COPY FOR
DEPT. Exec Offic
ATTN. B.C. Bachtold

State of California
Department of Transportation

04-SCl-85
R0.0/R17.9
04142-485000

PROJECT REPORT

TO: A. J. PHILLIPS, Chief
Office of Planning and Design

FROM: R. H. JAHRLING
Deputy District Director
Planning and Programming/
Highway Maintenance

Robert H. Jahrling 6-19-85
Signature / Date

INTRODUCTION

This Transmittal Report and Draft Environmental Impact Statement (DEIS) and Transit Plan covers a study of different types of transportation facilities on Route 85, the "West Valley Transportation Corridor," between Route 101 in South San Jose (PM R0.0) and Route 280 near Stevens Creek Boulevard in Cupertino (PM R17.9).

The purpose of this study is to develop sufficient information for the selection of a preferred transportation facility alternative which would reduce traffic congestion in The Corridor. The following local jurisdictions are involved with the study:

Cupertino, Campbell, San Jose, Los Gatos, Saratoga, Monte Sereno, Mountain View, Sunnyvale, and Santa Clara County.

PROJECT CATEGORY

This is a Category 1 project because mode choices involve a new freeway with controlled access and substantial right-of-way acquisition. A transit-only alternative and combinations of transit and roadways along with Transportation System Management (TSM) are also being considered.

BACKGROUND

See DEIS, summary section.

DESCRIPTION OF EXISTING FACILITY

The existing constructed freeway portion of State Route 85 from Stevens Creek Boulevard/Route 280 in Cupertino (PM R17.9) northerly to Route 101 in Mountain View (PM R23.9) is a four lane freeway. The remainder of adopted State Route 85 is unconstructed between Route 280 near Stevens Creek Boulevard in Cupertino (R17.9) and Route 101 in south San Jose at Monterey Road (R0.0). This remaining section is the subject of this project report and DEIS/Transit Plan. See Exhibit A for the location of the project.

DESIGNATED ROUTE 85

This portion of Route 85 extends from the junction of Route 9 near Saratoga to the junction of I-280 in Cupertino. Designated Route 85 is approximately 5 miles long, and is commonly as Saratoga-Sunnyvale Road and De Anza Blvd.

Upon completion of the unconstructed portion of Route 85, designated Route 85 will be relinquished to the proper local officials.

TRAFFIC/TRAVEL PROJECTIONS

Highway and transit travel projections have been developed for the year 1990 using the Metropolitan Transportation Commission (MTC) forecasting model and the data base generated for the Guadalupe Corridor project. Travel projections for the Final Environmental Impact Statement will be based on the year 2010. For details covering the travel projections see Section IV-B of DEIS under Transit Plan.

DEFICIENCIES AND JUSTIFICATION

See Section II-C of the DEIS.

PROPOSAL DESCRIPTION

a. DEIS and Transit Plan Limits

The project limits of the West Valley Transportation Corridor Study are between the Route 101 Freeway in South San Jose and Route 280/Stevens Creek Boulevard in Cupertino. The DEIS addresses alternatives for the project limits. Exhibit "A" indicates the limits of the study.

The TRANSIT PLAN addresses alternatives which include Light Rail Transit (LRT) or BUS in a system context. The transit system limits of the study are between the approved LRT of the Route 85/87 Guadalupe Corridor Project interchange and the SP-Caltrain stations in Mountain View and Sunnyvale. The transit system alternatives follow the Route 85 Corridor alignment between Route 87 and Route 280/Stevens Creek Boulevard, to the SP-Caltrain stations in Mountain View and Sunnyvale, there is, as yet, no established route alignment.

There is a current MTC study called the Fremont-Southbay (San Jose) Transit Corridor Study in which several alternatives from the east terminate at the SP-Caltrain stations, are being investigated. For more details about transit plan please refer to Chapter IV of the DEIS.

b. Proposed Project Alternatives

The following is a brief description of the alternatives considered. For more details please refer to DEIS, Chapter V.

No Project Alternative (NPA) -- No transportation facility in the corridor other than those currently proposed.

Transportation System Management (TSM) -- Low cost projects to improve and upgrade the existing transportation facilities, both roadway and transit.

Light Rail Transit (LRT) -- A grade separated light rail facility which would extend from the State Route 85/87 (Guadalupe Corridor) interchange northerly to the vicinity of Stevens Creek Boulevard in Cupertino. It should be noted that construction limits of the LRT alternative is part of an eventual loop as discused in Chapter IV of the DEIS.

This alternative would also extend the Route 85 roadway element portion of the Guadalupe Corridor project from Miyuki Drive to Route 101 in south San Jose.

4-Lane Freeway with LRT -- A grade separated access controlled four lane freeway with LRT in the median.

4-Lane Freeway with LRT and HOV -- A grade separated access controlled four lane freeway with LRT in the median and a High Occupancy Vehicle (HOV) lane between the LRT and first mixed flow traffic lane.

4-Lane Freeway with Bus/HOV Transitway -- A grade separated access controlled four lane freeway with a Bus/HOV transitway in the median.

6-Lane Freeway with Bus/HOV Transitway -- A grade separated access controlled six lane freeway with a Bus/HOV transitway in the median.

8-Lane Freeway -- A grade separated access controlled eight lane freeway with a median wide enough for either a Bus/HOV transitway, LRT system or future median widening.

8-Lane Freeway with LRT -- A grade separated access controlled eight lane freeway with LRT in the median.

Exhibit B indicates alternative typical sections. The roadway alternatives are studied for two profiles; the base profile and profile design variation through the City of Saratoga. For details of the base profile and Design Variation, see Section V-A of the DEIS.

c. Non Standard Design Features

Due to an already established narrow R/W, there could be substandard design features anticipated. Full design details are not available at this time. Every effort will be taken to minimize non standard design features during design. The following are the anticipated nonstandard design features:

1 - HORIZONTAL CLEARANCE AND SHOULDER WIDTH

All freeway alternatives could encounter substandard horizontal clearance and shoulders width at some transit stations.

2 - RIGHT OF WAY (R/W) CLEARANCE

The standard clearance from slope to R/W line can not be met through approximately one third of the project if any of the freeway alternatives are selected as the preferred alternative.

d. Cooperative Features

The West Valley Corridor Study is a cooperative project with the cost shared by Caltrans, Santa Clara County and the various corridor cities mentioned in the "INTRODUCTION" section. The engineering and environmental work is being done by Caltrans. The Federal Highway Administration (FHWA) is the lead agency, and the Urban Mass Transportation Administration (UMTA) is a cooperating agency.

Cooperative agreements will be negotiated with the Santa Clara Traffic Authority and other affected local agencies as necessary to complete the project.

The maintenance of highway element will be the responsibility of the State. The maintenance and operation of the transit features and vehicle will be the responsibility of the Santa Clara County Transit.

e. Replacement Planting

See DEIS, chapter VI, Section B.4.B.

f. New Public Road Connections

None.

g. Route Adoption Requirements

The location of State Route 85 was adopted in 1956 and 1957 by the then California Highway Commission which is now called the California Transportation Commission (CTC).

If the NPA, TSM or LRT are selected as preferred alternative, the State may request CTC to unadopt Route 85.

h. Project Cost

The construction and R/W cost has been estimated from $70 million for TSM alternative to $530M for an eight lane freeway with LRT. Please see exhibit C and also Chapter V of the DEIS Sections B.1 and B.2 for all cost breakdowns.

i. Effectiveness in Relieving Problem

For the traffic flow and congestion element, there are marked differences between each alternative. The following chart indicates the effect of each alternative on the transportation network.

Congestion relief on Transportation network

Alternative	Congestion Relief	Remarks
No project alternative	No	No effect on improving traffic condition.
TSM	Minimal	Most TSM type measures have already been implemented throughout the County.
LRT only	Minimal	Low projections (MTC Model) indicate minimal effect on improving traffic conditions.
4 Lane Fwy. with LRT	Some	This alternative typically accommodates less than half of the projected demand, however, improvements to traffic conditions would be noticeable.
4 Lane Fwy. with LRT and HOV 4 Lane Fwy. with Bus/ HOV Transitway	Large	Two thirds to three quarters of the demand could be handled by these alternatives.
6 Lane Fwy. with Bus/ HOV Transitway 8 Lane Fwy. 8 Lane Fwy. with LRT	Major	These alternatives could accomodate a significant amount of the projected demand.

PROPOSAL FUNDING

The study of this project is programmed under the HE14, new highway program. Funding scenarios for this project is as follows; please refer to Exhibit "D", Funding sources.

a. Highway Element

The selected alternative may contain two elements, highway and transit. Highway elements will be constructed using funds generated by Measure "A", a Santa Clara County 1/2 cent sales tax allocated for the improvement of specific highways, one of which is Route 85. FHWA funding will also be sought for highway construction if necessary. State money will also be used if available. Requests for FHWA funding participation will be decided by the measure "A" traffic authority.

b. Transit Element

If the selected alternative includes transit as one of the transportation modes, the geometrics will accommodate the transit portion, whether it is LRT or a Bus/HOV transitway. If the selected transit is LRT, the entire LRT associated cost would be sought from UMTA following an Alternatives Analysis. If the selected alternative contains the Bus/HOV transitway, UMTA funding would be sought for the transit portion, which includes the costs for the buses, maintenance facility and the stations. The roadway portion of the transitway will be considered as part of the highway element (used by HOVs) and would be funded by Measure "A", FHWA (if necessary), and State fund (if available) monies.

c. TSM Funding

If TSM is selected as the perferred alternative, it would be funded by measure "A", local funds, State, and federal funds.

d. Funding Source Feasibility

Local - Assured and significant due to measure "A"
UMTA - Unlikely due to low local and regional LRT priority in corridor
FHWA - Good due to significant local funding match
State - Same as for FHWA

e. STIP/PSTIP

Route 85 project will be added to the STIP after selection of the preferred alternative which is tentatively scheduled for January of 1986.

f. Construction Contract Size

It is planned that the final individual project sizes will conform to the policy per W. E. Schaefer memorandum of March 18, 1985. However, due to some large freeway to freeway interchanges and the magnitude of the total cost of the project it may be necessary to exceed the policy limit of some projects.

OTHER CONSIDERATIONS

a. Park and Ride Facilities

Park and Ride facilities are considered for all alternatives. See chapter VI of the DEIS Section H.3 for locations of the parking facilities.

b. Non Motorized Transportation and Pedestrians

Non motorized transportation and pedestrian facilities will be incorporated according to Caltrans policy and procedures. See chapter VI of the DEIS Sections H.5 and H.6 for bicycle and pedestrian routes.

c. Oversized Loads and Trucks

Some of the local jurisdictions have expressed concern to restrict oversized loads and trucks from using portions of the State Route 85. This issue will need to be resolved during the public review of the DEIS.

d. Navigable Water Ways

There are no navigable water ways throughout the corridor.

e. Floodplain and Wetlands

See DEIS. chapter VI, Section B3.A for floodplains and Section B3.C for wetlands.

f. Roadway Reconstruction and Restoration

N/A.

g. Bus/HOV Facilities

All of the highway alternatives considered have either Bus and/or HOV facilities included as part of the alternative. See chapter V of the DEIS for more details. Since this study defines HOV as two people or more, an exception to the FHWA policy which requires three or more people will be prepared in accordance to the memorandum by James B. Borden dated April 29, 1985.

h. Permits Required

The following permits will be required for all of the alternatives except the NPA and TSM. For locations please refer to the DEIS, chapter VI, Section B 3.A.

1. California Department of Fish and Game 1601 Streambed Alteration Permit.

2. U. S. Army Corps of Engineers Section 404 of the Clean Water Act (required prior to placing dredged or fill material into watercourses or wetlands).

3. Santa Clara Valley Water District coordination.

i. Consistency with Other Planning

1. Regional Plans

The Route 85 Corridor has been an adopted freeway corridor since the 1950's. As much as possible, development has occurred at the edge of the corridor based on 1960's freeway agreements. The Regional Plan currently states the right of way not acquired should be acquired as necessary and preserved for future transportation needs. The mode or modes have not been identified.

2. Local Plans

The Route 85 Corridor is included in local general plans. Development plans are reviewed continually by Caltrans.

j. Interim Projects

The interim projects on designated Route 85 (Saratoga-Sunnyvale Road/DeAnza Boulevard) will be implemented in accordance with the CHC policy resolution adopted on July 30, 1964 (PDPM 2-18.22, Oct. 1983).

Designated Route 85 will be relinquished to the proper local officials after completion of the West Valley Corridor.

k. Disposition of Existing Facility

If either the NPA or TSM alternatives are selected as the preferred alternative, the existing State owned R/W would be sold. This would generate $85 million. The money generated from the sell of the R/W would be returned to the Caltrans general funds and used on transportation projects through out the State.

l. Involvement with Southern Pacific Railroad

All alternatives except the NPA and TSM will involve the relocation of Southern Pacific tracks between approximately Saratoga Creek and Quito Road. In addition, all construction alternatives will cross over the S.P. tracks at Winchester Boulevard and Monterey Road. Please see chapter VI of the DEIS, Section H.7.

m. Value Engineering

Value engineering will be utilized in the design of the preferred alternative.

n. Conservation of Energy and Non renewable Resources

See DEIS, chapter VI, Section B.C.3.

o. Prolonged Temporary Ramp/Road Closures

See DEIS, chapter VI, Section J.2 under Traffic Disruption and/or Congestion.

PROJECT REVIEW

The draft project report and DEIS was reviewed by OPPD reviewer, Bob Coleman on May 16, 1985.

Rich Peter, the Headquarter Environmental reviewer, reviewed the DEIS on May 31, 1985.

Comments resulting from these reviews have been incorporated into the project report and the DEIS.

PUBLIC HEARING PROCESS

Formal public hearings are expected to be held in October or November, 1985.

FREEWAY AGREEMENT

Freeway Agreements were obtained with San Jose, Saratoga, Los Gatos, Cupertino and the County in the 1960's. If any of the freeway alternatives is selected as the preferred alternative, changes in design, profile, and/or interchanges will necessitate revision of all freeway agreements.

ENVIRONMENTAL CERTIFICATION

The draft Environmental Document has been prepared in accordance with the Department's and FHWA Environmental Regulations. The draft of the DEIS/DEIR herewith transmitted is the appropriate document for the build alternatives as described.

D W Reynolds 6/19/85
DARNALL W. REYNOLDS, Chief / Date
Environmental Analysis Branch

RIGHT-OF-WAY CERTIFICATION - See Exhibit E

I have reviewed the right-of-way data contained in this report and find it to be complete, current and accurate. Utilities and railroads are involved in this project.

R. A. Speck 6/19/85
R. A. SPECK Date
Deputy District Director
Right of Way

PROJECT PERSONNEL

The following people should be contacted if any questions should arise about this project report or the DEIS.

		ATSS
Transportation Sudies Branch Chief, Study Manager	Ron Lemmon	597-9150
Environmental Analysis Branch	P. H. Hughes	597-1318
Transportation Studies Branch, Sr. Engineer	J. J. Spinello	597-8788
Project Development Representative	H. P. Hensley	597-3983
Right of Way Reviewer	R. J. Murphy	597-2085
Environmental Document	C. I. Morton	597-4035
	J. A. Cullom	597-2383
Project Engineer	Saaid Fakharzadeh	597-9171

RECOMMENDATION

It is recommended this project report and the DEIS be approved, authorization be granted to circulate the environmental document in August or September 1985, to conduct public hearings in October or November 1985, and to negotiate cooperative agreements as necessary to complete the project.

ATTACHMENT

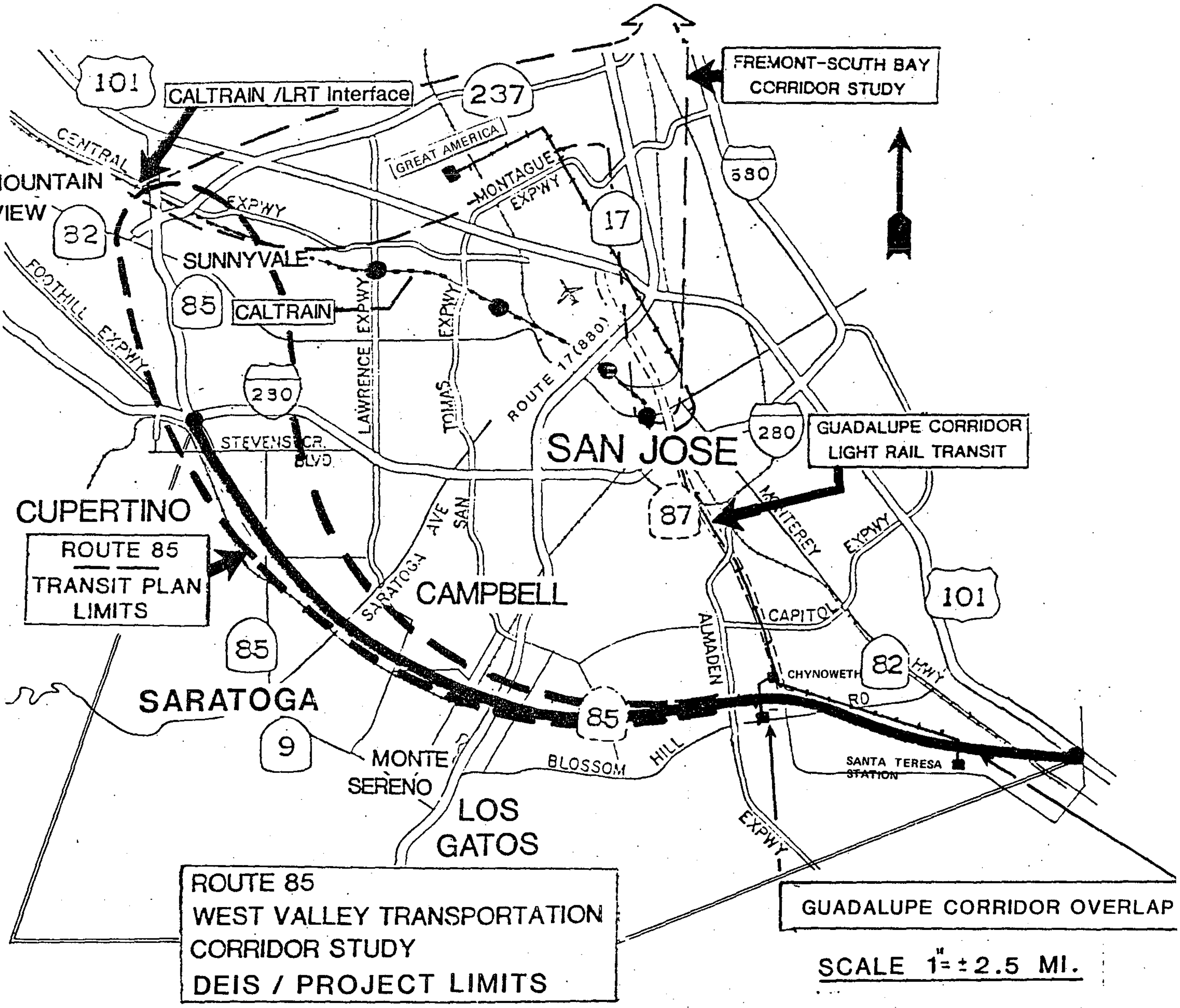
1. Exhibit A: Location Map
2. Exhibit B: Alternative typical cross-sections
3. Exhibit C: Project Cost and R/W Estimates
4. Exhibit D: Funding Sources
5. Exhibit E: R/W data sheets (No. 957 and 958)
6. Draft of the Draft Environmental Impact Statement and Transit Plan

EXHIBIT A

ROUTE 85

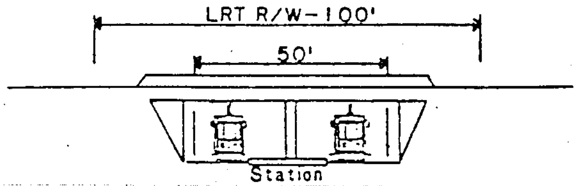
WEST VALLEY TRANSPORTATION CORRIDOR STUDY

Limits of other studies shown for reference only and are subject to change.

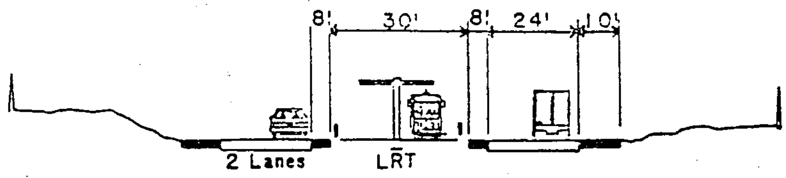


LOCATION MAP

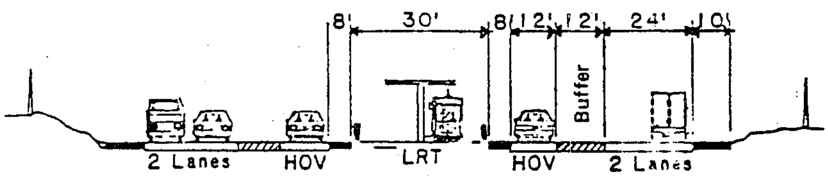
EXHIBIT B



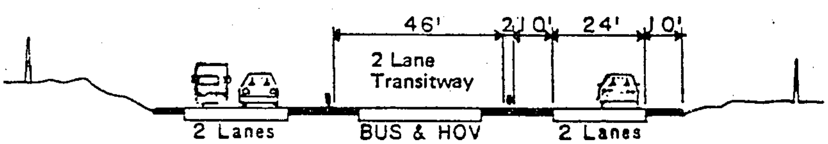
LIGHT RAIL TRANSIT
(GRADE SEPARATED)



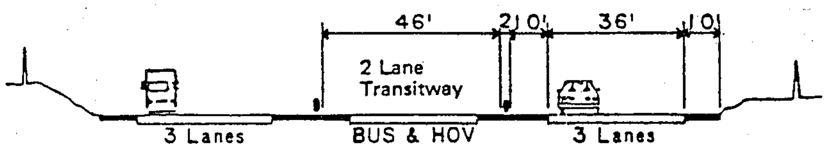
4 LANE FREEWAY
WITH LRT



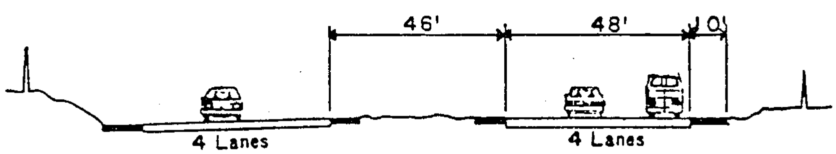
4 LANE FREEWAY
WITH HOV AND LRT



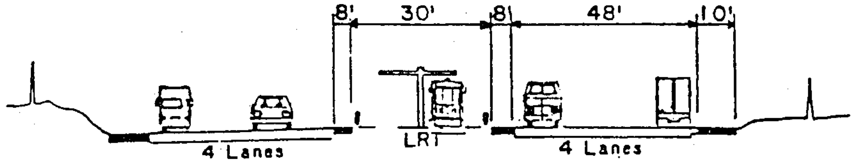
4 LANE FREEWAY
WITH BUS / HOV
TRANSITWAY



6 LANE FREEWAY
WITH BUS / HOV
TRANSITWAY



8 LANE FREEWAY



8 LANE FREEWAY
WITH LRT

ROUTE 85
WEST VALLEY TRANSPORTATION CORRIDOR
ALTERNATIVE TYPICAL SECTIONS

subject to change

06/18/85.

TRANSPORTATION STUDIES RTE 85

CAPITAL COST ESTIMATE FOR ALL ALTERNATIVES OF RTE 85

* ALL COSTS ESTIMATED IN 1985 $ MILLION *

	CONSTRUCTION COST			R/W COST				BASE PROFILE	SARATOGA DESIGN VARIATION	
ALTERNATIVE	HIGHWAY	TRANSITWAY	TRANSIT	ALIGNMENT	UTILITY RELOC.	PARK & RIDE ***	BUS OR LRT VEHICLES	TOTAL COST, $M	ADD. COST	TOTAL COST, $M
NO PROJECT	0	0	N/A	0	0	N/A	N/A	0	0	0
T S M	15	N/A	15	0	0	5	35	70	N/A	N/A
L R T	35	N/A	150	80 *	5	10	20	300	N/A	N/A
4 LN FWY W/ LRT	230	N/A	110	100 **	10	10	20	480	40	520
4 LN FWY W/ HOV & LRT	280	N/A	110	100 **	10	10	20	530	60	590
4 LN FWY W/ BUS & HOV	250	50	25	100 **	10	10	25	470	50	520
6 LN FWY W/ BUS & HOV	270	50	25	100 **	10	10	25	490	60	550
8 LN FWY	280	0	0	100 **	10	10	0	400	60	460
8 LN FWY W/ LRT	280	0	110	100 **	10	10	20	530	60	590

* TOTAL R/W COST (REMAINING R/W COST PLUS THE STATE OWNED LAND).

** REMAINING R/W COST.

*** INCLUDES R/W COST AND CONSTRUCTION OF FACILITY.

NOTES:

1- LRT TRANSIT COST INCLUDES TRACK & ELECTRIFICATION, COMMUNICATIONS, STATIONS AND STRUCTURES.

2- BUS TRANSIT COST INCLUDES STATIONS AND MAINTENANCE FACILITY.

3- THE ADDITIONAL COST FOR THE DESIGN VARIATION THROUGH SARATOGA IS A DRY CONDITION, NO GROUND WATER.

4- TRANSITWAY CONSTRUCTION COSTS ARE FOR THE ROADWAY PORTION (INCLUDING STRUCTURES) ONLY.

5- THE ABOVE COSTS DO NOT INCLUDE ENGINEERING AND ADMINISTRATIVE COSTS.

EXHIBIT C

3/18/85

TRANSPORTATION STUDIES RTE 85

FUNDING SOURCES*

A - MEASURE "A"   B - UMTA

ALTERNATIVE	CONSTRUCTION COST			R/W COST			
	HIGHWAY	TRANSITWAY	TRANSIT	ALIGNMENT	UTILITY RELOC.	PARK & RIDE	BUS OR LRT VEHICLES
NO PROJECT	--	--	--	--	--	--	--
T S M (5)	(5)	--	B	--	--	(5)	B
L R T	A	--	B	B	B	B	B
4 LN. FREEWAY W/ LRT	A	--	B	A	A	A,B	B
4 LN. FREEWAY W/ HOV & LRT	A	--	B	A	A	A,B	B
4 LN. FREEWAY W/ BUS & HOV	A	A	B	A	A	A	B
6 LN. FREEWAY W/ BUS & HOV	A	A	B	A	A	A	B
8 LN. FREEWAY	A	--	--	A	A	A	--
8 LN. FREEWAY W/ LRT	A	--	B	A	A	A,B	B

* FHWA, STATE AND LOCAL FUNDS TO BE REQUESTED IF NECESSARY.

NOTES:

1- LRT TRANSIT COST INCLUDES TRACK WORK & ELECTRIFICATION, COMMUNICATION, STATIONS AND STRUCTURES.

2- BUS TRANSIT COST INCLUDES STATIONS AND MAINTENANCE FACILITY.

3- TRANSITWAY CONSTRUCTION COST IS FOR THE ROADWAY PORTION (INCLUDING STRUCTURES) ONLY.

4- PARK AND RIDE INCLUDES R/W AND CONSTRUCTION COSTS.

5- TSM MEASURE "A" FUNDS TO BE USED ON EXISTING ROUTES 85, 237 AND 101

EXHIBIT D

No. 957 **EXHIBIT E** 1/6

Format for R/W Data for PR
(furnish data for each alternative under consideration)

To: James Spinello
Attn: Saeid Fakharzadeh

Dist 4 Co SCl Rte 85 PM R0.0/R17.9
E.A. 485000
Date 5/16/85

Project Desc: Construct Route 85 Freeway between Rte 101 & Stevens Creek Blvd.

Subject: Right of Way Data — Alternate 200' wide corridor
See Light Rail alternate

1. R/W Cost Estimate:

A) Acquisition, including Excess Land & Damages to Remainder	$ 94,600,000 *
B) Utility Relocation (State share)	$ 5,000,000
C) Clearance/Demolition	$ 400,000 * DF 6/17/85
D) RAP	$ 5,000,000 *
Total R/W Estimate	$ 105,000,000 * DF 6/17/85
E) Construction Contract Work	$ To be determined later

2. Parcel Data:

Type	Dual/Appr.	Utilities	RR Involvements	
X 211		U4-1 0	None	
A 20		-2 0	C&M Agree	0
B 200	10	-3 6	Service Contr	
C 50	25	-4 0	Lic/RE/Clauses	
D 30	25	U5-7 0	Misc R/W Work:	
E XXXX	XXXX	-8 0	RAP Displ	346
F XXXX		-9 0	Clear/Demo	373
Total 511			Const Permits	

Areas: R/W 235± ACS

No. Excess Parcels ______

Excess ______

Ent PMCS 6/1?/85

By: John J. Burch

Revised ______

* THESE AMOUNTS COVER R/W Cost Estimate from the proposed 85/87 Interchange to Route 280 near Stevens Creek Blvd. only [illegible]

3. Description of Major Items of Construction Contract Work:

To be determined at PS+E

4. General Description of R/W and Excess (zoning, use, major improvements, critical or sensitive parcels, etc.):

WIDE VARIETY OF IMPROVED AND VACANT PROPERTY INVOLVING NUMEROUS CRITICAL PARCELS.

5. Effect on Assessed Valuation:

MAJOR EFFECT - 1,000,000

6. Are Utility Facilities or Rights of Way Affected?

☐ No ☒ Yes (Give General Description for Each Alternative)

To be determined by detailed study during Project Development phase.

7. Are Railroad Facilities or Rights of Way Affected?

No Yes (Give General Description for Each Alternative.)

Relocation of the tracks will require C&M agreements

8. Summary of Rap Displacements:

Single family 287 Business/nonprofit 27

Multi-family 59 Farm 0

Based on Conceptual Stage Housing Availability Study dated May 4, 1985, it is anticipated that sufficient replacement housing (will/~~will not~~) be available without Last Resort Housing.

9. Summary of Housing Units Required:

A. Owner-Occupied 212 B. Tenant-Occupied 134

C. It is anticipated that 134 of the required units are/will be categorized as affordable low or moderate income housing units and that all/ 0 of such affordable units (should/should not) be replaced pursuant to Caltrans' policy. (Include date of Community Housing Assessment if District believes affordable units should be replaced.)

E 3/6

10. Discussion of material/disposal requirements and sources: In accordance with the "Saratoga Design Variation, one of three sites will be chosen by the contractor for material storage and disposal. Earthwork disposal estimated at approximately 1,500,000 cu. yds.

11. Discussion of Potential Relinquishments/Abandonments:

Frontage Roads and other collateral facilities will be relinquished to local agencies

12. Discussion of Existing/Potential Airspace Sites:

With a project of this scope there will probably been numerous ~~and~~ locations that would be desirable for the development of air rights.

13. Anticipated R/W Schedule & Lead Time Requirements:

49 Mo.

14. It is anticipated all R/W work will be performed by Caltrans' staff

☒ Yes ☐ No (Discuss):

*Evaluations prepared by:

1.	R/W	Signature J. L. O'Rourke	Date	06/10/85
2.	Railroad	Signature B J Webb	Date	5/20/85
3.	Utilities	Signature Milton Lee	Date	6/05/85

I have reviewed the above data and find it to be complete, current, and accurate.

for D. J. Murphy Date 6-14-85
Deputy District Director
Right of Way

*The Utility Coordinator and the Railroad Agent as well as the Right of Way Estimator must sign each Right of Way Data Sheet.

No. 958

E 4/6

Format for R/W Data for PR
(furnish data for each alternative under consideration)

To: James Spinello

Attn: Saeid Fakharcadeh

Dist 4 Co SCL Rte 85 PM R0.0/R17.8

E.A. 485000

Date 5/16/85

Project Desc: Construct Light Rail System Alternate – 100' wide corridor

Subject: Right of Way Data -- Alternate See Freeway Alternate

1. R/W Cost Estimate:

A) Acquisition, including Excess Land & Damages to Remainder	$ 38,400,000
B) Utility Relocation ~~(State share)~~	$ 5,000,000 SF 6/17/85
C) Clearance/Demolition	$ 100,000
D) RAP	$ 1,500,000
Total R/W Estimate	$ 45,000,000 SF 6/17/85
E) Construction Contract Work	$

2. Parcel Data:

Type	Dual/Appr.	Utilities		RR Involvements	
X 150±		U4-1	0	None	
A 5		-2	0	C&M Agree	0
B 80	5	-3	6	Service Contr	
C 20	10	-4	0	Lic/RE/Clauses	
D 10	10	U5-7	0	Misc R/W Work:	
E XXXX	XXXX	-8	0	RAP Displ	134
F XXXX		-9	0	Clear/Demo	150
Total 265				Const Permits	

Areas: R/W 75± Acs

No. Excess Parcels

Excess

Ent PMCS 6/11/85

By: John J. Bench

Revised

3. Description of Major Items of Construction Contract Work:

   to be determined later

4. General Description of R/W and Excess (zoning, use, major improvements, critical or sensitive parcels, etc.):

   WIDE VARIETY OF USES WITH SEVERAL CRITICAL PARCELS.

5. Effect on Assessed Valuation:

   MAJOR EFFECT.

6. Are Utility Facilities or Rights of Way Affected?

   ☐ No ☒ Yes (Give General Description for Each Alternative)

   To be determined by detailed study during the Project Development phase

7. Are Railroad Facilities or Rights of Way Affected?

   No Yes (Give General Description for Each Alternative.)

   Relocation of SP tracks will require C&M Agreement

8. Summary of Rap Displacements:

   Single family 119 Business/nonprofit 16

   Multi-family 15 Farm 0

   Based on Conceptual Stage Housing Availability Study dated May 4, 1985, it is anticipated that sufficient replacement housing (will/will not) be available without Last Resort Housing.

9. Summary of Housing Units Required:

   A. Owner-Occupied 64 B. Tenant-Occupied 70

   C. It is anticipated that 70 of the required units are/will be categorized as affordable low or moderate income housing units and that all/0 of such affordable units (should/should not) be replaced pursuant to Caltrans' policy. (Include date of Community Housing Assessment if District believes affordable units should be replaced.)

E 6/6

10. Discussion of material/disposal requirements and sources:

—

11. Discussion of Potential Relinquishments/Abandonments:

—

12. Discussion of Existing/Potential Airspace Sites:

~~Since this is a "surface~~" Probably there would be minimal airspace activity since project would ~~probably~~ be at grade. Could be some development around "stations".

13. Anticipated R/W Schedule & Lead Time Requirements:

Frontage roads and other collateral facilities will be relinquished to local agencies

14. It is anticipated all R/W work will be performed by Caltrans' staff

☒ Yes ☐ No (Discuss):

*Evaluations prepared by:

1. R/W	Signature J. L. O'Rourke	Date 6/10/85
2. Railroad	Signature R. J. Webb	Date 5/20/85
3. Utilities	Signature [illegible]	Date 6/05/85

I have reviewed the above data and find it to be complete, current, and accurate.

for [signature] Murphy Date 6-14-85
Deputy District Director
Right of Way

*The Utility Coordinator and the Railroad Agent as well as the Right of Way Estimator must sign each Right of Way Data Sheet.

Caltrans
CALIFORNIA DEPARTMENT OF TRANSPORTATION

FEDERAL HIGHWAY ADMINISTRATION

DISTRICT 4

DRAFT

JUN 19 1985

CALIFORNIA

85

STATE ROUTE 85
TRANSPORTATION CORRIDOR

DRAFT

ENVIRONMENTAL IMPACT STATEMENT

& TRANSIT PLAN

Report Number: FHWA-CA-EIS-85-XX-D

SCH No.: 83073008
4 SCL 85 R0.0/R17.9
04134-485000

Route 85 Transportation Corridor Study

DRAFT
ENVIRONMENTAL IMPACT STATEMENT

and

TRANSIT PLAN

Submitted pursuant to
(State) Division 13, Public Resources Code
(Federal) 42 U.S.C. 4332(2)(c), and
49 U.S.C. 303
by the

U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration

and

STATE OF CALIFORNIA
Department of Transportation

Cooperating Agencies

Urban Mass Transportation Administration
Santa Clara County   San Jose
Los Gatos   Campbell   Saratoga   Cupertino
Monte Sereno   Mountain View   Sunnyvale

Comments on this document are due by ______________, 1985 and should be sent to Ron Lemmon, Study Manager, Route 85 Transportation Corridor Project, California Department of Transportation, District 04, P.O. Box 7310, San Francisco, California, 94120.

____________________	____________________
DATE	E. W. BLACKMER, Chief Office of Environmental Analysis California Department of Transportation
____________________	____________________
DATE	BRUCE CANNON FHWA Division Administrator Federal Highway Administration

ABSTRACT

Caltrans proposes to construct a transportation facility in the Route 85 transportation corridor between Route 101 in south San Jose and Stevens Creek Boulevard in Cupertino, a distance of approximately 18 miles. Alternatives studied are the No Project, Transportation System Management, Light Rail Transit (LRT), 4-lane Freeway with LRT, 4-lane Freeway with LRT and High Occupancy Vehicle (HOV) lane, 4-lane Freeway with Bus/HOV Transitway, 6-lane Freeway with Bus/HOV Transitway, 8-lane Freeway, and 8-lane Freeway with LRT. Environmental impacts of the proposed alternatives include floodplain encroachment, loss of wetlands and riparian habitat, noise increases, visual changes, impacts to historical structures, loss of parklands, relocation and/or displacement of residents and businesses, changes in traffic movements, relocation of existing utilities, and construction impacts --such as noise, dust, and traffic congestion. Mitigation will reduce most of these impacts.

The following persons may be contacted for additional information concerning this document.

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Federal Highway Administration
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Sacramento, CA 95809
(916) 440-2804

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FIGURES AND TABLES

FIGURES

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SUMMARY

A. BACKGROUND

The location of State Route 85 was adopted between Route 101 in south San Jose and Route 101 in Mountain View in 1956 and 1957 by the California Highway Commission. Right of way acquisition commenced in the 1960s, but was halted in 1975, and some development occurred in the corridor. Approximately 60% of the needed right of way is owned or commited to ownership by Caltrans. The Santa Clara Valley Corridor Evaluation (SCVCE) prepared by Santa Clara County in 1979 again demonstrated the need for a transportation facility in the Route 85 transportation corridor and made a recommendation to preserve the corridor right of way. Through 1984 about $6.6 million has been spent on right of way protection and hardship parcels acquisition. Measure "A" funds are currently being spent for right of way protection and hardship acquisition. This and also pressure to develop the land within the corridor led to the completion of the Environmental Impact Statement/Report, West Valley Transportation Corridor, Unconstructed State Route 85, Santa Clara County, between State Route 101 (Monterey Road) and Stevens Creek Boulevard in Cupertino. This final environmental impact statement was approved in February, 1982 by the FHWA to protect the right of way.

The Guadalupe Corridor Project (Route 87) was an outgrowth of the SCVCE. As part of that project, the decision has been made to construct an expressway with Light Rail Transit (LRT) in the median of State Route 85 between Miyuki Drive (south San Jose) and State Route 87 as well as along portions of State Route 87. The Guadalupe Corridor project is considered to be a constructed element of the transportation system for the purposes of this study.

In December 1982, Caltrans at the request of and in cooperation with local and regional agencies, began a study of the State Route 85 Corridor. A Policy Advisory Board composed of elected officials from the affected local governments was formed. This board has met regularly to advise Caltrans and has approved the alternatives to be studied for this report. The objective of the Policy Advisory Board and of this study is to develop a Draft Environmental Impact Statement (DEIS) covering transportation alternatives and establish consensus on a preferred alternative for the Route 85 transportation corridor.

A Technical Advisory Committee was also formed with an engineering representative from each participating agency. This committee recommended which alternatives should be studied in detail for inclusion in the draft environmental impact statement. The alternatives recommended by the Technical Advisory Committee and approved by the Policy Advisory Board are described briefly in Section C below.

Public meetings were held in April of 1983 to gather information on the scope of the alternatives. After these meetings, seven alternatives were proposed as follows:

Freeway
Expressway
Light Rail Transit (LRT) at grade
Expressway with LRT
High Occupancy Vehicle (HOV) only facility
HOV only with LRT
No Project

In March 1984, additional public meetings were held. These meetings were to inform the public about the initial alternatives and to receive comments. The meetings were well attended and substantial verbal and written comments were received. The Policy Advisory Board, at its July 25, 1984 meeting, revised and finalized the alternatives. Nine (9) alternatives were selected to be studied in the Draft Environmental Impact Statement (DEIS). These alternatives are listed in Section C of the Summary and discussed in detail in Chapter V.

Recently Measure "A", a 1/2 cent sales tax increase, was passed in Santa Clara County, providing funding for highway improvement projects on Route 101, 237, and 85. Over $1 billion is expected to be generated during a ten year period. A County Traffic Authority has been formed to oversee the distribution of Measure "A" funds.

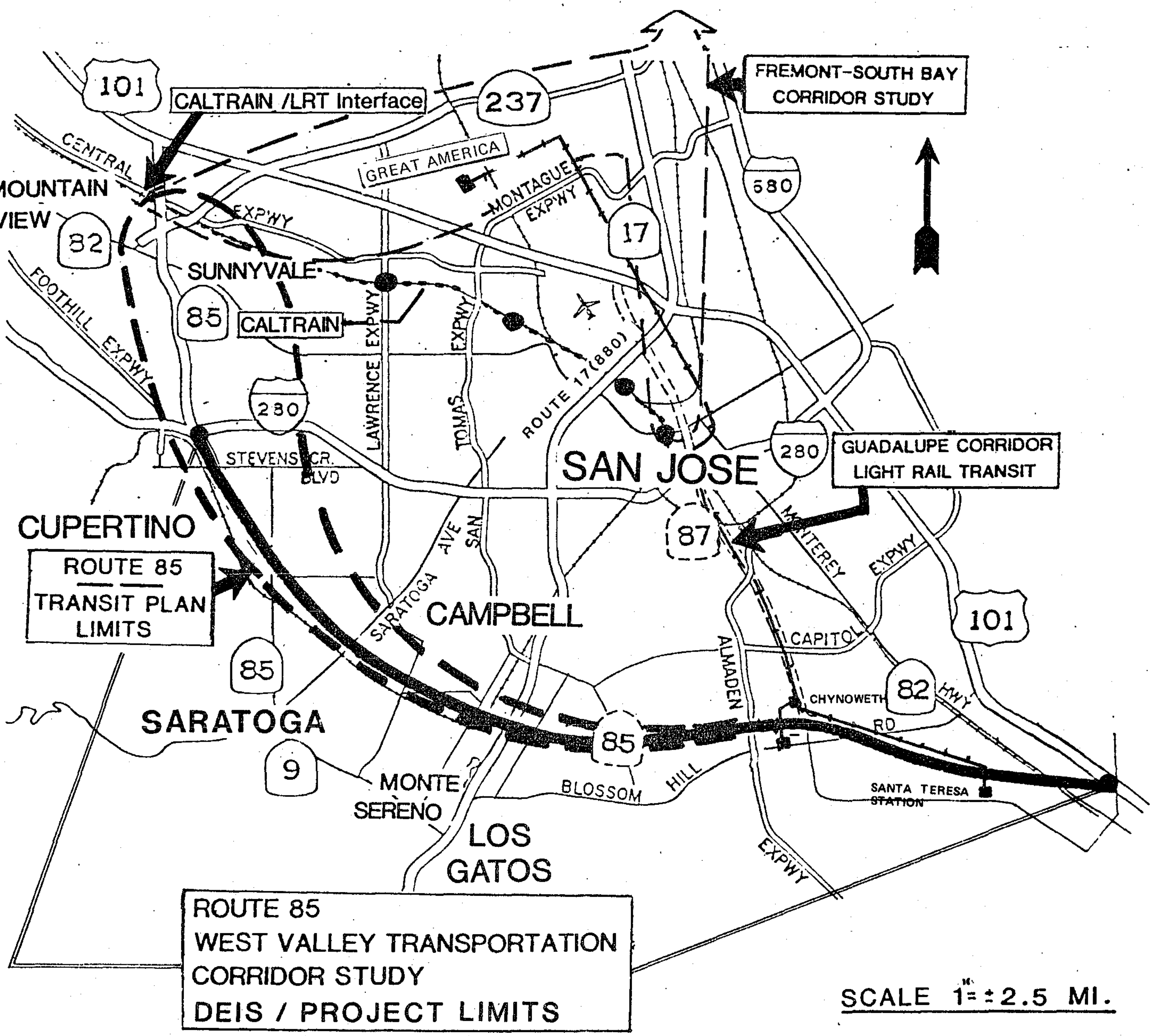
B. THE STUDY LIMITS

The corridor is approximately 18 miles long extending from the State Route 101 freeway in south San Jose (Post Mile 0.0) to the existing interchange of State Route 85 and Interstate Route 280 (85/280 interchange) in Cupertino (approximately Post Mile 18.0). The study itself is composed of two elements: (1) The environmental impacts of the alternatives and selection of a preferred alternative within the Route 85 transportation corridor (Draft Environmental Impact Statement limits) and (2) a study (Transit Plan) encompassing transit, specifically LRT, between the corridor and the area north of the corridor in Mountain View & Sunnyvale (near the SP/CalTrain stations) & State Route 101 (Transit Plan Limits). Environmental impacts of the Transit Plan will not be addressed within this report but a discussion of the Transit Plan is included. Figure S-1 depicts the study limits of this proposed project.

ROUTE 85

WEST VALLEY TRANSPORTATION CORRIDOR STUDY

Limits of other studies shown for reference only and are subject to change.



ROUTE 85 STUDY LIMITS
FIGURE S-1

C. PROJECT ALTERNATIVES

The alternatives which are examined in detail in this report are briefly described below. More detailed descriptions can be found in Chapter V. Figure S-2 depicts the typical sections for each of the project alternatives.

No Project Alternative (NPA) - No transportation facility in the corridor other than those currently proposed.

Transportation System Management (TSM) - Low cost projects to improve and upgrade the existing transportation facilities, both roadway and transit.

Light Rail Transit (LRT) - A grade separated light rail facility which would extend from the State Route 85/87 (Guadalupe Corridor) interchange northerly to a terminus in the vicinity of Stevens Creek Boulevard in Cupertino in the northwest. This alternative would also extend the Route 85 highway element of the Guadalupe Corridor Project from Miyuki Drive to Route 101 in south San Jose.

4-Lane Freeway with LRT - A grade separated access controlled four lane freeway with LRT in the median.

4-Lane Freeway with LRT and HOV - A grade separated access controlled four lane freeway with LRT in the median and a High Occupancy Vehicle (HOV) lane between the LRT and first mixed flow traffic lane.

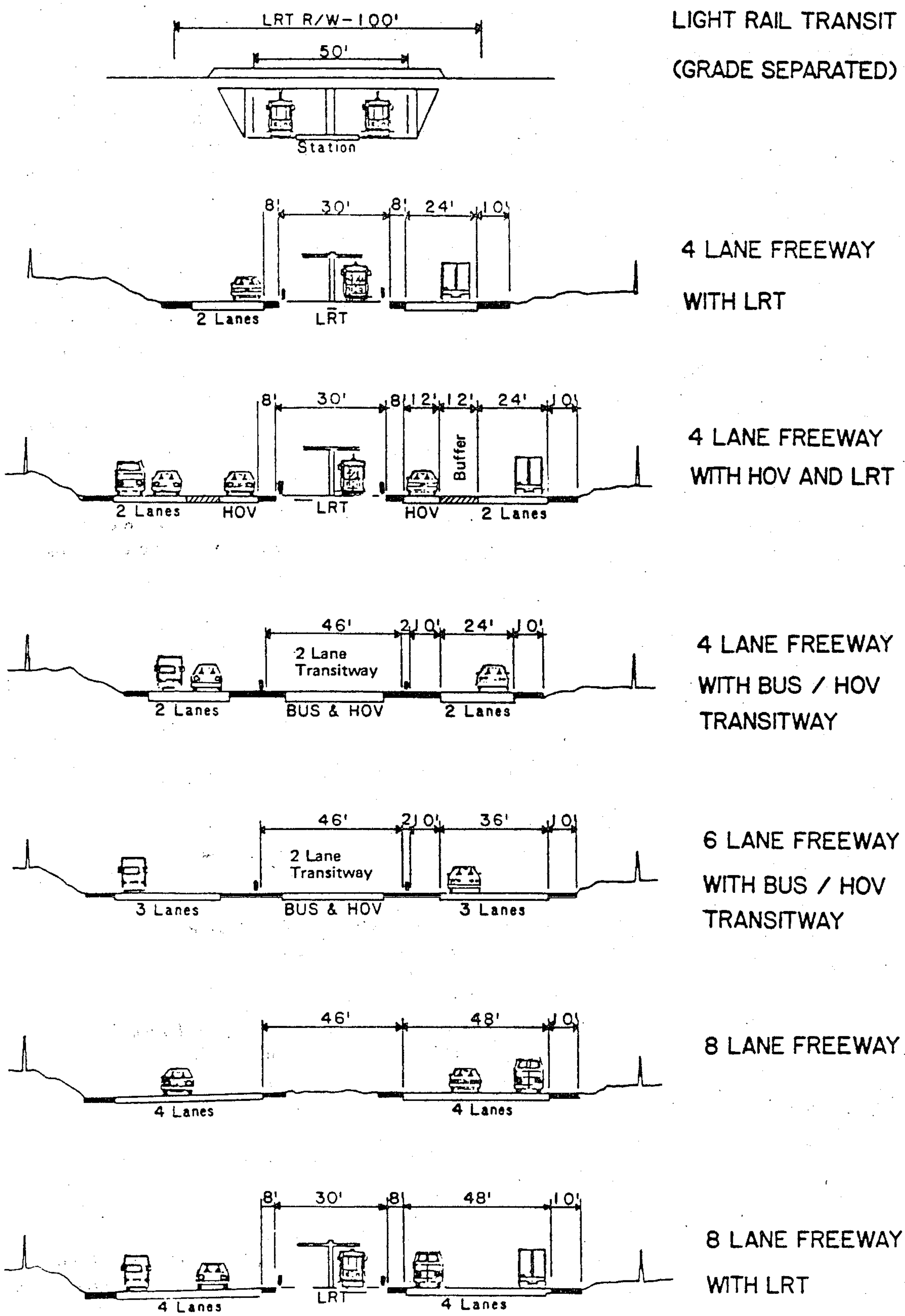
4-Lane Freeway with Bus/HOV Transitway - A grade separated access controlled four lane freeway with a Bus/HOV transitway in the median.

6-Lane Freeway with Bus/HOV Transitway - A grade separated access controlled six lane freeway with a Bus/HOV transitway in the median.

8-Lane Freeway - a grade separated access controlled eight lane freeway with a median wide enough for either a Bus/HOV transitway, an LRT system, or future freeway widening.

8-Lane Freeway with LRT - A grade separated access controlled eight lane freeway with LRT in the median.

Summary cost data for each of the proposed alternatives can be found in Table S-1. This table is a compilation of the various tables which can be found in Chapter V.



ROUTE 85 FIGURE S-2

WEST VALLEY TRANSPORTATION CORRIDOR

ALTERNATIVE TYPICAL SECTIONS

subject to change

TRANSPORTATION STUDIES RTE 85

CAPITAL COST ESTIMATE FOR ALL ALTERNATIVES OF RTE 85

* ALL COSTS ESTIMATED IN 1985 $ MILLION *

ALTERNATIVE	CONSTRUCTION COST			R/W COST				BASE PROFILE	SARATOGA DESIGN VARIATION	
	HIGHWAY	TRANSITWAY	TRANSIT	ALIGNMENT	UTILITY RELOC.	PARK & RIDE ***	BUS OR LRT VEHICLES	TOTAL COST, $M	ADD. COST	TOTAL COST, $M
NO PROJECT	0	0	N/A	0	0	N/A	N/A	0	0	0
T S M	15	N/A	15	0	0	5	35	70	N/A	N/A
L R T	35	N/A	150	80*	5	10	20	300	N/A	N/A
4 LN FWY W/ LRT	230	N/A	110	100**	10	10	20	480	40	520
4 LN FWY W/ HOV & LRT	280	N/A	110	100**	10	10	20	530	60	590
4 LN FWY W/ BUS & HOV	250	50	25	100**	10	10	25	470	50	520
6 LN FWY W/ BUS & HOV	270	50	25	100**	10	10	25	490	60	550
8 LN FWY	280	0	0	100**	10	10	0	400	60	460
8 LN FWY W/ LRT	280	0	110	100**	10	10	20	530	60	590

* TOTAL R/W COST (REMAINING R/W COST PLUS THE STATE OWNED LAND).

** REMAINING R/W COST.

*** INCLUDES R/W COST AND CONSTRUCTION OF FACILITY.

NOTES:

1- LRT TRANSIT COST INCLUDES TRACK & ELECTRIFICATION, COMMUNICATIONS, STATIONS AND STRUCTURES.

2- BUS TRANSIT COST INCLUDES STATIONS AND MAINTENANCE FACILITY.

3- THE ADDITIONAL COST FOR THE DESIGN VARIATION THROUGH SARATOGA IS A DRY CONDITION, NO GROUND WATER.

4- TRANSITWAY CONSTRUCTION COSTS ARE FOR THE ROADWAY PORTION (INCLUDING STRUCTURES) ONLY.

5- THE ABOVE COSTS DO NOT INCLUDE ENGINEERING AND ADMINISTRATIVE COSTS.

D. ENVIRONMENTAL CONSEQUENCES

All of the proposed alternatives for the Route 85 transportation corridor would have impacts on the environment. These impacts are listed in the order that they appear in Chapter VI and not by the order of their relative significance.

what does this mean ?

The construction of any of the alternatives would expose travellers to slightly greater geological hazards than their current exposure. All of the transportation structures will be designed to withstand with a minimum amount of damage the maximum credible earthquake event for the Route 85 transportation corridor.

The proposed construction alternatives will encroach on floodplains in the Route 85 corridor. The Canoas Creek floodplain will have a longitudinal encroachment. This encroachment will not change the shape, size or characteristics of that floodplain. The Calabazas Creek floodplain will have a transverse encroachment. For the Saratoga Design Variation, mitigation will require Calabazas Creek flood control channel work to be completed upstream and downstream from the Route 85 transportation corridor.

where?

There will be a loss of approximately 9.6 acres of wildlife habitat with any of the highway alternatives. The LRT only alternative will result in a loss of approximately 4.8 acres of wildlife habitat.

While there will be localized increases in the amount of carbon monoxide along the Route 85 transportation corridor, neither the state nor federal air pollution standards will be exceeded by the construction of any of the proposed alternatives.

All of the alternatives will result in an increase in the current noise levels along the Route 85 transportation corridor. These increases, ranging from six (6 dBA) to 30 dBA, will occur at various points along the corridor and depend on the particular alternative chosen. Noise walls will be constructed to mitigate these noise impacts to the largest degree feasible.

There will be visual impacts for all of the alternatives. The No Project Alternative (NPA) will probably result in the sale of the corridor and the eventual construction of whatever the cities will allow according to their current zoning. The TSM alternative will result in minor localized change in the views depending on the particular location and the particular construction which takes place. All of the major construction alternatives will have a negative visual impact in that there will be changes in the views from and to the Route 85 transportation corridor.

Where are 3.

The Route 85 construction alternatives could result in the removal of three structures which are potentially eligible for the National Register of Historic Places. These structures will be relocated or recorded to Historic American Building Survey standards. None of the proposed alternatives will impact any of the known archaeological sites in the Route 85 transportation corridor.

The Route 85 transportation corridor alternatives will impact lands covered under Section 4(f) of the Federal-Aid Highway Act of 1968. There will be impacts to five parks, one recreational area, one wildlife refuge, and three historical properties. Mitigation measures have been proposed for all of the impacts.

The Route 85 transportation corridor alternatives which require 200 feet of right of way will require the displacement of 346 residential units. The LRT only alternative, which requires only 100 feet of right of way, will require the displacement of 134 residential units. Adequate replacement housing is available in the Route 85 transportation corridor and the surrounding cities.

The Route 85 transportation corridor alternatives, which require 200 feet of right of way, will require the relocation of 26 businesses. The LRT only alternative will require the displacement of 16 businesses. Some of the businesses will not be able to relocate locally because of the unavailability of large parcels of vacant land.

All of the Route 85 transportation alternatives will have an impact on the existing traffic network. The NPA will worsen the existing conditions by further congesting the already overcrowded facilities. The TSM alternative will improve the existing traffic network to a small degree but will only delay the further congestion in the existing network. All of the major transportation alternatives will improve the existing transportation network to a much greater degree than either the NPA, TSM or LRT.

All of the Route 85 construction alternatives will require the relocation of utilities serving the corridor. These relocations should not cause any disruption in service to any customers.

There will be construction impacts associated with all of the proposed Route 85 alternatives. These impacts include local and short-term increases in noise pollution, dust, traffic rerouting and detouring, material disposal, and disruptions to residential and business activities. These impacts will be mitigated to the largest extent practicable.

Table S-2, Summary of Environmental Impacts, is a compilation of the environmental impacts compared to each of the proposed alternatives.

TABLE S-2
SUMMARY OF ENVIRONMENTAL IMPACTS

ENVIRONMENTAL IMPACTS	ALTERNATIVES								
	NPA	TSM	LRT	4FWY LRT	4FWY HOV & LRT	4FWY Bus/ HOV	6FWY Bus/ HOV	8FWY	8FWY LRT
Geological Hazards See Chapter VI-B-2	0	0	0	0	0	0	0	0	0
Floodplain Impacts See Chapter VI-B-3	-	-	+	+	+	+	+	+	+
Biological Impacts See Chapter VI-B-4	0	0	-	-	-	-	-	-	-
Air Impacts See Chapter VI-C-1	-	+	+	+	+	+	+	+	+
Noise Impacts See Chapter VI-C-2	0	0	-	--	--	--	--	--	--
Visual Impacts See Chapter VI-D	--	--	--	--	--	--	--	--	--
Historical Impacts See Chapter VI-E-2	0	0	-	--	--	--	--	--	--
Section 4(f) Impacts See Chapter VI-F	0	0	-	-	-	-	-	-	-
Housing Impacts See Chapter VI-G-3	0	0	-	--	--	--	--	--	--
Business Impacts See Chapter VI-G-3	0	0	-	--	--	--	--	--	--
Traffic Impacts See Chapter VI-H	-	0	+	++	++	++	++	++	++
Utility Relocation Impacts See Chapter V-B	0	0	+	+	+	+	+	+	+
Construction Impacts See Chapter VI-J	0	-	--	--	--	--	--	--	--

Scale: --/++ Significant impact; -/+ Moderate impact
0 little or no impact

Note: These impacts are listed in the order they appear in Chapter VI and not by order of significance.

I. INTRODUCTION

The purpose of this Draft Environmental Impact Statement (DEIS) is to help identify the alternatives which will best meet the transportation needs of the unconstructed Route 85 transportation corridor, in Santa Clara County. The DEIS describes specific characteristics and details of each alternative and their associated environmental impacts. The alternatives are then compared to the No Project Alternative (which is used as the baseline) and to each other. In this manner, the decision makers will be able to determine which is the best alternative for this corridor.

A. THE CORRIDOR STUDY

The Route 85 corridor extends from the Route 101 freeway in south San Jose to Route 280 in the vicinity of Stevens Creek Boulevard in Cupertino, for a distance of approximately 18 miles. The corridor passes through the Cities of San Jose, Campbell, Saratoga, Cupertino, Monte Sereno, the Town of Los Gatos, all of which are in Santa Clara County. These cities and communities are the project or construction limits. However, in order to analyze the transportation factors, such as travel demands in the Route 85 corridor, and to analyze the environmental impacts which extend beyond the project (or construction) limits, it is necessary to extend these limits and establish the transit plan limits. These transit plan limits are from the Coyote Valley in the south end to the Mountain View and Sunnyvale area in the north. Figure I-1 depicts both the project alternative limits and the transit plan limits. Appendix A depicts the entire corridor study area in aerial photography.

The corridor impacts of the project occuring outside of the project limits, will be identified in this report but not addressed in as much detail as those within the report project limits. For example, Route 85, north of Stevens Creek Boulevard, could be widened in the median to six lanes to accommodate the projected traffic demand. A detailed analysis of this widening will not be included here as it is beyond the scope and project limits of this Draft Environmental Impact Statement.

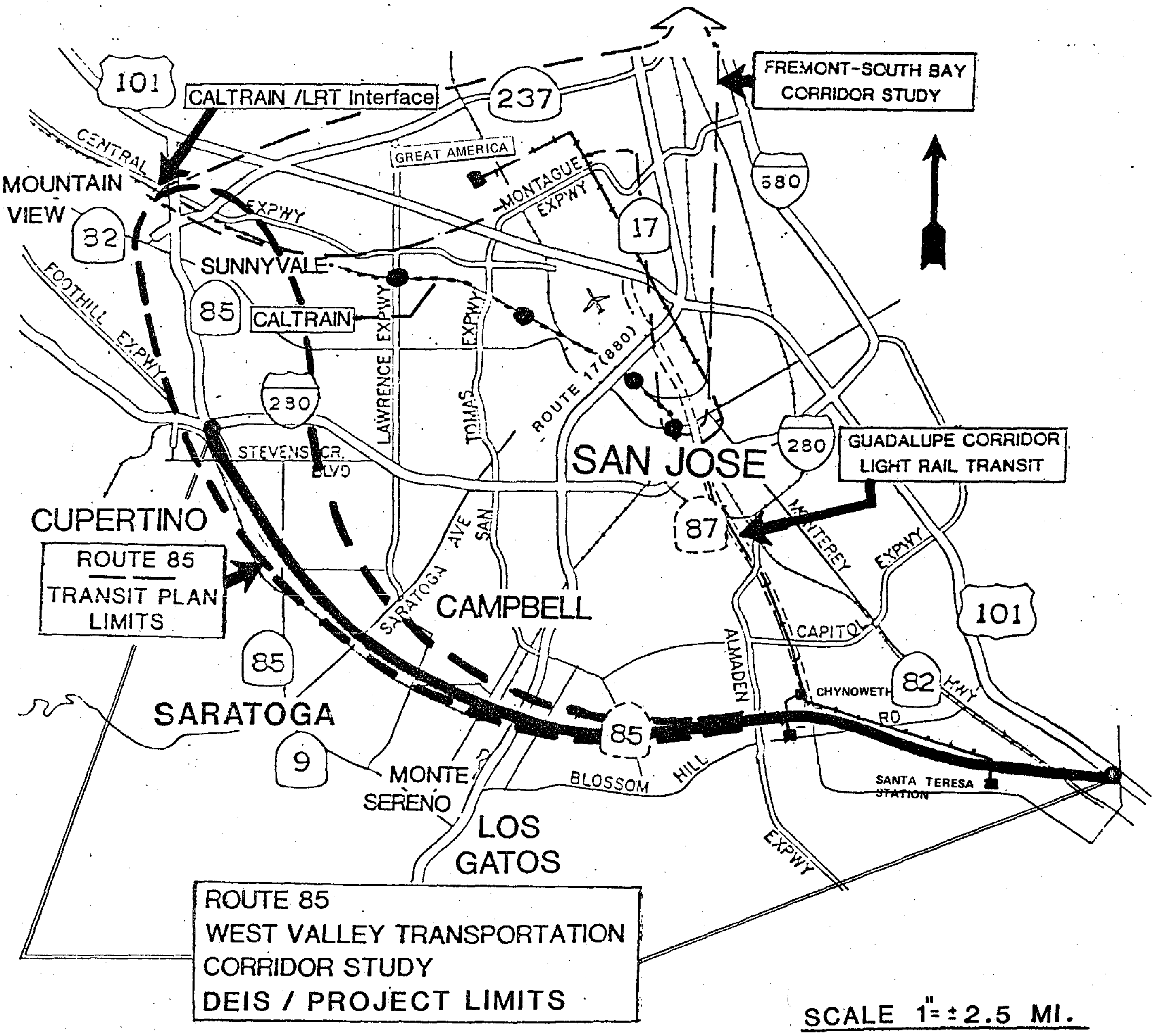
B. PROJECT BACKGROUND

The location of Route 85 was adopted during 1956 and 1957 by the California Highway Commission, and freeway agreements were signed with all of the affected jurisdictions. These include Cupertino, Saratoga, Campbell, the Town of Los Gatos, San Jose, and Santa Clara County. Right of way acquisition began in the 1960s but was halted in 1975 because of funding constraints. Since 1975, some development has occurred within the corridor. Approximately

ROUTE 85

WEST VALLEY TRANSPORTATION CORRIDOR STUDY

Limits of other studies shown for reference only and are subject to change.



ROUTE 85 STUDY LIMITS

FIGURE I-1

60% of the needed right of way is owned or committed to ownership by Caltrans. Pressure to develop the land within the adopted corridor led to the completion of a right of way protection Environmental Impact Statement/Report between Route 101 (Monterey Road) in south San Jose and Stevens Creek Boulevard in Cupertino. This report, entitled "West Valley Transportation Corridor, Unconstructed State Route 85, Santa Clara County", was approved by Caltrans and the Federal Highway Administration in July 1981.

The Santa Clara Valley Corridor Evaluation in 1979 demonstrated the need for a transportation facility within the corridor. It recommended that the Route 85 corridor right of way owned or committed to Caltrans be preserved and that no development be allowed within it. In total, approximately $6.6 million has been spent through 1984 on right of way protection and hardship acquisition.

The Guadalupe Corridor Project, (Route 87), was an outgrowth of the SCVCE. The Guadalupe Corridor overlaps the Route 85 corridor from Miyuki Drive to approximately Pearl Avenue in South San Jose where the Guadalupe Corridor joins the Route 85 corridor. Figure I-2 depicts this Route 85/Route 87 corridor overlap. Design has begun on an expressway with Light Rail Transit (LRT) in the median of Route 85 between Miyuki Drive and Route 87/Pearl Avenue as well as northerly along portions of Route 87. The Route 85 portion of the Guadalupe Corridor is scheduled to be completed in 1989, and is considered to be in full operation for the purposes of this Draft Environmental Impact Statement.

In December 1982, Caltrans, at the request of and in cooperation with local and regional agencies, began a study of the Route 85 Corridor. A Policy Advisory Board composed of elected officials from the affected local governments and Caltrans was formed. This board has met regularly to advise Caltrans as to which alternatives should be studied and the level of detail of each study. Listed below are the political entities composing the Policy Advisory Board.

POLICY ADVISORY BOARD MEMBERS

Santa Clara County	Campbell
Cupertino	Los Gatos
San Jose	Monte Sereno
Sunnyvale	Mountain View
Saratoga	

To assist Caltrans with their studies, a Technical Advisory Committee was also formed with a technical representative from each of the participating agencies. The Technical Advisory Committee has played an important role in defining the alternatives which are considered in this Draft Environmental Impact Statement. Listed below are the members of the Technical Advisory Committee.

TECHNICAL ADVISORY COMMITTEE

Cupertino	Los Gatos
San Jose	Monte Sereno
Sunnyvale	Mountain View
Saratoga	Campbell

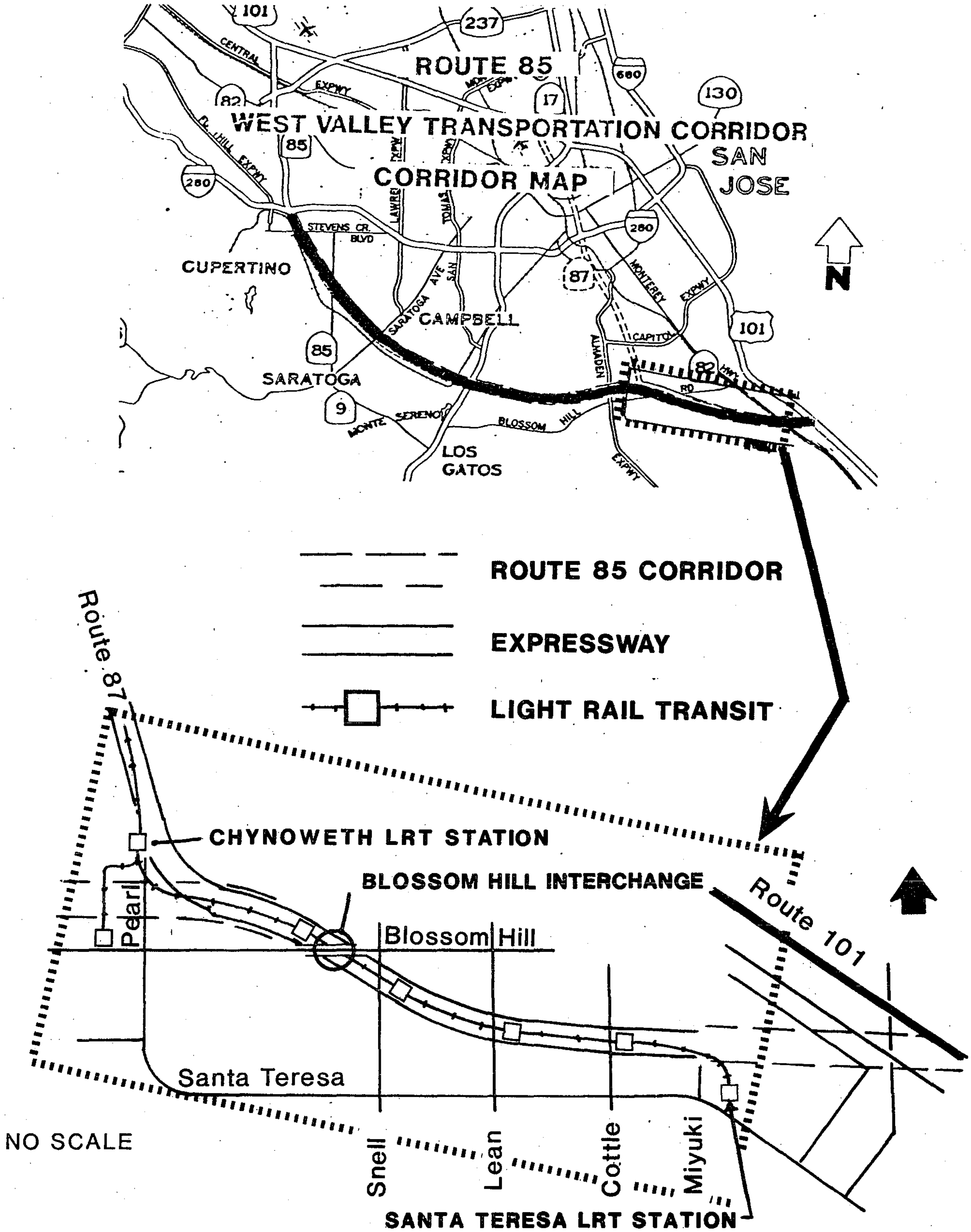
Federal Highway Administration
Santa Clara County Transportation Agency
Metropolitan Transportation Commission
Urban Mass Transportation Administration
Bay Area Air Quality Management District
California Highway Patrol

The initial seven alternatives, described below, were developed after public meetings in April 1983.

INITIAL ALTERNATIVES

Freeway
Expressway
Light Rail Transit (LRT)
Expressway with LRT
High Occupancy Vehicle Facility (HOV)
LRT and HOV
No Project Alternative

Caltrans technical staff, with assistance from the Technical Advisory Committee, then refined the alternatives and developed technical data for each of them. In March 1984, two meetings were held to inform and receive comments from the public on the seven alternatives then under study. As a result of these meetings, and subsequent action and study by the Policy Advisory Board and Technical Advisory Committee, the original seven alternatives were replaced with nine alternatives (three original



GUADALUPE CORRIDOR FEATURES In ROUTE 85

GUADALUPE CORRIDOR OVERLAP

FIGURE I-2

alternatives and six new alternatives) in June and July 1984. These final alternatives, briefly described below, are the project alternatives considered in this Draft Environmental Impact Statement. These alternatives are described in detail in Chapter V.

CURRENT PROJECT ALTERNATIVES

No Project Alternative
Transportation System Management (TSM)
Light Rail Transit (LRT)
4-lane Freeway with LRT
4-lane Freeway with LRT and HOV
4-lane Freeway with Bus/HOV Transitway
6-lane Freeway with Bus/HOV Transitway
8-lane Freeway
8-lane Freeway with LRT

II. PURPOSE AND NEED FOR THE PROJECT

A. TRANSPORTATION DEMAND

There is a great transportation demand in Santa Clara County. Driving through the County on its major roadways during commute hours motorists experience this tremendous transportation demand by the numerous traffic delays, and traffic congestion characteristic of a transportation system already operating at capacity. It is important to note that Route 85 currently exists as a four lane freeway between Stevens Creek Boulevard in Cupertino and U.S. Route 101 in Mountain View. In addition, existing State Route 85 is Saratoga-Sunnyvale Road (De Anza Boulevard between Route 280 and Bollinger Road in Cupertino), varies from a six lane roadway at Stevens Creek Boulevard with traffic signals at major intersections to a four lane road where it meets Saratoga-Los Gatos Road (State Route 9) in Saratoga. At this time there is no major freeway facility connecting the southern and western portions of the Santa Clara Valley as can be seen in Figure II-1. Figure II-1 also depicts the existing Route 85.

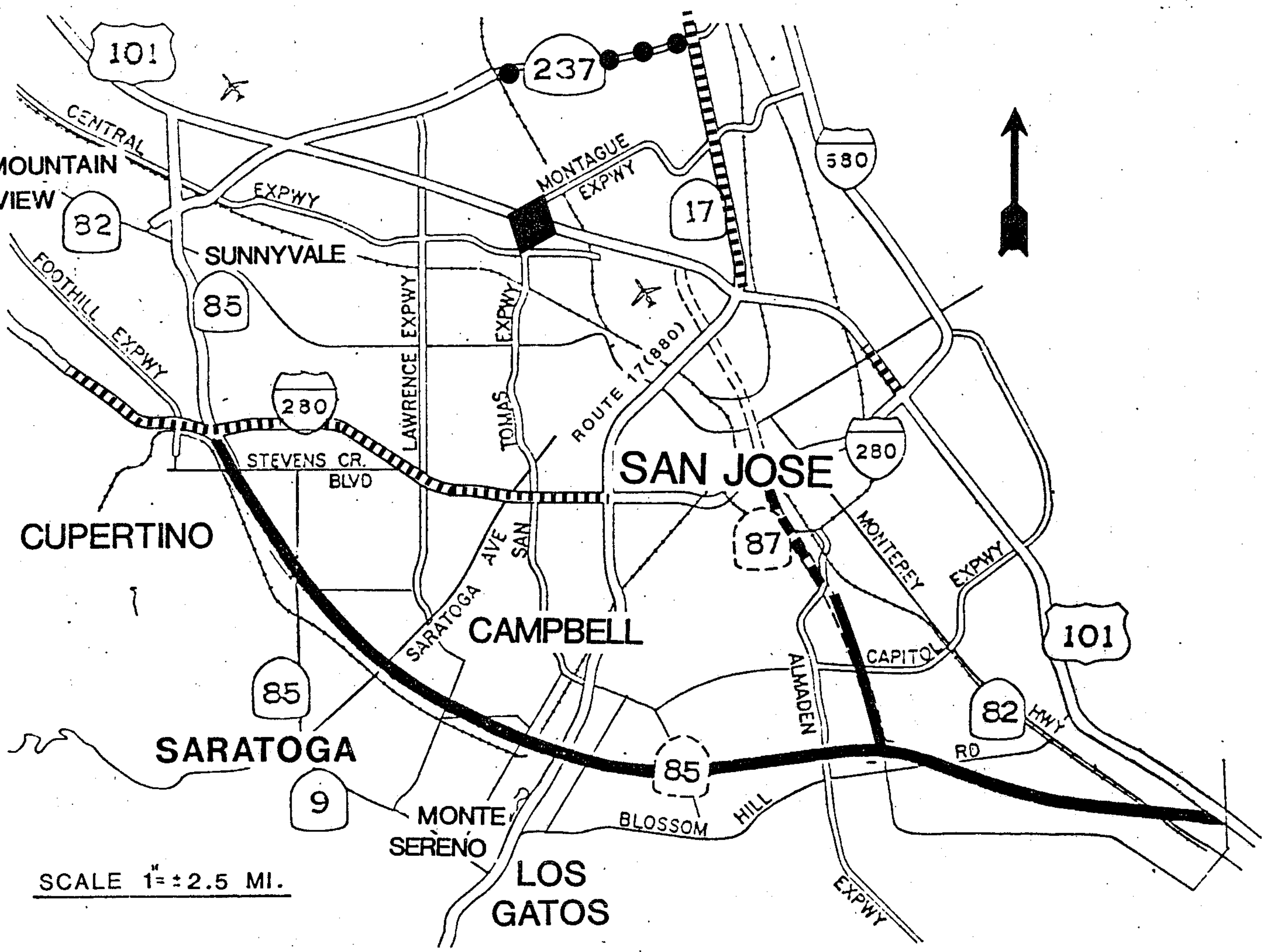
Recent passage of Measure "A", a 1/2 cent Santa Clara County sales tax increase to improve Routes 101, 237, and construct Route 85, is another clear sign that the transportation problems within the County are in the forefront of public opinion. Bumper stickers bearing the sentiment, "Build 85 in '85" also reflect the public's concern for a transportation improvement within the Route 85 corridor.

The transportation demand in the Route 85 corridor is also demonstrated in two recent countywide studies. These studies, the Santa Clara Valley Corridor Evaluation (SCVCE) and the July 1979 county planning department publication, "Transportation/Land Use Planning Outlook Within The Present General Plan Structure", were based on population, housing and employment projections for 1990 from the Association of Bay Area Government's (ABAG) using the following scenario:

- Highway recommendations of the SCVCE as shown in Figure II-2.
- Tripling the county bus fleet from 236 to 750 but no LRT.
- A countywide employment increase of 225,000 jobs.
- A countywide housing increase of 150,000 units.
- Job locations (recommended by the SCVCE) 40,000 more jobs in the southern and eastern portions of the county and 40,000 fewer jobs in the northern portion of the county.
- Continued auto dependent travel habits with a peak

DATE : MARCH 29,1979

SANTA CLARA VALLEY CORRIDOR EVALUATION

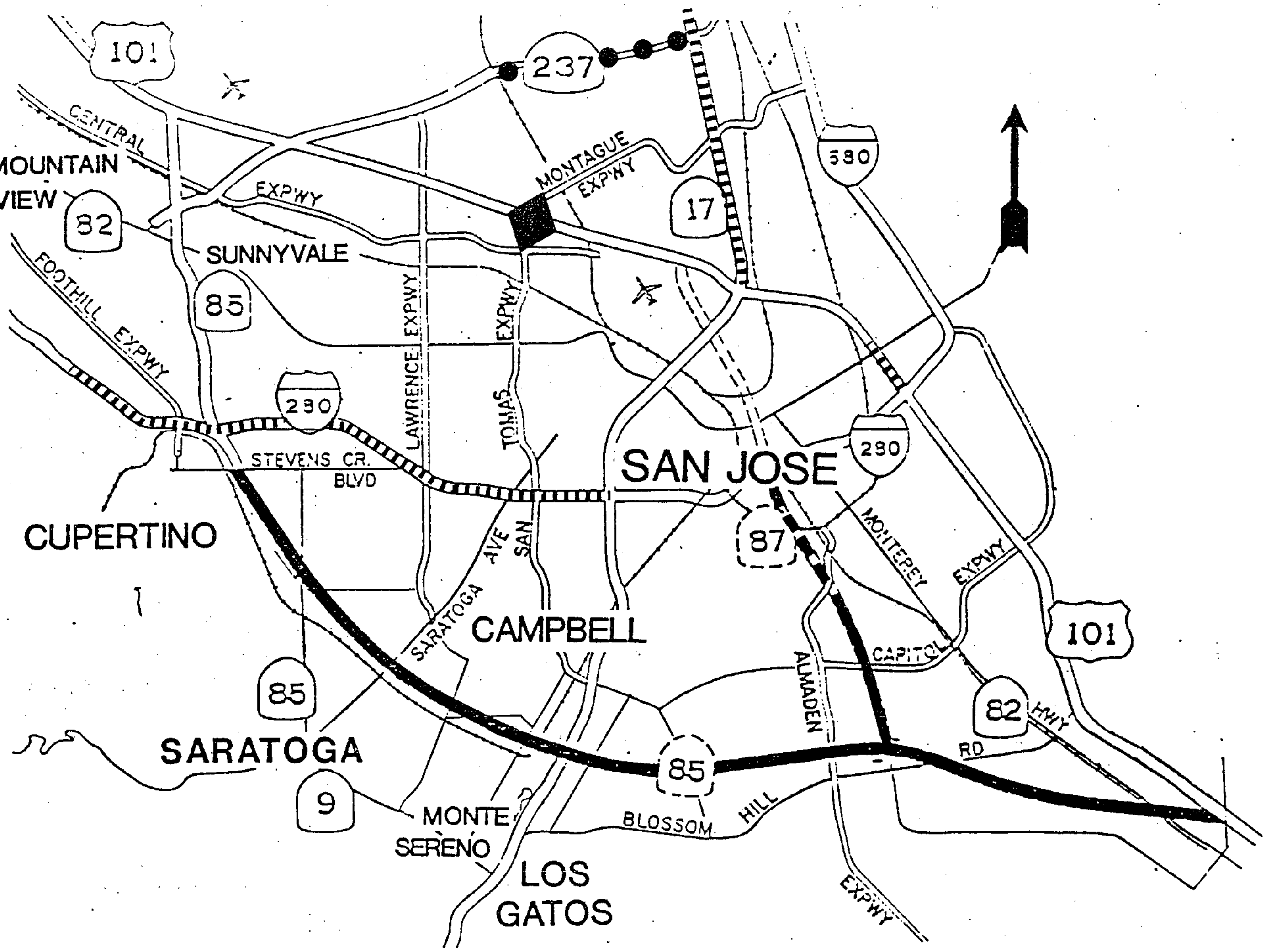


SCVCE HIGHWAY RECOMMENDATIONS

- New Facility
- Widening
- Widen Interchange
- Preserve Right-of-Way
- Upgrade to freeway

SANTA CLARA COUNTY MAP
FIGURE II-1

SANTA CLARA VALLEY CORRIDOR EVALUATION



New Facility

Widening

Widen Interchange

Preserve Right-of-Way

Upgrade to freeway

SCVCE HIGHWAY RECOMMENDATIONS

3/29/79

FIGURE II-2

auto occupancy factor of 1.18 persons per vehicle.

The County study projected increased demand and congestion. Specifically the County study projected the following for the year 1990 as compared to 1975 data:

- An increase in daily trips of 45%.
- Morning peak hour ridership share 10% of all peak hour trips.
- Peak hour vehicular trips up 42%.
- Congested miles of roadway up 77% (23% of the highway network.

More recent data (June 1983) has been released regarding population, housing and employment projections for the year 2000 from Association of Bay Area Governments. These figures support both of the above studies and suggest that there may be even more congestion than anticipated because of increased travel demand due to increases in population and job growth.

Some of these recent projections include:

- Projected population growth from 1980 to 2000 for Morgan Hill (380%) and Gilroy (317%) in southern Santa Clara County will be the highest in the Bay Area.
- Between 1980 and 2000, San Jose will add 141,000 new jobs and its population will increase by 21%.
- Santa Clara County's population will increase by 209,000 (16%) between 1980 and 2000 and employment will increase by 343,000 jobs (49%).
- The growth patterns indicate a major southern shift of growth in the county (from a predominance of growth in the northwest and northeast portions of the county) to the southern portion of the county.
- Of the 131,000 new units added to the housing supply of the county between 1980 and 2000, 75% of this growth will be located in San Jose, Morgan Hill, and Gilroy.

B. TRAVEL PROJECTIONS

Highway and Transit travel projections have been developed for the year 1990 using the Metropolitan Transportation Commission (MTC) forecasting model and the data base generated for the Guadalupe Corridor project. Travel projections for the Final

Environmental Impact Statement will be based on the year 2010. Further details covering the travel projections can be found in Section IV-B of the Transit Plan.

C. DEFICIENCIES OF EXISTING TRANSPORTATION NETWORK

The existing transportation network, including the many county arterials (expressways and boulevards), experience severe traffic congestion. According to the July 1979 County Planning Department Publication "Transportation/Land Use Planning Outlook Within The General Plan Structure", the entire highway network, due to population and employment increases in the county, is projected to exceed its capacity by 1990. Currently the demand in the major existing traffic corridors (Routes 9, 82, 17, 101, 237, and 280) exceeds capacity during peak commute hours and long traffic delays occur daily. The County study not only projected delays such as these as a result of exceeded capacity, but it also predicted traffic overflowing onto neighborhood and local streets which provide alternate parallel routes. Accompanying this overflow would be an increase in noise pollution, accidents and disruptions in these neighborhoods.

Specifically, the study found:

- The areas of the County with the greatest number of jobs (Palo Alto, Mountain View, Sunnyvale, Santa Clara, north San Jose) will suffer increased traffic congestion as a result of their rapid job growth. Major routes serving the job centers will be congested and traffic will be forced onto neighborhood streets in many residential areas.

- Residents living between job growth areas and the new housing growth areas (Cupertino, Campbell, West Valley, south central San Jose) will be impacted by the increased traffic and will suffer losses in their living environment.

- The residents of the outlying areas which are experiencing housing growth (south San Jose, Morgan Hill, and Gilroy) will face increasing congestion near their homes, and commuters from those areas will confront the extremes of traffic congestion on their way to and from work.

These existing roads will eventually need to be widened to handle the traffic demand and to alleviate congestion. At the present time, limited widening projects are programmed in the State Transportation Improvement Program (STIP) for Routes 17 and 280. Also, Routes 101 and 237 will be improved under the 1/2 cent Santa Clara County sales tax increase (Measure "A").

In the event of a 100-year flood, Route 85 constructed at the "base" profile across the Calabazas Creek floodplain would be the only roadway that would remain open to traffic between the Santa Cruz Mountains and Route 280.

D. MODAL INTERRELATIONSHIPS AND SYSTEM LINKAGE

The study includes mode alternatives such as freeway, LRT, bus and high occupancy vehicle (HOV) lanes. This corridor is the missing link of State Route 85 between Stevens Creek Boulevard in Cupertino and Route 101 in South San Jose. The construction of a freeway in this corridor will complete the freeway loop system in the county and would provide an east-west connection through the southern part of Santa Clara County.

The Route 85 corridor would also provide a shorter alternate route for vehicles travelling on Route 17 and wishing to continue north to Palo Alto and the San Francisco peninsula area. For those travellers who used Route 17 and Route 280, the mileage savings is approximately 4 miles. For those who use Route 17 to Route 101, the savings is approximately 7 miles.

The LRT alternative will extend the Guadalupe corridor LRT from the Route 85/Route 87 junction to the vicinity of Stevens Creek Boulevard in Cupertino. Since the LRT system ending in Cupertino would not connect to any major employment center, it would eventually need to be extended northward to the CalTrain depot in Mountain View and Sunnyvale with a further extension to the northern terminus of the Guadalupe LRT system. This extension would complete the LRT "loop" in the County. All LRT travel projections are based on the assumption that this "loop" is completed. In the interim, an LRT system ending in the vicinity of Stevens Creek Boulevard would be serviced by an extensive bus system which would transport the LRT patrons to the Mountain View, Sunnyvale, and Palo Alto job centers.

The Bus/HOV transitway will be in the median of the freeway and will extend from the Route 85/Route 87 interchange to the Stevens Creek Boulevard vicinity. The buses and HOV's would then either merge into the mixed flow traffic lanes of existing Route 85 or stay in an added median lane and continue northerly to Mountain View, Sunnyvale, and Palo Alto area job centers. Buses whose destination is not one of the above job centers would also be able to use the transitway for their travel on Route 85 through a system of intermediate access points.

E. IMPLICATIONS OF NO PROJECT ALTERNATIVE

If the No Project Alternative (NPA) is selected, no transportation facilities will be constructed within the Route 85 transportation corridor other than those already planned. The existing transportation corridor right of way would be sold. This will, in turn, allow development of the corridor to the extent allowed by the individual cities. The development of the corridor for purposes other than a transportation facility would generate additional traffic and will worsen an already congested traffic condition in the County.

The sale of the Caltrans owned right of way would generate approximately $85,000,000. This money would be returned to the Caltrans general fund for use on transportation projects throughout the state.

If the NPA is selected and development occurs within the corridor, it would cost significantly more to acquire the necessary rights of way for another transportation corridor in the future.

III. ROUTE 85 TRANSPORTATION CORRIDOR ANALYSIS PROCESS

A. CORRIDOR ANALYSIS PROCESS

The Route 85 transportation corridor project began with a public scoping meeting and open house in April 1983. Prior to this initial public meeting, the Policy Advisory Board and Technical Advisory Committee, composed of elected officials from the corridor cities and their technical staffs, developed seven transportation alternatives for the Route 85 transportation corridor which were presented to the public. This and subsequent meetings constitute part of the public participation process for this project. The results of these meetings were used to refine the transportation alternatives for the Route 85 transportation corridor study.

In June 1984, the alternatives along with their preliminary evaluations were presented to the Policy Advisory Board, the Technical Advisory Committee and the public when Caltrans published the "Alternative Reduction Working Paper, Sections I, II, & III". This was done to inform the board members and the general public of the alternatives which would be studied for inclusion in this report.

B. ALTERNATIVES ORIGINALLY PROPOSED

The alternatives described below were those originally proposed in the Stage I Work Program which was adopted by the Policy Advisory Board and Technical Advisory Committee.

Freeway - An eight lane grade separated access controlled freeway between the new Route 101 in south San Jose and Stevens Creek Boulevard in Cupertino. This alternative would include the conversion of the section of State Route 85 overlapping the Guadalupe Corridor from expressway to freeway standards.

Expressway - An expressway would be constructed between the existing Guadalupe Corridor expressway and Stevens Creek Boulevard in Cupertino. It would also link the Guadalupe Corridor expressway to the new Route 101 in south San Jose.

Light Rail Transit (LRT) at grade - Extend the Guadalupe Corridor LRT from the Route 87/Route 85 junction to Stevens Creek Boulevard in Cupertino.

Expressway and LRT - Construct an expressway and LRT system, combining those aspects of the expressway and LRT alternatives noted above.

High Occupancy Vehicle (HOV) Facility - Construct an HOV facility from the Route 87/Route 85 interchange to Stevens Creek Boulevard in Cupertino. This would be a restricted facility available only to buses, carpools, and vanpools.

LRT and HOV - This alternative would combine those aspects of the LRT and HOV alternatives noted above.

No Project Alternative - No transportation facilities other that those already planned would be constructed within the Route 85 transportation corridor. The Caltrans owned right of way would be sold.

C. CURRENT PROJECT ALTERNATIVES

There are currently nine (9) project alternatives under consideration. They comprise those alternatives which the Policy Advisory Board and Technical Advisory Committee have defined and approved for study. The alternatives are outlined below and in described in detail in Chapter V.

No Project Alternative - No transportation improvements in the corridor other than those currently proposed. The Caltrans owned right of way would be sold.

Transportation System Management - Low cost projects to improve and upgrade the existing transportation facilities, both roadway and transit. The Caltrans owned right of way would be sold.

Light Rail Transit - A grade separated light rail facility from the Route 85/Route 87 (Guadalupe Corridor) junction northwesterly to a terminus in the vicinity of Stevens Creek Boulevard in Cupertino.

4-lane Freeway with LRT - A grade separated access controlled four lane freeway with LRT in the median.

4-lane Freeway with LRT and HOV - A grade separated access controlled four lane freeway with LRT in the median and an HOV lane. Between the LRT and first mixed flow traffic lane, the HOV lane and a buffer area would be located to separate the two lanes.

4-lane Freeway with Bus/HOV Transitway - A grade separated access controlled four lane freeway with a Bus/HOV transitway in the median.

6-lane Freeway with Bus/HOV Transitway - A grade separated access controlled six lane freeway with a Bus/HOV transitway in the median.

8-lane Freeway - A grade separated access controlled eight lane freeway with a median of sufficient width to provide for either a Bus/HOV transitway or LRT system.

8-lane Freeway with LRT - A grade separated access controlled eight lane freeway with LRT in the median.

D. RELATIONSHIP TO OTHER TRANSPORTATION PROJECTS

The Route 85 transportation corridor is directly related to one other major transportation project and is indirectly related to several others.

Guadalupe Corridor

The Route 85 transportation corridor is directly associated with the Guadalupe Corridor. The Guadalupe Corridor is a north-south transportation corridor in which a four lane expressway with LRT in the median is under design from Miyuki Drive in south San Jose to Great America in City of Santa Clara. The Route 85 transportation corridor overlaps the Guadalupe Corridor for a distance of approximately 3.8 miles from Miyuki Drive to the Route 87/Route 85 junction. Construction of any of the highway alternatives for the Route 85 transportation corridor would include upgrading the overlapped Guadalupe Corridor to a six lane facility with grade separated interchanges and construction of an interchange with Route 101, Monterey Road, and Tennant Avenue/Bernal Road. Figure III-1 depicts this overlap.

Other Transportation Projects or Plans

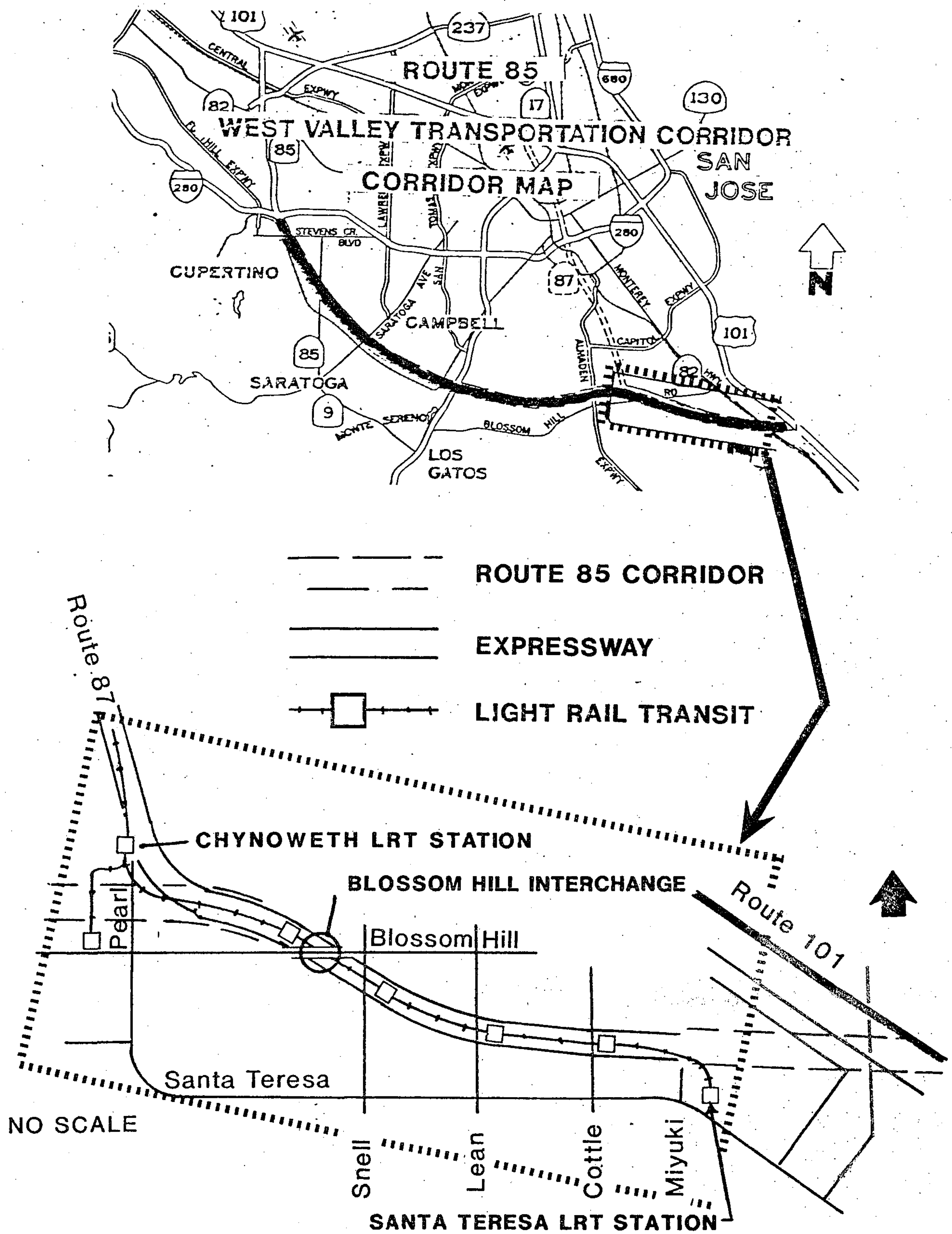
Several transportation projects currently under study within the County are the: San Jose Multimodal Terminal; Fremont-South Bay Corridor Study; Peninsula Corridor Study; and a study connecting the Route 85 transportation corridor to the Peninsula and Fremont-South Bay Corridors. These studies are briefly described below.

San Jose Multimodal Terminal

The San Jose Multimodal Terminal project would renovate, upgrade, and supplement the facilities currently being utilized as the Caltrain terminus. Caltrain is a daily commuter service extending from San Jose in the south to San Francisco in the north and is operated by Southern Pacific under contract to Caltrans.

Fremont-South Bay Corridor

The Fremont-South Bay Corridor study, being done by the Metropolitan Transportation Commission (MTC), examines a connection between the Bay Area Rapid Transit (BART) terminus in Fremont and



GUADALUPE CORRIDOR FEATURES In ROUTE 85

GUADALUPE CORRIDOR OVERLAP

FIGURE III-1

the northern terminus of the Guadalupe Corridor LRT in the vicinity of State Route 101 in San Jose.

Peninsula Corridor Study

The Peninsula Corridor study is in response to Senate Concurrent Resolution #74 and requires that a connection between the Guadalupe Corridor LRT and the peninsula rail system. This study is being conducted by the Peninsula Transit Alternatives Committee (PENTAB).

State Route 85 LRT Extension

This study will examine the feasibility of extending the proposed LRT system on State Route 85 north of Stevens Creek Boulevard to the Guadalupe Corridor LRT terminus at Great America in the City of Santa Clara. This will be done for planning purposes only and will not include environmental documentation or clearance.

Bicycle Element

Bicycles are elements of local, city, and county plans. Their consideration along the Route 85 transportation corridor will be included concurrent with the construction of any of the Route 85 transportation corridor alternatives.

IV. TRANSIT PLAN

A. TRANSIT PLAN

This draft plan provides essential data for making decisions on the feasibility of developing and operating a transit system within the Route 85 transportation corridor. This corridor extends from Route 101 in south San Jose to the vicinity of the CalTrain Stations in Mountain View and Sunnyvale (See Figure IV-1). The plan examines bus and light rail modes. The plan is conceptual in that: 1) it does not discuss specific facilities or improvements, and 2) it does not use a specific alignment for a portion of the corridor, Stevens Creek Boulevard to the vicinity of the CalTrain Stations.

Highlights of the plan follow. Many of the light rail assumptions are based on Working Paper 17 prepared for the Guadalupe Corridor Alternatives Analysis/Draft Environmental Impact Statement. Many of the bus assumptions were developed from discussions with the Santa Clara County Transit District.

1. LINEHAUL ROUTING

a. Bus

The bus alternative provides for express bus service in the Route 85 transportation corridor between Route 101 in the southeastern portion of San Jose and the area north and east of Mountain View. The distance between these areas within the corridor is about 22 miles. For purposes of this draft bus plan, however, the average one-way bus trip on the Route 85 transitway facility is 12 miles. This average is intended to accommodate the varying trip lengths of the bus routes analyzed in the plan (see Figure IV-2).

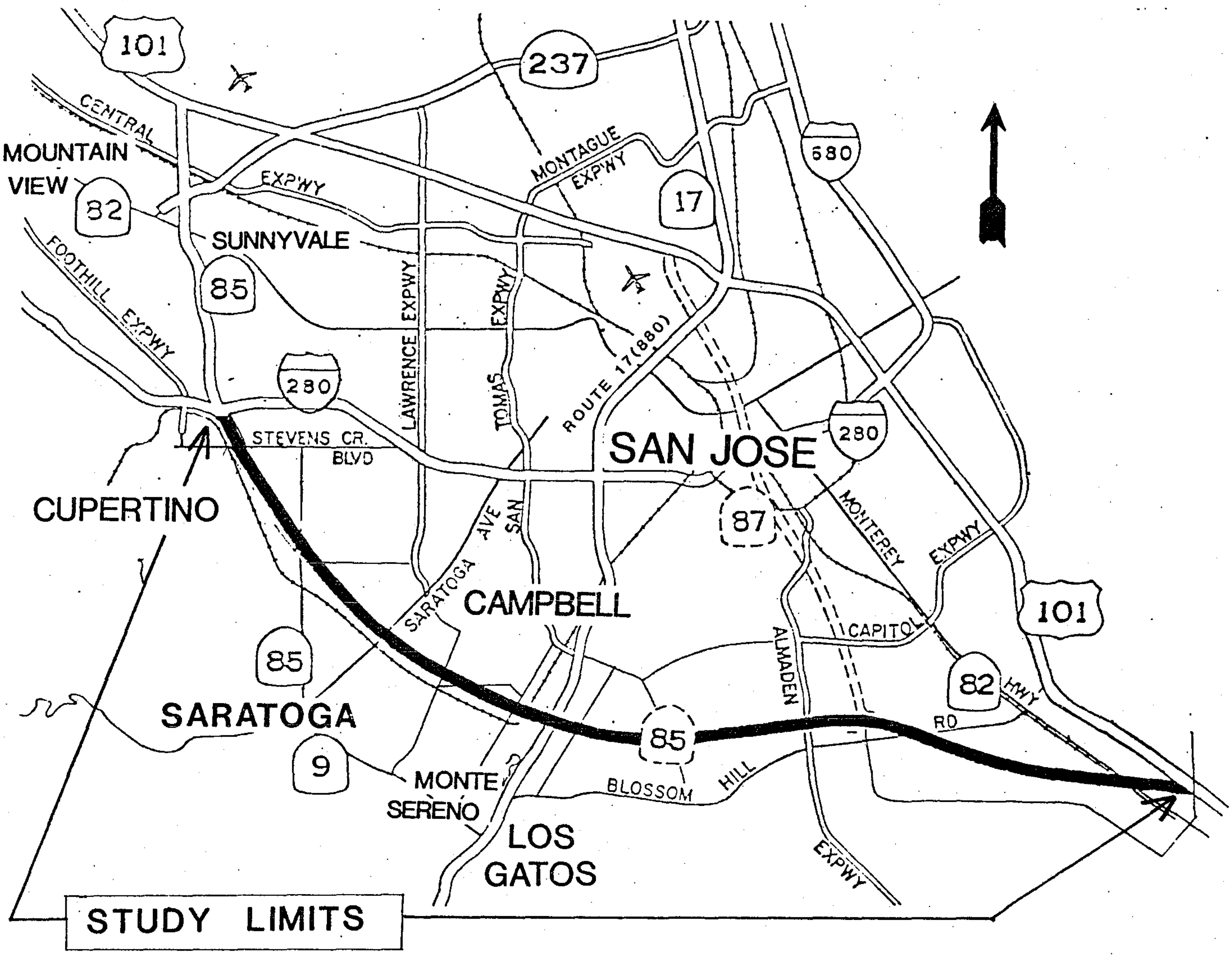
Each express bus would travel on surface streets according to its route, stop at the designated stops to pick up and discharge passengers, and traverse the transitway until it leaves the corridor. Major trip origins and destinations would be park and ride lots and employment areas where potential patronage is estimated to be the highest.

b. Rail

The primary LRT alternative provides service between Miyuki Drive near Route 101 in south San Jose to the CalTrain Station in Mountain View, a distance of approximately 22 miles. Data for service between Miyuki Drive and Stevens Creek Boulevard and Miyuki Drive and Great America are also provided. This is to allow comparisons between what might be considered the various segments required to complete the entire transit loop. The

ROUTE 85

WEST VALLEY TRANSPORTATION CORRIDOR STUDY



SCALE 1" = ± 2.5 MI.

LOCATION MAP
FIGURE IV-1

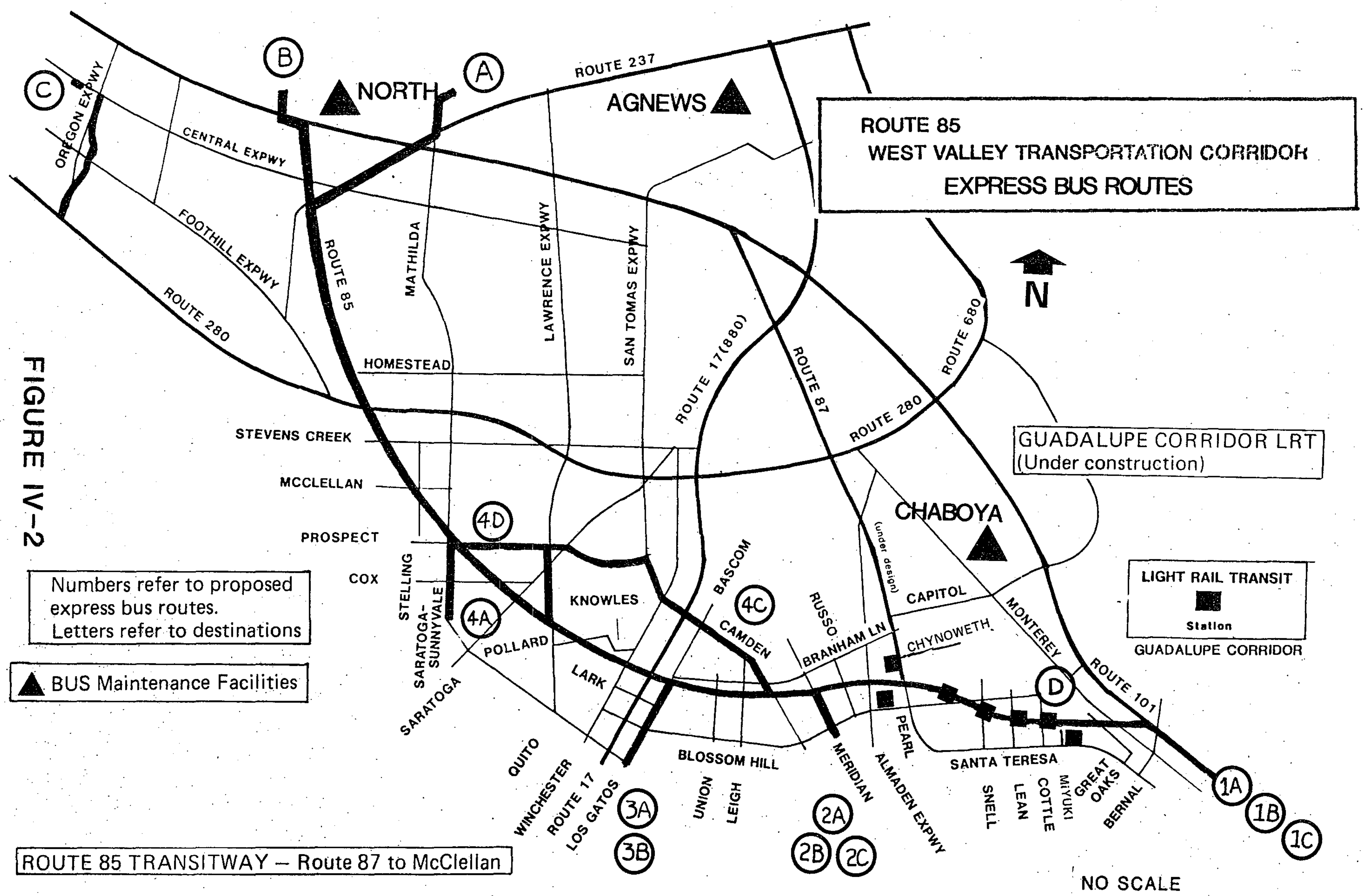

ROUTE 85
WEST VALLEY TRANSPORTATION CORRIDOR
EXPRESS BUS ROUTES
NORTH
AGNEWS
CHABOYA
N
ROUTE 237
CENTRAL EXPWY
FOOTHILL EXPWY
ROUTE 280
OREGON EXPWY
ROUTE 85
MATHILDA
LAWRENCE EXPWY
SAN TOMAS EXPWY
ROUTE 17(880)
ROUTE 87
ROUTE 280
ROUTE 680
HOMESTEAD
STEVENS CREEK
MCCLELLAN
PROSPECT
COX
STELLING
SARATOGA-SUNNYVALE
SARATOGA
KNOWLES
POLLARD
LARK
BASCOM
CAMDEN
RUSSO
BRANHAM LN
(under design)
CAPITOL
CHYNOWETH
MONTEREY
ROUTE 101
QUITO
WINCHESTER
ROUTE 17
LOS GATOS
BLOSSOM HILL
UNION
LEIGH
MERIDIAN
ALMADEN EXPWY
PEARL
SANTA TERESA
SNELL
LEAN
COTTLE
MIYUKI
GREAT OAKS
BERNAL
GUADALUPE CORRIDOR LRT
(Under construction)
LIGHT RAIL TRANSIT
Station
GUADALUPE CORRIDOR
Numbers refer to proposed express bus routes.
Letters refer to destinations
BUS Maintenance Facilities
A
B
C
D
1A
1B
1C
2A
2B
2C
3A
3B
4A
4C
4D
ROUTE 85 TRANSITWAY – Route 87 to McClellan
NO SCALE

FIGURE IV-2

segment between Miyuki Drive and Chynoweth Avenue, approximately 3.8 miles, is common with the Guadalupe LRT line currently being constructed. Figure IV-3 depicts this overlap section and the various segments of the entire LRT loop.

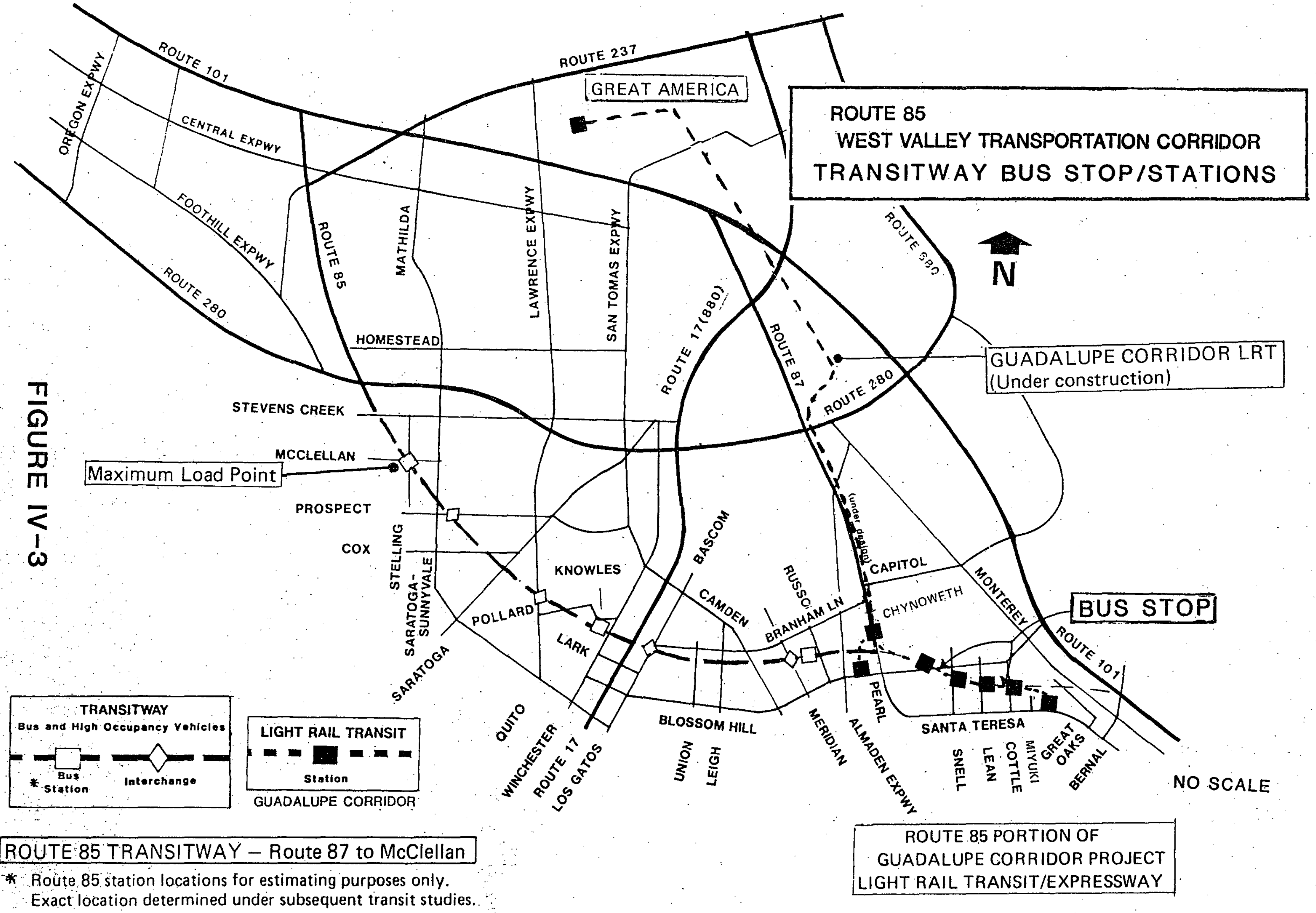
Between Chynoweth Avenue and Stevens Creek Boulevard (De Anza College), the alignment is common with Route 85. As Caltrans already owns much of the right-of-way required for any road or transit project in this corridor, this alignment is fixed. The alignment north from Stevens Creek Boulevard to the CalTrain stations in Mountain View or Sunnyvale has not been determined. However, this plan assumes the alignment to generally follow the existing Route 85 freeway to El Camino Real (Route 82), then veering slightly north to the CalTrain Station in Mountain View. The alignment between this CalTrain station and Great America is assumed to generally follow Route 237.

Ridership for the alternatives was estimated assuming that an entire LRT Loop is completed. The segments of this system are: 1) from the vicinity of Great America in the north to Miyuki Drive (Santa Teresa Station) in south San Jose (Guadalupe Corridor), 2) Miyuki Drive in south San Jose to the Mountain View CalTrain Station, and 3) from Mountain View to the vicinity of Great America (Guadalupe Corridor Extension to Lockheed). The Guadalupe segment is presently being constructed; the Route 85 segment is now under active study; and the Guadalupe extension is part of the Fremont-South Bay Corridor Study (see Figure IV-4).

Analysis of the ridership estimate indicates that the maximum load point occurs in Mountain View, one stop south of the CalTrain Station at El Camino Real (Route 82). Ridership appears to be very directional in the peak periods, south to north in the a.m. and north to south in the p.m.

2. FEEDER BUS ROUTING

This plan assumes that the Santa Clara County Transit District would provide necessary and sufficient feeder bus service to the Route 85 corridor station locations to facilitate efficient and effective operation of the alternatives, either express bus or the light rail transit.



ROUTE 85
WEST VALLEY TRANSPORTATION CORRIDOR
TRANSITWAY BUS STOP/STATIONS
ROUTE 101
ROUTE 237
GREAT AMERICA
OREGON EXPWY
CENTRAL EXPWY
FOOTHILL EXPWY
ROUTE 280
ROUTE 85
MATHILDA
LAWRENCE EXPWY
SAN TOMAS EXPWY
ROUTE 17(880)
ROUTE 87
ROUTE 880
N
HOMESTEAD
GUADALUPE CORRIDOR LRT
(Under construction)
ROUTE 280
STEVENS CREEK
MCCLELLAN
Maximum Load Point
PROSPECT
COX
STELLING
SARATOGA-SUNNYVALE
KNOWLES
BASCOM
(under design)
CAPITOL
RUSSO
CAMDEN
MONTEREY
CHYNOWETH
BUS STOP
BRANHAM LN
POLLARD
LARK
ROUTE 101
SARATOGA
PEARL
SANTA TERESA
BLOSSOM HILL
QUITO
WINCHESTER
ROUTE 17
LOS GATOS
UNION
LEIGH
MERIDIAN
ALMADEN EXPWY
SNELL
LEAN
COTTLE
MIYUKI
GREAT OAKS
BERNAL
NO SCALE
TRANSITWAY
Bus and High Occupancy Vehicles
* Bus Station
Interchange
LIGHT RAIL TRANSIT
Station
GUADALUPE CORRIDOR
ROUTE 85 PORTION OF
GUADALUPE CORRIDOR PROJECT
LIGHT RAIL TRANSIT/EXPRESSWAY
ROUTE 85 TRANSITWAY – Route 87 to McClellan
* Route 85 station locations for estimating purposes only.
Exact location determined under subsequent transit studies.

FIGURE IV-3

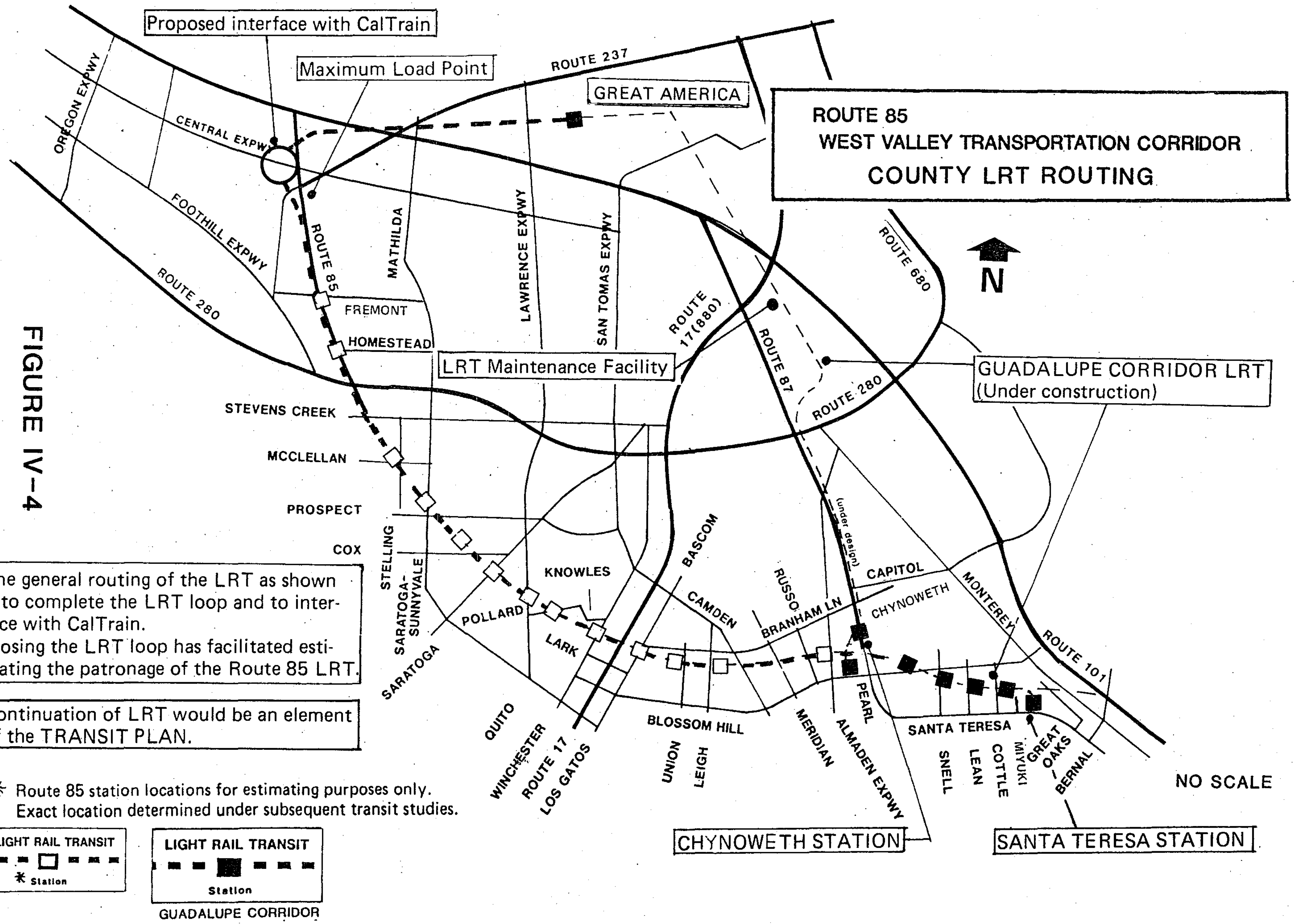
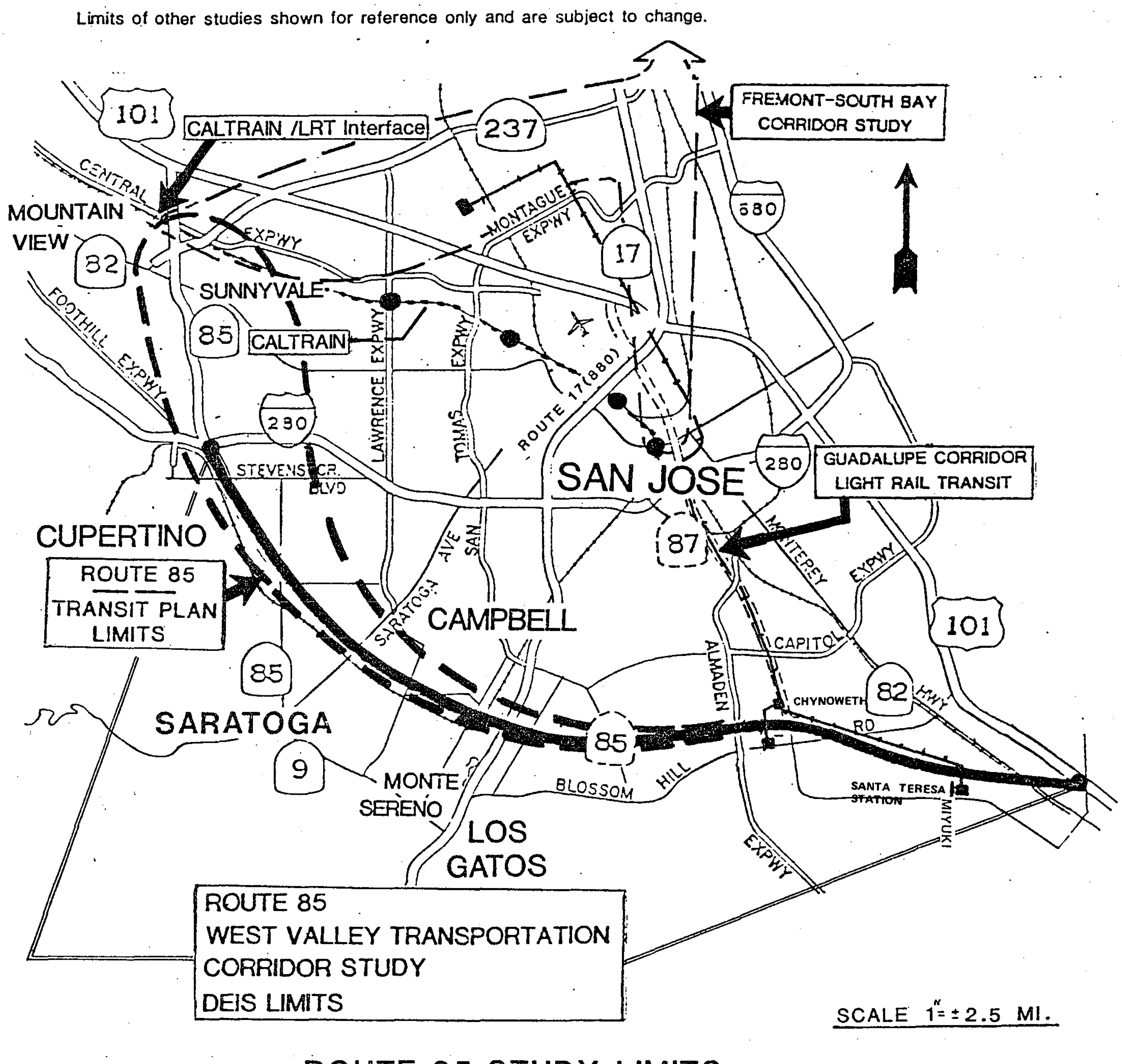

ROUTE 85
WEST VALLEY TRANSPORTATION CORRIDOR
COUNTY LRT ROUTING
Proposed interface with CalTrain
Maximum Load Point
GREAT AMERICA
ROUTE 237
OREGON EXPWY
CENTRAL EXPWY
FOOTHILL EXPWY
ROUTE 280
ROUTE 85
MATHILDA
LAWRENCE EXPWY
SAN TOMAS EXPWY
ROUTE 17 (880)
ROUTE 87
ROUTE 680
N
FREMONT
HOMESTEAD
LRT Maintenance Facility
GUADALUPE CORRIDOR LRT
(Under construction)
ROUTE 280
STEVENS CREEK
MCCLELLAN
PROSPECT
COX
STELLING
SARATOGA-SUNNYVALE
KNOWLES
BASCOM
(under design)
RUSSO
CAPITOL
CAMDEN
BRANHAM LN
CHYNOWETH
MONTEREY
ROUTE 101
POLLARD
LARK
SARATOGA
QUITO
WINCHESTER
ROUTE 17
LOS GATOS
BLOSSOM HILL
UNION
LEIGH
MERIDIAN
ALMADEN EXPWY
PEARL
SANTA TERESA
SNELL
LEAN
COTTLE
MIYUKI
GREAT OAKS
BERNAL
NO SCALE
CHYNOWETH STATION
SANTA TERESA STATION
The general routing of the LRT as shown is to complete the LRT loop and to interface with CalTrain.
Closing the LRT loop has facilitated estimating the patronage of the Route 85 LRT.
Continuation of LRT would be an element of the TRANSIT PLAN.
* Route 85 station locations for estimating purposes only.
Exact location determined under subsequent transit studies.
LIGHT RAIL TRANSIT
* Station
LIGHT RAIL TRANSIT
Station
GUADALUPE CORRIDOR

FIGURE IV-4

ROUTE 85

WEST VALLEY TRANSPORTATION CORRIDOR STUDY



ROUTE 85 STUDY LIMITS

FIGURE IV-5

3. STATIONS

a. Bus

Station locations within the corridor are shown on Figure IV-5. Stations designed for joint use by light rail and bus patrons are: Almaden Expressway, Winchester Boulevard and Stevens Creek Boulevard (McClellan Road). The rest of the express bus stops are at the following locations: Tennant Avenue/Bernal Road/Route 101, Cottle Road, Snell Avenue, Meridian Avenue, South Bascom Avenue, Quito Road, and Prospect Road. Meridian Avenue and South Bascom Avenue are potentially only access points. Further study will help determine their suitability as stops and/or access points.

Proposed lots and existing Santa Clara County Transit park and ride lots are shown on Figure IV-6.

This plan assumes that park and ride lots would be constructed at the station locations and that patrons would be able to use the park and ride facilities constructed for light rail transit. The actual size and configuration would depend on demand at each site as well as 1) existing facilities, 2) availability of land area and funding, 3) land use conditions and regulations, 4) circulation patterns, and 5) availability of any feeder bus and HOV access. Parking is assumed to be free.

b. Rail

Station locations betweenMiyuki Drive and Chynoweth Avenue are already determined under the Guadalupe Corridor Project. Between Chynoweth Avenue and Stevens Creek Boulevard, stations are assumed to be located at Almaden Expressway, Camden Avenue, Union Avenue, Bascom Avenue, Winchester Boulevard, Pollard Road, Quito Road, Saratoga Avenue, Prospect Avenue, Saratoga-Sunnyvale Road, and McClellan Avenue. These station locations are for estimating purposes only. Exact locations will be determined under subsequent transit studies. Station locations between Stevens Creek Boulevard and the CalTrain Station in Mountain View are conceptual at this time; however, for model construction, they were also assumed to be at Homestead Road, Fremont Avenue, El Camino Real, and the CalTrain Station. Again for model construction, four additional stations are assumed between the Mountain View CalTrain Station and Great America (see Figure IV-7).

This plan assumes that park and ride facilities will be constructed at all stations. The actual size and configuration would depend on demand at each site as well as: 1) availability of land area and funding, 2) land use conditions and regulations, 3) circulation patterns, 4) availability of existing facilities, and 5) availability of feeder bus and HOV access. This plan further assumes that the minimum parking area would be one acre. This facility could accommodate 75-100 vehicles, kiss-and-ride,

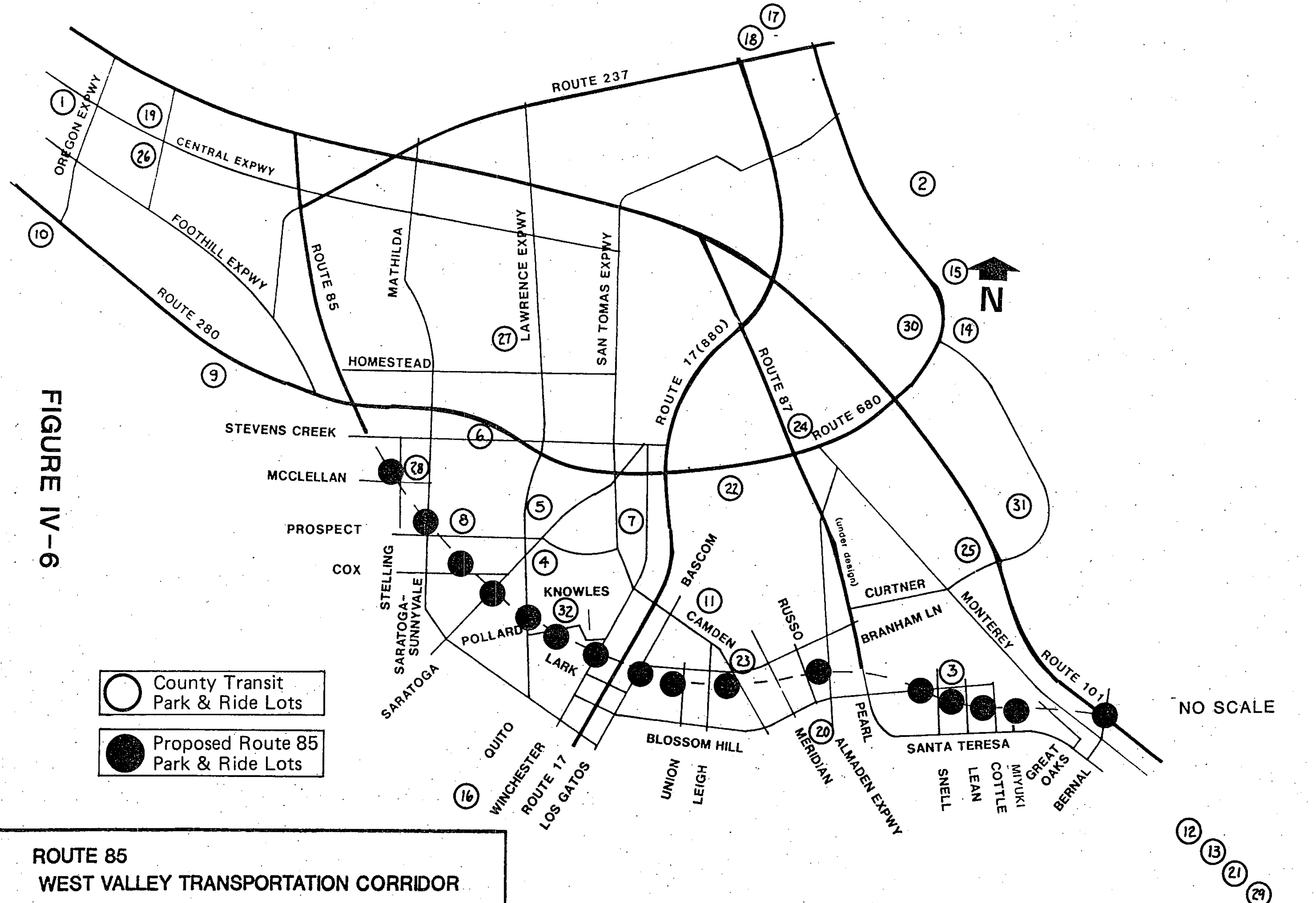
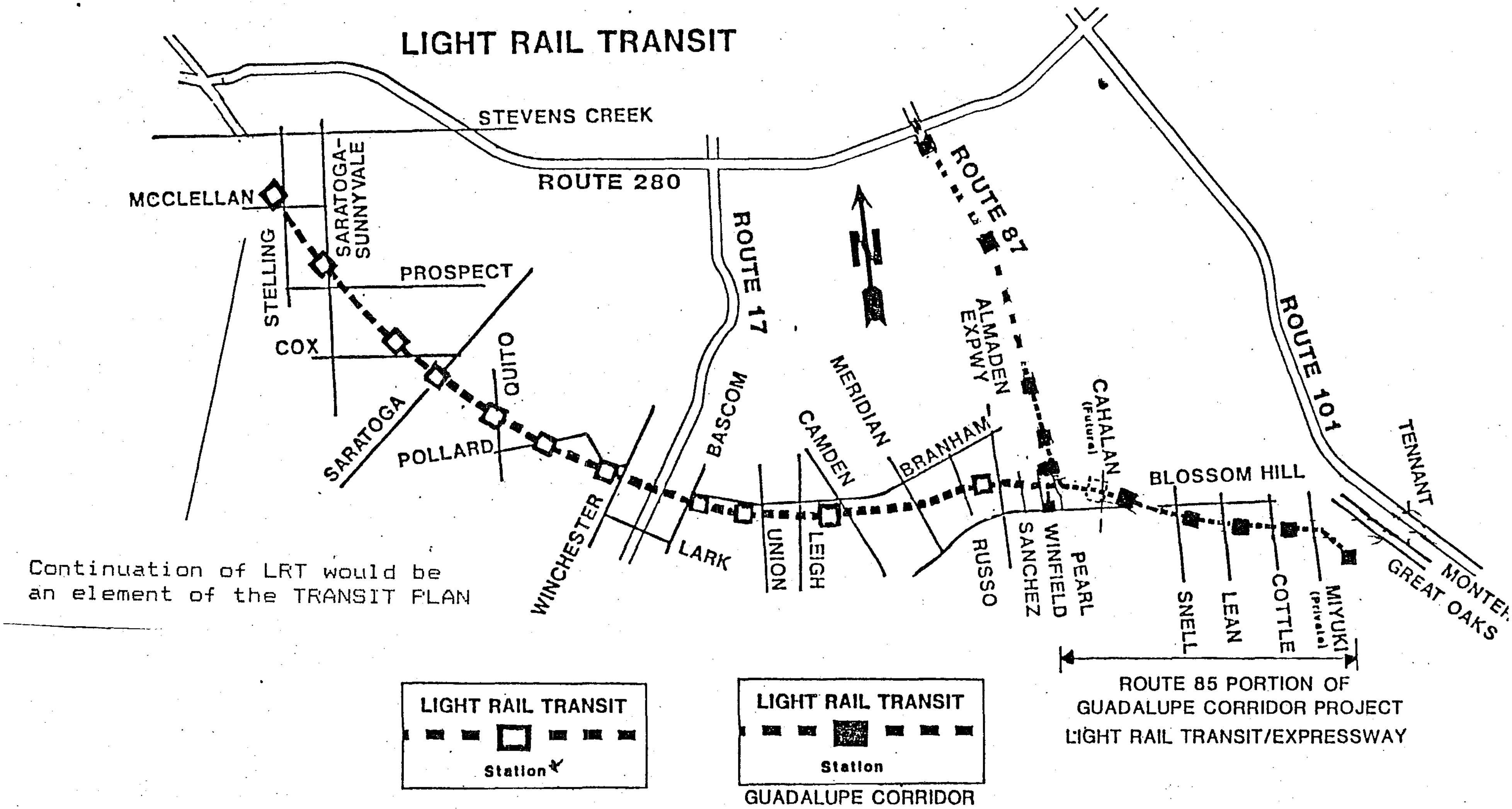


FIGURE IV-6

ROUTE 85
WEST VALLEY TRANSPORTATION CORRIDOR
PARK AND RIDE LOCATIONS



*Station Locations are shown for estimating purposes only. Exact location to be determined in subsequent transit studies.

ROUTE 85 LRT
FIGURE IV-7

and bus pads depending on the needs of the station site. Typical parking areas would be approximately two acres in size, however, which could accommodate 200 vehicles. Parking is assumed to be free of charge.

c. Intermediate Access

Some of the locations identified as Transitway interchanges, in Figure IV-3, Transitway Bus Stops/Stations, would have the potential for being used only as bus/HOV access to the transitway, and not for a combination access/transit stop site. The exact detailed operational characteristics will be determined under subsequent transit studies. These locations are: Meridian Avenue, South Bascom Avenue, Quito Road, and Prospect Road. Figure V-3 on page V-9 is a depiction of the type of intermediate access structure which might be used at these locations.

4. OPERATIONAL CHARACTERISTICS

a. Hours of Service and Headways

1 Bus

Transitway operating hours on weekdays are assumed to be from 6:00 - 9:00 am northbound and 3:00 - 6:00 pm southbound.

a) Peak Hour Headways

Maximum peak hour ridership is estimated to be 2800 occurring in the morning at the Route 85/237 interchange in Mountain View.

Dividing 2800 passengers per hour by 45 average passengers per bus yields the number of buses required to serve the peak hour transit demand. For this plan, therefore, 62 buses per peak hour would be needed. This number would require approximately one minute headways using standard 40 foot transit buses.

Using articulated buses with a capacity of 72 passengers per bus is an option. Approximately 39 buses per hour would be required with headways of approximately 1.5 minutes.

Peak hour headways of one to one and a half minutes at the Mountain View interchange require headways of 12-15 minutes on the twelve routes shown on Figure IV-2.

2 Rail

The hours of operation weekdays for the light rail alternative are assumed to be 5 am to 12 pm. Peak hours would be from 6-8 am and 3:30-5:30 pm. Weekend service would be provided from 6 am to 12 pm. These hours of operation are the same as those assumed in Working Paper 17 for the Guadalupe Corridor Alternatives Analysis/Draft Environmental Impact Statement.

a) Peak-Period Headways

The maximum load point on the line occurs in Mountain View, one stop south of the CalTrain Station at El Camino Real. The total number of peak-hour trips in the segment between CalTrain and El Camino Real is 2,800.

There are essentially two ways to satisfy passenger demand at a maximum load point: run one LRT vehicle at close headways or run trains of more than one vehicle at longer headways. For the purpose of this analysis, the plan will assume two-car trains. This assumption is consistent with the proposal for the Guadalupe Corridor LRT.

Dividing the total number of trips during one hour at the maximum load point (2,800) by the capacity of one two-vehicle train (336 passengers; see below, Type of Vehicle and Capacity) would yield the number of two-vehicle trains needed to satisfy passenger demand in the peak direction during one peak hour of a typical day. Nine two-vehicle trains would therefore be required. The minimum headway, then, during peak-hour service would be 6.6 minutes (60 minutes divided by nine two-vehicle trains).

b) Off-Peak Headways

Patronage information available at the time of this draft plan did not include total average daily ridership. Thus, it was not possible to estimate off-peak headways. However, this analysis will assume off-peak service to require two-vehicle trains running at 20-minute headways. This is a conservative assumption, particularly with respect to headways, and it would yield slightly higher operation and maintenance (O&M) costs. It would, however, provide the opportunity for a higher level of service during the off-peak which is needed to promote ridership.

Weekend and holiday service data were also not available. To compensate for this, the plan assumes that the weekday level of service will be provided for 286 days.

b. Vehicle Requirements

1. Bus

a) Type of Vehicle and Capacity

The Santa Clara County Transit District operates a fleet of mixed vehicles to satisfy service demands throughout the County. Vehicles range from small dial-a-ride coaches to 60 foot long articulated buses.

For this draft it is assumed that only standard 40 foot transit buses or 60 foot articulated buses will be used for express corridor service.

Capacity of a standard 40-foot transit bus is 45 passengers seated and 60 with standees. Capacity of a 60-foot long articulated bus is 72 passengers seated and 100 with standees. This draft plan assumes that each 40-foot transit bus would accommodate 45 passengers during the peak hour. The plan uses this figure because it would require the use of more buses, and such a requirement would be more of a "worst-case" scenario for determining operation and maintenance costs.

b) Fleet Size

Santa Clara County Transit District operates a fleet of 585 revenue vehicles and expansion to 750 vehicles is being considered. This plan assumes that the Transit District will be able to provide the buses needed.

Approximately 115 40-foot transit buses would be required to provide the express bus service addressed in this plan. Ninety-six buses would be required for the 12 routes (eight buses per route) and 19 additional buses would be needed for reserve (a 20 percent factor). The 96 buses include the 62 buses needed to accommodate the peak-hour demand of 2,800 riders in the Mountain View area.

Factors used in determining the need for 115 buses include the following:

- 12 New bus routes
- 12 minute peak hour headways per route
- A per-route average round trip travel time of one hour and 28 minutes for an average 34-mile round trip per bus.
- Each round trip consisting of 1) an average of 24 miles on the Route 85 facility at 30 miles per hour, 2) an average of 10 miles on city streets at 15 miles per hour.
- An eight-minute layover per run, thereby requiring eight buses per route for at least the first peak hour

of service daily.

Table IV-1 is a sample schedule utilizing 12-minute headways and eight-minute layovers:

TABLE IV-1

BUS ESTIMATE USING 12-MINUTE HEADWAYS/ROUTE
ROUND TRIP TIME = 1 HR. 28 MIN.

BUS	LEAVE TIME	RETURN TIME	LAYOVER
1	0600	0728	8 min.
2	0612	0740	"
3	0624	0752	"
4	0636	0804	"
5	0648	0816	"
6	0700	0828	"
7	0712	0840	"
8	0724	0852	"
1	0736	0904	Go to Yard
2	0748	0916	"
3	0800	0928	"
4	0812	0940	"
5	0824	0952	"
6	0836	1004	"
7	0848	1016	"
8	0900	1028	"

2 Rail

a) Type of Vehicle and Capacity

Currently, the Santa Clara County Transit District is purchasing 50 light rail vehicles produced by the Urban Transportation Development Corporation. These are double-ended, articulated, six-axle vehicles capable of operating singly or in trains of up to four units. For purposes of this analysis, this vehicle is assumed to be the one used for the Route 85 corridor Light Rail Alternatives.

This vehicle is an extension of the six-axle light rail vehicle (LRV) in revenue service in Toronto, Canada. The Toronto six-axle car is directly derived from its earlier predecessor, the four-axle Canadian LRV (CLRV) which has been in revenue service since 1979.

The CLRV has accumulated over ten million car-miles of revenue service with an availability averaging 95 percent.

The standard capacity of the CLRV vehicle is 75 seated and 91 standing; crush capacity is 76 seated and 182 standing. This plan uses a peak-hour capacity of 168 patrons per vehicle.

b) Fleet Size

Evaluation of headways, route length, spare vehicle needs, and other factors determine required fleet sizes. Table IV-2 presents the factors utilized in determining fleet size.

TABLE IV-2

FLEET SIZE DETERMINATION FACTORS

FACTORS	MIYUKI to STEVENS CREEK	MIYUKI to MOUNTAIN VIEW	MIYUKI to GREAT AMERICA
Total Round Trip Length (Miles)	33.4	45.6	56.8
Average Speed (MPH)	31	32	31.5
Base Run Time (Minutes)	64.6	85.5	108.2
10% Running Delay (Minutes)	6.5	8.5	10.8
Turnaround Time (Minutes)	10	10	10
Total Circuit Time	81.1	104	129

Table IV-3 summarizes the number of vehicles required during each time period, assuming peak and off-peak headways of 6.6 and 20 minutes, respectively, and 12% spares.

TABLE IV-3

	Miyuki to Stevens Creek	Miyuki to Mountain View	Miyuki to Great America
5am-6am	10	12	14
6am-8am	30	36	44
8am-3:30pm	10	12	14
3:30pm-5:30pm	30	36	44
5:30pm-12 Midnight	10	12	14

c. Fare Structures

1 Bus

The Santa Clara County Transit District policy is to structure fares to recover 20 percent of the operating cost of the bus. The current adult base fare for express service is $1.00.

Fares for express bus service in the Route 85 corridor will be consistent with other express bus fares in effect in the County.

2 Rail

Fare structure would be the same as that for the Guadalupe Corridor which is one constant fare for the entire route.

d. Income

The income for the various alternatives was determined based on the following criteria:

a) Transit revenue based on annual passenger trips developed from computer generated model AM peak hour transit passenger miles for alternatives containing transit.

b) LRT corridor trip length is 16.1 miles and express bus corridor trip length is 17.1 miles. TSM daily trip lengths are 2.25 miles for additional local buses and 9.73 miles for additional express buses.

c) Peak hour factor for LRT is 16.6% of daily (19 hour weekday) usage and daily weekend usage is 25% of daily weekday usage (286 weekdays per year).

Peak hour factor for express buses is 20.0% of daily (6 hour weekday) usage. No express buses are assumed to operate on the weekends.

d) Fares are $1.00 per express bus trip, $0.60 per local bus trip, and $0.85 per LRT trip (1985$).

Table IV-4, Annual Revenue, shows the annual projected revenue for all the alternatives based on the above assumptions.

e. Subsidies

The transit operating and maintenance costs will be subsidized in the same manner as the Guadalupe Corridor LRT. The following sources of funds could be utilized for transit operating and maintenance costs:

Local

1/2 cent sales tax (existing)
Transit fares

State

Transportation Development Act (SB 325)

Federal

Urban Mass Transportation Administration (UMTA), Section 9.

Table IV-5, Annual Subsidies, indicates the amounts that need to be subsidized for each alternative.

TABLE IV-5

ANNUAL SUBSIDIES
(MILLIONS OF 1985 DOLLARS)

Alternatives	Annual Transit Costs*	Annual Revenue ($M)	Annual Subsidy ($M)
NPA	0	0	0
TSM	22.7	15.7	7.0
LRT	6.7	3.0	3.7
4FWY with LRT	6.7	2.8	3.9
4FWY with HOV & LRT	6.7	2.5	4.2
4FWY with Bus/HOV	15.8	2.2	13.6
6FWY with Bus/HOV	15.8	2.1	13.7
8FWY	6.9	0.7	6.2
8FWY with LRT	6.7	2.8	3.9

* Maintenance and Operation Costs

TABLE IV-4

ANNUAL REVENUE
(1985 DOLLARS)

Alternatives	Annual Transit Revenue ($M)
NPA	0
TSM	15.7
LRT	3.0
4FWY with LRT	2.8
4FWY with HOV & LRT	2.5
4FWY with Bus/HOV	2.2
6FWY with Bus/HOV	2.1
8FWY	0.7
8FWY with LRT	2.8

f. Operational and Maintenance Costs

1 Bus

According to the 1985 five-year plan of the Santa Clara County Transit District (page II-27), the average operating cost per hour of a 40-foot transit bus is $62. Assuming peak-hour service for six hours a day at least 250 days a year, the annual operating cost of providing express bus service for the Route 85 corridor would be $10.7 million. (115 buses x $62/hour x 6 hours/day x 250 days/year = $10.7 million.)

According to the same five-year plan, the average maintenance cost per vehicle mile is $1.10. Assuming an average of 40,000 miles a year per bus, the annual maintenance cost of providing the express bus service in the corridor would be $5.06 million. (115 buses x $1.10/mile x 40,000 miles = $5.06 million.) This draft plan assumes that the buses providing service in the corridor would average 40,000 miles per year as the Transit District would maximize the efficient use of the vehicles.

The total operating and maintenance costs for the bus alternatives would be $15.8 million.

2. Rail

Table IV-6 present the additional Operational and Maintenance (O&M) costs for each of the rail alternatives. These costs were determined by analyzing the detailed costs (Tables M, N, and O) in Working Paper 17 and estimating (usually by "pro-rating") the additional personnel and associated costs needed to operate the two alternatives. These costs were then escalated to 1985 dollars.

With a 286-day operating year, the distances provided in Table IV-2, and various deadhead lengths, the annual vehicle miles travelled were calculated. These are presented in Table IV-6. Because the Route 85 corridor is more than seven miles from the maintenance facility, the deadhead vehicle miles travelled is substantial.

g. Maintenance Facility

1. Bus

Santa Clara County Transit District operates three maintenance facilities in the Route 85 corridor area. These are shown on Figure IV-2, Express Bus Routes.

A fleet expansion to 750 revenue vehicles would require substantial improvements to the Agnews and North facilities. Improvements are estimated by the District to cost approximately $11.3 million.

2. Rail

The Guadalupe Corridor maintenance facility can accommodate an additional 50 vehicles. This draft plan assumes that the vehicles required for the Route 85 line will be stored and maintained at this facility. To allow for this, there will be some needed capital cost to construct the additional track at the maintenance facility. Also, because the location of the facility is 7.5 miles from the alignment of the Route 85 line, the dead-head O&M cost could be a major consideration. A more detailed analysis than what this plan provides may indicate a small storage/maintenance facility near Mountain View would be cost effective.

TABLE IV-6

ESTIMATED ANNUAL LRT O&M COSTS

Category	Miyuki to Stevens Creek	Miyuki to Mountian View	Miyuki to Great America
Conducting Transportation ($M)	2.0	2.4	3.0
Maintenance ($M)	2.2	2.5	3.0
Electrical energy @ $.06/kWh ($M)	1.1	1.4	1.5
Subtotal ($M)	5.3	6.3	7.5
General Administration 5% of subtotal ($M)	0.3	0.3	0.4
TOTAL 1980 $M	5.6	6.6	7.9
1984 $M	7.0	8.4	10.0
Annual Vehicle Miles (Millions)	2.2	3.0	3.1

B. TRAVEL PROJECTIONS

Travel projections for both highway and transit were developed utilizing the Metropolitan Transportation Commission Forecasting Model and the data base generated by the Metropolitan Transportation Commisssion and Santa Clara County for the Guadalupe Corridor Project.

The Metropolitan Transportation Commission forecasting model is similar to conventional urban transportation forecasting systems. The Metropolitan Transportation Commission model inputs forecasted socio-economic, network, and level of service data into trip generation equations to produce travel demand projections. The transportation network limits for travel demand projections is the same for all alternatives and modes. The network includes a light rail/expressway facility in the Guadalupe Corridor. It is assumed that all ramps on the peak direction would be metered for all of the freeway alternatives.

The Metropolitan Transportation Commission model does not have the capacity to estimate the HOV demand directly. However, a procedure utilizing the model and available travel data was developed to provide an HOV assignment. Two analyses of carpool alternatives were done, one assuming three or more persons per vehicle and one assuming two or more persons per vehicle. Factors of 3.5% (from Guadalupe Corridor Alternatives Analysis (GCAA)) for 3+ carpools and 18% for 2 person carpools were applied to the total demand volumes, resulting in HOV demand volumes (vehicle trips) of 21.5%.

The Route 85 study used the same inputs as the GCAA for economic, land use, auto mode level of service and supplementary travel-related data.

The following is a brief explanation of the terms used in the travel projection demand/usage charts.

Vehicle Demand

The total number of vehicles (automobiles and trucks) that would want to use the facility for each alternative in the year 1990 regardless of alternative.

Person Demand

The amount of people that would want to use the facility for each alternative in the year 1990. The person demand is 1.25 X vehicle demand + transit patronage demand for LRT and Express bus.

Usage

The maximum number of vehicles or persons that can use the constructed facility in 1990. Usage volumes in the northwest peak direction are for ramp metered (constrained) facilities. The southeast off-peak direction is not ramp metered.

Patronage

Transit or vehicle riders on the system at given locations. Transit riders are people riding the LRT or Express Bus.

HOV Lanes

High Occupancy Vehicle (HOV) lanes require 2 or more passengers per vehicle. HOV usage is estimated to be 21.5% of the total vehicle usage. For alternatives that include HOV, the capacity of the HOV facility will be equal to or exceed the projected HOV demand.

LRT

Light Rail Transit system as described in the alternatives description section of Chapter V.

Express Buses

Express buses are buses that will traverse a portion of their trip on the transitway or freeway.

ADT

Average Daily Traffic is the total number of vehicles in a typical 24 hour period.

Transit Patronage

Transit Patronage is the number of riders on the LRT or Express Buses. For alternatives that contain both HOV and Transit, Transit Patronage is reduced by 10%.

Patronage usage is derived from vehicle usage utilizing vehicle occupany factors. The occupancy factors vary from each alternative because of the availability of different transportation modes to influence rider preference. For AM peak hour and peak period (6 hours) versus alternative tables, the following vehicle occupancy factors were used:

Freeway alternatives without HOV . . . . 1.25 persons/vehicle
Freeway/HOV Alternatives . . . . 1.0 persons/freeway lane vehicles
Freeway/HOV Alternatives . . . . 2.2 persons/HOV lane vehicles

For Average Daily Traffic versus Alternative Tables, the following vehicle occupany factors were used:

Freeway Alternatives without HOV. . . . 1.3 persons/freeway lane vehicle
Freeway with HOV alternatives. . . . . . 1.22 persons/freeway lane vehicle
Freeway with HOV alternatives. . . . . . 2.2 persons/HOV vehicle

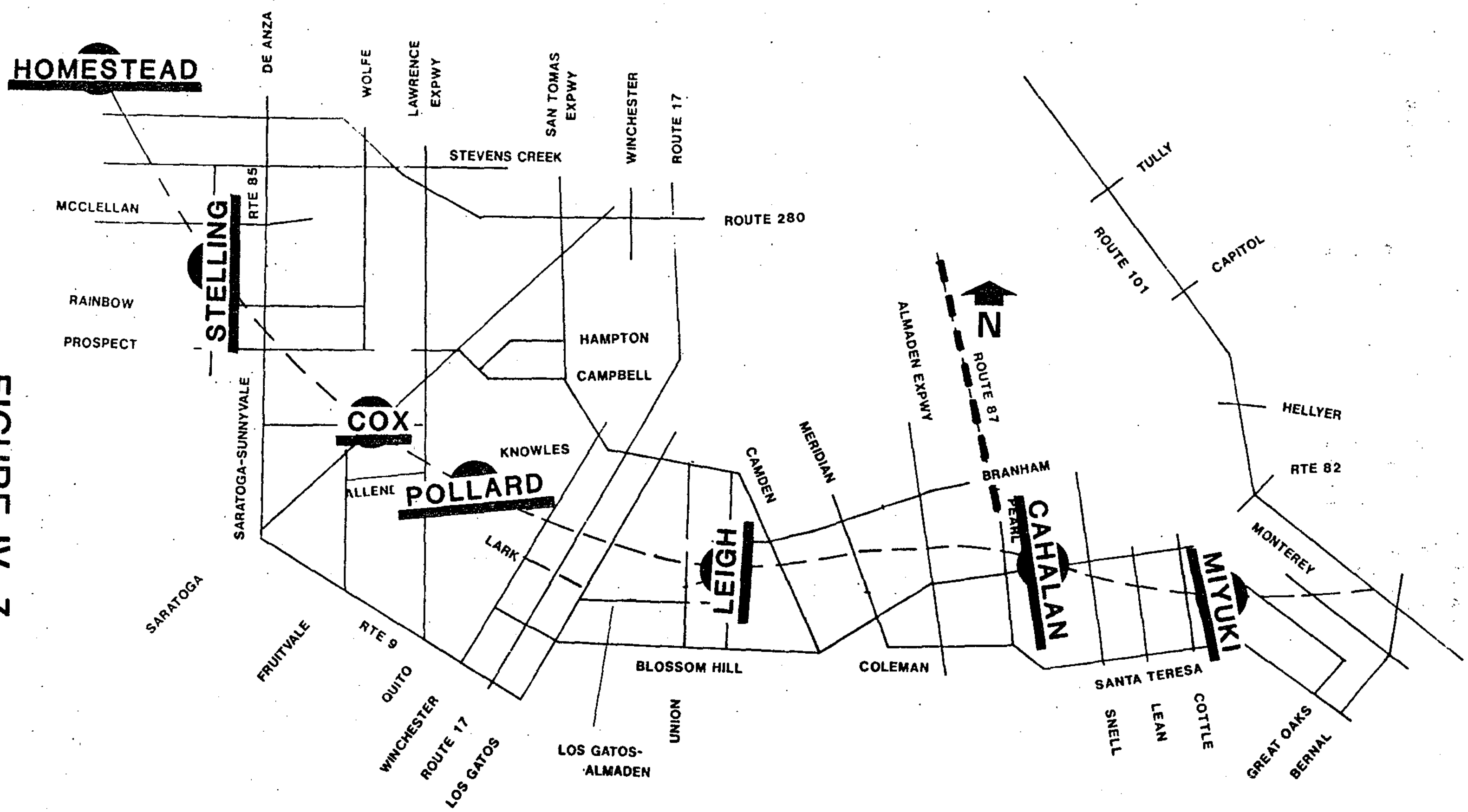
The following factors were used to arrive at the daily usage (weekday 24 hour) in person and vehicles:

Vehicles in freeway lanes (24 hour) = 12 X freeway lanes AM peak hour usage
Vehicles using HOV facilities (6 hours) = 5 X HOV AM peak hour usage
Patronage using LRT (19 hours) = 6 X LRT AM peak hour patronage
Patronage using Express Buses (6 hours) = 5 X express bus AM peak hour patronage

Federal Highway Administration planning procedures for highway projects require that projections be developed for 20 years beyond construction of a project. The projection year should therefore be 2010 to satisfy the FHWA.

Table IV-7 has been prepared using the above assumptions. Figure IV-8 depicts the links on which these table were based. The

FIGURE IV-7



● AM Peak Hour (Weekdays)
NORTHBOUND
SOUTHBOUND.

● Daily Projections (Weekdays)
24 HOUR BOTH DIRECTIONS

ROUTE 85
WEST VALLEY TRANSPORTATION CORRIDOR
1990 TRAVEL PROJECTIONS
LOCATIONS

tables are separated into links, northwest and southeast peakhour direction volumes and 24 hour volumes.

At the time of the selection of the preferred alternative, Caltrans will have a subregional computer simulation model in operation with the latest projections for population and jobs. The subregional model, with its updated socio-economic data base, will be used to simulate travel for the year 2010. The results of this simulation will be used to refine the project for the final environmental impact report, the official decision and eventual design.

1990 Travel Projections (x1000)
Daily (Weekday) Usage

NORTHBOUND-MIYUKI

ALTERNATIVE	VEHICLES			PATRONAGE				
	FWY LNS 24HRS	HOV LNS 6HRS	TOTAL	FWY LNS 24HRS	HOV LNS 6HRS	LRT 18HRS	EXP BUS 6HRS	TOTAL
TSM	NA	NA	NA	NA	NA	NA	NA	NA
LRT	26.8	NA	26.8	34.8	NA	4.8	NA	39.6
4L/LRT	26.8	NA	26.8	34.8	NA	4.2	NA	39.0
4L/LRT&HOV	26.8	NA	26.8	32.7	NA	4.2	NA	36.9
4L/BUSHOV TRANSITWAY	26.8	NA	26.8	32.7	NA	NA	1.0	33.7
6L/BUSHOV TRANSITWAY	27.3	NA	27.3	33.3	NA	NA	1.0	34.3
8 LANE	28.8	NA	28.8	37.4	NA	NA	0.3	37.7
8 LN/LRT	28.8	NA	28.8	37.4	NA	4.2	NA	41.6

1990 Travel Projections (x1000)-AM Peak Hour-MIYUKI

MIYUKI	DEMAND		USAGE									
AMPEAK-NB	VEH	PER	VEHICLES				PERSONS					
ALTERNATIVE			FWY LNS	HOV LNS	TOT	% DMD	FWY LNS	HOV LNS	LRT	EXP BUS	TOT	% DMD
TSM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LRT	2.4	3.8	2.0	NA	2.0	83	NA	NA	0.8	NA	0.8	21
4L/LRT	2.4	3.7	2.0	NA	2.0	83	2.5	NA	0.7	NA	3.2	87
4L/LRT&HOV	2.4	3.7	2.0	NA	2.0	83	2.0	NA	0.7	NA	2.7	73
4L/BUS&HOV TRANSITWAY	2.4	3.2	2.0	NA	2.0	83	2.0	NA	NA	0.2	2.2	69
6L/BUS&HOV TRANSITWAY	2.4	3.2	2.1	NA	2.1	88	2.1	NA	NA	0.2	2.3	72
8L	2.4	3.1	2.4	NA	2.4	100	3.0	NA	NA	0.1	3.1	100
8L/LRT	2.4	3.7	2.4	NA	2.4	100	3.0	NA	0.7	NA	3.7	100

MIYUKI	DEMAND		USAGE									
AMPEAK-SB	VEH	PER	VEHICLES				PERSONS					
ALTERNATIVE			FWY LNS	HOV LNS	TOT	% DMD	FWY LNS	HOV LNS	LRT	EXP BUS	TOT	% DMD
TSM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LRT	0.7	2.1	0.7	NA	0.7	100	0.9	NA	1.2	NA	2.1	100
4L/LRT	0.7	2.1	0.7	NA	0.7	100	0.9	NA	1.2	NA	2.1	100
4L/LRT&HOV	0.7	1.9	0.7	NA	0.7	100	0.9	NA	1.0	NA	1.9	100
4L/BUS&HOV TRANSITWAY	0.7	0.9	0.7	NA	0.7	100	0.9	NA	NA	NIL	0.9	100
6L/BUS&HOV TRANSITWAY	0.7	0.9	0.7	NA	0.7	100	0.9	NA	NA	NIL	0.9	100
8L	0.7	0.9	0.7	NA	0.7	100	0.9	NA	NA	NIL	0.9	100
8L/LRT	0.7	2.1	0.7	NA	0.7	100	0.9	NA	1.2	NA	2.1	100

Table IV-7 (con't.)
1990 Travel Projections (x1000)-AM Peak Hour-CAHALAN

CAHALAN	DEMAND		USAGE									
AMPEAK-NB	VEH	PER	VEHICLES				PERSONS					
ALTERNATIVE			FWY LNS	HOV LNS	TOT	% DMD	FWY LNS	HOV LNS	LRT	EXP BUS	TOT	% DMD
TSM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LRT	4.0	6.9	2.0	NA	2.0	50	2.5	NA	1.9	NA	4.4	64
4L/LRT	4.0	6.8	3.0	NA	3.0	75	3.8	NA	1.8	NA	5.6	82
4L/LRT&HOV	4.0	6.6	3.0	NA	3.0	75	3.0	NA	1.6	NA	4.6	70
4L/BUS&HOV TRANSITWAY	4.0	5.7	3.0	NA	3.0	75	3.0	NA	NA	0.7	3.7	65
6L/BUS&HOV TRANSITWAY	4.0	5.6	3.5	NA	3.5	88	3.5	NA	NA	0.6	4.1	73
8L	4.0	5.1	4.0	NA	4.0	100	5.0	NA	NA	0.1	5.1	100
8L/LRT	4.0	6.7	4.0	NA	4.0	100	5.0	NA	1.7	NA	6.7	100

CAHALAN	DEMAND		USAGE									
AMPEAK-SB	VEH	PER	VEHICLES				PERSONS					
ALTERNATIVE			FWY LNS	HOV LNS	TOT	% DMD	FWY LNS	HOV LNS	LRT	EXP BUS	TOT	% DMD
TSM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LRT	3.7	5.4	2.0	NA	2.0	54	2.0	NA	0.8	NA	2.8	52
4L/LRT	3.7	5.4	3.7	NA	3.7	100	4.6	NA	0.8	NA	5.4	100
4L/LRT&HOV	3.7	5.3	3.7	NA	3.7	100	4.6	NA	0.7	NA	5.3	100
4L/BUS&HOV TRANSITWAY	3.8	4.8	3.8	NA	3.8	100	4.8	NA	NA	NIL	4.8	100
6L/BUS&HOV TRANSITWAY	3.8	4.8	3.8	NA	3.8	100	4.8	NA	NA	NIL	4.8	100
8L	3.8	4.9	3.8	NA	3.8	100	4.8	NA	NA	0.1	4.9	100
8L/LRT	3.7	5.3	3.7	NA	3.7	100	4.6	NA	0.7	NA	5.3	100

Table IV-7 (con't.)
1990 Travel Projections (x1000)
Daily (Weekday) Usage

NORTHBOUND-CAHALAN

	VEHICLES			PATRONAGE				
ALTERNATIVE	FWY LNS 24HRS	HOV LNS 6HRS	TOTAL	FWY LNS 24HRS	HOV LNS 6HRS	LRT 18HRS	EXP BUS 6HRS	TOTAL
TSM	NA	NA	NA	NA	NA	NA	NA	NA
LRT	38.0	NA	38.0	49.4	NA	11.4	NA	60.8
4L/LRT	43.0	NA	43.0	55.9	NA	10.8	NA	66.7
4L/LRT&HOV	43.0	NA	43.0	52.5	NA	9.6	NA	62.1
4L/BUS&HOV TRANSITWAY	43.0	NA	43.0	52.5	NA	NA	3.5	56.0
6L/BUS&HOV TRANSITWAY	45.5	NA	45.5	55.5	NA	NA	3.0	58.5
8L	48.0	NA	48.0	62.4	NA	NA	0.5	62.9
8L/LRT	48.0	NA	48.0	62.4	NA	10.2	NA	72.6

Table IV-7 (con't.)
1990 Travel Projections (x1000)-AM Peak Hour-LEIGH

LEIGH	DEMAND		USAGE									
AMPEAK-NB	VEH	PER	VEHICLES				PERSONS					
ALTERNATIVE			FWY LNS	HOV LNS	TOT	% DMD	FWY LNS	HOV LNS	LRT	EXP BUS	TOT	% DMD
TSM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LRT	6.7	9.6	NA	NA	NA	NA	NA	NA	1.2	NA	1.2	13
4L/LRT	6.7	9.5	3.2	NA	3.2	49	4.0	NA	1.1	NA	5.1	54
4L/LRT&HOV	6.7	9.5	3.2	1.4	4.6	69	3.2	3.2	1.1	NA	7.5	79
4L/BUS&HOV TRANSITWAY	6.6	9.7	3.2	1.4	4.6	70	3.2	3.1	NA	1.4	7.7	80
6L/BUS&HOV TRANSITWAY	6.6	9.6	4.2	1.4	5.6	85	4.2	3.1	NA	1.3	8.6	90
8L	6.8	8.8	6.2	NA	6.2	91	7.8	NA	NA	0.3	8.1	92
8L/LRT	6.7	9.4	6.2	NA	6.2	93	7.8	NA	1.0	NA	8.8	93

LEIGH	DEMAND		USAGE									
AMPEAK-SB	VEH	PER	VEHICLES				PERSONS					
ALTERNATIVE			FWY LNS	HOV LNS	TOT	% DMD	FWY LNS	HOV LNS	LRT	EXP BUS	TOT	% DMD
TSM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LRT	2.4	3.5	NA	NA	NA	NA	NA	NA	0.5	NA	0.5	14
4L/LRT	2.4	3.4	2.4	NA	2.4	100	3.0	NA	0.4	NA	3.4	100
4L/LRT&HOV	2.4	3.4	1.9	0.5	2.4	100	1.9	1.1	0.4	NA	3.4	100
4L/BUS&HOV TRANSITWAY	2.4	3.3	2.4	NA	2.4	100	3.0	NA	NA	0.3	3.3	100
6L/BUS&HOV TRANSITWAY	2.4	3.3	2.4	NA	2.4	100	3.0	NA	NA	0.3	3.3	100
8L	2.4	3.4	2.4	NA	2.4	100	3.0	NA	NA	0.4	3.4	100
8L/LRT	2.3	3.3	2.3	NA	2.3	100	2.9	NA	0.4	NA	3.3	100

Table IV-7 (con't.)
1990 Travel Projections (x1000)
Daily (Weekday) Usage

NORTHBOUND-LEIGH

	VEHICLES			PATRONAGE				
ALTERNATIVE	FWY LNS 24HRS	HOV LNS 6HRS	TOTAL	FWY LNS 24HRS	HOV LNS 6HRS	LRT 18HRS	EXP BUS 6HRS	TOTAL
TSM	NA	NA	NA	NA	NA	NA	NA	NA
LRT	NA	NA	NA	NA	NA	7.2	NA	7.2
4L/LRT	59.4	NA	59.4	77.2	NA	6.6	NA	83.8
4L/LRT&HOV	59.4	7.2	66.6	72.5	15.8	6.6	NA	94.9
4L/BUS&HOV TRANSITWAY	59.4	7.1	66.5	72.5	15.6	NA	7.0	95.1
6L/BUS&HOV TRANSITWAY	64.4	7.1	71.5	78.6	15.6	NA	6.5	100.7
8L	74.4	NA	74.4	96.7	NA	NA	1.5	98.2
8L/LRT	74.4	NA	NA	96.7	NA	6.0	NA	102.7

Table IV-7 (con't.)
1990 Travel Projections (x1000)-AM Peak Hour-POLLARD

POLLARD	DEMAND		USAGE									
AMPEAK-NB	VEH	PER	VEHICLES				PERSONS					
ALTERNATIVE			FWY LNS	HOV LNS	TOT	% DMD	FWY LNS	HOV LNS	LRT	EXP BUS	TOT	% DMD
TSM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LRT	7.6	11.0	NA	NA	NA	NA	NA	NA	1.5	NA	1.5	14
4L/LRT	7.6	10.9	3.5	NA	3.5	46	4.4	NA	1.4	NA	5.8	53
4L/LRT&HOV	7.6	10.8	3.5	1.6	5.1	68	3.5	3.6	1.3	NA	8.4	78
4L/BUS&HOV TRANSITWAY	7.6	11.7	3.5	1.6	5.1	68	3.5	3.6	0.0	2.2	9.3	79
6L/BUS&HOV TRANSITWAY	7.6	11.7	4.7	1.6	6.3	83	4.7	3.6	0.0	2.2	10.5	90
8L	7.8	10.3	6.8	NA	6.8	87	8.5	0.0	0.0	0.5	9.0	88
8L/LRT	7.7	10.9	6.8	NA	6.8	88	8.5	0.0	1.3	0.0	9.8	90

POLLARD	DEMAND		USAGE									
AMPEAK-SB	VEH	PER	VEHICLES				PERSONS					
ALTERNATIVE			FWY LNS	HOV LNS	TOT	% DMD	FWY LNS	HOV LNS	LRT	EXP BUS	TOT	% DMD
TSM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LRT	2.2	3.1	NA	NA	NA	NA	NA	NA	0.3	NA	0.3	10
4L/LRT	2.2	3.1	1.9	NA	1.9	86	2.4	NA	0.3	NA	2.7	88
4L/LRT&HOV	2.2	3.0	1.7	0.5	2.2	100	1.7	1.0	0.2	NA	3.0	100
4L/BUS&HOV TRANSITWAY	2.2	2.8	2.2	NA	2.2	100	2.8	NA	NA	NIL	2.8	100
6L/BUS&HOV TRANSITWAY	2.2	2.8	2.2	NA	2.2	100	2.8	NA	NA	NIL	2.8	100
8L	2.2	2.8	2.2	NA	2.2	100	2.8	NA	NA	NIL	2.8	100
8L/LRT	2.2	3.1	2.2	NA	2.2	100	2.8	NA	0.3	NA	3.1	100

Table IV-7 (con't.)
1990 Travel Projections (x1000)
Daily (Weekday) Usage

NORTHBOUND-POLLARD

ALTERNATIVE	VEHICLES FWY LNS 24HRS	HOV LNS 6HRS	TOTAL	PATRONAGE FWY LNS 24HRS	HOV LNS 6HRS	LRT 18HRS	EXP BUS 6HRS	TOTAL
TSM	NA	NA	NA	NA	NA	NA	NA	NA
LRT	NA	NA	NA	NA	NA	9.0	NA	9.0
4L/LRT	65.1	NA	65.1	84.6	NA	8.4	NA	93.0
4L/LRT&HOV	65.1	8.2	73.3	79.4	18.0	7.8	NA	105.2
4L/BUS&HOV TRANSITWAY	65.1	8.2	73.3	79.4	18.0	NA	11.0	108.4
6L/BUS&HOV TRANSITWAY	71.1	8.2	79.3	86.7	18.0	NA	11.0	115.7
8L	81.6	NA	81.6	106.1	NA	NA	2.5	108.6
8L/LRT	81.6	NA	81.6	106.1	NA	7.8	NA	113.9

Table IV-7 (con't.)
1990 Travel Projections (x1000)-AM Peak Hour-COX

COX	DEMAND		USAGE									
AMPEAK-NB	VEH	PER	VEHICLES				PERSONS					
ALTERNATIVE			FWY LNS	HOV LNS	TOT	% DMD	FWY LNS	HOV LNS	LRT	EXP BUS	TOT	% DMD
TSM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LRT	7.0	10.9	NA	NA	NA	NA	NA	NA	2.1	NA	2.1	19
4L/LRT	7.0	10.7	3.6	NA	3.6	51	4.5	NA	1.9	NA	6.4	60
4L/LRT&HOV	7.0	10.5	3.6	1.5	5.1	73	3.6	3.3	1.7	NA	8.6	82
4L/BUS&HOV TRANSITWAY	6.9	11.2	3.6	1.5	5.1	74	3.6	3.3	NA	2.6	9.5	84
6L/BUS&HOV TRANSITWAY	6.9	11.1	5.1	1.5	6.6	95	5.1	3.3	NA	2.5	10.9	98
8L	7.2	9.5	7.2	NA	7.2	100	9.0	NA	NA	0.5	9.5	100
8L/LRT	7.1	10.7	7.1	NA	7.1	100	8.9	NA	1.8	NA	10.7	100

COX	DEMAND		USAGE									
AMPEAK-SB	VEH	PER	VEHICLES				PERSONS					
ALTERNATIVE			FWY LNS	HOV LNS	TOT	% DMD	FWY LNS	HOV LNS	LRT	EXP BUS	TOT	% DMD
TSM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LRT	1.8	2.4	NA	NA	NA	NA	NA	NA	0.1	NA	0.1	4
4L/LRT	1.8	2.4	1.8	NA	1.8	100	2.3	NA	0.1	NA	2.4	100
4L/LRT&HOV	1.8	2.4	1.4	0.4	1.8	100	1.4	0.4	0.1	NA	1.9	81
4L/BUS&HOV TRANSITWAY	1.8	2.3	1.8	NA	1.8	100	2.3	NA	NA	NIL	2.3	100
6L/BUS&HOV TRANSITWAY	1.8	2.3	1.8	NA	1.8	100	2.3	NA	NA	NIL	2.3	100
8L	1.8	2.3	1.8	NA	1.8	100	2.3	NA	NA	NIL	2.3	100
8L/LRT	1.8	2.4	1.8	NA	1.8	100	2.3	NA	0.1	NA	2.4	100

Table IV-7 (con't.)
1990 Travel Projections (x1000)
Daily (Weekday) Usage

NORTHBOUND-COX

ALTERNATIVE	VEHICLES FWY LNS 24HRS	VEHICLES HOV LNS 6HRS	VEHICLES TOTAL	PATRONAGE FWY LNS 24HRS	PATRONAGE HOV LNS 6HRS	PATRONAGE LRT 18HRS	PATRONAGE EXP BUS 6HRS	PATRONAGE TOTAL
TSM	NA	NA	NA	NA	NA	NA	NA	NA
LRT	NA	NA	NA	NA	NA	12.6	NA	12.6
4L/LRT	68.4	NA	68.4	88.9	NA	11.4	NA	100.3
4L/LRT&HOV	68.4	7.5	75.9	83.4	16.6	10.2	NA	110.2
4L/BUS&HOV TRANSITWAY	68.4	7.4	75.8	83.4	16.3	NA	13.0	112.8
6L/BUS&HOV TRANSITWAY	75.9	7.4	83.3	92.6	16.3	NA	12.5	121.4
8L	86.4	NA	86.4	112.3	NA	NA	2.5	114.8
8L/LRT	85.9	NA	85.9	111.7	NA	10.8	NA	122.5

1970 Travel Projections (x1000)-AM Peak Hour-STELLING

STELLING	DEMAND		USAGE									
AMPEAK-NB	VEH	PER	VEHICLES				PERSONS					
ALTERNATIVE			FWY LNS	HOV LNS	TOT	% DMD	FWY LNS	HOV LNS	LRT	EXP BUS	TOT	% DMD
TSM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LRT	8.5	13.1	NA	NA	NA	NA	NA	NA	2.5	NA	2.5	19
4L/LRT	8.5	13.0	3.8	NA	3.8	45	4.8	NA	2.4	NA	7.2	55
4L/LRT&HOV	8.5	12.7	3.8	1.8	5.6	66	3.8	4.0	2.1	NA	9.9	78
4L/BUS&HOV TRANSITWAY	8.4	13.7	3.8	1.8	5.6	67	3.8	4.0	NA	3.2	11.0	80
6L/BUS&HOV TRANSITWAY	8.4	13.6	5.6	1.8	7.4	88	5.6	4.0	NA	3.1	12.7	93
8L	8.7	11.6	7.5	NA	7.5	86	9.4	NA	NA	0.7	10.1	87
8L/LRT	8.6	13.1	7.5	NA	7.5	87	9.4	NA	2.3	NA	11.7	90

STELLING	DEMAND		USAGE									
AMPEAK-SB	VEH	PER	VEHICLES				PERSONS					
ALTERNATIVE			FWY LNS	HOV LNS	TOT	% DMD	FWY LNS	HOV LNS	LRT	EXP BUS	TOT	% DMD
TSM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LRT	1.7	2.2	NA	NA	NA	NA	NA	NA	0.1	NA	0.1	6
4L/LRT	1.7	2.2	1.4	NA	1.4	82	1.8	NA	0.1	NA	1.9	83
4L/LRT&HOV	1.7	2.2	1.3	0.4	1.7	100	1.3	0.8	0.1	NA	2.2	100
4L/BUS&HOV TRANSITWAY	1.7	2.1	1.7	NA	1.7	100	2.1	NA	NA	NIL	2.1	100
6L/BUS&HOV TRANSITWAY	1.7	2.1	1.7	NA	1.7	100	2.1	NA	NA	NIL	2.1	100
8L	1.7	2.1	1.7	NA	1.7	100	2.1	NA	NA	NIL	2.1	100
8L/LRT	1.7	2.2	1.7	NA	1.7	100	2.1	NA	0.1	NA	2.2	100

Table IV-7 (con't.)
1990 Travel Projections (x1000)
Daily (Weekday) Usage

NORTHBOUND-STELLING

	VEHICLES			PATRONAGE				
ALTERNATIVE	FWY LNS 24HRS	HOV LNS 6HRS	TOTAL	FWY LNS 24HRS	HOV LNS 6HRS	LRT 18HRS	EXP BUS 6HRS	TOTAL
TSM	NA	NA	NA	NA	NA	NA	NA	NA
LRT	NA	NA	NA	NA	NA	15.0	NA	15.0
4L/LRT	71.5	NA	71.5	93.0	NA	14.4	NA	107.4
4L/LRT&HOV	71.5	9.1	80.6	87.2	20.1	12.6	NA	119.9
4L/BUS&HOV TRANSITWAY	71.5	9.0	80.5	87.2	19.9	NA	16.0	123.1
6L/BUS&HOV TRANSITWAY	80.5	9.0	89.5	98.2	19.9	NA	15.5	133.6
8L	90.0	NA	90.0	117.0	NA	NA	3.5	120.5
8L/LRT	90.0	NA	90.0	117.0	NA	13.8	NA	130.8

Table IV-7 (con't.)
1990 Travel Projections (x1000)-AM Peak Hour-HOMESTEAD

HOMESTEAD	DEMAND		USAGE									
AMPEAK-NB	VEH	PER	VEHICLES				PERSONS					
ALTERNATIVE			FWY LNS	HOV LNS	TOT	% DMD	FWY LNS	HOV LNS	LRT	EXP BUS	TOT	% DMD
TSM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LRT	6.6	10.8	4.9	NA	4.9	74	6.1	NA	2.5	NA	8.6	80
4L/LRT	6.6	10.7	4.9	NA	4.9	74	6.1	NA	2.4	NA	8.5	80
4L/LRT&HOV	6.6	10.4	4.9	1.4	6.3	96	4.9	3.1	2.1	NA	10.1	98
4L/BUS&HOV TRANSITWAY	6.6	11.0	4.9	1.4	6.3	96	4.9	3.1	NA	2.7	10.7	98
6L/BUS&HOV TRANSITWAY	6.6	11.0	5.2	1.4	6.6	100	5.2	3.1	NA	2.7	11.0	100
8L	6.7	8.7	5.6	NA	5.6	84	7.0	NA	NA	0.3	7.3	84
8L/LRT	6.6	10.6	5.6	NA	5.6	85	7.0	NA	2.3	NA	9.3	88

HOMESTEAD	DEMAND		USAGE									
AMPEAK-SB	VEH	PER	VEHICLES				PERSONS					
ALTERNATE			FWY LNS	HOV LNS	TOT	% DMD	FWY LNS	HOV LNS	LRT	EXP BUS	TOT	% DMD
TSM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LRT	2.2	2.9	2.2	NA	2.2	100	2.7	NA	0.1	NA	2.9	100
4L/LRT	2.2	2.9	2.2	NA	2.2	100	2.8	NA	0.1	NA	2.9	100
4L/LRT&HOV	2.2	2.9	1.7	0.5	2.2	100	1.7	1.0	0.1	NA	2.9	100
4L/BUS&HOV TRANSITWAY	2.2	2.8	2.2	NA	2.2	100	2.8	NA	NA	NIL	2.8	100
6L/BUS&HOV TRANSITWAY	2.2	2.8	2.2	NA	2.2	100	2.8	NA	NA	NIL	2.8	100
8L	2.2	2.8	2.2	NA	2.2	100	2.8	NA	NA	NIL	2.8	100
8L/LRT	2.2	2.9	2.2	NA	2.2	100	2.8	NA	0.1	NA	2.9	100

Table IV-7 (con't.)
1990 Travel Projections (x1000)
Daily (Weekday) Usage

NORTHBOUND-HOMESTEAD

	VEHICLES			PATRONAGE				
ALTERNATIVE	FWY LNS 24HRS	HOV LNS 6HRS	TOTAL	FWY LNS 24HRS	HOV LNS 6HRS	LRT 18HRS	EXP BUS 6HRS	TOTAL
TSM	NA	NA	NA	NA	NA	NA	NA	NA
LRT	63.7	NA	63.7	82.8	NA	15.0	NA	97.8
4L/LRT	63.7	NA	63.7	82.8	NA	14.4	NA	97.2
4L/LRT&HOV	63.7	7.1	70.8	77.7	15.6	12.6	NA	105.9
4L/BUS&HOV TRANSITWAY	63.7	7.1	70.8	77.7	15.6	NA	13.5	106.8
6L/BUS&HOV TRANSITWAY	65.1	7.1	72.2	79.4	15.6	NA	13.5	108.5
8L	67.2	NA	67.2	87.4	NA	NA	1.5	88.9
8L/LRT	67.2	NA	67.2	87.4	NA	13.8	NA	101.2

C. COST EFFECTIVENESS

Cost effectiveness measures are of critical concern to the decision-makers. They represent the "bottom line" of the comparative project worth. These measures are intended to relate costs to goal attainment. In practice, they typically relate costs of effectiveness in terms of transit system and the patronage.

Table IV-8 presents the cost effectiveness data for each of the Highway alternatives.

TABLE IV-8

ANNUAL HIGHWAY COST EFFECTIVENESS MEASURES (1985 DOLLARS)

	HIGHWAY				
	COSTS			USAGE	COSTS
Alternatives	Annualized Capital ($M)	Operation Maintenance ($M)	Total ($M)	Passenger Miles (M)	Cents/ Passenger Mile
NPA	0	0	--	0	--
TSM	NA	NA	--	NA	--
LRT	NA	NA	--	NA	--
4FWY with LRT	25.1	1.1	26.2	453.7	5.8
4FWY with HOV & LRT	28.7	1.1	29.8	578.2	5.2
4FWY with Bus/HOV	30.2	1.1	31.3	604.9	5.2
6FWY with Bus/HOV	31.6	1.1	32.7	719.9	4.5
8FWY	28.7	1.1	29.8	684.2	4.4
8FWY with LRT	28.7	1.1	29.8	655.1	4.5

Table IV-9 presents the cost effectiveness data for the Transit element of each of the alternatives.

TABLE IV-9

ANNUAL TRANSIT COST EFFECTIVENESS MEASURES
(1985 DOLLARS)

	TRANSIT					
	COSTS and REVENUES				USAGE	COSTS
Alternatives	Annualized Capital ($M)	Operation & Maintenance ($M)	Revenue ($M)	Net Cost ($M)	Passenger Miles (M)	Cents/ Passenger Mile
NPA	0	0	0	--	0	--
TSM	3.9	22.7	15.7	10.9	106.4	10.3
LRT	19.1	6.7	3.0	22.8	57.7	39.5
4FWY with LRT	9.6	6.7	2.8	13.5	53.5	25.1
4FWY with HOV & LRT	9.6	6.7	2.5	13.8	48.1	28.6
4FWY with Bus/HOV	3.8	15.8	2.2	17.4	37.7	46.2
6FWY with Bus/HOV	3.8	15.8	2.1	17.5	36.0	48.7
8FWY	0.8	6.9	0.7	7.0	12.6	55.2
8FWY with LRT	9.6	6.7	2.8	13.5	53.0	24.4

Table IV-10 presents the combined Highway and Transit cost effectiveness data for each of the alternatives.

TABLE IV-10

ANNUAL COMBINED COST EFFECTIVENESS MEASURES

ALTERNATIVE	HIGHWAY Cost per Passenger Mile (cents)	TRANSIT Cost per Passenger Mile (cents)	COMBINED* Cost per Passenger Mile (cents)
NPA	--	--	--
TSM	--	10.3	10.3
LRT	--	39.5	39.5
4FWY with LRT	5.8	25.1	7.8
4FWY with HOV & LRT	5.2	28.6	7.0
4FWY with Bus/HOV	5.2	46.2	7.6
6FWY with Bus/HOV	4.5	48.7	6.6
8FWY	4.4	55.2	5.3
8FWY with LRT	4.5	25.4	6.1

* The combined costs are not additive but are based on annual cost per alternative and annual passenger miles travelled. The highway costs do not include the operation and maintenace costs incurred by the motorist.

Table IV-11 presents the cost effectiveness measures for each of the three LRT segments, assuming only that segment is constructed. As mentioned previously, Miyuki Drive to the Mountain View CalTrain station is the primary segment for this study. However, it is believed that even if a short segment (e.g., to Stevens Creek Boulevard) is constructed, the system should be viewed in the context of the entire loop eventually being constructed.

For the maintenance and operational cost of Bus and LRT, see Section F of this chapter.

3. Revenue

a) Transit revenue is based on annual passenger trips developed from computer generated AM peak hour transit passenger miles for alternatives containing transit.

b) LRT corridor trip length is 16.1 miles and express bus corridor trip length is 17.1 miles. TSM daily trip lengths are 2.25 miles for additional local buses and 9.73 miles for additional express buses.

c) Peak hour factor for LRT is 16.6% of daily (19 hour weekday) usage and daily weekend usage is 25% of daily weekday usage (286 weekdays per year).

Peak hour factor for express buses is 20.0% of daily (6 hour weekday) usage and no express buses are assumed to operate on weekends.

d) Fares are $1.00 per express bus trip, $0.60 per local bus trip and $0.85 per LRT trip (1985 $'s).

4. Usage

Annual passenger miles developed from computer model generated AM peak hour transit passenger miles and highway vehicle miles for the Route 85 corridor between Stevens Creek Boulevard in Cupertino and Route 101 in south San Jose. Table IV-12, 1990 Travel Projections, show the two way AM peak hour passenger and vehicle miles for the various alternatives.

TABLE IV-12
1990 TRAVEL PROJECTIONS AM PEAK HOUR TWO WAY
PASSENGER AND VEHICLE MILES (X1000)

	HIGHWAY			TRANSIT		
Alternative	Vehicle Miles FWY Lanes	HOV Lanes	TOTAL	Passenger Miles LRT	BUS	TOTAL
NPA	0	0	0	NA	--	NA
TSM	--	--	NA	--	64.2	64.2
LRT	--	--	NA	33.6	--	33.6
4FWY with LRT	83.1	--	83.1	31.2	--	31.2
4FWY with HOV and LRT	78.7	27.2	105.9	28.0	--	28.0
4FWY with Bus/HOV	83.6	27.2	110.8	--	29.0	29.0
6FWY with Bus/HOV	104.1	27.2	131.3	--	27.7	27.7
8FWY	125.3	--	125.3	--	9.7	9.7
8FWY with LRT	124.9	--	124.9	30.9	--	30.9

Notes: Projections for the Route 85 corridor between Stevens Creek Boulevard/Route 280 in Cupertino and Route 101 in south San Jose. Projections with LRT assume the other LRT segments completing the "Loop" are in place and operational.
LRT operates from Miyuki Drive to Stevens Creek Boulevard (16.1 miles) in both directions. Express Buses in peak direction (NB) from Rute 101 to Stevens Creek Boulevard (17.1 miles) and in off peak direction (SB) in mixed flow between Saratoga Avenue and Route 101.

D. FINANCIAL FEASIBILITY

The selected alternative may contain two elements, highway and transit. Highway elements will be constructed using funds generated by Measure "A", a Santa Clara County 1/2 cent sales tax allocated to the improvement of specific highways, one of which is Route 85. FHWA funding will also be sought for highway construction if necessary and State funds if available. FHWA funding participation will be decided by the Measure "A" Traffic Authority.

If TSM is selected as the preferrred alternaive, it would be funded by local, State and/or Federal monies. If the selected alternative includes transit as one of the transportation modes, the geometrics will accommodate the transit portion, whether it is LRT or a Bus/HOV transitway. It would not delay the construction of the roadway. (If the selected transit is LRT, the entire LRT associated cost would be sought from UMTA following an Alternatives Analysis). If the selected alternative contains the Bus/HOV transitway, UMTA funding would be sought for the transit portion, which includes the costs for the buses, maintenance facility and the stations. The transitway portion will be considered as part of the highway element (used by HOVs) and would be funded by Measure "A", FHWA monies if necessary, and State funds if available. A detailed cost breakdown is contained in Section V.B.4 under Total Project Costs, on page V-43. Table IV-13 indicates the funding sources for all the alternatives.

TRANSPORTATION STUDIES RTE 85

FUNDING SOURCES*

A - MEASURE "A"   B - UMTA

ALTERNATIVE	CONSTRUCTION COST HIGHWAY	TRANSITWAY	TRANSIT	R/W COST ALIGNMENT	UTILITY RELOC.	PARK & RIDE	BUS OR LRT VEHICLES
NO PROJECT	--	--	--	--	--	--	--
T S M (5)	(5)	--	B	--	--	(5)	B
L R T	A	--	B	B	B	B	B
4 LN. FREEWAY W/ LRT	A	--	B	A	A	A,B	B
4 LN. FREEWAY W/ HOV & LRT	A	--	B	A	A	A,B	B
4 LN. FREEWAY W/ BUS & HOV	A	A	B	A	A	A	B
6 LN. FREEWAY W/ BUS & HOV	A	A	B	A	A	A	B
8 LN. FREEWAY	A	--	--	A	A	A	--
8 LN. FREEWAY W/ LRT	A	--	B	A	A	A,B	B

* FHWA, STATE AND LOCAL FUNDS TO BE REQUESTED IF NECESSARY.

NOTES:

1- LRT TRANSIT COST INCLUDES TRACK WORK & ELECTRIFICATION, COMMUNICATION, STATIONS AND STRUCTURES.

2- BUS TRANSIT COST INCLUDES STATIONS AND MAINTENANCE FACILITY.

3- TRANSITWAY CONSTRUCTION COST IS FOR THE ROADWAY PORTION (INCLUDING STRUCTURES) ONLY.

4- PARK AND RIDE INCLUDES R/W AND CONSTRUCTION COSTS.

5- TSM MEASURE "A" FUNDS TO BE USED ON EXISTING ROUTES 85, 237 AND 101

V. PROJECT ALTERNATIVES AND COSTS

A. PROJECT ALTERNATIVES

This chapter contains a description of all the alternatives and their associated costs. These alternatives were finalized in June 1984 by the Route 85 Policy Advisory Board and with the public's input. State and Federal policy require that a No Project Alternative (NPA) and Transportation System Management (TSM) alternative be considered along with the major facility improvement alternatives.

Included in this chapter are sections describing each alternative, their shared characteristics and project data. This project data includes such items as right of way costs, construction costs, vehicle requirements and costs, operation and maintenance costs, construction phasing, and conversion costs.

1. NO PROJECT ALTERNATIVE

The No Project Alternative (NPA) means doing nothing within the Route 85 transportation corridor. No transportation related facilities, other than those already planned, such as the Guadalupe Corridor, would be built. The NPA is used as a bench mark for comparison of the other alternatives.

As a result of selecting the NPA, Caltrans would sell the right of way it currently owns. This would allow the development of the corridor to the extent the individual cities would allow. It would also allow Caltrans to use the right of way sale proceeds for other transportation projects <u>throughout</u> the state. The current estimated value of the Caltrans owned right of way in 1984 dollars is $85,000,000.

2. TRANSPORTATION SYSTEM MANAGEMENT

This alternative, Transportation System Management (TSM), would be relatively low cost and would be designed to maximize the utilization of the existing facilities. The alternative would include improvements to public transportation facilities, purchase of additional buses, promotion of vanpools, construction of park and ride facilities, preferential parking for carpools and vanpools, and pedestrian and bicycle facilities. Highway operational improvements, such as localized widenings, High Occupancy Vehicle (HOV) lanes, computerized traffic control systems, improved signalization, channelization, and restriping would also be included. The currently owned Caltrans right of way would be sold.

Over the past 20 years, due to the limited funding, most of the transportation improvements in Santa Clara County have been "TSM-like" measures. However, additional measures can be taken.

The following TSM measures were suggested by the local cities along the Route 85 corridor as well as by the Santa Clara County Transit District. These suggestions have been grouped into four categories: those covered by Measure "A"; those that are TSM transit improvements; those already in the five year State Transportation Improvement Plan (STIP); and those that are TSM highway improvements.

Measure "A"

These items and their associated costs will not be considered part of the TSM alternative because they will be studied under the Measure "A" portions of Route 101, 237 and 85 north of Stevens Creek Boulevard projects. The code in front of the description refers to that particular project on Figure V-1, TSM Alternatives, on page V-4.

A1 Construct the Mary Avenue extension past State Route 237.

A2 Construct a Mathilda Avenue/State Route 237 overcrossing to bypass the existing signals.

A3 Institution or addition of HOV lanes on Routes 101, 85, and 237.

A4 Grade separate the State Route 237/Middlefield Road interchange.

A5 Widen the existing ramp from northbound State Route 85 to northbound Route 101 to provide two lanes of traffic.

A6 Add ramp metering on Route 101 at various locations.

TSM Transit Capital Improvements

The 1985 estimates of capital costs for these measures are $ 50 Million. Transit improvements are constantly being studied, revised, and implemented by the state, Metropolitan Transportation Commisssion, local entities, and transit operators and businesses. The following items are examples of the types of transit improvements that have been suggested by the Technical Advisory Committee.

Increase the promotion of car and vanpools.

Increase the level of service of CalTrain. (Although this is a transit management proposal, the heavy

ROUTE 85
WEST VALLEY TRANSPORTATION CORRIDOR
TRANSPORTATION SYSTEM MANAGEMENT

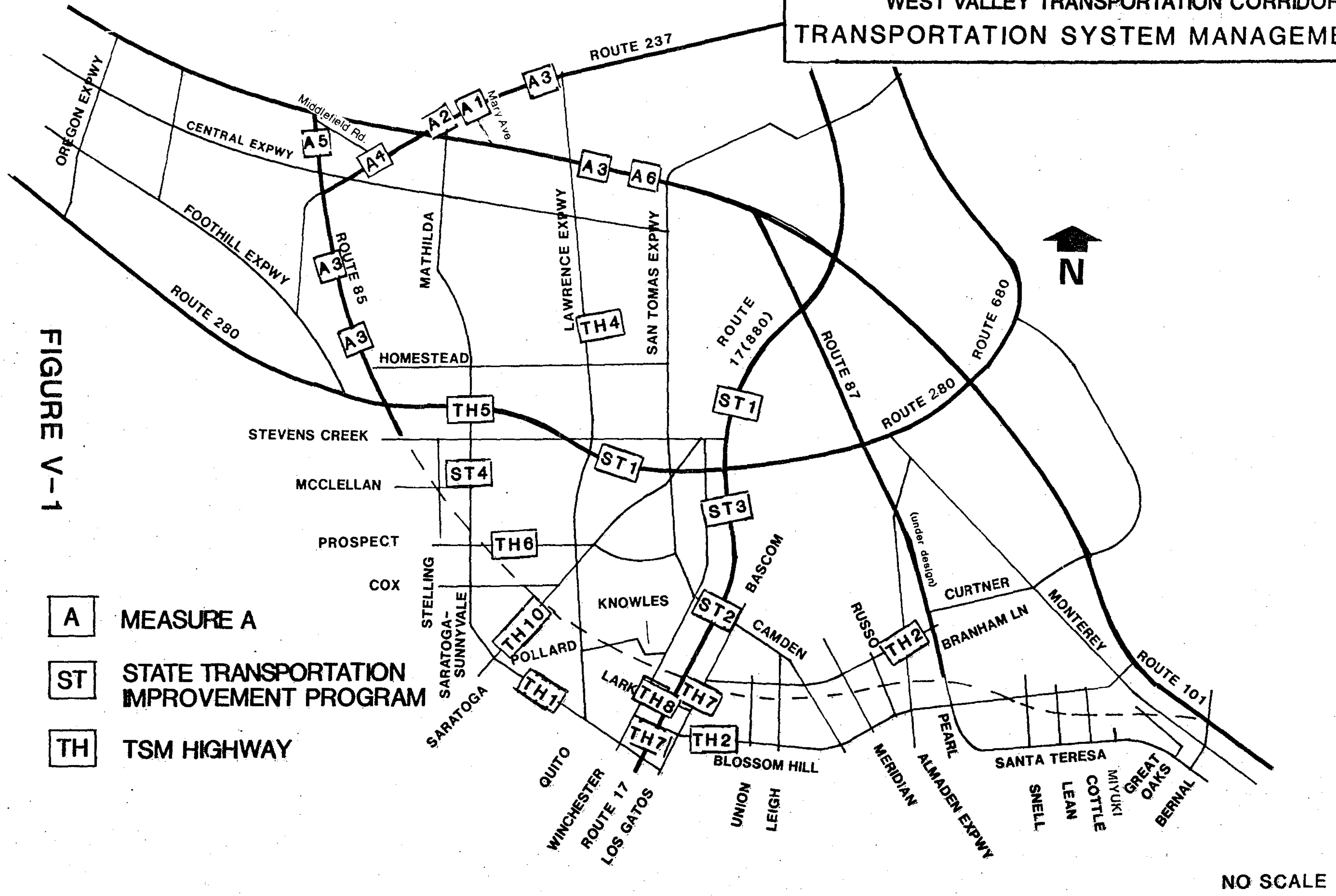


FIGURE V-1

cost of this proposal disallows it from being incorporated into the TSM cost estimate.

Increase the number of feeder, local and express buses as proposed under Santa Clara County Transit's projected 750 bus fleet system.

Provide additional Park and Ride facilities in the county to promote transit use.

<u>State Transportation Improvement Plan (STIP)</u>

Caltrans has already made provisions for these proposals in the STIP. Their cost, which is approximately $35 million, is not included in the TSM cost estimate.

ST1 Institution or addition of HOV lanes on Routes 280, 880, and 17. (Route 17 is renumbered to Route 880 north of the Route 17/Route 280 interchange).

ST2 Improve the Camden Avenue/State Route 17 interchange.

ST3 Provide additional capacity on northbound Route 17/880 to alleviate the present bottlenecks.

ST4 Stripe for a two-way left turn median on De Anza Boulevard between Rainbow Drive and Prospect Avenue.

<u>TSM Highway Improvements</u>

The 1985 estimated capital cost for the following measures is $15 Million.

TH1 Spot widening of Saratoga Avenue (Route 9) from 2 to 4 lanes between Massol Avenue in Los Gatos to Ridgecrest Avenue in Monte Sereno.

TH2 Elimination of on-street parking, reduced sidewalk width, and intersection restriping for additional capacity at locations along Branham Lane and Blossom Hill Road.

TH3 Synchronization of traffic signal at various intersections in the corridor to facilitate traffic movement.

TH4 Provide HOV lanes on the Lawrence Expressway from north of State Route 237 to south of Prospect Road. (This improvement is in the County 5 Year Plan, therefore the cost is not included in the TSM highway improvement).

TH5 Widen the De Anza Boulevard/Route 280 overcrossing to provide an additional through lane.

TH6 Provide double left turn lanes from southbound De Anza to eastbound Prospect.

TH7 Construct an interchange at Blossom Hill Road and State Route 17.

TH8 Widen Lark Avenue overcrossing over State Route 17; install signal at northbound State Route 17/Lark Avenue on- & off-ramps.

TH9 Widen Los Gatos Boulevard/South Bascom Avenue between Lark Avenue and Samaritan Drive.

TH10 Widen Saratoga Avenue between Los Gatos Boulevard and Santa Cruz Avenue to provide adequate merge distances.

Many of these suggestions, as well as other planned improvements, were incorporated into the analytical model that was used for the Guadalupe Corridor in 1990. (For more information about the model, see the "Guadalupe Corridor Working Paper 4, for Discussion Purposes: Travel Model Assumptions, Volume II," 1980). This "Guadalupe 1990 Build" has become the Route 85 West Valley Corridor "No Project Alternative" (NPA). Because many TSM measures were incorporated into the "Guadalupe 1990 Build" model, the effect of the TSM alternative on the transportation network would be relatively similar to the NPA.

3. ALTERNATIVE CHARACTERISTICS

The following characteristics will be found in the appropriate alternative. Typical alternative cross sections are shown in Figure V-2. All dimensions are subject to change and will be finalized during final design of the selected alternative.

HIGHWAY ALTERNATIVES

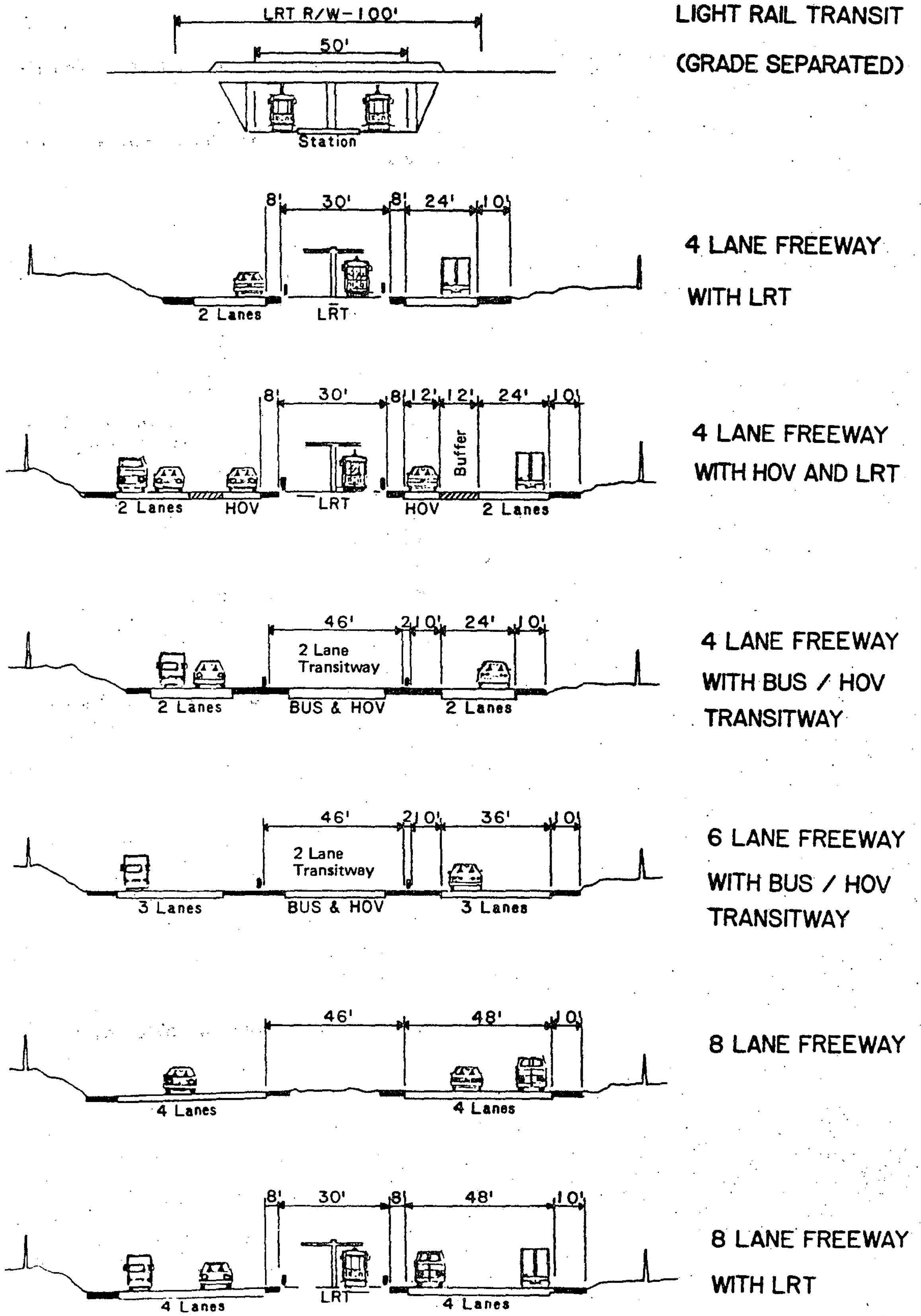
All would be grade separated, access controlled freeways, either 4, 6, or 8 lanes.

All would have metered on-ramps.

All on-ramps would have bus and carpool bypass lanes.

All would include the reconstruction of the Route 85/Route 87 overlap from a 4 lane expressway to a grade separated freeway. The number of lanes will be determined during final design of the selected alternative.

All would extend Route 85 to Route 101.



ROUTE 85 FIGURE V-2
WEST VALLEY TRANSPORTATION CORRIDOR
ALTERNATIVE TYPICAL SECTIONS

subject to change

All would include the construction of park and ride facilities.

All would include a 46 foot wide median suitable for future transit and/or HOV facilities.

BUS/HOV TRANSITWAY

Two lanes in the median.

Peak directional operation only -- reversible lanes.

2+ HOV's and buses only.

Intermediate access at various locations. Figure V-3 indicates a typical Bus/HOV intermediate access facility.

Reverse commute in mixed flow freeway lanes.

Extensive feeder bus system to stations.

Convertible to rail when warranted by patronage.

Park and ride facilities at stations.

All facilities will be accessible to the elderly and handicapped.

LIGHT RAIL TRANSIT

Grade separated right-of-way.

Bi-directional operation.

Extensive feeder bus system to stations.

Park and ride facilities at stations.

All facilities will be accessible to the elderly and handicapped.

HIGH OCCUPANCY VEHICLE LANES

2+ HOV's and buses only.

Limited intermediate access.

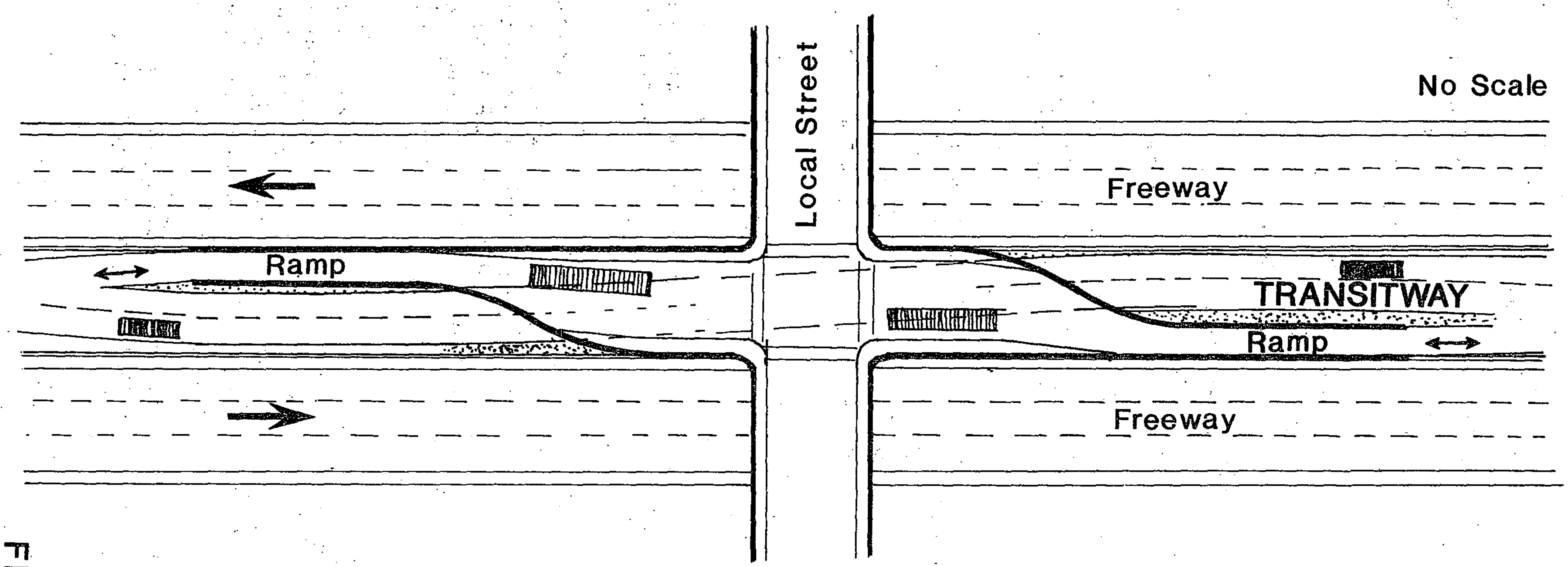
Buffered from number one freeway lane.

No stations or station access.

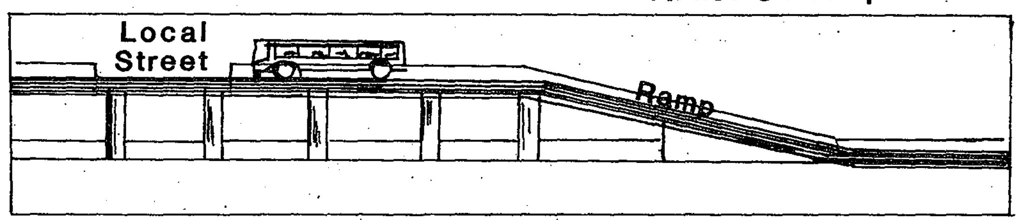
PARK AND RIDE FACILITIES

All facilities will have a minimum of 100 parking spaces.

Transitway is reversible allowing for peak direction flow.



Artist Conception



Section through ramp

FIGURE V-3

TRANSITWAY ACCESS

Parking is assumed to be free of charge.

All facilities will be accessible to the elderly and handicapped.

TRANSIT STATIONS

Figure V-4 depicts typical rail and bus stations.

All bus stations will be convertible to rail.

All stations will have center platforms.

A barrier free fare collection system will be used.

Each station will be handicapped accessible. Elevators, escalators, stairways, and pedestrian walkways would enable all potential patrons to access the transit system.

Station platforms will be designed to accommodate all projected patronage demand.

An improved county bus system would be implemented to provide extensive feeder bus service to the station areas.

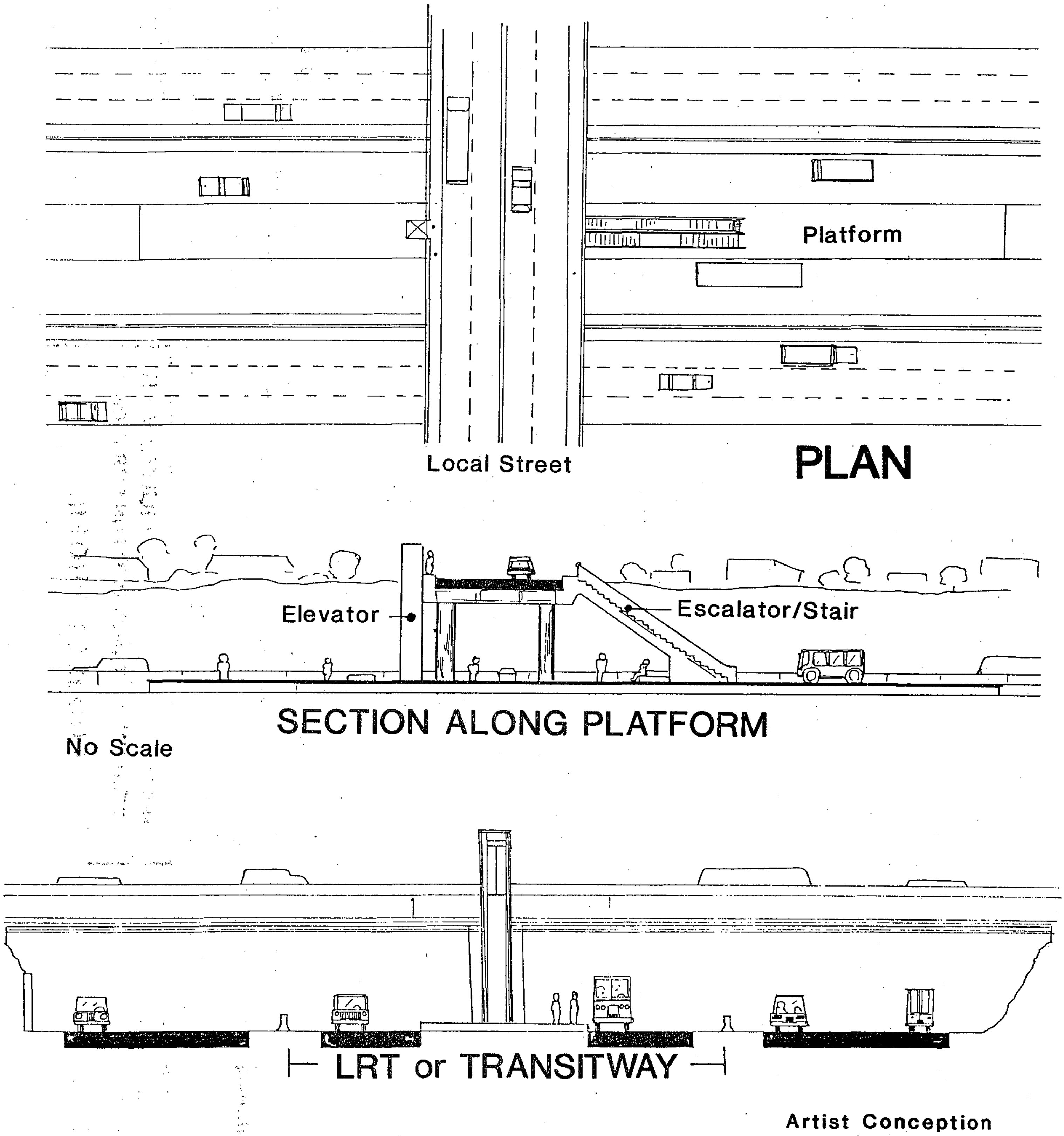
PROFILE

All of the construction alternatives will use the same vertical profile as depicted in Figure V-5. The exact vertical alignment will be determined during final design of the selected alternative.

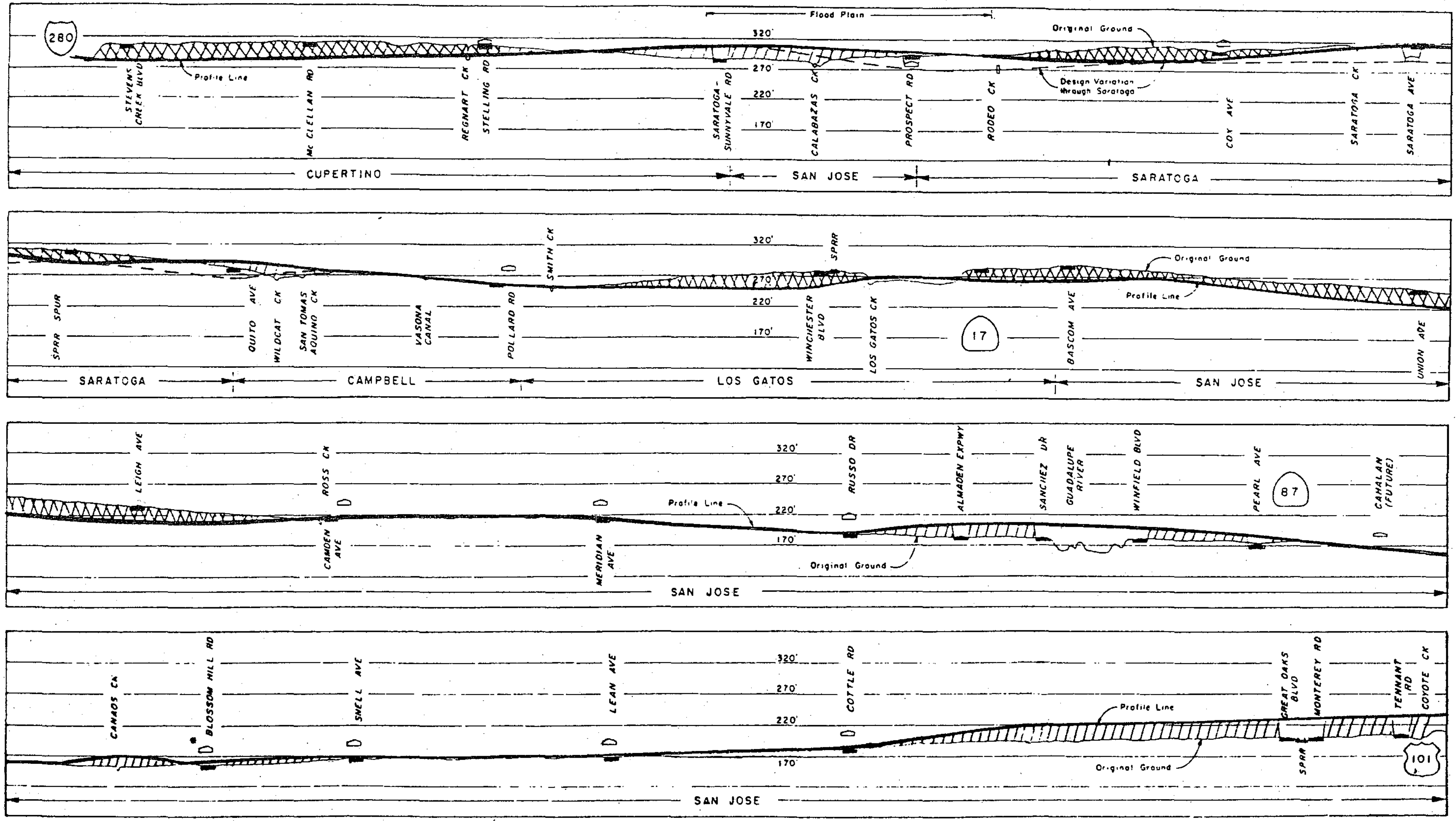
The "Base" profile meets the engineering requirements of Caltrans and the wishes of the cities except Saratoga through which the project passes. This profile was developed to be compatible with whichever mode or modes (either highway, Bus/HOV, or LRT) are selected as the preferred alternative. In addition, a profile design variation through the City of Saratoga is studied. This design variation is discussed on page V-32.

This profile is comprised of ¯5.8 miles of at grade, ¯5.9 miles of above grade construction, and ¯6.2 miles of below grade construction. This combination of vertical alignments provides a gently rolling facility without any grades greater than 3%. This vertical alignment will be applicable for all of the alternatives including LRT.

Table V-1 lists the interchanges and grade separations which would be necessary for all of the alternatives except the NPA or TSM.



TYPICAL BUS OR RAIL STATION
FIGURE V-4



* Constructed under Guadalupe Corridor Project

Proposed Street Relocation

Existing Street

Fill

Excavation

SCALE IN FEET
0 750 1500 2250

ROUTE 85 **FIGURE V-5**

WEST VALLEY TRANSPORTATION CORRIDOR

PROJECT PROFILE

TABLE V-1
MAJOR STRUCTURE LOCATIONS

LOCATIONS	ALL ALTERNATIVES (except NPA and TSM) OVER (2)	UNDER	FREEWAY (1) INTERCHANGE YES/NO
Route 101	X		YES
Bernal Road/Tennant Ave.	X		YES
Monterey Road	X		NO
Great Oaks Boulevard/ Southern Pacific R.R.	X		YES
Cottle Road		X	YES
Lean Avenue		X	NO
Snell Avenue		X	NO
Blossom Hill Road		X	YES
Branham Lane		X	NO (5)
State Route 87			YES
Pearl Avenue			YES
Winfield Boulevard	X		NO
Guadalupe River	X		NO
Sanchez Drive	X		NO
Almaden Expressway	X		YES
Russo Drive		X	NO
Meridian Avenue		X	NO
Camden Avenue		X	YES
Leigh Avenue		X	NO
Union Avenue		X	YES
Bascon Avenue		X	YES
Lark Avenue		X	YES
State Route 17		X	YES
Knowles Drive	X		NO
Los Gatos Creek	X		NO
Southern Pacific RR		X	NO
Winchester Boulevard		X	YES
Pollard Road		X	NO (3)
Quito Avenue	X		YES
Southern Pacific RR		X	
Saratoga Avenue	X	(4)	YES
Saratoga Creek	X	(4)	NO
Cox Avenue		X	NO
Prospect Road	X	(4)	YES
Calabazas Creek	X	(4)	NO
Saratoga-Sunnyvale Road	X		YES
Stelling Road		X	NO
McClellan Road		X	NO
Stevens Creek Boulevard		X	YES

(1) The LRT only alternative will be grade separated between Route 87 and the existing interchange at Stevens Creek Boulevard.
(2) Over and Under refers to the freeway profile.
(3) Pollard would be a 1/2 interchange with the Bus/HOV alternatives.
(4) Saratoga Design Variation only.
(5) Route 87 interchange

Figures V-6 through V-9 depict the proposed interchange and station locations for the various alternatives.

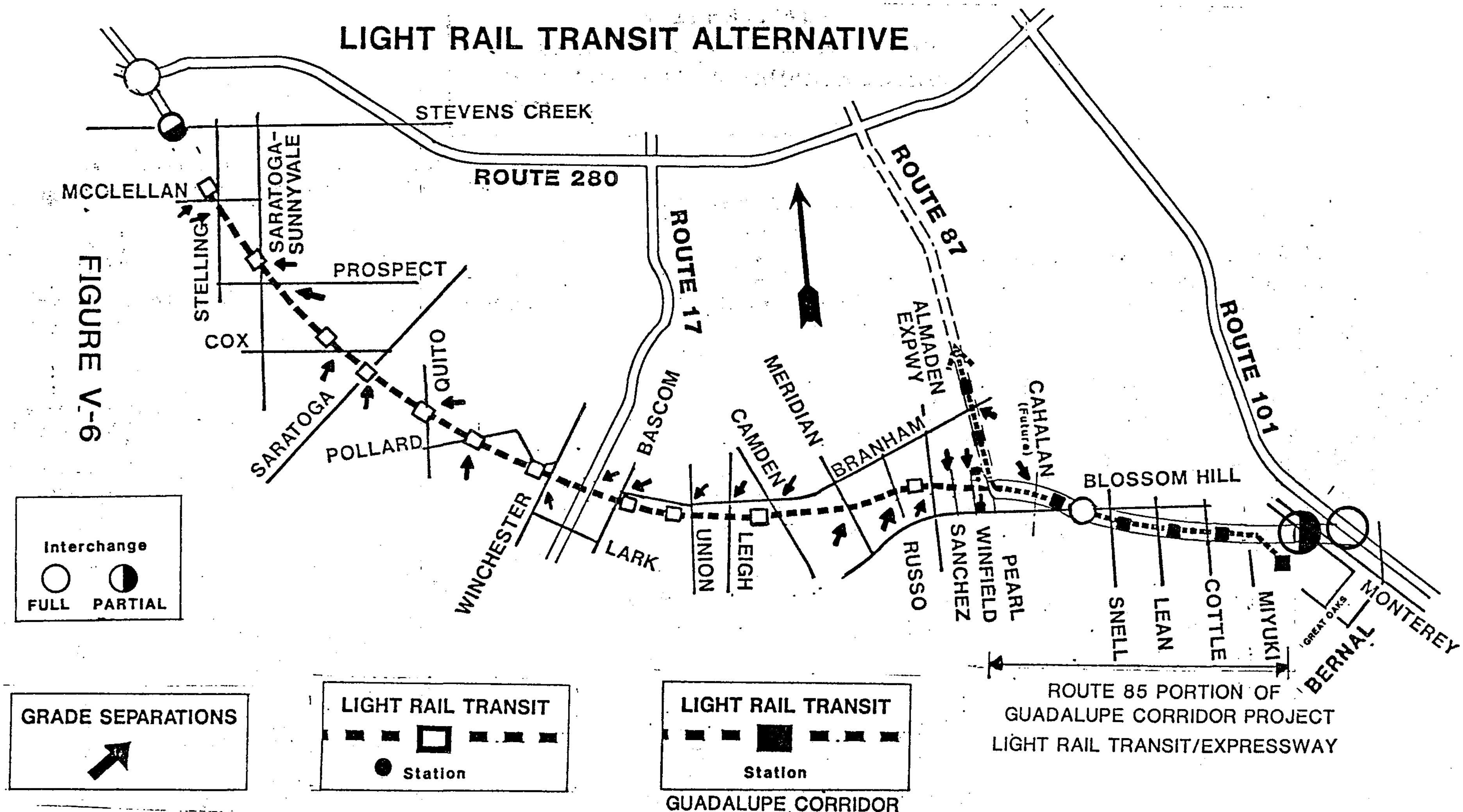
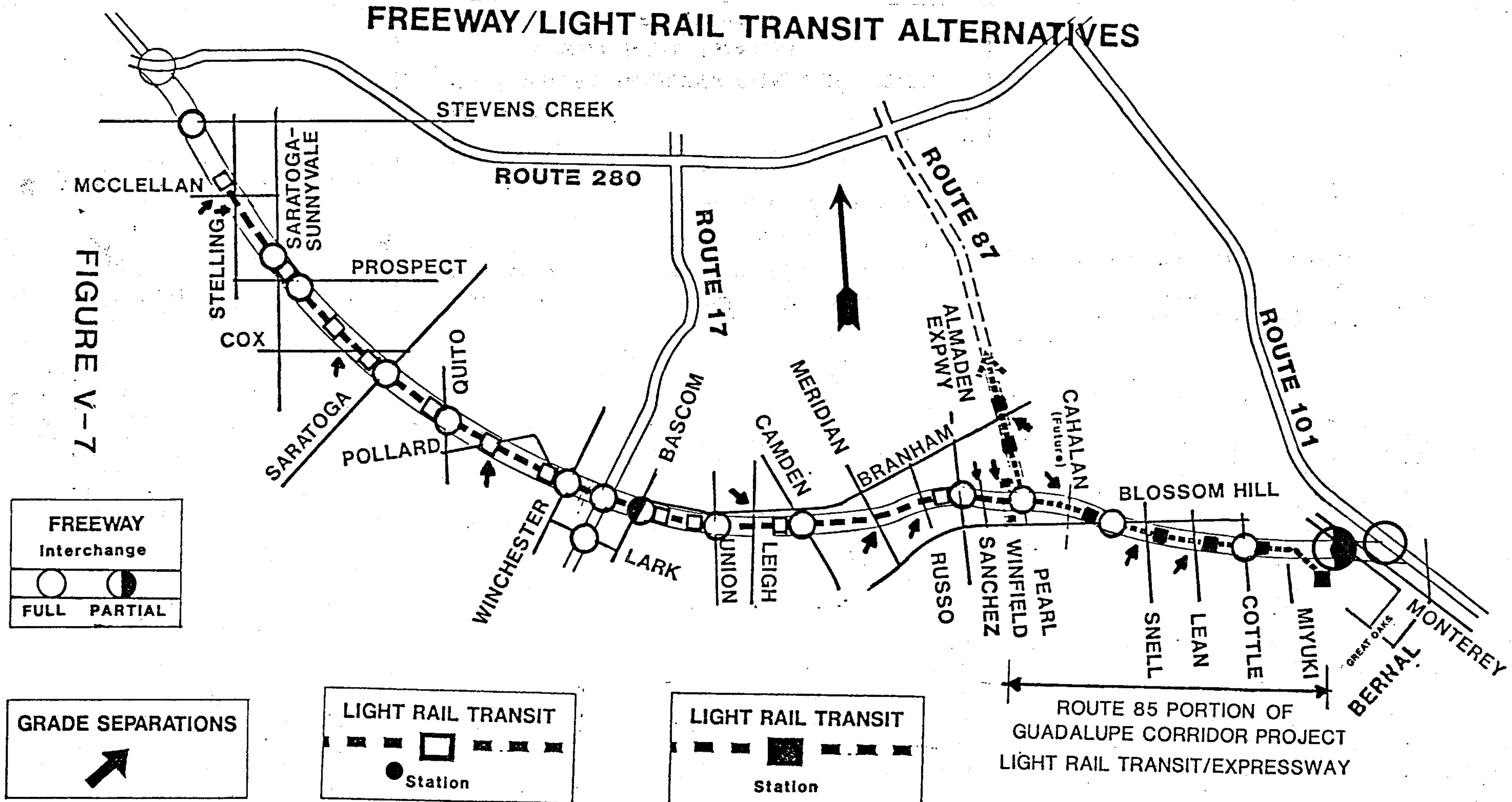


FIGURE V-6

● Route 85 station locations for estimating purposes only.
Exact location determined under subsequent transit studies.

ROUTE 85
WEST VALLEY TRANSPORTATION CORRIDOR
LIGHT RAIL TRANSIT
ALTERNATIVE

FREEWAY/LIGHT RAIL TRANSIT ALTERNATIVES



● Route 85 station locations for estimating purposes only.
Exact location determined under subsequent transit studies.

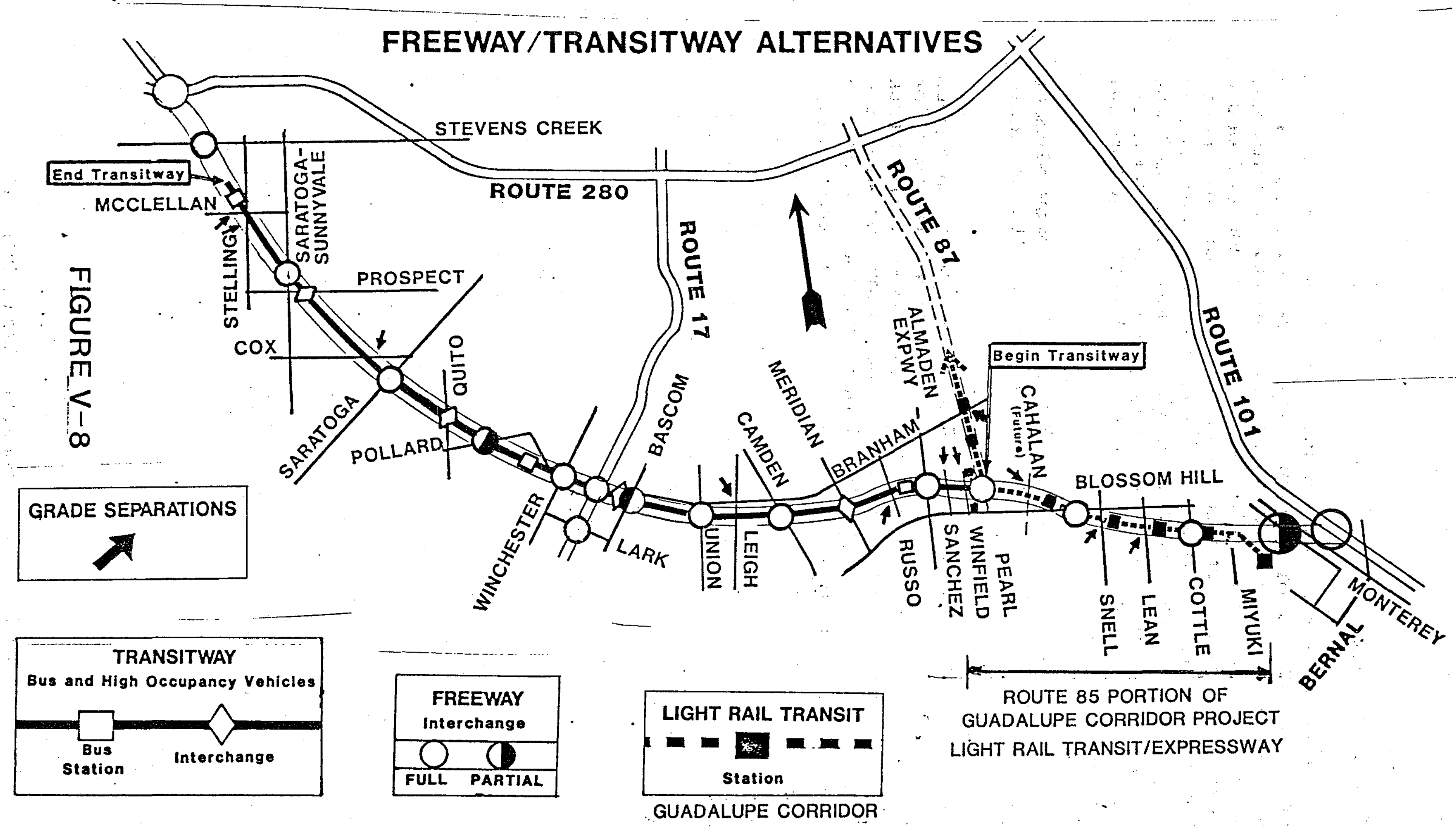
ROUTE 85
WEST VALLEY TRANSPORTATION CORRIDOR
FREEWAY / LIGHT RAIL TRANSIT ALTERNATIVES

4. LIGHT RAIL TRANSIT

The Light Rail Transit (LRT) alternative will provide for an exclusive grade-separated right-of-way, trackage, signals, vehicles, and stations for a bi-directional LRT system within the Route 85 corridor study limits. The Route 85 corridor LRT would include extending the Guadalupe Corridor LRT, from the Route 85/Route 87 interchange in San Jose to Stevens Creek Boulevard in Cupertino, a distance of approximately 12 miles. The LRT may meander within the existing right of way so as to reduce its impact on the surrounding areas. Figure V-_ depicts a typical cross section of this alternative.

This alternative would also extend the Route 85 roadway element portion of the Guadalupe Corridor project to Route 101 in south San Jose.

The 1985 costs are estimated to be $290 million which includes right of way. If the LRT only alternative is chosen, funding for LRT construction would not use highway funds. Because the State has already acquired approximately 60% of the right of way with the use of highway funds, the State's highway fund would have to be reimbursed prior to the construction of the LRT alternative.



ROUTE 85
WEST VALLEY TRANSPORTATION CORRIDOR
FREEWAY / TRANSITWAY
ALTERNATIVES

4. LIGHT RAIL TRANSIT

The Light Rail Transit (LRT) alternative will provide for an exclusive grade-separated right-of-way, trackage, signals, vehicles, and stations for a double-tracked LRT system within the Route 85 corridor study limits. The Route 85 corridor LRT would include extending the Guadalupe Corridor LRT, from the Route 85/Route 87 interchange in San Jose to Stevens Creek Boulevard in Cupertino, a distance of approximately 12 miles. The LRT may meander within the existing right of way so as to reduce its impact on the surrounding areas. Figure V-10 depicts a typical cross section of this alternative.

This alternative would also extend the Route 85 roadway element portion of the Guadalupe Corridor project to Route 101 in south San Jose.

The 1985 cost is estimated to be $300 million which includes right of way. If the LRT only alternative is chosen, funding for LRT construction would not use highway funds. Because the State has already acquired approximately 60% of the right of way with the use of highway funds, the State's highway fund would have to be reimbursed prior to the construction of the LRT alternative. In addition, the State may sell the excess right of way which would not be needed for the construction of this alternative.

FREEWAY ALTERNATIVES

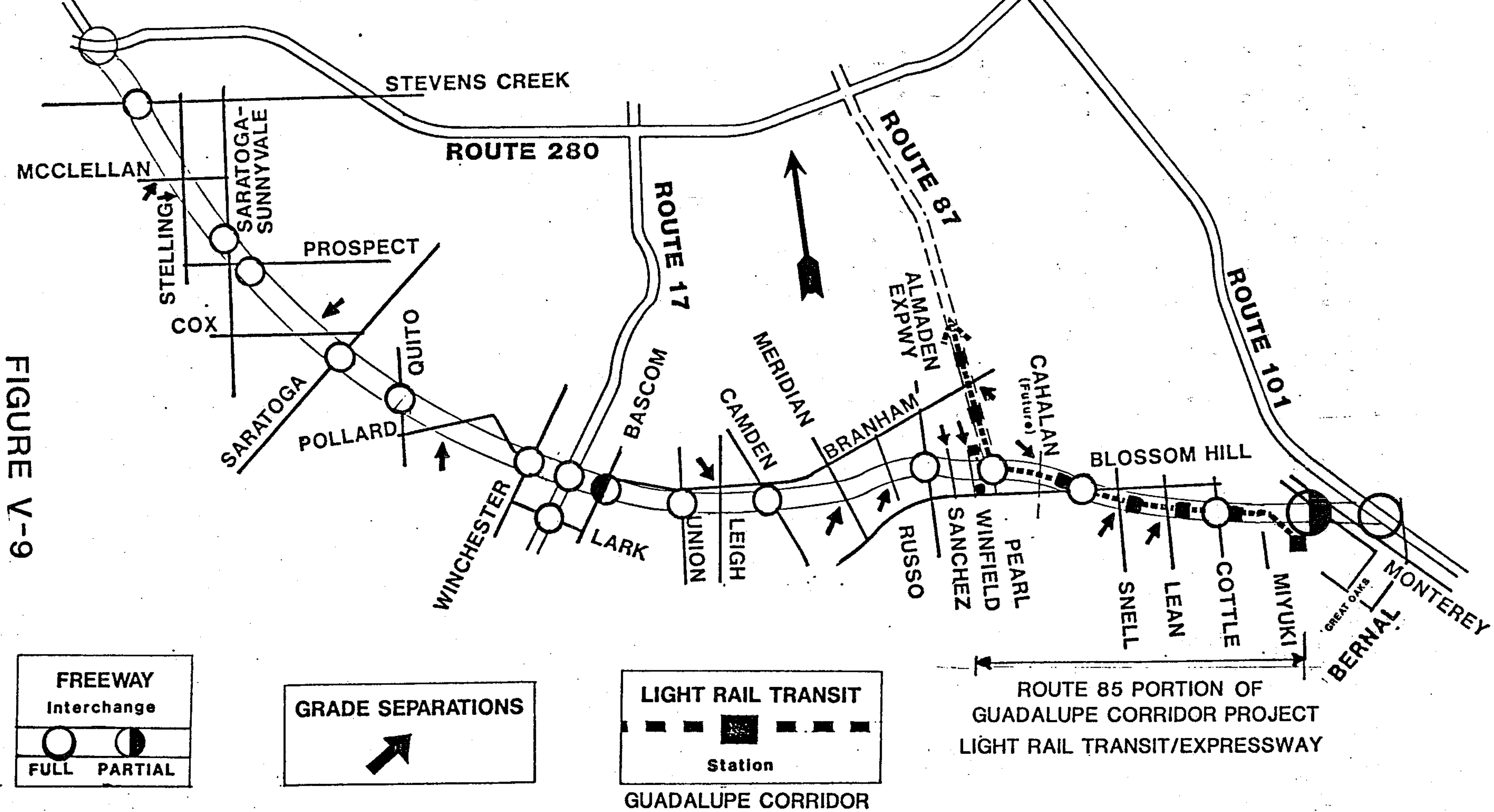
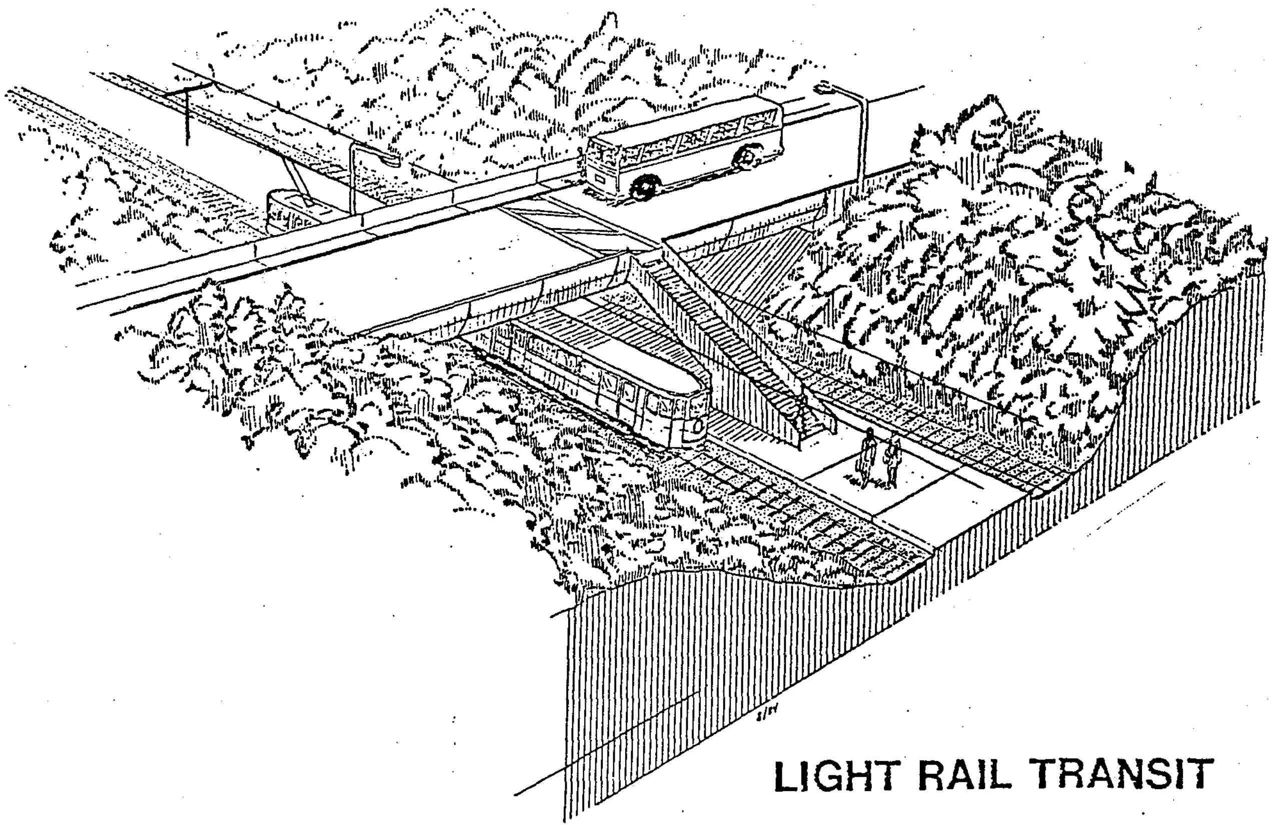


FIGURE V-9

ROUTE 85
WEST VALLEY TRANSPORTATION CORRIDOR
FREEWAY ALTERNATIVES

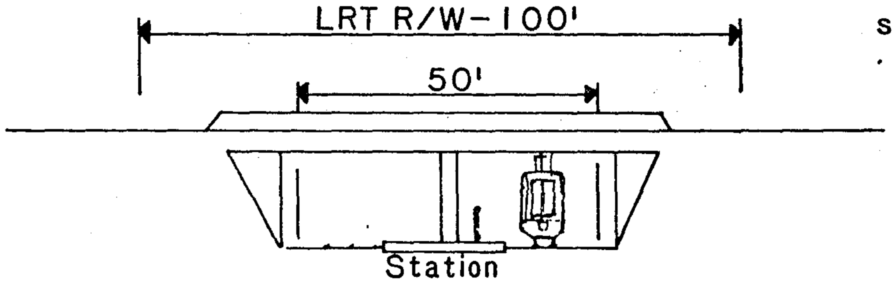
WEST VALLEY TRANSPORTATION CORRIDOR STUDY

ROUTE 85



LIGHT RAIL TRANSIT

(GRADE SEPARATED)



subject to change

TYPICAL SECTION

FIGURE V-10

5. 4-LANE FREEWAY WITH LRT

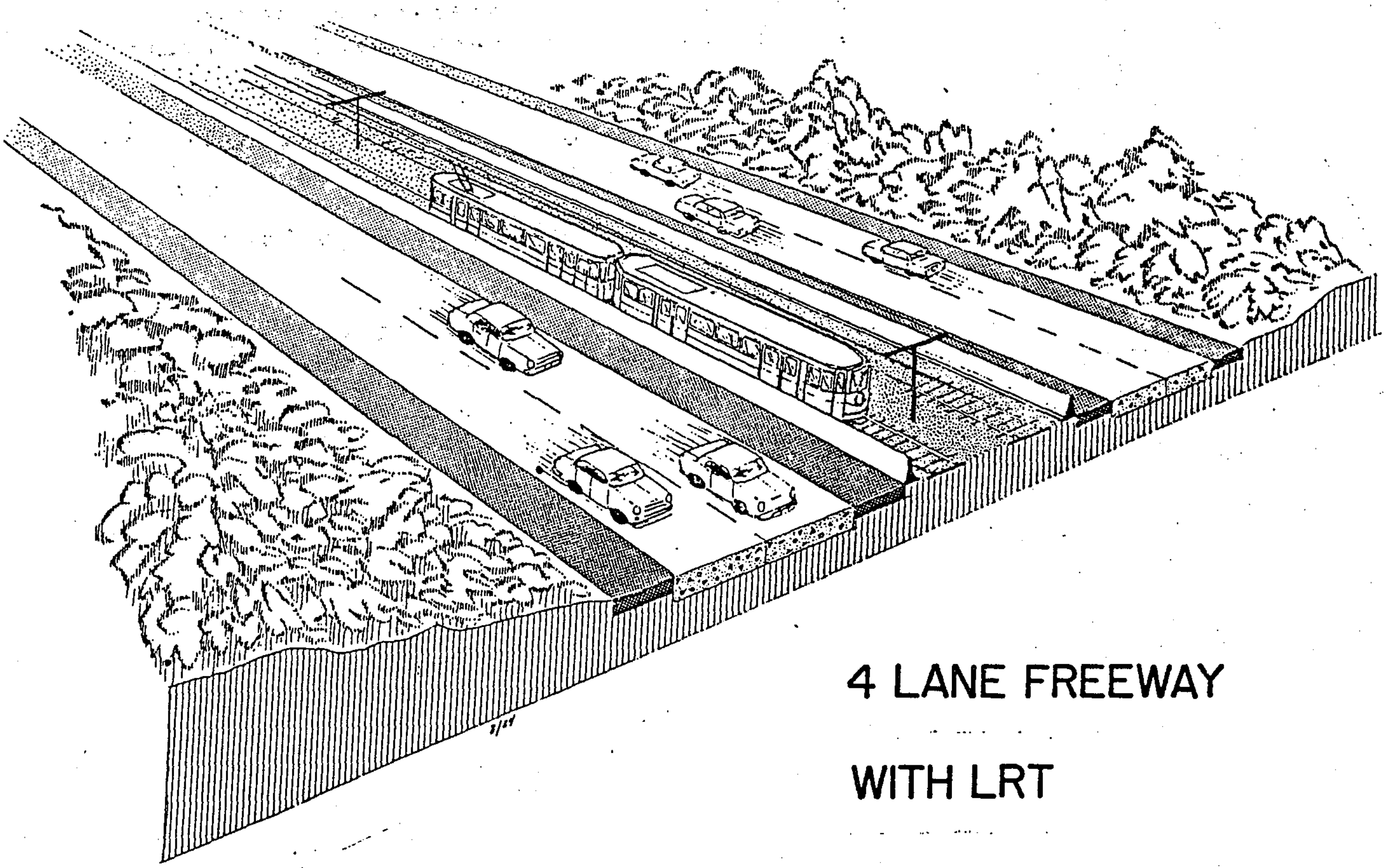
This alternative includes a 4-lane freeway between Route 280 in Cupertino and Route 87 and also provides a 6-lane freeway from Route 87 to Route 101 in south San Jose.

The LRT portion of this alternative extends the LRT of the Guadalupe Corridor project from the Route 85/Route 87 interchange northerly in the Route 85 freeway median to the vicinity of Stevens Creek Boulevard in Cupertino. Figure V-11 is a typical cross section of this alternative.

The 1985 estimated capital costs for this alternative are $480 million. These costs would include all the costs associated with the LRT system.

WEST VALLEY TRANSPORTATION CORRIDOR STUDY

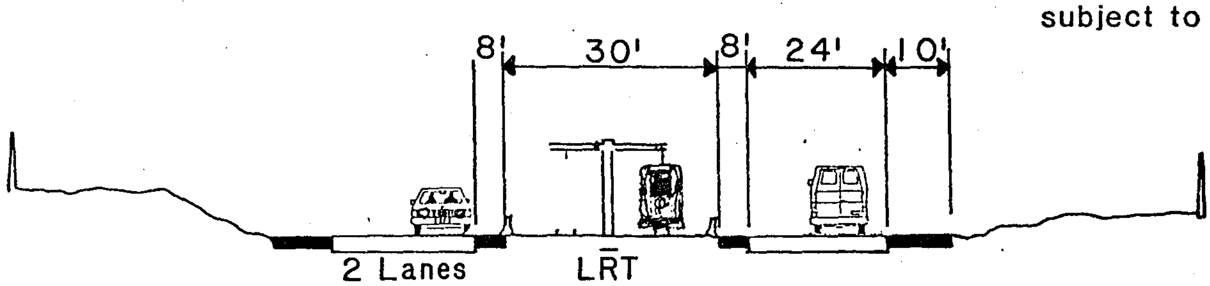
ROUTE 85



4 LANE FREEWAY

WITH LRT

subject to change



TYPICAL SECTION

FIGURE V-11

6. 4-LANE FREEWAY WITH LRT AND HIGH OCCUPANCY VEHICLE LANES

This alternative includes a 4-lane freeway between Route 280 in Cupertino and Route 87, and provides a 6-lane freeway from Route 87 to Route 101 in south San Jose.

The LRT portion of this alternative extends the LRT of Guadalupe Corridor Project from the Route 85/Route 87 interchange northerly in the Route 85 median to the vicinity of Stevens Creek Boulevard in Cupertino.

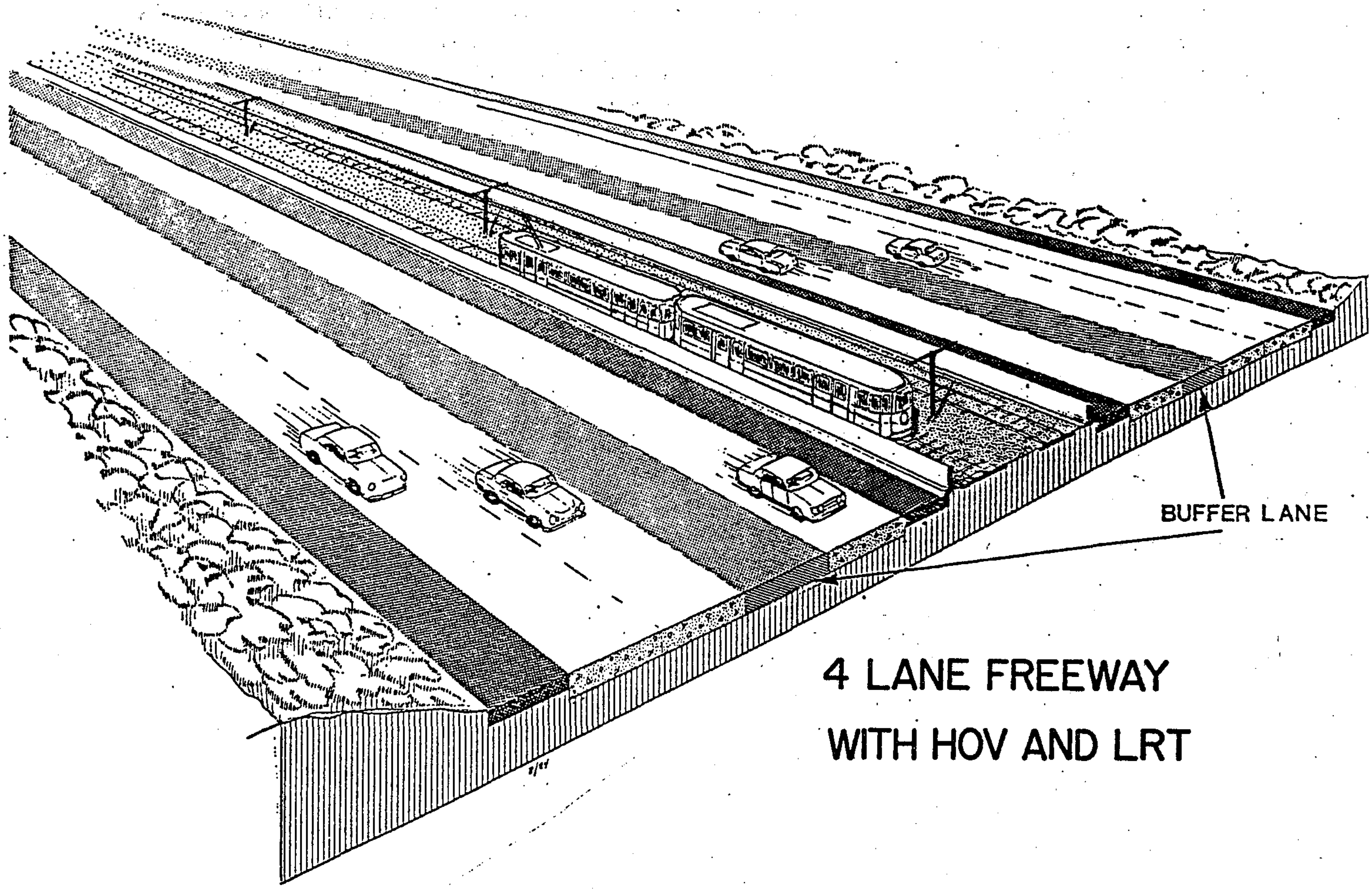
Between the LRT and the inside lane of the freeway, there would be a High Occupancy Vehicle (HOV) lane with a buffer lane.

A typical cross section for this alternative can be seen in Figure V-12.

The 1985 estimated capital costs for this alternative are $530 million. These costs include all those associated with the LRT system.

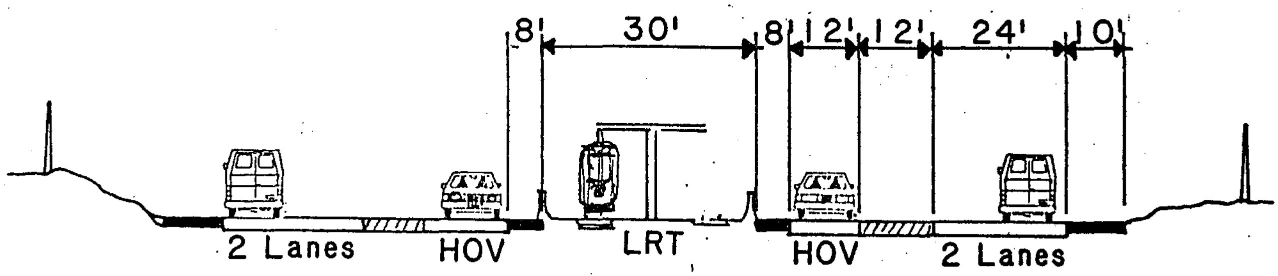
WEST VALLEY TRANSPORTATION CORRIDOR STUDY

ROUTE 85



4 LANE FREEWAY
WITH HOV AND LRT

subject to change



TYPICAL SECTION

FIGURE V-12

7. 4-LANE FREEWAY WITH BUS/HOV TRANSITWAY

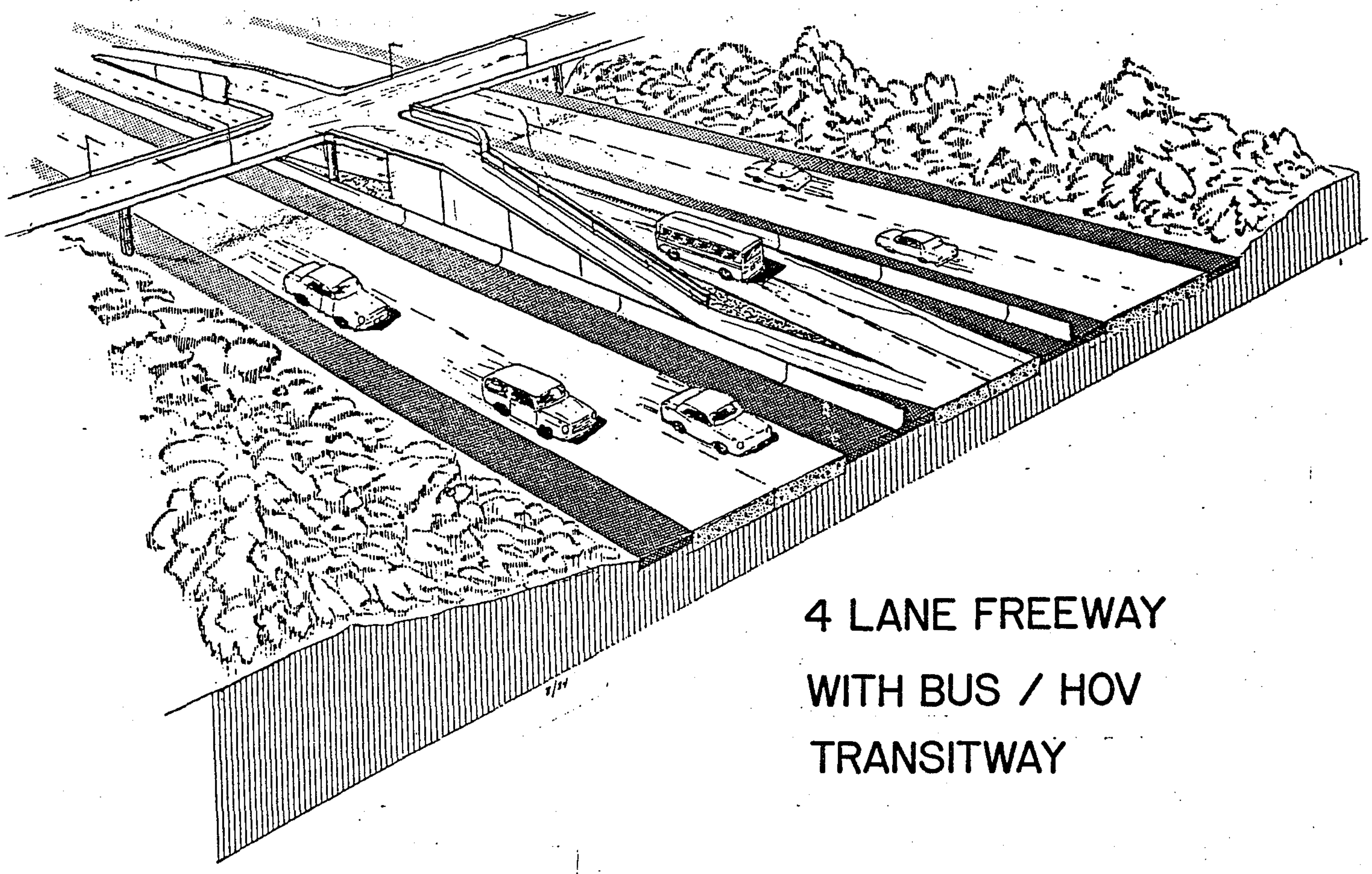
This alternative includes a 4-lane freeway between Route 280 in Cupertino and Route 87 and also provides a 6-lane freeway from Route 87 to Route 101 in south San Jose.

In the median of this alternative, from Route 87 to the vicinity or Stevens Creek Boulevard, would be a 2-lane transitway for buses and HOV's. These lanes would be reversible for peak direction operation. The Bus/HOV transitway would be designed so that it may be converted to LRT when warranted. Figure V-13 is a typical cross section for this alternative.

The 1985 estimated capital costs for this alternative are $470 million.

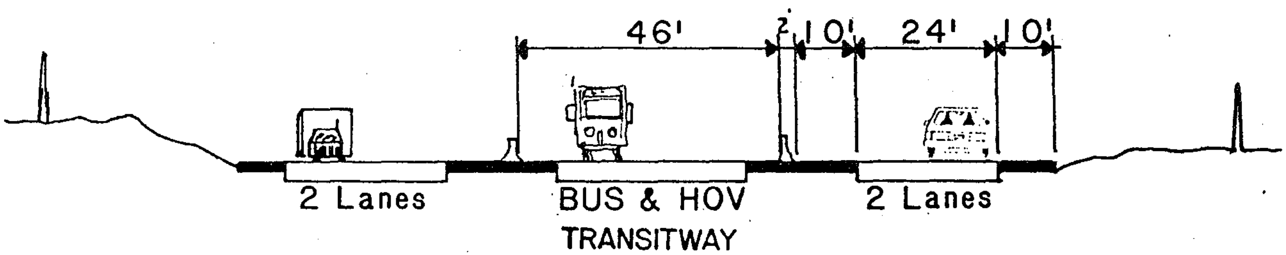
WEST VALLEY TRANSPORTATION CORRIDOR STUDY

ROUTE 85



4 LANE FREEWAY
WITH BUS / HOV
TRANSITWAY

subject to change



TYPICAL SECTION

FIGURE V-13

8. 6-LANE FREEWAY WITH BUS/HOV TRANSITWAY

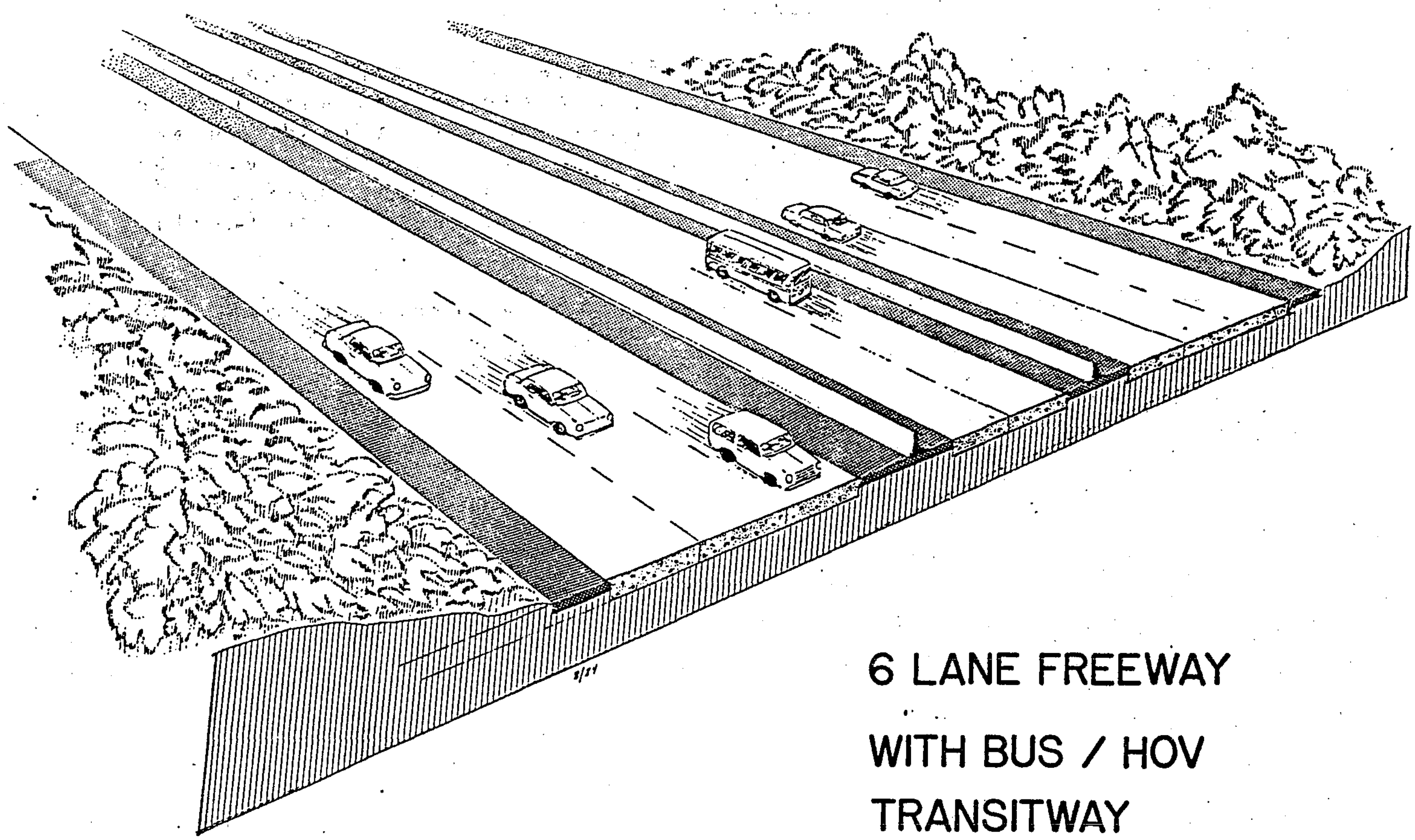
This alternative includes a 6-lane freeway between Route 280 in Cupertino and Route 101 in south San Jose.

In the median of this alternative, from Route 87 to the vicinity of Stevens Creek Boulevard, would be a 2-lane transitway for buses and HOV's. These lanes would be reversible for peak direction operation. The Bus/HOV transitway would be designed so that it may be converted to LRT when warranted. Figure V-14 is a typical cross section for this alternative.

The 1985 estimated capital costs for this alternative are $490 million. These costs include all costs associated with the Bus/HOV transitway, stations, and vehicles.

WEST VALLEY TRANSPORTATION CORRIDOR STUDY

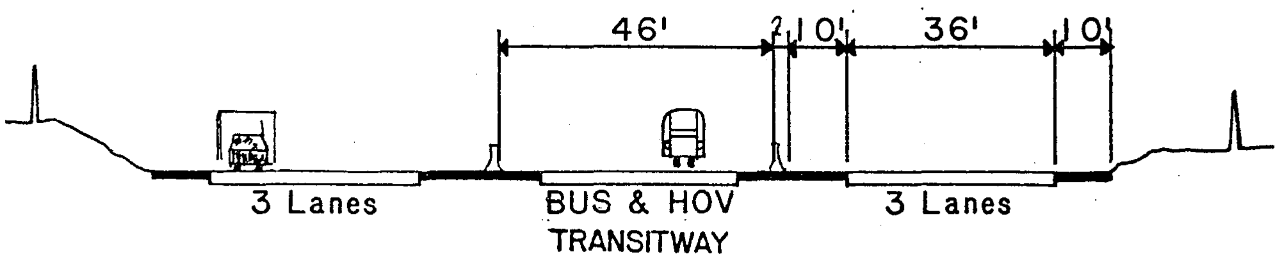
ROUTE 85



6 LANE FREEWAY

WITH BUS / HOV TRANSITWAY

subject to change



TYPICAL SECTION

FIGURE V-14

9. 8-LANE FREEWAY

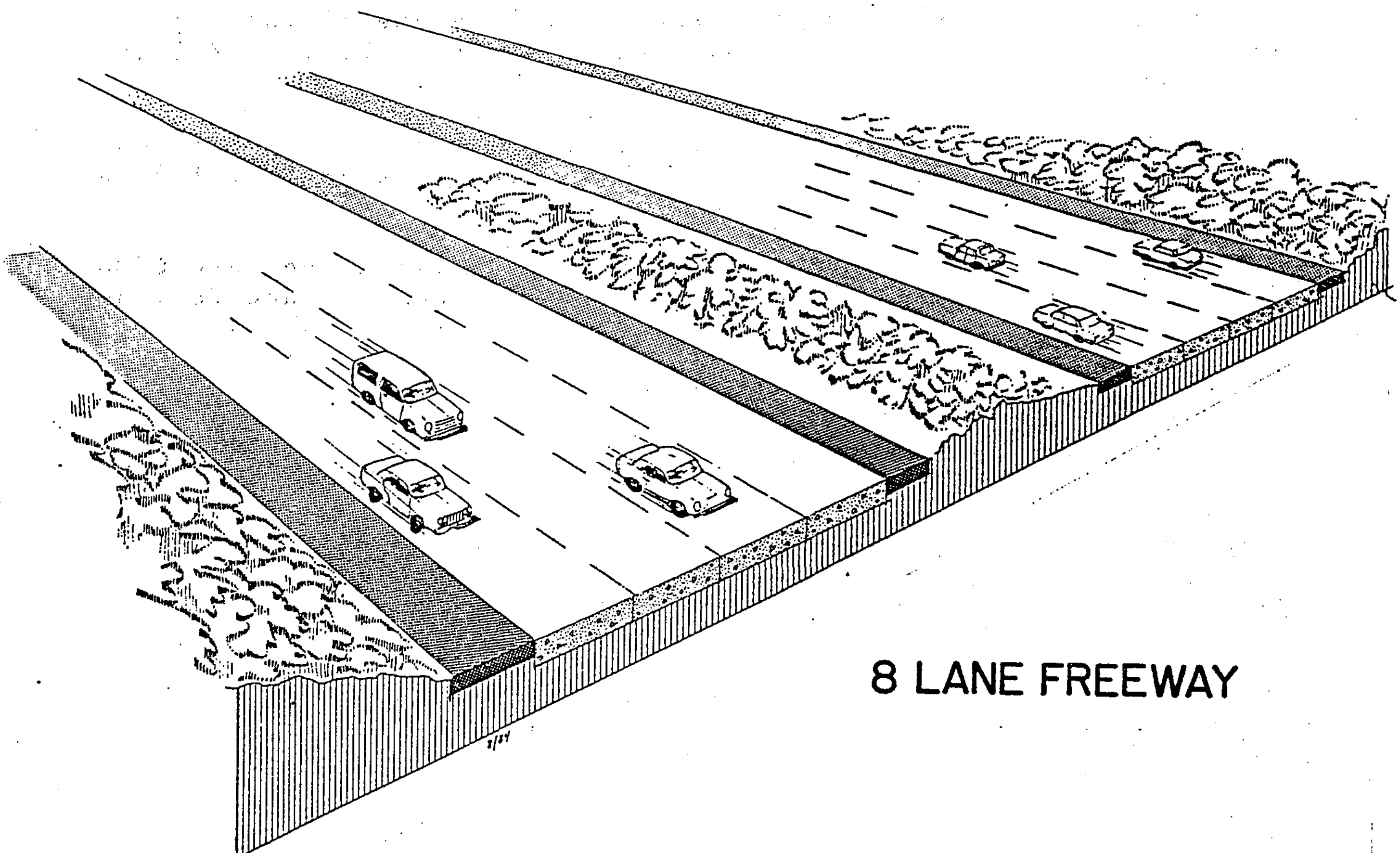
The freeway (FWY) alternative would have full control of access and grade separation at intersections. It would include a wide median that could accommodate either LRT, Bus/HOV transitway or additional freeway lanes for future widening. Figure V-15 is the typical section for this alternative.

Between Route 101 and the Route 85/Route 87 interchange, the Guadalupe Corridor, an existing four lane expressway with LRT in the median, would be widened to six lanes and the at-grade intersections would be grade-separated. Figure I-2 depicts the overlap between Routes 85 and 87. Northerly of the Route 85/Route 87 interchange, the proposed FWY would be a full eight lane facility.

The 1985 estimated capital costs for this alternative are $400 million.

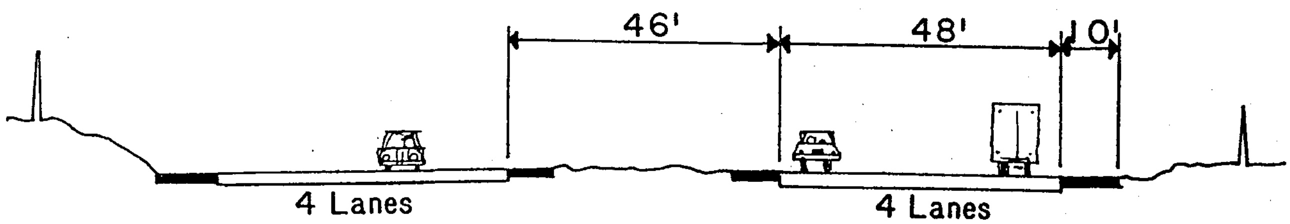
WEST VALLEY TRANSPORTATION CORRIDOR STUDY

ROUTE 85



8 LANE FREEWAY

subject to change



TYPICAL SECTION

FIGURE V-15

10. 8-LANE FREEWAY WITH LRT

This alternative, 8-FWY and LRT, is identical to the 8-lane freeway alternative described above, except that an LRT system would be constructed in the freeway median.

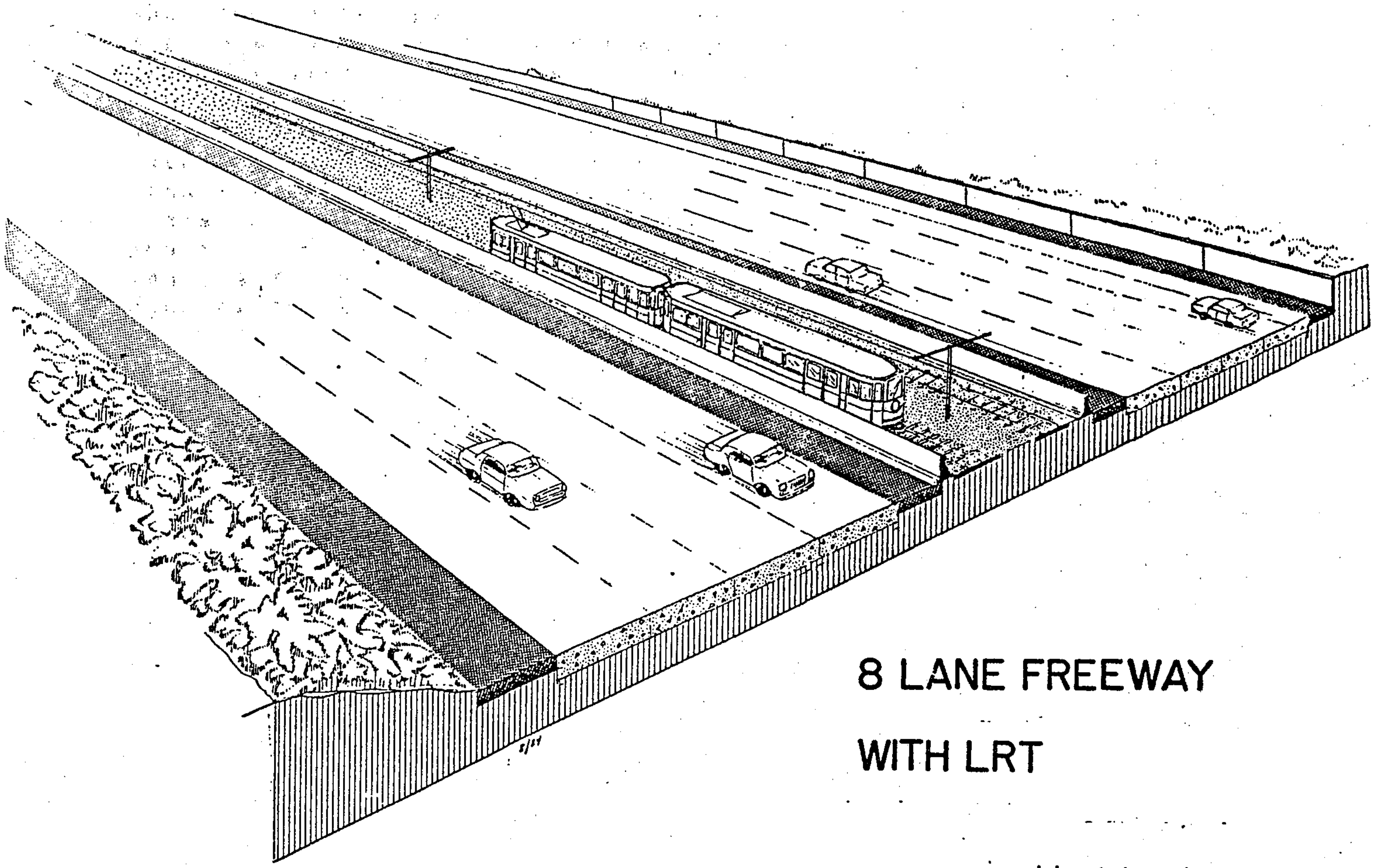
The LRT portion of this alternative extends the LRT of the Guadalupe Corridor Project from the Route 85/Route 87 interchange northerly in the Route 85 freeway median to the vicinity of Stevens Creek Boulevard.

Figure V-16 depicts the typical section for this alternative. Both the interchanges and LRT station locations are listed in Table V-1.

The estimated 1985 capital costs for this alternative are $530 million. This cost includes the LRT infrastructure and rolling stock.

WEST VALLEY TRANSPORTATION CORRIDOR STUDY

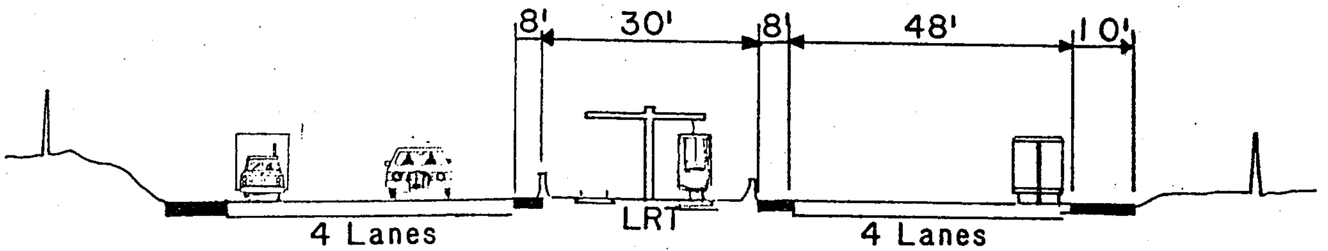
ROUTE 85



8 LANE FREEWAY

WITH LRT

subject to change

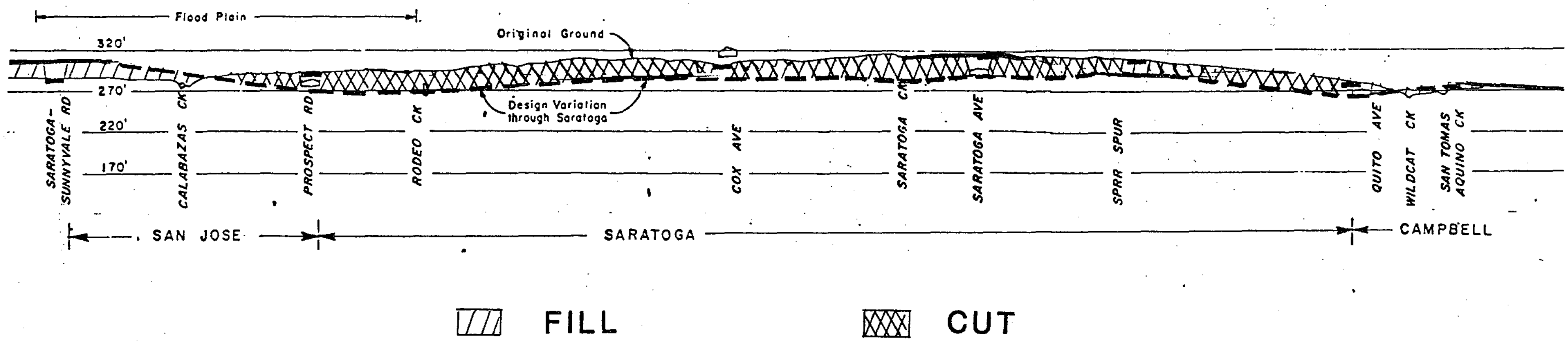


TYPICAL SECTION

FIGURE V-16

11. SARATOGA DESIGN VARIATION

The Saratoga design variation consists of a change in the base profile through the City of Saratoga. This variation would cause the vertical alignment to be fully depressed through much of Saratoga instead of the base profile which is partially depressed. Significant features of this variation include depressing the profile below the Calabazas Creek floodplain, and constructing the freeway below Rodeo Creek, and Saratoga Creek. This variation would apply to all of the alternatives except LRT only, and is estimated to cost an additional $40 and $60 million 1985 dollars. This cost includes $5.6 million for the improvement of Calabazas Creek as estimated by the Santa Clara County Water District. This cost differential is between different alternative widths and assumes dry conditions with no ground water. Ground water, if encountered, would increase the cost significantly. Figure V-17 depicts this design variation through the City of Saratoga.



DESIGN VARIATION THROUGH SARATOGA

FIGURE V-17

SARATOGA DESIGN VARIATION PROFILE

B. PROJECT DATA

1. RIGHT OF WAY COSTS

Tables V-2 and -3, Right of Way Information, compares the number of acres and costs for each of the alternatives based on the right of way width required. These tables are for the alignment right of way only and do not include right of way costs for utility relocation and park and ride facilities. It is broken down into different right of way classifications, such as commercial, multiple-residential, single-family, industrial, Santa Clara County and Santa Clara Valley Water District. Table V-2 depicts the right of way requirements between Stevens Creek Boulevard/Route 280 and the Route 85/87 interchange.

TABLE V-2
RIGHT OF WAY INFORMATION
STEPHENS CREEK BOULEVARD/ROUTE 280
TO
ROUTE 85/87 INTERCHANGE
(MILLIONS OF 1984 DOLLARS)

Right of Way Width	Acres			Cost		
	200' (1)	100' (2)	0' (3)	200' (1)	100' (2)	0' (3)
R/W Classification Commercial	26.5	21.0	14.7	16	9	9
Multiple-Residential Units	36.7	25.0	111.7	12	10	32
Single-Family Residential	162.9	27.0	120.8	57	18	34
Industrial	9.1	1.0	24.2	10	1	7
Santa Clara County Transit District	0	0	0	0	0	0
Santa Clara Valley Water District	0	0	0	0	0	0
TOTALS	235.2	74	271.4	95	38 (4)	82 (5)

(1) 200' R/W includes remaining property to be aquired for all alternatives except NPA, TSM, and LRT.
(2) 100' R/W is additional property required for LRT only.
(3) 0' This represents the amount of R/W that the state currently owns and applies only to the NPA and TSM alternatives.
(4) This is the cost of the LRT right of way which remains to be acquired. The total right of way cost including what the state already owns is approximately $80 million.
(5) Value of State owned land which would be sold.

Figure V-18 depicts the right of way requirements for the Route 85 transportation corridor. It also reflects the right of way currently owned by Caltrans and that right of way which still need to be aquired.

Table V-3 depicts the right of way requirements between the Route 85/87 interchange and Route 101 in south San Jose.

TABLE V-3
RIGHT OF WAY INFORMATION
ROUTE 85/87 INTERCHANGE
TO
ROUTE 101 IN SOUTH SAN JOSE
(MILLIONS OF 1984 DOLLARS)

Right of Way Width	Acres 200' (1)	Acres 100' (2)	Acres 0' (3)	Cost 200' (1)	Cost 100' (2)	Cost 0' (3)
R/W Classification Commercial	9	N/A	0	3	N/A	0
Multiple-Residential Units	21	N/A	0	8	N/A	0
Single-Family Residential	29.6	N/A	75	6	N/A	9
Industrial	55.5	N/A	12	9	N/A	3
Santa Clara County Transit District	41	N/A	0	8	N/A	0
Santa Clara Valley Water District	31	N/A	0	0	N/A	0
TOTALS	187.1	N/A	87	34 (4)	N/A	12

(1) 200' R/W includes remaining property to be aquired for all alternatives except NPA, TSM, and LRT.

(2) 100' R/W is additional property required for LRT only. If LRT, NPA, or TSM are selected as the preferred alternative, the Guadalupe Corridor portion will be constructed as an expressway with LRT in the median as originally planned.

(3) 0' This represents the amount of R/W that the state currently owns and applies only to the NPA and TSM alternatives.

(4) This cost except the portion between Miyuki Drive and Route 101 will be financed under the Guadalupe Corridor project. The remaining right of way cost between Miyuki Drive and Route 101 is estimated to be $5 million and will be acquired in conjunction with the Route 85 project.

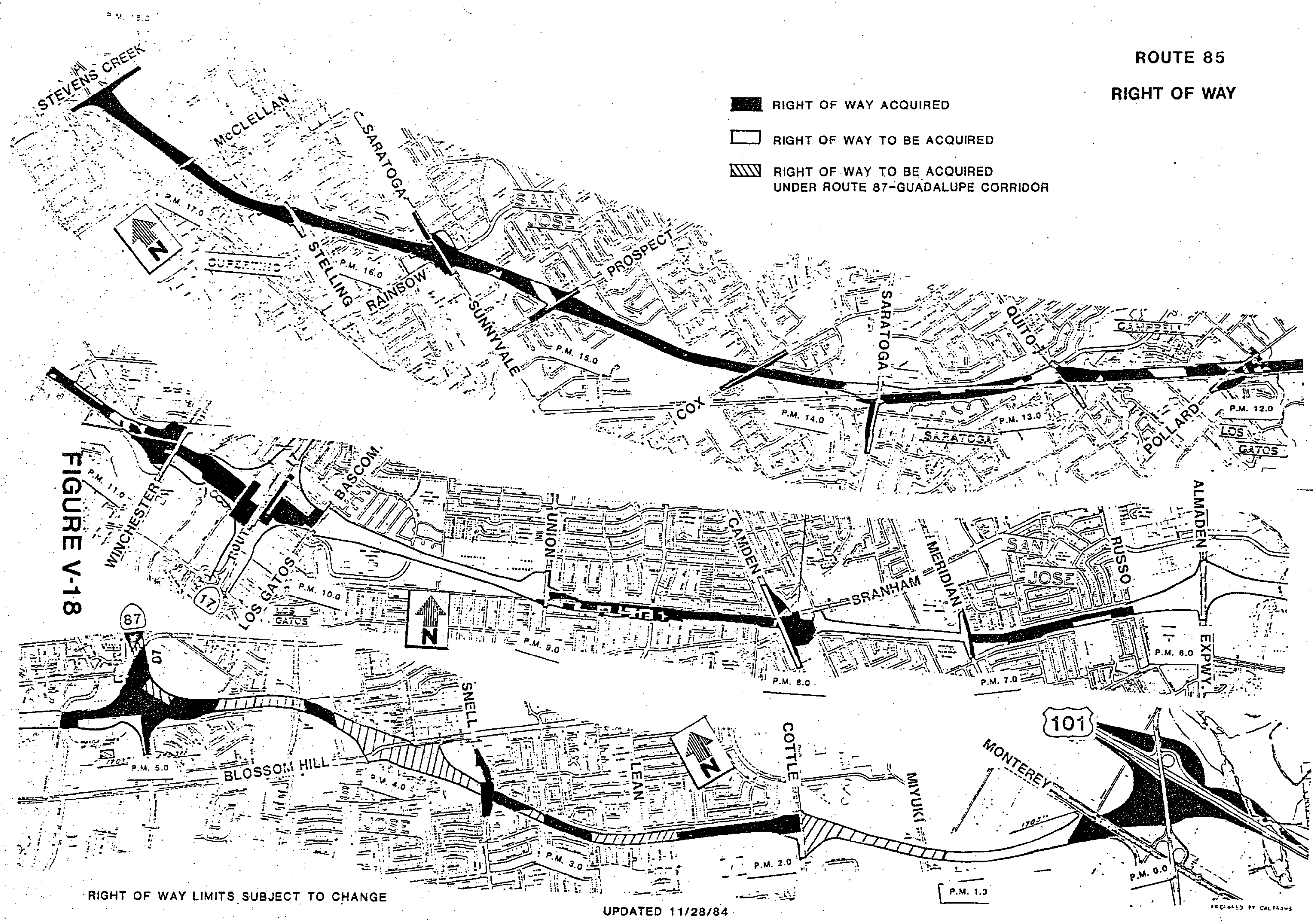
The utility relocation costs are the same for all the highway alternatives, estimated to be $10 Million, while the LRT alternative is estimated to be $5 Million. The difference in cost over the highway and LRT alternatives is due to the LRT requiring narrower right of way. Table V-4 describes the utilities that need to be relocated.

TABLE V-4

UTILITY RELOCATION REQUIRED
(BASE PROFILE)

LOCATION	PUBLIC UTILITIES 1	2	3	4	5	6	7	8
Stevens Creek		x	x	x		x		
McClellan	x	x	x	x		x		
Kenmore Ct.	x							
Stelling Road	x	x	x	x				
Goleta Drive	x							
Sculley Ave		x						
Cox Avenue		x				x		
Cox Lane				x		x		
Glenbrae Drive	x			x				
Saratoga Avenue	x	x					x	x
Quito Road							x	x
Bonnet Way	x							
Sousa Lane				x				
More Avenue	x							
Wedgewood Avenue	x		x	x			x	
Winchester	x	x	x					
Knowles Drive	x							
Oka Road	x							
Mozart Avenue	x		x					
Wanda Lane		x	x					
Bascom Avenue	x	x	x		x			
Elester Drive				x				
White Oaks Avenue	x							
Jacksol Drive			x					
Union Avenue	x	x	x	x		x		
Sandy Lane	x	x	x					
Troy Avenue	x	x	x					
Anna Drive	x	x	x					
Trent Drive	x	x	x					
Tilden Drive	x	x	x					
Leigh Avenue	x	x	x					
Caroline Way	x		x					
Branham Lane	x	x	x	x		x		

1 Santa Clara Co. Sanitary Sewers
2 Cupertino Muni. Water System
3 PG & E Gas
4 PG & E Electric
5 GTE
6 Pacific Bell
7 Santa Clara Valley Water
8 Southern Pacific Railroad



ROUTE 85
RIGHT OF WAY
RIGHT OF WAY ACQUIRED
RIGHT OF WAY TO BE ACQUIRED
RIGHT OF WAY TO BE ACQUIRED UNDER ROUTE 87-GUADALUPE CORRIDOR
STEVENS CREEK
McCLELLAN
SARATOGA
STELLING
RAINBOW
SUNNYVALE
PROSPECT
CUPERTINO
SAN JOSE
P.M. 17.0
P.M. 16.0
P.M. 15.0
P.M. 14.0
P.M. 13.0
P.M. 12.0
P.M. 11.0
P.M. 10.0
P.M. 9.0
P.M. 8.0
P.M. 7.0
P.M. 6.0
P.M. 5.0
P.M. 4.0
P.M. 3.0
P.M. 2.0
P.M. 1.0
P.M. 0.0
COX
SARATOGA
QUITO
CAMPBELL
POLLARD
LOS GATOS
WINCHESTER
BASCOM
LOS GATOS
17
UNION
CAMDEN
BRANHAM
MERIDIAN
RUSSO
ALMADEN EXPWY.
87
SNELL
BLOSSOM HILL
LEAN
COTTLE
MIYUKI
MONTEREY
101
N
RIGHT OF WAY LIMITS SUBJECT TO CHANGE
UPDATED 11/28/84

FIGURE V-18

The Saratoga design variation utility relocation will cost an additional $1.0 Million due to profile differences. Table V-5 describes the additional relocations needed for this variation.

TABLE V-5
ADDITIONAL UTILITY RELOCATION REQUIRED
(SARATOGA DESIGN VARIATION)

LOCATION	PUBLIC UTILITIES 1	2	3	4	5	6	7	8
Saratoga-Sunnyvale	x	x	x	x				
Wildflower Way				x				
Sharon Drive	x	x						
Brookvale Drive	x							
Prospect Road	x	x	x	x		x		
Plumas Drive	x							
Saratoga Avenue	x	x	x	x				x
Quito Road	x	x	x	x				x

1 Santa Clara Co. Sanitary Sewers
2 Cupertino Muni. Water System
3 PG & E Gas
4 PG & E Electric
5 GTE
6 Pacific Bell
7 Santa Clara Valley Water
8 Southern Pacific Railraod

2. CONSTRUCTION COSTS

Table V-6, Construction Costs, details the various construction related costs for the various alternatives. It is broken down into three categories, highway, transitway and transit (LRT). The LRT costs include trackage, electrical, communications, stations and structures. The costs include 5 million 1985 dollars for landscaping and revegation of those areas disturbed by the construction of the selected alternative.

TABLE V-6

PROJECT CONSTRUCTION COSTS (1)
(MILLIONS OF 1985 DOLLARS)

	CONSTRUCTION COSTS			
	HIGHWAY	TRANSITWAY	TRANSIT	TOTAL COSTS
NPA	-0-	N/A	N/A	(2)
TSM	15	-0-	15	30
LRT	35 (3)	NA	150	185
4-FWY & LRT	230	NA	110	340
4-FWY w/ LRT & HOV	280	NA	110	390
4-FWY w/ BusHOV(4)	250	50	25	325
6-FWY w/ BusHOV(4)	270	50	25	345
8-FWY	280	0	0	280
8-FWY & LRT	280	NA	110	390

(1) These Costs do not include Engineering or Contract Administration costs.
(2) Sale of State owned Right of Way would yield $85,000,000.
(3) This is the cost to extend Route 85 from Miyuki Drive to Route 101 in south San Jose.
(4) The Bus/HOV transitway costs include vehicles, stations and the maintenance facility improvements.

3. OPERATION AND MAINTENANCE COSTS

Table V-7, following, shows the operational and maintenance costs for all the alternatives. The LRT maintenance costs are for the limits between the Chynoweth LRT station and the Mountain View CalTrain station. The maintenance costs for the highway element of the freeway alternatives are assumed to be the same because they all use the same right of way width.

TABLE V-7
MAINTENANCE AND OPERATIONAL COSTS
(MILLIONS OF 1985 DOLLARS)

	MAINTENANCE COSTS			OPERATIONAL COSTS			
		TRANSIT *			TRANSIT *		TOTAL
ALTERNATIVE	HIGHWAY	LRT	BUS & HOV	HIGHWAY	LRT	BUS & HOV	COSTS
NPA	0	0	0	0	0	0	0
TSM	0	0	7.3	0	0	15.4	22.7
LRT	0	2.7	0	0	4.0	0	6.7
4-FWY & LRT	1.1	2.7	0	0	4.0	0	7.8
4-FWY w/ LRT & HOV	1.1	2.7	0	0	4.0	0	7.8
4-FWY w/ Bus/HOV	1.1	0	5.1	0	0	10.7	16.9
6-FWY w/ Bus/HOV	1.1	0	5.1	0	0	10.7	16.9
8-FWY	1.1	0	2.2	0	0	4.7	8.0
8-FWY & LRT	1.1	2.7	0	0	4.0	0	7.8

* Does not include 5% General Administration Costs

4. VEHICLE REQUIREMENTS AND COSTS

The requirements for both bus and rail vehicles are detailed in Chapter IV, Transit Plan, starting on page IV-16. The total vehicle costs per alternative are shown on Table V-8, Project Alternative Costs, on page V-43.

5. TOTAL PROJECT COSTS

Table V-8, Project Alternative Costs, details the costs of the various alternatives. It breaks down each alternatives cost into individual items such as: right of way costs; construction costs; vehicle costs; and total project costs.

The Saratoga Design Variation will add between $40 and $60 million dollars to each alternative. Table V-9, Project Alternative Costs, Saratoga Design Variation, displays these costs.

Table V-10 is a compilation of the above Tables V-6, -7, -8, and -9.

TABLE V-8
PROJECT ALTERNATIVE COSTS (1)
(MILLIONS OF 1985 DOLLARS)

	RIGHT OF WAY COSTS			CONSTRUCTION COSTS			
	ALIGNMENT	PARK AND RIDE (2)	UTILITY RELOCATION	HIGHWAY / TRANSITWAY	TRANSIT	VEHICLE COSTS (3)	TOTAL COSTS (6)
NPA	(4)	-0-	-0-	-0-	N/A	N/A	(4)
TSM	0	5	-0-	15/NA	15	35	70
LRT	80	10	5	35/NA	150	20	300
4-FWY & LRT	100	10	10	230/NA	110	20	480
4-FWY w/ LRT & HOV	100	10	10	280/NA	110	20	530
4-FWY w/ BusHOV(5)	100	10	10	250/50	25	25	470
6-FWY w/ BusHOV(5)	100	10	10	270/50	25	25	490
8-FWY	100	10	10	280	0	10	410
8-FWY & LRT	100	10	10	280	110	20	530

(1) These Costs do not include Engineering or Contract Administration costs.
(2) Includes Right of Way costs and Construction of Park and Ride facility.
(3) Vehicle Costs include the cost of the additional buses and rail vehicles.
(4) Sale of state owned R/W would yeild $85,000,000.
(5) The Bus/HOV transitway costs include vehicles, stations and the maintenance facility improvements.
(6) Total Costs include landscaping and revegation costs.

TABLE V-9
PROJECT CONSTRUCTION COSTS (1)
SARATOGA DESIGN VARIATION
(MILLIONS OF 1985 DOLLARS)

	CONSTRUCTION COSTS					
	HIGHWAY	TRANSITWAY	TRANSIT	TOTAL COSTS	ADDITIONAL SARATOGA COSTS (2)	TOTAL SDV COSTS
NPA	-0-	N/A	N/A	(3)	-0-	-0-
TSM	15	-0-	15	30	-0-	30
LRT	35	NA	150	185	N/A	185
4-FWY & LRT	230	NA	110	340	40	380
4-FWY w/ LRT & HOV	280	NA	110	390	60	450
4-FWY w/ BusHOV(4)	250	50	25	325	50	375
6-FWY w/ BusHOV(4)	270	50	25	345	60	405
8-FWY	280	0	0	280	60	340
8-FWY & LRT	280	NA	110	390	60	450

(1) These Costs do not include Engineering or Contract Administration costs.
(2) These additional costs assume dry conditions with no ground water.
(3) Sale of the State owned R/W would yeild $85,000,000.
(4) The Bus/HOV transitway costs include vehicles, stations and the maintenance facility improvements.

CAPITAL COST ESTIMATE FOR ALL ALTERNATIVES OF RTE 85

* ALL COSTS ESTIMATED IN 1985 $ MILLION *

ALTERNATIVE	CONSTRUCTION COST			R/W COST				BASE PROFILE	SARATOGA DESIGN VARIATION	
	HIGHWAY	TRANSITWAY	TRANSIT	ALIGNMENT	UTILITY RELOC.	PARK & RIDE ***	BUS OR LRT VEHICLES	TOTAL COST, $M	ADD. COST	TOTAL COST, $M
NO PROJECT	0	0	N/A	0	0	N/A	N/A	0	0	0
T S M	15	N/A	15	0	0	5	35	70	N/A	N/A
L R T	35	N/A	150	80 *	5	10	20	300	N/A	N/A
4 LN FWY W/ LRT	230	N/A	110	100 **	10	10	20	480	40	520
4 LN FWY W/ HOV & LRT	280	N/A	110	100 **	10	10	20	530	60	590
4 LN FWY W/ BUS & HOV	250	50	25	100 **	10	10	25	470	50	520
6 LN FWY W/ BUS & HOV	270	50	25	100 **	10	10	25	490	60	550
8 LN FWY	280	0	0	100 **	10	10	0	400	60	460
8 LN FWY W/ LRT	280	0	110	100 **	10	10	20	530	60	590

* TOTAL R/W COST (REMAINING R/W COST PLUS THE STATE OWNED LAND).

** REMAINING R/W COST.

*** INCLUDES R/W COST AND CONSTRUCTION OF FACILITY.

NOTES:

1- LRT TRANSIT COST INCLUDES TRACK & ELECTRIFICATION, COMMUNICATIONS, STATIONS AND STRUCTURES.

2- BUS TRANSIT COST INCLUDES STATIONS AND MAINTENANCE FACILITY.

3- THE ADDITIONAL COST FOR THE DESIGN VARIATION THROUGH SARATOGA IS A DRY CONDITION, NO GROUND WATER.

4- TRANSITWAY CONSTRUCTION COSTS ARE FOR THE ROADWAY PORTION (INCLUDING STRUCTURES) ONLY.

5- THE ABOVE COSTS DO NOT INCLUDE ENGINEERING AND ADMINISTRATIVE COSTS.

6. CONSTRUCTION PHASING

In a project of this magnitude, construction of any of the alternatives would take a number of years and be done in multiple phases. Listed below is one possible approach to the construction stages for a typical highway alternative in the corridor once all the necessary right of way has been purchased. It should be noted that the following represents the approximate location limits of construction and not the size of the contract. According to the States' policy, each limit will be broken down into different small size contracts.

Location	Activity
Guadalupe River	Construct Bridge
Prospect Road to Stevens Creek Blvd.	Construct Freeway and Interchanges
Route 101 to Route 17	Excavate material from Route 17 to Route 87 and widen to 6 lanes Route 85 from Route 87 to Route 101. Construct Route 101/Route 85 Interchange.
Route 17 & Route 85 Interchange	Construct Route 85/Route 17 Interchange *
Route 87 to S. Bascom Road	Construct Freeway and Interchanges *
Winchester Blvd. to Prospect Road	Construct Freeway and Interchanges *
Stevens Creek Blvd. to Route 101	Add a lane and modify Interchanges

* These three stages would be completed at approximately the same time.

The above construction sequence would take approximately 5 to 6 years to complete.

7. CONVERSION COSTS

In the event that an alternative with a transitway is constructed, the conversion of the Route 85 Bus/HOV transitway to a rail guideway would be expected to occur when patronage increases justifies such a change. This justification would occur when the bus/HOV facility had reached its capacity and could no longer carry the patronage at an acceptable level of service. However, prior to reaching its capacity, the HOV component of the transitway would have been restricted by access metering and/or increasing the ridership requirements. Several other factors concerning bus capacity will influence the decision to convert to a rail system. The additional impact on the city streets of the buses needed to carry the increased patronage will be a deciding factor on the level of service available with the bus mode.

The cost of converting the Bus/HOV facility to rail instead of building rail initially is a factor that cannot be ignored. To convert the 13 mile long Bus/HOV transitway and stations between Route 87 and Stevens Creek Boulevard/Route 280 to a rail system would cost approximately $90 Million (1985 dollars). The cost of purchasing rail vehicles in the future would increase the cost by an additional $20 Million (a vehicle cost of $1,000,000 and 20 vehicles). Total capital cost to convert the Route 85 Bus/HOV facility to rail, between Route 87 and Stevens Creek Boulevard/Route 280 would be approximately $110 Million (1985 dollars).

If either of the freeway with Bus/HOV transitway alternatives are selected as the preferred alternative, all transitway facilities, structures, stations, and access points will be designed to accomodate the possibility of future LRT and to minimize the conversion costs.

VI. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES: SETTING, IMPACTS, AND MITIGATION

Several technical studies were developed to provide background data and to assist in evaluating the environmental consequences of the proposed transportation project. The following studies were prepared for the Route 85 transportation corridor:

1. Conceptual Stage Housing Study
   Caltrans Right of Way Department, June 1984.
2. Natural Environment Study
   Caltrans Environmental Analysis, May 1985.
3. Geotechnical Report
   Caltrans Materials, October 1984.
4. Historical Property Survey Report
   Caltrans Environmental Analysis, November 1984.
5. Social-Economic-Landuse-Growth Impact Study,
   Caltrans Environmental Analysis, February 1985.
6. Air-Noise-Energy Report
   Caltrans Environmental Studies, May 1985.
7. Visual Analysis
   Caltrans Landscape Architecture Branch, May 1985.
8. Location Hydraulics Study
   Caltrans Hydraulics Branch, February 1985.

All of these technical studies are on file at the Caltrans District Office at 150 Oak Street in San Francisco and are available for public inspection during normal working hours.

A. PROJECT LOCATION AND DESCRIPTION OF AREA

The Route 85 transportation corridor, also know as the West Valley Corridor, is located entirely within Santa Clara County at the south end of San Francisco Bay. See Figure II-1 on page II-3 for the relative location. The Route 85 corridor passes through the communities of San Jose, Campbell, Los Gatos, Saratoga, and Cupertino.

Santa Clara County is one of the fastest growing areas in the San Francisco Bay Region and contains a full range of urban land uses, along with some of the last remaining agriculture land in the South Bay. The current county population is approximately 1.3 million people with the majority living in the southern portion of the county but working in the northern and northwest portions of the county.

B. NATURAL ENVIRONMENT

1. TOPOGRAPHY

The proposed project is located in the Santa Clara Valley. This valley is a long, narrow, fertile plain in the center of Santa Clara County, situated at the southern end of San Francisco Bay. The Valley is bordered on the west by the Santa Cruz Mountains and on the east by the Diablo Range. These two ranges converge at Coyote Narrows near the community of Coyote which is near the southern end of the Route 85 transportation corridor where the corridor originates. The Route 85 transportation corridor traverses relatively flat terrain in a northerly direction, along the base of the Santa Cruz Mountains, with elevations ranging from 160 feet to 320 feet above mean sea level.

2. SOILS AND GEOLOGY

a. Soil Types

The land surface of the Santa Clara Valley floor, has a gradient of 10 to 20 feet per mile which is the result of the prehistoric coalescence of alluvial fans of a number of streams flowing from the surrounding mountain ranges. The alluvium is composed of unconsolidated particles consisting of clay, silt, sand, and gravel. The soil on top of the alluvial plains and fans consists of deep loams and silty clay loams. This is Class I and II agricultural soil and is considered fertile by the United States Soil Conservation Service. The basement rock underlying the area ranges from 300 to 1200 feet in depth.

b. Subsidence

Subsidence, the gradual sinking of the land surface, in the Santa Clara Valley has occurred due to groundwater withdrawal for agricultural, domestic, and industrial uses. The withdrawal of water has been greater than the natural and artificial replenishment which has resulted in subsidence of up to thirteen feet in downtown San Jose. The subsidence that has occurred in the vicinity of the Route 85 corridor has only been between 0.1 and 0.3 feet. Recharge of the aquifers, the water-bearing layers of rock, gravel, or sand, by natural and artificial (percolation ponds) methods halted land subsidence in 1971.

None of the proposed alternatives will cause any additional subsidence to occur either in the corridor or in the region.

c. Seismic Factors

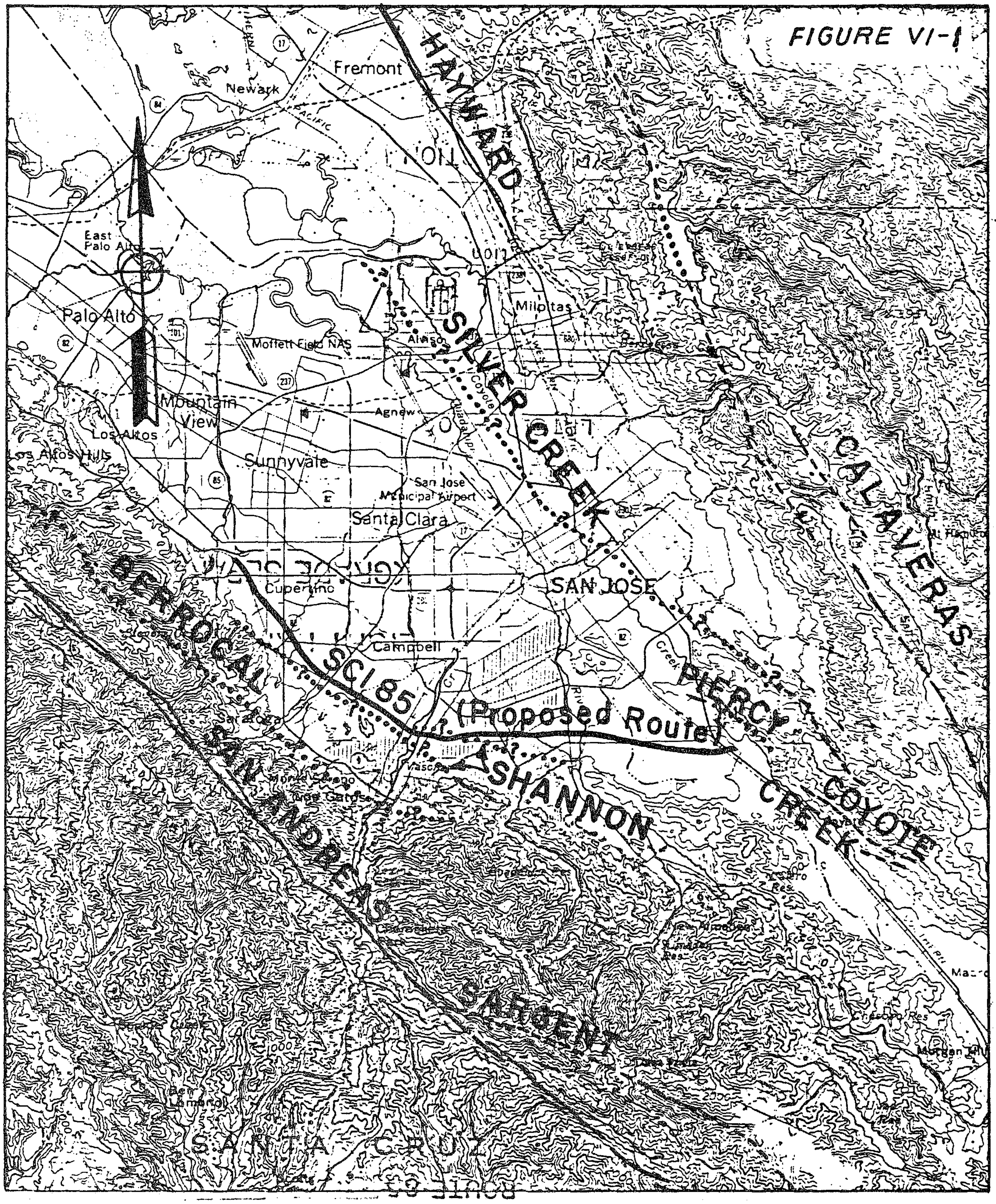
The Santa Clara Valley is within a zone of moderate seismic hazard which lies between the San Andreas fault zone and the Hayward-Calaveras fault zone. These faults trend in a northwest direction, are seismically active, and have been associated with significant earthquakes. The San Andreas fault runs along the crest of the Santa Cruz Mountains from four to twelve miles west of Route 85. The Hayward and Calaveras faults follow the Diablo Range and are located six to twelve miles east of Route 85. Figure VI-1 depicts the locations of these and other faults in relationship to the Route 85 Transportation corridor. A summary of the most significant historic seismic events on these faults, the epicenter location, and Richter magnitude is shown in Table VI-1.

In addition several smaller, less important faults are in close proximity to Route 85. These include the Silver Creek, Sargent, the northeast segment of the Berrocal, Coyote Creek, Piercy, and Shannon Faults. See Figure VI-1 for their locations.

The Silver Creek Fault, which was last active in 1911, lies approximately 3 miles east of the southern project terminus and displays no evidence of recent displacement. The Sargent Fault lies south of the corridor and is a complex system of interconnecting faults extending northwest between the San Andreas and Calaveras faults. Recent displacement and fault creep are evident along the Sargent Fault. The northeast segment of the Berrocal Fault extends between Los Gatos and Los Altos Hills and it shows no evidence of recent displacement. The Coyote Creek Fault lies southeast of the projects' southern terminus and has displayed no evidence of recent movement. The Piercy Fault, just east of the southern end of the Route 85 transportation corridor, has shown no recent movement. The Shannon Fault closely parallels Rout 85 from Regnart Creek in the north to the Almaden Expressway in the southeast. This fault crosses the Route 85 corridor twice, once in the vicinity of Wedgewood Avenue and Pollard Road in the north and also in the vicinity of Leigh Avenue in the south. There is no reliable evidence of recent displacement along this fault.

Table VI-2 is a list of the nearby active faults, the estimated maximum credible seismic event, and the maximum credible rock accelerations anticipated on the site from such an event. Maximum credible rock acceleration is an estimate of the amount of bedrock movement that would occur during a maximum credible earthquake event. The actual movement experienced at the ground surface would depend upon the depth and type of material overlying the bedrock.

The primary seismic risk to the project is earthquake induced shaking. On the potentially active Shannon Fault, which crosses



Legend
- Well Located Fault
- Approximate Location
- Concealed Location
- ? ? Inferred Location

ROUTE 85
FAULT LOCATION MAP
Scale: 1" = 250,000'

TABLE VI-1

SIGNIFICANT HISTORIC SEISMIC EVENTS

DATE	FAULT	EPICENTER LOCATION	RICHTER MAGNITUDE
1836	Hayward		7.0 - 7.5 *
1861	Calaveras		6.5 - 7.5 *
1868	Hayward		7.0 - 7.5 *
1906	San Andreas	Olema	8.25 *
1957	San Andreas	Daly City	5.3
1979	Calaveras	Coyote Lake	5.9
1984	Calaveras	Morgan Hill	6.1

* Estimated

TABLE VI-2

PREDICTED MAXIMUM EARTHQUAKES AND INTENSITIES

FAULT	MAXIMUM CREDIBLE EVENT (RICHTER)	MAXIMUM CREDIBLE ACCELERATION (GRAVITY)
San Andreas	8.25	0.62
Hayward	7.5	0.50
Calaveras	7.5	0.48
Sargent	7.0	0.42

the corridor at two locations, ground rupture is remotely possible. However, there has been no evidence of fault movement during the last 11,000 years. The project is more likely to experience ground shaking from an event on either the San Andreas, Hayward or Calaveras Faults.

Ground shaking can result in one or more of the following impacts:

Densification of loose granular soils. (Densification is the decrease in the volume of sediments as a result of compression).

Cracking, spreading, and settlement of embankment materials, especially at bridge approaches.

Liquefaction.
(Liquefaction is the phenomenon whereby the ground surface and underlying sediments behave like a liquid when an earthquake occurs).

Shear failure of embankments.

The potential for densification is considered to be low to moderate. If densification does occur, it would result in local deflection and misalignment of pavement.

The potential for liquefaction has been estimated as low to moderately low.

Shear failure potential is low because of the relatively strong foundation and embankment soils.

All of the interchanges and grade separations for this project will require the construction of bridges or undercrossings. These interchanges and grade separations are listed on Table V-1 on page V-13. All structures will be designed to account for the seismicity and soil response of the site, and the dynamic characteristics of the structure. In addition, the following measures will be included in the design of bridges, interchanges, and grade separations to enable them to withstand extensive movement without collapse although heavy damage may occur.

Hinge restrainers will be used to hold together the superstructure elements during extreme motion.

Heavy keys will be used to limit movement between the superstructure and abutments.

Increased reinforcement will be used in column sections to assure effective containment of concrete and to allow large movements to occur without collapse.

3. HYDROLOGY

a. Floodplains

The Route 85 transportation corridor crosses 11 base floodplains and their respective water courses between Route 101 in south San Jose and Stevens Creek Boulevard in Cupertino. A base floodplain is defined as the floodplain associated with the "flood or tide having a one percent chance of being exceeded in any given year". Listed below are the watercourses and their respective base floodplains starting from Coyote Creek on the eastern end to Regnart Creek in the northwest and their approximate location. Figure VI-2 depicts these water courses and their respective floodplains.

Watercourse	Location (Approximate)
Coyote Creek	Route 101, San Jose
Canoas Creek	Lean Avenue, San Jose
Guadalupe River	Almaden Expressway, San Jose
Ross Creek	Camden Avenue, San Jose
Los Gatos Creek	Oka Road/Lane, Los Gatos
Smith Creek	Pollard Road, Saratoga
San Tomas Aquino	Quito Road, Saratoga
Wildcat Creek	Quito Road, Saratoga
Saratoga Creek	Saratoga Avenue, Saratoga
Rodeo Creek *	Blaney Avenue, Saratoga
Calabazas Creek	De Anza Road, Saratoga
Regnart Creek	Stelling Road, Saratoga

* Rodeo Creek is the eastern edge of the Calabazas Creek Floodplain.

In addition to the listed watercourses, there is a base floodplain, approximately 200 feet wide, in the vicinity of Wedgewood Avenue and the Southern Pacific Railroad tracks in Los Gatos, which is not associated with any watercourse. All of the above floodplains are based on the Santa Clara Valley Water District Flood Control Facility and 1% Flood Maps , dated November, 1983.

All of the alternatives, except for the NPA and TSM, will result in either a longitudinal or transverse encroachment on the above listed floodplains. A longitudinal encroachment is one which parallels the base floodplain while a transverse encroachment crosses the floodplain.

Table VI-3 on page VI-9 is a summary of the floodplain encroachment criteria which is required under Presidential Executive Order 11988, Floodplain Management and the Federal Highway Program Manual 6-7-3-2.

The Route 85 transportation corridor, where it overlaps with the Guadalupe Corridor, will be a longitudinal encroachment on the base floodplain of Canoas Creek, and as such, constitutes a insignificant encroachment according to the Federal Highway Program Manual. This longitudinal encroachment will not change the size, shape, or characteristics of the floodplain. The Guadalupe Corridor transportation facility will act as a boundary for this expansive, shallow floodplain. All the drainage facili-

TABLE VI-3

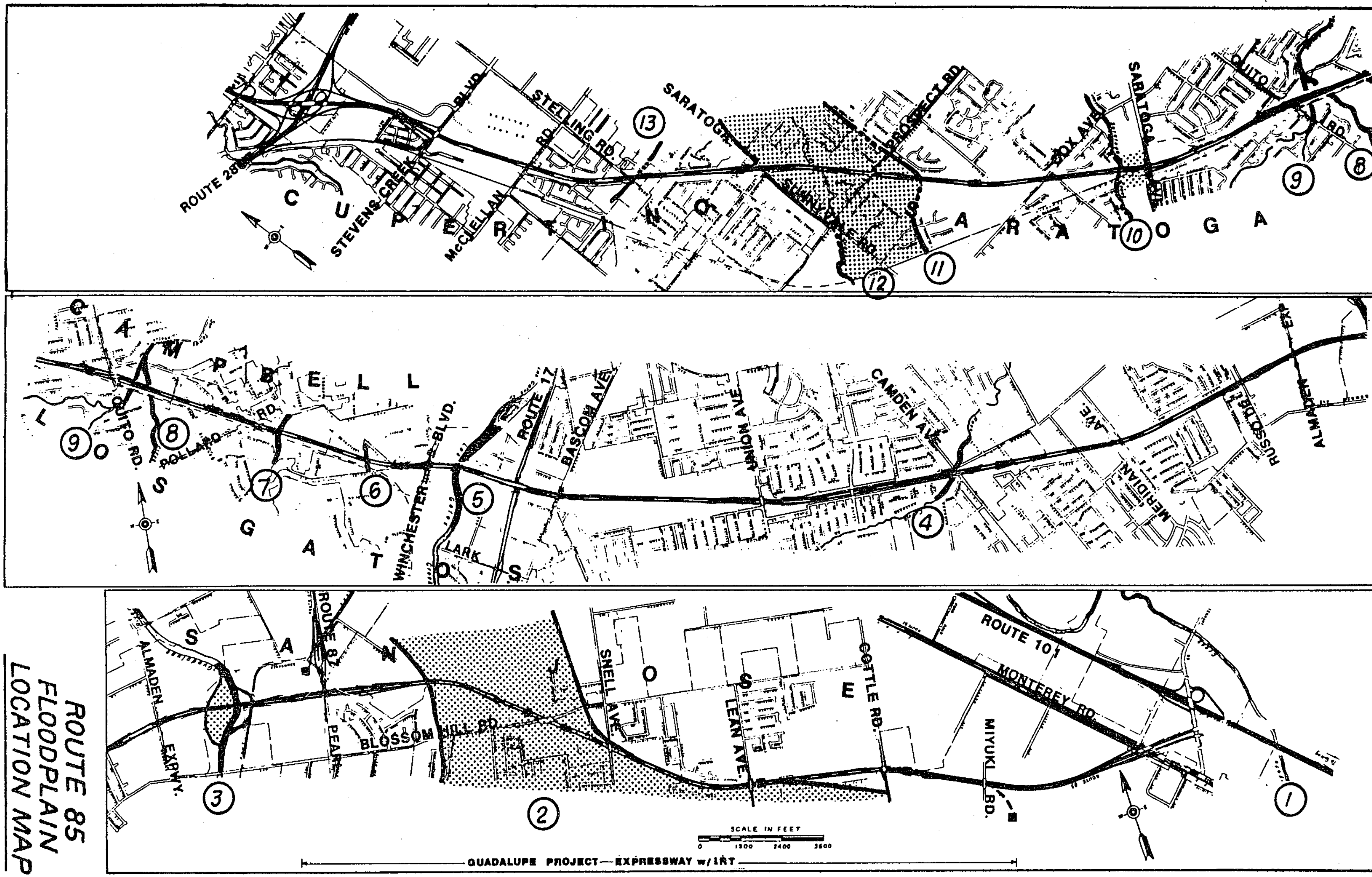
FLOODPLAIN ENCROACHMENT

IMPACTS	FLOODPLAINS												
	1	2	3	4	5	6	7	8	9	10	11	12	13
Longitudinal Encroachment?	No	Yes *	No	No	No	No	No	No	No	No	No	No	No
Significant Risks?	No	No	No	No	No	No	No	No	No	No	No	No *	No
Support Incompatible Development?	No	No	No	No	No	No	No	No	No	No	No	No	No
Significant Impact to Floodplain Values?	No	No	No	No	No	No	No	No	No	No	No	No	No
Special Mitigation to Minimize Impacts Required?	No	No	No	No	No	No	No	No	No	No	No	No	No
Significant Encroachment?	No	No	No	No	No	No	No	No	No	No	No	No	No
Location Hydraulics Study Available?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

* See Text for explanation.

1 Coyote Creek
2 Canoas Creek
3 Guadalupe River
4 Ross Creek
5 Los Gatos Creek
6 Unnamed Floodplain
7 Smith Creek
8 San Tomas Aquino Creek
9 Wildcat Creek
10 Saratoga Creek
11 Rodeo Creek
12 Calabazas Creek
13 Regnart Creek

ROUTE 85 FLOODPLAIN LOCATION MAP



1. Coyote Creek
2. Canoas Creek
3. Guadalupe River
4. Ross Creek
6. Unnamed Flood Plain
7. Smith Creek
8. San Tomas Aquino Cr.
9. Wild Cat Creek
11. Rodeo Creek
12. Calabazas Creek
13. Regnart Creek

Floodplain

FIGURE VI-2

ties constructed in association with the Guadalupe Corridor facility will be sized to accommodate the base flood. The widening of the Guadalupe Corridor facility proposed by the Route 85 alternatives will have no effect on the floodplain.

Saratoga Design Variation

The following discussion applies only to the Saratoga Design Variation which depresses the transportation facility for approximately 2.5 miles through the City of Saratoga.

In order for the floodwaters associated with Saratoga Creek to be confined within its channel and not impact the Route 85 facility, upstream channel improvement will have to be done. These channel improvements will require larger structures under the Southern Pacific Railroad, but would allow Saratoga Creek to be carried over the proposed transportation facility in an aqueduct. The aqueduct will eliminate any flood problems on the transportation facility.

Although the Saratoga Design Variation crosses over the Calabazas Creek channel, the profile will be depressed across most of the Calabazas Creek floodplain. This will create special problems which can only be solved by the construction of extensive channel improvements along Calabazas Creek extending upstream and downstream past Route 280 to the Lawrence Expressway. The Santa Clara Valley Water District estimates the cost of these improvements to be $5.6 million dollars. These improvements would eliminate the base floodplain associated with Calabazas Creek and allow the Route 85 transportation facility to cross the creek on a short bridge. With these channel improvements, the depressed section of the facility would no longer be in the base floodplain.

If these channel improvements are not done and the Route 85 transportation facility is depressed across the floodplain, the Route 85 transportation facility will be subject to closure and damages due to flooding. In addition, aqueducts will be required for the Rodeo and Saratoga Creeks to cross the depressed Route 85 transportation corridor.

In the event of a 100 year flood, Route 85, constructed at the "base" profile across Calabazas Creek, would be the only roadway that would remain open to traffic between the Santa Cruz Mountains and Route 280.

b. Water Quality

The watercourses which cross the corridor are listed in Table VI-3 on page VI-8.

The surface water quality is generally considered good with total dissolved solids of 149 parts per million (ppm) and 183ppm as measured at the Guadalupe Reservoir and the Vasona Reservoir, respectively (Surface Water Quality 1965-1979, Santa Clara Valley Water District, July 1980). Total dissolved solids is a measure of the amount of dissolved solids in a volume of water. The desirable limit of total dissolved solids in drinking water is 500ppm or less.

Existing and potential surface runoff problems were identified during the preparation of the Surface Runoff Management Plan for Santa Clara County. These surface runoff problems were mainly associated with silt, debris, oil and grease, mercury, herbicides and pesticides. Stream siltation as a result of erosion was considered to be a major problem.

All the creeks and rivers are considered non-game fishery streams in the area of the corridor except for San Tomas Aquino Creek. There have been reports of steelhead rainbow trout and king salmon in the upper sections of this creek.

The major impacts on water quality will occur during the construction phase and in particular during the rough grading process. There will be a short-term increase in turbidity and sedimentation of the affected watercourses which will decrease to an insignificant level when construction is completed.

The additional runoff caused by the new pavement constitutes an extremely small percentage of the total runoff for each of the affected watersheds. No significant impact on surface water quality is anticipated from roadway pollutants.

Construction impacts on water quality will be mitigated by following the Caltrans Standard Specifications which include a number of requirements which contractors must follow while working in or near watercourses and for general erosion control. These requirements a number of those required by the California Department of Fish and Game.

Because all of the construction alternatives require the crossing of the Guadalupe River and its percolation ponds, special construction measures will be followed. These include erection of a temporary wooden trestle as a construction platform, dewatering the percolation ponds so that dry construction techniques can be utilized, and the use of temporary dikes and fill sections from which to construct the bridges. As mitigation for these impacts, several measures have been proposed by the Santa Clara Valley Water District. These may include those measures listed below or others not yet determined.

1. Creation of offsite percolation ponds.
2. Cleaning of the existing ponds.
3. Widening a portion of the Guadalupe River northerly of Blossom Hill Road.

The following permits will be required for all of the alternatives except the NPA and TSM.

1. California Department of Fish and Game 1601 Streambed Alteration Permit
2. U. S. Army Corps of Engineers Section 404 of the Clean Water Act (required prior to placing dredged or fill material into watercourses or wetlands)
3. Santa Clara Valley Water District coordination

c. Wetlands

There are two wetlands which will be impacted by the construction of a transportation facility in the Route 85 corridor. These are the Oka Lane Wildlife Reestablishment Area and the Guadalupe River Percolation Ponds, both of which are managed by the Santa Clara Valley Water District. These two wetlands are described in detail in Section 4.b.4 on page VI-17 of this chapter.

d. Hazardous Wastes

A review of the locations of known or suspected hazardous wastes sites was conducted in 1984 and 1985. Information provided by the California Department of Health Services and the Region 2 Water Quality Control Board revealed that there are no known or suspected hazardous wastes sites within the Route 85 project area. If during construction of the selected alternative, a hazardous waste site is encountered, all work within the area of the suspected site will halt. Standard Caltrans procedures will then be followed to ascertain the nature of the hazard and how it should be handled and mitigated.

4. BIOTIC COMMUNITY

a. Rare, Threatened or Endangered Species

A field and literature search was conducted by Caltrans biologists to determine the presence of any candidate, listed, or proposed species of rare, threatened, or endangered plants or animals.

A candidate species, the salt marsh yellowthroat (*Geothlypis trichas sinuosa*) was the only species of concern identified by the U.S. Fish and Wildlife Service in their letter of March 28, 1984 that may occur in the Route 85 transportation corridor.

This warbler is normally found in wetland and riparian habitats of central California from Tomales Bay in the north to Santa Cruz County in the south and the Carquinez Straits in the east. It nests in fresh and brackish water marshes and riparian habitats from mid April to mid July.

In Santa Clara County, the known breeding sites are located in the Palo Alto and Alviso marshes. Most observations of the salt marsh yellowthroat in Santa Clara County have been isolated occurances along streams within 10 miles (16 kilometers) of the San Francisco Bay. In the past, the salt marsh yellowthroat had been observed in the upper reaches of Coyote Creek, the Guadalupe River, and Los Gatos Creek. Lack of recent observations can be attributed to the disturbance of creek channels and loss of riparian vegetation which resulted in the blockage of migration corridors from upland sites to marsh lands.

Only one recent comprehensive study (Status of the Salt Marsh Yellowthroat in the San Francisco Bay Area, California, 1975-1976. Margaret L. Foster) that describes the salt marsh yellowthroat distribution within the study area is available. While this study produced no evidence of use of habitat within the Route 85 corridor by the yellowthroat, its author hypothesizes that 2 years of drought may have influenced the distribution of the salt marsh yellowthroat. A new study of the salt marsh yellowthroat distribution is being performed by the San Francisco Bay Bird Observatory and should be complete in the summer of 1985. The results of this study will be considered in the determination of impacts caused by this project. If, based on the findings of the current distribution study, it is determined that any of the Route 85 alternatives could affect populations of the salt marsh yellowthroat, technical assistance will be requested from the U.S. Fish and Wildlife Service to minimize and mitigate potential impacts.

b. Habitats

Prehistorically, the Route 85 transportation corridor consisted of the following plant communities or ecosystems: oak savannah, grasslands, freshwater marshes, and riparian woodlands bordering streams. Settlement first brought grazing and then conversion of the land to agricultural purposes. Very little undeveloped land remains adjacent to the Route 85 corridor today.

Vegetation within the Route 85 corridor consists of active and abandoned orchards, row crops, nurseries, open fields, riparian woodlands, wetlands and urban ornamental landscaping. Because of the relatively low biotic value of row crops, nurseries, and urban uses for wildlife habitat, these categories will not be discussed. Of the Route 85 corridor, 53 acres or 7% is in row crops, 16 acres or 2% is in nursery, and 110 acres or 15% is in urban land use with ornamental landscaping as its only vegetation.

1. Orchards

Most of the orchards, consisting primarily of plum or walnut trees, have been abandoned in recent years. Orchards constitute

125 acres or approximately 12% of the Route 85 corridor.

The orchard ground cover, in areas of annual discing, consists of introduced grasses, such as wild oats and foxtail, and ruderals such as thistles, sweet fennel and morning glory. In areas which have had little disturbance, native species are recolonizing. This ground cover provides habitat for gophers, voles, ground squirrels and striped skunks. Passerine birds which utilize this area include mourning dove, goldfinch, and house finches. Predatory bird species include the American kestrel and red-tailed hawk.

The abandoned orchards provide unique habitat for wildlife. Unpruned trees develop a tangled growth of branches that provide protective and nesting cover. As the main branches and trunks begin to die, they provide cavities used for nesting and roosting for birds such as woodpeckers, western bluebirds, and screech owls. Insects inhabiting these trees are a valuable source of food for woodpeckers, common flickers, brown creepers, wrens and others. The tree blossoms are used by hummingbirds and house finches as a source of food during the spring.

2. Open Fields

Most of the open fields within the corridor were formerly in agricultural use, either row crop or orchards. This classification accounts for 420 acres of land or approximately 54% of the Route 85 corridor.

Vegetation cover in the open fields consists of the same type of cover found in the orchards, such as wild oats and foxtail. This habitat also provides for any of the same types of animal life that are listed above for the orchards.

3. Riparian Woodlands

Approximately 10 acres or 1% of the Route 85 corridor consists of riparian vegetation along the watercourses which ranges in biotic value from low to high. This value is dependent upon the quality of the habitat and the degree of man's influence. This habitat is usually characterized as having complex communities of woody plants, including both deciduous and non-deciduous trees and many shrubs and vines. Many of these species are hydrophytes and are restricted to moist environments. On the lower, moister slopes typical species encountered include willows, cattails, sedges, cottonwoods, sycamore, and box elder while walnut, coyote brush, oak, blackberry, and poison oak are found on the higher slopes.

Table VI-4 below describes the watercourses which would be affected by any of the proposed project alternatives. Those watercourses which are of low biotic value for wildlife habitat will not be discussed in detail. Those watercourses which have been left in their natural state have higher biotic value for wildlife habitat and will be discussed in this section.

TABLE VI-4
RIPARIAN BIOTIC VALUE

WATERCOURSE	WIDTH OF RIPARIAN HABITAT	BIOTIC VALUE ONSITE/OFFSITE	RIPARIAN ACREAGE IMPACTS(1)
Coyote Creek	300'	High/High	1.0
Canoas Creek	< 50'	Low/Low	0.3
Guadalupe River	1100+'(2)	Low/High	0.7
Ross Creek	< 50'	Low/Low	0.3
Los Gatos Creek	180 - 310	High/High	3.0
Smith Creek	75 - 170	Medium/Low	0.6
San Tomas Aquino Creek	< 100'	Low/Medium	0.4
Wildcat Creek	70 - 100	Medium/Medium	0.6
Saratoga Creek	100 - 150	High/High	0.5
Rodeo Creek	50'	Low/Low	0.2
Calabazas Creek (3)	130 - 220	High/Medium	1.4
Regnart Creek	50 - 180	Low/Low	0.4
		TOTAL ACREAGE = 9.4	

(1) Based on 200 foot right of way.
(2) Includes percolation ponds on both sides of the Guadalupe River.
(3) Does not include impacts associated with the Saratoga Design Variation. This would require extensive up- and downstream channel improvements having significant impacts.

Coyote Creek - Coyote Creek is crossed by the Route 85/Route 101 interchange at the eastern terminus of this project. This area of the creek is a well developed riparian woodland approximately 300 feet wide and is surrounded primarily by parkland. The tree species observed during the biological survey include several species of willow, Fremont cottonwood, black walnut, coast live oak, and sycamore. Other plants observed were Himalayan blackberry and knotweed. To the west of the Route 85 corridor is an orchard and on the east there are grassy hills.

The impacts of the new interchange include the creation of new shadows and the loss of approximately 0.5 acres of riparian habitat. The total area of impact is approximately 1 acre. In addition, a large coast live oak with a diameter at breast height of approximately 6 feet will be removed due to the construction of the interchange.

As mitigation for this loss of riparian habitat, 1.5 acres of riparian habitat will be created or enchanced at a location agreed upon by California Department of Fish and Game, U. S. Department of Fish and Wildlife, Caltrans, Santa Clara Valley Water District and others as appropriate. This new habitat will as closely as possible replace in kind the habitat lost as the result of this project.

Los Gatos Creek - Los Gatos Creek will be crossed by the Route 85 project on a series of bridges just west of Route 17. The width of the riparian vegetation zone at the crossing point varies from 180 to 310 feet and, although the area is not fully developed as a riparian woodland, indicator species are present. The adjacent land uses include a golf driving range and residential and commercial land uses.

Vegetation along the stream banks includes willow, sycamore, coast live oak, buckeye, and black cottonwood. Coyote brush, willow, snowberry and mugwort are also found along the banks in addition to introduced ruderals and grasses. A wide variety of birds were observed during the field survey and included the following: brown towhee, scrub jay, kingfisher, red-winged blackbird, Caspian tern, barn swallow, snowy egret and others.

3.0 acres of riparian habitat will be the lost and new shadows will be created. As mitigation for the above impact at Los Gatos Creek, 9.0 acres of riparian habitat will be enhanced or created just to the north of the interchange in conjunction with the mitigation packages proposed for the riparian impacts to all the creek crossings within the Route 85 transportation corridor.

Saratoga Creek

Within the Route 85 project corridor, the Saratoga Creek riparian zone varies in width from 100 to 150 feet. Adjacent land uses are primarily residential, abandoned orchards, and open fields.

The stream channel is relatively undisturbed within the Route 85 project corridor, the tree cover is continuous and includes large sycamores, black walnut, white alder, coast live oak and willows. Wildlife observed included mourning dove, western pond turtle, western fence lizard, western kingfisher, western aquatic garter snake, and western toad. Mammals included raccoon, opossum, skunk, and gray squirrel. Predatory species such as the kestrel and barn owl could be expected within the adjacent right of way.

The project will result in the loss of 0.5 acres of riparian habitat with a high biotic value for wildlife. The riparian habitat will be replaced by 1.5 acres of new habitat or the enhancement of existing riparian habitat in the vicinity of the project in coordination with all parties concerned.

Calabazas Creek

The riparian vegetation zone associated with Calabazas Creek varies in width from 130 feet to 220 feet within the Route 85 corridor. The adjacent land uses are open fields, residential and a vacant school.

The riparian vegetation area affected, approximately 1.4 acres, is of high biotic value as wildlife habitat and consists of coast live oak, sycamore, box elder, black walnut, willows and elderberry. Within the understory are poison oak, snowberry, coyote brush, blackberry, and manroot. Annual grasses and ruderals cover those areas not heavily shadowed by the trees. Wildlife seen or sign noted included mourning dove, scrub jay, common crow, house finch, kestrel, Nuttall's woodpecker, and raccoon.

4.5 acres of habitat will be created or enhanced in the vicinity of the Route 85 corridor to compensate for loss of the 1.4 acres.

Summary of Corridor Impacts and Mitigation

There will be a loss of 9.4 acres of riparian habitat for any of the alternatives which require the 200 foot of right of way. Of this 9.4 acres, 6 acres is considered to be high quality, 1.2 acres medium quality, and 2.4 acres low quality. The LRT alternative will result in a loss of approximately 4.8 acres. This 4.8 acres consists of 3 acres of high quality, 0.6 acres of medium quality and 1.2 acres of low quality.

Based on the high biotic value attributed to riparian corridors, these losses are considered a significant, adverse environmental impact. Not only would valuable habitat be destroyed but also the functional continuity of several of the riparian corridors would be affected.

Any construction alternative will require the modification to the stream channels which cross the corridor. This will require that 1601/1603 agreements be reached with the Department of Fish and Game. The Department of Fish and Game has requested that Caltrans replace the affected riparian habitat such that there is no net loss in habitat value.

The U.S. Fish and Wildlife Service has indicated that replacement of high quality riparian habitat should be at a ratio of 3 acres developed for each acre lost. The Department of Fish and Game and Caltrans both have a policy of tree replacement on a 5 to 1 basis with the Department asking for 5 gallon replacements for all trees except willows.

For the loss of the high quality habitat associated with any of the highway alternatives, 18 acres of riparian habitat will be created or enchanced in the vicinty of the Route 85 corridor. For the loss of the high quality habitat in the case of the LRT only alternative , 9.0 acres of riparian habitat will be created or enhanced in the vicinity of the Route 85 corridor.

Mitigation measures for the loss of riparian habitat will be developed by Caltrans in consultation with the California Department of Fish and Game, the U.S. Fish and Wildlife Service, and other agencies such as the Santa Clara Valley Water District as appropriate. All mitigation requirements included as conditions of permits required from these agencies will be included in the project. Permit conditions are expected to require habitat replacement or restoration equal in biotic value to the habitat removed by the project, and located, if feasible, in the immediate areas of the habitat destroyed. Replacement of equivalent habitat value may involve development or restoration of acreage substantially greater than the areas eliminated by construction.

4. Wetlands

According to the official definition of the U.S Army Corps of Engineers, wetlands are areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, under normal conditions, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, and similar areas. These areas are protected and must be identified pursuant to Executive Order 11990, Protection of Wetlands.

Two wetlands have been identified within the Route 85 project. These are the Oka Lane Wildlife Reestablishment Area and the Los Alamitos Percolation Ponds. These areas would also be designated as wetlands under the classification system of the U.S. Fish and Wildlife Service. These two wetlands comprise 4 acres or 0.5% of the Route 85 corridor. The Oka Lane area is adjacent to and fed by Los Gatos Creek and is utilized primarily for settling and percolation ponds. The Los Alamitos ponds are fed by the Guadalupe River just north of Blossom Hill Road and are used solely as percolation ponds. Both of these areas are managed by the Santa Clara Valley Water District in their ongoing groundwater recharge effort.

Oka Lane Wildlife Reestablishment Area

The Oka Lane Wildlife Reestablishment Area consists of several ponds between Route 17 and Los Gatos Creek. The southeastern most of these is utilized and managed as a siltation pond so that percolation in the other ponds will be unimpeded. This periodically drained desiltation pond is surface-scraped to remove any surface sediments which has collected. The remaining ponds are managed and used as percolation ponds.

Figure VI-3 on page VI-20, depicts an aerial photograph of the Oka Lane Wildlife Reestablishment Area. The wildlife reestablishment area consists of all the ponds with the exception of the desilting basin. The ponds provide wildlife with open water and brushy upland habitat. The brushy habitat contains native and exotic species. The exotic species have been introduced as food sources for the wildlife. A wide variety of birds, fish, reptiles and amphibians have been observed utilizing the wildlife reestablishment area.

There will be no direct impacts to the Oka Lane Wildlife Reestablishment Area as a result of the Route 85 project alternatives. The proposed Route 17/Route 85 interchange will be designed to minimize the impacts to the ponds. There are, however, indirect short-term adverse impacts which will be associated with construction activity. These impacts are primarily increased noise and dust. There will be indirect long term impacts from the increased noise and human activity adjacent to the ponds. In addition, the possible construction of the extension of Knowles Drive (to provide local access) will increase the noise and human activity in the vicinity of the ponds and the "resting and nesting" island. All of these indirect impacts, while considered adverse, are not significant. Caltrans' Standard Specifications and special measures as required will be followed during construction to control dust and noise. These measures include the use of watering to reduce the amount of dust, and the use of proper mufflers to reduce the noise pollution.

Los Alamitos Percolation Ponds

The Los Alamitos percolation ponds are located adjacent to the Guadalupe River near the junction of the Almaden Expressway and Blossom Hill Road. They are part of the Santa Clara Valley Water District ground water replenishment system. See Figure VI-4 on page VI-21.

Much of the ground surface around the ponds is devoid of vegetation and the banks of the ponds are relatively steep so that only a narrow space is available for hydrophytic plants. The bareness of the ground and steepness of the banks is due to the Santa Clara Valley Water District's management of the ponds. Mule fat is the most successful of the native plants inhabiting the pond borders. Aquatic vegetation consists mostly of nonvascular plants.

Despite the disturbed nature of the edges of the ponds, many bird species were evident during the field surveys. Some of these birds are not common to the area: for example, Canada goose, white-fronted goose, and the black-crowned night heron. The

FIGURE VI-4

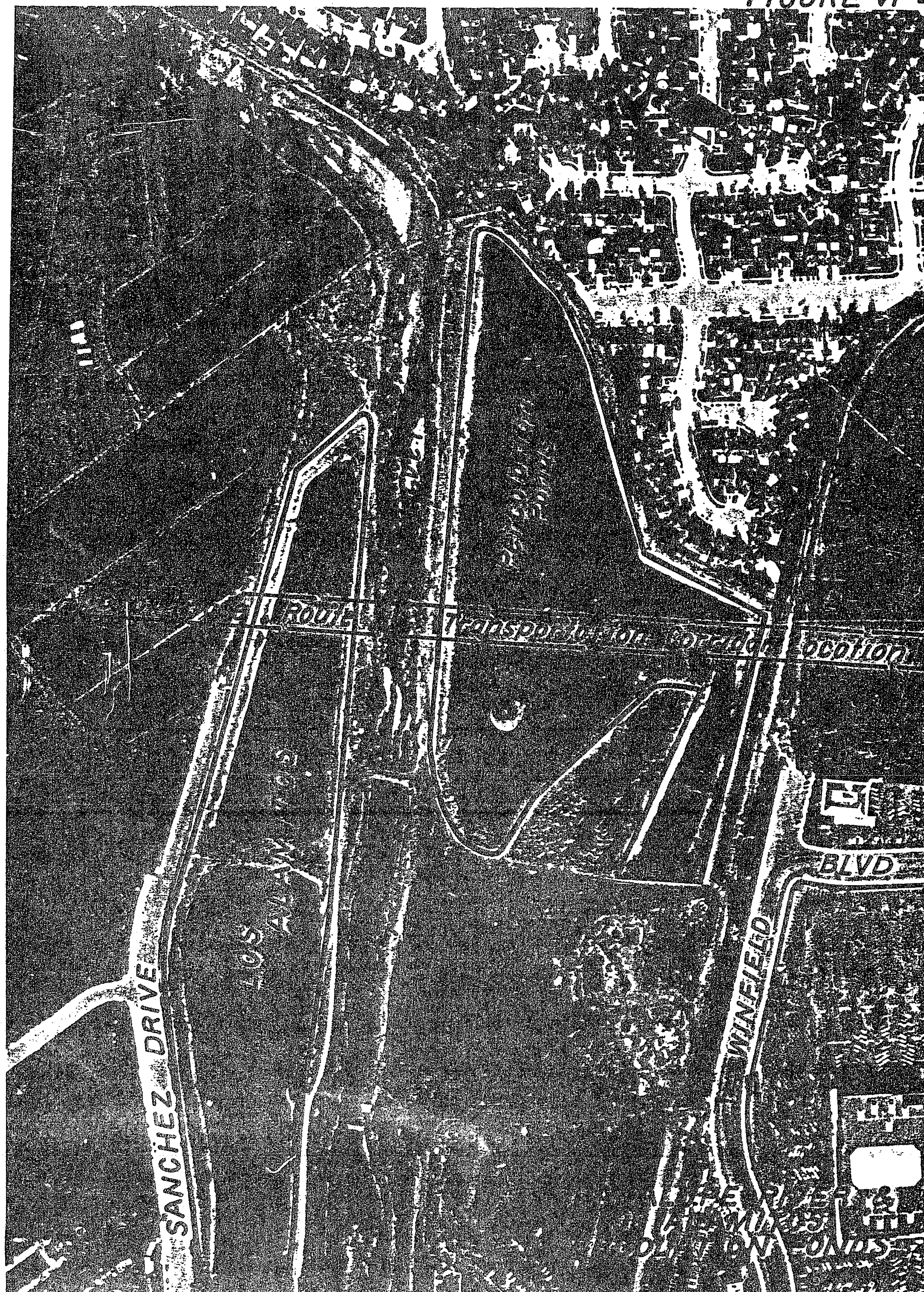
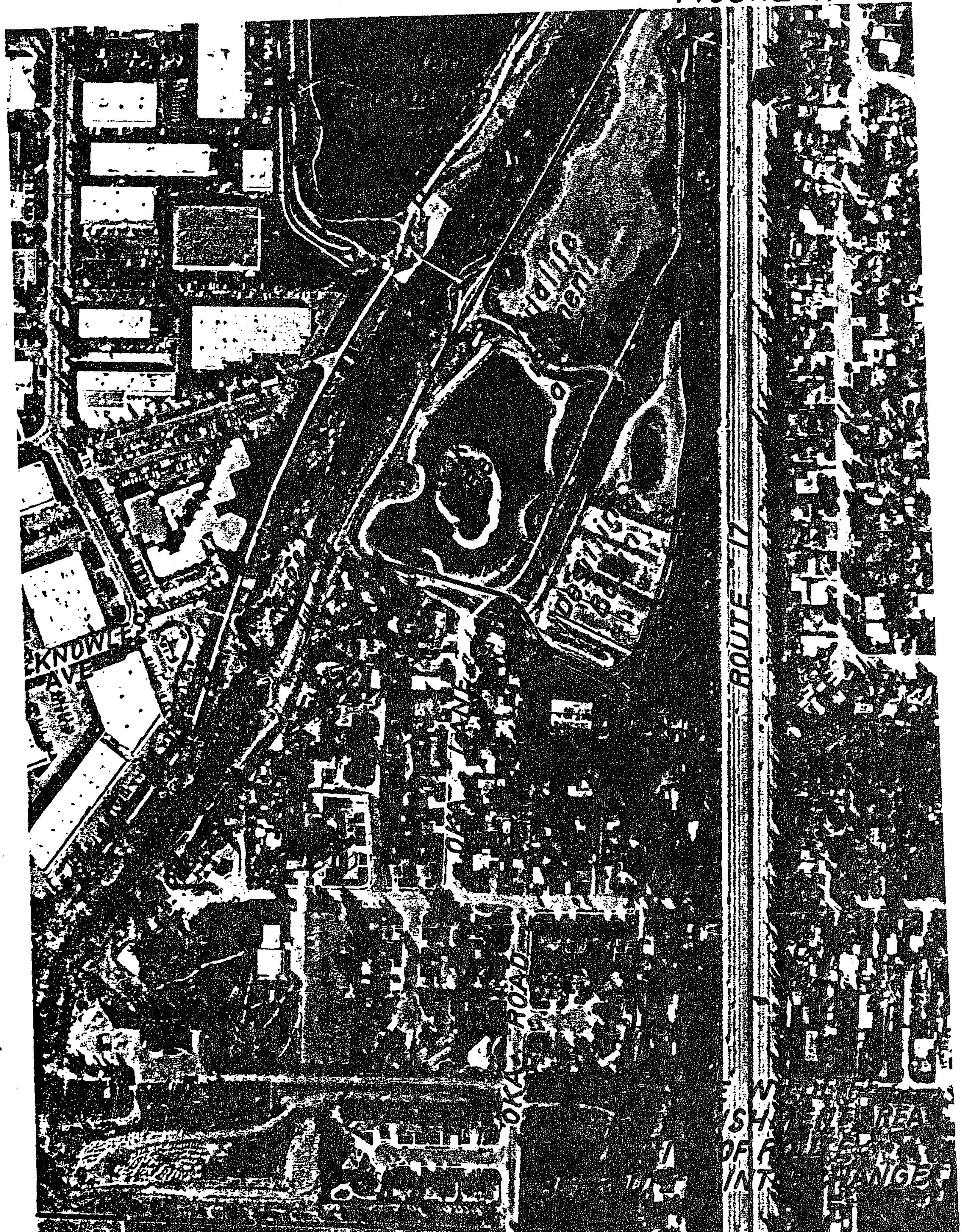


FIGURE VI-3



ponds are used as a stopover point during the winter migration months.

Approximately 3.7 acres of wetlands would be eliminated from the Los Alamitos ponds with the selection of any of the Route 85 project alternatives except the NPA, TSM and LRT. This would be a direct, adverse, significant impact. In addition to the direct losses, adjacent wetlands would be indirectly affected by noise and increased human activity. Some waterfowl may be adversely affected by the physical barrier of the 160+ foot wide, 1100 foot long bridge structure which would bisect the pond area as it carries Route 85 across the ponds.

The LRT alternative would eliminate 1.8 acres of wetland from the Los Alamitos ponds. This would be a direct, adverse, significant impact although it would not be as severe as the 160+ foot wide bridge. The LRT alternative would have the same indirect impacts as the 160+ foot wide bridge structure.

Mitigation for the loss of wetlands in the Route 85 project corridor would require, at the minimum, creation of an equivalent number of acres of new wetlands of comparable or higher quality than that which was lost. If the habitat lost cannot be mitigated adjacent to the impact area, then offsite mitigation could be used. The two roads that are planned to be built adjacent to the Oka Lane Wildlife Reestablishment Area should be fully screened from the ponds by landscaping with native trees and shrubs. This should effectively mitigate the indirect, adverse impacts to the Oka Lane Wildlife Reestablishment Area.

C. AIR, NOISE, AND ENERGY STUDIES

1. CLIMATE AND AIR QUALITY

a. Climate

The San Francisco Bay Area, including the Santa Clara Valley, experiences a Mediterranean type of climate influenced significantly by the maritime effects of the Pacific Ocean. This type of climate has warm, very dry summers, and cool, relatively rainy winters. The average summer temperature is 70 degrees Fahrenheit while the winter average is 52 degrees Fahrenheit. The Santa Clara Valley normally averages 14.2 inches of rain per year. Winds are channelled by the Santa Clara Valley and are generally from a southerly direction in the winter and a northwesterly direction in the summer. None of the project's alternatives will affect or be adversely affected by the regional climatic conditions of the area.

b. Air Quality

The information in this section is based on an air quality analysis which is part of the Route 85 Corridor Technical Studies Report which was completed in February 1985.

In terms of air quality, the only distinctions among the alternatives are the traffic characteristics, that is, speed, volumes, vehicle mix, profile variations, and transportation control measures (TCM's) implemented. Differences in the horizontal alignment of the build alternatives create only a 10 foot or less difference in the computer model, which is not considered to affect results by a significant amount.

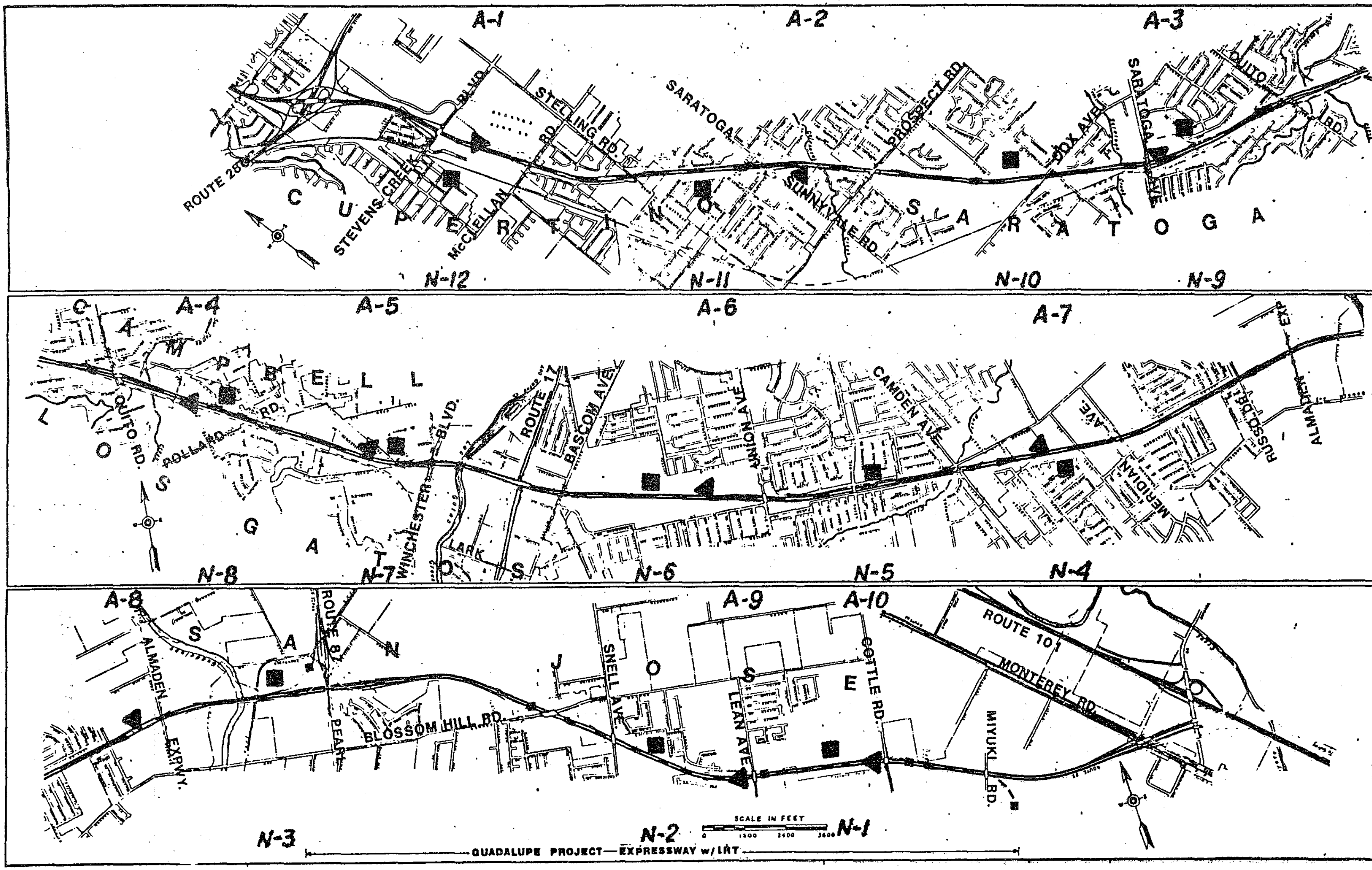
Ambient carbon monoxide (CO) sampling was done during the winter of 1983-84 from 11/1/83 to 2/25/84 at eight sites along the Route 85 corridor. Figure VI-5 on page VI-23 depicts these locations. Table VI-5 summarizes the ambient CO levels.

Figure VI-6 shows the results of the Bay Area Air Quality Management District's (BAAQMD) sampling. As Figure VI-6 shows, ambient CO levels are lower in the Route 85 corridor than in the downtown San Jose area. The Fourth Street monitoring station in downtown San Jose showed 2 violations of the 8 hour CO standard of nine parts per million, two violations of the federal Total Suspended Particulates (TSP) secondary standard, and nine violations of the federal ozone standard during 1983. For each of these pollutants, the highest concentration levels in the Bay Area are recorded at this monitoring station.

The federal and state governments have researched the effects of carbon monoxide on human health and have established concentration levels at which it can be dangerous. These levels were then used in establishing air quality standards. The Federal Clean Air Act of 1970 and its amendments require states and regions to develop plans and programs to meet these standards. The federal 1-hour carbon monoxide standard is 35 parts per million, and the state standard is 20 parts per million. The 8-hour CO standard is 9 part per million in both federal and state standards.

The highest carbon monoxide concentrations, if a Route 85 transportation facility is built, are generally expected to be found in the microscale area adjacent to the freeway. The microscale analysis for this project is a worst case analysis made by using the Caline3 computer model. The inputs to this model include traffic volumes, motor vehicle emission factors, wind speeds and directions, atmospheric stability classes, temperature inversions, highway configurations and receptor locations. The output is the expected carbon monoxide concentration at the various receptors for 1-hour.

The carbon monoxide concentration that the model yields is directly proportional to traffic volumes and emission factors



▲ = Air Sites
■ = Noise Sites

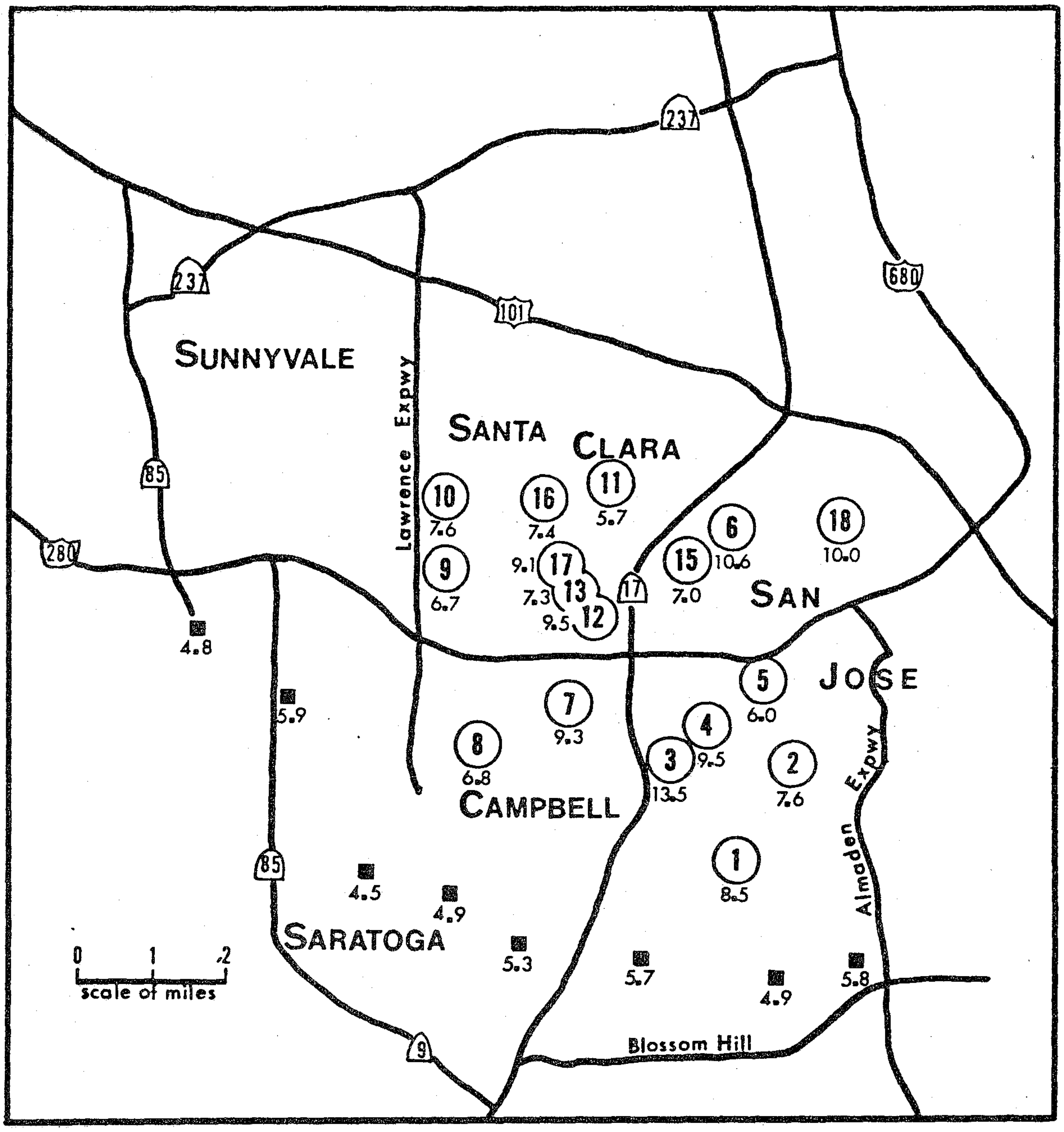
AIR AND NOISE MEASUREMENT SITES
WEST VALLEY CORRIDOR

FIGURE VI-5

TABLE VI-5

EXISTING AMBIENT CARBON MONOXIDE CONCENTRATIONS

Location of 1983/84 Field Sampling Sites	Ambient Maximum Recorded Value (PPM) 1-hr.	8-hr
Russo Street San Jose	7	4
Dent Avenue San Jose	10	6
Cambrian Park San Jose	9	4
Pollard Road Los Gatos	8	5
More Avenue Saratoga	7	5
Saratoga Avenue Saratoga	6	5
Rainbow Drive Cupertino	12	6
Bubb Road Cupertino	7	5



Map of monitoring sites in Santa Clara County, California. Numbers within circles are BAAQMD sites. Adjacent numbers are highest measured 8-hour CO concentrations between 18 Nov 1983 and 14 Feb 1984. Numbers near the black squares at the bottom of the map are highest 8-hour CO concentrations from Caltrans monitors from the same period.

FIGURE VI-6

(which are inversely related to traffic speed). Low wind speed and stable air conditions produce the highest concentration; higher wind speeds and more turbulent conditions tend to disperse the pollutants over a wider area. Wind direction in conjunction with site location can be especially critical, with a 10 degree change in direction producing as much as a 10 parts per million variation.

Table VI-6 summarizes the maximum expected carbon monoxide values for the various alternatives in 1990. These levels do not include park and ride lot carbon monoxide contributions. When exact locations and sizes are determined, these lots must be given consideration since they could, on an hourly basis, contribute several parts per million of carbon monoxide to neighboring properties. Likewise, receptors at major interchanges may have to be reconsidered when more detailed geometrics are available.

The maximum 1990 ambient carbon monoxide level projected for the project area is 9 parts per million for the 1-hour and 6 parts per million for the 8-hour test. These projected 1990 ambient carbon monoxide values were obtained using a rollback method based on the production rates of carbon monoxide obtained from the Bay Area Air Quality Management District. The 1987 values were reduced 19% for vehicle Inspection/Maintenance and 14% for Transportation Control Measure #12, which is a special credit for the San Jose area only.

These ambient carbon monoxide levels were added to the roadway produced carbon monoxide projected using the Caline 3 computer model. A 25% reduction credit was taken off the Light Duty Auto (LDA) contribution for Inspection/Maintenance (I/M).

<u>None</u> of the alternatives are expected to cause exceedances of the air quality standards.

Bay Area Air Quality Plan (BAAQP) Legislative Background

According to the procedure made law in the 1970 Clean Air Act and its 1977 amendments, the San Francisco Bay Area Air Basin (which includes San Jose) was declared a non-attainment area for carbon monoxide and ozone.

This non-attainment designation means that because no reasonable measures could bring down the concentration levels of these pollutants soon enough to meet the federal standards (or goals) set for 1982, an extension was granted. The Bay Area now has until 1987 to meet the federal standards and was required to prepare a report explaining how this would be done. This report, the 1982 Bay Area Air Quality Plan, was recently approved by the Environmental Protection Agency. It contains various control measures to bring pollutant concentrations down to acceptable levels by 1987. Vehicle emission controls and the recently implemented Inspection/Maintenance program are two of the more

TABLE VI-6

MAXIMUM "WORST CASE" MICROSCALE CO LEVELS (1990)

Alternatives	1-hour (ppm)	8-hour (ppm)
NPA	12	5
TSM	12	5
LRT	12	5
4-lane Freeway	13	6
4-lane Freeway (Saratoga cut)	16	7
4-lane Freeway with HOV	13	6
4-lane Freeway with HOV (Saratoga Cut)	16	7
6-lane Freeway with Bus/HOV Transitway	13	6
6-lane Freeway with Bus/HOV Transitway (Saratoga Cut)	16	7
8-lane Freeway	14	6
8-lane Freeway (Saratoga Cut)	17	7

important control measures as well as the Transportation Control Measures (TCM's).

Table VI-7 explains the Transportation Control Measures included in the 1982 Bay Area Air Quality Plan.

Each of these measures must be addressed, either by including them as (or in) major alternatives or explaining the consideration given them and why they are not feasible or environmentally desirable for the project or air basin.

TABLE VI-7

TRANSPORTATION CONTROL MEASURES

TCM	EXPLANATION
1-3	These involve transit deverlopment in a way not directly related to the adoption of specific projects.
4	HOV Lanes
5	Ridesharing
6	Long Range Transit Improvement
7	Preferential Parking for Car and Vanpools
8	Park and Ride Lots
9	Bicycle Paths
10	Local Government Information
11	Gas Cap controls
12	Commuter Transportation Program

Table VI-8 shows the Transportation Control Measures that are incorporated into each alternative. The NPA develops no Transportation Control Measures even though it will result in lower microscale carbon monoxide levels in the project area. TCM's 1-3 do not apply to any of the proposed alternatives. TCM 4, HOV lanes, applies only to those alternatives which include HOV lanes in their description. TCM 5, Ridesharing, applies to all of the alternatives except the NPA and LRT. TCM 6, Long Range Transit, only applies to Bus/HOV and highway with LRT alternatives. TCM's 7 and 9-12 are not applicable to any of the alternatives. TCM 8, Park and Ride, applies to all the alternatives except the NPA.

TABLE VI-8

ALTERNATIVE TCM INCORPORATION

TCM's	NPA	TSM	LRT	4FWY & LRT	4FWY & HOV & LRT	4FWY & Bus/HOV	6FWY & Bus/HOV	8FWY	8FWY & LRT
	ALTERNATIVES (YES/NO or N/A (Not Applicable))								
1-3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4 HOV Lanes	N	N	N	Y	Y	N	Y	N	N
5 Ridesharing	N	Y	N	Y	Y	Y	Y	Y	Y
6 Long Range Transit	N	N	N	N	Y	Y	Y	N	Y
7 Preferred Parking	N	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8 Park and Ride	N	Y	Y	Y	Y	Y	Y	Y	Y
9 Bicycle Paths	N	N	N	N	N	N	N	N	N
10 Local Government Policies	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
11 Gas Cap Controls	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12 Commuter Transportation Program	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2. NOISE

The cities along the corridor are primarily residential in character and generally experience low ambient noise levels. The greatest amount of noise produced in the project area is from motor vehicles. This traffic noise is a function of traffic volumes, types, speed and distance to the listener. The major existing noise source within the Route 85 corridor is vehicle traffic on all the parallel and cross streets, and especially the heavily used highways such as State Route 101, 17, 85, 9, Almaden Expressway and Blossom Hill Road. Small localized noise sources which also contribute to the noise level, but only for brief time periods, include farm equipment used in conjunction with the small agricultural facilities and railroad activity northwesterly of Winchester Boulevard.

Potential sensitive receptors located adjacent to the corridor include over 1,350 residences, seven schools, two parks, two hospitals and a recreational facility. Of the 1.350 residences, approximately 405 (30%) of them are two level structures usually associated with sleeping quarters on the upper levels. The institutional receptors are listed below:

Gunderson High School
Almaden Elementary School
Branham High School
Athenour Elementary School
Rolling Hills Junior High School
Blue Hills School
De Anza Junior College

Good Samaritan Hospital
Kaiser Foundation Hospital

Congress Springs Park
Kevin Moran Park

Noise readings were taken at 12 representative sites in or adjacent to the corridor. These locations are shown on Figure VI-7. Table VI-9 lists these locations, the ambient noise readings in decibels (dBA), and the projected noise levels for the various alternatives. dBA is a numerical expression of the relative loudness of a sound. All of the build alternatives will have an adverse impact on the noise environment that exists throughout most of the Route 85 corridor and its adjacent communities.

The results of several 24-hour ambient noise measurements indicate the hourly peak noise to be an average of Leq 56 dBA along the unoccupied corridor as compared to 76 dBA at Branham Way, a relatively short occupied sector of the Route 85 corridor. Leq is the average noise energy for a stated period of time. These noise levels are the present values for the NPA. Where the alignment is adjacent to Branham Way, now used as a major 2-lane thoroughfare, the receptors should benefit due to the shifting of many vehicles to the proposed facility.

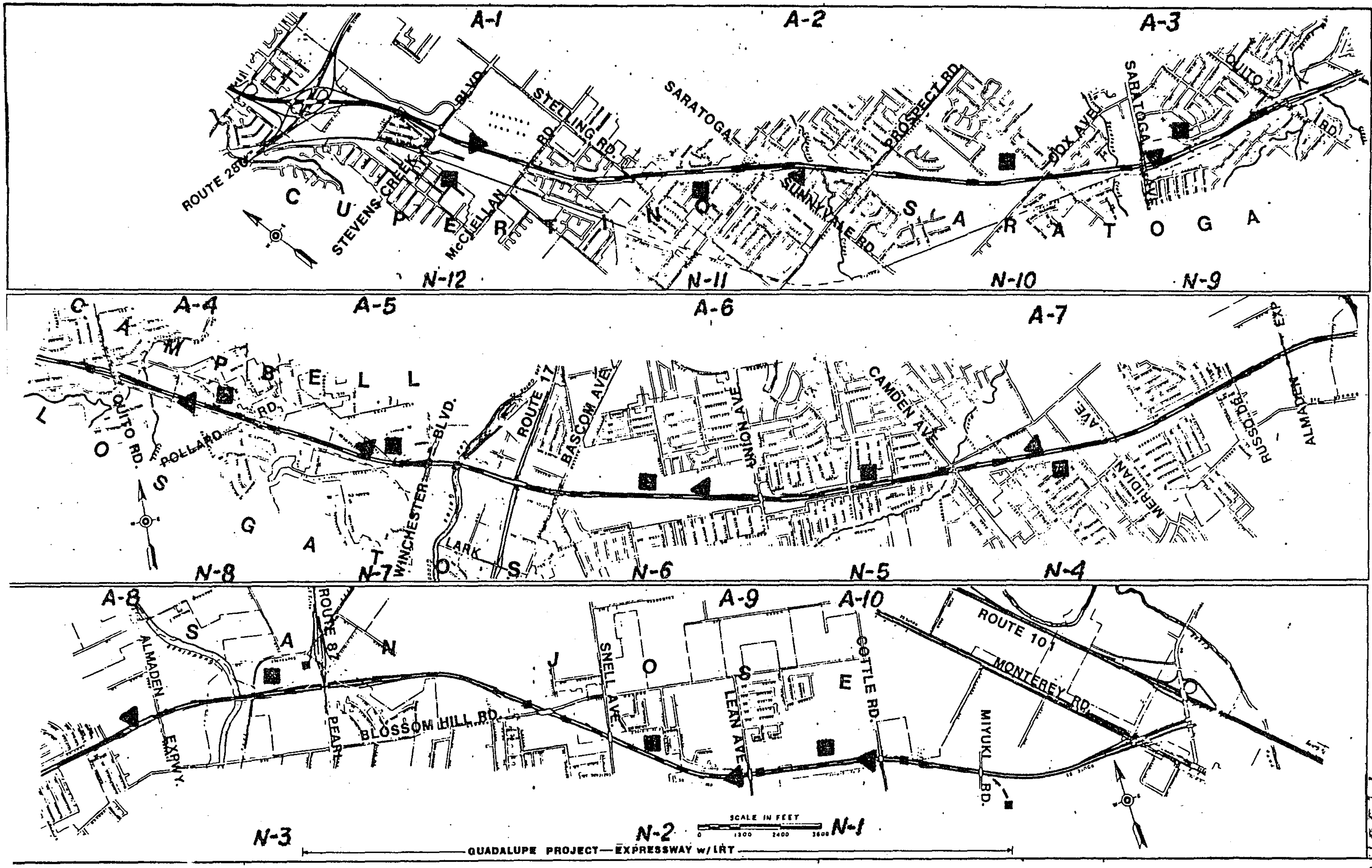
The schools immediately adjacent to the corridor will be impacted by the construction of any of the alternatives. The wall heights and lengths will be designed to attenuate the increased noise level to the largest extent feasible during the final design of the selected alternative. Gunderson High School noise impacts will be determined during the design of the Route 85/Route 87 interchange.

The noise impacts on Kaiser Foundation Hospital will be studied in detail during the design of the Route 85/Cottle Road interchange. Preliminary calculations indicate that there will not be

TABLE VI-9
AMBIENT AND PREDICTED HOURLY NOISE LEVELS

MEASUREMENT LOCATION	PEAK AMBIENT NOISE READING (dBA)	PEAK PREDICTED NOISE LEVEL (dBA) CATEGORY (2) MITIGATED/ UNMITIGATED				CHANGE (1) (dBA) CATEGORY (2) MITIGATED/ UNMITIGATED			
		1	2	3	4	1	2	3	4
156 Herlong Avenue San Jose	51	63/ 68	(3) 67	(3) 67	/	(3) 17	(3) 16	(3) 16	/
5797 Orchard Park Drive San Jose	52	63/ 68	(3) 67	(3) 67	/	11/ 16	(3) 15	(3) 15	/
5299 Fell Avenue San Jose	50	(3) 63	(3) 62	(3) 64	/	(3) 13	(3) 12	(3) 14	/
1393 Dentwood Avenue San Jose	53	66/ 73	63/ 71	64/ 71	/	13/ 20	10/ 18	11/ 18	/
14305 Branham Lane San Jose	71	64/ 69	(3) 67	62/ 67	/	-7/ -2	(3) -4	(3) -4	/
2334 Monaco Drive San Jose	51	65/ 71	63/ 69	63/ 69	/	14/ 20	12/ 18	12/ 18	/
628 Vasona Avenue Los Gatos	53	(3) 67	(3) 65	(3) 65	/	(3) 14	(3) 12	(3) 12	/
4767 Roundtree Drive Campbell	48	67/ 77	67/ 74	65/ 75	(3)	19/ 29	19/ 26	17/ 27	(3)
18902 Afton Avenue Saratoga	59	(3) 67	(3) 66	(3) 65	/	(3) 8	(3) 7	(3) 6	/
19732 Solana Drive Saratoga	52	64/ 69	(3) 67	(3) 67	/	12/ 17	(3) 15	(3) 15	/
1130 Scotland Drive Cupertino	52	67/ 77	67/ 74	65/ 75	/	15/ 25	15/ 22	13/ 23	/
10130 Bubb Road Cupertino	54	(3) 67	(3) 67	(3) 65	/	(3) 13	(3) 13	(3) 11	/

(1) May not necessarily be at the corresponding time.
(2) CATEGORY <1> 6- or 8-lane freeway <2> 4-lane freeway with LRT
<3> 4-lane freeway with HOVs <4> Light Rail Transit
(3) Not Applicable



▲ = *Air Sites*
■ = *Noise Sites*

AIR AND NOISE MEASUREMENT SITES
WEST VALLEY CORRIDOR

FIGURE VI-7

a noticable noise impact and no mitigation is expected. The noise impacts associated with Good Samaritan Hospital will be determined during the design of the Route 85/Route 17/Bascom interchange. Mitigation is expected to be needed.

The noise level emitted by the transportation mode varies since there are seven build alternatives; six involve freeways of different capacity and the seventh is LRT. These freeway noise levels were determined by the Federal Highway Administration approved vehicle noise prediction model with maximum traffic operating at Level of Service "C", which should produce the highest noise levels. This should occur shortly before or after the peak vehicle volume hour associated with congested and slower commute traffic.

Table VI-10, lists the typical unmitigated peak hour noise levels of all the alternatives based on an at-grade alignment, 200 foot right of way width, receptors 20 feet, 150 feet, and 500 feet outside of the right of way, and the aforementioned traffic conditions. Since the LRT system should be the same as that proposed for the Guadalupe Corridor, the data for the noise emitted was taken from that study.

Table VI-10

ALTERNATIVE	NOISE LEVEL (dBA) 20 feet	150 feet	500 feet
NPA (average, unoccupied portion of corridor)	56	56	56
NPA (occupied portion, with dwellings and streets)	76	67	62
LRT (average peak hour)	56	51	46
4-lane Freeway with LRT	74	69	64
4-lane Freeway with 2-lane Transitway	75	70	65
4-lane Freeway with LRT and HOV	75	70	65
6-lane Freeway with 2-lane Transitway	77	72	67
8-lane Freeway	77	72	67
8-lane Freeway with LRT	77	72	67

MITIGATION MEASURES

The noise mitigation measures for this project are to attenuate traffic noise by constructing soundwalls at locations where they are feasible and effective. The location of the barriers varies with the alignment of Route 85 and the adjacent terrain features.

At this stage of the analysis, the calculations were simplified by making assumptions which were applied to all the alternatives. They are as follows:

1. Right of way widths were generally divided into widths

of 200, 300, and 400 feet (widths over 200 feet can be found at interchange locations);
2. Cuts and fills were divided into increments of 2 feet, with 30 feet used as a maximum;
3. All receptors, including commercial establishments, were considered residential and were conservatively presumed to be 20 feet outside of the right of way;
4. No corrections for grades and superelevations were included.
5. No adjustments for flanking noise were included. (Noise coming in at an angle from the edges of soundwalls).

In addition, lengths and heights of the barrier were calculated only between interchanges. Additional noise barriers, where needed, will be added at the right of way line encompassing the interchanges, on fill sections approaching structures and on the structures themselves.

The results of the calculations are shown in Table VI-11 on page VI-35. These barrier selections were based on the Federal Highway Program Manual 7-7-3 noise abatement criteria levels and the guidelines set forth in Caltrans' Design Information Bulletin 58.

The noise attenuation expected from the proposed noise walls varies from 5-dBA (as required by Design Bulletin 58) to 11-dBA depending upon the alternative.

Although the LRT alternative may not require a soundwall, a community wall (six foot high soundwall) shall be considered throughout the Route 85 corridor, including areas not protected by the soundwall of other alternatives.

Although maximum noise attenuation measures within allowable and practical means were applied to the barrier noise height selection, all of the "build" alternatives will have an adverse impact on the noise environment that exists throughout most of the Route 85 corridor. There will be an average increase of approximately 12 dBA within the corridor. This increase will especially impact the approximately 1,350 residences which border directly on the Route 85 corridor.

TABLE VI-11

SUMMARY OF NOISE WALL LENGTHS AND HEIGHTS BETWEEN INTERCHANGES
STANDARD PROFILE

ALTERNATIVES	Wall Heights (Nearest 0.5 Mile)							
	No Wall	6'	8'	10'	12'	14'	16'	TOTAL WALLS(1)
All 6- or 8-lane Freeways	5.0	--	1.0	14.5	1.0	(2)	--	16.5
4-lane Freeway with LRT	8.0	--	6.5	2.5	4.5	(2)	--	13.5
4-lane Freeway with HOV's	8.5	--	2.5	10.5	--	(2)	--	13.0
LRT	No walls expected							

SARATOGA DESIGN VARIATION

ALTERNATIVES	Wall Heights (Nearest 0.5 Mile)							
	No Wall	6'	8'	10'	12'	14'	16'	TOTAL WALLS(1)
All 6- or 8-lane Freeways	7.0	--	1.0	13.0	0.5	(2)	--	14.5
4-lane Freeway with LRT	9.0	--	6.0	2.0	4.5	(2)	--	12.5
4-lane Freeway with HOV's	10.0	--	2.0	9.5	--	(2)	--	11.5
LRT	No walls expected							

(1) The above totals do not include 8.5 miles of walls primarily 8' to 10' in height, attributed to the interchange areas.

(2) Less than 0.25 miles of wall will be constructed at this height.

3. ENERGY RESOURCES

Predicting the amount of energy consumed by the various project alternatives is limited by the accuracy of the traffic data. These estimates are largely based on speed, which in turn is a function of the predicted level of congestion. A small amount of traffic growth can change congestion levels dramatically. In examining conditions in a single forecast year (1990), the estimates indicate how well the transportation facility will be working.

There are complementary ways in which to measure relative energy conservation, no one of which results in an entirely adequate picture. These include operational fuel efficiency (gallons/1000 passenger miles), construction energy payback period (years), and energy conservation in the form of reduced energy usage (gallons saved/day).

Figure VI-8, on page VI-38 compares the peak period operational fuel efficiency of the various alternatives. As can be seen, the NPA is the least fuel efficient and the LRT is the most fuel efficient, for the number of passengers carried. However, the off peak penalties of weekend and evening service would lower the efficiency of the LRT substantially. Buses on HOV lanes would have a similar penalty, but since cars outnumber buses on the HOV lanes, there would be less apparent effect in the Freeway/HOV lane 24 hour efficiencies. The "freeway alternatives" save the most fuel overall in that they carry the largest number of patrons.

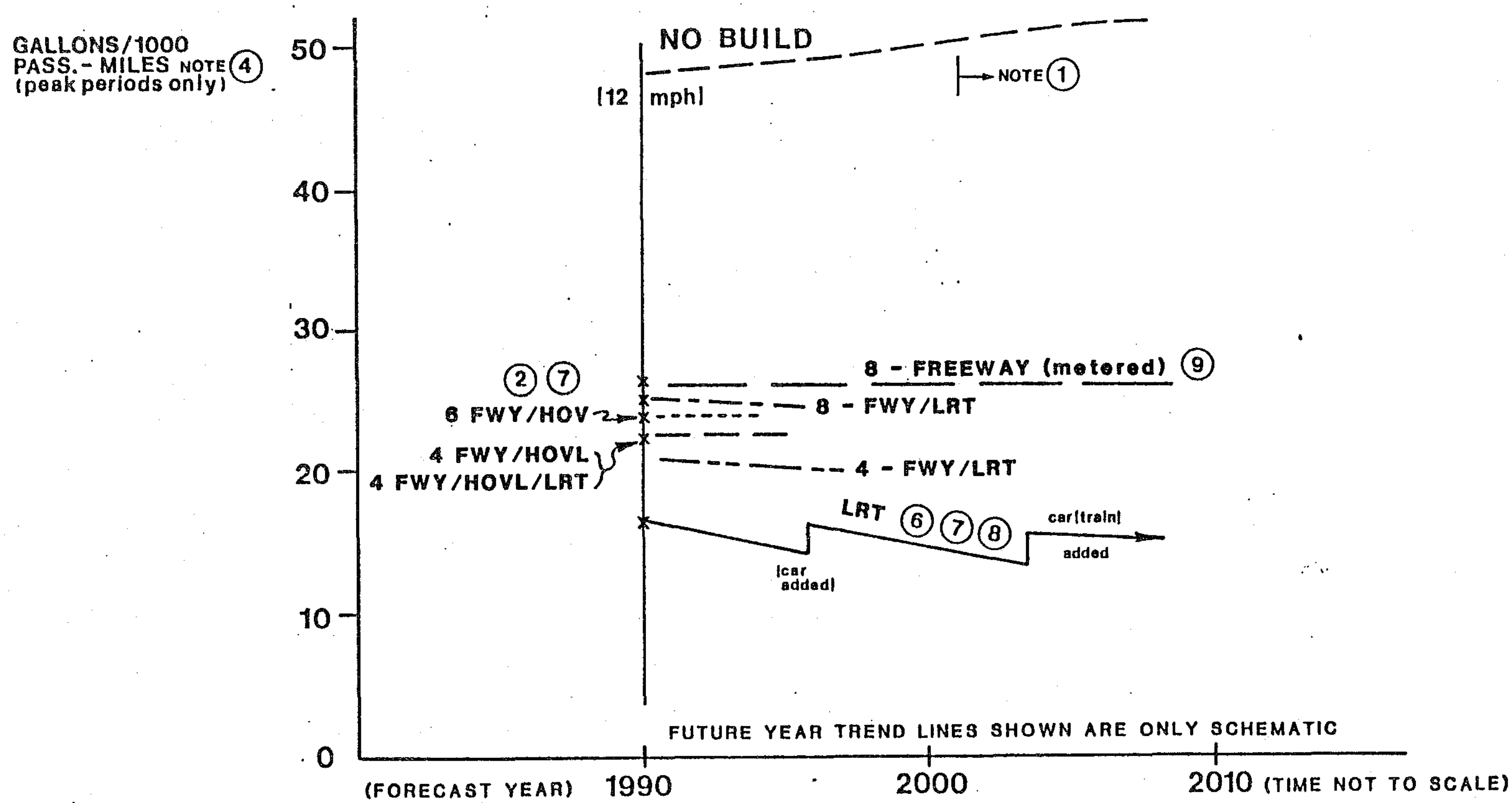
The energy payback period is determined by dividing the construction energy cost by the yearly savings, as compared to the NPA. Figure VI-9, on page VI-39 compares the energy payback periods for the various project alternatives. The eight lane freeway has the shortest energy payback period while the LRT has the longest.

Figure VI-10, on page VI-39 compares the various alternatives in terms of the fuel saved during peak periods each weekday, for the traffic which is removed from city streets. These amounts are based on vehicle speed and miles travelled. As can be seen in Figure VI-10, LRT has the lowest short term energy savings while the eight lane freeway with LRT has the greatest savings. The long term savings are more subjective due to the unavailability of future traffic volumes but show that the eight lane freeway with LRT is potentially the most energy conservative.

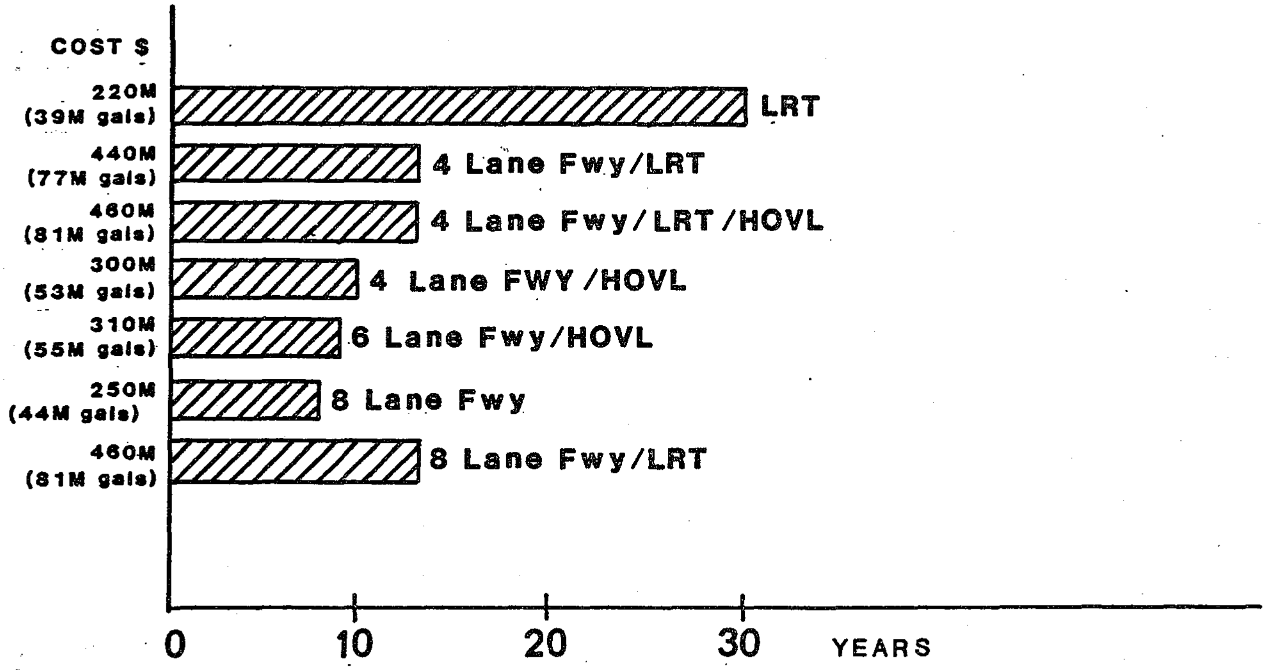
D. AESTHETICS AND VISUAL RESOURCES

The information in this section is based on the Visual Analysis Report done by Caltrans in May 1985 and is available for public review at Caltrans District 04 office during normal working hours.

1. Congestion discourages further growth. 2. Ground rules for HOVL would change whenever lane became congested. 3. Peak direction bogs down as congestion increases. 4. Gallons of fuel can be visualized as proportional to fuel dollar costs. 5. All "Build" alternates produce additional Energy savings (through lessened congestion) for those remaining on City streets. But this cannot be quantified and is relatively short-lived (as congestion resumes). 6. The lesser used modes (LRT, HOVL), while quite efficient for the trips carried, - nevertheless have lesser impact on general area congestion initially but a more guaranteed future of energy efficiency (as trip demand increases). 7. Off peak penalties of weekend and evening service would lower overall efficiency on LRT. However, buses on HOVL would have a similiar penalty - but since cars outnumber buses on HOVL, there is less apparent effect. 8. Signal preemption on LRT operation is assumed. 9. Future mpg improvements will be somewhat offset by ramp meter delay and circuity penalties.



OPERATIONAL FUEL EFFICIENCY
(PROPULSION FUEL ONLY)



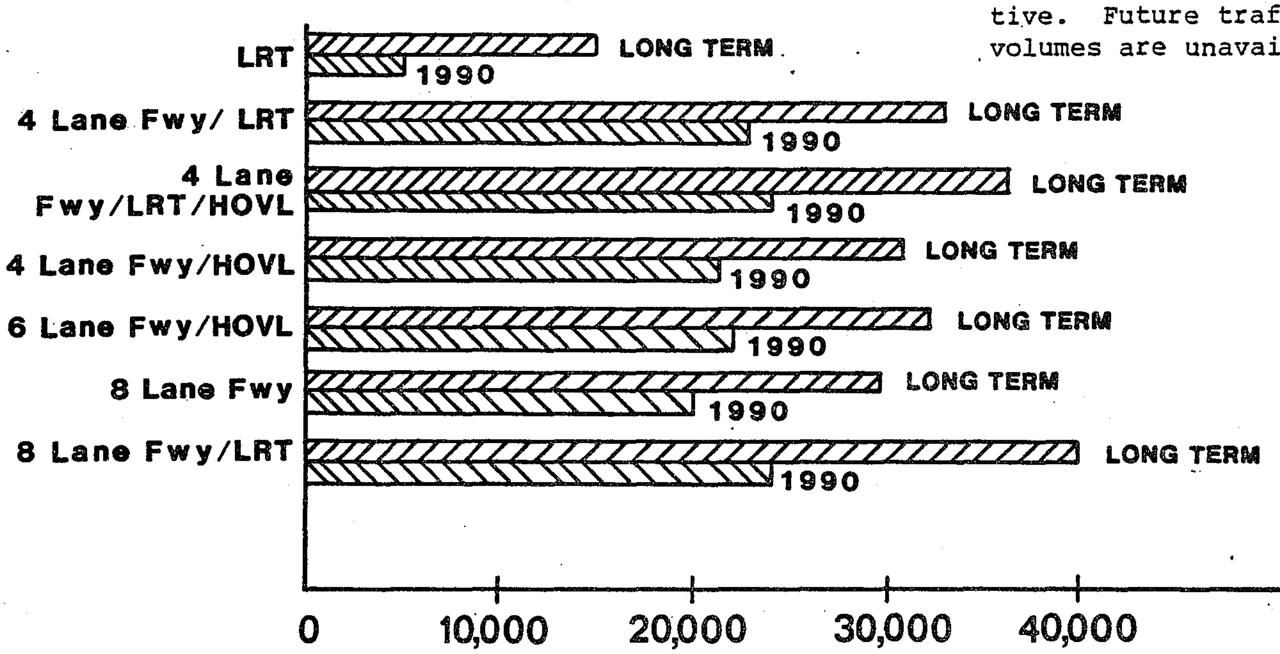
CONSTRUCTION ENERGY PAYBACK PERIOD
(at 1990 Saving Rates)

Notes

1) Actual payback period will be considerably longer for those alternates that become congested again after 1990

2) As ridership on LRT, HOVL increases after 1990, actual payback periods will be somewhat shorter.

Note that "long term" estimates are subjective. Future traffic volumes are unavailable.



GALLONS SAVED IN PEAK PERIODS
EACH WEEKDAY

1. VISUAL CHANGES

The visual analysis was conducted based on two perspectives. These are the view from the project and the view of the project. The visual impacts of the Route 85 project alternatives range from none to major, depending on the alternative selected and the location of the viewer in relation to the project.

The visual impacts resulting from the NPA are difficult to determine as the corridor would be developed to the extent permitted by the individual communities and their zoning regulations. There would be little if any additional visual impact from the TSM alternative because this only involves the upgrading of existing facilities and services. However, if the TSM alternative is selected, the existing right of way would be sold, having the same impact as the NPA.

The other alternatives have been divided into two groups, those that utilize the full 200 feet of right of way and LRT, which would only use 100 feet of the right of way.

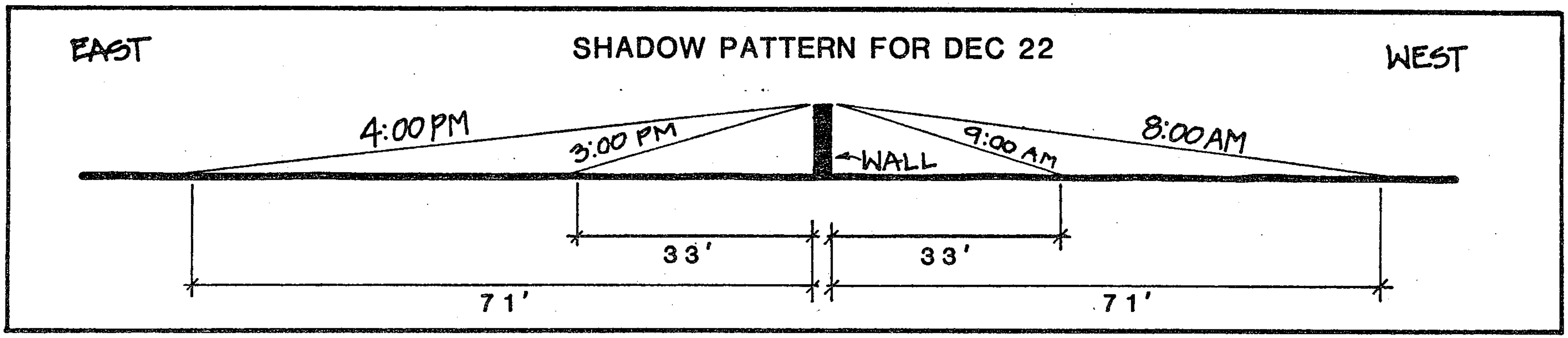
2. LIGHT AND SHADOWS

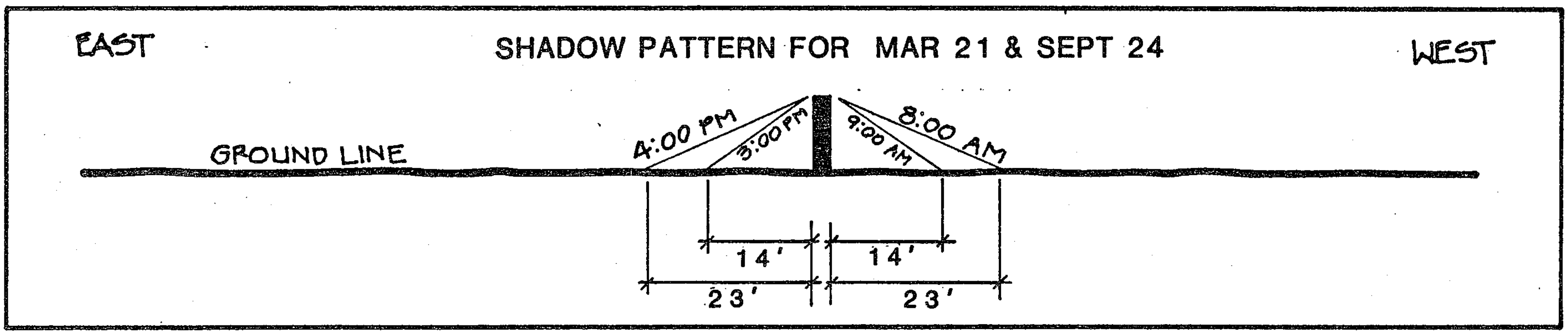
New shadows from sound walls will be created by the construction of any of the Route 85 project alternatives except LRT. Shadows will also be caused by the new bridge structures in the area of the creeks and interchanges and by the installation of sound walls along the edges of the transportation facility. However, the LRT only alternative would not have soundwalls or interchanges. Figures VI-10 and -11 on pages VI-41 and VI-42 depict the shadows that a 10 foot high wall would cast at various times of the year. The new shadow patterns will most severly affect adjacent homes on the north side of the corridor from Route 101 in San Jose to Saratoga Avenue, and on the east side of the corridor from Saratoga Avenue to Route 280.

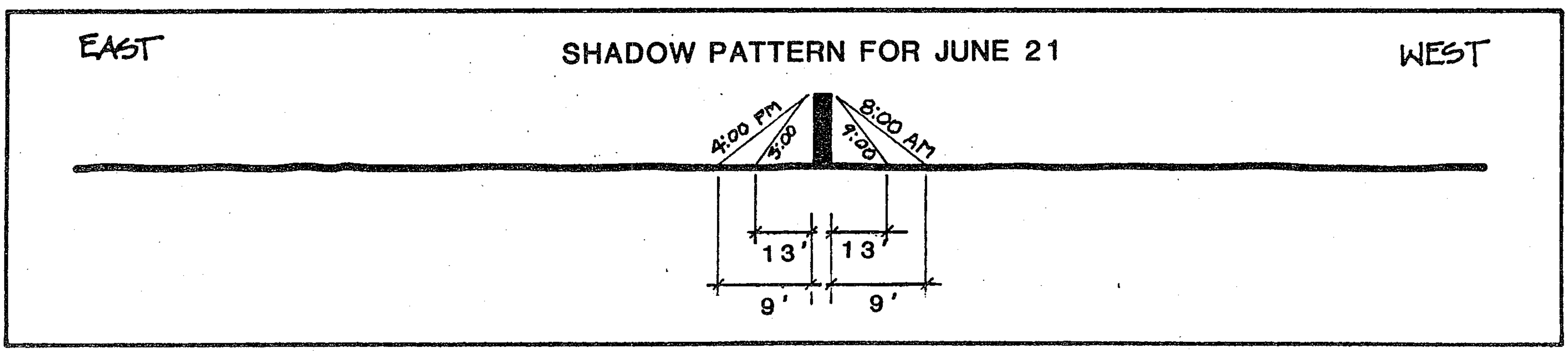
Proposed construction in the Route 85 corridor is divided almost equally between development, at grade, on fill, and in cut section. The design variation through the City of Saratoga would increase the area of cut approximately 1.2 miles, while reducing at grade construction by 0.8 miles and construction of fill by 0.4 miles. The project area is fully urbanized with most of the land used for residential development with some commercial/office space throughout the limits.

The development of the Route 85 corridor, with any of the highway construction alternatives, would cause significant visual impacts to three types of viewers: residents, periodic occupants (such as office workers and patrons of service facilities) and travellers. The LRT only alternative would have a significantly lower visual impact. The greatest degree of impact would be on residents because they regularly view the Route 85 project area because

SHADOW DIAGRAM FOR 10' HIGH WALL ON NORTH-SOUTH CORRIDOR ALIGNMENT

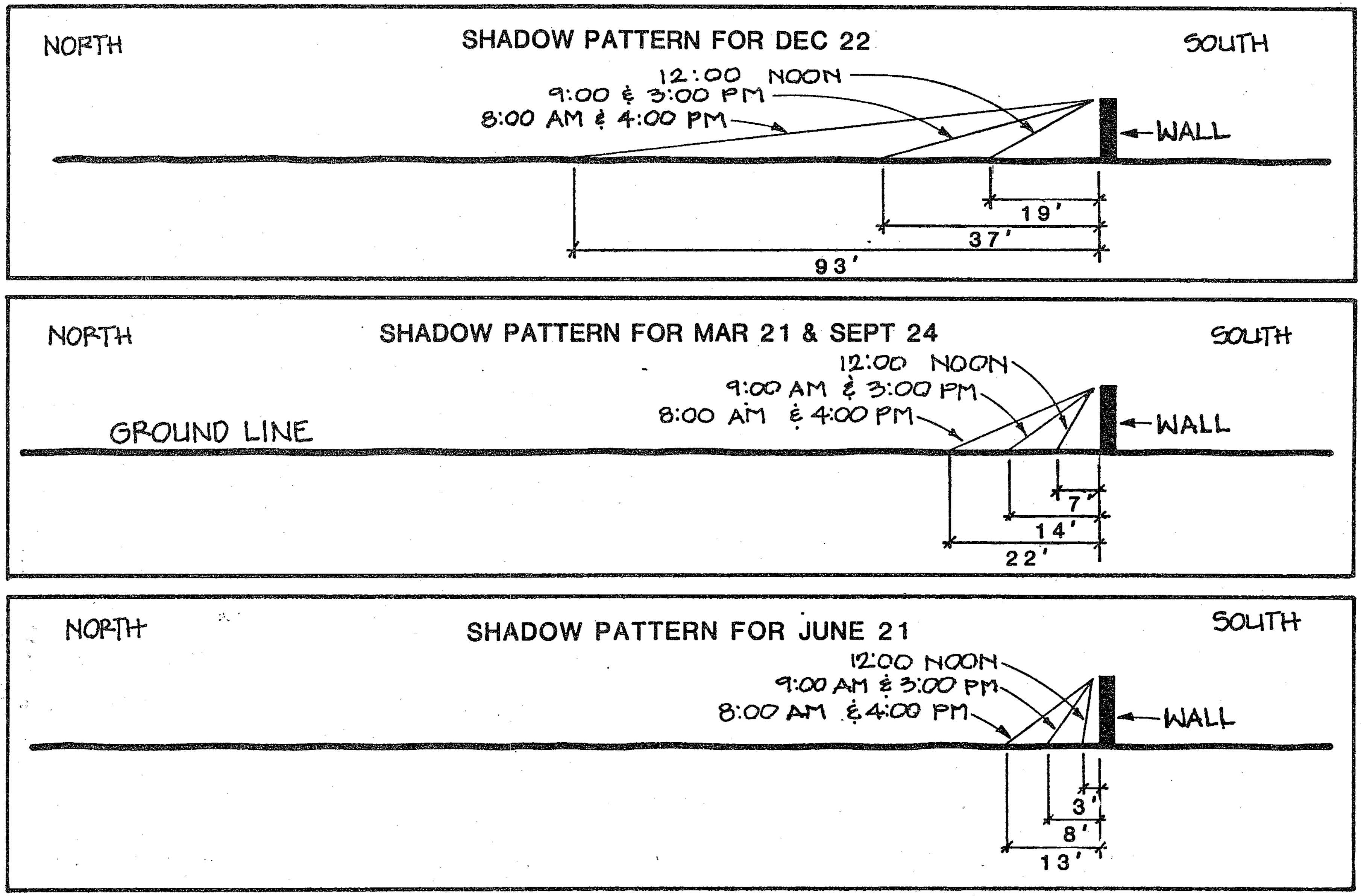






NOT TO SCALE

SHADOW DIAGRAM FOR 10' HIGH WALL ON EAST-WEST CORRIDOR ALIGNMENT



NOT TO SCALE

they live there. Travellers using the Route 85 transportation corridor generally would have improved views where the alternatives are constructed on fill sections and greatly restricted views in cut sections or where soundwalls are adjacent to the travelled way.

All construction alternatives would have varying adverse visual impacts on residents and periodic occupants immediately adjacent to the transportation corridor. The impacts would be less severe with the LRT alternative since sound walls would not be built and structures would be less massive. The greatest impacts from the highway alternatives would occur in residential neighborhoods where the transportation structures, lighting, and vehicular movements would be visible to a large number of residents. The proposed construction would reduce the quality of views to adjacent hillsides and open space and would visually divide the communities along its path.

Due to the relatively flat topography of the project area, the adverse visual impact caused by much of he proposed construction is reduced to insignificant levels as close as one block from the travelled way, where development occurs adjacent to the right of way. Large bridge structures at the Guadalupe River, and at fill areas would still create adverse visual impacts throughout adjacent neighborhoods regardless of their distance from the transportation facility but at a decreasing magnitude as distance increases.

Construction alternatives which require use of the entire right of way would have greater visual impacts than alternatives using only a portion of the right of way. The LRT alternative would only require approximately 100 feet of right of way, would not require sound walls, and would provide for larger landscaping areas than the highway alternatives. The alternatives utilizing fewer lanes and, thus, allowing wider planting areas would allow better implementation of mitigation measures.

Successful mitigation would substantially lessen the adverse affects of all proposed construction alternatives. However, the negative impacts to areas directly adjacent to the right of way would permanently lessen the quality of short range views as well as impair the mid and long range views of the surrounding hillsides. The LRT only alternative would have a smaller impact due to the absence of soundwalls. The visual impact of soundwalls upon adjacent properties cannot be mitigated. Figure VI-12 is an example of long, mid, and short range views from the Route 85 corridor.

The selection of the NPA would cause Caltrans to sell the corridor right of way it currently owns. This alternative would have minimal impact on viewers within the project area. The existing visual quality, and residential character would remain relatively unchanged, assuming that infill development would be consistent with current zoning and existing residential character.

VALLEY VIEWS

FIGURE VI-12

The goal of mitigation measures for visual impacts is to incorporate the proposed Route 85 transportation system into the existing urban development without substantially diminishing visual quality.

The most effective method of reducing adverse visual effects would be to make the Route 85 corridor development blend into the existing neighborhoods. This would most likely occur where the roadway is in a cut section below viewer sightlines and in areas with full highway landscaping. Soundwalls would reduce attention drawn to the transportation facilities and would also screen undesirable views from community view.

While soundwalls may mitigate the negative impact of corridor transportation systems for adjacent residents, they may have a negative impact in themselves. High walls along the right of way in close proximity to adjacent residences may block views to surrounding landforms and could create undesirable shadow patterns over many residential back yards. These shadow impacts can not be mitigated.

Mitigation measures for the adverse effects of construction include depressed roadway, soundwalls, and project landscaping.

Since the cost of depressing the roadway sections is very high, it is unlikely that this mitigation measure would be used.

A depressed roadway would consist of cutting into existing grade by six to 20 feet so that the roadway would pass under existing local streets. By depressing the roadway many transportation structures would be removed from viewer sight lines. The design variation through the City of Saratoga would depress the vertical alignment approximately 20 feet, with a 35 foot cut at Saratoga Creek.

Soundwalls would block sight lines to Route 85 transportation facilities from surrounding neighborhoods and may block views from the Route 85 corridor to the Coastal Foothills and Santa Cruz Mountains. Soundwalls would be eight feet to 14 feet tall, the majority being 10 feet tall, and would be built at roadway grade, or at the top of earthen berms (where sufficient right of way is available) to further screen highway facilities. In areas where sound attenuation is not required, community walls 6 feet tall may be constructed to block views into the corridor. Landscaping would have a minimal mitigating effect on properites adjacent to sound walls since the walls will be on the right of way lines. Low sight walls could be considered to screen the visual impacts of the LRT only alternative.

Highway landscaping (including tree preservation, ground cover, screen planting - trees and shrubs and plant establishment), in conjunction with depressed roadway sections, and soundwalls, would minimize views of the transportation facilities, other than soundwalls, and would reduce the affects of highway construction on existing neighborhoods. Landscaping would help the Route 85 transportation corridor blend into the fully landscaped residential and business areas adjacent to the right of way. It would have the greatest effect from the travelled way side of the sound wall.

Although the development of any of the construction alternatives would have significant visual impacts on residents, periodic occupants and travellers on the Route 85 corridor, those impacts will be partially mitigated by constructing depressed roadway sections, soundwalls and project landscaping.

E. CULTURAL RESOURCES

The Historic Properties Survey Report was prepared by Caltrans in November 1984 and is available for public inspection at the Caltrans District 04 office in San Francisco.

This report included an evaluation of cultural resources including archaeological, architectural and historical properties and was prepared to determine the potential impacts of the Route 85 project alternatives to properties on or eligible for the National Register of Historic Places. This study was confined to the Area of Potential Environmental Impact (APEI) which was established in consultation with the Federal Highway Administration. The area of potential environmental impacts for archaeological resources was determined to be those areas within the existing or proposed Route 85 right of way boundaries. The area of potential environmental impact for historical resources was determined to be those areas within the existing or proposed Route 85 right of way boundaries plus those properties immediately adjacent to either side of the corridor. If additional right of way is required, further cultural resources studies will be required.

1. ARCHAEOLOGICAL RESOURCES

Portions of the Route 85 transportation corridor have been covered by 33 partial archaeological surveys for other projects. Caltrans archaeologists surveyed those areas not covered by the above surveys. The two recorded archaeological sites, CA-SCl-137 and CA-SCl-295, are within the Guadalupe Corridor Route 87/Route 85 overlap area. See Figure III-1 on page III-5 for this overlapping area.

CA-SCl-137 was first recorded in 1974 and was determined eligible for the National Register of Historic Places (NRHP) in 1982. Archaeological site CA-SCl-137 is characterized by surface deposits of midden, fire-cracked rock, ground and chipped stone implements and shellfish remains. Artifacts found at the site include projectile points, small mortars and pestles and waste flakes. This site also contains burials. There is currently a phased testing and mitigation program on this site in conjunction with the Guadalupe Corridor project. All impacts and mitigation will occur as a result of the Guadalupe Corridor project.

Archaeological site CA-SCl-295 was first recorded in 1974 and consists of surface archaeological material. A significance testing program was completed by Santa Clara County. It found that CA-SCl-295 does not meet National Register of Historic Places criteria for eligibility. The Federal Highway Administration has made this determination and the State Historic Preservation Office have concurred with this finding of non-significance.

If during the construction of the selected Route 85 transportation corridor project, archaeological remains are uncovered, all work in the area of the project shall cease until a qualified archaeologist can evaluate the nature and significance of the find.

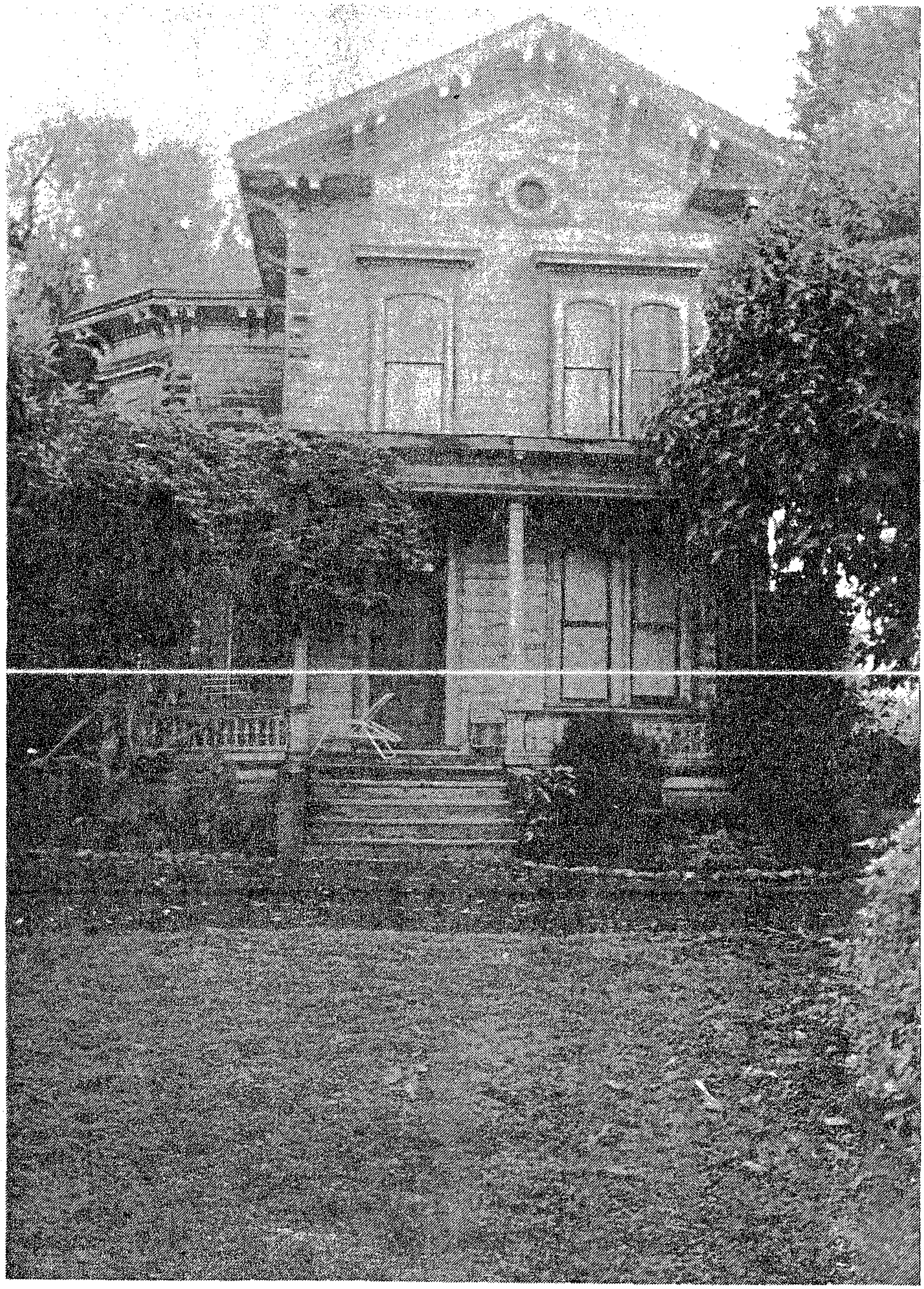
2. HISTORICAL RESOURCES

The Historical Architectural Survey evaluated properties within the existing or proposed Route 85 right of way boundaries and those properties immediately adjacent to it. Properties adjacent to the Guadalupe corridor (Route 87) project area were not resurveyed because the State Historic Preservation Office has determined that the Guadalupe corridor project will not affect any historic properties. Buildings within the area of potential environmental impact which were constructed in the last quarter century using a representative sample of buildings were surveyed architecturally. As a result of the survey, three properties within the Route 85 corridor were found to be potentially eligible for the National Register of Historic Places. They are all located in San Jose at the addresses listed below and shown in Figures VI-13 through -15.

The David Greenawalt Farm	14611 Almaden Expressway	Figure VI-13
The Le Fevre House & Barn	1444 More Avenue	Figure VI-14
The Warner Hutton House	13495 Sousa Lane	Figure VI-15

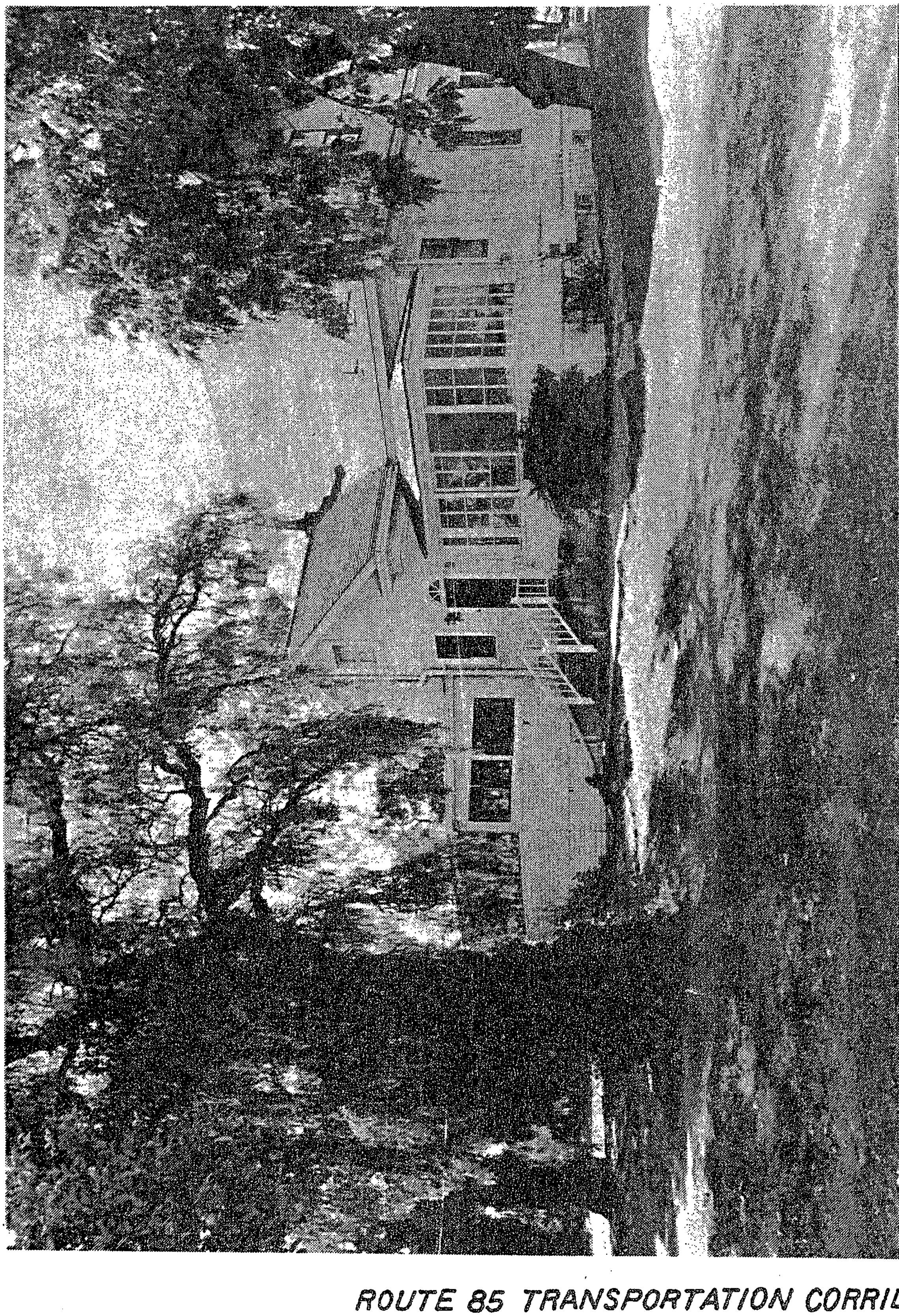
The Secretary of the Interior has established criteria for use in evaluating and determining the eligibility of of properties for listing on the National Register of Historic Places. Those criteria are listed in Table VI-12 on page VI-50.

FIGURE VI-14



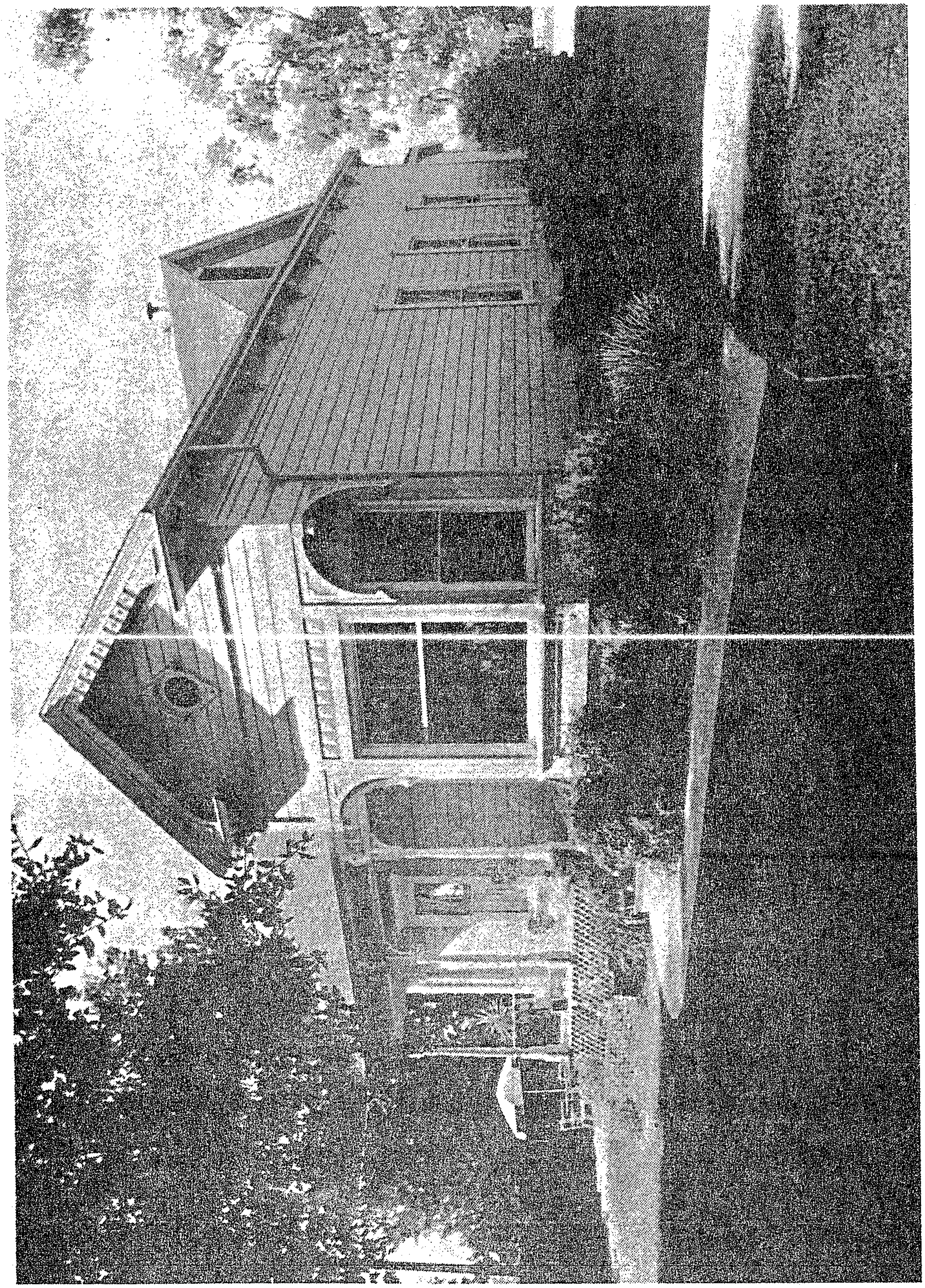
ROUTE 85 TRANSPORTATION CORRIDOR
HISTORICAL PROPERTY
DAVID GREENAWALT HOUSE

FIGURE VI-15



ROUTE 85 TRANSPORTATION CORRIDOR
HISTORICAL PROPERTY
LE FEVRE HOUSE

FIGURE VI-16



ROUTE 85 TRANSPORTATION CORRIDOR
HISTORICAL PROPERTY
WARREN HUTTON HOUSE

TABLE VI-12

NATIONAL REGISTER CRITERIA

"The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of State and local importance that possess integrity of location, design, setting, materials, workmanship, feeling and association:

A. That are associated with events that have made a significant contribution to the broad patterns of our history; or

B. That are associated with the lives of persons significant in our past; or

C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that rperesent a significant and distinguishable entity whose components may lack individual distinction; or

D. That have yielded, or may yield, information important in prehistory or history."

The David Greenawalt Farm

The David Greenawalt Farm, built in 1877, consists of the following structures: a farmhouse, a tankhouse, a barn, and various frame sheds on an eight acre parcel. The two and a half story farmhouse of wood frame construction is built in the classic Italianate architectural style. All of these buildings are in generally fair condition.

The David Greenawalt Farm appears to meet National Register Criteria B and C at the local level and possibly C at the state level.

David Greenawalt was born in Pennsylvania in 1824. In 1850 he came to California in search of gold. In 1851 he married Eliza Booth, a native of England who was a survivor of the ill-fated Donner Party. He earned his living in the stock business and eventually in 1867 acquired the farmstead, which was then over 200 acres. By the time of his death in 1888, his land holdings had grown to 624 acres.

The David Greenawalt Farm is an extremely rare survivor of the period of early agricultural development of the Santa Clara Valley which led to the area being termed the "garden of the world" by the late 19th century. With much of the area today given over to tract subdivisions and the technological industries of the Silicon Valley, most of these 19th century farmsteads have disappeared completely. While the remaining acreage is a small fraction of the original, the combination of large farmhouse, with its remarkably intact interior decor, tankhouse, barn and other outbuildings, mature 19th century landscaping elements and orchard remnant well conveys a sense of time and place which makes this property extremely significant.

The Le Fevre House

The Le Fevre House is a one and a half story wood frame house built in the Colonial Revival architectural style around 1905. It includes such features as a projecting front gable supported by Tuscan columns to form a veranda. The property also includes a Dutch plan carriage barn sheathed in board and batten siding with a gable roof.

The property was purchased by Alphonse O. Le Fevre as a 20 acre parcel in 1904. The Santa Clara County Directory lists him as a orchardist.

Remnants of the original walnut orchard which the house and barn served can still be seen in adjoining parcels. With its high degree of architectural integrity, mature period landscaping and a fine barn, this small complex represents an increasingly rare and good example of an early 20th century farmstead of which relatively few remain in Santa Clara County. In the context of both this area and the era represented, this property appears to meet National Register criterion C at the local level.

The Warner Hutton House

The Warner Hutton House was built around 1896. It is a one story wood frame house on a L-plan which was built in the Queen Anne architectural style.

Warner Hutton was born in New York in 1842. He came west with his parents and in 1883 he purchased 175 of his parents' 200 acres. In 1896 his parents gave him the remaining acreage and it appears that the house was constructed around this time.

The Warner Hutton House has a high degree of architectural integrity, and in the context of the Santa Clara Valley, is one of very few remaining houses of its period with this degree of design detail.

All three historic properties lie within the proposed alignment of the Route 85 transportation corridor and will be moved or demolished by the proposed project. Although the determination of eligibility has not yet been made by the State Historic Preservation Office and the Advisory Council on Historic Preservation; it is expected that these properties will be determined eligible for and eventually included on the National Register of Historic Places.

Because specific project plans have not been developed, no Determination of Effect has not been made for these three historic properties. Generally adverse effects occur when a historic property is isolated from its surrounding environment; when that environment is altered; or when visual, audible, or atmospheric elements are introduced that are out of character with the property and its setting. Therefore, it is reasonable to assume that any of the construction alternatives will have an adverse effect on these historic properties. As the properties appear to be significant and eligible for the National Register of Historic Places, the impacts to these properties constitute significant adverse environmental impacts.

The impact on these structures will be mitigated by either of the following measures:

1) Relocation of the impacted property with the coordination of the local historical society.

2) Recording of the affected properties to the Historic American Building Survey (HABS) standards before demolition.

If the structures are relocated, the parcels onto which they are moved will be fully landscaped to approximate the landscaping of the original parcel.

Which mitigation measure(s) will be applied will be determined by Caltrans, and the Federal Highway Administration in consultation with the State Historic Preservation Office and the Advisory Council on Historic Preservation.

F. DRAFT SECTION 4(F) EVALUATION

The Federal-Aid Highway Act of 1968 seeks to preserve the natural beauty of the country side and public park and recreation lands, wildlife and waterfowl refuges, and historic sites. It further specifies that "publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, state or local significance--or <u>any</u> land from a historic site of national, state or local significance" may be used for Federal-aid projects only if:

1. There is no feasible and prudent alternative to the use of such land, and

2. The project includes all possible planning to minimize harm to 4(f) lands resulting from such use.

1. PARKS AND RECREATIONAL LANDS

There are 5 parks and one recreational site which will be impacted by the construction of any of the construction alternatives. The parks are listed below and are shown on Figure VI-16 on page VI-55.

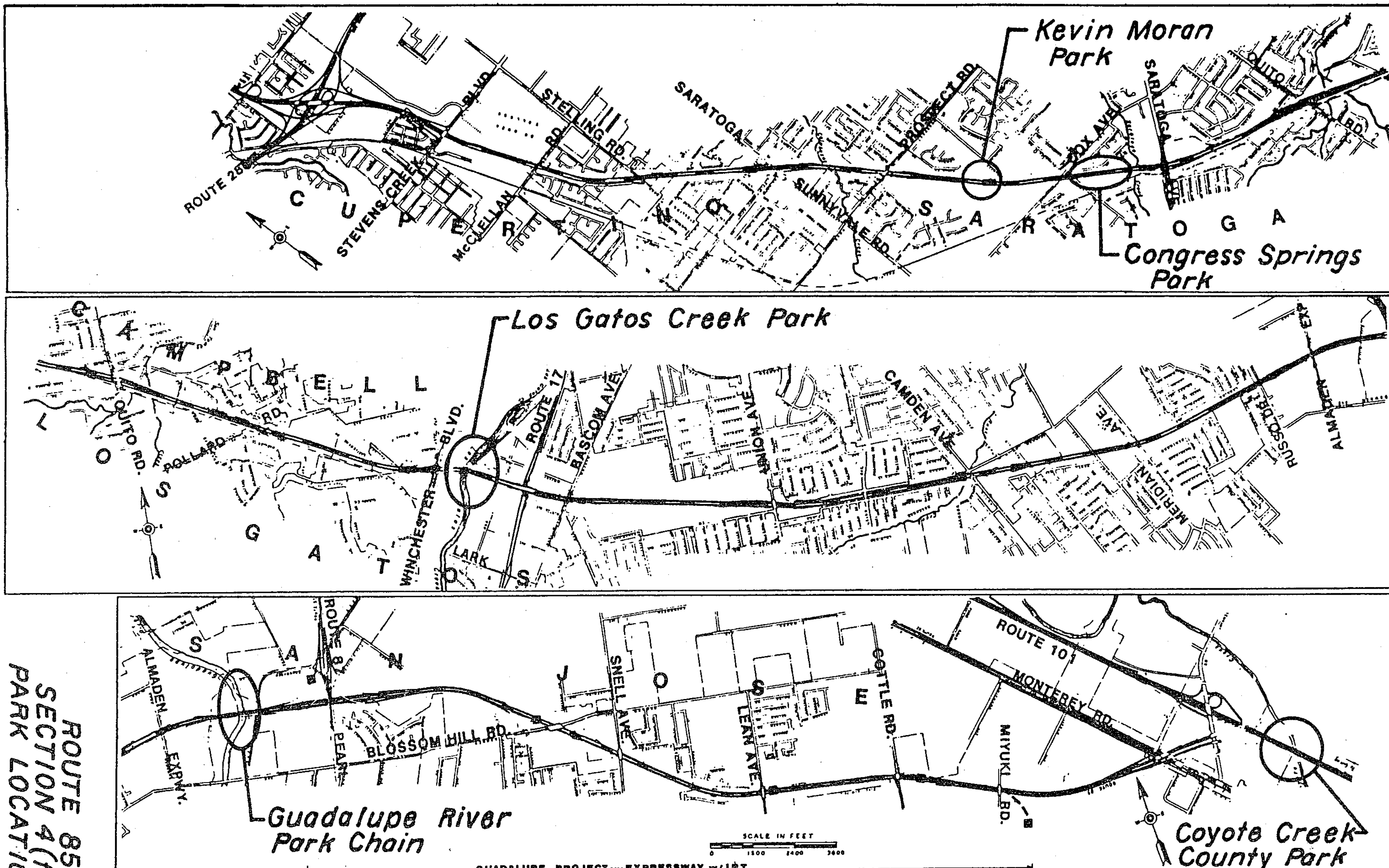
Coyote Creek County Park
Guadalupe River Park Chain
Los Gatos Creek Park
Congress Springs Park
Kevin Moran Park

Table VI-13 is a summary of the parks, impacts, and proposed mitigation measures. All of the impacted parks will be made less desirable by the intrusion of the transportation facility. Mitigation of the impacts, to the largest extent possible, will lessen the undesirableness of the transportation facility intrusion.

TABLE VI-13
SUMMARY OF IMPACTS ON PARKS

PARK	IMPACT	MITIGATION *
Coyote Creek Park Chain	Loss of 0.35 acres of parkland.	None; Property owned by Caltrans
Guadalupe River Park Chain (undeveloped)	Loss of 1.1 acres of parkland.	
Los Gatos Creek Park (Bikepath only)	Loss of 2.7 acres of parkland.	Replacement acreage is available within the proposed Route 85/ Route 17 Interchange
Congress Springs Park	Noise Impact Only	Construction of a Noise wall
Kevin Moran Park	Noise Impact Only	Construction of a Noise wall

* Landscaping will be included in all of the mitigation proposals.



ROUTE 85
SECTION 4(f)
PARK LOCATIONS

FIGURE VI-16

Coyote Creek County Park

Park Characteristics

The Coyote Creek County Park, administered by Santa Clara County, will be impacted in the vicinity of the Route 85/Route 101 interchange with the construction of the northbound on-ramp from Route 101 to Route 85. This park was established in 1960. That section of the park in which the impact will occur is approximately 2,000 acres in size. The facilities in the area of the on-ramp are two paved hiking and biking trails on either side of Coyote Creek. The impact to these trails will be the creation of new shadows.

Impacts

Figure VI-17 on page VI-57 depicts the area of the park which will be impacted by the Route 85 transportation corridor. The right of way required for the Route 85 transportation corridor was purchased for the Route 101 freeway project in the 1960s and 70s and received environmental clearance with the Route 101 Final Environmental Impact Statement approved by the Federal Highway Administration and Caltrans in July, 1978.

There is no prudent and feasible alternative to avoid impact to this park. To shift the location of the interchange north or south of its present location would involve the acquisition of new right of way and would entail the same or greater impact on the park.

Guadalupe River Park Chain

Park Characteristics

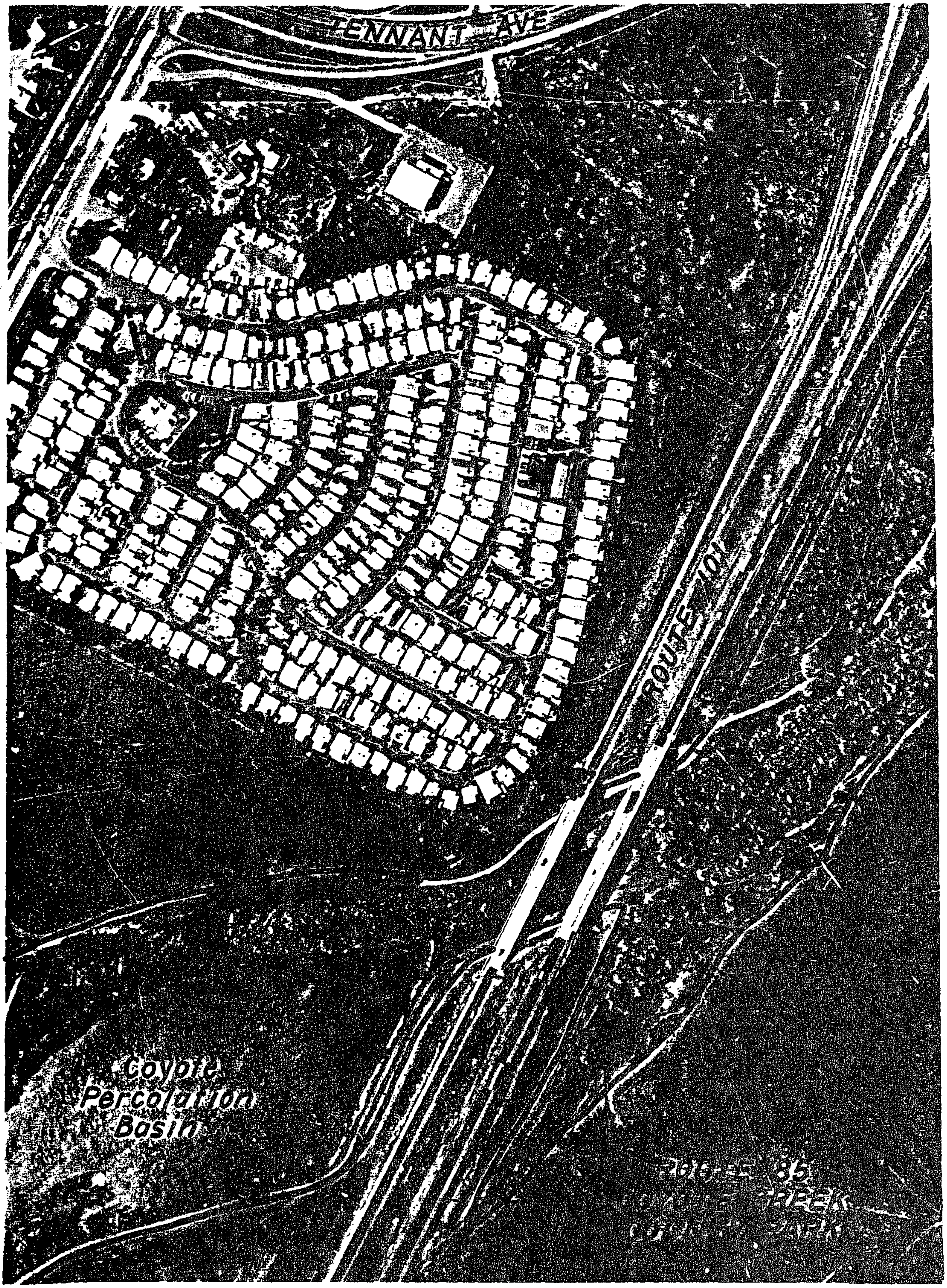
This undeveloped Guadalupe River Park Chain was established in the 1970s, and is approximately 500 acres in size. This park is owned by the Santa Clara Valley Water District but is administered by the City of San Jose Parks and Recreation Department. There are no facilities in this area of the park.

Impacts

Figure VI-4 on page VI-22 is an aerial photograph of the Guadalupe River/Los Alamitos Percolation Ponds. This impact will be caused by the bridge structure necessary to cross the Guadalupe River and the Los Alamitos Percolation Ponds and will result in the loss of approximately 1.1 acres of park. All of the construction alternatives will have the same impact. This impact will be intrusion of structures and the creation of new shadows and an increase in the noise level.

Mitigation

FIGURE VI-17



There is no mitigation for the intrusion of the new bridge structures and the creation of the new shadows. The bridge structures will be of sufficient elevation so that any future trail system along the edge of the river will be able to pass underneath them. Ambient noise readings show a noise level of approximately 50 dBA. As a result of the construction of bridge structure necessary to cross the Guadalupe River and the Los Alamitos Percolation Ponds, the noise level will be increased to approximately 63 dBA. While this is an increase of 13 dBA, it is still within the Federal Highway Administration noise guidelines. However, noise walls will be considered for inclusion on the bridge structures during final design of the selected alternative.

There is no prudent and feasible alternative to avoid use of this park property. To shift the location of the interchange north or south of its present location would involve the acquisition of new right of way and would entail the same or greater impact on the park.

Los Gatos Creek Park

Park Characteristics

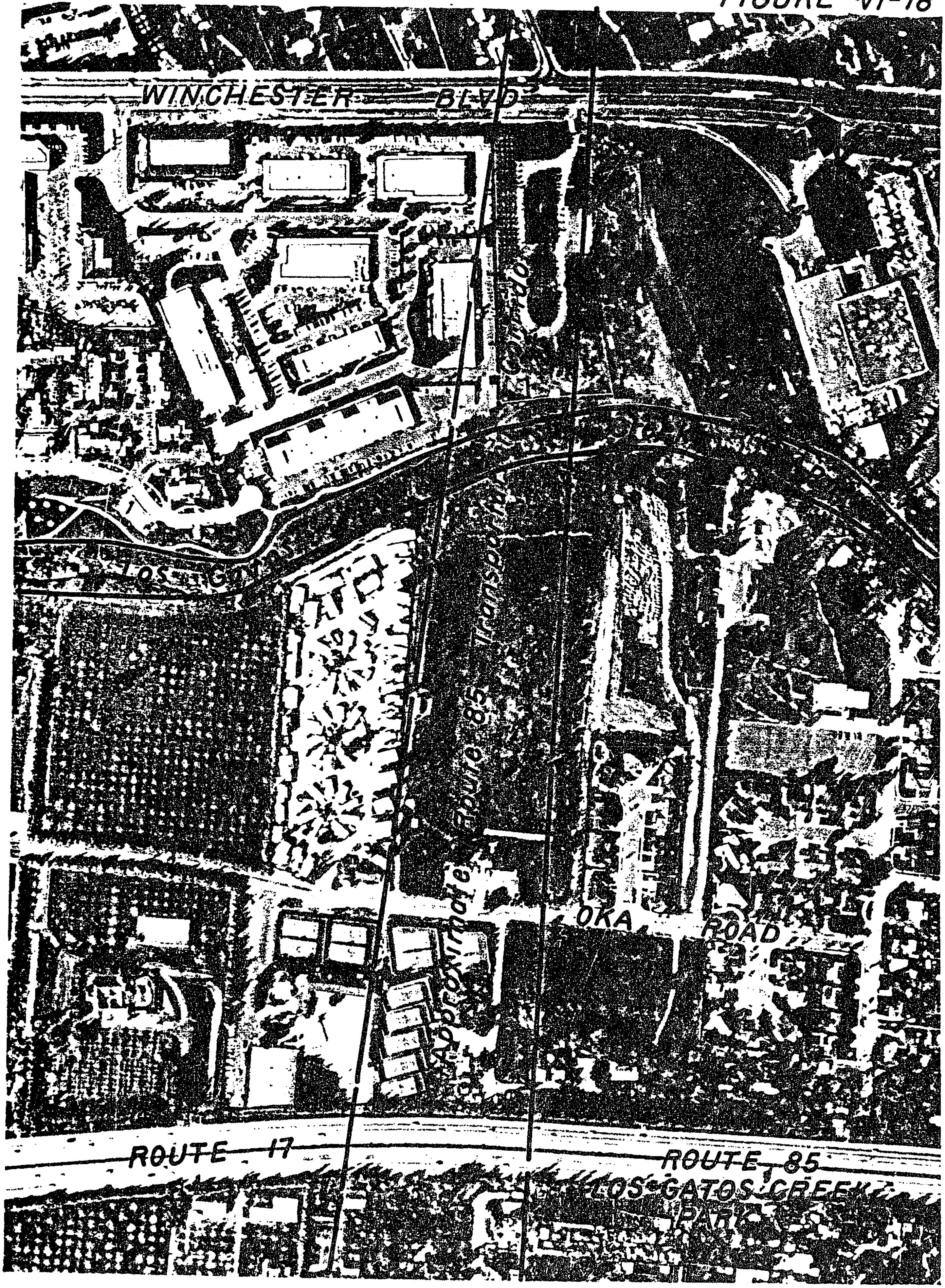
Los Gatos Creek Park, administered by the County of Santa Clara, is approximately 80 acres in size and was established approximately 20 year ago. Figure VI-18 on page VI-59 is an aerial photograph of the area.

This county park chain extends from the junction of Los Gatos Creek and the Guadalupe River to the Santa Cruz Mountains, a distance of approximately 10 miles. The existing facilities include a continuous trail system from the San Tomas Expressway in Campbell through the Santa Clara Valley Water District's 80 acre percolation ponds to Vasona Lake County Park in Los Gatos and Lexington Reservoir County Park south of Los Gatos. That section of the park chain which will be affected is the area between Route 17 and Winchester Boulevard north of Lark Avenue over which Route 85 will pass on a structure. All the right of way necessary for the construction of the Route 85/Route 17 interchange in the area of the creek park is currently owned by Caltrans. The only facility within the creek park in the area of the interchange is a recently constructed county bike path which is in the right of way owned by Caltrans.

Impacts

The impact to the bike path will be an increase in the current noise levels and the introduction of new shadows. The noise level will increase from approximately 53 dBA to 67 dBA. While this is a 14 dBA increase in noise level, it is still within the Federal Highway Administration noise guidelines. However, noise walls will be considered for inclusion on the bridge structures during final design of the interchange.

FIGURE VI-18


WINCHESTER BLVD
Approximate Route 85
OKA ROAD
ROUTE 17
ROUTE 85
LOS GATOS CREEK PARK

There will be 5 bridges of varying widths going over the bike path which will intrude into the park area and produce shadows approximately 400 feet wide. All of these bridges will be of sufficient height to allow the construction of a new bike path in the general area of the present bike path. These bridges will also change the visual aspects of the creek in this area.

Mitigation

No mitigation is currently being considered for these impacts. During construction of the interchange, the bike path will have to be closed and the bicyclists routed around the construction site. There is no mitigation proposed for this temporary disruption. A bike path will be incorporated as part of the interchange design. The exact location and type of bike path will be determined once the preferred alternative has been selected.

There is no prudent and feasible alternative to avoid impact to this park. To shift the location of the interchange north or south of its present location would involve the acquisition of new right of way and would entail the same or greater impact on the park.

Congress Springs Park

Park Characteristics

Congress Springs Park, immediately adjacent to the Route 85 right of way northerly of Saratoga Avenue, is in the City of Saratoga, is 19.5 acres in area. This park was established in 1980 and is owned and administered by the City of Saratoga.

The park facilities include 3 baseball diamonds, bleachers, park benches, slide & swing sets, jungle gym, a teeter-tooter, picnic tables, and a snack bar. Figure VI-19 depicts these facilities and their relationship to the Route 85 transportation corridor.

Impacts

The outfields of the baseball diamonds lie directly adjacent to the Route 85 right of way for approximately 1580 feet. There will be no actual taking of parkland, but the ambient noise level is approximately 52 dBA and will be increased to approximately 77 dBA with the construction of an 8-lane freeway.

Mitigation

This impact will be mitigated with the construction of a 10 foot high noise wall along the edge of the park. The noise wall will reduce the noise level to approximately 67 dBA. With the Saratoga Design Variation, the transportation facility would be in a deeper cut and no noise walls will be required.

FIGURE VI-19

GLEN BRAE DR
Railroad
Southern Pacific
Congress Springs
AVE
ROUTE 85
CONGRESS SPRINGS
PARK

There is no prudent and feasible alternatives to avoid affecting the park. If the alignment were shifted, new right of way would have to be acquired, more residential displacement would occur, more utilities would be relocated, including the further realignment of the Southern Pacific Railroad, and the impact to the park would not be lessened to any great degree.

Kevin Moran Park

Park Characteristics

Kevin Moran Park, immediately adjacent to the Route 85 right of way in the City of Saratoga, is 10.4 acres in area. It was established in 1981 and is owned and administered by the City of Saratoga.

The park facilities include park benches, picnic tables, a slide, a swing set, and a bike and pedestrian trail. The park lies adjacent to the Route 85 right of way for approximately 1235 feet. Figure VI-20 shows these facilities and their relationship to the Route 85 transportation corridor.

Impacts

Like Congress Springs Park, there will no actual taking of property but the ambient noise level of 52 dBA will be increased to approximatley 77 dBA with the construction of an 8-lane freeway.

Mitigation

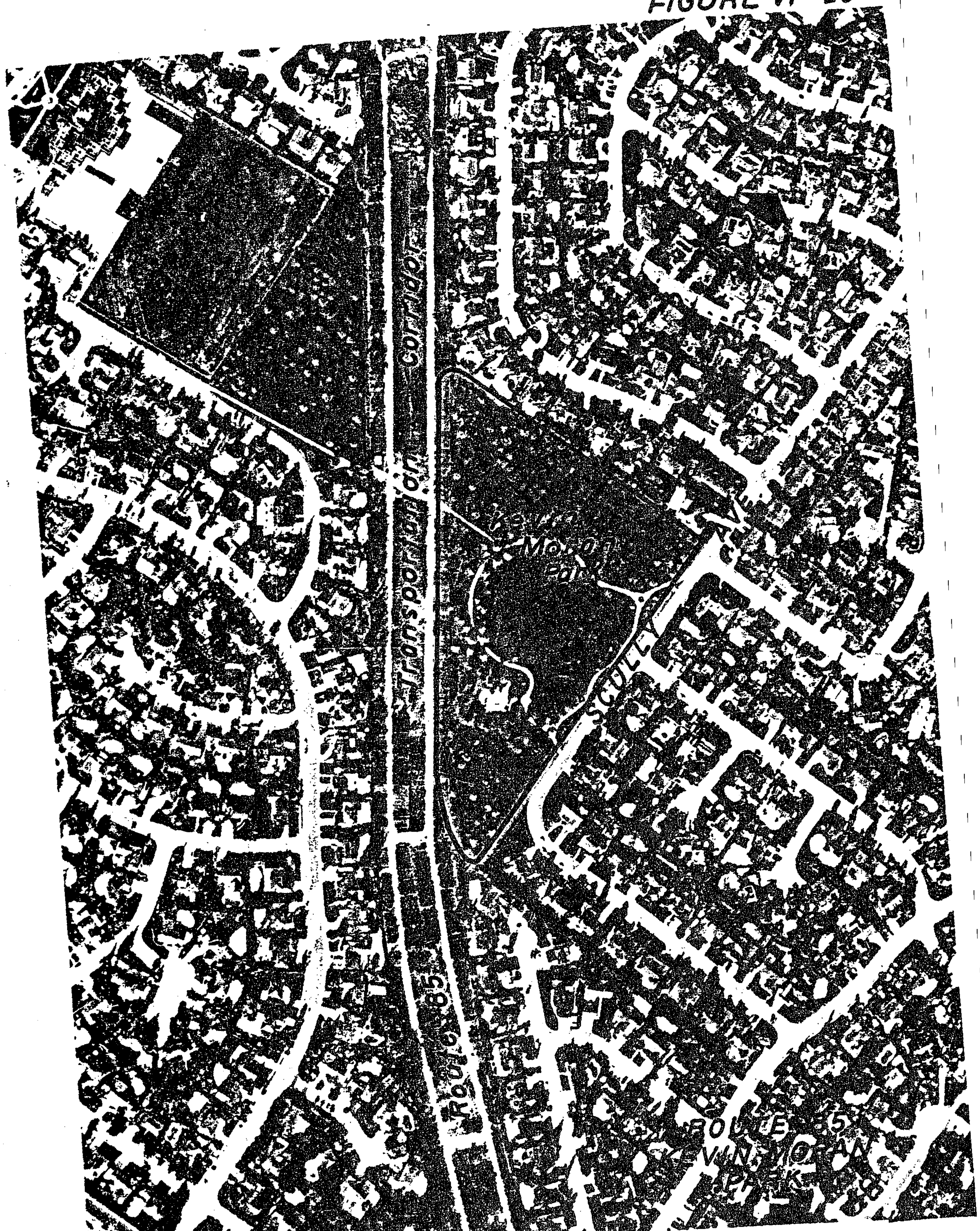
This impact will require the construction of a 10 foot high noise wall along the edge of the park which will reduce the noise level to approximately 67 dBA. As with the Congress Springs Park, the Saratoga Design Variation will be in a deeper cut section and will not require the construction of a noise wall at this site.

There is no prudent and feasible alternative to avoid affecting the park. If the alignment were shifted, new right of way would have to be acquired, more residential displacement would occur, more utilities would be relocated, and the impact to the park would not be lessened to any great degree.

RECREATIONAL LAND

The Branham High School playing field is the only recreational land impacted by the construction of any of the alternatives within the Route 85 transportation corridor. Figure VI-21, on page VI-63 depicts this area. There will be a loss of approximately 4.5 acres of playing field and open space which is inside the right of way needed for the construction of any of the proposed alternatives. The athletic field is adjacent to the proposed right of way line for approximately 1100 feet and the nearest building is approximately 500 feet distant. The tennis courts at the edge of the right of way will be impacted by the

FIGURE VI-20



introduction of new noise to the area. This impact will be mitigated by the construction of a noise wall to attenuate the noise to largest extent possible.

The history of the interrelationship between the development of the school site and the Route 85 corridor dates back to 1963. The Campbell Union School District was aware of the right of way boundaries for the Route 85 corridor and maintained close coordination with Caltrans prior to the purchase of the school site. Design of the school facilities was based on the eventual sale of the 4.5 acres to Caltrans for Route 85 transportation corridor. The only improvements that have been made to this land are the planting of grass and the installation of sprinkler systems.

2. WILDLIFE REFUGES

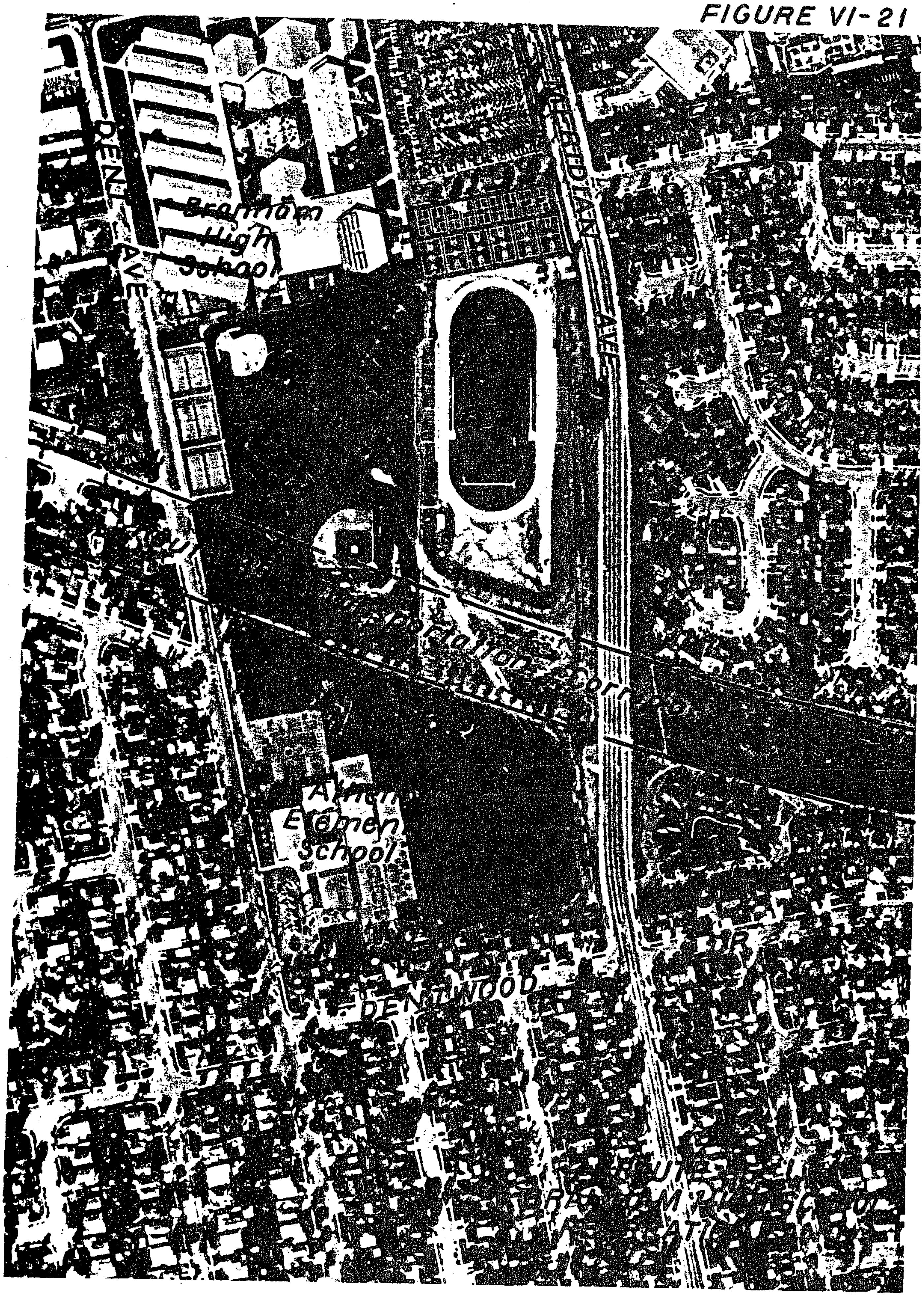
The Oka Lane Percolation Pond Wildlife Reestablishment Area as shown in Figure VI-3 on page VI-21, is a joint creekside development project between the City of Campbell, Santa Clara Valley Water District, and Santa Clara County Parks and Recreation Department. It lies to the west of Route 17 and north of the proposed Route 17/Route 85 interchange in Los Gatos and Campbell. Facilities include walking trails, foot bridges, a gazebo-like bird observation platform and landscaping. Santa Clara County Parks and Recreation Department maintains the trails and the observation platform, while Santa Clara Valley Water District maintains the percolation ponds. There is also a pedestrian truss bridge connecting the east side of the wildlife reestablishment area to the percolation ponds on the west side of Los Gatos Creek. The primary uses of this area are for nature observation, hiking, and bird dog training.

The Route 85/Route 17 interchange has been designed as to have no direct impact on the wildlife area. There will be an indirect impact in the manner of increased noise from the transportation facility. As part of the Route 85 transportation improvements, a bridge will be constructed along Knowles Drive over Los Gatos Creek to provide local access to the Mozart Avenue area north of the interchange. It will have no direct impact on the wildlife reestablishment area. There will be an indirect impact in the manner of increased noise from the new local access bridge and road.

3. HISTORICAL PROPERTIES

There are 3 historical properties and two archaeological sites which will be impacted by any of the proposed alternatives.

FIGURE VI-21



The three historical properties are the David Greenawalt Farm, the Le Fevre House and Barn, and the Warner Hutton House. Their locations are shown on Figure VI-22, page VI-65.

These three properties may be eligible for the National Register of Historic Places. The David Greenawalt Farm, built in 1877, is an extremely rare survivor of the early agricultural development period of Santa Clara Valley. The Le Fevre House and Barn, built after 1905, is an increasingly rare and good example of an early 20th century farmstead, a property type which is rapidly disappearing in Santa Clara County. The Warner Hutton House, built around 1896, has a high degree of architectural integrity, and in the context of the Santa Clara Valley, is one of very few remaining houses of its period with this degree of design detail.

All three of these properties will be impacted by the construction of any of the "freeway" alternatives. Only the Le Fevre House and Barn would impacted by the LRT alternative.

The construction of the Route 85/Almaden Expressway interchange may require the removal of the David Greenawalt Farm. Feasible design changes which would reduce or eliminate the impact of the David Greenawalt Farm are being investigated.

If there are no design changes which would eliminate the impact, the David Greenawalt Farm and outbuildings, after being recorded to the standards of the Historic American Buildings Survey, will be relocated with the coordination of the Santa Clara County Historical Resources Commission.

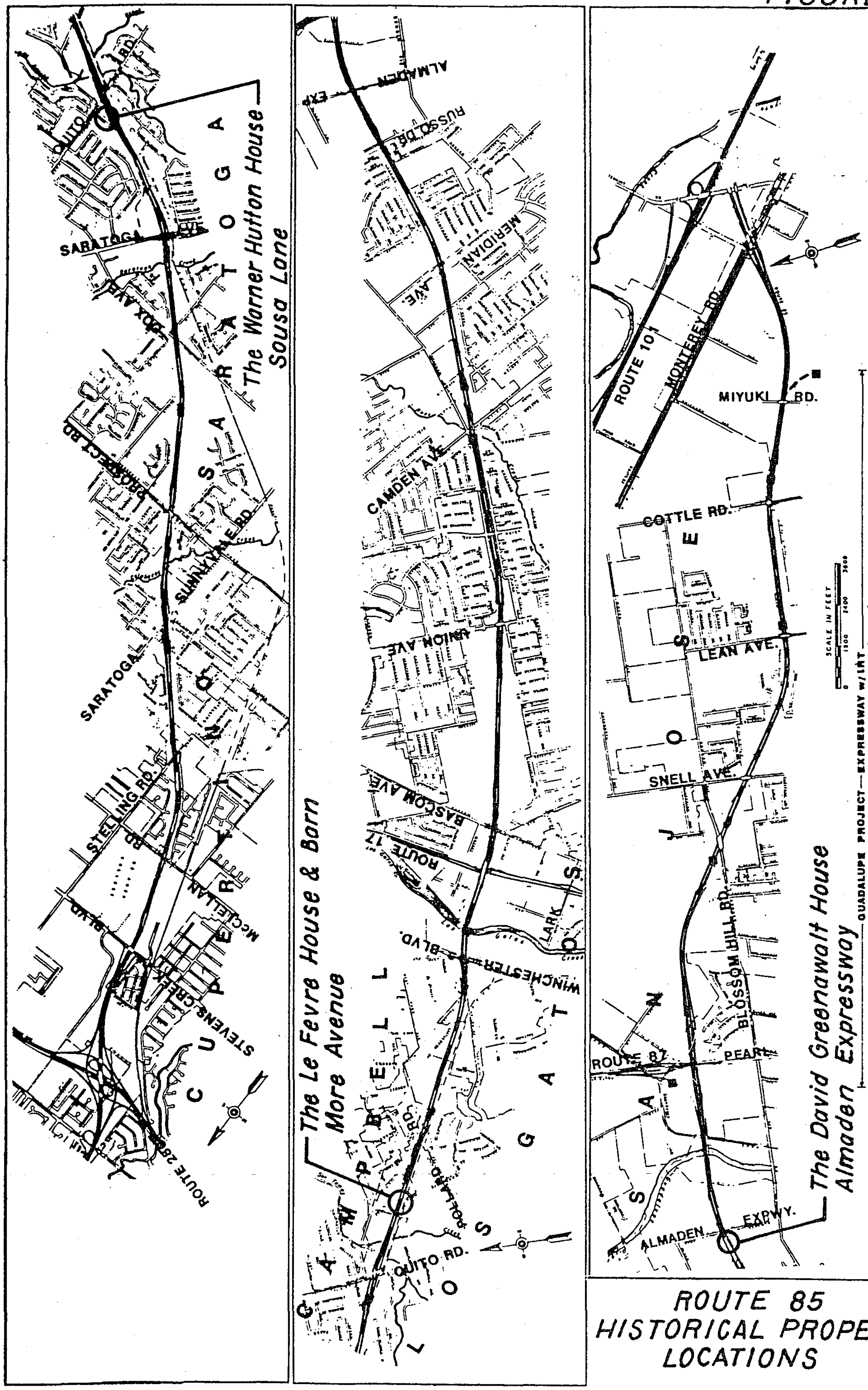
All of the Route 85 project alternatives will require the removal of the Le Fevre House and Barn as this property lies in the middle of the transportation corridor. There are no feasible design changes which can be incorporated which would reduce or eliminate the construction impact on the property.

As mitigation for this impact, the Le Fevre House and Barn will be recorded to standards of the Historic American Buildings Survey. The final mitigation decision will be determined during final design of the selected alternative.

The Warner Hutton House will be impacted by any of the Route 85 project alternatives. There are no feasible and prudent design changes which can be incorporated which would reduce or eliminate the construction impact on the property.

As mitigation for this impact, the Warner Hutton house will be recorded to the standards of the Historic American Building. Survey. The final mitigation decision will be determined during final design of the selected alternative.

The archaeological site subject to Section 4(f) involvement is CA-SCl-137. This site is located in the section of the corridor that overlaps with the Guadalupe Corridor easterly of the Route



ROUTE 85
HISTORICAL PROPERTY
LOCATIONS

85/Route 87 interchange. (Figure I-2 on page I-7 depicts this overlapping section.) This site will be impacted by the Guadalupe Corridor project and is currently in a phased testing and mitigation program in conjunction with that project. There will be no impact to this site from any of the Route 85 transportation corridor alternatives.

G. SOCIAL AND ECONOMIC PROFILE

1. POLITICAL JURISDICTIONS

The Route 85 transportation corridor passes through five cities or towns from its proposed interchange at Route 101 in south San Jose to Stevens Creek Boulevard in Cupertino, a distance of approximately 18 miles. The cities include San Jose, Campbell, Cupertino, Saratoga, and the Town of Los Gatos. Figure VI-23 depicts the corporate city boundaries in relationship to the Route 85 transportation corridor.

2. POPULATION AND DEMOGRAPHICS

Table VI-14, on page VI-68, reveals some of the population characteristics of the Route 85 transportation corridor cities. Also included is the length of the transportation corridor within each city and its overall percentage of the entire 18 miles.

None of the proposed alternatives will significantly alter the population characteristics of the Route 85 transportation corridor.

3. LAND USE

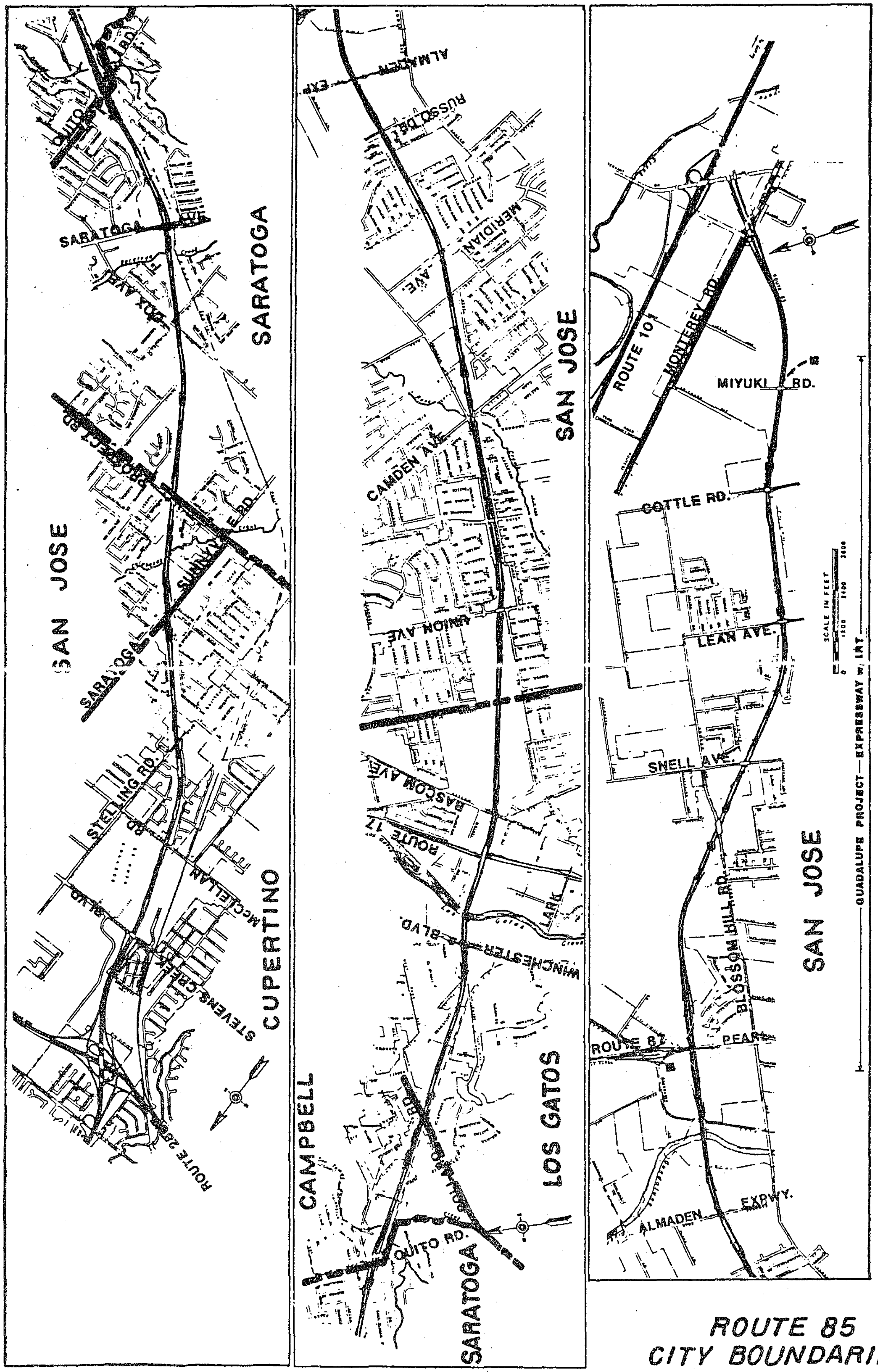
The cities, the county, the region and the state all have land use plans. These plans detail the amount and type of land use in a particular area, the planned land uses and the amount of growth which each of the jurisdictions recommends, and a time schedule for the implementation of the plan. Table VI-15, Plan Compatability, is a matrix of how each of the alternatives complies with the various land use plans. The NPA is the only alternative which does not comply with any of the land use plans. All of the other construction alternatives comply with the various land use plans. In particular, the California Urban Strategy stipulates that new urban development should be located according to the following three priorities:

TABLE VI-14
ROUTE 85 POPULATION CHARACTERISTICS
(1984 DATA)

Item	San Jose	Saratoga	Cupertino	Los Gatos	Campbell	Santa Clara County
Length of Route 85 (Miles)	11.0	2.4	2.0	1.7	0.9	18.0
Area (Sq. Miles)	160	12	10	11	5	1310
Population (1984) X 1,000	683.8	30.1	38.1	27.8	33.7	1,365.1
% Black*	4.6	0.3	0.8	0.3	1.2	3.4
% Hispanic*	22.3	2.8	4.3	4.3	8.3	17.5
Median Age*	27.4	37.4	32.2	35.0	28.7	29.9
% < 19*	31.0	28.5	26.0	22.8	22.0	27.6
% > 65*	6.2	8.2	5.5	12.0	8.5	7.5
Median Household Income $ *	22,886	41,143	30,312	26,329	19,742	23,369
% Workers Driving Alone *	72.2	80.2	76.5	75.8	75.8	72.5

* 1980 U.S. Census data

FIGURE VI-23



ROUTE 85
CITY BOUNDARIES

TABLE VI-15
PLAN COMPATIBILITY

LAND USE PLANS	ALTERNATIVES (YES/NO)								
	NPA	TSM	LRT	4FWY & LRT	4FWY & HOV & LRT	4FWY & Bus/HOV	6FWY & Bus/HOV	8FWY	8FWY & LRT
State Urban Strategy	No	Yes	Yes	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Regional Plan (ABAG)	No	Yes	Yes	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Santa Clara County	No	Yes	Yes	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
Cupertino	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Monte Sereno	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Campbell	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Saratoga	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Los Gatos	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
San Jose	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes

First: Renew and maintain existing and urban areas in both cities and suburbs.

Second: Develop vacant and underused land within existing urban and suburban areas already served by streets, water, sewer, and other public services. Open space, historic buildings, recreational opportunities, and the distinct identities of neighborhoods should be preserved.

Third: When urban development is necessary outside existing urban and suburban areas, use land that is immediately adjacent. Non-contiguous development is appropriate where it provides for planned open space, greenbelts, agricultural preservation or new town community development.

To the extent that all of the highway alternatives will provide improved transportation service for the region and its commuters, these alternatives are consistent with the California Urban Strategy land use priorities and with the goal to redirect commute traffic from residential areas. The public transit features of these alternatives are supportive of the Strategy's goals to provide and expand public transportation and redice dependence on individual auto use.

Land use within the Route 85 transportation corridor includes residential, commercial, industrial, open space, and agricultural. Figure VI-24 depicts these various land use types in the corridor.

All of the construction alternatives will change the land use within the Route 85 corridor. There will be a loss of housing, businesses, open space, and agricultural land. These land use changes within the Route 85 transportation corridor have been planned for and anticipated by the cities for many years. The anticipated land use changes are detailed in the following sections.

a. Housing

There are approximately 1350 housing units immediately adjacent to the Route 85 transportation corridor. This represents 0.5% of the available housing stock in the corridor cities. Table VI-16 gives the number and type of housing units within the corridor cities in addition to the vacancy rates for all housing types.

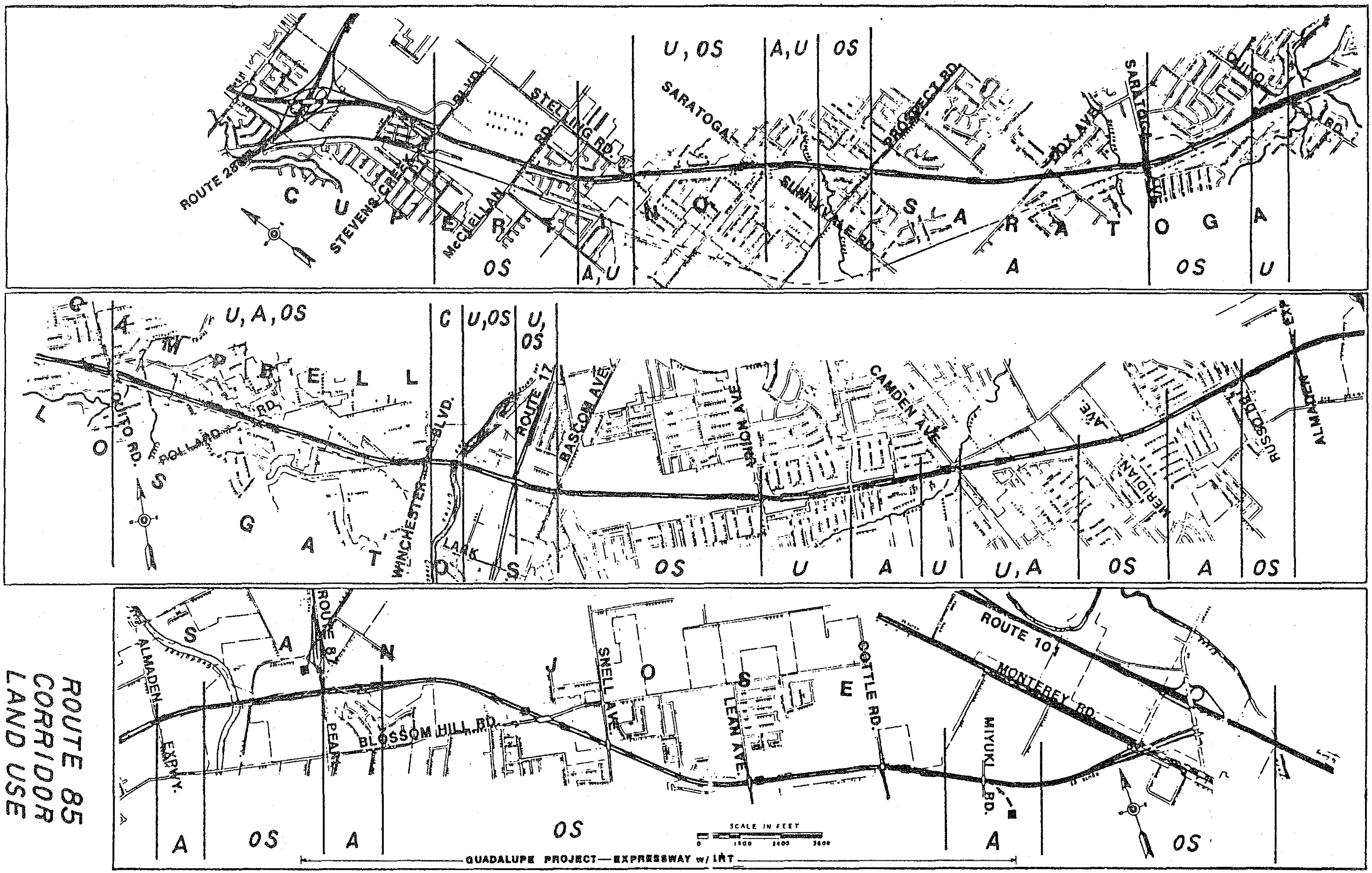
The construction alternatives will require the removal of residential structures in the Route 85 transportation corridor. The number of displacements is based on the right of way width required for each alternative. The NPA and TSM alternatives require no right of way. The LRT alternative has a right of way width requirement of 100 feet. The remaining alternatives all require that the right of way width be 200 feet. However, the right of way requirement at the interchange areas will be different and exact right of way requirements will be determined after selection of the preferred alternative. This could change the number of residential units which will be impacted. Table VI-17 depicts the number of residential units which will be displaced and the number of people displaced, based on the right of way width required for the alternative. The 200 foot alternatives would remove 346 units or 0.1% of the housing units of the corridor cities. 71 single family residences and 1 duplex in the Route 85 transportation corridor are owned by the State. The 100 foot alternative would remove 134 units or 0.04% of the housing units.

TABLE VI-16
ROUTE 85 HOUSING CHARACTERISTICS
(1984 DATA)

City	Housing Type: Single Family	Multi-Family	Mobile Homes	Vacancy Rate %
Cupertino	11260	5545	2	1.0
Saratoga	9198	910	0	0.9
Campbell	8246	7874	378	1.6
Los Gatos	13006	4208	147	1.5
San Jose	158818	71635	10636	1.3

TABLE VI-17
RESIDENTIAL DISPLACEMENTS

	ALTERNATIVE I 200 foot Right of Way	ALTERNATIVE II 100 foot Right of Way
Single Family Residential	255	119
Multiple-Family Units	59	15
Mobile Home	32	0
TOTAL	346	134
Total STATE Owned Units	72	54
Approximate Number of Persons Displaced	900	356



ROUTE 85 CORRIDOR LAND USE

Legend

A = Agriculture
OS = Open Space
U = Urban/Residential
C = Commercial/Industrial

FIGURE VI-24

As mitigation for these displacements, qualifying residents will be eligible for a variety of relocation payments and services in accordance with all applicable state and federal regulations in force. To qualify for relocation assistance, Caltrans must purchase the residence. Tenants who occupied state-owned property after acquisition are not eligible for relocation payments.

b. Business and Commercial

The businesses affected by the construction alternatives range from seasonal fruit stands to high technology research and development firms. Table VI-18 gives the breakdown of the affected businesses by the right of way width required. This right of way width requirement is the same as that described in the above section, Housing.

TABLE VI-18
NON-RESIDENTIAL DISPLACEMENTS

	ALTERNATIVE I 200 foot Right of Way	ALTERNATIVE II 100 foot Right of Way
Non-Residential	25	16
Non-Profit *	1	0
TOTAL	26	16
Total STATE Owned Units	12	10

* This is a church which is leasing a State owned building.

There will be an adequate supply of replacement sites for all the businesses displaced with two exceptions: those currently leasing large parcels from the State and the Los Gatos Swim and Racquet Club. The businesses leasing from the State such as the nurseries, the driving range, and the church, will probably go out of business since there are no available low cost parcels in the vicinity of the Route 85 corridor. The Los Gatos Swim and Racquet Club will be unable to locate a large vacant parcel in its clientele area since the only vacant land in the town may not be economically viable for this type of operation. In-lieu of payments will be made to those businesses who are eligible. The extent of the impact and specific relocation problems will be determined after the selection of the preferred alternative.

c. Open Space

Approximately 420 acres of open space will be removed with the selection of any of the construction alternatives. This land is primarily abandoned orchards and grassy fields.

d. Agricultural

There are 53 acres of agricultural land within the right of way which will be required for any of the alternatives. The majority of this land is being farmed with row crops and other seasonal produce and is located near the eastern end of the project between Route 101 and Cottle Road.

In consultation with the U.S. Soil Conservation Service, required by the Farmland Protection Policy Act of 1981, it was determined that, with the exception of the Cambrian Park area there is no "prime" agricultural land which would be protected by the Farmland Protection Policy Act.

The Cambrian Park area was a golf course until 1984 when it was converted into 2 industrial parks with the proposed Route 85 transportation corridor splitting the parcel. This conversion of the farmland land makes it ineligible for protection under the Farmland Protection Policy Act.

All the other areas of the proposed corridor, even those in active agricultural use at the present, have been committed to urban development. Therefore, they are not protected by the Farmland Protection Policy Act and no further coordination with the U.S. Soil Conservation Service is required.

4. ECONOMY AND EMPLOYMENT

Table VI-19 gives the breakdown of the various employment categories for each of the corridor cities. This breakdown is based on the Association of Bay Area Governments Projections 83.

The construction of any of the alternatives will generate new short term employment opportunities. The number of new jobs is based on the construction cost of the individual alternatives at the rate of 12.5 person-years per million dollars for "basic" jobs and 18.5 person-years for "service" jobs. Table VI-20 gives the cost of the alternatives and the number of new jobs which may be created.

TABLE VI-19
ROUTE 85 CORRIDOR CITY EMPLOYMENT

CITY	Total	Agriculture & Mining	Manufact-uring	Retail	Service	Other
Campbell	19957	180	3988	4758	5923	5108
Cupertino	42765	351	18719	6615	13904	3176
Los Gatos	13379	120	1868	3532	5371	2438
San Jose	229917	2666	54820	42098	65814	64519
Saratoga	5789	153	281	957	3118	1280
Santa Clara County	698950	8779	255413	128446	214654	91695

Source: ABAG Projection 83

TABLE VI-20
CONSTRUCTION COSTS AND PROJECTED EMPLOYMENT INCREASES

Alternative	Cost 1985$ Million	Employment (In person-years)		
		Basic (1)	Service (2)	Total
NPA	-	-	-	-
TSM	30	375	560	935
LRT	185	2310	3465	5775
4-FWY & LRT	340	4250	6375	10625
4-FWY w/ LRT & HOV	390	4875	7310	12185
4-FWY w/ Bus/HOV	325	4060	6090	10150
6-FWY w/ Bus/HOV	345	4310	6465	10775
8-FWY	280	3500	5250	8750
8-FWY & LRT	390	4875	7310	12185

(1) Basic = approximately 12.5 person years for each $1,000,000 of construction spending.
(2) Service = approximately 18.5 person years for each $1,000,000 spent.

H. TRANSPORTATION NETWORK

The impact on the transportation network can be divided into two catergories: 1) operational impact; and 2) physical impact.

1. OPERATIONAL IMPACT

Each of the Route 85 project alternatives would have some impact on the existing roadway network, which consists of the highway network and the local road network. In order to study the effects on the roadway network, the Guadalupe Corridor model of Santa Clara County's transportation network was used. The model, which incorporated some State Transportation Improvement Program projects, existing Route 85 between Routes 280 and 101 as a 6-lane freeway, existing and projected street capacities for 1990, and planned local street improvements, produced the "Guadalupe 1990 Build" analysis of the transportation network. This information, as well as, information about the network supplied by the local agencies along the Route 85 corridor coupled with field observations, was used to produce the No Project Alternative AM peak hour traffic congestion as shown in Figure VI-26.

Tables VI-21 and -22 define the legend used in Figure VI-26 in terms of level of service.

The TSM alternative will have no significant effect on the existing transportation network. The LRT alternative, due to the projected low patronage, will have minimal impacts to the transportation network. For the same reason, the 8-lane freeway with LRT is considered to have the same impact as the 8-lane freeway. Table VI-23 indicates the impact each alternative would have on the existing transportation network.

With all the freeway alternatives, typically the local roads crossing the corridor where there is an interchange planned will experience more traffic because of the vehicles wanting to access the freeway through those interchanges. Conversely, local roads that only cross the corridor (no interchange) would typically experience less traffic.

2. PHYSICAL IMPACTS

The physical impact of each major construction alternative on the local roads is not well defined. Exactly which streets would be affected, and to what extent, will depend on the final design of the selected alternative, which has not yet been determined. In addition, the final design will be based, in part, on the freeway agreements for each interchange, which will be negotiated with each city during preparation of the Final Environmental Impact Statement for the preferred alternative. However, there are some consequences a construction alternative would have (there would be little or no difference between each freeway alternative because the right of way lines would be very similar) and there are numerous mitigations measures available to reduce these impacts.

These consequences may be divided into two major areas: 1) those local roads that cross the corridor where an interchange or grade separation would not be provided; and 2) those local roads adja-

TABLE VI-21
LEVEL OF SERVICE DESCRIPTIONS
(LOCAL ROADS)

Level of Service	Traffic Quality	Legend for Streets
A	Low volumes; high speeds; speeds not restricted by other vehicles; all signal cycles clear with no vehicles waiting through more than one signal cycle.	_____
B	Operating speeds beginning to be affected by other traffic; between one and ten percent of of the signal cycles have one or more vehicles which wait through more than one signal cycle during peak traffic periods.	______
C	Operating speeds and maneuverability closely controlled by other traffic; between 11 and 30 percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during peak traffic periods; recommended ideal design standard.	_____
D	Tolerable operating speeds; 31 to 70 percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during peak traffic periods; ofter used as design standard in urban areas.	_____
E	Capacity; the maximum traffic volume an intersection can accommodate; restricted speeds; 71 to 100 percent of the signal cycles have one or more vehicles which wait through more than one signal cycle during peak traffic periods.	_____
F	Long queues of traffic; unstable flow; stoppages of long duration; traffic volume and speed can drop to zero; traffic volume will be less than the volume which occurs with level of service E.	_____

Source: Highway Capacity Manual. Highway Research Board Special Report 87. National Academy of Sciences, Washington D.C., 1965, page 320.

TABLE VI-22
LEVEL OF SERVICE DESCRIPTIONS
(FREEWAYS)

Level of Service	Traffic Quality	Legend for Highway
A	Freeflow operation; operating speed generally > 60 mph; a vehicle is not affected by other vehicles in the traffic stream	_____
B	Stable flow operation; operating speed generally > 55 mph; volume between 35% and 50% of capacity; some slower vehicles may have effect on vehicles.	_____
C	Stable flow operation; operating speed generally > 50 mph; volume doesn't exceed 75% of capacity; speed has become primarily a function of traffic densities.	_____
D	Approaching unstable flow; operating speed generally > 40 mph; volume doesn't exceed 90% of capacity; potential conflict points begin to have greater effect on operations.	_____
E	Unstable flow; operating speeds 30-35 mph; service volume regulated by capacity at critical locations; demand does not greatly exceed capacity, therefore, long backups do not develop upstream.	_____
F	Forced flow; operating speeds from 30 mph (at capacity) to stop-and-go type flow to zero in a complete jam; acts as a storage for vehicles backing up from a downstream bottleneck.	_____

Source: Highway Capacity Manual. Highway Research Board Special Report 87. National Academy of Sciences, Washington D.C., 1965, pages 245-252.

ROUTE 85

WEST VALLEY TRANSPORTATION CORRIDOR

A.M. PEAK HOUR TRAFFIC CONGESTION

NO PROJECT ALTERNATIVE

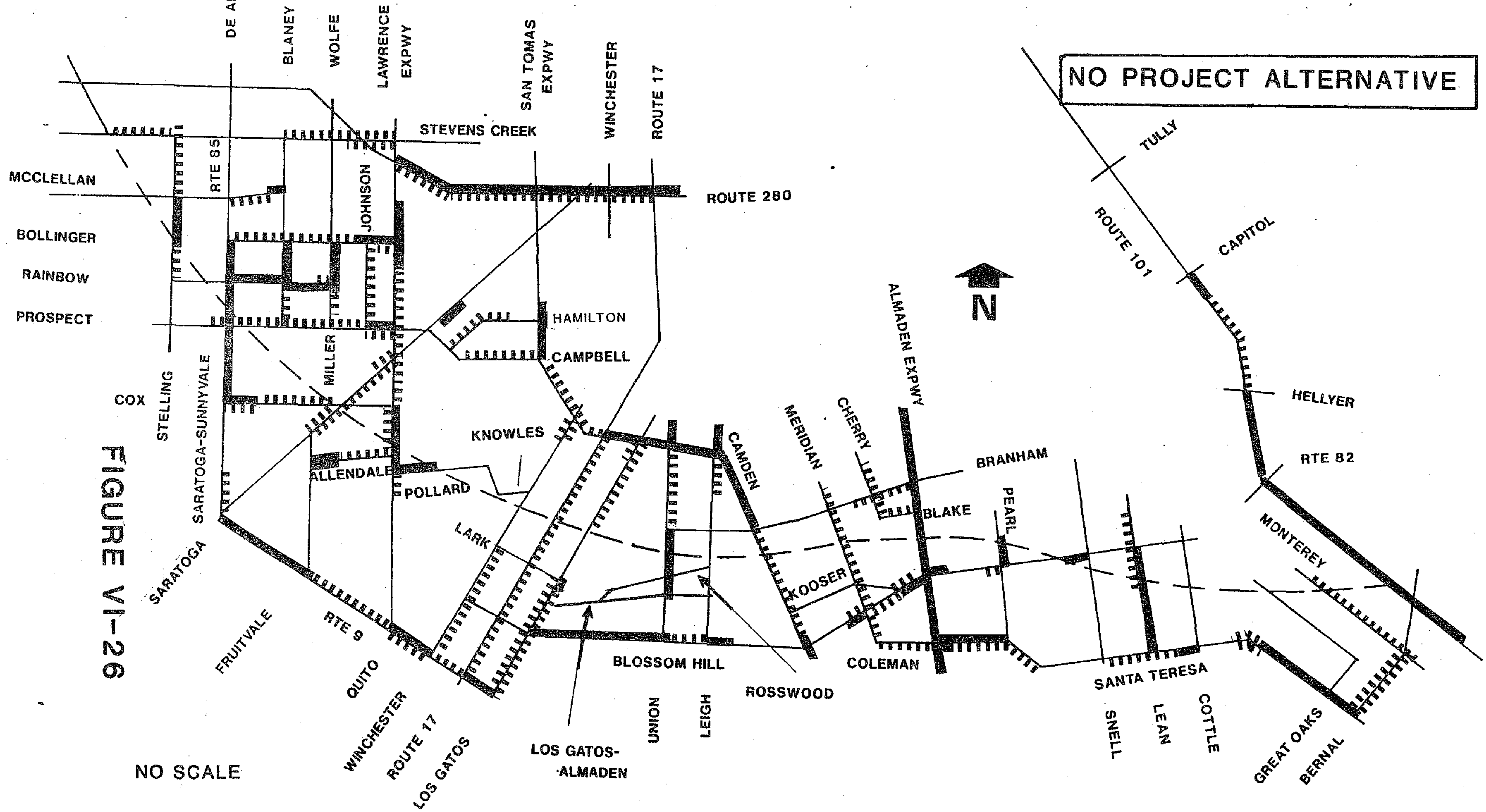


FIGURE VI-26

Alignment of Route 85	Little Delay, If Any	Some Delay – Predominately Minor	Heavy Congestion – Long Delays
	LOCAL STREET – All vehicles clear each cycle FREEWAY – Free flow conditions (55 mph)	LOCAL STREET – Some vehicles wait more than one signal cycle. FREEWAY – Approach capacity (40 mph)	LOCAL STREET – Most vehicles wait more than one signal cycle; extended duration of congestion FREEWAY– Forced flow conditions (15-20 mph)

TABLE VI-23
TRANSPORTATION NETWORK CONGESTION RELIEF

Alternative	Congestion Relief	Remarks
NPA	None	No effect on improving traffic conditions
TSM	Minimal	Most TSM type measure have already been implemented throughout the county
LRT only	Minimal	Low patronage projections indicate minimal effect on improving existing traffic conditions
4FWY with LRT	Some	This alternaive typically accomodates less than half of the projected demand, however, improvements to traffic conditions would be noticeable
4FWY with LRT & HOV 4FWY with BusHOV	Large	Two thirds to three quarters of the demand could be handled by these two alternatives
all 6- and 8-lane alternative	Major	These alternatives could accomodate a significant amount of the projected demand

cent to or partially in the corridor that will be altered in some way.

In the first major area, local roads would be severed at the Route 85 corridor boundary. The impact of these road closures would be relatively minor because there would be other local roads that would cross the corridor as an alternate route.

Table VI-24, Local Road Closures, indicates possible roads which would be closed to through traffic and the closest alternate street that would be available for travel across the corridor. The added mileage required to reach these alternate streets would, in no case, be greater than 0.7 miles.

In the second major area, local roads might be relocated or realigned, extended, or partially eliminated. Those roads near a

TABLE VI-24
POSSIBLE LOCAL ROAD CLOSURES
OFF.
ce off

Local Road to be Closed	Closest Alternative Route
Cleo Avenue	Saratoga-Sunnyvale Road
Rainbow Drive	Saratoga-Sunnyvale Road
Glen Brae Drive	Cox Avenue
Oka Lane	Winchester Boulevard
Harwood Road	Camden Avenue
Carter Avenue	Camden Avenue
Dent Avenue	Meridian Avenue

proposed interchange or grade separation (especially for the LRT only alternative), are the most likely to be impacted.

Preliminary designs which include freeways would physically affect the following streets as listed in Table VI-25, excluding grade separated or interchange streets.

However, there may be other roads that would be affected that cannot be determined at this time, including roads that might be severed by the Route 85 corridor boundary.

Because the LRT only alternative would be grade separated and would not include interchanges, the number of local roads impacted would be smaller than those affected by a freeway alternative. In addition, it is possible that not all the local roads that would be closed by a freeway alternative would be severed by the LRT only alternative.

Although the exact impact of each alternative is unknown, during final design efforts will be made to keep the physical impacts to a minimum and to mitigate any impact that remained.

2. TRANSIT FACILITIES

There are two aspects of how the transit facilities, within all of Santa Clara County, would be impacted by each alternative: (1)

TABLE VI-25
POSSIBLE PHYSICALLY IMPACTED LOCAL ROADS

Festival Drive, Cupertino	Cleo Avenue, Cupertino
Rainbow Drive, Cupertino	Sharon Drive, San Jose
Plumas Drive, San Jose	Dagmar Drive, San Jose
Sousa Lane, Saratoga	Aspesi Drive, Saratoga
Del Loma Drive, San Jose	Wedgewood Avenue, Los Gatos
Pollard Road, Los Gatos	Van Dusen Lane, Campbell
Harriet Avenue, Campbell	York Avenue, Campbell
Little Harriet (Private), Los Gatos	
Teakwood Drive, San Jose	
Palmer Drive (Private), Los Gatos	
Hooke Lane (Private), Los Gatos	
Albright Way, Los Gatos	Capri Drive, Los Gatos
West Mozart Avenue, Los Gatos	Oka Road, Los Gatos
Burton Road, Los Gatos	East Mozart Aveune, Los Gatos
Wanda Lane, Los Gatos	Oka Lane, Los Gatos
Knowles Drive, Los Gatos	Samaritan Drive, San Jose
National Way, Los Gatos	Branham Lane, San Jose
Sandy Lane, San Jose	Tony Drive, San Jose
Anna Drive, San Jose	Trent Drive, San Jose
Tilden Drive, San Jose	Mary Jane Way, San Jose
Harwood Road, San Jose	Pinmore Drive, San Jose
Winfield Boulevard, San Jose	Cheynoweth Avenue, San Jose
Pearl Avenue, San Jose	Calahan, Avenue, San Jose
Blossom Hill Road, San Jose	Linwell Court, San Jose
Perimeter Road, San Jose	Bathurst Way, San Jose
Tennant Avenue/Bernal Road, San Jose	

How would each specific element of the transit network be impacted? and (2) What would be the overall impact on the entire system?

The transit network consisting of two modes of transportation, bus and rail, has been analyzed using the Metropolitan Transportation Commission model. If the NPA or TSM alternative is selected, the transit network would operate at a level shown on Table VI-26, "NPA" for the year 1990. Table VI-26 compares each alternative to the NPA/TSM, because that would be the existing 1990 condition if none of the alternatives were chosen.

What is not included in these comparisons is how the existing transit network, projected into 1990 without any improvements, compares to the NPA/TSM level. This NPA/TSM level comes from the "Guadalupe 1990 build" model which had an improved 750 bus system incorporated into it. This difference between the existing bus network projected into 1990 and the 1990 TSM network is an increase of approximately 77,000 daily passenger trips or 58%.

TABLE VI-26
1990 PROJECT PASSENGER TRIPS

	LOCAL BUS	EXPRESS BUS	LRT	BART	Southern Pacific (CalTrain)
NPA/TSM	22,300	12,800	9,500	1,400	6,400
LRT	21,900	9,900	15,700	1,300	6,000
4-FWY & LRT	21,600	9,600	15,300	1,300	5,900
4-FWY w/ LRT & HOV	21,600	9,600	14,700	1,300	5,900
4-FWY w/ Bus/HOV	20,600	17,100	9,100	1,300	5,900
6-FWY w/ Bus/HOV	20,400	16,900	8,900	1,300	6,000
8-FWY	21,300	11,900	9,500	1,300	6,200
8-FWY & LRT	21,400	9,300	14,900	1,300	5,900

a. Buses

Within the Route 85 transportation corridor, Santa Clara County Transit operates 22 local and 9 express bus lines. Figure VI-27 depicts the bus lines which intercept the Route 85 transportation corridor. Headways on the local lines range from 15 minutes during peak periods, 30 minutes midday, to 60 minutes after 6 P.M. Twelve of the 22 local and two of the 9 express lines are wheelchair accessible.

In general, local bus ridership would decrease, anywhere from 400 to 1,900 passenger trips, regardless of which alternative is chosen. The two alternatives which include a bus/HOV transitway would have the greatest impact, whereas, the LRT only alternative would have the least. However, the transitway alternatives would greatly increase the ridership on express buses, by almost 33% or about 4,300 passenger trips per day. All the other alternatives, except the 8-lane freeway, would reduce patronage on express buses by more than 22% or a minimum of 2,900 passenger trips. The reduction caused by the 8-lane freeway is only 7% or 900 passenger trips. Table VI-27 tabulates these trip differences for each of the alternatives.

TABLE VI-27

DIFFERENCE IN PASSENGER TRIP FROM NPA IN 1990 (TOTAL NUMBER AND PERCENTAGE)

NUMBER/ PERCENT	LOCAL BUS	EXPRESS BUS	LRT	BART	SOUTHERN PACIFIC (CalTrain)	TOTAL TRIPS
LRT	-400/ -1.8	-2,900/ -22.7	+6,200/ +65.3	-100/ -7.0	-400/ -6.2	+2,400/ +4.6
4-FWY & LRT	-700/ -3.1	-3,200/ -25.0	+5,800/ +61.0	-100/ -7.0	-500/ -7.8	+1,300/ +2.5
4-FWY w/ LRT & HOV	-700/ -3.1	-3,200/ -25.0	+5,200/ +54.7	-100/ -7.0	-500/ -7.8	+700/ +1.3
4-FWY w/ Bus/HOV	-1,700/ -7.6	+4,300/ +33.6	-400/ -4.2	-100/ -7.0	-500/ -7.8	+1,600/ +3.1
6-FWY w/ Bus/HOV	-1,900/ -8.5	+4,100/ +32.0	-600/ -6.3	-100/ -7.0	-400/ -6.2	+1,100/ +2.1
8-FWY	-1,000/ -4.5	-900/ -7.0	NC*/ NC	-100/ -7.0	-200/ -3.1	-2,200/ -4.2
8-FWY & LRT	-900/ -4.0	-3,500/ -27.3	+5,400/ +56.8	-100/ -7.0	-500/ -7.8	+400/ +0.8

* NC = No Change

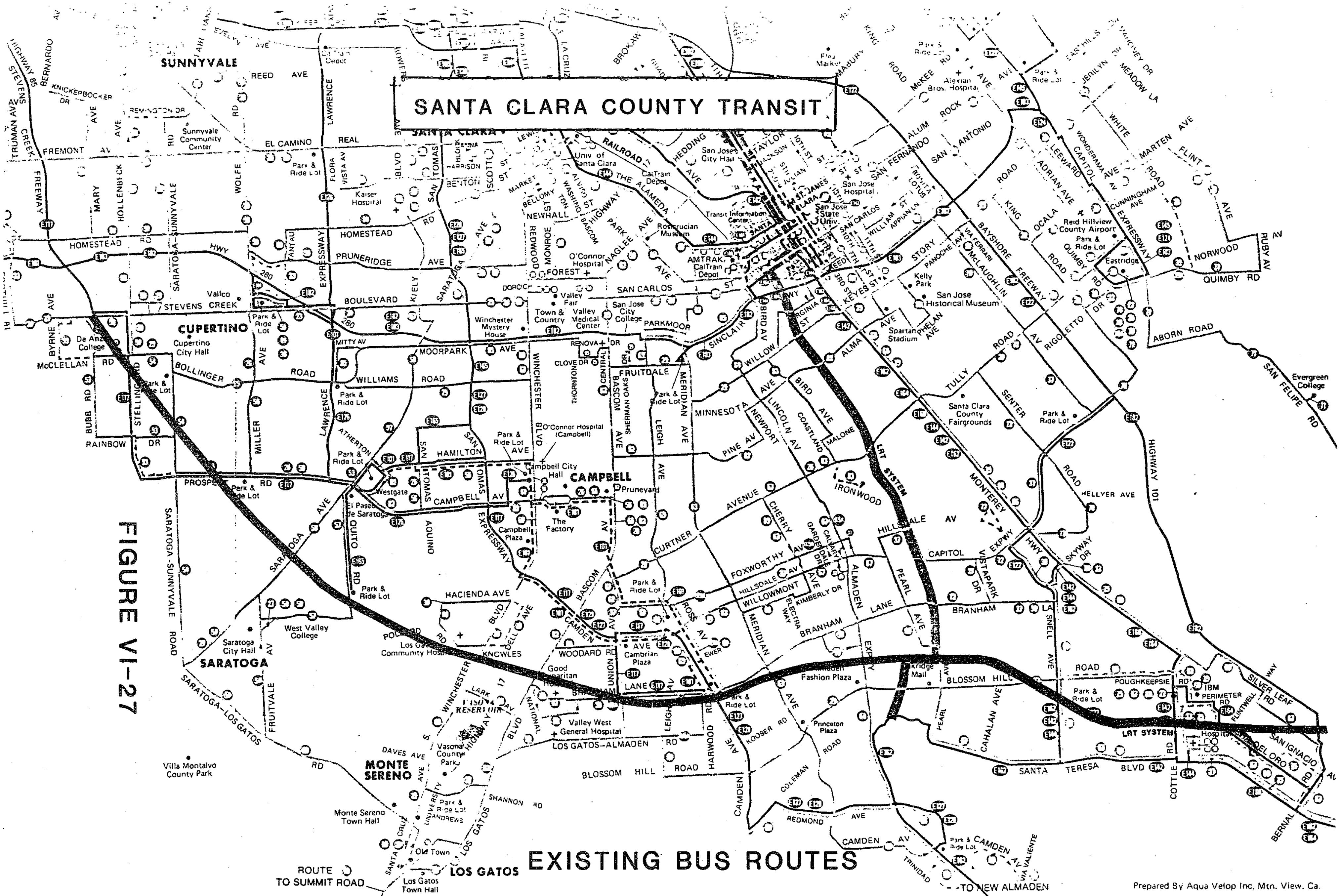


FIGURE VI-27

EXISTING BUS ROUTES

SOURCE:COUNTY TRANSIT APRIL 1,1985

Prepared By Aqua Velop Inc. Mtn. View, Ca.

From a different, less numerical perspective, it is easy to see why the bus patronage would be impacted as above. For example, the express bus element would lose passengers to the LRT because of the reduced travel times for LRT and immunity from congestion on the freeways. However, if a transitway is built and the LRT is not available, express buses would be able to utilize that transitway, stay out of traffic jams and reduce the travel time, thereby gaining more passengers. Express buses would still be effective on the 8-lane freeway as its loss of passengers to driving on the freeway is less than its loss of passengers to LRT.

b. Rail

There are three rail elements: Light Rail Transit (LRT), Heavy Rail Transit (HRT) which includes Bay Area Rapid Transit (BART) and the Southern Pacific Railroad (CalTrain).

In the case of the LRT element, the LRT network ridership would increase by more than 50%, between 5,200 and 6,200 passenger trips with any alternative that includes LRT. Ridership would decrease slightly, less than 5%, with a bus/HOV transitway alternative. The 8-lane freeway alternative would have no significant effect on the number of passenger trips on the LRT system.

Ridership on BART and the CalTrain would decrease with each alternative. The impact on BART is the same for each alternative, a loss of 100 passenger trips per day. The CalTrain would lose between 200 and 500 passengers trips per day, with the 8-lane freeway having the least effect.

c. Transit Network

The overall effect on the transit system is that the total number of transit trips would, at most, increase by only 4.6% or 2,400 trips (LRT only). The greatest loss in transit trips would occur with the 8-lane freeway, but the loss would only be 4.2% or 2,200 trips. Each of the alternatives, except the 8-lane freeway, would increase the transit ridership, but only by less than 1 to 4.6%.

It is clear that the effect of each alternative on the entire transit network is slight. Adding new transit facilities - LRT or Transitways - will bring few, new transit riders; rather what will occur is "mode switching." Mitigation efforts to increase ridership would have to concentrate on promoting transit within Santa Clara County.

These impacts on the transit element, however, must be looked at in relationship to the entire transportation network, which also includes the highway and local road elements (see Section VI-H-1 on page VI-78).

d. Station Intersection Analysis

The vehicle trips to the transit stations, whether LRT or Bus, are generated from mode of arrival; drive alone, Kiss and Ride, bus and taxi. Bus and taxi arrivals will have a negligible impact.

The vehicle trips associated with each transit station have the potential to impact intersections immediately adjacent to the parking facility. Analysis indicates that the volume of trips during the A.M. peak hour will average 250 vehicles at each of the stations except Camden. At Camden, the volume is projected to be approximately 700 trips. The peak hour volume of 250 trips is not expected to result in any significant impacts on the affected intersections. At Camden, the 700 projected trips can cause traffic congestion which will be mitigated.

Measures to mitigate the effects of vehicle trips include upgrading the existing intersection signalization; restriping to add or change lane configuration; or widening. The design of the Route 85 interchanges to provide access into and through interchanges is another mitigation. The vehicle trips resulting from the stations will not have any significant impact on the affected intersections.

e. Existing LRT Facilities

The LRT facilities in the Guadalupe Corridor overlap are considered as existing. If any of the freeway alternatives are selected as the preferred alternative, the existing LRT facilities will be upgraded.

3. PARKING FACILITIES

There are two aspects to the impact on parking facilities that an alternative would have: 1) the elimination of parking facilities due to the construction of one of the alternatives and the measures that could be taken to reduce this impact; and 2) where new parking facilities could be located for those alternatives that include transit.

Existing parking facilities would only be impacted by a major construction alternative. The impact of each major alternative would be the same because each alternative has the same profile and similar geometrics. If the NPA or TSM alternative is chosen, the existing parking facilities would not be significantly impacted except for the possible increase in use of the park and ride lots.

a. Existing Facilities Impacts

There are 5 parking lots, outside the Guadalupe Corridor, that would be eliminated or reduced if a major construction alternative is selected. Table VI-28 on page VI-88 gives the location of these lots and the impacts the alternatives would have. Figures VI-28 through -32 depict the actual location of these parking lots in relationship to the Route 85 corridor.

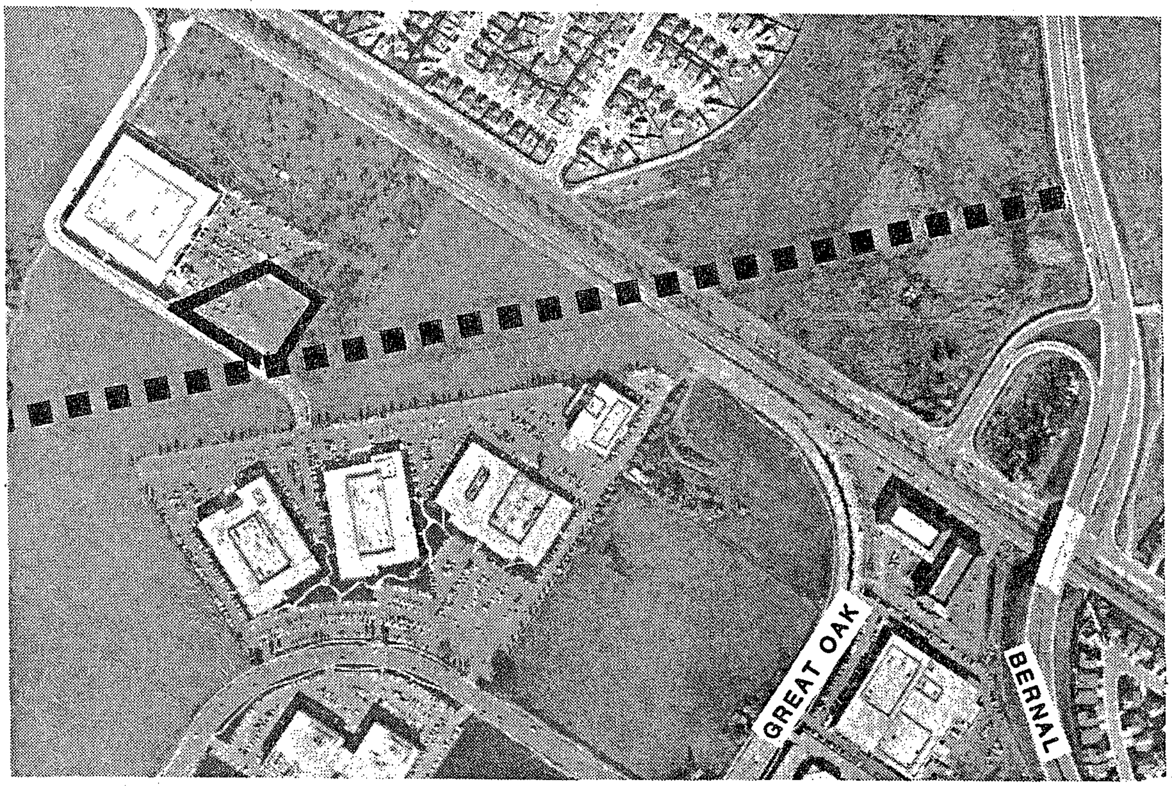
TABLE VI-28
PARKING FACILITY IMPACTS & MITIGATION

TYPE OF LOT	LOCATION	NUMBER OF SPACES LOST	NOTES
Business Parking Lot See Fig. VI-35	Berg Avenue (east of Great Oaks, north of Tennant Road	~175	1
Park and Ride See Fig. VI-_3	Corner of Camden & Branham	~150	1
Business Parking Lot See Fig. VI-37	Corner of Route 85 and Almaden Expressway	~0-10	1 & 2
Business Parking Lot See Fig. VI-38	Dell Avenue and Knowles Drive	~35	1
Business Parking Lot See Fig. VI-39	Corner of Route 85 and Winchester Boulevard	~175	1

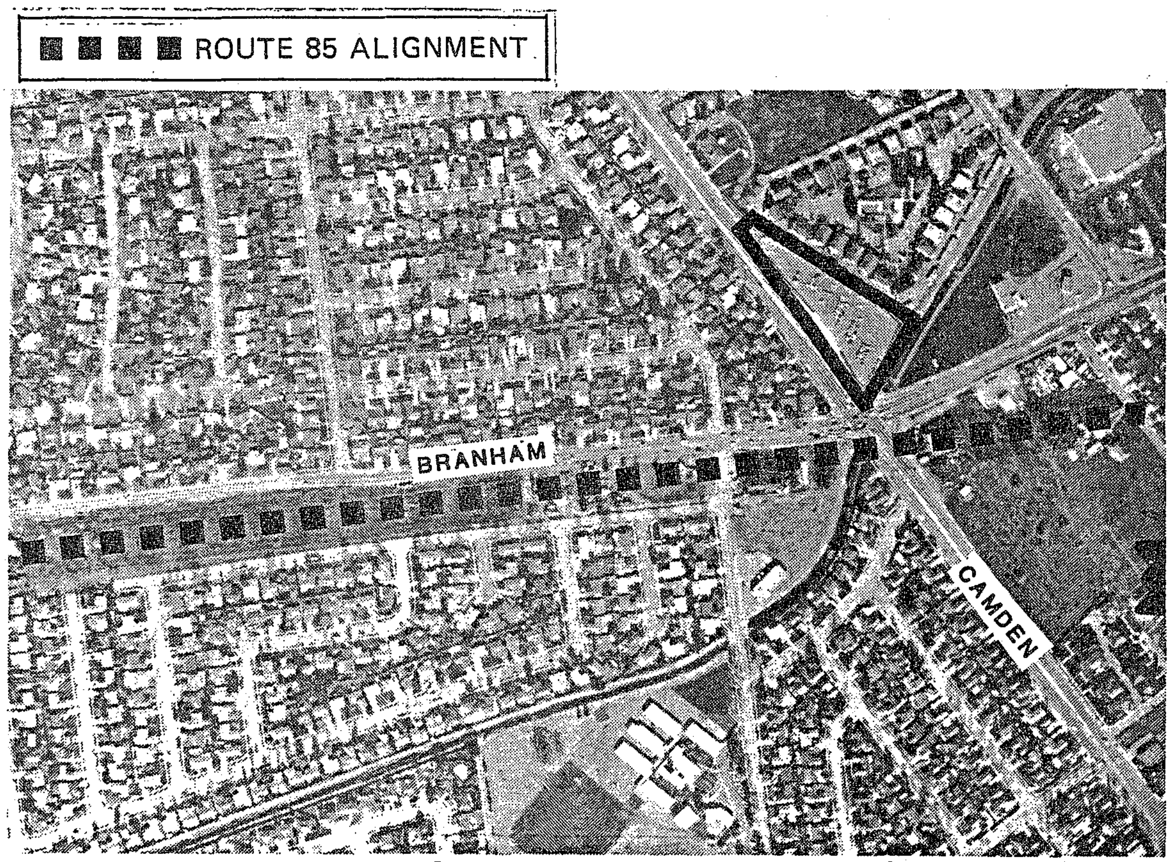
Notes: 1) The number of parking spaces lost will depend on the final design of the facility.
2) The entrance to this parking lot from the Almaden Expressway would be eliminated.

Within the Guadalupe Corridor portion of the study between Pearl and Miyuki Drive, an expressway with LRT has been approved with parking facilities at Cottle Road, Snell Road, and Blossom Hill Road. When this portion is converted to a freeway under the Route 85 project, the conversion will be designed to minimize the loss of parking spaces to the existing parking facilities. The exact number of spaces lost will depend on the final design of Route 85.

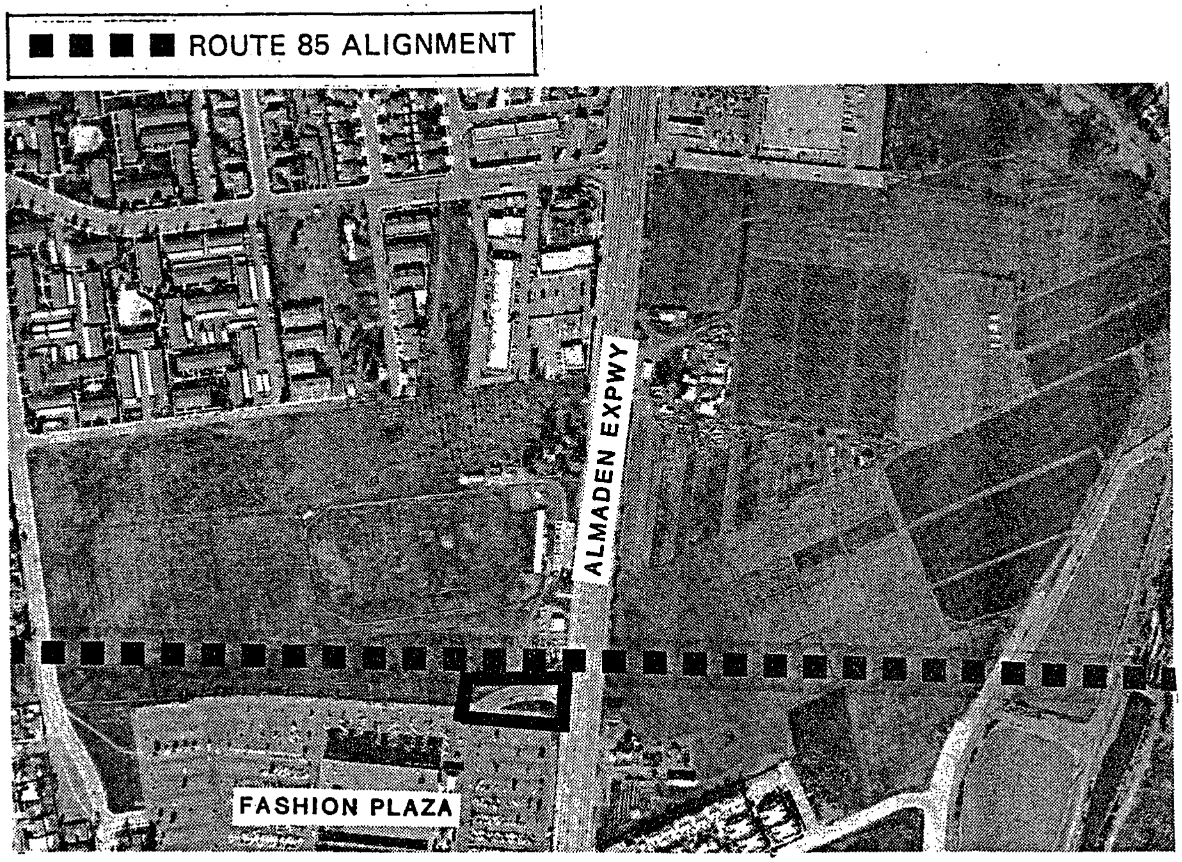
Some residential parking (local on-street parking) would be eliminated at various locations along the corridor where local roads



BERG AVE. SITE FIGURE VI-28



CAMDEN AVE. SITE FIGURE VI-29



ALMADEN EXPWY SITE

FIGURE VI-30

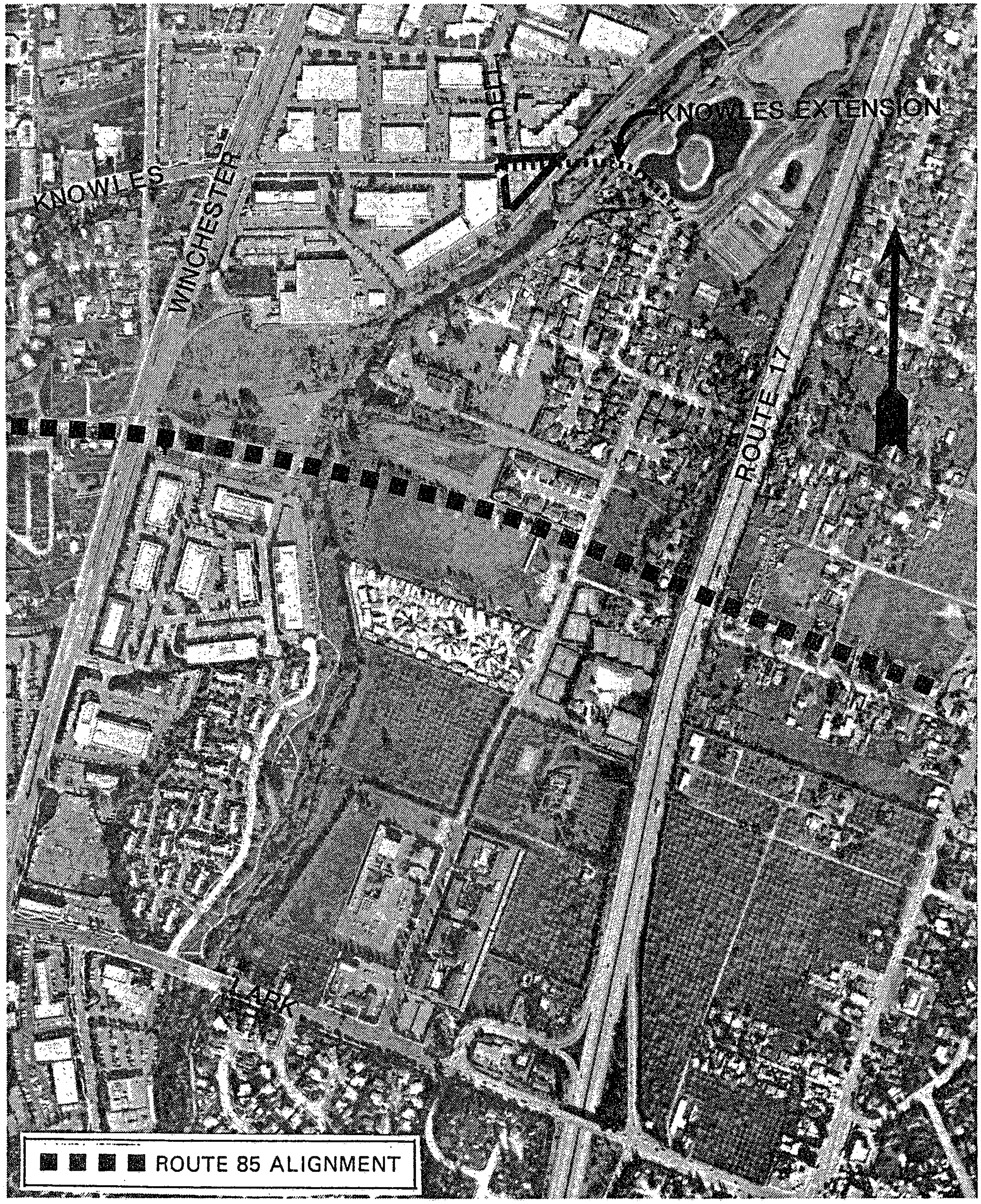
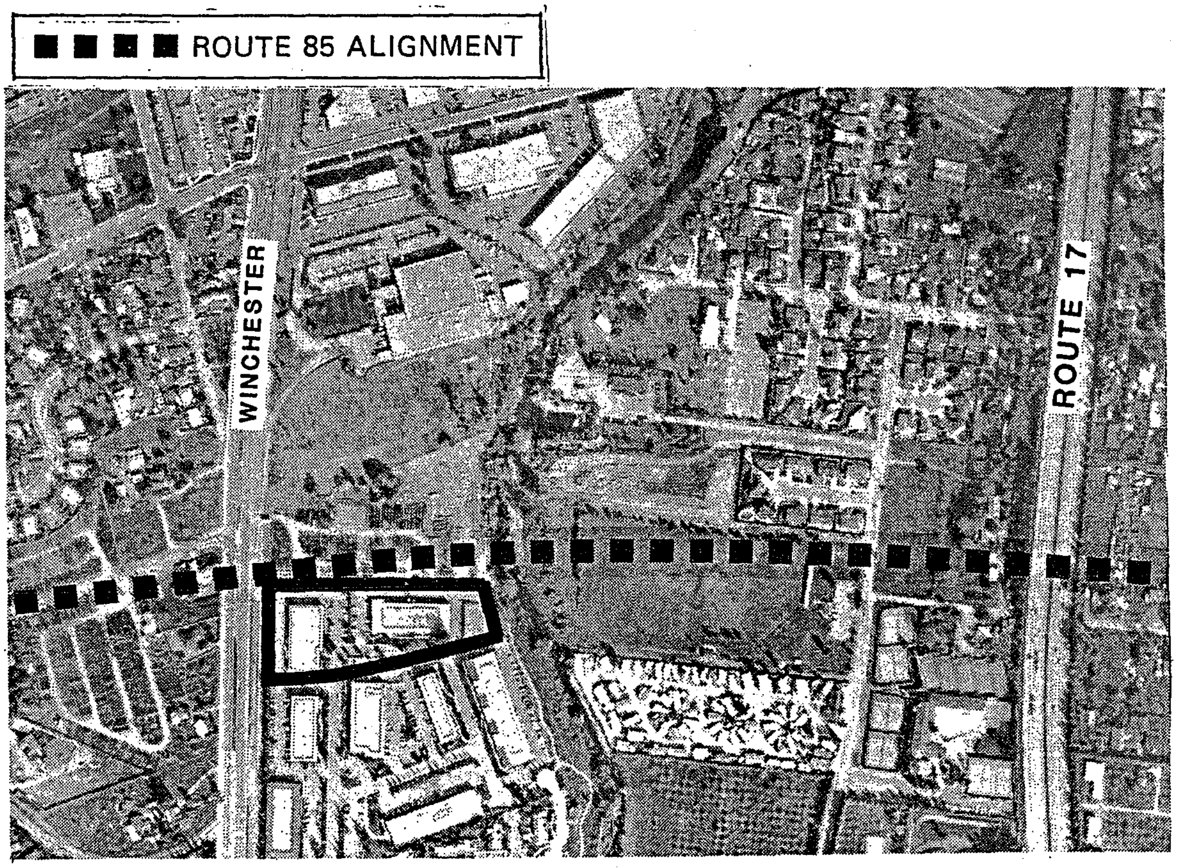


FIGURE VI-31 DELL AVE. SITE



WINCHESTER SITE

FIGURE VI-32

are severed or eliminated. However, the need for roadside parking would also be eliminated or substantially reduced with the removal of some buildings and state purchase of land within the right of way. The impact will be negligible.

b. Mitigation

As mitigation for the park and ride facility at Camden and Branham, parking would be provided at the same, general location which would negate the loss of the existing parking facility.

Those parking facilities located within the Guadalupe Corridor overlap would either remain with, some alteration, and/or be relocated at the same interchange or grade separation. Efforts would be made to minimize the number of parking lots lost. Overall, there will be no significant loss of parking spaces within the Route 85 corridor.

For those business parking facilities that would lose spaces, which are an integral part of that business' operation, due to a partial acquisition, there would be many ways to mitigate that loss -- for example, restriping, use of adjacent nearby land, or construction of parking structures. However, until the Right of Way Branch has reached the appraisal and acquisition stage and a final alternative is chosen, the overall impact and the most appropriate mitigation measure cannot be determined.

c. Construction Impacts and Mitigation

During the construction of each interchange or grade separation, the parking facilities now in use would be impacted. The park and ride facility at Camden Avenue and Branham Lane would be unusable during construction. However, once construction is completed, there would be parking available. For those parking lots located within the Route 87/85 overlap, it would not be possible to completely close them during construction, because of the tremendous inconvenience that it would cause the commuters along Route 87. In order to minimize the impact that construction activities would have on these parking facilities, construction would be staged to keep to a minimum the number of parking spaces unavailable for use.

d. New Parking Facilities

Parking facilities would be provided at every LRT station for all the freeway alternatives. Figure VI-33 on VI-96 depicts these tentative park and ride locations. These parking facilities would be incorporated within the existing right of way in the interchanges or on vacant land in the vicinity of the stations.

At the Almaden Expressway, Camden Avenue, Union, South Bascom and Pollard stations, parking facilities can be incorporated in the interchange design without acquiring additional right of way. The exact location and size of the parking facilities will be determined during the final design of the selected alternative.

At the Winchester Boulevard, Quito, Prospect and Saratoga/Sunnyvale Road stations, there are vacant parcels in the vicinity of the stations which could be used as possible park and ride locations. Figure VI-33 shows the locations of the proposed transit stations. Figures VI-33 through -35 depict the location of these vacant parcels.

At the Saratoga station, there are two possibilities; one is a joint use of the Paul Masson Winery property and the other is to acquire the vacant land immediately north of the winery.

At the McClellan station, there are also two possibilities; one is the joint use of the De Anza College parking lot and the other is to construct a structure over the freeway for parking.

For the LRT only alternative, all the park and ride sites can be incorporated within the existing right of way requirements.

All the park and ride facilities will be designed for a minimum of 100 vehicles on approximately one acre of land. There is assumed to be no charge for use of the parking facilities.

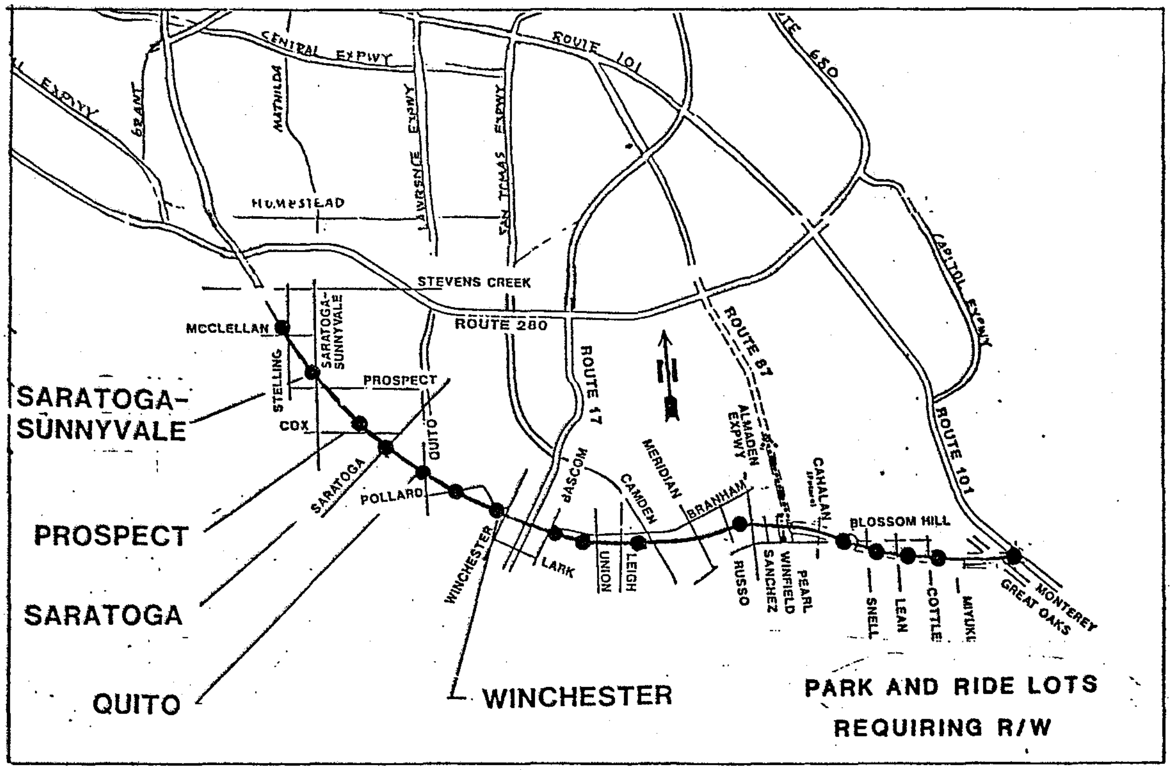
The main impact of these new park and ride facilities will be the traffic impact at the station locations which are described in Section VI-H-4 under Transit Facilities. It should be noted that due to the low patronage projected for the LRT, the traffic impact caused by the LRT patrons on the intersections adjacent to the stations will be insignificant. No mitigation for these minor traffic impacts is proposed.

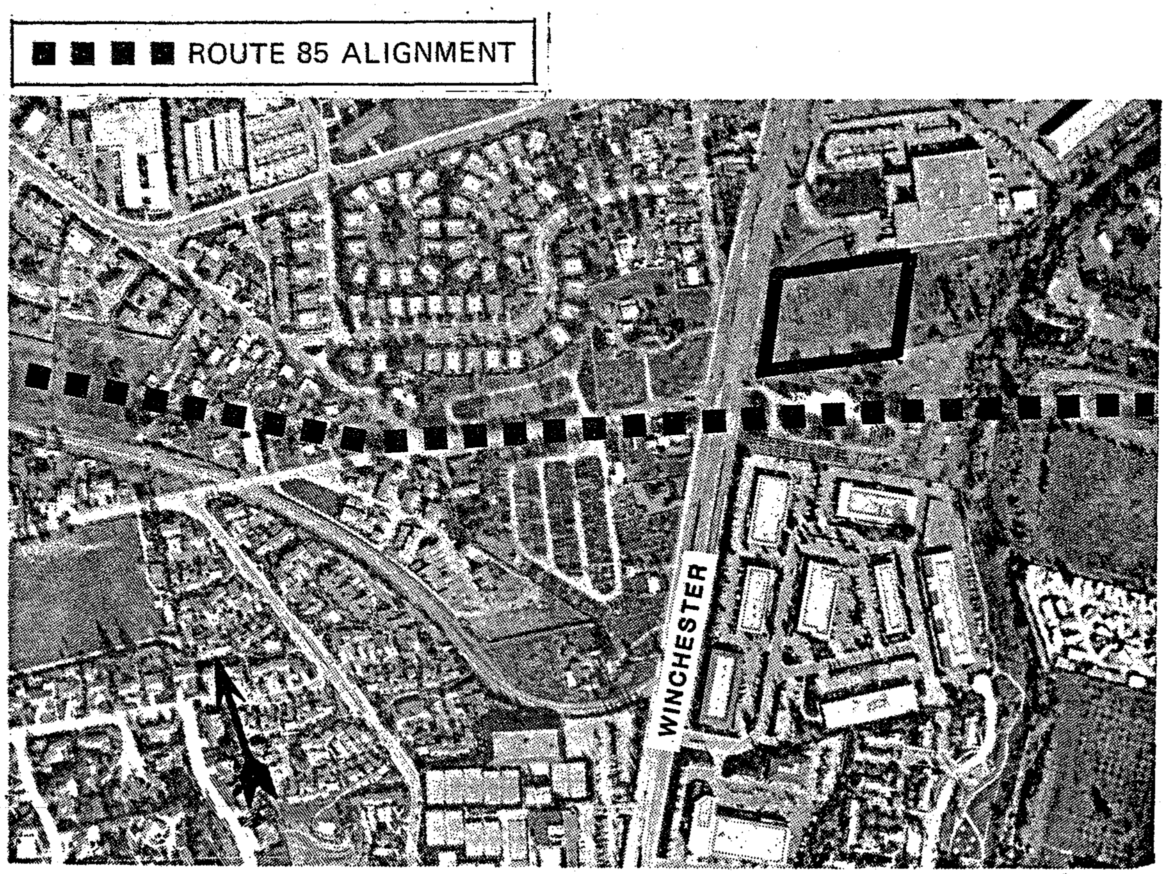
4. AIRPORTS

San Jose International Airport, located north of the Route 85 corridor, is the closest airport to the corridor. The airport network would not be directly affected by any of the alternatives, however, travel to the airport would be impacted.

The NPA and TSM alternatives would provide little or no assistance in making travel to the airport more accessible or faster.

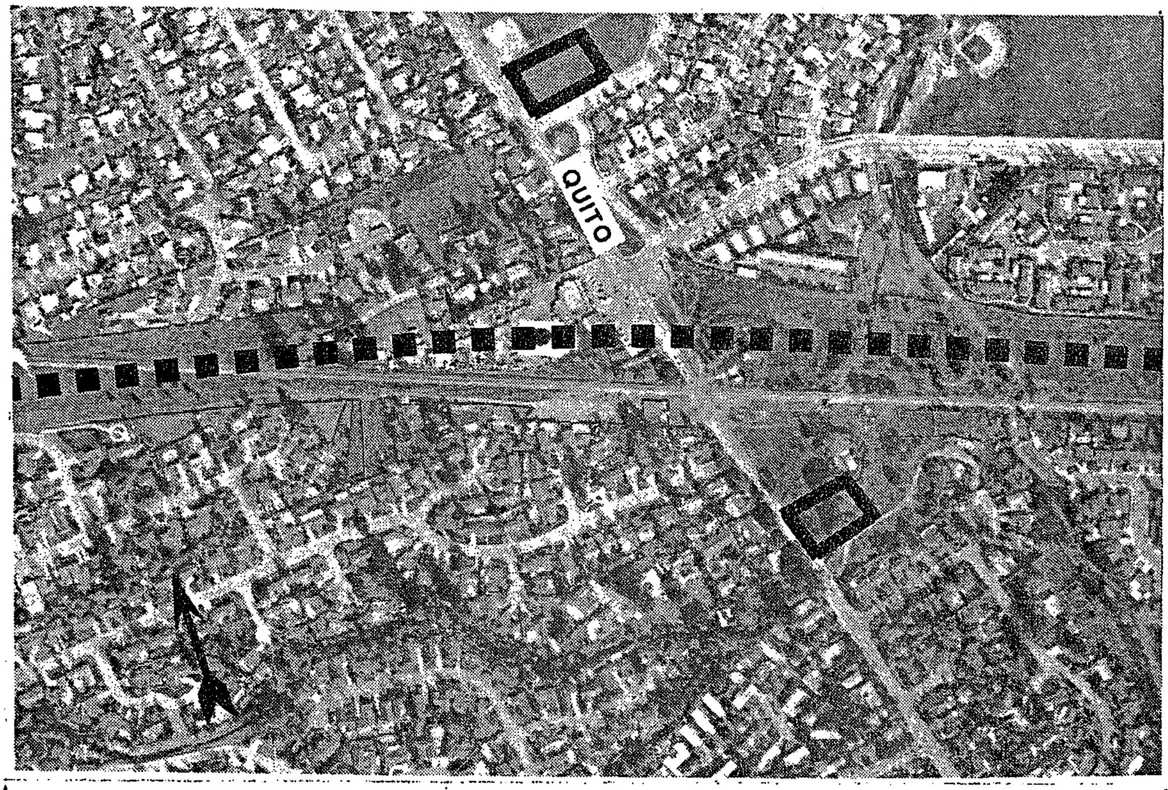
Those alternatives that do not include LRT would have a minor impact on travel to the airport. Construction of any one of these alternatives would open up other routes to the airport utilizing Route 85 and Route 87, which goes right to the airport. Also, traffic on Route 280, another route leading towards the airport, between Route 85 and Route 17, would be reduced, espe-





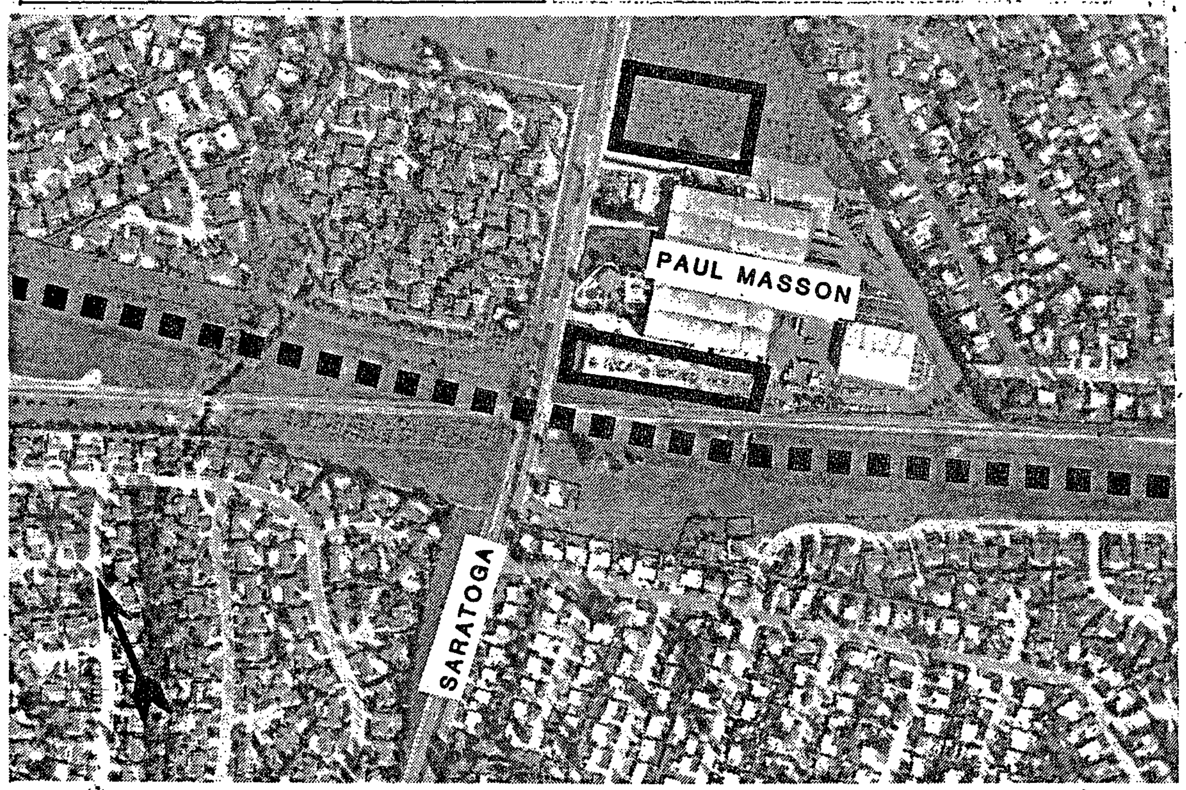
WINCHESTER

FIGURE VI-33



QUITO

■ ■ ■ ■ ROUTE 85 ALIGNMENT

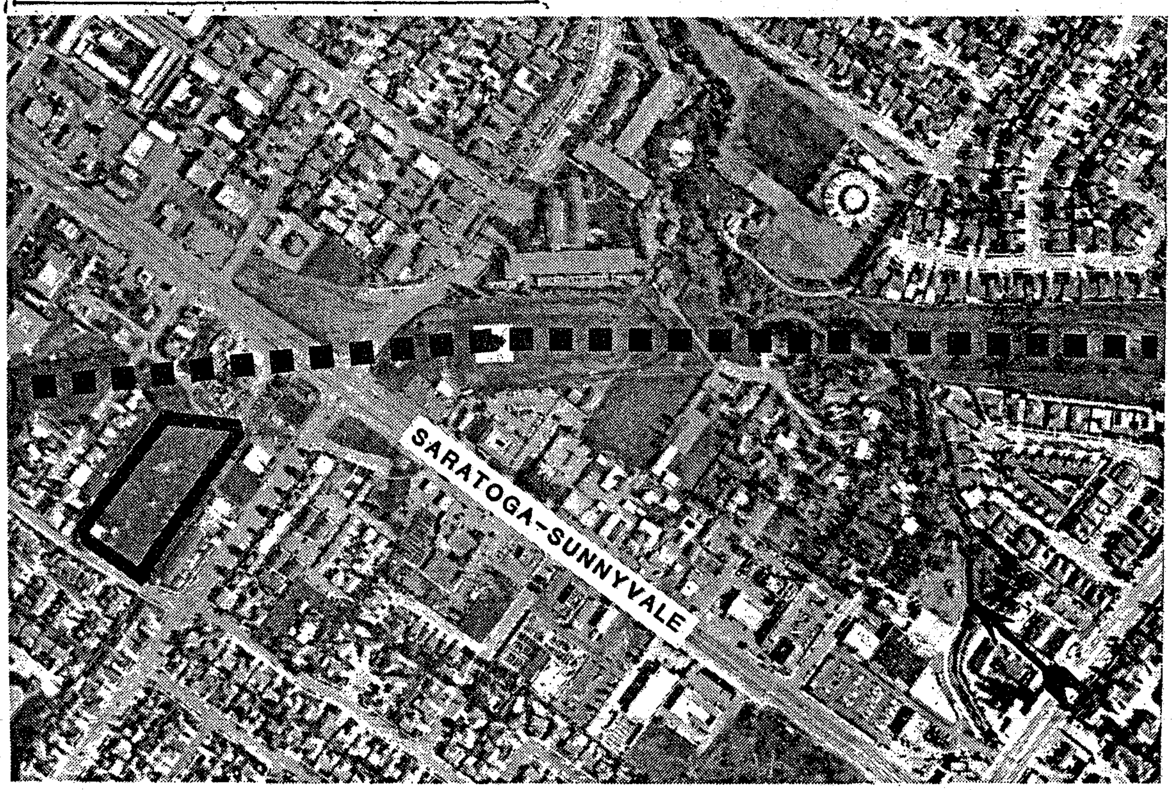


SARATOGA

FIGURE VI-34

PROSPECT

■ ■ ■ ■ ROUTE 85 ALIGNMENT



SARATOGA-SUNNYVALE

FIGURE VI-35

cially on weekends, because travellers heading south would be able to use Route 85 to connect to Route 17 and Route 101.

Alternatives that include the construction of LRT may have a significant impact on the accessibility to the airport. The Guadalupe Corridor Project (Route 87), will have an LRT station approximately one mile from the airport. If there are shuttle buses from the Odell Road station to the airport, people would be able to ride the LRT to the airport. If the LRT system is extended to Stevens Creek Boulevard with the Route 85 transportation corridor, additional people would be able to use the LRT to travel to the airport. Furthermore, if the LRT "Loop" in Santa Clara County is completed, (the LRT would be extended along Route 85 to Route 101 in Mountain View and then connect back to Route 87), then north county residents would also be able to use the LRT system for travel to the airport.

5. BICYCLE ROUTES

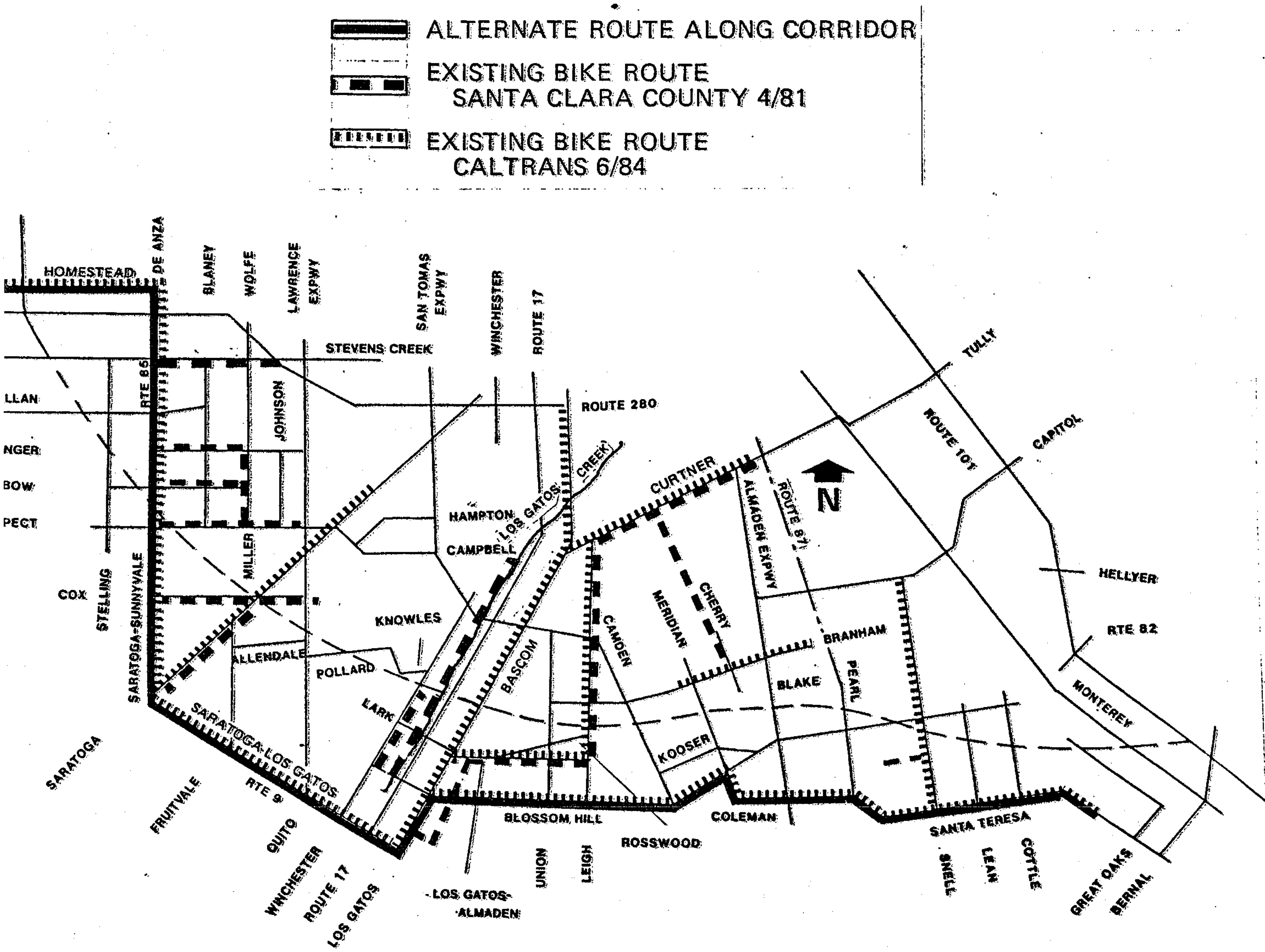
For each construction alternative, bicycles would not be allowed to travel within the corridor. As a result, only those bicycle facilities or routes that cross the corridor would be affected.

Policies regarding these bike routes are many and varied. Each city and the County has its own priorities and policies. The City of Los Gatos has specific bike routes, while the City of San Jose has a policy that all roads should be accessible to bicyclists. However, these policies may fluctuate, depending upon many factors; for example -- the make-up of city councils, local & national trends (e.g. energy conservation), emphasis on modes of travel, and the extent of bicycle traffic.

Because of these possible fluctuations, it is difficult to predict what these policies and routes will look like in twenty years. For this study, it is a safe assumption that any proposed bike route that would cross the corridor would be on an existing street. Therefore, it is important to see how local roads would be affected by the corridor alternatives as well as how the existing bike routes would be affected.

The major existing bike routes are shown on Figure VI-36, on page VI-100. Only one path is not on an existing road and that is the route paralleling Los Gatos Creek.

The project will replace in kind existing major routes for nonmotorized traffic severed or destroyed by freeway construction. It is the State's contention that there are reasonable alternative routes for those routes that would be severed, see Figure VI-42, on page VI-100, and there are existing nonmotorized transportation facilities that allow bicyclists to travel along the general direction of the corridor. Therefore, nonmotorized transportation facilities do not need to be incorporated into the design of



ROUTE 85
WEST VALLEY TRANSPORTATION CORRIDOR
BIKE ROUTE

FIGURE VI-36

any construction project along the corridor. However, the impacts on the routes that cross the corridor will be discussed.

a. Impacts

The NPA would not involve any construction, therefore, the existing bike routes and any proposed bike routes would not be affected.

The TSM alternative would involve minor construction on existing roadways. If this alternative is selected, existing bike routes would not be eliminated and any construction would make provisions for continued bicycle use.

The impacts of each of the major construction alternatives on the bicycle routes would be the same as each alternative has the same vertical alignment and similar geometrics. Some roads would be permanently closed to traffic across the corridor and others would be closed during construction. Those possible roads that would be permanently closed to traffic across the corridor are as follows:

Road	City
Cleo Avenue	Cupertino
Rainbow Drive	Cupertino
Glen Brae Drive	Saratoga
Oka Lane	Los Gatos
Harwood Road	San Jose
Carter Avenue	San Jose
Dent Avenue	San Jose

At each interchange and/or grade separations, local roads would have to be closed for some period of time during construction.

The bike route at Los Gatos Creek would be closed during construction of the Route 85/Route 17 interchange and would need to be reconstructed.

b. Mitigation

As mitigation for the above impacts, the following measures have been proposed to reduce the impacts:

- During construction of interchanges and grade separations where local roads would be closed, there would be detours designated for motor vehicle traffic that the bicyclists would also be able to use.

- For those roads that would no longer cross the corridor, there would be alternate routes (i.e. other local roads) that might be taken to cross the corridor. Table VI-29 shows approximately the additional time it would take to get to the closest street that would cross the corridor from the affected street, which would be a minor inconvenience.

- At all the grade separations and interchanges, there would be shoulders to ensure that bicyclists would be able use each local road.

- For the bicycle route along Los Gatos Creek, the abutment fill for the Route 85 overcrossing (regardless of which major construction alternative was chosen) would be designed so that a paved bike lane could be provided.

6. PEDESTRIAN ROUTES

Pedestrian routes, like bicycle facilities, are considered by the State as non-motorized transportation facilities. As was described in the above section, "Bicycle Routes", the State would accommodate any routes severed by any major construction and ensure that alternative routes for travel along the direction of the corridor exist or are provided. Because of safety reasons, pedestrians would not be permitted to be in the corridor for any of the major construction alternatives. However, there are many local streets alongside the corridor that are available to pedestrians, indicating that alternative routes do exist. Therefore, only those routes (basically local streets) that cross the corridor would be affected.

Due to the numerous paths available to pedestrians, mostly alongside local roads, it is important to look at the effect of each alternative on local roads.

The NPA would not involve any construction, therefore no local roads would be impacted nor would any existing or proposed pedestrian routes.

The TSM alternative would involve minor reconstruction on existing roads. If this alternative is selected, existing pedestrian routes would not be eliminated and any construction would make provisions for continued pedestrian use.

The impact of each of the major construction alternatives on pedestrian routes would be similar to the impact on bicycle routes. Some roads, and concurrently, some pedestrian routes, would be permanently closed to traffic across the corridor and others would be closed during construction.

Those possible roads that would be permanently closed are as follows:

TABLE VI-29
BICYCLE IMPACTS

Street Closure	Nearest Parallel Street	Distance & Time* to Nearest Parallel Street North of Corridor Distance	Time	South of Corridor Distance	Time
Cleo Avenue	Saratoga-Sunnyvale Road	NS**	NS	1200'	1.4 Min
Rainbow Drive	Saratoga-Sunnyvale Road	NS	NS	400'	0.5 Min
Glen Brae Drive	Cox Avenue	NS	NS	1450'	1.7 Min
Oka Lane	Winchester Boulevard	3000'	6.8 Min	3400'	3.9 Min
Harwood Road	Camden Avenue	360'	0.8 Min	1300'	1.2 Min
Carter Avenue	Camden Avenue	750'	1.7 Min	2200'	2.5 Min
Dent Avenue	Meridian	2250'	5.1 Min	1700'	2.0 Min

* Assume the bicyclist travels at a rate of 10 mph
** NS = not significant

Road	City
Cleo Avenue	Cupertino
Rainbow Drive	Cupertino
Glen Brae Drive	Saratoga
Oka Lane	Los Gatos
Harwood Road	San Jose
Carter Avenue	San Jose
Dent Avenue	San Jose

At each interchange and/or grade separations, local roads would have to be closed for some period of time during construction.

The pedestrian/bike route at Los Gatos Creek would be closed during construction of the Route 85/Route 17 interchange and would need to be reconstructed.

Efforts to minimize the impact of the major construction alternatives would be similar to those for the bicycle routes -- detours during construction, reconstruction of the path at Los Gatos Creek, and alternative routes for crossing the corridor for those routes severed by construction. More details are provided in the bicycle section on page VI-104.

In addition to the efforts mentioned above, there would be additional measures taken to mitigate the impacts as follows:

- Each intersection or grade separation would have sidewalks.

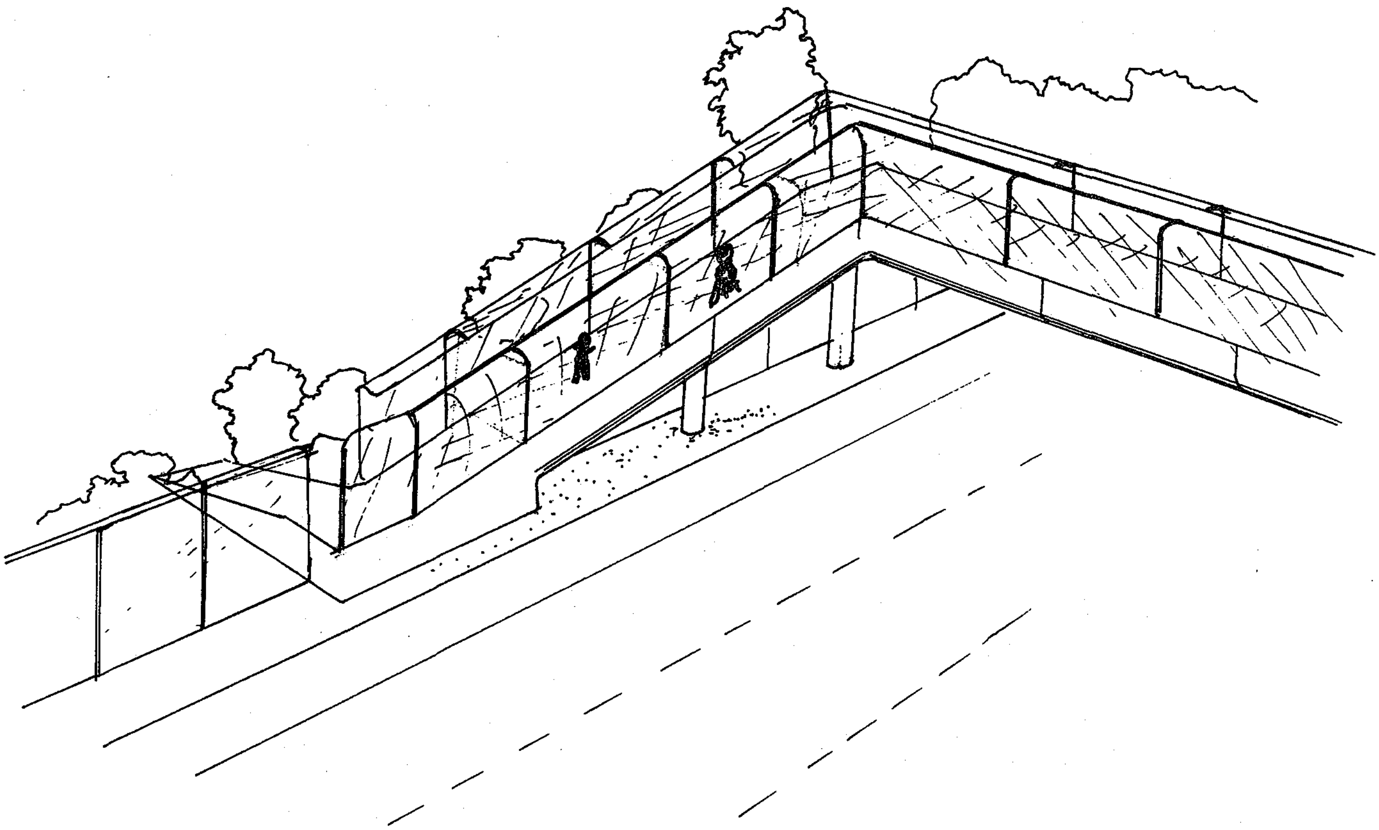
- Newly constructed or reconstructed local roads would replace in kind any existing pedestrain facilities.

- Pedestrian overcrossings (POC) will be constructed where warranted and reasonalble alternative routes are not available. The mostprobable location for the construction of a POC is for the area between Branham High School and Athenour Elementary School in San Jose and the surrounding neighborhoods, for children in those areas crossing the corridor. This POC will cross over the corridor in the vicinity of Dent Avenue. Another POC may be required for the LRT station between Cox and Prospect if an alternative with LRT is selected. Figure VI-37 on page VI-104 depicts a typical pedestrian overcrossing. This figure is an artists conception and is one of many design available.

7. RAILROADS

The Southern Pacific (SP) railroad tracks would only be impacted by the major construction alternatives. As there will be no construction within the corridor for the NPA or TSM alternatives, the location of the SP trackage will not change. The remaining alternatives will necessitate the relocation of the SP tracks between approximately Saratoga Creek and 750 feet west of Quito Road. In addition, the SP spur leading into the Paul Masson Winery will need to be relocated. Figure VI-38 depicts the location of the trackage and spur which will need to be relocated. Also, all construction alternatives will cross over the railroad tracks at Monterey Road and Winchester Boulevard.

The purpose of this relocation is to keep the railroad trackage on the south side of the Route 85 corridor. Figure VI-39 depicts the typical cross section in this area. By keeping the trackage to the south side of Route 85, the need for structures to facilitate the railroad crossing the corridor twice within approximately 1 mile would be eliminated. This relocation would include adding approximately 5100 feet and removing about 5000 feet of



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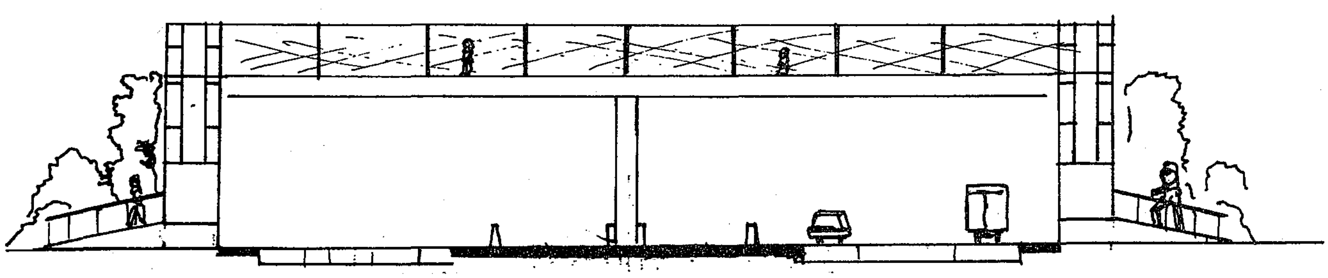


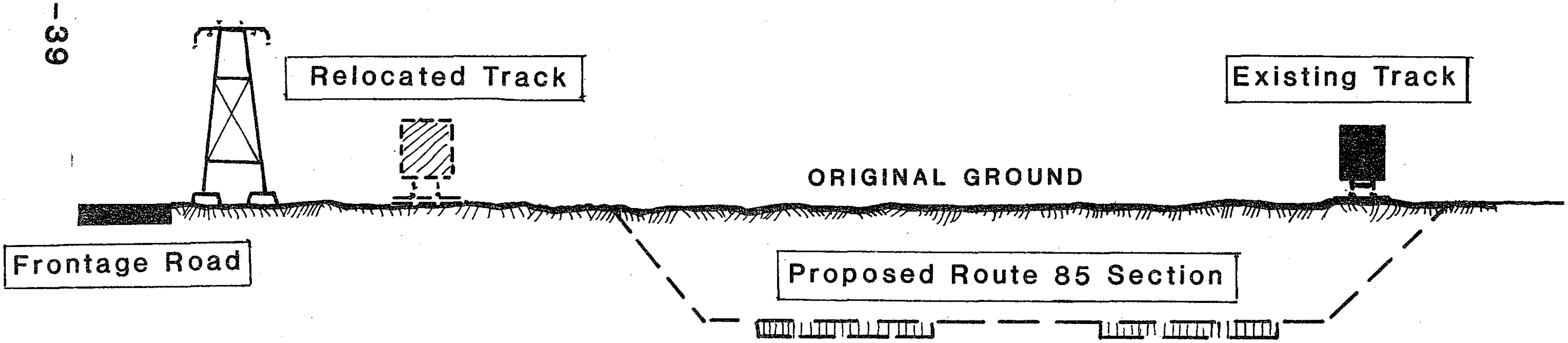
PEDESTRIAN OVERCROSSING

FIGURE VI-37

RAILROAD LOCATION

FIGURE VI-38

FIGURE VI-39



CROSS SECTION south of SARATOGA AV.

LOOKING NORTH

No Scale

4-19-85
L LAYNE

RELOCATED TRACK

railroad trackage. There would also be a need for a railroad overcrossing at Saratoga Avenue.

If the spur into the Paul Masson Winery is relocated, approximately 550 feet of trackage and an overcrossing structure would be added and approximately 200 feet of trackage would be eliminated. This relocated spur would only be built if it is warranted. At the present time, Paul Masson Winery is planning to move and it is unknown at this time who will occupy the property. The decision whether or not to build the spur will be made at a later date when the occupants are known.

The impact of this relocation would be relatively minor. Those living adjacent to the corridor on the north side would end up with more distance between their residences and the railroad (approximately 200 feet), whereas those living adjacent to the corridor on the south side would have less distance between their residences and the railroad (approximately 120 feet). The difference between the noise generated by the trains before and after the relocation is relatively insignificant. The relocation of this trackage will be closely coordinated with the Southern Pacific Railroad.

I. PUBLIC FACILITIES

1. UTILITIES

The relocation of existing utilities, overhead and underground, which cross or are within the corridor right of way will be required for all alternatives except the NPA and TSM alternatives. The precise location of the utility facilities will be determined during the project development process. Conflicts, is any, with the proposed construction will be resolved jointly with the utility owners in accordance with established procedures. The utilities that exist in the corridor from Stevens Creek Boulevard in Cupertino to Route 87 in San Jose are:

- Santa Clara County Sanitary Sewer
- Santa Clara Valley Water District
- San Jose Water Company
- City of San Jose Sanitary Sewer
- Cupertino Municipal Water Systems
- PG & E Gas Facilities
- PG & E Electric Facilities
- GTE Underground and Aerial Facilities
- Pacific Bell Underground and Aerial Facilities
- Gill Cable

The approximate locations of the affected utilities are shown in Table V-3 on page V-39.

In addition to the above facilities, there are three PG & E transmission towers that are located within the corridor right of way between Saratoga Avenue and Quito Road. These towers will have to be relocated if an alternative that includes freeway is built in the corridor.

The Saratoga design variation will require the relocation of additional utilities for any of the construction alternatives. The approximate locations of these additional relocations are shown in Table V-4 on page V-42.

Major utilities relocation work from Route 87 to Route 101 in San Jose will be completed in conjunction with the Guadalupe Corridor Project.

Under certain circumstances, utilities may be encased or capped to save costs. The process of utility relocation, encasement, or capping would be completed during earthmoving activities prior to the construction of any transportation facilities.

All of the affected utility companies will be notified well in advance of any proposed relocation. Close coordination with the affected companies will occur so that there will be no disruption of service to the customer during relocation.

No mitigation is proposed as there will be no significant impact.

2. SCHOOLS

Table VI-30 lists the schools which are located either within or in close proximity to the Route 85 transportation corridor.

Branham High Schools' playing field will be impacted by any of the construction alternatives. It will lose approximately 4 1/2 acres of their playing field. This impact is covered fully in Section F, Section 4(f), of this chapter.

There will be a noise impact on the schools immediately adjacent to the Route 85 transportation corridor. These impacts are discussed in the noise impact section of this chapter on page VI-31.

3. PARKS

Table VI-31 lists the parks which are adjacent to or may be impacted by the Route 85 transportation corridor. Those parks which will be impacted by the construction of any of the alternatives are described fully in Section F, Section 4(f), page VI-54, of this chapter. All of the construction alternatives will

TABLE VI-30
SCHOOL LOCATIONS

SCHOOL	LOCATION
Anderson Elementary	Rhoda Drive, San Jose
Miner School	Lean Avenue, San Jose
Oak Ridge Elementary	Bufkin Drive, San Jose
Calero Elementary	Calero Avenue, San Jose
Frost Elementary	Gettysburg Drive, San Jose
Gunderson High	Gaundabert Lane, San Jose
Almaden Elementary	Dentwood Drive, San Jose
Hammer Elementary	Bouret Drive, San Jose
Branham High	Branham Lane, San Jose
Athenour Elementary	Dent Avenue, San Jose
Lone Hill School	Harwood Road, San Jose
Rolling Hills Jr. High	More Avenue, Campbell
Congress Springs Elem.	Via Escuela, Saratoga
Blue Hills School	De Sanka Ave., Saratoga
Jollyman Elementary	Jollyman Dr., San Jose
De Anza Junior College	Stevens Creek Boulevard, Cupertino

result in improved access to all of the parks in the vicinity of the Route 85 transportation corridor.

TABLE VI-31
PARK LOCATIONS

Park	Location
Coyote Creek County Park *	Route 101, South San Jose
Playa Del Rey Park	Glenburry Way, San Jose
Guadalupe River Park Chain *	Guadalupe River, San Jose
Los Gatos Creek Park *	Oka Lane/Road, Los Gatos
Congress Springs Park *	Glen Brae Drive, Saratoga
Kevin Moran Park *	Scully Road, Saratoga
South Oaks Park	, San Jose(?)
Jollyman Park	Stelling Road, Saratoga

* Section 4(f) Impact described on page VI-54.

4. LIBRARIES

Table VI-32 lists the libraries which are in the study area of the Route 85 transportation corridor. These libraries will benefit from the construction of any of the alternatives because of the improved access to them.

TABLE VI-32
LIBRARY LOCATIONS

Almaden Branch Library 6455 Camden Avenue San Jose, CA 95120	Calabazas Branch Library 1230 South Blaney Avenue San Jose, CA 95219
Campbell Library 70 North Central Avenue Campbell, CA 95008	Cupertino Library 10400 Torre Avenue Cupertino, CA 95014
Los Gatos Library 110 East Main Los Gatos, CA 95030	Pearl Branch Library 4270 Pearl Avenue San Jose CA 95136
Saratoga Community Library 13650 Saratoga Avenue Saratoga, CA 95020	Village Library 14410 Oak Street Saratoga, CA 95020

5. HOSPITALS

The following hospitals are adjacent to or near the Route 85 transportation corridor. There will be improved access to all of the hospital facilities in the corridor. There may be a noise impact on Good Samaritan Hospital as a result of the construction of any of the proposed alternatives. This noise impact will be determined during the final design of the Route 85/Route 17/Bascom Avenue interchange complex and the appropriate mitigation proposed at that time. The Kaiser Foundation Hospital impacts, if any, will be determined during the design of the Route 85/Cottle Road interchange. There is not expected to be any noise impact at this location which requires mitigation.

HOSPITAL	LOCATION
Kaiser Foundation	Hospital Parkway, San Jose
Good Samaritan	Samaritan Drive, San Jose
Plum Tree Convalescent	Samaritan Drive, San Jose
Los Gatos - Saratoga Community	Pollard Road, Los Gatos
Saratoga Place Residential	Sousa Lane, Saratoga

There will be no negative impacts to the hospitals mentioned above from any of the proposed alternatives. None of the alternatives will increase the ambient interior noise levels above the Federal Highway Administration recommended levels.

6. EMERGENCY SERVICES

There will be a beneficial impact from the construction of any of the highway alternatives on emergency services. This will be the creation of a new route by which emergency vehicles can travel in the corridor. In addition, in case of the 100 year flood, the Route 85 transportation facility would be the only highway open for travel in the Route 85 corridor.

7. NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION MONUMENTS

The National Oceanic and Atmospheric Administration (NOAA) will be notified in advance of any construction activities that would disturb any geodetic control survey monuments. The cost of relocating any NOAA monuments will be included as mitigation for this impact.

J. CONSTRUCTION IMPACTS

The degree of short term construction impacts would be similar for all the major construction alternatives as each alternative has the same profile and similar geometrics. These impacts would be very significant due to the tremendous amount of construction that would occur and the length of time it would take to complete it. In the NPA, no construction would occur, therefore, there would be no construction related impacts. The TSM alternative would require only relatively minor construction, not unlike some projects already in progress or completed within the county (e.g. widening projects on Route 101 and HOV lane additions on Route 237), and as a result, the construction related impacts would not be significant. It should be noted that the TSM alternative would take one to two years to complete whereas, each major construction alternative would take five to seven years to complete.

For each of the major construction alternatives, the following type of construction impacts could occur:

a. Noise and Air pollution
b. Traffic disruption and/or congestion
c. Impacts on businesses and residential properties and their associated activities
d. Disruption and/or relocation of utility services
e. Rerouting of emergency services
f. Safety problems
g. Materials transportation and removal problems

The degree of impact will depend on each project. Since most of these alternatives are very similar in scope, having the same profile and geometrics, most of the impact differences are negligible.

The above impacts discussed below are applicable to all the alternatives, except the NPA and TSM alternative. Significant differences between the alternatives, if any, are noted.

1. NOISE AND AIR POLLUTION

The construction impact on noise and air pollution would be very significant. The severity is due, in part, to the extensive length of time it would take to complete the project.

For those living or doing business directly next to the corridor, the impact would be greater. There would be more dust, noise, and fumes from equipment for those closest to the construction areas. The greater the distance from the corridor, the larger the buffer from the noise and air pollution. The LRT alternative may reduce this impact slightly because the buffer would be about 100 feet greater that the rest of the major construction alternatives (the right of way requirement, excluding interchanges, would be approximately 100 feet for the LRT alternative and approximately 200 feet for the freeway alternatives).

It is possible that there would be night construction for interchange and grade separation work, which would adversely affect residential areas. However, this night work would probably be for short periods of time, unlike other construction work.

These impacts would be mitigated by having contractors follow standard Caltrans noise, dust and air pollution reduction procedures and all applicable local statutes.

2. TRAFFIC DISRUPTION AND/OR CONGESTION

Every major construction alternative would produce short term increases in traffic congestion, some traffic re-routing, and lane closures on Routes 17 and 101.

Most of the traffic problems would occur during interchange and grade separation construction. As work is done at each grade separation or interchange, the local road would have to be closed and traffic re-routed. However, construction would be staged to minimize the amount of congestion and the inconvenience of detours.

The major traffic disruption would be for the Guadalupe portion of the project between Route 87 and Miyuki Drive. This section under the Guadalupe Corridor project is approved as a four lane expressway with LRT in the median. If any of the freeway alternatives are selected as the preferred alternative for the Route 85 project, the Guadalupe portion will be upgraded to a six lane freeway. This would involve the construction of interchanges at Cottle Road and possibly Blossom Hill Road. (The interchange would only be built at Blossom Hill Road if funding is not available under the Guadalupe Corridor Project). Also the intersections at Lean, Snell and Cahallan will be converted to grade separations. All these modifications will be done under full traffic conditions which will cause major traffic disruptions.

The following mitigation measure can be taken at each location to minimize the traffic impact. It should be noted that most of the work will have to be done during off-peak hours and at night with traffic control.

Cottle Road

The Cottle Road and Route 85 intersection, when converted to an interchange, will cross over the freeway on its present alignment. This will involve closing Cottle Road to traffic during construction. There are two options available: 1) to provide a temporary roadway west of the existing Cottle Road during construction for through traffic; and 2) the detouring of through traffic on Santa Teresa, Lean, and Herlong to bypass Cottle Road.

Lean Avenue

The Lean Avenue overcrossing can not be constructed on the existing alignment without Lean Avenue being closed to traffic. There is no area on which a temporary road can be constructed for detours to mitigate this closure. The Cottle Road interchange will be constructed prior to Lean Avenue so that the Lean Avenue traffic can be rerouted on to to Cottle Road during the Lean Avenue construction.

Cahalan Avenue

The Cahalan Avenue overcrossing can be constructed with minimum traffic disruption as it is not connected to Route 85 at this time.

Snell Road

The Snell Road overcrossing can be constructed on the present alignment if Snell Road can be closed during the approximate 1 year construction period, or if an alternate park and ride facility is provided. It would be highly disruptive to close Snell Road for such a long time period as it is a major city street. Another possibility would be the use of the park and ride facility as a detour for Snell Road and construct the Snell Road overcrossing on the present street alignment. Once the overcrossing is constructed, the park and ride facilities would be reconstructed as presently planned.

It should be noted that all the above construction impacts on the Guadalupe portion of the corridor can be minimized to insignificance if construction of the expressway can be delayed till the preferred Route 85 alternative is selected, so that this portion of the Route 85 corridor could be initially built as a freeway and not an expressway.

Regardless of staging, there may be some congestion throughout the project caused by the entrance and exit from the job site by trucks and equipment. There would also be many heavy trucks and equipment travelling on local streets. This increase in local truck travel would be controlled by determining specific routes and hours of operation which the contractors would be required to adhere to.

3. IMPACTS ON RESIDENTIAL & BUSINESS PROPERTIES AND THEIR ASSOCIATED ACTIVITIES

Almost the entire corridor is surrounded by houses and businesses, many with their backyards adjacent to the right of way boundary. Those areas nearest the corridor would be most directly affected. The noise and air pollution, as discussed above on page VI-116, and congestion, as discussed on page VI-116, would create a nuisance. The street closures and traffic rerouting required to move traffic around construction sites, would reduce access to businesses and residences near the construction sites. Residences would be significantly inconvenienced. There may be a loss of patronage to nearly businesses if access to their facilities is impeded.

The distance from the business or residence to the actual construction site would determine the severity of the impact because the distance acts as a buffer to construction generated impacts.

For the children in the areas, it may not be as safe a place to play as before because of the many trucks in the area and construction going on in the corridor. Section 6 on page VI-115 describes the safety issues in more detail.

4. DISRUPTION AND/OR RELOCATION OF UTILITY SERVICES

For each of the major construction projects, there would be major relocations of utilities. Efforts will be made to minimize the amount of inconvenience to nearby residences. Section VIII-D on page V-39 provides more details.

5. REROUTING OF EMERGENCY SERVICES

The construction impacts of each alternative (except the NPA and TSM) on emergency services would be the closure of some local roads. To minimize this impact, local emergency services will be notified and kept informed so that alternate response patterns can be devised.

6. SAFETY PROBLEMS

Each major construction alternative, because of the length of the construction period and the size of the construction area, would have some major safety concerns. Unattended equipment parked in the corridor may be susceptible to vandalism, theft, or unauthorized use. Materials, like sand piles or freshly placed concrete, or equipment, may be disturbed if the corridor is used as a playground because there would be easy access to the corridor from nearby neighborhoods.

Most important is the concern that people, especially children, may get into the corridor, for whatever reason, once construction has begun. Currently, there are a few well-worn foot or bicycle paths in part of the corridor that are owned by the State (although trespassing is prohibited) which indicate that it would be very difficult to control access to the corridor.

Mitigation measures might include the fencing of strategic locations along the corridor where construction has begun, fenced-in equipment yards and night and weekend security patrols.

7. MATERIAL TRANSPORTATION AND REMOVAL PROBLEMS

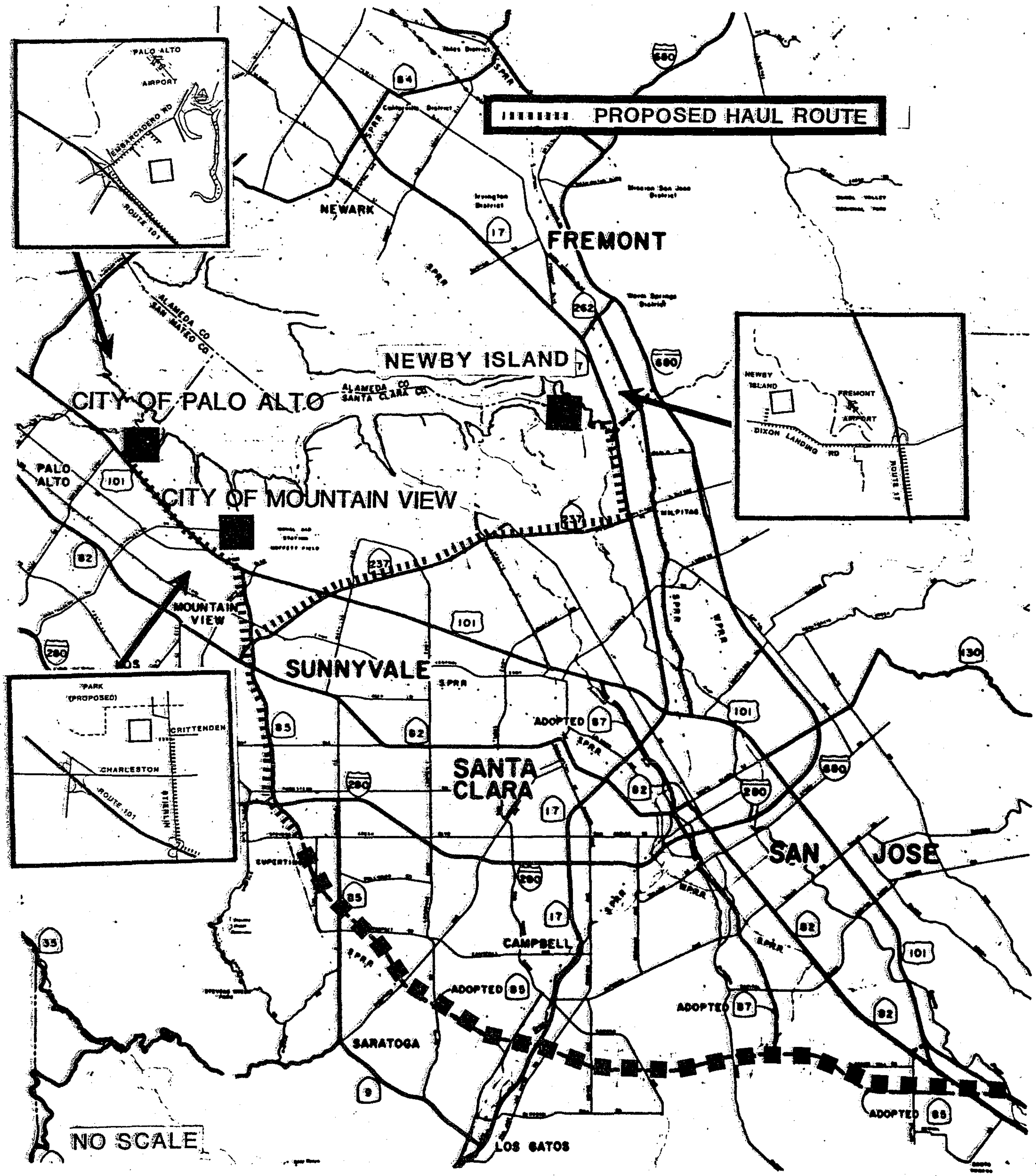
For each alternative that requires work in the corridor, there would be problems associated with the hauling and removal of materials.

Haul roads would be established to ease movement within the corridor for the contractors and to reduce the amount of time that equipment and trucks would be travelling on local roads. However, these haul roads would begin and end where local streets intersect the corridor. There would be problems with trucks crossing these streets without the benefit of a signalized intersection. These trucks would be a hazard to local traffic and/or cause a disruption in the traffic flow.

There would also be the concern that the use of these haul roads during dry weather would cause a considerable amount of dust which would be controlled by keeping the road moistened. Once these roads become wet, especially during or after a rain storm, mud would be tracked onto local streets once the trucks leave the haul road.

Mitigation efforts to reduce these impacts would include the determination of safe crossing patterns, requiring the contractor to be responsible for the cleanup of construction-related mud or dirt on local roads and prohibiting any street crossing which is deemed unsafe. Figure VI-40, Materials Disposal Locations, shows the landfill sites which may be available for the disposal of the excess material.

If the Saratoga Design Variation is chosen as part of the preferred alternative, there will be between 1.5 and 1.8 million cubic yards of excess material to be disposed. The disposal of this excess material would mean 120,000 to 140,000 truck trips on and through the local streets along the corridor in Saratoga and other communities depending on the location of the disposal sites. This truck traffic would increase the disruption of the existing traffic flow.



MATERIAL DISPOSAL LOCATIONS

FIGURE VI-40

VII. GROWTH INDUCEMENT AND CUMULATIVE IMPACTS

A. INTRODUCTION

The term growth is site specific and refers to a change in the size and structure of a population, economic activity or land use. This includes the expansion of urban activities into open space, agricultural, rural or vacant-urban land as well as the recycling of land for new and generally higher density uses or more intensive economic activities. The growth induced by a project is defined as the portion of the projected growth within the study area and surrounding communities that would not have occurred had the project not been built.

Between 1950 and 1960, Santa Clara County changed from a rural, agricultural to an urbanized, industrial economy. Initially, Palo Alto, Mountain View, the City of Santa Clara and Sunnyvale, commonly know as Silicon Valley, were significant areas for industrial development. The rapid growth of an electronics and aerospace industry in the northern portion of the county led to a high demand for single family housing in these cities and the study area. By the 1970's most vacant land zoned for residential use was in the central and southern parts of the County. Commutes grew longer with new employment opportunities located in the north and with residences located in the central and southern part of the County. The disparity between housing location and job location is generally referred to as the job/housing imbalance. This imbalance has driven up local housing prices, making it difficult for families to move into the County and for industry to recruit new employees. The same imbalance which forced many people to work in North County and to live in outlying areas causes severe congestion on local freeways and expressways during the peak commute hours.

In a report issued in November, 1979, the Santa Clara County Industry and Housing Management Task Force stated vis a vis industrial growth:

> "There are limits to the total amount of growth that can be accommodated by environmental and constructed systems without creating serious problems. The problems we are currently facing in Santa Clara strongly suggest that we are already at or rapidly approaching the limits of those systems we are dependent upon for our comfort, convenience, health and general well-being."

Among the limiting factors listed are a clogged transportation system. Long and congested commutes, along with a housing shortage, high housing costs, and a shrinking labor pool are credited with exerting a dampening effect on industrial growth.

As housing costs skyrocket and commuter congestion becomes more severe, companies are finding it harder and more expensive to retain and recruit the employees needed to maintain the level of productivity it takes to compete. With the average price of a new home well above $150,000, with a housing vacancy rate down to 1.7% and the influx of commuters bringing 44,000 vehicles a day into the County, some Silicon Valley firms have decided that Santa Clara County may be the place for white collar research and development but not for blue collar assembly.

All of the alternatives except the NPA and TSM will shorten the commute time to jobs on North and South County from homes in West County. The alternatives support the current and planned industrial activities in Silicon Valley, Southern San Jose and Coyote Valley. The question that needs to be answered is whether this will stimulate growth? Or conversely, will the NPA with its congested commutes suppress potential development to the extent that industrial and/or residential growth will fail to reach planned levels of development? Will projected land use activities differ significantly with or without the project?

The present circulation system is barely adequate for handling current commute transportation demands. The potential for breakdown may well discourage firms from expanding existing operations or new firms from location in Silicon Valley.

B. IMPACTS

The existing transportation network can constrain industrial expansion in North County. Automobile commuter access (as measured by travel time) to Silicon Valley will be substantially improved by alternatives 6FWY with Bus/HOV, 8FWY, and 8FWY with LRT; somewhat less so by alternatives 4FWY with LRT, 4FWY with LRT and HOV, and 4FWY with Bus/HOV; and substantially less by the TSM and LRT alternatives. It is unlikely that a LRT system that ends in Cupertino would be used by many commuters travelling to the Cities of Santa Clara, Sunnyvale, Mountain View or Palo Alto. To the extent the "Freeway" alternatives and TSM reduce congestion and improve the level of service, thus removing constraints to expansion they will reduce the likelihood of firms relocating elsewhere. To this extent, the alternatives can influence the level and timing of industrial development in North County. The "Freeway" alternatives will encourage commercial development on West County sites adjacent to the corridor. Car oriented facilities such as gasoline stations are likely to cluster around ramps. Sites along major streets leading to ramps will become preferred locations for retailers. Transit and bus facilities could encourage commercial business that caters to transit patrons to concentrate at transit and bus stations.

The County and the City of Los Gatos have adopted specific policies that relate land use decisions to transportation capacity and congestion. Where development is proposed in congested areas, development can be disallowed until adequate transportation capacity is available. Should the county or city halt development because of local street congestion, the "Freeway" alternatives, and the LRT and TSM, to a much lesser degree, could be growth inducing to the extent that they will reduce local street congestion and hence allow for more residential, commercial and industrial development in the study area than would otherwise be the case.

Coyote Valley contains acres of flat, developable land presently vacant or in agricultural use. These provide ideal sites for industrial parks and high-tech firms and pressure to develop this land is great. The completion of the Highway 101 freeway bypass between Morgan Hill and San Jose, the light rail system currently under construction in the Guadalupe corridor and a new major transportation facility in the "85" corridor reduce the relative isolation of Coyote Valley. These facilities alter the way in which developers view the potential of Coyote Valley to become another "Silicon Valley." High- tech firms are seeking new locations that are accessible to an educated and skilled labor pool such as can be found in western Santa Clara County. A new transportation facility provides the accessibility heretofore missing. It links the predominately residential West County with a potential employment center in the South. It will enable West County residents to commute to South County jobs within a resonable time.

As compared to the other alternatives, the LRT is most restrictive spatially. The LRT alternative and those alternatives which contain LRT would tend to make Edenvale's industrial sites within walking distance of the transportation corridor more accessible and hence more attractive than other sites in Edenvale and Coyote Valley. These alternatives favor higher density industrial development along the LRT route. Since buses are not limited to a fixed transitway, the alternatives with busways or HOV lanes can serve all portions of West County, (assuming intermediate access on the busway) North County, and Coyote Valley. However, sites within walking distance to bus routes would have the greatest accessibility and would be the preferred locations for industrial and commercial development. As compared to those alternatives with LRT, alternatives with busways and HOVs are less restrictive and would promote industrial and commercial development over a wider area. Freeway alternatives permit full freedom of movement for all but transit dependent commuters and are less restrictive. Under the "Freeway" alternatives, industrial and commercial uses would most likely be developed at the lowest densities and over the widest areas.

Transportation is unlikely to be a key consideration in a person's decision to move to Santa Clara County. Other factors such as employment opportunities and the cost of housing are far more significant. However, new jobs in North County, Edenvale, and Coyote Valley are likely to bring new people into the county. Many of these new jobs may be filled by employees who come from other areas and are in the market for homes. Housing demand could increase substantially, putting severe pressure on the residential communities along the corridor, on Central Coyote Valley, Almaden Valley, and on South County generally to meet this demand. The current high prices for housing would escalate further and development of residential parcels accelerated. Cities would be pressed to increase housing densities, change zoning designations, and allow more residential development than is presently considered desirable, especially in the mountain areas along the cities' western fringes. Open space within the cities could be reduced substantially.

In Horizon 2000, the City of San Jose has designated South Almaden Valley and Central Coyote Valley as urban reserves. These areas will provide 11,000 dwelling units together with supporting commercial and public facilities to accommodate the long range housing needs of the County's growing work force. However, construction of a major transportation facility in the "85" corridor is one of several preconditions for the development of the urban reserve areas.

Table VII-1, Growth Inducement summarizes the impacts of growth inducement on North County, the study area, and Coyote Valley. These impacts are compared and ranked relative to each other. The area with the highest impact is assigned a rank value of 1; the area with the next highest impact is assigned a 2, and so forth. Areas of progressively smaller impacts are assigned correspondingly higher rank values.

To the extent that the alternatives remove poor access as a constraint to industrial development, influence development decisions and stimulate existing development forces, the alternatives are considered growth inducing, some more so than others as is indicated in Table VII-1.

TABLE VII-1

GROWTH INDUCEMENT

ALTERNATIVE	AREA: NORTH COUNTY	AREA: STUDY AREA	AREA: COYOTE VALLEY
NPA	*	*	*
TSM	12	11	12
LRT	10	9	10
4FWY with LRT	8	7	8
4FWY with HOV and LRT	8	5	8
4FWY with Bus/HOV	8	6	8
6FWY with Bus/HOV	4	3	4
8FWY	2	2	2
8FWY with LRT	2	1	2

VIII. PROBABLE UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS

In Chapter VI, all the environmental impacts of the various alternatives were presented in detail, along with some of the mitigation measures intended to reduce or eliminate adverse these environmental impacts. However, not all of the adverse impacts identified in Chapter VI can be mitigated to a level of insignificance. Those impacts that are probably unavoidable are listed below with a short summary. For a more detailed discussion of these impacts refer to the proper section of Chapter VI.

A. SHORT TERM CONSTRUCTION IMPACTS

If a major construction alternative is selected, the short term construction impacts would be very significant due to the tremendous amount of construction that would occur and the length of time it would take to complete it (5-7 years); unlike the NPA and TSM alternative where construction related impacts would not exist and/or be insignificant.

Each of the major construction alternative's impacts -- noise and air pollution, traffic disruption and/or congestion, impacts on businesses and residential properties and their associated activities, disruption and/or relocation of utility services, rerouting of emergency services, safety problems, materials transportation and removal problems -- would be similar in scope as each alternative has the same profile and similar geometrics.

Each short term construction impact is discussed in greater detail in Chapter VI on page VI-115.

B. LAND USE CHANGES

1. CONVERSION OF PARKLAND

Approximately six acres of parkland (including parks and recreational areas) will be converted to transportation facilities with the construction of any of the alternatives except the NPA and TSM. The construction of the LRT would result in the conversion of less acreage due the narrower right of way required.

2. CONVERSION OF OPEN SPACE

Approximately 420 acres of open space (grasslands, abandoned orchards and the like) will be converted to transportation facilities with the construction of any of the alternatives except the NPA and TSM. The construction of the LRT would result in the conversion of approximately 210 acres only due to the narrower right of way width required.

3. CONVERSION OF AGRICULTURAL LAND

Approximately 69 acres of farmland, consisting of 53 acres of rowcrops and 16 acres of nurseries, will be converted to transportation facilities and lost to agricultural use. None of this land is considered to be prime agricultural land as defined by the U.S. Soil Conservation Service and according to the Farm Protection Policy Act.

4. RESIDENTIAL DISPLACEMENT

All of the construction alternatives will require the displacement of residential units. Those alternatives requiring 200 feet of right of way (all except the NPA, TSM, and LRT) will displace 346 residential units. The LRT only alternative will require the displacement of 134 residential units.

5. BUSINESS DISPLACEMENT

Those alternatives requiring 200 feet of right of way for the transportation corridor will displace 26 businesses. The LRT only alternative, because it only requires 100 feet of right of way will only displace 16 businesses.

C. VISUAL EFFECTS

The development of any of the construction alternatives would result in significant visual impacts on residents, periodic occupants and travellers within the Route 85 transportation corridor. These impacts may be partially mitigated by the construction of soundwalls and project landscaping.

D. UTILITY RELOCATIONS

The relocation of existing utilities, overhead and underground, will be required for all the alternatives except the NPA and TSM alternatives. The utilities which would have to be relocated include, but may not be limited to, water, gas (local distribution and high pressure), sewer, storm drain, electric, telephone, high tension towers.

All of the affected utility companies will be notified well in advance of any proposed relocation. Close coordination with the affected companies will occur so that there will be no disruption of service to the customer during relocation.

IX. RELATIONSHIP BETWEEN LOCAL SHORT TERM USES OF MAN'S ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG TERM PRODUCTIVITY

Implementation of any of the alternatives will have short-term impacts on the corridor's land use, population or natural environment. These impacts or uses of the environment should be considered in the context of the long-term impact, that improved transportation service will have on the productivity of Santa Clara Valley.

The primary short-term uses which are adversely impacted are the following;

- Construction activities would temporarily reduce business opportunities in the vicinity of the construction sites. Reduced business patronage and possible business failures could occur.
- Construction would impede mobility and change circulation patterns in the vicinity of the construction sites. There would also be noise, dust, unpleasant odors, and other construction nuisances.
- Some businesses and residents would be relocated by the proposed project.
- Air quality will be temporarily degraded due to exhaust emissions and dust generated by the construction equipment.
- Visual blighting will occur from temporary storage of construction materials and equipment on the various sites.

The proposed transportation improvements within the West Valley Transportation Corridor would provide the opportunity to integrate more effectively the human activities of the valley. This integration will improve the productivity of the valley in terms of the quality of life (the activities to which residents have access and the extent of their productive leisure time) and in terms of economic productivity by increasing the work force within commuting distance of industry and by improving the ability of industry, to conduct business dependent upon the transport of people and goods.

Efficient use of limited natural resources can be enhanced, particularly energy resources. By causing future travel to occur in a more energy-efficient manner in the future, it is possible to develop a transportation system for the future when petroleum is expected to be scarcer than it is today. Further, the quality of the natural environment can be enhanced by reducing future air pollution through a current investment in future transit capacity.

Thus, in addition to the benefits which will be derived by the user of any of the proposed alternatives, the valley as a whole, transit riders and non-riders, will experience benefits. Specifically, the different alternatives, to varying degrees, will:

- Improve the accessibility of the labor force to employment opportunities.
- Expand the size of the labor force within commuting distance by highway or transit of major locations.
- Improve business efficiency by improving accessibility throughout the valley.
- Link dispersed employment centers with the outlying residential centers.
- Expand opportunities for employment through creation of jobs and new facilities.
- Increase the transportation capacity of the corridor.
- Decrease the individual travel time.
- Improve accessibility to services and recreation.
- Provide improved mobility to those dependent upon transit.

X. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

This chapter summarizes the primary and secondary impacts of the use of non-renewable and irretrievable resources, and discusses any irreversible damage that could result from the environmental impacts associated with this project.

A. LAND USE CHANGES

This project is located in an urbanized area and the land adjacent to to the corridor is generally committed to public or private urban uses. Land used for transportation facilities would be used for that purpose into the forseeable future. The project may (in concert with other factors) engender associated commercial, residential, of industrial development that would not have otherwise occurred.

B. CONSTRUCTION MATERIALS

The use of steel, concrete, lumber, plastics and other materials and equipment would differ among the various alternatives.

No construction materials would be used in the No-Project alternative. Because of the minor nature of construction in the TSM alternative, no significant irretrievable use of construction materials would occur.

All the build alternatives would require significant use of building materials such as concrete, lumber, copper, and steel. The irretrievable use of these resources could have some slight impact on supply for the time period required for construction. Ample supplies of all these materials exist.

The materials needed to manufacture buses or rail cars for the various alternatives would be small compared to the amount used to manufacture the vehicles annually produced in the United States or Canada. Some of the metals used in vehicle construction would be used irretrievably.

If the Saratoga Design Variation is chosen as part of the preferred alternative, there will be between 1.5 and 1.8 million cubic yards of excess material to be disposed. This material will become the property of the contractor who shall furnish to the Caltrans resident project engineer evidence that this material will be disposed of in an environmentally cleared site and that he, the contractor, has obtained all necessary permits, licenses and clearances prior to disposal. Figure VI-__, Material Disposal Locations, on page VII-1 depicts the location of the possible disposal sites.

C. PUBLIC FUNDS

All alternatives would have some financial impacts. If the NPA or TSM alternatives are selected, the existing Caltrans owned right of way between Route 87 and Stevens Creek Boulevard would be sold. This is expected to generate approximately $85 Million. This money would be recycled into the Caltrans budget and spent on other transportation project throughout the State.

The capital expenditure for the highway element of all construction alternatives will be raised by the Santa Clara County 1/2 cent sales tax increase under Measure "A" and the Federal Highway Administration if necessary. The transit element would be funded by UMTA after the approval of an Alternatives Analysis. Most of this money would be recycled back into the local economy by construction and other employment opportunities that Route 85 will create.

D. ENERGY

The construction of any of the alternatives, except the NPA, will require the use of direct and indirect energy. Direct energy is that energy which is used to propel the vehicles while the indirect energy is the remaining energy used. Indirect energy includes constructing the vehicles and facilities, exploring for energy resources, power generation, mining or refining the fuel and transporting it to the user.

All of the construction alternatives will result in an energy savings. The short range (1990) savings range from approximately 5,000 gallons saved in the weekday peak period for LRT, to approximately 25,000 gallons for the 8 lane freeway with LRT. Long term savings are even higher ranging from 18,000 gallons for LRT to 40,000 for the 8 lane freeway with LRT. Additional energy information can be found on page VI-39.

XI. COMMENTS AND COORDINATION

A. ROUTE 85 TRANSPORTATION CORRIDOR ANALYSIS PROCESS

The analysis process consists of developing alternatives, analyzing the affects the individual alternatives have on the existing traffic facilities and the environment, and selecting a preferred alternative.

The Route 85 transportation corridor analysis process began in December of 1982 with the determination of the initial set of transportation alternatives. The alternatives were developed based on local and regional transportation needs, interface with the Guadalupe Corridor project, and incorporating existing concepts for Route 85. Caltrans, the Policy Advisory Board, and the Technical Advisory Committee, worked closely in developing these initial alternatives. Through public meetings the alternatives were modified, added or deleted as necessary to arrive at the nine alternatives that are being assessed by this environmental document. A preferred alternative will be selected after the completion of the environmental process which includes the review of the Draft Environmental Impact Statement by the appropriate regulatory agencies, the public, and a unanimous vote of the Policy Advisory Board members. The preferred alternative will be given a detailed description and impact assessment for the Final Environmental Impact Statement. If the preferred alternative contains a transit element, an Alternatives Analysis (A/A) will have to be conducted for the transit element. However, this would not delay the construction of any highway element. Table XI-1 on page XI-2 is a chronology of the events that have taken place and the proposed time schedule for those events still to take place. After the completion of the Final Environmental Impact Statement, final engineering and design will take place followed by the staged construction of the selected alternative.

B. CONSISTENCY WITH LOCAL, REGIONAL, AND STATE PLANS

Route 85 was adopted by the state highway commission in 1956-1958 and constructed as a freeway in 1965-1971 from Route 101 in Mountain View to Stevens Creek Boulevard/Route 280 in Cupertino. Figure __-__ on page __-__ depicts the existing Route 85 freeway. The uncompleted portion of Route 85 between Stevens Creek Boulevard in Cupertino and Roue 101 in south San Jose remains as an adopted but unconstructed route in State and local plans. The route was conceived as a freeway and "Freeway Agreements" showing the routing and location of interchanges were signed between the State and all affected cities in the 1960's. No work was done in the corridor after 1972 except the acquisition of right of way under hardship and protection cases. In the middle 1970's, the portion of Route 85 from Route 87 south to Miyuki Drive in south

TABLE XI-1

ROUTE 85 CHRONOLOGY

EVENT	DATE
Final Environmental Document For R/W Protection	February 1982
West Valley Transportation Corridor Study Begins	December 1982
Public Meetings to Develop Original Alternatives	April 1983
Public Meetings to Reduce Number of Original Alternatives	March 1984
Alternatives Selected for DEIS	June 1984
Circulate DEIS to Public	Fall 1985
Public Hearings	Late 1985
Selection of Preferred Alternative	Early 1986
Completion of Final Environmental Impact Statement	End 1986

San Jose, a distance of 4 miles, was included in the Guadalupe Corridor. The Final Environmental Impact Statement/Alternatives Analysis for the Guadalupe Corridor project, approved in August 1983, recommended the construction of a four lane expressway with LRT in the median for that portion of the Route 85/Route 87 overlap.

Over the years, the "freeway only" concept has changed to a "transportation corridor" concept including not just a freeway but also a Bus/HOV transitway and/or light rail transit system. This Draft Environmental Impact Statement is focused on the transportation corridor concept.

The Metropolitan Transportation Commission, the regional transportation agency, and the local and county planning departments have been involved in all phases of this study.

The proposal itself is not in either the regional (RTIP) or state (STIP) transportation improvement plans as there is no "project". The outgrowth of this study is expected to produce as "project". The breakdown of funds for a project has not been clearly defined, but in recent actions in Santa Clara County, the voters passed "Measure A", a 10 year funding program for several routes including Route 85. It is expected that a major portion of the funding will come from monies generated from "Measure A".

C. PUBLIC PARTICIPATION

The public participation has taken several forms including direct public meetings to mass mailing of a newsletter. The following events have taken place in an effort to keep the public informed as to the progress of the study and to receive their input.

A mailing list was initially developed from the participants in the public meetings and names provided through the PAB and TAC. This list includes individual citizens, groups and businesses. A detailed mailing list of property owners and residents in and immediately adjacent to the corridor was developed from Santa Clara County assessor maps. From this list, a newsletter was mailed to all those listed, with a postage paid card included for the updating of the mailing list. Additional newsletters are being prepared and additional public meeting arranged as necessary. Public hearings will take place prior to the selection of the preferred alternative. The public at any time is welcome to participate in the PAB or TAC meetings which are held bi-monthly.

TABLE XI-2

PUBLIC PARTICIPATION EVENTS

EVENT	DATE
Public Meetings	April 6 & 12, 1983
Monthly Policy Advisory Board (PAB) Meetings	Early 1983 - Present
Public Meetings	March 15 & 29, 1984
Alternative Reduction Booklet	June 1984
Newsletter	January 1985
Definition of Alternatives Booklet	January 1985
Profile Meetings	
San Jose	August 1, 1984
Campbell	August 2, 1984
Cupertino	August 6, 1984
Saratoga	August 7, 1984
Los Gatos	August 8, 1984
Informational Meetings	
Saratoga	January 1985
Los Gatos	January 1985
San Jose	March 1985
San Jose	March 1985
Campbell	April 1985
Los Gatos	April 1985

XII. DISTRIBUTION LIST

This Draft Environmental Impact Statement will be available for public review at the following locations:

California Department of Transportation
District 4
150 Oak Street
San Francisco, CA 94102

CITY HALLS

Campbell City Hall
75 North Central Avenue
Campbell, CA 95008

Cupertino City Hall
10300 Torre Avenue
Cupertino, CA 95014

Los Gatos City Hall
110 East Main Street
Los Gatos, CA 95030

Monte Sereno City Hall
18041 Saratoga-Los Gatos Road
Monte Sereno, CA 95030

Mountain View City Hall
540 Castor Street
Mountain View, CA 94042

San Jose City Hall
801 North First Street
San Jose, CA 95110

Saratoga City Hall
13777 Fruitvale Avenue
Saratoga, CA 95070

Sunnyvale City Hall
456 West Olive Avenue
Sunnyvale, CA 94086

LIBRARIES

Almaden Branch Library
6455 Camden Avenue
San Jose, CA 95120

Calabazas Branch Library
1230 South Blaney Avenue
San Jose, CA 95129

Campbell Library
70 North Central Avenue
Campbell, CA 95008

Cupertino Library
10400 Torre Avenue
Cupertino, CA 95014

Los Gatos Library
110 East Main
Los Gatos, CA 95030

Pearl Branch Library
4270 Pearl Avenue
San Jose, CA 95136

San Jose Main Branch Library
180 West San Carlos
San Jose, CA _____

Saratoga Community Library
13650 Saratoga Avenue
Saratoga, CA 95020

Village Library
14410 Oak Street
Saratoga, CA 95020

The following is the list of agencies, organizations and individuals to which this Draft Environmental Impact Report/Statement has been distributed.

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Washington D.C., 20510

The Honorable Alan Cranston
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10960 Wilshire Boulevard
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Los Angeles, California, 90024

The Honorable Don Edwards
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The Honorable Tom Lantos
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The Honorable Ed Zschau
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San Francisco, Ca 94105

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Note: The State Clearinghouse distributed this DEIR/DEIS to the following State agencies for their comments:

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Energy Resources Conservation
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Sacramento, CA 95825

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Department of Parks
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Sacramento, CA 95814

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Operating Engineers Local #3
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XIII. ENVIRONMENTAL EVALUATION PERSONNEL

The following people were principally responsible for preparing this Draft EIS/EIR or significant background papers.

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Barbara Szudy - Conceptual Stage Housing Study; Associate Right of Way Agent; Bachelor of Arts: English, University of California, Berkeley; 7 years Caltrans experience in right of way studies.

Keith Robinson - Visual Analysis; Landscape Architect; Bachelor of Science: Landscape Architecture, California Polytechnic, San Luis Obispo; 4 years Caltrans experience in landscape architecture.

XIV. BIBLIOGRAPHY

The following references have been utilized for background data during the preparation of this report.

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XV. GLOSSARY

Alluvial Fan: A fan-shaped accumulation of sediment at the mouth of a ravine.

Alluvium: Sediment which has been deposited by flowing water, such as gravel, sand, or clay.

Annualized Energy: Total energy consumed annually for the operation and construction of an energy system, expressed in EBO or BTU per year. One time energy consumption, (including that for project construction and vehicle manufacture), is annualized by dividing it by the project's useful lifetime or 30 years.

Aquifer: A water bearing layer of permeable rock, sand or gravel.

APEI: Area of Potential Environmental Impact

Automobile Occupancy: Number of persons (including the driver) per vehicle.

Average Daily Traffic (ADT): An average of the total volume of traffic during a given number of days.

Bbl: Barrels of oil (one Bbl equals 42 U.S. Gallons).

BTU: British Thermal Unit. An energy unit equal to the quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit. One therm equals 100,000 BTU.

BTU per Passenger Mile: The energy content of fuel required to propel a vehicle for a distance of one mile. The reciprocal, passenger miles per BTU, is sometimes used as a measure of energy efficiency. (Seat miles per BTU is a measure of potential efficiency resulting from maximum vehicle occupancy.)

Busway: A lane or lanes within a roadway which are used exclusively for buses, usually operating in express service. In some instances, high occupancy vehicles would also use the facility.

Carpool: Automobile with two or more occupants.

Clean Air Act: A federal law enacted to ensure that the National Ambient Air Quality Standards are attained.

CO: Carbon monoxide. A colorless, odorless, tasteless gas and pollutant released by the combustion of fossil fuels. It is considered one of the criteria air pollutants for which standards have been established to protect human health.

Construction Energy: The energy used to build transportation facilities; such as, stations, terminals, roadways, trackbeds, and vehicles.

Rare Species: A designation in the State of California for animals that are not presently threatened with extinction but occur in such small numbers throughout their range that they may become endangered if their environments deteoriates or their numbers decrease.

Recharge: The replenishment of groundwater by infiltration of water through the soil.

Right of Way: Land which is dedicated to transportation uses (whether or not it currently contains a transportation facility).

Riparian: A type of habitat associated with stream and lake margins, usually characterized by dense vegetation and an abundance and diversity of wildlife.

Runoff: The amount of rainwater leaving an area in surface drainage.

SCVCE: Santa Clara Valley Corridor Evaluation. A report written in 1979 studying the transportation alternatives proposed for the Santa Clara Valley.

Section 4(f): Section 4(f) of the Department of Transportation Act requires that a federally-funded transportation project may not use land from a publicly-owned park, recreation area, historic site, wildlife or waterfowl refuge unless it has been established that there is no feasible and prudent alternative to its use and that all possible planning has occurred to minimize harm to the Section 4(f) property.

Section 106: A portion of the National Historic Preservation Act of 1966 which establishes a review procedure of cultural resources which may be affected by projects recieving federal funds.

Threatened Species: According to the Federal Endangered Species Act of 1973, any species which is likely to become an endangered species within the forseeable future, throughout all or a significant portion of its range.

Total Suspended Particles (TSP): Air pollutants which consist of solid particles (dust, lead, salts, etc.) suspended in the atmosphere.

Transitway: A transportation facility for the use of HOVs and buses which is separated from the mixed flow traffic lanes.

Transportation System Management (TSM): The low cost improvement or upgrading of existing transportation facilities or transit systems, such as ramp metering, HOV bypass lanes on ramps, traffic signal synchronization, increased transit service, etc.

Volume-to-Capacity Ratio: Relationship of transportion system usage to the number of vehicles or patrons which could be accommodated during the same period of time.

West Valley Corridor (WVC): The location of State Route 85 adopted by the California Highway Commission. The corridor averages 200 feet wide and extends from State Route 101 in South San Jose at the Bernal Road/Tennant Avenue/Highway 101 interchange to existing State Route 85 at Stevens Creek Boulevard in Cupertino.

Wetlands: According to the official definition of the U.S. Army Corps of Engineers, wetlands are areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, under normal conditions, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, and similar areas.

INDEX

APPENDIX A

ROUTE 85

WEST VALLEY

TRANSPORTATION

CORRIDOR

STUDY

CORRIDOR MAP

Scale 1in. = ±1000 ft.

U.S. DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

RECORD OF DECISION

STATE ROUTE 85 TRANSPORTATION CORRIDOR
State Route 101 in Southern San Jose to Interstate 280 in Cupertino
Santa Clara County, California

BACKGROUND: The unconstructed State Route 85 (SR 85) transportation corridor extends for approximately 18 miles with a nominal width of 200 feet from the SR 101 freeway in south San Jose to Interstate 280 (I-280) in Cupertino. The transportation corridor passes through or is adjacent to the cities of San Jose, Saratoga, Campbell, and Cupertino, the Town of Los Gatos, and the County of Santa Clara.

This record of decision completes the second tier of a two-tier evaluation of the SR 85 transportation corridor. The first-tier evaluation, which began in 1978, resulted in a corridor right-of-way protection final environmental impact statement and section 4(f) evaluation (final EIS/4(f)) entitled: "West Valley Transportation Corridor, Unconstructed State Route 85, Santa Clara County." The record of decision for this action was approved on May 26, 1982. Through October 1986, about $35 million had been spent on right-of-way protection and hardship acquisition under this document. The subject record of decision is the culmination of the second-tier draft and final EIS/4(f) process to evaluate and select a transportation facility within the reserved transportation corridor.

In addition, the SR 85 transportation corridor is directly associated with the Guadalupe corridor. The Guadalupe corridor is a north-south transportation corridor that provides both highway and light rail transit (LRT) improvements. South of I-280 the LRT is in the median of a grade-separated, access-controlled expressway that follows the SR 87 corridor to SR 85 and then along the SR 85 corridor to Miyuki Drive. The SR 85 transportation corridor overlaps the Guadalupe corridor for a distance of approximately four miles Miyuki Drive to the SR 85/SR 87 interchange and north on SR 87 to Branham Lane. Portions of the Guadalupe corridor are constructed or under construction north of SR 85. However, for the purposes of the SR 85 corridor EIS/4(f), the Guadalupe corridor project is considered to be a constructed element of the transportation system.

DECISION: The selected alternative for the SR 85 transportation corridor is a a six-lane freeway along the adopted SR 85 corridor between SR 101 near Bernal Road and I-280. The median will be of sufficient width to accommodate future mass transportation and two of the six lanes will be designated for high occupancy vehicles (HOV) and buses during peak periods. The design of the

Guadalupe corridor in the overlap section between Miyuki Drive and Branham Lane will be revised to provide the selected freeway alternative with LRT in the median instead of the Guadalupe corridor expressway design. The final EIS/4(f) identified this alternative as the preferred/project alternative. All interchanges, separations, bridge structures, retaining walls, sound walls, grading, and other design features will be designed as appropriate to accommodate future transportation options in the corridor. See pages V-27 to V-38 in the final EIS/4(f) for additional information.

ALTERNATIVES CONSIDERED: The following alternatives were studied during project development and environmental analysis. See final EIS/4(f) pages V-6 to V-14, V-24 to V-26, and those referenced below for more information.

No-Project Alternative: No transportation facility would be constructed in the corridor other than those currently proposed. Page V-1.

Transportation System Management (TSM): Low-cost projects to improve and upgrade existing transportation facilities, both roadway and transit. Pages V-2 to V-6.

Light Rail Transit (LRT): A grade-separated light rail facility that extends the Guadalupe corridor LRT system from the SR 85/SR 87 interchange northerly to a terminus in the vicinity of Stevens Creek Boulevard in Cupertino. The SR 85 highway element of the Guadalupe corridor would also be extended from Miyuki Drives to SR 101 in south San Jose. Pages V-6 to V-15.

Four-Lane Freeway with LRT: A grade-separated, access-controlled, four-lane freeway with LRT in the median. Page V-16.

Four-Lane Freeway with LRT and HOV: A grade-separated, access-controlled, four-lane freeway with LRT in the median and an HOV lane between the LRT and first mixed-flow traffic lane. This is essentially the selected alternative, except that the median has been reserved for future mass transportation options instead of providing an LRT. Page V-17.

Four-Lane Freeway with Bus/HOV Transitway: A grade-separated, access-controlled, four-lane freeway with a reversible bus/HOV transitway in the median. Page V-18.

Six-Lane Freeway with Bus/HOV Transitway: A grade-separated, access-controlled, six-lane freeway with a reversible bus/HOV transitway in the median. Page V-19.

Eight-Lane Freeway: A grade-separated, access-controlled, eight-lane freeway with a median wide enough for an LRT system or future freeway widening for mixed-flow or bus/HOV lanes. Page V-20.

Eight-Lane Freeway with LRT: A grade-separated, access-controlled, eight-lane freeway with LRT in the median. Page V-21.

Saratoga Design Variation: This design variation, requested by the City of Saratoga, would fully depress the base profile of all of the build alternatives except the LRT-only through most of the City of Saratoga, rather than the selected base profile which is partially depressed. Pages V-22 to V-23.

BASIS FOR DECISION: State Route 85 currently exists as a four-lane freeway between SR 101 and I-280/Stevens Creek Boulevard and a conventional highway (Saratoga-Sunnyvale Road/De Anza Boulevard) between Stevens Creek Boulevard and SR 9 in Saratoga. The conventional highway varies from six-lane roadway at Stevens Creek Boulevard with traffic signals at major intersections to a four-lane road where it meets SR 9. At this time there is no freeway facility connecting the southern and western portions of the Santa Clara Valley.

The existing transportation network, including the many county arterials (expressways and boulevards), experiences severe traffic congestion. The traffic demand on the existing major highway corridors (I-280, I-680, I-880, and SR's 9, 17, 82, 101, and 237) exceeds capacity during commute hours causing long traffic delays and an increased number of accidents. This congestion causes traffic to divert onto county arterials and neighborhood streets that provide alternate parallel routes. The traffic overflow causes increased noise, accidents, and disruptions in these neighborhoods.

The no-project alternative will not solve the safety and congestion problems that currently exist and that without improvement would continue to worsen in the future. In addition, the existing transportation corridor right-of-way would be sold, allowing development to occur in the corridor which would generate additional traffic and significantly increase the cost of any transportation corridor deemed necessary in the future. For these reasons, the no-project alternative has not been selected. See final EIS/4(f) pages III-1 to III-10 and V-1 for additional information regarding the need for the project and the impacts of the no-project alternative.

The TSM, LRT, and four-lane freeway with LRT alternatives were not selected because they would not meet the projected transportation needs of the SR 85 corridor. TSM would have minimal effect on reducing traffic congestion. In addition, many of the TSM measures are currently being implemented. The projected LRT patronage is low and funding sources are uncertain. The capacity of the four-lane freeway is less than half of the projected travel demand.

The four-lane and six-lane freeway with bus/HOV transitway alternatives were not selected because of operational problems, higher costs, possible additional right-of-way requirements, and the difficulty to convert to other transportation options in the future.

The eight-lane freeway and eight-lane freeway with LRT alternatives were not selected due to the considerable community and local agency opposition to an eight-lane highway facility and the lack of funding for the LRT.

The Saratoga design variation of the base profile was not selected because of the additional cost ($40 to $60 million 1985 dollars), the significant biological impacts to Saratoga, Rodeo, and Calabazas Creeks, and the need to provide aqueducts to carry Saratoga and Rodeo Creeks over the freeway.

All of the freeway alternatives would have similar environmental impacts along the corridor alignment as the selected alternative. However, the six-lane freeway including HOV lanes and a wide median for future mass transportation is being selected because it provides the best overall facility to reduce the traffic congestion and accident rate, encourage the use of HOV's, and maintain flexibility for future mass transportation options. In addition, the vehicle miles travelled within the corridor area will be reduced; community accessibility, including police and fire response times, will be improved; energy consumption will be reduced; and regional air quality will be improved slightly. For these reasons, the selected alternative is considered preferable from a strictly environmental point-of-view.

MEASURES TO MINIMIZE HARM: The following measures have been incorporated into the project to reduce the impact of constructing the selected SR 85 transportation corridor project. Other measures to mitigate project impacts, including standard specifications and practices, are included in final EIS/4(f) Chapter VI, "Affected Environment and Environmental Consequences," pages VI-1 to VI-175 and Chapter XI, Section D, "DEIS/DEIR Comment and Question Responses," pages XI-9 to XI-182. These additional mitigating measures are incorporated into this record of decision by reference.

1. Residential and Business Displacement. The selected alternative will displace approximately 408 residences and 69 non-residential units (non-profit and business establishments). The impacts of displacement will be mitigated by providing relocation payments and services in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act and its implementing regulations. Project relocation studies have concluded that sufficient replacement housing is available in the cities along the SR 85 corridor. Some of the businesses, however, will not be able to relocate locally due to the unavailability of large tracts of vacant land. See final EIS/4(f) pages VI-127 to VI-130 for additional information.

2. Highway Traffic Noise. The selected alternative (including the Guadalupe/SR 85 overlap section) provides for the installation of about 27.8 miles of noise barriers to reduce the projected highway traffic noise in adjacent neighborhoods. The approximate heights and locations of the noise barriers are provided on page VI-66 and depicted in Appendix A of the final EIS/4(f). These noise barriers will be subject to further modification during final project design through additional aesthetic and cost-effectiveness reviews and coordination with the local governments and affected residents along the SR 85 corridor. See final EIS/4(f) pages VI-52 to VI-66 and VI-169 for additional information regarding project noise impacts and mitigation.

3. Wetlands. The selected alternative will impact a total of 15.1 acres of riparian and open-water wetlands located within the 14 creeks, rivers and percolation pond traversed by the project. Mitigation plans have been developed in consultation with the California Department of Fish and Game, the Fish and Wildlife Service, the Army Corps of Engineers, and the Santa Clara Valley Water District to create and/or enhance wetland resources at Coyote Creek, Guadalupe River Percolation Ponds, Guadalupe River, and within the SR 85/SR 17 interchange area. Mitigation specifics will be finalized during project design and further coordination with the above agencies. See final EIS/4(f) pages VI-23 to VI-38 for further information.

4. Historical and Archaeological Resources. Three historical properties (the David Greenawalt farm, the Le Fevre house and barn, and the Warner Hutton house) and one significant archaeological site (CA-SCl-137) will be impacted by the selected alternative. Mitigating measures for the historical structures will be in accordance with the approved section 106 memorandum of agreement included on pages VI-114 to VI-117 of the final EIS/4(f). Archaeological site CA-SCl-137 is located within the Guadalupe /SR 85 overlap section and is currently in a phased testing and mitigation program in conjunction with the Guadalupe corridor project. See final EIS/4(f) pages VI-84 to VI-96 and VI-110 to VI-117 for additional information.

5. Aesthetics. The selected alternative will substantially change the visual setting along the SR 85 corridor. Landscaping, depressed highway sections, soundwalls, and architectural treatments on highway structures will be included in the project as appropriate to reduce the visual impacts. See final EIS/4(f) pages VI-70 to VI-84 for additional information.

SECTION 4(f): The section 4(f) evaluation for the use of land from Coyote Creek County Park, Guadalupe River Park Chain, Los Gatos Creek Park, Saratoga Creek Park, Branham High School recreational land, the David Greenawalt farm, the Le Fevre house and barn, the Warner Hutton house, and archaeological site CA-SCl-137 is included in the final EIS/4(f) on pages VI-96 to VI-120. Based upon the considerations outlined in the section 4(f) evaluation, it is determined that there is no feasible and prudent alternative to the use of land from these section 4(f) properties and that the proposed action includes all possible planning to minimize harm resulting from such use.

MONITORING OR ENFORCEMENT PROGRAM: Special monitoring or enforcement programs have not been adopted for specific project mitigation measures. Current Federal Highway Administration and California Department of Transportation policies and procedures are adequate to ensure that the mitigation measures prescribed above are carried out.