)	C	.77	C	.77		.77		.77		.77		.77
Cahuenga/Fountain	1980	A	.52	C	.74		.47		.67		.55		.79
	2000 Base	B	.68	E	.98		.68		.98		.68		.98
	Option I/XII	B	.69	E	.97		.69		.97		.69		.97

(1) - Chandler/Lankershim Station, Subway
(2) - Lankershim between Chandler and Magnolia Station, Subway
(3) - Chandler/Lankershim Station, Aerial

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Cahuenga/Franklin	1980	C	.76	E	.99		.63		1.03		.95		.93
	2000 Base	D	.86	F	1.12		.86		1.12		.86		1.12
	Option I/XII	D	.88	F	1.09		.88		1.09		.88		1.09
Cahuenga/Hollywood	1980	C	.72	E	.90		.86		.95		.58		.84
	2000 Base	E	.95	F	1.13		.95		1.13		.95		1.13
	Option I/XII	E	.98	F	1.23		.98		1.23		.98		1.23
	Mitigation	C	.72	E	.98		.72		.98		.72		.98
Cahuenga/Hwd Fwy Ramos-Regal Pl.	1980	D	.85	C	.77		.85		.77		.85		.77
	2000 Base	E	.94	D	.81		.94		.81		.94		.81
	Option I (4)	E	.96	D	.85		.96		.85		.96		.85
	Option I (5)	E	.93	D	.80		.93		.80		.93		.80
	Mitigation	E	.94	D	.82		.94		.82		.94		.82
Cahuenga/ Lankershim	1980	A	.53	A	.55		.50		.32		.56		.74
	2000 Base	D	.89	C	.73		.89		.58		.89		.80
	Option I (4)	F	1.01	D	.85		1.01		.85		1.01		.85
	Option I (5)	E	.93	D	.80		.93		.80		.93		.80
	Mitigation	D	.81	D	.84		.81		.84		.81		.84
Cahuenga/ Magnolia	1980	A	.58	C	.75		.74		.83		.45		.69
	2000 Base	B	.64	D	.83		.64		.83		.64		.83
	Option I (1)	A	.59	D	.80		.59		.80		.59		.80
	Option I (2)	A	.59	D	.80		.59		.80		.59		.80
	Option I (3)	A	.59	D	.80		.59		.80		.59		.80
Cahuenga/Moorpark	1980	A	.45	A	.42		.49		.41		.38		.44
	2000 Base	B	.67	C	.72		.67		.72		.67		.72
	Option I (1)	B	.69	C	.76		.69		.76		.69		.76
Cahuenga/Sunset	1980	B	.62	C	.74		.75		.82		.52		.67
	2000 Base	D	.81	E	1.00		.81		1.00		.81		1.00
	Option I/XII	C	.78	F	1.02		.78		1.02		.78		1.02
	Mitigation				NONE								
Camarillo/ Lankershim/ Vineland*	1980	D	.82	F	1.08		.75		1.10		.78		1.06
	2000 Base	C	.77	E	.94		.77		.94		.77		.94
	Option I (1)	C	.70	E	.90		.70		.90		.70		.90
	Option I (2)	C	.73	D	.88		.73		.88		.73		.88
	Option I (3)	C	.70	E	.90		.70		.90		.70		.90

* Vineland: 1980 : AM - 0.97; PM 1.08
2000 Base: AM - 0.77; PM 0.94

Option I (1): AM - 0.70, PM 0.90
Option I (2): AM - 0.73, PM 0.88
Option I (3): AM - 0.70, PM 0.90

(1) - Chandler/Lankershim Station, Subway
(2) - Lankershim between Chandler & Magnolia Station, Subway
(3) - Chandler/Lankershim Station, Aerial
(4) - Universal Station, Subway
(5) - Studio City Station, Subway

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Carillo-Crescent Hgts/Olympic	1980	C	.76	E	.96		1.03		.89		.61		1.00
	2000 Base	E	.96	F	1.26		.96		1.26		.96		1.26
	Option I/XII	E	.95	F	1.27		.95		1.27		.95		1.27
Carillo-McCarthy Vista San Vicente	1980	C	.72	C	.74		.90		.83		.58		.66
	2000 Base	F	1.13	F	1.22		1.13		1.22		1.13		1.22
	Option I/XII	F	1.08	F	1.16		1.08		1.16		1.08		1.16
Chandler/Lankershim	1980	A	.45	A	.38		.52		.68		.39		.18
	2000 Base	B	.62	A	.57		.62		.57		.62		.57
	Option I (1)	C	.71	F	1.27		.71		1.27		.71		1.27
	Option I (2)	F	1.10	F	1.65		1.10		1.65		1.10		1.65
	Option I (3)	C	.71	F	1.27		.71		1.27		.71		1.27
	Mitigation	B	.62	C	.79		.62		.79		.62		.79
Chandler/Laurel Cyn.	1980	B	.68	E	.90		.72		.94		.64		.8
	2000 Base	B	.64	D	.87		.64		.87		.64		.87
	Option I (1)	B	.64	D	.88		.64		.88		.64		.88
	Option I (2)	B	.64	D	.88		.64		.88		.64		.88
	Option I (3)	B	.64	D	.88		.64		.88		.64		.88
Chandler/Tujunga North I/S	1980	A	.40	A	.58		.07		.21		.74		.84
	2000 Base	A	.54	C	.71		.19		.49		.72		.82
	Option I (1)	E	.96	E	.92		.27		.53		1.30		1.10
	Option I (2)	A	.50	C	.71		.18		.55		.66		.80
	Option I (3)	E	.92	E	.99		.18		.68		1.27		1.16
	Mitigation	A	.55	B	.68		.27		.53		.68		.75
Chandler/Tujunga South I/S	1980	A	.42	A	.32		.29		.16		.55		.48
	2000 Base	A	.53	A	.38		.53		.35		.53		.39
	Option I (1)	A	.50	C	.71		.50		.71		.50		.71
	Option I (2)	A	.52	A	.37		.52		.37		.52		.37
	Option I (3)	B	.63	B	.66		.63		.61		.63		.68
Chandler/Vineland	1980	A	.40	A	.44		.22		.40		.52		.48
	2000 Base	A	.37	A	.46		.27		.46		.43		.46
	Option I (1)	A	.33	A	.46		.16		.31		.43		.54
	Option I (2)	A	.43	A	.55		.25		.55		.54		.55
	Option I (3)	A	.33	A	.46		.16		.31		.43		.54
Crenshaw/Olympic	1980	E	.99	D	.88		1.17		.94		.87		.84
	2000 Base	F	1.25	F	1.13		1.25		1.13		1.25		1.13
	Option I/XII	F	1.23	F	1.13		1.23		1.13		1.23		1.13
	Option IX	F	1.22	F	1.11		1.22		1.11		1.22		1.11

(1) - Chandler/Lankerhsim Station, Subway
(2) - Lankershim between Chandler & Magnolia Station, Subway
(3) - Chandler/Lankershim Station, Aerial

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Crenshaw/Wilshire	1980	C	.71	D	.87		.63		.78		.76		.93
	2000 Base	F	1.01	F	1.11		.93		.94		1.06		1.21
	Option I/XII	E	.96	F	1.08		.84		.91		1.02		1.18
	Option IX	E	.96	F	1.12		.84		.90		1.03		1.25
Crenshaw/8th	1980	B	.62	C	.70		.75		.63		.49		.77
	2000 Base	D	.84	E	.91		.84		.91		.84		.91
	Option I/XII	C	.78	E	.90		.78		.90		.78		.90
	Option IX	C	.77	D	.88		.77		.88		.77		.89
Crescent Heights/ Fountain	1980	C	.79	E	.90		.82		.94		.74		.85
	2000 Base	E	.92	F	1.06		.92		1.06		.92		1.06
	Option I/XII	E	.92	F	1.08		.92		1.08		.92		1.08
	Mitigation	C	.77	E	.91		.77		.91		.77		.91
Crescent Heights/ Melrose	1980	D	.87	D	.83		.96		.87		.74		.80
	2000 Base	E	.96	E	.99		.96		.99		.96		.99
	Option I/XII	E	.93	E	.95		.93		.95		.93		.95
Crescent Heights/ Santa Monica	1980	C	.78	F	1.02		.91		1.20		.66		.86
	2000 Base	E	1.00	F	1.35		1.00		1.35		1.00		1.35
	Option I/XII	E	.98	F	1.32		.98		1.32		.98		1.32
Crescent Heights/ Sunset	1980	D	.84	D	.89		1.15		1.19		.66		.73
	2000 Base	F	1.09	F	1.07		1.09		1.07		1.09		1.07
	Option I/XII	E	.94	E	1.00		.94		1.00		.94		1.00
Crescent Heights/ Wilshire	1980	C	.72	D	.87		.93		.88		.51		.95
	2000 Base	F	1.03	F	1.25		1.03		1.25		1.03		1.25
	Option I/XII	E	.95	F	1.22		.95		1.22		.95		1.27
Crescent Heights/ 3rd	1980	C	.76	E	.94		.80		.85		.72		1.03
	2000 Base	E	1.00	F	1.12		1.00		1.12		1.00		1.12
	Option I/XII	E	.96	F	1.07		.96		1.07		.96		1.07
Curson/Olympic	1980	A	.46	A	.51		.46		.51		.46		.51
	2000 Base	B	.64	C	.73		.64		.73		.64		.73
	Option I/XII	B	.65	D	.82		.65		.82		.65		.82
Curson/Wilshire	1980	A	.31	A	.43		.31		.43		.31		.43
	2000 Base	A	.44	B	.61		.44		.61		.44		.61
	Option I/XII	A	.46	C	.76		.46		.76		.46		.76

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Edgewood/La Brea	1980	E	.91	E	.92		.81		.94		1.03		.89
	2000 Base	F	1.05	F	1.15		1.05		1.15		1.05		1.15
	Option I/XII	F	1.02	F	1.16		1.02		1.16		1.02		1.16
	Option IX	F	1.02	F	1.16		1.02		1.16		1.02		1.16
Fairfax/Fountain	1980	C	.73	D	.88		.66		.76		.80		1.01
	2000 Base	D	.88	E	.94		.88		.94		.88		.94
	Option I/XII	D	.84	E	.92		.84		.92		.84		.92
Fairfax/Hollywood	1980	B	.64	C	.70		.27		.66		.84		.72
	2000 Base	C	.77	D	.84		.45		.84		.90		.84
	Option I/XII	C	.74	D	.81		.40		.81		.87		.81
Fairfax/Melrose	1980	B	.62	D	.84		.55		.75		.68		.92
	2000 Base	D	.84	F	1.13		.84		1.13		.84		1.13
	Option I/XII	D	.81	F	1.14		.81		1.14		.81		1.14
Fairfax/Olympic	1980	C	.76	D	.85		.81		.86		.72		.85
	2000 Base	F	1.04	F	1.09		1.04		1.09		1.04		1.09
	Option I/XII	F	1.11	F	1.17		1.11		1.17		1.11		1.17
	Mitigation	E	.91	F	1.17		.91		1.17		.91		1.17
Fairfax/ Santa Monica	1980	C	.77	D	.85		.90		.63		.68		1.05
	2000 Base	E	.95	F	1.05		.95		1.05		.95		1.05
	Option I/XII	E	.90	F	1.04		.90		1.04		.90		1.04
Fairfax/ San Vicente	1980	C	.70	B	.69		.77		.81		.63		.55
	2000 Base	E	.97	E	.96		.97		.96		.97		.96
	Option I/XII	F	1.03	F	1.02		1.03		1.02		1.03		1.02
	Mitigation	D	.84	D	.83		.84		.83		.84		.83
Fairfax/Sunset	1980	C	.72	D	.84		.77		.74		.68		.93
	2000 Base	D	.81	D	.89		.81		.89		.81		.89
	Option I/XII	C	.77	D	.86		.77		.86		.77		.86

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Fairfax/Wilshire	1980	A	.61	C	.79		.70		.78		.52		.80
	2000 Base	D	.88	F	1.11		.88		1.11		.88		1.11
	Option I/XII	D	.85	F	1.12		.85		1.12		.85		1.12
Fairfax/3rd	1980	E	.93	C	.73		.82		.75		1.01		.71
	2000 Base	F	1.06	F	1.16		1.06		1.16		1.06		1.16
	Option I/XII	F	1.02	F	1.12		1.02		1.12		1.02		1.12
Fairfax/6th	1980	A	.59	B	.62		.66		.66		.52		.57
	2000 Base	D	.84	D	.87		.84		.87		.84		.87
	Option I/XII	C	.79	D	.83		.79		.83		.79		.83
gueroa/Olympic	1980	B	.64	C	.78		.75		.88		.55		.71
	2000 Base	D	.83	F	1.17		.83		1.17		.83		1.17
	Option I/XII	D	.84	F	1.14		.84		1.14		.84		1.14
Figueroa/Wilshire	1980	E	.90	E	.93		1.06		.98		.70		.89
	2000 Base	F	1.09	F	1.20		1.09		1.20		1.09		1.20
	Option I/XII	E	1.00	F	1.14		1.00		1.14		1.00		1.14
Figueroa/3rd	1980	A	.58	C	.77		.65		.86		.47		.65
	2000 Base	F	1.02	F	1.21		1.15		1.21		.75		1.21
Deleted (Flower/3rd Sta.)													
Figueroa/5th	1980	B	.67	C	.72		.86		.71		.34		.72
	2000 Base	D	.83	E	.94		.92		.94		.68		.94
	Option I/XII	C	.72	E	.91		.88		.91		.47		.91
Figueroa/6th	1980	C	.73	B	.65		.65		.61		.81		.73
	2000 Base	F	1.04	E	.92		1.04		.92		1.04		.92
	Option I/XII	F	1.01	D	.88		1.01		.88		1.01		.88

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Figueroa/7th	1980	D	.83	D	.82		.97		.76		.69		.91
	2000 Base	D	.82	C	.76		.82		.76		.82		.76
	Option I/XII	C	.79	C	.72		.79		.72		.79		.72
Figueroa/8th	1980	A	.56	D	.81		.57		.86		.46		.77
	2000 Base	D	.81	E	.98		.81		.98		.81		.98
	Option I/XII	C	.79	E	.98		.79		.98		.79		.98
Figueroa/9th	1980	B	.63	A	.47		.59		.44		.65		.50
	2000 Base	D	.87	C	.79		.87		.79		.87		.79
	Option I/XII	D	.88	C	.77		.88		.77		.88		.77
Flower/Wilshire	1980	C	.72	C	.75		.70		.78		.76		.70
	2000 Base	E	1.00	F	1.06		1.00		1.06		1.00		1.06
	Option I/XII	E	.98	F	1.02		.98		1.02		.98		1.02
Flower/3rd	1980	A	.54	A	.42		.59		.50		.52		.34
	2000 Base	F	.98	D	.88		1.03		1.00		.91		.63
Deleted (Flower/3rd Sta.)													
Flower/5th	1980	A	.59	C	.70		.74		.69		.41		.57
	2000 Base	D	.81	E	.93		.89		.93		.68		.93
	Option I/XII	C	.74	D	.87		.85		.87		.57		.87
Flower/6th	1980	A	.55	B	.60		.70		.63		.46		.59
	2000 Base	D	.82	E	.90		.82		.90		.82		.90
	Option I/XII	C	.79	E	.90		.79		.90		.79		.90
Flower/7th	1980	A	.57	D	.82		.87		.97		.32		.54
	2000 Base	C	.70	C	.76		.70		.76		.70		.76
	Option I/XII	B	.68	C	.77		.68		.77		.68		.77

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Flower/8th	1980	A	.46	C	.72		.51		.84		.40		.63
	2000 Base	B	.62	E	.97		.62		.97		.62		.97
	Option I/XII	A	.59	E	.98		.59		.98		.59		.98
Flower/9th	1980	A	.57	A	.50		.54		.52		.59		.48
	2000 Base	E	.90	D	.85		.90		.85		.90		.85
	Option I/XII	E	.90	D	.84		.90		.84		.90		.84
Fountain/Gardner	1980	A	.49	B	.68		.54		.80		.41		.49
	2000 Base	C	.70	C	.76		.70		.76		.70		.76
	Option I/XII	A	.57	C	.71		.57		.71		.57		.71
ıntain/ ..ighland	1980	E	.90	E	.98		1.03		1.14		.79		.81
	2000 Base	F	1.11	F	1.39		1.11		1.39		1.11		1.39
	Option I/XII	F	1.06	F	1.32		1.06		1.32		1.06		1.32
Fountain/La Brea	1980	B	.62	C	.75		.55		.86		.69		.64
	2000 Base	C	.79	E	.94		.79		.94		.79		.94
	Option I/XII	C	.76	E	.91		.76		.91		.76		.91
Fountain/ La Cienega	1980	B	.61	D	.88		.70		.78		.52		.95
	2000 Base	E	.90	D	.83		.90		.83		.90		.83
	Option I/XII	D	.84	C	.78		.84		.78		.84		.78
Fountain/Vine	1980	B	.67	E	.92		.59		.96		.75		.87
	2000 Base	C	.74	C	.72		.74		.72		.74		.72
	Option I/XII	B	.67	C	.71		.67		.71		.67		.71
Franklin/Gower	1980	B	.64	D	.87		.60		.88		.71		.87
	2000 Base	D	.87	F	1.14		.87		1.14		.87		1.14
	Option I/XII	D	.84	F	1.14		.84		1.14		.84		1.14

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Franklin/Highland North I/S	1980	E	.90	D	.89		.89		.76		.90		.93
	2000 Base	D	.89	F	1.08		.85		.68		.91		1.24
	Option I/XII	D	.80	F	1.04		.78		.64		.81		1.20
Franklin/Highland South I/S	1980	E	.91	F	1.03		1.15		1.06		.81		1.00
	2000 Base	E	1.00	E	1.00		.87		1.00		1.06		1.00
	Option I/XII	E	.97	E	.95		.82		.95		1.04		.95
Franklin/La Brea	1980	A	.53	A	.45		.47		.46		.77		.50
	2000 Base	C	.72	E	.90		.72		.90		.72		.90
	Option I/XII	C	.70	D	.84		.70		.84		.70		.84
anklin/Vine	1980	C	.76	E	.90		.82		.82		.64		1.05
	2000 Base	E	.90	F	1.07		.90		1.07		.90		1.07
	Option I/XII	D	.89	F	1.08		.89		1.08		.89		1.08
Gardner/ Hollywood	1980	A	.51	A	.59		.50		.42		.51		.66
	2000 Base	B	.67	B	.68		.67		.68		.67		.68
	Option I/XII	A	.59	B	.65		.59		.65		.59		.65
Gardner/Melrose	1980	B	.60	C	.72		.54		.49		.61		.82
	2000 Base	C	.79	E	.98		.79		.98		.79		.98
	Option I/XII	C	.72	E	.91		.64		.86		.76		.93
Gardner/ Santa Monica	1980	A	.46	B	.65		.19		.38		.58		.76
	2000 Base	B	.64	D	.83		.33		.59		.77		.93
	Option I/XII	A	.58	C	.78		.24		.48		.73		.91
Gardner/Sunset	1980	A	.48	B	.65		.42		.54		.52		.74
	2000 Base	B	.60	D	.83		.60		.83		.60		.83
	Option I/XII	A	.55	C	.73		.55		.73		.55		.73

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Gardner/3rd	1980	A	.53	B	.61		.50		.58		.54		.61
	2000 Base	D	.80	D	.87		.80		.87		.80		.87
	Option I/XII	C	.72	D	.82		.55		.64		.79		.89
Garland/8th	1980	A	.26	A	.43		.10		.24		.40		.60
	2000 Base	A	.35	A	.56		.35		.56		.35		.56
Deleted (Wilshire/Witmer Sta.)													
Gower/Hollywood	1980	D	.82	D	.83		1.18		.84		.58		.82
	2000 Base	D	.81	E	.98		.81		.98		.81		.98
	Option I/XII	C	.78	E	.92		.78		.92		.78		.92
er/Sunset	1980	D	.84	D	.86		1.13		.91		.58		.82
	2000 Base	D	.86	E	.99		.86		.99		.86		.99
	Option I/XII	D	.81	E	.95		.81		.95		.81		.95
Grand/Temple	1980	E	.96	D	.86		1.03		.91		.89		.81
	2000 Base	F	1.54	F	1.18		1.54		1.18		1.54		1.18
	Option I/XII	F	1.46	F	1.10		1.46		1.10		1.46		1.10
Grand/Wilshire	1980	A	.46	A	.46		.52		.47		.35		.45
	2000 Base	A	.53	A	.46		.60		.46		.37		.46
	Option I/XII	A	.50	A	.42		.57		.42		.33		.42
Grand/1st	1980	A	.58	B	.65		.52		.76		.62		.60
	2000 Base	E	.91	F	1.07		.91		1.07		.91		1.07
	Option I/XII	D	.83	F	1.02		.83		1.02		.83		1.02
Grand/5th	1980	A	.47	B	.62		.53		.55		.41		.67
	2000 Base	C	.75	E	.98		.75		.98		.75		.98
	Option I/XII	C	.72	E	.95		.72		.95		.72		.95

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Grand/6th	1980	A	.49	C	.69		.58		1.00		.43		.42
	2000 Base	C	.75	F	1.07		.75		1.07		.75		1.07
	Option I/XII	C	.73	F	1.03		.73		1.03		.73		1.03
Grand/7th	1980	B	.68	C	.72		.81		1.05		.55		.51
	2000 Base	C	.78	D	.81		.78		.81		.78		.81
	Option I/XII	C	.73	C	.74		.73		.74		.73		.74
Grand/8th	1980	A	.49	B	.64		.47		.51		.51		.75
	2000 Base	A	.58	D	.82		.58		.82		.58		.82
	Option I/XII	A	.55	C	.78		.55		.78		.55		.78
Hauser/Olympic	1980	D	.83	D	.84		.93		.89		.76		.80
	2000 Base	F	1.16	F	1.21		1.16		1.21		1.16		1.21
	Option I/XII	F	1.16	F	1.20		1.16		1.20		1.16		1.20
	Option IX	F	1.16	F	1.20		1.16		1.20		1.16		1.20
Hauser/Wilshire	1980	A	.58	A	.59		.73		.66		.47		.54
	2000 Base	D	.86	D	.85		.86		.85		.86		.85
	Option I/XII	C	.79	D	.82		.79		.82		.79		.82
	Option IX	C	.79	D	.82		.79		.82		.79		.82
Hauser/6th	1980	B	.66	D	.84		.47		.79		.79		.87
	2000 Base	D	.85	D	.88		.85		.88		.85		.88
	Option I/XII	C	.75	D	.82		.75		.82		.75		.82
	Option IX	C	.75	D	.82		.75		.82		.75		.82
Highland/ Hollywood	1980	C	.76	D	.83		.79		.80		.72		.87
	2000 Base	E	.90	F	1.02		1.01		1.01		.74		1.04
	Option I/XII	D	.87	D	.98		.97		.98		.69		.98
Highland/Odin East Roadway	1980	A	.41	C	.77		.65		.92		.17		.38
	2000 Base	A	.54	E	.93		.54		.93		.54		.93
	Option I/XII	A	.51	E	.90		.51		.90		.51		.90

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Highland/Olympic	1980	D	.89	E	.98		1.02		.94		.78		1.00
	2000 Base	F	1.16	F	1.13		1.16		1.13		1.16		1.13
	Option I/XII	F	1.12	F	1.09		1.12		1.09		1.12		1.09
	Option IX	F	1.12	F	1.10		1.12		1.10		1.12		1.10
Highland/Sunset	1980	D	.89	E	.99		.96		.99		.74		.92
	2000 Base	E	1.00	F	1.23		1.00		1.23		1.00		1.23
	Option I/XII	E	.92	F	1.09		.92		1.09		.92		1.09
Highland/Wilshire	1980	C	.74	E	.91		.84		.89		.66		.92
	2000 Base	F	1.01	F	1.21		1.01		1.21		1.01		1.21
	Option I/XII	E	.96	F	1.17		.96		1.17		.96		1.17
	Option IX	E	.96	F	1.17		.96		1.17		.96		1.17
Highland/3rd	1980	E	.96	E	.97		.92		.86		1.02		1.09
	2000 Base	F	1.29	F	1.29		1.29		1.29		1.29		1.29
	Option I/XII	F	1.23	F	1.24		1.23		1.24		1.23		1.24
	Option IX	F	1.23	F	1.24		1.23		1.24		1.23		1.24
Highland/6th	1980	D	.83	E	.92		1.01		1.05		.65		.79
	2000 Base	F	1.04	F	1.29		1.04		1.29		1.04		1.29
	Option I/XII	E	.99	F	1.25		.99		1.25		.99		1.25
	Option IX	E	.99	F	1.25		.99		1.25		.99		1.25
Hill/Temple	1980	D	.81	C	.72		1.08		.62		.53		.84
	2000 Base	E	.95	F	1.17		.95		1.17		.95		1.17
	Option I/XII	D	.87	F	1.08		.87		1.08		.87		1.08
Hill/1st	1980	D	.88	E	.90		.99		1.07		.79		.78
	2000 Base	F	1.19	E	.92		1.19		.92		1.19		.92
	Option I/XII	F	1.09	E	.92		1.09		.92		1.09		.92

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Hill/2nd	1980	B	.64	C	.70		.73		.59		.56		.80
	2000 Base	E	.95	E	.97		.95		.97		.95		.97
	Option I/XII	E	.90	E	.91		.90		.91		.90		.91
Hill/3rd	1980	C	.77	C	.74		.78		.96		.76		.55
	2000 Base	E	.97	E	.99		.97		.99		.97		.99
	Option I/XII	E	.93	E	.95		.93		.95		.93		.95
Hill/4th	1980	A	.47	A	.57		.61		.63		.33		.48
	2000 Base	B	.69	C	.72		.69		.72		.69		.72
	Option I/XII	B	.69	B	.69		.69		.69		.69		.69
Hill/5th	1980	B	.68	C	.70		.72		.55		.64		.94
	2000 Base	D	.82	E	.93		.82		.93		.82		.93
	Option I/XII	C	.79	E	.91		.79		.91		.79		.91
Hill/6th	1980	D	.80	C	.70		.88		.75		.72		.66
	2000 Base	F	1.06	E	.98		1.06		.98		1.06		.98
	Option I/XII	F	1.01	E	.98		1.01		.98		1.01		.98
Hill/7th	1980	B	.61	A	.58		.72		.59		.50		.62
	2000 Base	D	.86	C	.75		.86		.75		.86		.75
	Option I/XII	D	.80	C	.79		.80		.79		.80		.79
Holloway/ La Cienega	1980	D	.84	E	.98		.76		.89		.89		1.05
	2000 Base	F	1.09	E	.96		1.09		.96		1.09		.96
	Option I/XII	E	1.00	E	.92		1.00		.92		1.00		.92
Hollywood/La Brea	1980	D	.82	D	.82		.70		.89		.90		.73
	2000 Base	F	1.04	E	.98		1.04		.98		1.04		.98
	Option I/XII	E	1.00	E	.98		1.00		.98		1.00		.98

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Hollywood/ Laurel Canyon	1980	B	.69	B	.67		.48		.84		.86		.51
	2000 Base	B	.65	E	.96		.65		.96		.65		.96
	Option I/XII	B	.64	E	.95		.64		.95		.64		.95
Hollywood/Vine	1980	B	.65	C	.75		.50		.73		.79		.76
	2000 Base	C	.72	D	.81		.72		.81		.72		.81
	Option I/XII	B	.68	C	.75		.68		.75		.68		.75
Hwd Fwy N.B. Off-Universal/ Lankershim	1980	C	.74	D	.87		.81		1.18		.72		.74
	2000 Base	D	.87	D	.83		.87		.83		.87		.83
	Option I (4)	F	1.08	F	1.05		1.08		1.05		1.08		1.05
	Option I (5)	E	.91	F	1.02		.91		1.02		.91		1.02
	Mitigation	D	.86	D	.83		.86		.83		.86		.83
.over/Olympic	1980	D	.86	D	.87		.84		.78		.88		.92
	2000 Base	E	.90	E	.99		.71		.73		1.03		1.16
	Option I/XII	D	.88	E	.96		.70		.72		1.00		1.12
Hoover/Wilshire	1980	A	.51	C	.78		.36		.77		.67		.80
	2000 Base	B	.64	E	.97		.64		.97		.64		.97
	Option I/XII	B	.60	E	.94		.60		.94		.60		.94
Hoover/7th	1980	A	.44	B	.62		.52		.58		.34		.66
	2000 Base	B	.62	D	.82		.62		.82		.62		.82
	Option I/XII	B	.62	D	.85		.67		.85		.51		.85
Hoover/8th	1980	C	.73	E	.94		.92		.96		.54		.93
	2000 Base	D	.89	E	.99		.89		.99		.89		.99
	Option I/XII	D	.87	E	.96		.87		.96		.87		.96
Hoover/9th	1980	C	.78	D	.80		.82		.87		.72		.70
	2000 Base	D	.83	D	.82		.83		.82		.83		.82
	Option I/XII	D	.82	C	.79		.82		.79		.82		.79

(4) - Universal Station, Subway
(5) - Studio City Station, Subway

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Hope/Temple	1980	D	.86	D	.86		1.09		.83		.76		.87
	2000 Base	F	1.54	F	1.31		1.54		1.31		1.54		1.31
	Option I/XII	F	1.47	F	1.22		1.47		1.22		1.47		1.22
Hope/Wilshire	1980	A	.44	A	.47		.31		.43		.58		.52
	2000 Base	B	.61	B	.66		.61		.66		.61		.66
	Option I/XII	A	.58	B	.60		.58		.60		.58		.60
Hope/1st	1980	B	.62	C	.75		.69		.85		.53		.67
	2000 Base	F	1.15	F	1.22		1.15		1.22		1.15		1.22
	Option I/XII	F	1.08	F	1.17		1.08		1.17		1.08		1.17
pe/6th	1980	A	.36	A	.46		.24		.44		.43		.49
	2000 Base	A	.50	B	.63		.45		.63		.52		.63
	Option I/XII	A	.47	A	.58		.41		.58		.50		.58
Hope/7th	1980	A	.40	A	.53		.39		.54		.40		.53
	2000 Base	B	.60	B	.69		.60		.69		.60		.69
	Option I/XII	A	.56	A	.68		.56		.68		.56		.68
Hope/8th	1980	A	.34	A	.52		.24		.50		.45		.54
	2000 Base	A	.47	B	.69		.47		.69		.47		.69
	Option I/XII	A	.46	B	.68		.46		.68		.46		.68
Hope/9th	1980	A	.38	A	.41		.30		.79		.43		.35
	2000 Base	A	.49	A	.54		.49		.54		.49		.54
	Option I/XII	A	.48	A	.57		.48		.57		.48		.57
Irolo/8th	1980	C	.71	D	.80		1.00		.92		.51		.72
	2000 Base	C	.74	D	.86		.74		.86		.74		.86
	Option I/XII	B	.69	E	.98		.69		.98		.69		.98
	Mitigation	B	.65	E	.93		.65		.93		.65		.93

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
La Brea/Olympic	1980	D	.81	D	.88		.96		.99		.71		.81
	2000 Base	F	1.10	F	1.20		1.10		1.20		1.10		1.20
	Option I/XII	F	1.08	F	1.19		1.08		1.19		1.08		1.19
	Option IX	F	1.08	F	1.19		1.08		1.19		1.08		1.19
La Brea/ Santa Monica	1980	C	.79	D	.87		.65		.65		.95		1.10
	2000 Base	F	1.04	F	1.13		1.04		1.13		1.04		1.13
	Option I/XII	E	.99	F	1.09		.99		1.09		.99		1.09
La Brea/Sunset	1980	B	.67	D	.85		.77		1.02		.62		.73
	2000 Base	D	.85	F	1.06		.85		1.06		.85		1.06
	Option I/XII	C	.78	F	1.06		.78		1.06		.78		1.06
Brea/ lshire	1980	A	.58	B	.69		.63		.77		.52		.65
	2000 Base	D	.84	F	1.06		.84		1.06		.84		1.06
	Option I/XII	C	.79	F	1.05		.79		1.05		.79		1.05
	Option IX	C	.79	F	1.05		.79		1.05		.79		1.05
La Brea/3rd	1980	D	.88	D	.87		.90		.83		.86		.91
	2000 Base	F	1.18	F	1.21		1.18		1.21		1.18		1.21
	Option I/XII	F	1.12	F	1.16		1.12		1.16		1.12		1.16
	Option IX	F	1.12	F	1.16		1.12		1.16		1.12		1.16
La Brea/6th	1980	D	.85	D	.87		.72		.75		.98		.98
	2000 Base	E	.93	F	1.19		.93		1.19		.93		1.19
	Option I/XII	D	.89	F	1.16		.89		1.16		.89		1.16
	Option IX	D	.89	F	1.16		.89		1.16		.89		1.16
La Cienega/ Melrose	1980	D	.83	E	.93		.72		1.10		1.00		.82
	2000 Base	D	.89	F	1.16		.89		1.16		.89		1.16
	Option I/XII	D	.85	F	1.13		.85		1.13		.85		1.13
La Cienega/ Santa Monica	1980	D	.88	E	.94		1.31		1.07		.61		.85
	2000 Base	E	1.00	F	1.20		1.00		1.20		1.00		1.20
	Option I/XII	E	.96	F	1.17		.96		1.17		.96		1.17

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
La Cienega/Sunset	1980	D	.81	D	.85		.81		.85		.81		.85
	2000 Base	E	.97	F	1.01		.97		1.01		.97		.98
	Option I/XII	E	.93	E	.98		.93		.98		.93		.98
La Cienega/ Wilshire	1980	C	.75	E	.93		.77		.85		.73		1.00
	2000 Base	F	1.07	F	1.30		1.07		1.30		1.07		1.30
	Option I/XII	F	1.05	F	1.29		1.05		1.29		1.05		1.29
La Cienega/3rd	1980	D	.93	F	1.01		1.02		1.16		.85		.86
	2000 Base	F	1.04	F	1.09		1.04		1.09		1.04		1.09
	Option I/XII	E	.99	F	1.09		.99		1.09		.99		1.09
Lankershim/ Magnolia	1980	B	.60	C	.72		.53		.64		.67		.81
	2000 Base	B	.66	C	.71		.66		.71		.66		.71
	Option I (1)	A	.56	A	.59		.56		.59		.56		.59
	Option I (2)	B	.67	C	.72		.67		.72		.67		.72
	Option I (3)	A	.56	A	.59		.56		.59		.56		.59
Lankershim/North Gate - P/R Access	1980	A	.37	A	.43		.45		.43		.21		.43
	2000 Base	A	.54	A	.54		.67		.56		.23		.48
	Option I (4)	D	.81	C	.75		1.06		.75		.23		.75
	Mitigation	B	.64	C	.73		.83		.73		.22		.73
Lankershim/ Oxnard	1980	A	.49	A	.59		.63		.71		.35		.48
	2000 Base	B	.60	B	.66		.63		.66		.54		.66
	Option I (1)	B	.67	C	.74		.75		.74		.54		.74
	Option I (2)	B	.68	C	.75		.75		.78		.57		.71
	Option I (3)	B	.67	C	.74		.75		.74		.54		.74
Lankershim/ Tour Center Drive	1980	A	.46	B	.67		.55		.77		.27		.51
	2000 Base	F	1.16	D	.89		1.16		.89		1.16		.89
	Option I (4)	F	1.31	F	1.01		1.31		1.01		1.31		1.01
	Option I (5)	F	1.16	E	.95		1.16		.95		1.16		.95
	Mitigation	D	.94	D	.82		.94		.82		.94		.82
Lankershim/ Ventura	1980	E	.94	C	.72		.82		.58		1.07		.87
	2000 Base	E	.90	D	.80		.90		.80		.90		.80
	Option I (4)	E	.90	D	.84		.90		.84		.90		.84
	Option I (5)	D	.87	E	.98		.87		.98		.87		.98
Larchmont/3rd	1980	B	.66	B	.66		.43		.30		.74		.78
	2000 Base	D	.89	E	.93		.89		.93		.89		.93
	Option I/XII	D	.83	D	.89		.83		.89		.83		.89
	Option IX	D	.83	D	.89		.83		.89		.83		.89

(1) - Chandler/Lankershim Station, Subway
(2) - Lankershim between Chandler & Magnolia Station, Subway
(3) - Chandler/Lankershim Station, Aerial
(4) - Universal Station, Subway
(5) - Studio City Station, Subway

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Laurel Cyn./ Ventura	1980	D	.89	F	1.04		.85		.95		.94		1.15
	2000 Base	D	.84	F	1.05		.84		1.05		.84		1.05
	Option I (4)	D	.88	F	1.06		.88		1.06		.88		1.06
	Option I (5)	D	.88	F	1.06		.88		1.06		.88		1.06
Los Angeles/ Temple	1980	A	.56	A	.57		.65		.60		.45		.51
	2000 Base	C	.75	C	.75		.75		.75		.75		.75
	Option I/XII	C	.71	B	.67		.71		.67		.71		.67
Los Angeles/1st	1980	B	.60	A	.57		.51		.63		.71		.51
	2000 Base	D	.89	C	.76		.89		.76		.89		.76
	Option I/XII	D	.84	C	.72		.84		.72		.84		.72
Los Angeles/2nd	1980	A	.46	B	.66		.55		.81		.35		.48
	2000 Base	B	.61	C	.73		.61		.73		.61		.73
	Option I/XII	A	.53	B	.68		.53		.68		.53		.68
Los Angeles/3rd	1980	B	.67	A	.54		.71		.48		.62		.65
	2000 Base	D	.82	B	.69		.82		.69		.82		.69
	Option I/XII	C	.79	B	.65		.79		.65		.79		.65
Los Angeles/5th	1980	A	.51	A	.41		.71		.44		.32		.38
	2000 Base	B	.61	A	.52		.61		.52		.61		.52
	Option I/XII	B	.60	A	.51		.60		.51		.60		.51
Lucas/Wilshire	1980	A	.41	A	.42		.42		.38		.40		.47
	2000 Base	A	.47	B	.60		.47		.60		.47		.60
Deleted (Wilshire/Witmer Sta.)													
Lucas/3rd	1980	C	.73	C	.77		.87		.82		.65		.74
	2000 Base	E	.97	E	.96		.97		.96		.97		.96
Deleted (Wilshire/Witmer Sta.)													

(4) - Universal Station, Subway
(5) - Studio City Station, Subway

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Lucas/6th	1980	B	.66	A	.56		.76		.61		.60		.52
	2000 Base	D	.84	C	.79		.84		.79		.84		.79
Deleted (Wilshire/Witmer Sta.)													
Macy/Mission	1980	D	.85	B	.64		.69		.74**		1.03		.44
	2000 Base	D	.86	C	.74		.86		.74		.86		.74
	Option I/XII	E	.99	C	.77		.99		.79		.99		.72
	Mitigation				NONE								
Macy/N. Main	1980	A	.42	A	.56		.80		.64		.17		.51
	2000 Base	A	.49	B	.65		.64		.65		.27		.55
	Option I/XII	A	.47	B	.60		.62		.60		.25		.60
Macy/N. Spring	1980	B	.61	A	.57		.65*		.70		.50		.32
	2000 Base	C	.78	C	.73		.78		.83		.78		.53
	Option I/XII	C	.73	B	.67		.73		.82		.73		.36
Macy/Vignes	1980	D	.85	C	.76		1.01		.75		.51		.77
	2000 Base	E	.95	D	.88		1.03		.88		.76		.88
	Option I/XII	F	1.05	F	1.10		1.14		1.10		.86		1.10
	Mitigation	E	.97	D	.89		1.02		.89		.86		.89
Magnolia/ Tujunga	1980	C	.78	C	.78		.67		.52		.95		1.18
	2000 Base	C	.76	D	.84		.76		.84		.76		.84
	Option I (1)	C	.71	D	.83		.71		.83		.71		.83
	Option I (2)	C	.72	D	.81		.72		.81		.72		.81
	Option I (3)	C	.71	D	.83		.71		.83		.71		.83
Magnolia/ Vineland	1980	B	.60	A	.58		.69		.53		.50		.63
	2000 Base	A	.58	B	.69		.58		.69		.58		.69
	Option I (1)	B	.60	C	.74		.60		.74		.60		.74
	Option I (2)	A	.58	B	.68		.58		.68		.58		.68
	Option I (3)	B	.60	C	.74		.60		.74		.60		.74
Main/Temple	1980	A	.26	A	.49		.14		.29		.38		.78
	2000 Base	A	.41	B	.64		.41		.64		.41		.64
	Option I/XII	A	.39	B	.60		.39		.60		.39		.60

* Macy W/B Lt @ 1980: 0.80
2000 Base: 0.78
** Macy E/B Lt @ 1980: 1.18
2000 Build: 0.74

(1) - Chandler/Lankershim Station, Subway
(2) - Lankershim between Chandler & Magnolia Station, Subway
(3) - Chandler/Lankershim Station, Aerial

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Main/1st	1980	A	.48	B	.68		.18		.70		.77		.65
	2000 Base	A	.59	E	.90		.30		.90		.77		.90
	Option I/XII	A	.57	D	.85		.29		.85		.74		.85
Main/2nd	1980	A	.35	B	.61		.32		.62		.39		.60
	2000 Base	A	.46	D	.86		.46		.86		.46		.86
	Option I/XII	A	.44	C	.75		.44		.75		.44		.75
Main/3rd	1980	A	.40	A	.54		.26		.48		.55		.65
	2000 Base	A	.47	A	.52		.40		.52		.50		.52
	Option I/XII	A	.45	A	.50		.39		.50		.48		.50
ain/4th	1980	A	.31	A	.53		.27		.58		.31		.48
	2000 Base	A	.42	C	.74		.42		.74		.42		.74
	Option I/XII	A	.41	C	.77		.41		.77		.41		.77
Main/5th	1980	A	.29	A	.42		.24		.40		.34		.44
	2000 Base	A	.38	A	.55		.38		.55		.38		.55
	Option I/XII	A	.39	A	.56		.39		.56		.39		.56
Main/6th	1980	A	.28	A	.50		.25		.48		.31		.52
	2000 Base	A	.34	B	.61		.34		.61		.34		.61
	Option I/XII	A	.33	B	.69		.33		.69		.33		.69
Main/7th	1980	A	.49	C	.70		.27		.75		.73		.65
	2000 Base	A	.49	C	.72		.49		.72		.49		.72
	Option I/XII	A	.50	C	.71		.50		.71		.50		.71
Moorpark/ Vineland	1980	C	.73	C	.72		.84		.74		.63		.70
	2000 Base	D	.86	D	.85		.86		.85		.86		.85
	Option I (4)	D	.84	D	.84		.84		.84		.84		.84
	Option I (5)	E	.91	F	1.11		.91		1.11		.91		1.11

(4) - Universal Station, Subway
(5) - Studio City Station, Subway

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Normandie-Irolo/Olympic	1980	E	.92	E	.92		1.00		1.11		.86		.79
	2000 Base	F	1.10	F	1.01		1.10		1.01		1.10		1.01
	Option I/XII	F	1.09	E	1.00		1.09		1.00		1.09		1.00
Normandie/Wilshire	1980	B	.65	C	.71		.81		.73		.55		.69
	2000 Base	E	.92	E	.96		.92		.96		.92		.96
	Option I/XII	D	.81	F	1.01		.81		1.01		.81		1.01
	Mitigation	D	.81	E	.96		.81		.96		.81		.96
Normandie/3rd	1980	D	.86	D	.87		.72		.67		.97		1.02
	2000 Base	F	1.08	F	1.13		1.08		1.13		1.08		1.13
	Option I/XII	F	1.06	F	1.17		1.06		1.17		1.06		1.17
	Mitigation				NONE								
ormandie/6th	1980	D	.81	D	.83		.84		.83		.79		.83
	2000 Base	E	.95	F	1.02		.95		1.02		.95		1.02
	Option I/XII	E	.93	F	1.06		.93		1.06		.93		1.06
	Mitigation				NONE								
N. Broadway/Sunset	1980	B	.68	C	.78		.72		.84		.63		.71
	2000 Base	D	.87	F	1.06		.87		1.06		.87		1.06
	Option I/XII	C	.79	E	.96		.79		.96		.79		.96
N. Main/Alpine-Vignes	1980	A	.40	B	.60		.38		.58		.42		.63
	2000 Base	A	.57	E	.97		.57		.97		.57		.97
	Option I/XII	A	.59	E	.89		.59		.89		.59		.89
Olive/1st	1980	A	.52	A	.57		.17		.54		.75		.59
	2000 Base	C	.77	E	.98		.77		.98		.77		.98
	Option I/XII	C	.73	E	.93		.73		.93		.73		.93
Olive/4th	1980	A	.40	A	.49		.31		.48		.48		.50
	2000 Base	C	.73	C	.78		.73		.78		.73		.78
	Option I/XII	C	.70	C	.75		.70		.75		.70		.75

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Olive/5th	1980	B	.63	B	.67		.72		.62		.54		.75
	2000 Base	F	1.08	E	.90		1.08		.90		1.08		.90
	Option I/XII	F	1.05	E	.93		1.05		.93		1.05		.93
	Mitigation				NONE								
Olive/6th	1980	B	.68	C	.75		1.00		.95		.49		.63
	2000 Base	E	.94	E	.98		.94		.98		.94		.98
	Option I/XII	E	.90	E	.96		.90		.96		.90		.96
Olive/7th	1980	A	.47	B	.69		.43		.94		.57		.51
	2000 Base	E	.94	F	1.06		.94		1.06		.94		1.06
	Option I/XII	D	.89	F	1.03		.89		1.03		.89		1.03
ympic/Rimpau	1980	C	.71	D	.82		.77		.80		.61		.83
	2000 Base	D	.87	E	.95		.87		.95		.87		.95
	Option I/XII	D	.84	E	.92		.84		.92		.84		.92
	Option IX	D	.84	E	.92		.84		.92		.84		.92
Olympic/ San Vicente	1980	B	.67	B	.63		.66		.78		.69		.46
	2000 Base	E	.94	E	.97		.94		.97		.94		.97
	Option I/XII	E	.95	E	.98		.95		.98		.95		.98
Olympic/Union	1980	A	.54	B	.68		.66		.81		.36		.49
	2000 Base	B	.69	D	.80		.69		.80		.69		.80
	Option I/XII	B	.68	C	.78		.68		.78		.68		.78
Olympic/Vermont	1980	D	.87	D	.89		.88		.98		.86		.77
	2000 Base	F	1.00	F	1.11		1.00		1.11		1.00		1.11
	Option I/XII	E	.99	F	1.09		.99		1.09		.99		1.09
Olympic/Western	1980	E	.92	E	.91		.84		.87		1.03		.97
	2000 Base	F	1.18	F	1.15		1.18		1.15		1.18		1.15
	Option I/XII	F	1.16	F	1.14		1.16		1.14		1.16		1.14
	Option IX	F	1.16	F	1.15		1.16		1.15		1.16		1.15

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Olympic/Wilton	1980	D	.86	D	.86		.81		.86		.93		.85
	2000 Base	F	1.11	F	1.10		1.11		1.10		1.11		1.10
	Option I/XII	F	1.08	F	1.07		1.08		1.07		1.08		1.07
	Option IX	F	1.08	F	1.07		1.08		1.07		1.08		1.07
Oxnard/Tujunga	1980	A	.34	A	.50		.25		.37		.47		.70
	2000 Base	A	.39	A	.55		.39		.55		.39		.55
	Option I (1)	A	.36	A	.52		.36		.52		.36		.52
	Option I (2)	A	.36	A	.53		.36		.53		.36		.53
	Option I (3)	A	.36	A	.52		.36		.52		.36		.52
Oxnard/Vineland	1980	A	.50	B	.61		.31		.46		.68		.77
	2000 Base	A	.56	C	.74		.40		.74		.61		.74
	Option I (1)	A	.58	C	.78		.58		.78		.58		.78
	Option I (2)	A	.58	C	.78		.58		.78		.58		.78
	Option I (3)	A	.58	C	.78		.58		.78		.58		.78
Ramirez/ Vignes-Santa Ana Fwy Ramps	1980		Not Signalized										
	2000 Base		Not Signalized										
	Option I/XII	F	1.07	F	1.08		.47		1.08		1.38		1.08
	Mitigation	B	.61	E	.92		.44		.92		.70		.92
Rampart/Wilshire	1980	A	.55	B	.66		.72		.67		.41		.65
	2000 Base	C	.75	D	.87		.75		.87		.75		.87
	Option I/XII	C	.71	D	.86		.71		.86		.71		.86
Rampart/6th	1980	C	.73	D	.84		.74		.84		.71		.84
	2000 Base	D	.88	F	1.15		.88		1.15		.88		1.15
	Option I/XII	D	.87	F	1.06		.87		1.06		.87		1.06
Ramoart/7th	1980	A	.46	A	.58		.66		.47		.30		.68
	2000 Base	A	.58	C	.74		.58		.74		.58		.74
	Option I/XII	A	.54	C	.73		.54		.73		.54		.73
Rimpau/Wilshire	1980	A	.58	B	.63		.57		.58		.58		.67
	2000 Base	C	.76	D	.81		.76		.81		.76		.81
	Option I/XII	C	.74	D	.80		.74		.80		.74		.80
	Option IX	C	.74	D	.80		.74		.80		.74		.80
Riverton/Ventura	1980	B	.66	B	.68		.30		.75		.81		.64
	2000 Base	C	.72	C	.75		.43		.75		.80		.75
	Option I (4)	C	.78	D	.82		.31		.82		.98		.82
	Option I (5)	C	.71	C	.76		.43		.76		.78		.76

(1) - Chandler/Lankershim Station, Subway
(2) - Lankershim between Chandler & Magnolia Station, Subway
(3) - Chandler/Lankershim Station, Aerial
(4) - Universal Station, Subway
(5) - Studio City Station, Subway

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Rossmore/ Wilshire	1980	B	.66	C	.77		.64		.60		.68		.93
	2000 Base	C	.71	D	.85		.62		.58		.76		1.01
	Option I/XII	B	.67	D	.82		.57		.53		.72		.99
	Option IX	B	.66	D	.82		.56		.53		.72		.99
Rossmore/3rd	1980	D	.89	D	.83		.75		.58		1.02		1.05
	2000 Base	F	1.16	F	1.09		1.16		1.09		1.16		1.09
	Option I/XII	F	1.13	F	1.05		1.13		1.05		1.13		1.05
	Option IX	F	1.13	F	1.05		1.13		1.05		1.13		1.05
Rossmore/6th	1980	C	.78	D	.85		.77		.75		.75		.94
	2000 Base	F	1.01	F	1.08		1.01		1.08		1.01		1.08
	Option I/XII	E	.91	F	1.05		.91		1.05		.91		1.05
	Option IX	E	.91	F	1.04		.91		1.04		.91		1.04
San Pedro/ Temple	1980	A	.45	A	.46		.18		.42		.60		.47
	2000 Base	B	.60	B	.64		.27		.64		.74		.64
	Option I/XII	A	.56	A	.56		.30		.53		.70		.58
Spaulding/ Wilshire	1980	A	.28	A	.39		.28		.39		.28		.39
	2000 Base	A	.40	A	.54		.40		.54		.40		.54
	Option I/XII	A	.44	A	.54		.44		.54		.44		.54
Spring/Temple	1980	B	.61	A	.40		.69		.38		.52		.41
	2000 Base	D	.80	A	.53		.80		.53		.80		.53
	Option I/XII	C	.76	A	.50		.76		.50		.76		.50
Spring/1st	1980	B	.69	B	.64		.70		.57		.68		.66
	2000 Base	D	.89	D	.82		.89		.71		.89		.88
	Option I/XII	D	.86	C	.79		.86		.68		.86		.84
Spring/2nd	1980	B	.60	A	.49		.70		.53		.47		.47
	2000 Base	C	.75	B	.67		.75		.67		.75		.67
	Option I/XII	C	.72	B	.63		.72		.63		.72		.63
Spring/3rd	1980	B	.68	A	.47		.80		.53		.56		.42
	2000 Base	D	.81	A	.49		.81		.49		.81		.49
	Option I/XII	C	.77	A	.47		.77		.47		.77		.47

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Spring/4th	1980	A	.51	A	.50		.63		.51		.38		.49
	2000 Base	B	.66	B	.63		.66		.63		.66		.63
	Option I/XII	B	.66	B	.64		.66		.64		.66		.64
Spring/5th	1980	B	.61	A	.46		.66		.42		.56		.52
	2000 Base	C	.76	B	.63		.76		.63		.76		.63
	Option I/XII	C	.74	B	.62		.74		.52		.74		.62
Spring/6th	1980	A	.52	A	.56		.79		.71		.30		.43
	2000 Base	B	.65	B	.68		.65		.68		.65		.68
	Option I/XII	B	.62	B	.67		.62		.67		.62		.67
pring/7th	1980	B	.65	C	.72		.62		.60		.70		.85
	2000 Base	B	.69	C	.76		.69		.76		.69		.76
	Option I/XII	B	.69	C	.74		.69		.74		.69		.74
Sunset/Vine	1980	C	.79	D	.88		.58		.83		1.11		.95
	2000 Base	D	.89	F	1.07		.89		1.07		.89		1.07
	Option I/XII	D	.85	F	1.04		.85		1.04		.85		1.04
Tujunga/Ventura	1980	A	.47	A	.58		.23		.28		.60		.74
	2000 Base	A	.54	B	.65		.33		.40		.65		.76
	Option I (4)	A	.58	C	.70		.27		.35		.72		.87
	Option I (5)	A	.58	C	.70		.27		.35		.72		.87
Union/ Wilshire	1980	B	.66	C	.75		.79		1.00		.58		.58
	2000 Base	C	.71	D	.81		.71		.81		.71		.81
	Option I/XII	B	.69	C	.78		.69		.78		.69		.78
Union/3rd	1980	A	.59	B	.60		.24		.23		.82		.84
	2000 Base	D	.82	D	.84		.82		.84		.82		.84
	Option I/XII	C	.79	D	.81		.79		.81		.79		.81

(4) - Universal Station, Subway
(5) - Studio City Station, Subway

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Union/6th	1980	C	.78	D	.81		.58		.60		.90		.93
	2000 Base	D	.88	E	.93		.88		.93		.88		.93
	Option I/XII	D	.85	D	.89		.85		.89		.85		.89
Union/7th	1980	A	.42	A	.53		.54		.56		.34		.51
	2000 Base	A	.59	C	.75		.59		.75		.59		.75
	Option I/XII	A	.56	C	.73		.56		.73		.56		.73
Union/8th	1980	A	.54	C	.72		.58		.53		.51		.84
	2000 Base	B	.67	D	.87		.67		.87		.67		.87
	Option I/XII	B	.67	D	.84		.67		.84		.67		.84
ion/9th	1980	A	.37	A	.37		.36		.36		.38		.37
	2000 Base	A	.51	C	.72		.51		.72		.51		.72
	Option I/XII	A	.54	B	.68		.54		.68		.54		.68
Ventura/ Vineland	1980	B	.68	D	.85		.81		.94		.56		.63
	2000 Base	D	.86	D	.84		.86		.84		.86		.84
	Option I (4)	D	.89	D	.88		.89		.92		.89		.80
	Option I (5)	E	.92	E	.93		.92		.93		.92		.93
	Mitigation	D	.85	D	.84		.85		.84		.85		.84
Vermont/ Wilshire	1980	C	.71	D	.82		.77		.79		.64		.97
	2000 Base	E	.94	F	1.13		.94		1.13		.94		1.13
	Option I/XII	D	.89	F	1.05		.89		1.05		.89		1.05
Vermont/3rd	1980	D	.88	E	.95		.77		.87		1.00		1.04
	2000 Base	F	1.15	F	1.24		1.15		1.24		1.15		1.24
	Option I/XII	F	1.14	F	1.24		1.14		1.24		1.14		1.24
Vermont/6th	1980	D	.86	F	1.02		.75		.78		.98		1.27
	2000 Base	F	1.11	F	1.17		1.11		1.17		1.11		1.17
	Option I/XII	F	1.12	F	1.21		1.12		1.21		1.12		1.21
	Mitigation	F	1.07	F	1.18		1.07		1.18		1.07		1.18

(4) - Universal Station, Subway
(5) - Studio City Station, Subway

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Vermont/7th	1980	C	.72	E	.99		.75		.81		.68		1.30
	2000 Base	D	.89	E	.93		.95		.93		.77		.93
	Option I/XII	D	.84	E	.92		.91		.92		.70		.92
Vermont/8th	1980	A	.54	C	.76		.50		.57		.61		1.03
	2000 Base	C	.72	D	.87		.72		.87		.72		.87
	Option I/XII	B	.68	D	.85		.68		.85		.68		.85
Vermont/9th	1980	A	.57	C	.79		.42		.57		.80		1.01
	2000 Base	D	.83	C	.77		.83		.77		.83		.77
	Option I/XII	C	.79	C	.75		.79		.75		.79		.75
Virgil/Wilshire	1980	A	.58	C	.78		.57		.66		.56		.82
	2000 Base	B	.68	D	.88		.68		.70		.68		.98
	Option I/XII	B	.64	E	.93		.64		.70		.64		1.06
	Mitigation				NONE								
Virgil/3rd	1980	E	.92	D	.85		.92		.94		.91		.81
	2000 Base	F	1.18	F	1.15		1.18		1.15		1.18		1.15
	Option I/XII	F	1.23	F	1.22		1.23		1.22		1.23		1.22
	Mitigation	F	1.01	F	1.07		1.01		1.07		1.01		1.07
Virgil/6th	1980	B	.69	C	.77		.72		.81		.67		.76
	2000 Base	D	.88	E	.97		.88		.92		.88		.99
	Option I/XII	E	.93	F	1.07		.93		1.07		.93		1.07
	Mitigation	D	.88	E	.93		.88		.93		.88		.93
Western/ Wilshire	1980	D	.89	E	.94		.88		.87		.91		1.00
	2000 Base	E	.99	F	1.03		.99		1.03		.99		1.03
	Option I/XII	E	.93	E	.99		.93		.99		.93		.99
	Option IX	E	.94	F	1.02		.94		1.02		.94		1.02
Western/3rd	1980	D	.89	F	1.02		.87		1.04		.90		.99
	2000 Base	F	1.18	F	1.32		1.18		1.32		1.18		1.32
	Option I/XII	F	1.11	F	1.27		1.11		1.27		1.11		1.27
	Option IX	F	1.11	F	1.27		1.11		1.27		1.11		1.27

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Western/6th	1980	D	.84	D	.89		.78		.88		.89		.91
	2000 Base	F	1.04	F	1.15		1.04		1.15		1.04		1.15
	Option I/XII	E	.99	F	1.11		.99		1.11		.99		1.11
	Option IX	E	1.00	F	1.12		1.00		1.12		1.00		1.12
Western/8th	1980	C	.70	C	.76		.70		.68		.69		.90
	2000 Base	E	.93	E	.98		.93		.98		.93		.98
	Option I/XII	D	.88	E	.95		.88		.95		.88		.95
	Option IX	D	.88	E	.95		.88		.95		.88		.95
Wilsnire/ Wilton	1980	C	.74	C	.76		.60		.74		.91		.77
	2000 Base	E	.98	E	1.00		.98		1.00		.98		1.00
	Option I/XII	E	.94	E	.96		.94		.96		.94		.96
	Option IX	E	.94	E	.96		.94		.96		.94		.96
lshire/ Witmer	1980	A	.29	A	.40		.32		.41		.23		.37
	2000 Base	A	.38	A	.55		.40		.55		.36		.55
Deleted (Wilshire/Witmer Sta.)													
Wilton/3rd	1980	C	.74	E	.91		.65		.81		.80		1.00
	2000 Base	E	.99	F	1.17		.99		1.17		.99		1.17
	Option I/XII	E	.93	F	1.13		.93		1.13		.93		1.13
	Option IX	E	.93	F	1.13		.93		1.13		.93		1.13
Wilton/6th	1980	B	.68	C	.79		.70		.88		.67		.74
	2000 Base	D	.80	D	.89		.80		.89		.80		.89
	Option I/XII	C	.75	D	.85		.75		.85		.75		.85
	Option IX	C	.75	D	.86		.75		.86		.75		.86
Wilton/8th	1980	B	.63	C	.77		.74		.84		.52		.70
	2000 Base	D	.84	E	.99		.84		.99		.84		.99
	Option I/XII	D	.80	E	.97		.80		.97		.80		.97
	Option IX	C	.79	E	.96		.79		.96		.79		.96
Witmer/6th	1980	A	.46	A	.48		.26		.30		.58		.59
Deleted	2000 Base	B	.66	B	.69		.66		.69		.66		.69
(Wilshire/Witmer Sta.)													

LOCATION	CONDITION	INTERSECTION ANALYSIS SUMMARY											
		INTERSECTION				1st STREET				2nd STREET			
		AM		PM		AM		PM		AM		PM	
		LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX	LOS	INDEX
Witmer/7th	1980	A	.33	A	.39		.13		.19		.50		.57
	2000 Base	A	.43	A	.54		.43		.54		.43		.54
Deleted (Wilshire/Witmer Sta.)													
	1980												
	1980												
	1980												
	1980												
	1980												
	1980												
	1980												

Appendix B

Study Intersection Capital Improvements

Appendix B

Study Intersection Capital Improvements

(CIP/B-Permit/Other Projects)

Intersection	Project No	Alteration/Change
Alameda/Aliso-Commecial	61584	Add LTP, TH N/B & S/B; Add RTO, LTO E/B
Alameda/Arcadia	61584	Add LTP, TH N/B; Add TH S/B
Beaudry/4th	71833	Add RTO E/B
Beverly/Crescent Heights	71770	Add LTP N/B & S/B
Burbank/Vineland	21270	Add LTP N/B & S/B, Add LTP, TH E/B & W/B
Cahuenga/Magnolia	(2)	Add RTO E/B, W/B
Camarillo/Lankershim/Vineland	71799	Add TH N/B, LTP S/B; Add TH & LTP W/B
Chandler/Lankershim	(2)	Add TH N/B, S/B, W/B
Chandler/Vineland	21270	Add TH N/B
Crescent Heights/Melrose	7150	Add LTP All Directions
Fairfax/Wilshire	(1)	Add LTP W/B
Figueroa/Wilshire	T-0019	Add LTP N/B & S/B, Delete RTP N/B
Figueroa/6th	T-0010	Add TH N/B, Delete RTP N/B
Figueroa/7th	T-0019	Add LTP N/B & S/B
Figueroa/8th	B3926	Add RTO S/B
Flower/Wilshire	61432	No Change in Capacity
Flower/5th	61432	No Change in Capacity
Flower/6th	61432	No Change in Capacity
Flower/7th	61432	No Change in Capacity
Flower/8th	61433	Add LTP N/B
Flower/9th	61433	Add LTP S/B
Franklin/Highland (N I/S)	(1)	Add N/B TH, S/B TH & W/B RTO Lanes
Franklin/Highland (S I/S)	(1)	Add N/B TH, S/B & E/B RTO Lanes

Intersection	Project No	Alteration/Change
Gower/Hollywood	61495	No Change in Capacity; widening only E-W
Grand/Temple	61280 91777	No Change in Capacity Add RTO W/B
Grand/Wilshire	B3825	Additional Lane E/B
Grand/7th	B3825	Add RTO S/B
Hill/Temple	91777	Add RTO W/B
Hill/4th	91436	No Change in Capacity; widening only S/B
Hill/5th	91436	No Change in Capacity; widening only S/B
Hollywood/La Brea	91814	No Change in Capacity; widening only E-W
Hope/9th	BD3945	No Change in Capacity; widening only E/B
Irolo/8th	71635	Add LTP N/B & S/B
La Brea/Wilshire	(1)	Add LTP E/B & W/B
Lankershim/Magnolia	(2)	No Change in Capacity; widening only E-W
Macy/Mission	61621	Add LTP N/S, Add 2nd RT S/B
Magnolia/Vineland	(2)	Add RTO E/B & W/B
Normandie-Irolo/Olympic	61608	Add LTP N/B
Olive/4th	(3)	Add TH E/B
San Pedro/Temple	61658	No Change in Capacity; widening only E,W & N/B approaches
Vermont/6th	71434	Add LTP E/B & W/B
Virgil/6th	(3)	Add LTP N/S, Additional width W/B
Western/6th	61658	No Change in Capacity; widening only E-W

(1) CIP Candidate Project
(2) North Hollywood Redevelopment
(3) Unnumbered R-Permit

Abbreviations Used

E/B - Eastbound
E-W - East-West
LTO - Left Turn Only
LTP - Left Turn Pocket
N/B - Northbound
N-S - North-South
Ped Act. Sig.- Pedestrain Actuated Signal
Pk.Hr. - Peak Hour
RTO - Right Turn Only
S/B - Southbound
TH - Through
W/B - Westbound

Appendix C

Potential Operational (TSM) Improvements

Appendix C

Potential Operational (TSM) Improvements

TSM Projects

Intersection	TSM Action
Alvarado/Olympic	PM-N/B Pk. Hr. Lane
Alvarado/3rd	AM-W/B Pk. Hr. Lane; PM-W/B & S/B Pk. Hr. Lanes
Alvarado/6th	AM & PM-E/B & W/B Pk. Hr. Lanes
Beverly/Crescent Hts.	Parking Restric. Exist. Stripe E/B & W/B Curb Lanes
Beverly/Fairfax	Parking Restric. Exist. Stripe E/B & W/B Curb Lanes
Beverly/Gardner	E/B & W/B LTP
Beverly/La Cienega	AM & PM-E/B, W/B & S/B Pk. Hr. Lanes
Burbank/Lankershim/Tujunga	Restripe E/B: 2 TH + RTO
Cahuenga/Franklin	AM-S/B Pk. Hr. Lane; PM-N/B Pk. Hr. Lane
Cahuenga/Moorpark	PM-N/B Pk. Hr. Lane
Carillo-Crescent Hts./Olympic	AM-N/B & S/B Pk. Hr. Lanes; PM-S/B Pk. Hr.
Carillo-McCarthy Vista/San Vicente	AM & PM-N/B & S/B Pk. Hr. Lanes
Crescent Hts./3rd	E-W LTP
Edgewood/La Brea	N-S NLT; Restripe N/B: 3 TH + RTO
Fairfax/Fountain	PM-N/B Pk. Hr. Lane
Fairfax/Olympic	S/B RTO Lane (Off-center striping)
Fairfax/Santa Monica	S/B RTO Lane
Fairfax/Sunset	S/B RTO Lane, PM-N/B Pk. Hr. Lane
Flower/Wilshire	PM-N/B NLT, E/B RTO
Flower/5th	Restripe W/B to Add TH*
Flower/7th	N/B & S/B NLT

*If DPM constructed, reduction in roadway width prevents this.

TSM Projects

Intersection	TSM Action
Fountain/Highland	Restripe: 2 Lanes W/B
Fountain/Vine	AM-S/B Pk. Hr. Lane; PM-N/B, S/B, E/B, W/B Pk. Hr. Lanes
Gardner/Melrose	E/B & W/B LTP
Gower/Hollywood	Restripe S/B RTO + 2 TH & LTO
Gower/Sunset	AM-S/B Pk. Hr. Lane; PM-N/B Pk. Hr. Lane
Grand/7th	PM-N/B NLT
Hauser/6th	PM-N/B Pk. Hr. Lane, E/B & W/B LTP
Highland/Olympic	AM-N/B NLT + Stripe 2 N/B Lanes; PM-N/B & S/B NLT + 2 Lanes N/B
Highland/Sunset	AM-N/B & S/B NLT
Hill/1st	PM-S/B NLT
Hollywood/Vine	AM-S/B Pk. Hr. Lane; PM-N/B & S/B Pk. Hr. Lanes
Hoover/Olympic	AM & PM-N/B Pk. Hr. Lane
Hoover/8th	PM-N/B & S/B Pk. Hr. Lanes E/B & W/B LTP
Hoover/9th	AM & PM-N/B & S/B Pk. Hr. Lanes
La Cienega/Santa Monica	PM-W/B Pk. Hr. Lanes
La Cienega/3rd	AM & PM-W/B, N/B & S/B Pk. Hr. Lanes
Lankershim/Ventura	AM-E/B Pk. Hr. Lane
Laurel Canyon/Ventura	PM-E/B & W/B Pk. Hr. Lanes & AM & PM-S/B Pk. Hr. Lane
Lucas/3rd	AM-S/B Pk. Hr. Lane; PM-N/B & S/B Pk. Hr. Lanes

TSM Projects

Intersection	TSM Action
Magnolia/Tujunga	N/B & S/B RTO Lane
Normandie/3rd	S/B RTO Lane
Normandie/6th	AM & PM-S/B Departure Pk. Hr. Lane & NLT - All Directions
Olympic/Rimbau	AM & PM-S/B Pk. Hr. Lane, N/B RTO Lane
Olymoic/Vermont	AM-S/B Pk. Hr. Lane
Rampart/6th	AM-N/B Pk. Hr. Lane
Rossmore/Wilshire	Opt. S/B Lt & Ped Act. Sig.
Rossmore/6th	AM & PM-S/B NLT
Sunset/Vine	AM-S/B Pk. Hr. Lane; PM - N/B & S/B Pk. Hr. Lane
Union/Wilshire	AM & PM-S/B Pk. Hr. Lane
Union/6th	E/B & W/B - LTP
Union/8th	E/B & W/B - LTP
Vermont/7th	E/B & W/B - LTP
Western/Wilshire	AM - E/B Pk. Hr. Lane; PM - E/B & W/B Pk. Hr. Lanes
Western/6th	AM - W/B NLT
Willow/6th	AM & PM - N/B & S/B Pk. Hr. Lanes

Abbreviations Used

E/B - Eastbound
E-W - East-West
LTO - Left Turn Only
LTP - Left Turn Pocket
N/B - Northbound
N-S - North-South
Ped Act. Sig. - Pedestrian Actuated Signal
Pk. Hr. - Peak Hour
RTO - Right Turn Only
S/B - Southbound
TH - Through
W/B - Westbound

WPT12/27

Appendix D

Options I, VII, IX, XII, XIII
Mode of Access - All Mode Totals
Constrained Parking Demand at all Stations
Daily (24-Hour) Arrivals

STATION NUMBER	STATION	OPTION				
		I	VII	IX	XII	XIII
1	UNION STATION	36.6	33.5	36.7	37.0	33.6
2	FIRST/HILL	16.4	14.6	16.3	16.9	15.2
3	FIFTH/HILL	35.4	30.7	35.2	36.2	29.3
4	SEVENTH/FLOWER	38.8	31.8	39.0	39.6	32.2
5	ALVARADO/WILSHIRE	22.0	22.2	22.8	23.4	21.3
6	VERMONT/WILSHIRE	33.6	32.2	33.7	33.9	31.8
7	NORMANDIE/WILSHIRE	18.0	15.6	17.8	18.3	15.1
8	WESTERN/WILSHIRE	21.4	19.8	25.4	21.6	22.4
9	CRENSHAW/WILSHIRE	13.6	14.4	-	13.8	-
10	LA BREA/WILSHIRE	14.3	14.4	16.3	14.4	17.0
11	CURSON/WILSHIRE	37.6	35.7	38.4	38.3	36.7
12	BEVERLY/FAIRFAX	9.3	-	9.0	9.1	-
13	SANTA MONICA/FAIRFAX	14.1	-	13.9	13.5	-
14	CAHUENGA/HOLLYWOOD	24.4	-	25.0	25.0	-
15	HOLLYWOOD BOWL *	1.6	-	-	-	-
16	UNIVERSAL CITY OR STUDIO CITY	13.9	-	14.4	13.6	-
17	NORTH HOLLYWOOD	16.6	-	17.0	7.1	-
18	FAIRFAX/SUNSET **	-	-	-	-	-
19	LA BREA/SUNSET	-	-	2.8	2.8	-
30	LAUREL CYN. *	-	-	-	12.5	-
	TOTAL	367.7	264.9	363.6	377.0	254.6

*Deleted from study
**Included under Option VIII
SOURCE: SCRTD MODE OF ARRIVAL FOR SCAG 82B (2000) -- ALL STATIONS

Appendix E

Mode of Arrival or Departure
Parking at all Stations
Option XII (Except Stations 16 & 17 - Option I)
Daily (24 - Hour) Arrivals or Departures

STATION NUMBER	STATION	WALK	BUS	K/R	P/R	AUTO TRIPS	TOTAL TRIPS
1	UNION STATION	1118	28458	1238	5609	561	36984
2	FIRST/HILL	3824	13036	1	21	2	16884
3	FIFTH/HILL	14686	21169	47	287	29	36219
4	SEVENTH/FLOWER	11366	21828	563	5301	530	39588
5	ALVARADO/WILSHIRE	9957	10668	1324	1275	129	23352
6	VERMONT/WILSHIRE	6274	24718	1192	1525	153	33862
7	NORMANDIE/WILSHIRE	5462	10773	894	1071	107	18307
8	WESTERN/WILSHIRE	4002	16910	233	439	44	21628
9	CRENSHAW/WILSHIRE	3034	10293	252	242	24	13845
10	LA BREA/WILSHIRE	1325	12384	362	326	33	14430
11	CURSON/WILSHIRE	1006	35076	597	1490	149	38318
12	BEVERLY/FAIRFAX	1946	4883	925	1205	120	9079
13	SANTA MONICA/FAIRFAX	517	12712	242	58	6	13535
14	CAHUENGA/HOLLYWOOD	6255	15286	1450	1793	179	24963
15	HOLLYWOOD BOWL	DELETED FROM STUDY					
16	UNIVERSAL CITY OR STUDIO CITY	807	8300	721	3667	367	13862
17	NORTH HOLLYWOOD	507	8739	1821	5008	501	16576
18	FAIRFAX/SUNSET	INCLUDED UNDER OPTION VII ONLY					
19	LA BREA/SUNSET	249	1518	407	600	60	2834
30	LAUREL CYN.	DELETED FROM STUDY					

SOURCE: SCRTD MODE OF ARRIVAL FOR SCAG 82B (2000) -- ALL STATIONS
*Option I

Appendix E

Mode of Arrival
Parking at all Stations
Option XII (Except Stations 15 & 17 - Option I)
A.M. Peak Hour

STATION NUMBER	STATION	WALK	BUS	K/R	P/R	AUTO TRIPS	TOTAL TRIPS
1	UNION STATION	97	4605	208	750	75	5735
2	FIRST/HILL	27	1455	0	3	0	1485
3	FIFTH/HILL	106	1481	7	38	4	1636
4	SEVENTH/FLOWER	100	2460	66	734	73	3433
5	ALVARADO/WILSHIRE	531	1170	240	176	18	2135
6	VERMONT/WILSHIRE	312	2558	268	242	24	3404
7	NORMANDIE/WILSHIRE	443	773	194	162	16	1588
8	WESTERN/WILSHIRE	29	1973	35	49	5	2091
9	CRENSHAW/WILSHIRE	206	1542	37	18	2	1805
10	LA BREA/WILSHIRE	13	1297	57	17	2	1386
11	CURSON/WILSHIRE	7	2554	116	272	27	2976
12	BEVERLY/FAIRFAX	33	336	193	243	24	829
13	SANTA MONICA/FAIRFAX	4	1469	61	0	0	1534
14	CAHUENGA/HOLLYWOOD	323	1335	316	270	27	2271
15	HOLLYWOOD BOWL	DELETED FROM STUDY					
16*	UNIVERSAL CITY OR STUDIO CITY	160	1078	145	710	71	2164
17*	NORTH HOLLYWOOD	55	1216	372	929	93	2665
18	FAIRFAX/SUNSET	INCLUDED UNDER OPTION VIII ONLY					
19	LA BREA/SUNSET	38	162	75	113	11	399
30	LAUREL CYN.	DELETED FROM STUDY					

SOURCE: SCRTD MODE OF ARRIVAL FOR SCAG 82B (2000) -- ALL STATIONS
*Option I

Appendix E

Mode of Departure
Parking at all Stations
Option XII (Except Stations 16 & 17 - Option I)
AM Peak Hour

STATION NUMBER	STATION	WALK	BUS	K/R	P/R	AUTO TRIPS	TOTAL TRIPS
1	UNION STATION	135	859	9	30	3	1036
2	FIRST/HILL	829	1300	0	0	0	2129
3	FIFTH/HILL	2949	2902	0	2	0	5853
4	SEVENTH/FLOWER	2291	1990	4	46	5	4336
5	ALVARADO/WILSHIRE	1494	1016	10	9	1	2530
6	VERMONT/WILSHIRE	994	2653	8	11	1	3667
7	NORMANDIE/WILSHIRE	717	1506	6	8	1	2238
8	WESTERN/WILSHIRE	822	1566	2	3	0	2393
9	CRENSHAW/WILSHIRE	440	617	2	1	0	1060
10	LA BREA/WILSHIRE	257	1229	3	1	0	1490
11	CURSON/WILSHIRE	209	4590	4	11	1	4815
12	BEVERLY/FAIRFAX	354	644	7	9	1	1015
13	SANTA MONICA/FAIRFAX	95	1194	2	0	0	1291
14	CAHUENGA/HOLLYWOOD	987	1888	10	13	1	2899
15	HOLLYWOOD BOWL	DELETED FROM STUDY					
16*	UNIVERSAL CITY OR STUDIO CITY	11	536	5	27	3	582
17*	NORTH HOLLYWOOD	44	558	13	37	4	656
18	FAIRFAX/SUNSET	INCLUDED UNDER OPTION VIII ONLY					
19	LA BREA/SUNSET	14	152	3	4	0	173
30	LAUREL CYN.	DELETED FROM STUDY					

SOURCE: SCRTD MODE OF ARRIVAL FOR SCAG 82B (2000) -- ALL STATIONS
*Option I

Appendix E

Mode of Arrival
Parking at all Stations
Option XII (Except Stations 16 & 17 - Option I)
P.M. Peak Hour

STATION NUMBER	STATION	WALK	BUS	K/R	P/R	AUTO TRIPS	TOTAL TRIPS
1	UNION STATION	187	2438	82	638	64	3409
2	FIRST/HILL	968	1917	0	2	0	2887
3	FIFTH/HILL	3580	3880	3	21	2	7486
4	SEVENTH/FLOWER	2769	3077	43	455	46	6390
5	ALVARADO/WILSHIRE	1965	1547	85	110	11	3713
6	VERMONT/WILSHIRE	1279	3837	66	105	10	5297
7	NORMANDIE/WILSHIRE	963	1990	51	75	7	3086
8	WESTERN/WILSHIRE	986	2394	16	34	3	3433
9	CRENSHAW/WILSHIRE	574	1138	18	16	2	1748
10	LA BREA/WILSHIRE	316	1850	25	16	2	2209
11	CURSON/WILSHIRE	249	6288	37	95	9	6678
12	BEVERLY/FAIRFAX	446	884	54	72	7	1463
13	SANTA MONICA/FAIRFAX	121	1813	12	0	0	1946
14	CAHUENGA/HOLLYWOOD	1267	2600	82	126	13	4088
15	HOLLYWOOD BOWL	DELETED FROM STUDY					
16*	UNIVERSAL CITY OR STUDIO CITY	53	995	43	225	23	1339
17*	NORTH HOLLYWOOD	72	1021	108	316	32	1549
18	FAIRFAX/SUNSET	INCLUDED UNDER OPTION VIII ONLY					
19	LA BREA/SUNSET	27	225	26	54	5	337
30	LAUREL CYN.	DELETED FROM STUDY					

SOURCE: SCRTD MODE OF ARRIVAL FOR SCAG 82B (200D) -- ALL STATIONS
*Option I

Appendix E

Mode of Departure
Parking at all Stations
Option XII (Except Stations 16 & 17 - Option I)
P.M. Peak Hour

STATION NUMBER	STATION	WALK	BUS	K/R	P/R	AUTO TRIPS	TOTAL TRIPS
1	UNION STATION	153	6028	278	1896	190	8545
2	FIRST/HILL	217	2061	0	4	0	2282
3	FIFTH/HILL	882	2544	10	58	6	3500
4	SEVENTH/FLOWER	Gas	3519	109	1183	118	5621
5	ALVARADO/WILSHIRE	1042	1581	308	297	30	3358
6	VERMONT/WILSHIRE	628	3700	307	333	33	5001
7	NORMANDIE/WILSHIRE	706	1298	227	230	23	2484
8	WESTERN/WILSHIRE	237	2752	50	83	8	3130
9	CRENSHAW/WILSHIRE	353	1996	53	38	4	2444
10	LA BREA/WILSHIRE	84	1893	79	38	4	2098
11	CURSON/WILSHIRE	59	4308	143	347	35	4892
12	BEVERLY/FAIRFAX	138	586	230	294	29	1277
13	SANTA MONICA/FAIRFAX	33	2057	67	0	0	2157
14	CAHUENGA/HOLLYWOOD	637	2061	368	383		
15	HOLLYWOOD BOWL	DELETED FROM STUDY					
16	UNIVERSAL CITY OR STUDIO CITY	194	1482	176	878	88	2313
17	NORTH HOLLYWOOD	80	1617	448	1175	118	3438
18	FAIRFAX/SUNSET	INCLUDED UNDER OPTION VIII ONLY					
19	LA BREA/SUNSET	49	235	95	176	18	573
30	LAUREL CYN.	DELETED FROM STUDY					

SOURCE: SCRTD MODE OF ARRIVAL FOR SCAG 828 (2000) -- ALL STATIONS
*Option I

Appendix F

Mode of Arrival or Departure
Parking at all Stations
Option VII
Daily (24-Hour) Arrivals or Departure

STATION NUMBER	STATION	WALK	BUS	K/R	P/R	AUTO TRIPS	TOTAL TRIPS
1	UNION STATION	1005	25514	1077	5374	537	33507
2	FIRST/HILL	2965	11400	3	198	20	14586
3	FIFTH/HILL	11729	18638	42	257	26	30692
4	SEVENTH/FLOWER	9798	16192	375	4949	495	31809
5	ALVARADO/WILSHIRE	9621	10030	1235	1246	125	22257
6	VERMONT/WILSHIRE	6095	23395	1151	1434	143	32218
7	NORMANDIE/WILSHIRE	4308	9590	722	864	86	15570
8	WESTERN/WILSHIRE	3778	15388	201	375	37	19779
9	CRENSHAW/WILSHIRE	2171	11741	232	230	23	14397
10	LA BREA/WILSHIRE	845	12825	360	311	31	14372
11	CURSON/WILSHIRE	704	33038	528	1292	129	35691
12	BEVERLY/FAIRFAX	-	-	-	-	-	-
13	SANTA MONICA/FAIRFAX	-	-	-	-	-	-
14	CAHUENGA/HOLLYWOOD	-	-	-	-	-	-
15	HOLLYWOOD BOWL	-	-	-	-	-	-
16	UNIVERSAL CITY OR STUDIO CITY	-	-	-	-	-	-
17	NORTH HOLLYWOOD	-	-	-	-	-	-
18	FAIRFAX/SUNSET	-	-	-	-	-	-
19	LA BREA/SUNSET	-	-	-	-	-	-
30	LAUREL CYN.	-	-	-	-	-	-

SOURCE: SCRTD MODE OF ARRIVAL FOR SCAG 82B (2000) -- ALL STATIONS

Appendix F

Mode of Arrival
Parking at all Stations
Option VII
A.M. Peak Hour

STATION NUMBER	STATION	WALK	BUS	K/R	P/R	AUTO TRIPS	TOTAL TRIPS
1	UNION STATION	87	4287	182	758	76	5390
2	FIRST/HILL	29	1391	1	29	3	1453
3	FIFTH/HILL	84	1459	7	35	4	1589
4	SEVENTH/FLOWER	87	1993	49	618	62	2809
5	ALVARADO/WILSHIRE	526	1192	231	168	17	2134
6	VERMONT/WILSHIRE	312	2477	261	230	23	3303
7	NORMANDIE/WILSHIRE	385	763	155	129	13	1445
8	WESTERN/WILSHIRE	27	1878	30	41	4	1980
9	CRENSHAW/WILSHIRE	191	1796	35	18	2	2042
10	LA BREA/WILSHIRE	10	1468	58	17	2	1555
11	CURSON/WILSHIRE	5	2600	103	238	24	2970
12	BEVERLY/FAIRFAX	-	-	-	-	-	-
13	SANTA MONICA/FAIRFAX	-	-	-	-	-	-
14	CAHUENGA/HOLLYWOOD	-	-	-	-	-	-
15	HOLLYWOOD BOWL	-	-	-	-	-	-
16	UNIVERSAL CITY OR STUDIO CITY	-	-	-	-	-	-
17	NORTH HOLLYWOOD	-	-	-	-	-	-
18	FAIRFAX/SUNSET	-	-	-	-	-	-
19	LA BREA/SUNSET	-	-	-	-	-	-
30	LAUREL CYN.	-	-	-	-	-	-

SOURCE: SCRTD MODE OF ARRIVAL FOR SCAG 82B (2000) -- ALL STATIONS

Appendix F

Mode of Departure
Parking at all Stations
Option VII
A.M. Peak Hour

STATION NUMBER	STATION	WALK	BUS	K/R	P/R	AUTO TRIPS	TOTAL TRIPS
1	UNION STATION	123	697	8	28	3	859
2	FIRST/HILL	626	1013	0	1	0	1640
3	FIFTH/HILL	2343	2414	0	2	0	4759
4	SEVENTH/FLOWER	1973	1407	3	38	4	3425
5	ALVARADO/WILSHIRE	1431	859	9	8	1	2308
6	VERMONT/WILSHIRE	956	2438	8	11	1	3414
7	NORMANDIE/WILSHIRE	532	1265	5	7	1	1810
8	WESTERN/WILSHIRE	777	1321	2	3	0	2103
9	CRENSHAW/WILSHIRE	267	661	2	1	0	931
10	LA BREA/WILSHIRE	160	1145	3	1	0	1309
11	CURSON/WILSHIRE	142	4033	4	9	1	4189
12	BEVERLY/FAIRFAX	-	-	-	-	-	-
13	SANTA MONICA/FAIRFAX	-	-	-	-	-	-
14	CAHUENGA/HOLLYWOOD	-	-	-	-	-	-
15	HOLLYWOOD BOWL	-	-	-	-	-	-
16	UNIVERSAL CITY OR STUDIO CITY	-	-	-	-	-	-
17	NORTH HOLLYWOOD	-	-	-	-	-	-
18	FAIRFAX/SUNSET	-	-	-	-	-	-
19	LA BREA/SUNSET	-	-	-	-	-	-
30	LAUREL CYN.	-	-	-	-	-	-

SOURCE: SCRTD MODE OF ARRIVAL FOR SCAG 82B (2000) -- ALL STATIONS

Appendix F

Mode of Arrival
Parking at all Stations
Option VII
P.M. Peak Hour

STATION NUMBER	STATION	WALK	BUS	K/R	P/R	AUTO TRIPS	TOTAL TRIPS
1	UNION STATION	169	2097	72	632	63	3033
2	FIRST/HILL	738	1562	0	14	1	2315
3	FIFTH/HILL	2852	3292	3	19	2	6158
4	SEVENTH/FLOWER	2386	2193	28	376	38	5021
5	ALVARADO/WILSHIRE	1887	1364	78	103	10	3442
6	VERMONT/WILSHIRE	1233	3565	63	98	10	4969
7	NORMANDIE/WILSHIRE	727	1700	41	61	6	2535
8	WESTERN/WILSHIRE	932	2085	14	29	3	3063
9	CRENSHAW/WILSHIRE	367	1259	16	16	2	1660
10	LA BREA/WILSHIRE	199	1798	24	16	2	2037
11	CURSON/WILSHIRE	172	5684	32	82	8	5978
12	BEVERLY/FAIRFAX	-	-	-	-	-	-
13	SANTA MONICA/FAIRFAX	-	-	-	-	-	-
14	CAHUENGA/HOLLYWOOD	-	-	-	-	-	-
15	HOLLYWOOD BOWL	-	-	-	-	-	-
16	UNIVERSAL CITY OR STUDIO CITY	-	-	-	-	-	-
17	NORTH HOLLYWOOD	-	-	-	-	-	-
18	FAIRFAX/SUNSET	-	-	-	-	-	-
19	LA BREA/SUNSET	-	-	-	-	-	-
30	LAUREL CYN.	-	-	-	-	-	-

SOURCE: SCRTD MODE OF ARRIVAL FOR SCAG 828 (2000) -- ALL STATIONS

Mode of Departure
VII Parking at all Stations
Option VII
P.M. Peak Hour

STATION NUMBER	STATION	WALK	BUS	K/R	P/R	AUTO TRIPS	TOTAL TRIPS
1	UNION STATION	137	5527	242	1931	193	8030
2	FIRST/HILL	178	1914	1	42	4	2139
3	FIFTH/HILL	707	2379	9	53	5	3153
4	SEVENTH/FLOWER	600	2739	76	987	99	4501
5	ALVARADO/WILSHIRE	1018	1669	291	281	28	3287
6	VERMONT/WILSHIRE	618	3562	298	315	32	4825
7	NORMANDIE/WILSHIRE	590	1227	182	184	18	2201
8	WESTERN/WILSHIRE	223	2589	43	71	7	2933
9	CRENSHAW/WILSHIRE	295	2314	50	39	4	2702
10	LA BREA/WILSHIRE	55	2079	79	38	4	2255
11	CURSON/WILSHIRE	42	4259	127	302	30	4760
12	BEVERLY/FAIRFAX	-	-	-	-	-	-
13	SANTA MONICA/FAIRFAX	-	-	-	-	-	-
14	CAHUENGA/HOLLYWOOD	-	-	-	-	-	-
15	HOLLYWOOD BOWL	-	-	-	-	-	-
16	UNIVERSAL CITY OR STUDIO CITY	-	-	-	-	-	-
17	NORTH HOLLYWOOD	-	-	-	-	-	-
18	FAIRFAX/SUNSET	-	-	-	-	-	-
19	LA BREA/SUNSET	-	-	-	-	-	-
30	LAUREL CYN.	-	-	-	-	-	-

SOURCE: SCRTD MODE OF ARRIVAL FOR SCAG 823 (2000) -- ALL STATIONS