Dave Davis

FINAL
ENVIRONMENTAL IMPACT STATEMENT
ROUTE 85 TRANSPORTATION CORRIDOR PROJECT

VOLUME I

JULY 1987

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CALIFORNIA DEPARTMENT OF TRANSPORTATION

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Route 85 Transportation Corridor Project
Between Route 101 in southern San Jose
and
Route 280 in Cupertino

FINAL
ENVIRONMENTAL IMPACT STATEMENT

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
U.S. Army Corps of Engineers
Santa Clara County San Jose
Los Gatos Campbell Saratoga Cupertino
Monte Sereno Mountain View Sunnyvale

8-10-87
DATE

E. W. BLACKMER, Chief
Office of Environmental Analysis
California Department of Transportation

August 18, 1987
DATE

Willie Kirkeburg
Federal Highway Administration
Region 9

ABSTRACT

Caltrans proposes to construct a transportation facility in the unconstructed Route 85 transportation corridor between Route 101 in south San Jose and Stevens Creek Boulevard/Route 280 in Cupertino, a distance of approximately 18 miles. The project alternative is a 6-lane Freeway with two of those lanes reserved for High Occupancy Vehicles (HOV) during the peak periods. Environmental impacts of the project alternative 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.

Ron Lemmon, Chief
Transportation Studies
Caltrans, District 4
150 Oak Street
P.O. Box 7310
San Francisco, CA 94120
(415) 557-9150

Dave Eyres, District Engineer
Federal Highway Administration
P.O. Box 1915
Sacramento, CA 95809
(916) 551-1314

PREFACE

This Final Environmental Impact Statement (FEIS) is composed of 2 volumes, I & II.

Volume I is the technical material which was in the DEIS/DEIR. This material has been updated to reflect the selection of the project alternative. It has also been updated to correct any errors found in either the DEIR or DEIS. Chapter XI of this volume contains all of the questions and responses received during the public review periods for the DEIR and DEIS.

Volume II consists of all the comments, letters, and petitions which were received during the public review periods of the DEIR and DEIS.

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SUMMARY

I. Summary

This report completes the second tier of a two tier evaluation of the Route 85 transportation corridor in Santa Clara County. The first tier evaluation, which began in 1978, resulted in a right of way protection environmental document which was completed in May of 1982. The second tier of the two tier evaluation initially examined the environmental impacts of the various transportation alternatives which were proposed for this corridor (Draft Environmental Impact Report/Statement -- DEIR/S, September 1985/April 1986). This report examines the environmental impacts of the selected preferred alternative/project alternative.

A. Background

The alignment 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 then California Highway Commission. Freeway agreements were negotiated and executed in the late 1950's and 1960's and construction on the northerly end commenced in the 1960's. In 1975, however, right of way (R/W) acquisition and further construction was suspended due to funding constraints. Over 18 miles of the corridor was unconstructed with about 45% of the R/W acquired by Caltrans. The remaining R/W was then being threatened with development and some development was beginning to occur in the corridor. 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. This and also intense pressure to develop the land within the corridor led to the completion of the R/W Protection Environmental Impact Statement/Report - West Valley Transportation Corridor, Unconstructed State Route 85, Santa Clara County. The Record of Decision for this Final Environmental Impact Statement/Report (FEIS/R) was approved May 26, 1982 by the Federal Highway Administration (FHWA). Through October 1986 about $35 million has been spent on right of way protection and hardship parcel acquisition under this document.

The Guadalupe Corridor Project (Route 87/85) was also an outgrowth of the SCVCE. As part of that project, the decision was made to construct an expressway, as Route 85, with Light Rail Transit (LRT) in the median of proposed State Route 85, between Miyuki Drive (south San Jose) and State Route 87 as well as along portions of State Route 87. The environmental document (Guadalupe Corridor Alternatives Analysis - GCAA) for this project was approved on August 12, 1983. The Guadalupe Corridor Project is considered to be a constructed element of the transportation system for the purposes of this FEIS.

In December 1982, Caltrans, at the request of and in cooperation with local and regional agencies, began a study of the State Route 85 transportation corridor. A Policy Advisory Board (PAB), composed of elected officials from the affected local governments, was formed. This board met regularly to discuss Route 85 issues and concerns, to advise Caltrans on the study, to approve the Route 85 transportation corridor alternatives which were studied in the DEIR/DEIS and to recommend a preferred alternative to Caltrans. A Technical Advisory Committee (TAC) was also formed with engineering and technical representatives from each participating communities in addition to other outside State, Federal, and local agencies. This committee was the staff of the PAB and studied, evaluated, and made recommendations on issues as directed by the PAB.

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 Report/Statement (DEIR/DEIS). These alternatives are listed in Section C of the Summary and discussed in detail in Chapter V.

In 1984, Measure "A", a 1/2 cent sales tax increase, was passed by the voters in Santa Clara County, providing funding for highway improvement projects on Routes 101, 237, and 85. Over $886 million is expected to be generated during its ten year life. The Santa Clara County Traffic Authority (TA) was formed to oversee the distribution of Measure "A" funds. Measure "A" funds were approved by the TA to supplement State funds for R/W protection and hardship acquisitions in the corridor.

Circulation for comments of the DEIR and DEIS was completed on December 6, 1985 and June 23, 1986, respectively. Public hearings were held on October 23 & 24, 1985 (DEIR) and on June 11, 1986 (DEIS).

The PAB unanimously approved and presented a preferred alternative recommendation to Caltrans at their September 17, 1986 meet-

ing. See Table I-1 for this recommendation. This PAB preferred alternative is virtually identical to that recommended in Section D below except for item "1-G" in Table I-1. This is an operational feature that could be statutorily implemented.

B. The Project Limits

The unconstructed Route 85 transportation corridor, approximately 18 miles long with a nominal width of 200', extends from the U.S. Route 101 freeway in south San Jose (Post Mile R0.0) to the existing interchange of State Route 85 and Interstate Route 280 (85/280 interchange) in Cupertino (approximately Post Mile R18.0). The transportation corridor passes through or is adjacent to the cities of San Jose, Saratoga, Campbell, Cupertino, the Town of Los Gatos, and the County of Santa Clara. Figure I-1 depicts the limits of the project alternative.

The existing Route 85 north of Stevens Creek Boulevard is under a separate study, called the "Triangle Study". The Triangle Study includes widening of the existing Route 85 and modifications to the Route 85/Route 280, Route 85/Route 82, Route 85/Route 237, Route 85/Central Expressway, and Route 85/Route 101 interchanges. A spearate, interim project will widen existing Route 85 in the median from north of Homestead Avenue to just north of Route 237.

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 know as Saratoga-Sunnyvale Road and De Anza Boulevard. Upon completion of the unconstructed portion of Route 85, designated Route 85 would be relinquished to the proper local officials.

C. DEIR/DEIS Alternatives

The alternatives which are examined in detail in the DEIR/DEIS are briefly described below. More detailed descriptions can be found in Chapter V. Figure I-2 depicts the typical sections for each of the DEIR/DEIS corridor 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

ROUTE 85 POLICY ADVISORY BOARD UNANIMOUS RECOMMENDATION ON A PREFERRED ALTERNATIVE FOR THE STATE ROUTE 85 TRANSPORTATION CORRIDOR - September 17, 1986

1. That the Route 85 Policy Advisory Board recommend to the California Department of Transportation and the Santa Clara County Traffic Authority that the preferred alternative for the Route 85 Transportation Corridor between Route 101 in southern San Jose and Route 280 in Cupertino be a freeway facility with the following characteristics:

   A. Six lanes, with two of those lanes designated as commuter lanes for peak period operation.

   B. Preservation of a 46-foot median for future mass transportation only. Preservation to be guaranteed by the appropriate intergovernmental agreement.

   C. Design of all interchanges, bridge structures, and grading to accommodate future transit options in the corridor.

   D. Design of freeway-to-freeway interchanges (Routes 85/101, 85/87, 85/17, and 85/280) to permit priority staging of connecting movement with the highest projected traffic volume.

   E. Where appropriate, consistently applied mitigation measures, to include noise attenuation, landscaping and profile depression.

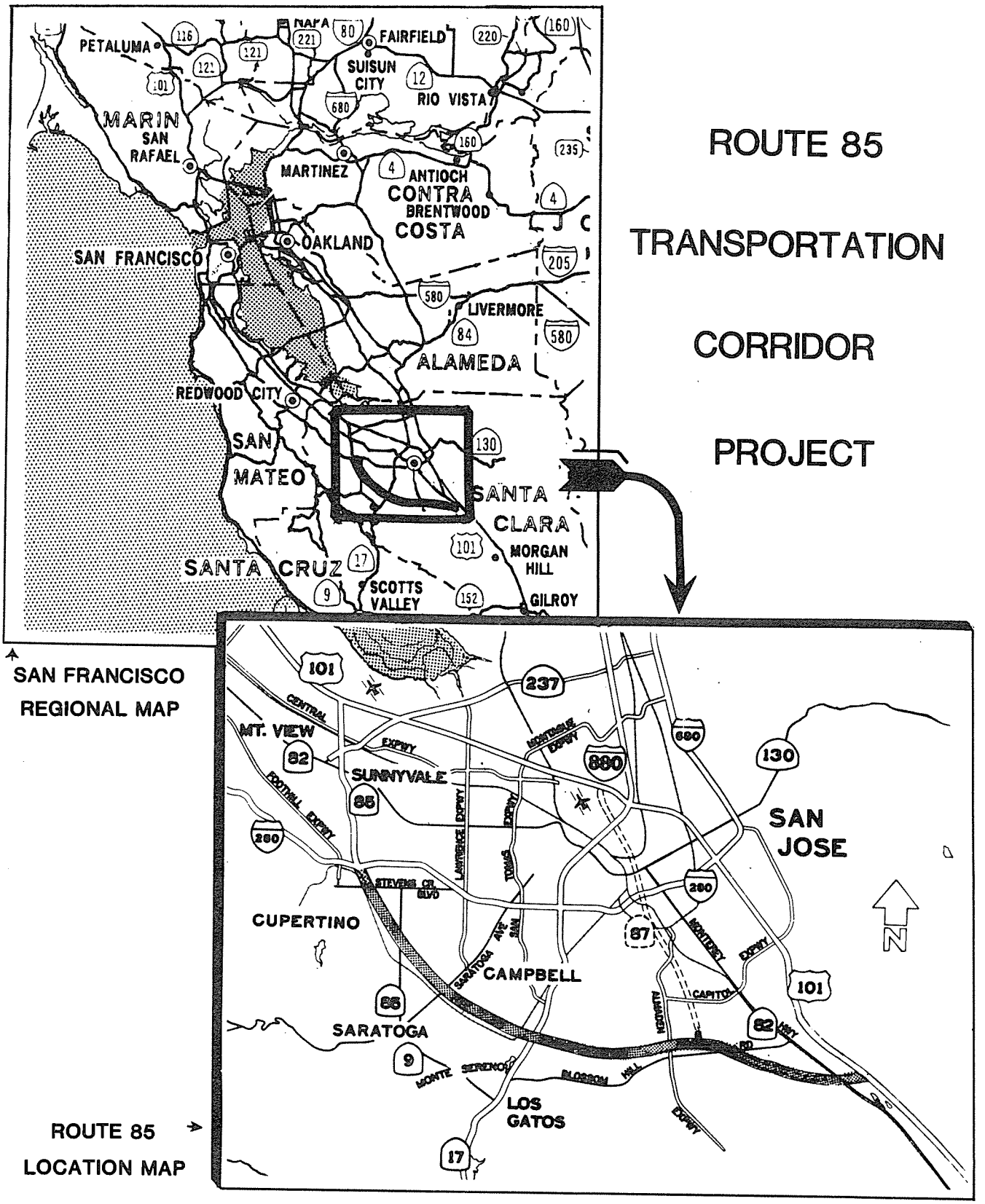
   F. Development of a bicycle plan for the length of the corridor and consideration of pedestrian crossings.

   G. A ban on medium and heavy trucks (not to include passenger buses or recreational vehicles) similar to that in effect on Route 580 in Oakland.

2. All interchange design would be subject to approval through Freeway Agreement process of each individual local jurisdictions. That questions regarding the number and location of interchanges be deferred for resolution during the course of negotiations between local jurisdictions and the Department of Transportation.

3. That the Policy Advisory Board establish a process for consideration by local jurisdictions to develop mutually acceptable transportation and land use policies between all cities presently on the Policy Advisory Board and the County in order to coordinate development with existing or future transportation facilities.

TABLE I-1



ROUTE 85 PROJECT LIMITS

FIGURE I-1

rail facility to extend from the State Route 85/87 interchange northerly to a terminus in the vicinity of Stevens Creek Boulevard in Cupertino in the northwest. This alternative also extended 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 reversible Bus/HOV transitway in the median.

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

8-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.

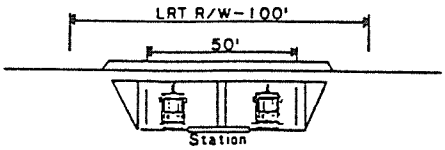
8-Lane Freeway with LRT - A grade separated access controlled eight lane freeway with LRT in the median.

Summary cost data for each of the DEIR/DEIS alternatives can be found in Table I-2. This table is a compilation of the various tables which can be found in Chapter V.

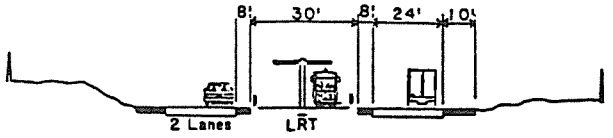
D. Preferred/Project Alternative

The recommended alternative is a project consisting of a new freeway facility to be constructed along the unconstructed adopted Route 85 alignment from Route 101 near Bernal Road to Miyuki Drive, and between Route 87 and Route 280, and that the Guadalupe Corridor Project be revised to provide a freeway facility, instead of the presently proposed expressway, on Route 85 on the overlap section between the Route 87/85 interchange and Miyuki Drive. In addition, all interchanges, separations, bridge structures, retaining walls, sound walls, grading, and other design features are to be designed as appropriate to accommodate future

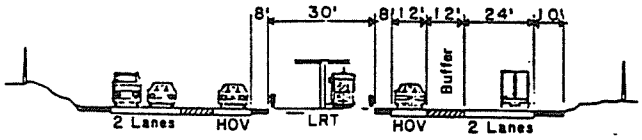
- NO PROJECT ALTERNATIVE (NPA)
- TRANSPORTATION SYSTEM MANAGEMENT (TSM)
- LIGHT RAIL TRANSIT (GRADE SEPARATED)



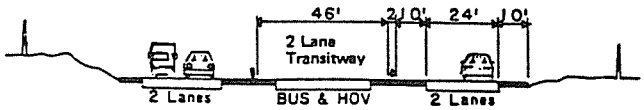
- 4 LANE FREEWAY WITH LRT



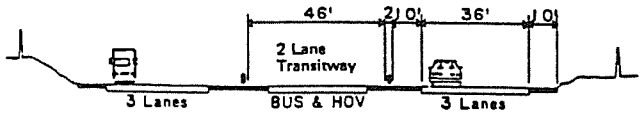
- 4 LANE FREEWAY WITH HOV AND LRT



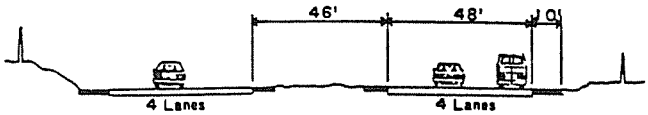
- 4 LANE FREEWAY WITH BUS / HOV TRANSITWAY



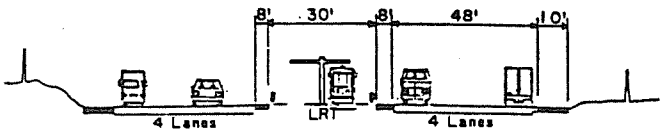
- 6 LANE FREEWAY WITH BUS / HOV TRANSITWAY



- 8 LANE FREEWAY



- 8 LANE FREEWAY WITH LRT



TYPICAL SECTIONS

DEIR/DEIS ALTERNATIVES

FIGURE I-2

ROUTE 85 TRANSPORTATION CORRIDOR PROJECT

CAPITAL COSTS
DEIR/DEIS ALTERNATIVES
TABLE I-2

* ALL COSTS ESTIMATED IN 1985 $ MILLION *

ALTERNATIVE	CONSTRUCTION COST			R/W COST				BASE PROFILE TOTAL COST, $M	SARATOGA DESIGN VARIATION	
	HIGHWAY	TRANSITWAY	TRANSIT	ALIGNMENT	UTILITY RELOC.	PARK & RIDE ***	BUS OR LRT VEHICLES		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 COST INCLUDES TRACK, ELECTRIFICATION, COMMUNICATION, STATIONS AND STRUCTURES.
2. BUS TRANSIT COST INCLUDES STATIONS AND MAINTENANCE FACILITY.
3. THE ADDITIONAL COST FOR THE DESIGN VARIATION THROUGH SARATOGA IS FOR 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.
6. TOTAL COSTS INCLUDE LANDSCAPING AND REVEGETATION.
7. NO PROJECT AND TSM ALTERNATIVES WOULD RESULT IN THE SALE OF STATE OWNED R/W YIELDING $85 MILLION (1985 DOLLARS)

transportation options in the corridor. The Route 85 project is proposed to be as follows:

Typical Section

Provide a freeway with 6 total lanes, consisting of 4 mixed flow lanes and 2 lanes designated as commuter lanes for buses and high occupancy vehicles (HOV's) occupied by 2 or more people. Commuter lanes to be used as such during peak periods only, and will be used for mixed-flow through traffic at other times of the day. The median will be of sufficient width for future mass transportation. Figure I-3 is a typical section for the project.

Interchanges

Interchanges (I/C) will be provided for at the locations shown on Figure I-4. Right of way acquisition and the construction of portions of the freeway to freeway interchanges (Routes 85/101, 85/87, 85/17, and 85/280) and all other interchanges as determined during the freeway agreement negotiation/execution process, will be provided as necessary to permit staged development based on available funding at the time of construction.

Profile, Mitigation

Figure I-5 shows the project profile. In addition to the profile, all mitigation measures such as noise attenuation, landscaping, sequence of construction work, etc., as appropriate, will be consistently applied throughout the corridor to minimize adverse impacts of the project. The project profile may be modified to mitigate impacts at various locations along the corridor, (for example, at schools, etc.) and/or as a result of the freeway agreement negotiation/execution process.

Bicycle, Pedestrian Facilities, Park & Ride, Ramp Metering

Develop a bicycle plan for the corridor jurisdictions, consider pedestrian facilities and onsite park and ride facilities, and provide ramp metering with a county wide traffic control center and bus and carpool by-pass lanes at all on-ramps.

Cost

The cost of the project, including right of way and construction, is projected to be $495 million (January 1987 dollars). This cost is summarized in Table I-3.

Funding

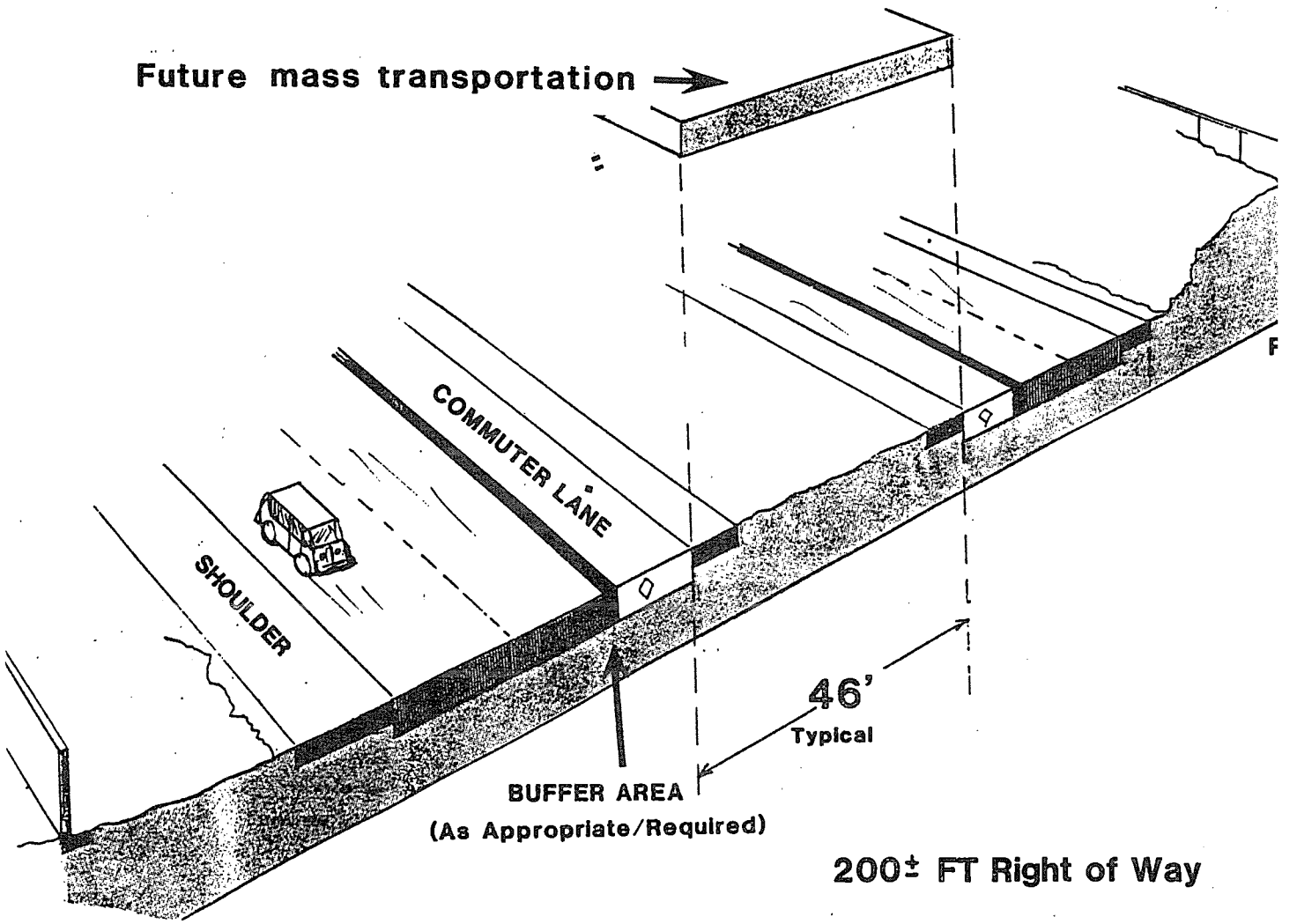
Funding for the project will be primarily from funds generated by "Measure A", a ten year Santa Clara County 1/2 cent sales tax allocated to the improvement of specific highways, one of which is Route 85. State and Federal funds will also be sought for con-

6 Lane / HOV Freeway ---- 46 Foot Median

2 of the 6 Lanes designated as

High Occupancy Vehicle (HOV) Commuter Lanes

during peak periods



PROJECT TYPICAL SECTION

FIGURE I-3

ROUTE 85 TRANSPORTATION CORRIDOR PROJECT

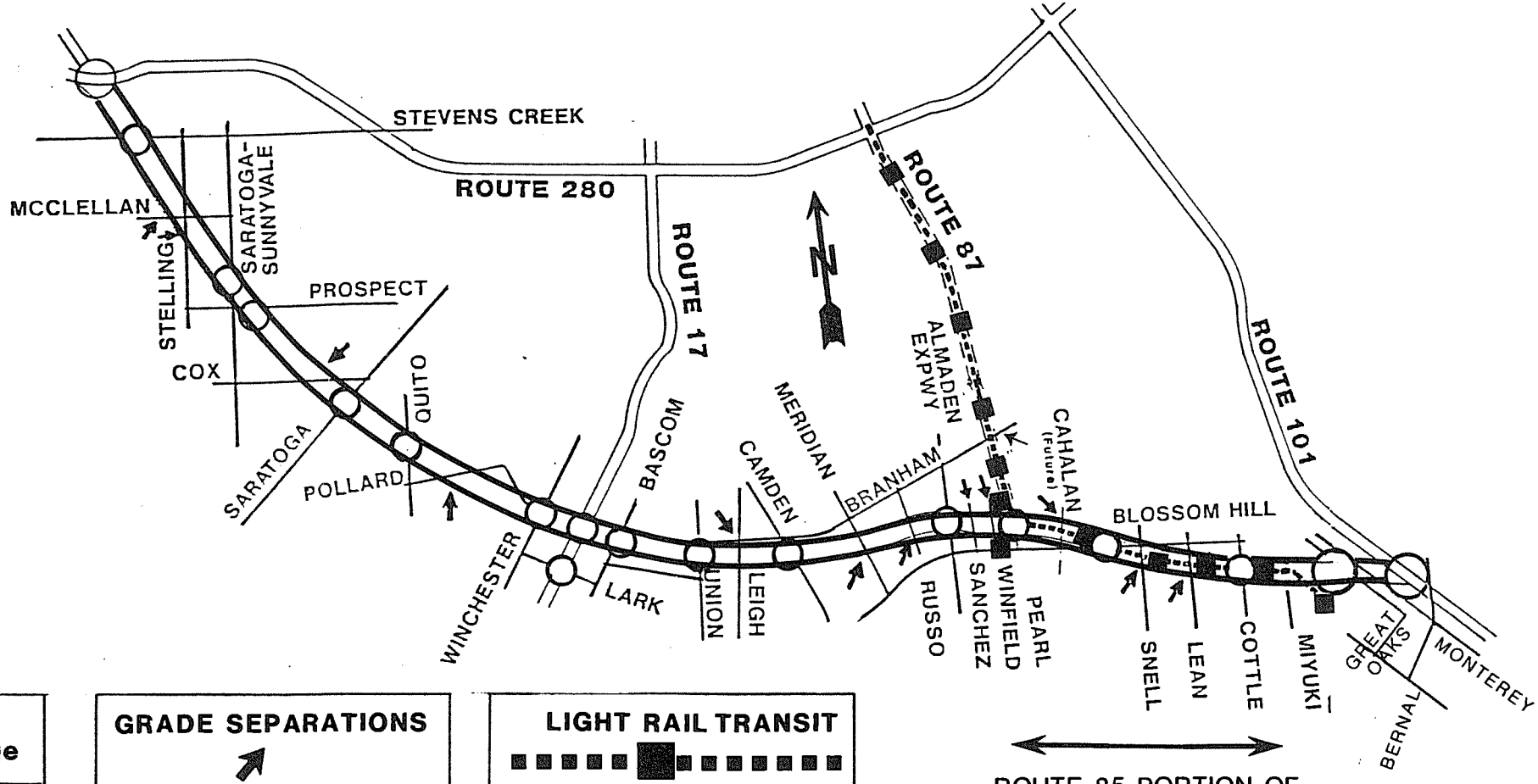


FIGURE I-4

PROJECT INTERCHANGE LOCATIONS

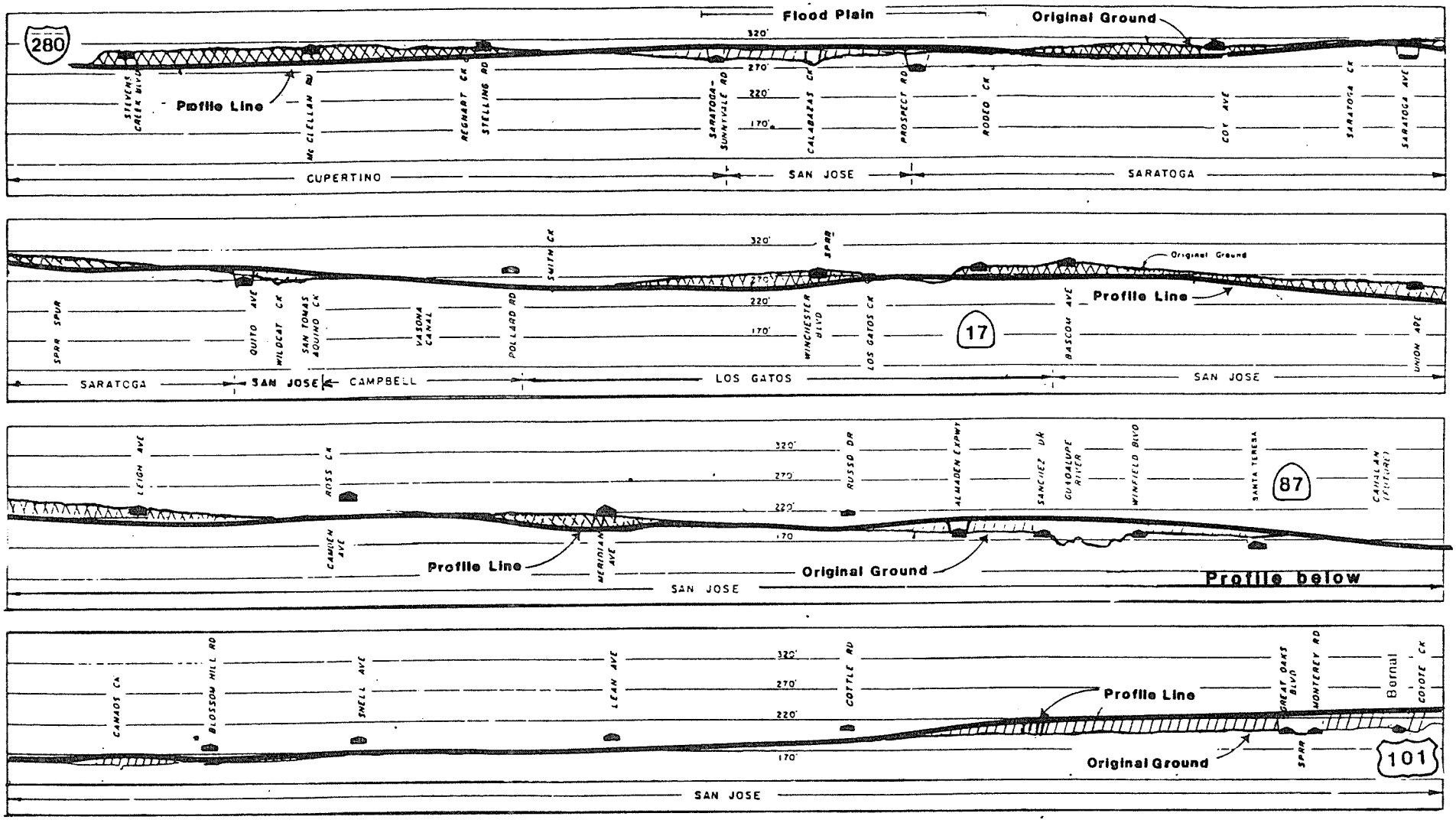


FIGURE I-5

* Constructed under Guadalupe Corridor Project

Proposed Street Location

Fill

Cut

ROUTE 85 TRANSPORTATION CORRIDOR PROJECT

PROJECT PROFILE

Santa Teresa/Rte 87 Profile

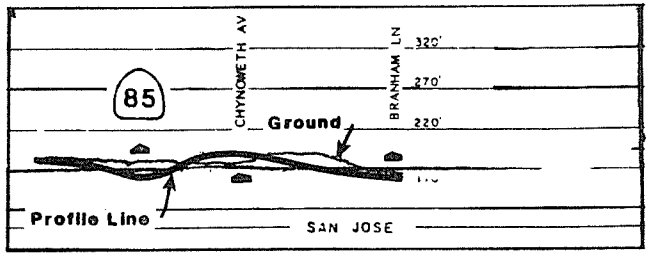


TABLE I-3
ROUTE 85 TRANSPORTATION CORRIDOR

CAPITAL COST ESTIMATE (MILLIONS $) FOR THE ROUTE 85 PROJECT

6 LANE/HOV FREEWAY (1)

Construction Cost (2)				R/W Costs	Total Costs
Route 101 at Monterey Road to Route 87/ Santa Teresa	Guadalupe River to Route 280	GCP-Measure "A" Portion (3)	Total Constr. Cost	Alignment	Project
122	230	13	365	130 (4)	495

Notes:
(1) Two of the six lanes designated High Occupancy Vehicle (HOV)-Commuter Lanes during Peak Periods.
(2) a. Includes the cost for mass transportation compatability, additional structure width, retaining walls, etc. to provide for future mass transportation.
b. Park and Ride / Bike costs assumes all facilities are on-site (No Additional R/W).
c. Includes Utility Relocation Costs
d. The above costs do not include Project engineering, and Construction Engineering costs.
e. Estimated in Millions of January 1987 $'s.
(3) GCP - Guadalupe Corridor Project. Advanced funds to GCP for facilitating the revision of GCP to a freeway.
(4) Remaining Right of Way (R/W) Cost. (1/86 $) (See Figure V-14)

struction when available. The amount of future Federal and State fund participation to be sought will depend on the then applicable allocation and budgeting processes of the California Transportation Commission, Regional Planning Organizations, and appropriate local agencies.

E. Environmental Consequences

The project has significant impacts on the environment. These impacts can not be mitigated to insignificance and are listed in the order that they appear in Chapter VI.

The project will result in an increase in the current average noise levels along the Route 85 transportation corridor. These changes, ranging from -4 dBA to +30 dBA, will occur at various points along the corridor. Noise walls will be constructed to mitigate these noise impacts to the largest degree feasible.

There will be visual impacts as a result of the construction of the project. There will be changes in the views from and to the Route 85 transportation corridor. There will also be the visual impact of the noise walls and the creation of new shadows along the Route 85 corridor.

The Route 85 transportation corridor project will require the displacement of approximately 408 residential units. Adequate replacement housing is available in the Route 85 transportation corridor cities and the surrounding cities.

The Route 85 transportation corridor project will require the relocation of 69 businesses. Some of the businesses will not be able to relocate locally because of the unavailability of large parcels of vacant land.

The Route 85 transportation corridor project will have an impact on the existing traffic network.

Table I-4, Summary of Project Environmental Impacts, is a compilation of the environmental impacts of the proposed project.

TABLE I-4
SUMMARY OF PROJECT ENVIRONMENTAL IMPACTS

OF THE

ROUTE 85 PROJECT

ENVIRONMENTAL IMPACTS	
Noise Impacts See Chapter VI-C-2	Noise change from -4 to +30 dBA at points along the corridor.
Visual Impacts See Chapter VI-D	Construction of approximately 22 miles of sound wall. Shadow impacts.
Housing Impacts See Chapter VI-G-3	Displacement of approximately 408 residences.
Business Impacts See Chapter VI-G-3	Displacement of 69 businesses.
Traffic Impacts See Chapter VI-H	Changes in traffic volumes on local streets.

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

II

INTRODUCTION

II. Introduction

The purpose of this Final Environmental Impact Statement (FEIS) is to describe the specific characteristics and details of the Route 85 project alternative and its associated environmental impacts.

A. The Route 85 Corridor

The unconstructed 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, a distance of approximately 18 miles. The corridor passes through or is adjacent to the Cities of San Jose, Campbell, Saratoga, Cupertino, Monte Sereno, and the Town of Los Gatos, all of which are in Santa Clara County. These cities and communities represent the jurisdictions of 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 was necessary to consider and develop information beyond these limits. An example was the Transit Plan that was discussed in the DEIS/DEIR. Figure II-1 depicts the project limits. Appendix A depicts the entire corridor study area in aerial photography.

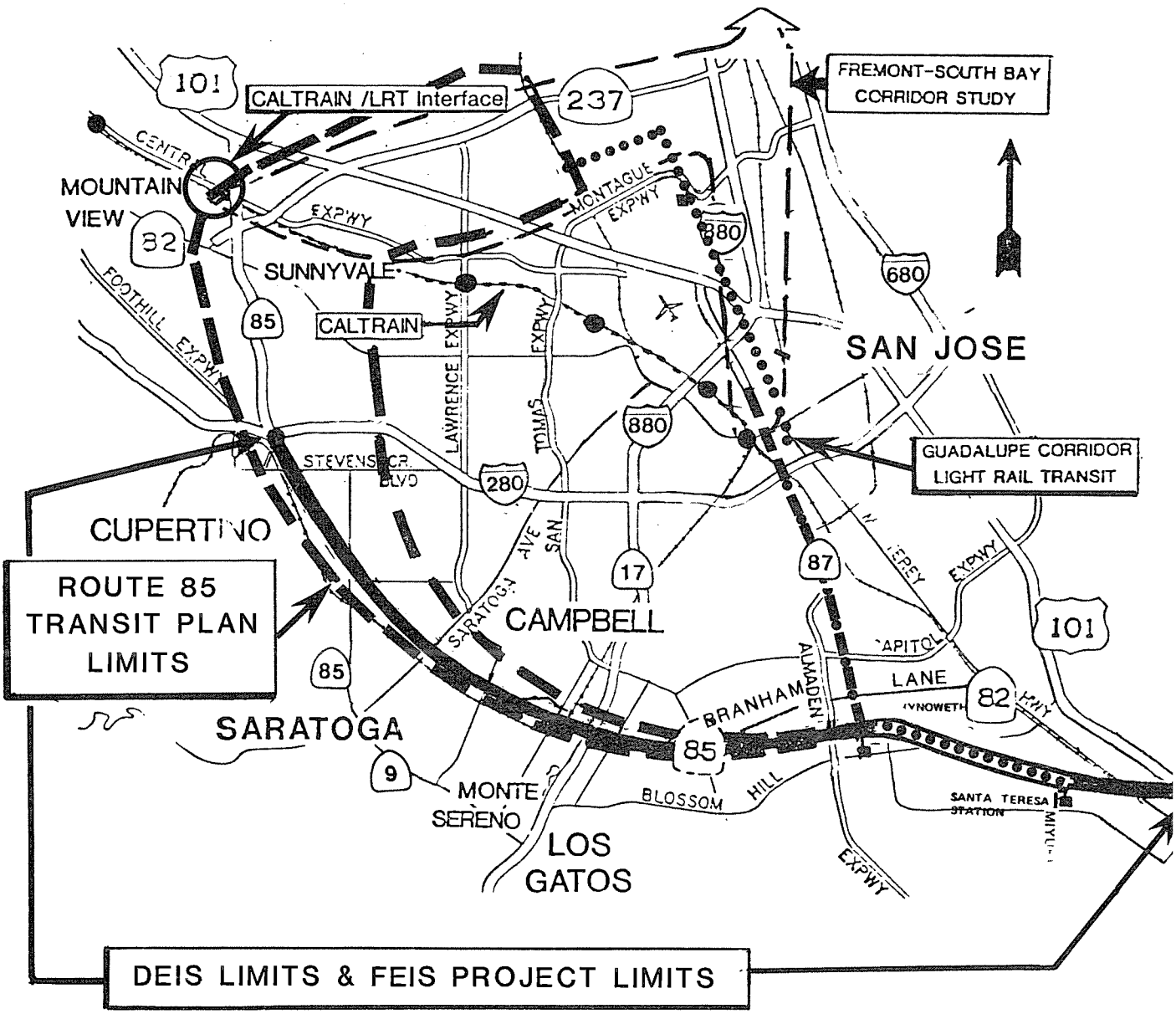
The corridor impacts of the project occuring outside of the project limits will be identified in this report but not addressed in as much detail as those within the project limits. For example, Route 85, north of Stevens Creek Boulevard, would be widened to six or eight lanes to accommodate the Route 85 project projected traffic. A detailed analysis of this widening will not be included here, as it is beyond the scope and project limits of this FEIS and is the subject of another study currently underway.

B. Project Background

This report completes the second tier of a two tier evaluation of the Route 85 transportation corridor in Santa Clara County. The first tier evaluation, which began in 1978, resulted in a right of way protection environmental document which was completed in May of 1982. The second tier of the two tier evaluation initially examined the environmental impacts of the various transportation alternatives which were proposed for this corridor (Draft Environmental Impact Report/Statement -- DEIR/S, September 1985/April 1986).

ROUTE 85 TRANSPORTATION CORRIDOR PROJECT

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



SCALE 1" = ± 2.5 MI.

ROUTE 85 PROJECT LIMITS

FIGURE II-1

This report examines the environmental impacts of the selected preferred alternative-project alternative.

The alignment 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 what was then the California Highway Commission. Freeway agreements were negotiated and executed in the late 1950's and 1960's and construction on the northerly end commenced in the 1960's. In 1975, however, right of way (R/W) acquisition and further construction was suspended due to funding constraints. Over 18 miles of the corridor was unconstructed with about 45% of the R/W acquired by Caltrans. The remaining R/W was then being threatened with development and some development was beginning to occur in the corridor. 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. This, and also intense pressure to develop the land within the corridor, led to the completion of the R/W Protection Environmental Impact Statement/Report - West Valley Transportation Corridor, Unconstructed State Route 85, Santa Clara County. The Record of Decision for this Final Environmental Impact Statement/Report (FEIS/R) was approved May 26, 1982, by the Federal Highway Administration (FHWA). Through October 1986, about $35 million has been spent on right of way protection and hardship parcel acquisition under this document.

The Guadalupe Corridor Project (Route 87/85), was also an outgrowth of the SCVCE. As part of that project, the decision was made to construct an expressway with Light Rail Transit (LRT) in the median as State Route 85 between Miyuki Drive (south San Jose) and State Route 87, as well as along portions of State Route 87. The environmental document (Guadalupe Corridor Alternatives Analysis - GCAA) for this project was approved on August 12, 1983. The Guadalupe Corridor overlaps the Route 85 corridor from Miyuki Drive to approximately Santa Teresa Boulevard (Route 87/85 interchange) in south San Jose and north on Route 87 to Branham Lane. Figure II-2 depicts this Route 85/Guadalupe Corridor overlap. As one of the results of the Route 85 project alternative being a freeway, portions of the design of the Guadalupe Corridor as an expressway have been revised, and design has begun on a freeway with Light Rail Transit (LRT) in the median asof Route 85 between Miyuki Drive and Route 87/Santa Teresa Boulevard, as well as portions of Route 87 immediately northerly of Route 85 involving the Route 85/87 interchange. The Guadalupe Corridor Project has been divided into two stages. Stage I is assumed to be included as part of the Guadalupe Corridor EIS and work on this portion is scheduled to be completed in 1988 or 1989. Stage II in-

cludes all the related interchanges and overcrossings and is covered in this Route 85 EIS. Construction project advertising for Stage II elements of the Guadalupe Corridor can not be done until this Route 85 FEIS has been approved, but is scheduled to be completed in 1989. The Route 85 portion of the Guadalupe Corridor Project is considered to be a constructed element (as an expressway with LRT) of the transportation system for the purposes of this FEIS.

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 (PAB) composed of elected officials from the affected local governments and Caltrans was formed. This board met regularly to discuss Route 85 issues and concerns, to advise Caltrans on the study, to approve the Route 85 transportation corridor alternatives which were studied in the DEIS/DEIR and to recommend a preferred alternative to Caltrans. On September 17, 1986, the PAB unanimously recommended to Caltrans their preferred alternative. Table I-1 is a copy of the PAB recommendation. Listed below are the political entities composing the Policy Advisory Board.

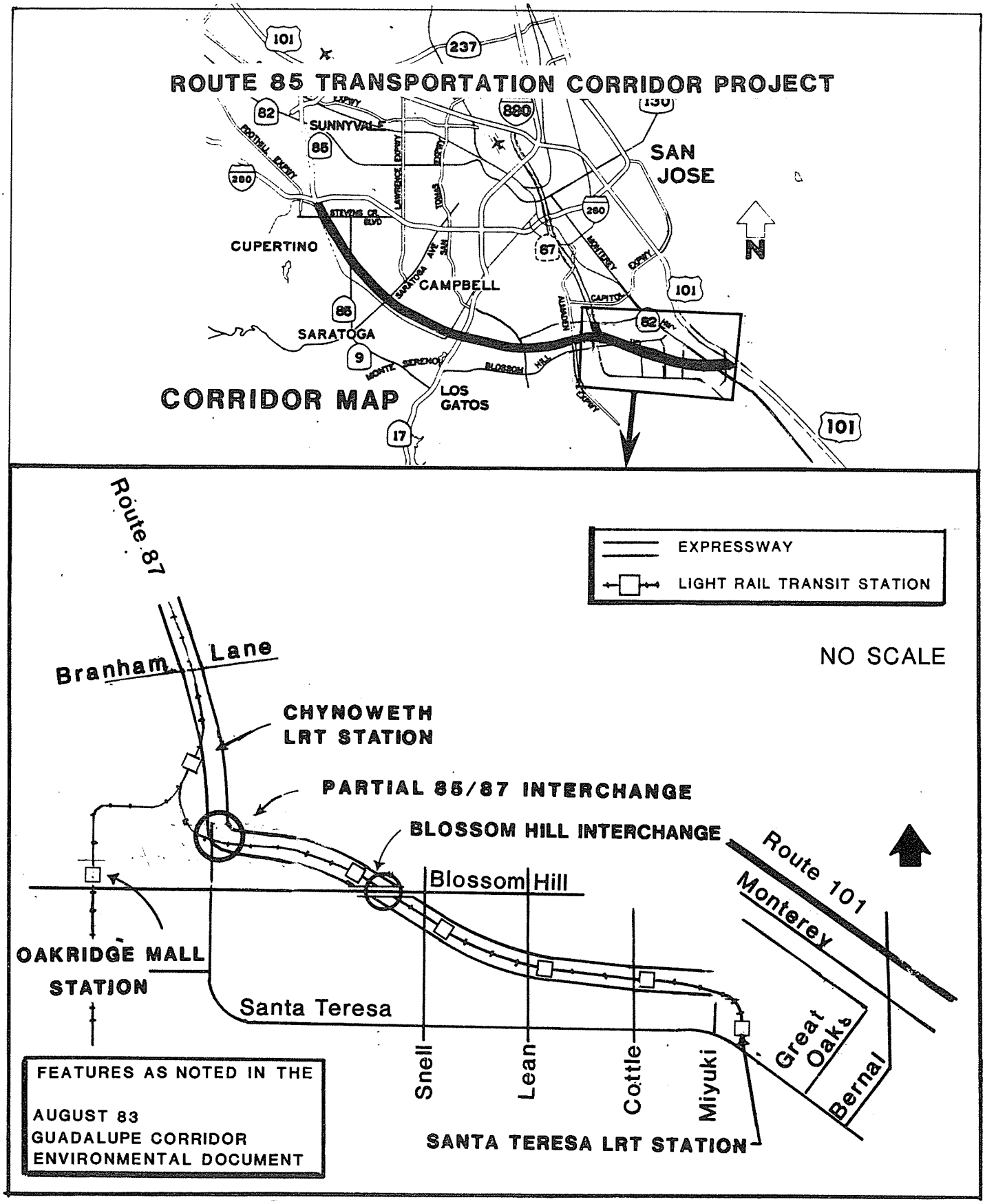
POLICY ADVISORY BOARD (PAB) MEMBERS

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

A Technical Advisory Committee (TAC) was also formed with engineering and technical representatives from each of the participating communities, in addition to other outside State, Federal and local agencies. The Technical Advisory Committee played an important role in defining the alternatives which were considered in the DEIS/DEIR and also studied, evaluated, and made recommendations on issues as directed by the PAB. 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 Public Works & Transportation
Metropolitan Transportation Commission
Urban Mass Transportation Administration
Bay Area Air Quality Management District
California Highway Patrol
CALTRANS



GUADALUPE CORRIDOR OVERLAP

FIGURE II-2

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:

INITIAL ALTERNATIVES

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

The 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 revised to nine alternatives (three original alternatives and six new alternatives). The PAB finalized these nine on July 25, 1984. These final alternatives, listed below, are the alternatives considered in the Draft Environmental Impact Statement/Report (DEIS/DEIR) and are described in detail in Chapter V.

DEIS 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

PAB Preferred Alternative Recommendation

Following the DEIR and DEIS public hearings in 1985 and 1986, the PAB unanimously recommended (September 17, 1986)

that the preferred alternative for the Route 85 transportation corridor be a six lane freeway with two of those lanes being reserved for HOV's during the peak periods. See Table I-1 for this recommendation.

Route 85 Project Alternative

The Route 85 project alternative on which this Final Environmental Impact Statement is based is a new freeway facility to be constructed along the unconstructed adopted Route 85 alignment from Route 101 near Bernal Road to Miyuki Drive, and between Route 87 and Route 280. In addition, the "Guadalupe Corridor" project is to be revised to provide a freeway facility, instead of the previously proposed expressway, on the overlap section (see Figure II-2). Also, all interchanges, separations, bridge structures, retaining walls, sound walls, grading, and other design features are to be designed as appropriate to accommodate future mass transportation options in the corridor. The project alternative described here and in Chapter V is virtually identical to the PAB Preferred Alternative Recommendation except for item "1-G" (truck ban). This is an operational feature that could be statutorily implemented. The Route 85 project alternative is described in Chapter V and as follows:

Typical Section

Provide a freeway with 6 total lanes, consisting of 4 mixed flow lanes and 2 lanes designated as commuter lanes for buses and high occupancy vehicles (HOV's) occupied by 2 or more people. Commuter lanes to be used as such during peak periods only, and will be used for mixed-flow through traffic at other times of the day. The median will be of sufficient width for future mass transportation. Figure V-11 is a typical section for this project.

Interchanges

Interchanges (I/C) will be provided for at the locations shown on Figure V-12. Right of way (R/W) acquisition and the construction of portions of the freeway to freeway interchanges (Routes 85/101, 85/87, 85/17, and 85/280) and all other interchanges, as determined during the freeway agreement negotiation/execution process, will be provided as necessary to permit staged development based on available funding at the time of construction.

Profile, Mitigation

Figure V-13 shows the project alternative profile. In addition to the profile, all mitigation measures such as noise attenuation, landscaping, sequence of construction work, etc., as appropriate, will be consistently applied through-

out the corridor to minimize adverse impacts of the project. The project alternative profile may be modified to mitigate impacts at various locations along the corridor, (for example, at schools, etc.) and/or as a result of the freeway agreement negotiation/execution process.

Bicycle, Pedestrian Facilities, Park & Ride, Ramp Metering

Develop a bicycle plan for the corridor jurisdictions, consider pedestrian facilities and onsite park and ride facilities, and provide ramp metering with a county wide traffic control center and bus and carpool by-pass lanes at all on-ramps.

III

PURPOSE AND NEED FOR PROJECT

III. 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, increased accidents and traffic congestion characteristic of a transportation system already operating at and beyond capacity. 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 also a conventional highway - Saratoga-Sunnyvale Road (De Anza Boulevard in Cupertino) between Route 280 and State Route 9 in Saratoga. It 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 freeway facility connecting the southern and western portions of the Santa Clara Valley, as can be seen in Figure III-1. Figure III-1 also depicts the existing Route 85.

Passage of Measure "A", a 1/2 cent Santa Clara County sales tax increase, to improve Routes 101, 237, and complete 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" and "Build 85" also reflected 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 III-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

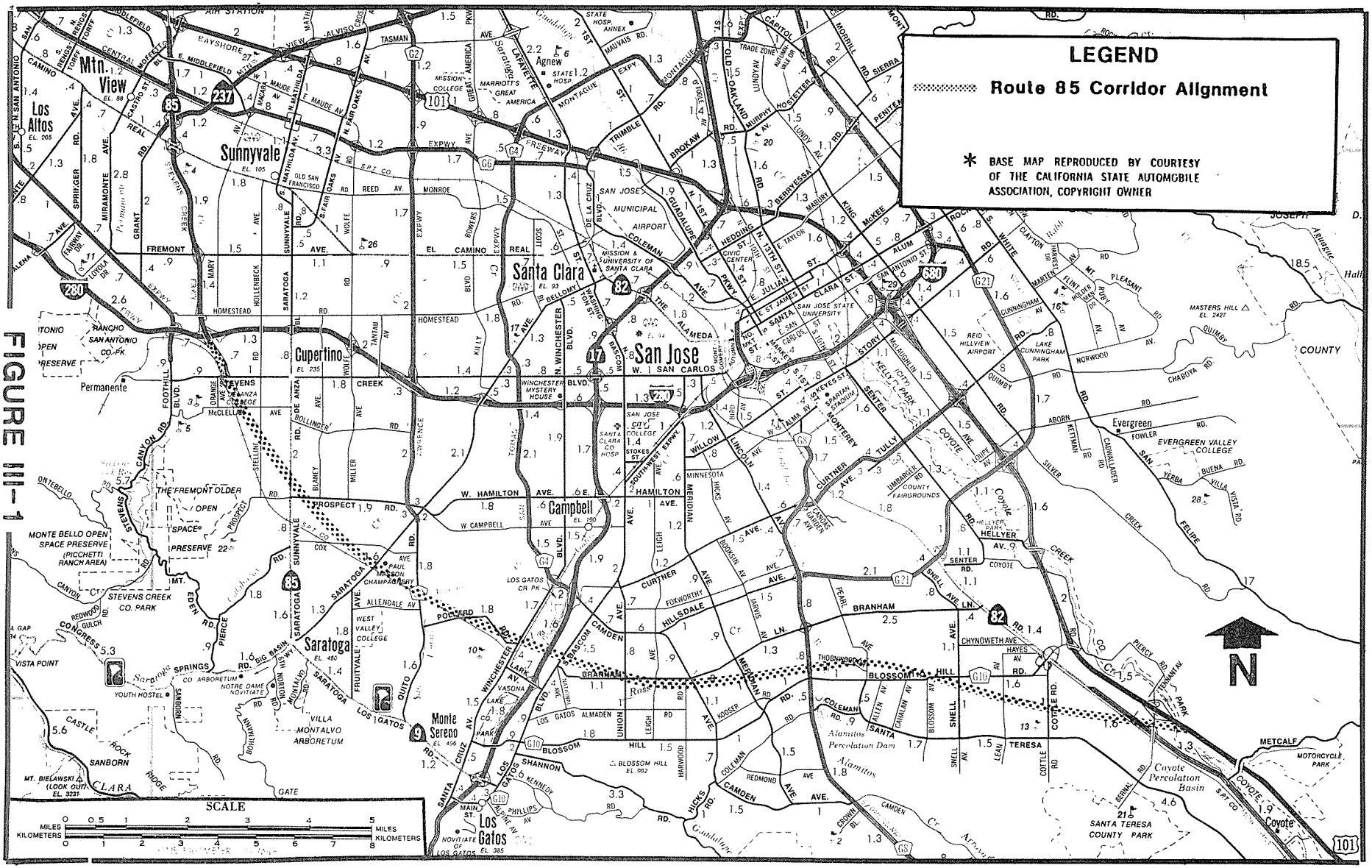
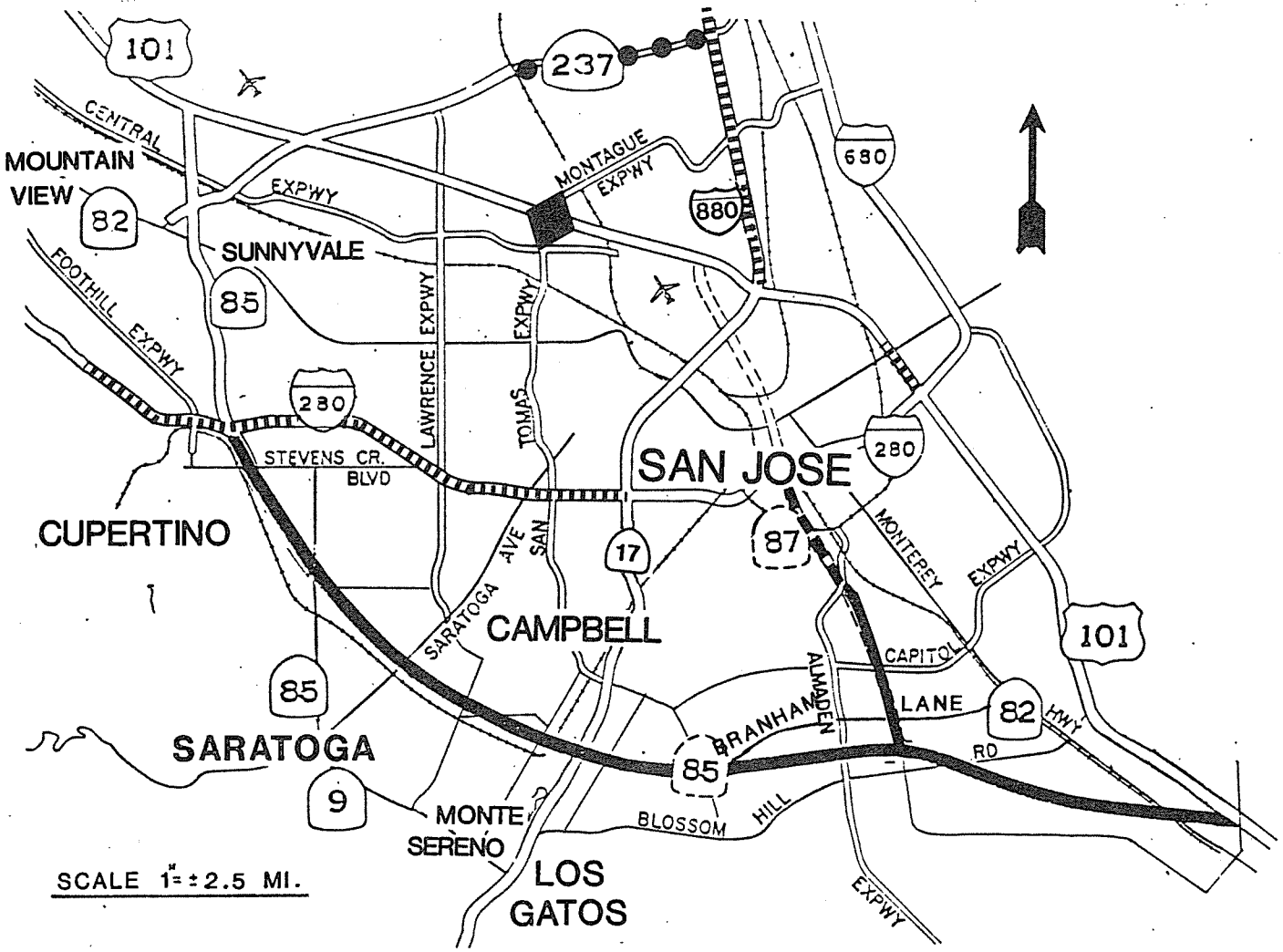


FIGURE III-1

SANTA CLARA COUNTY MAP*

DATE : MARCH 29,1979

SANTA CLARA VALLEY CORRIDOR EVALUATION



New Facility

Widening

Widen Interchange

Preserve Right-of-Way

Upgrade to freeway

SCVCE MAP

FIGURE III-2

of the county.

- Continued auto dependent travel habits with a peak 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 transit ridership could comprise 12% of all peak hour work trips.
- Peak hour vehicular trips up 42%.
- Congested miles of roadway up 77% (23% of the highway network.

More recent data (July 1985) has been released regarding population, housing and employment projections for the year 2005 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. ABAG estimates that between 1985 and 2005, Santa Clara County will add about 378,000 more jobs and 240,000 additional individuals to the resident labor force.

Santa Clara County's "Transportation 2000" considers Route 85 to be a Category 2, Immediate Need, project which should be completed within ten years.

B. Travel Projections

Travel projections for both highway and transit were developed utilizing the Metropolitan Transportation Commission (MTC) Forecasting Model. The Route 85 projection year is 2010. This conforms to normally followed Federal Highway Administration (FHWA) planning procedures for highway projects of this size. The data base used was the Association of Bay Area Governments (ABAG) "Projections 1985". The MTC model was expanded to a subregional computer simulation with the latest projections for population and jobs and updated socio-economic data base to project travel for the year 2010. Results of this simulation are summarized in Table III-1 and Figure III-3 and will be used for eventual final design of the highway facility.

The MTC Forecasting Model is similar to conventional urban transportation forecasting systems. The model inputs fore-

casted socio-economic, network, and service data into trip generation equations to produce travel demand projections. The Route 85 study used the same input format as the Guadalupe Corridor Alternative Analysis (GCAA) for economic, land use, capacity, and supplementary travel-related data. The network includes a light rail/freeway/expressway facility in the Guadalupe Corridor and Measure "A" projects, in addition to various projects included in State, Federal, and local transportation improvement programs for Santa Clara County. It also assumes that all ramps during the peak period would be metered and that a minimum of a six lanes will be available on existing Route 85 north of Route 280.

The MTC model does not have the ability to estimate the commuter/High Occupancy Vehicle (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 GCAA) for 3+ carpools and 18% for 2 person carpools were combined, resulting in HOV DEMAND vehicle volumes of 21.5% of the total DEMAND.

Table III-1 indicates the AM peak hour and the average daily traffic (ADT) vehicle volumes.

Figure III-3 compares the project alternative's average USAGE/DEMAND in the AM peak hour between Route 101 in south San Jose and Route 280 in Cupertino. The projected future LRT USAGE in both the AM peak directions match the projected patronage DEMAND for those desiring to use LRT. However, this usage is well below the total person demand for the corridor as similarly projected for 1990 in the DEIR/DEIS.

The following is a brief explanation of the terms used in this travel projection section and the factors used. Table III-1 and Figure III-3 are summaries of the 2010 travel projections for both AM peak hour and daily traffic.

FREEWAY DEMAND

The projected total amount of vehicles (capacity constrained) that would want to use a freeway containing a total of 6 lanes in the year 2010.

CAPACITY CONSTRAINED

Capacity constrained projection takes into account the number of lanes and the capacity per lane of all facilities in the county. Vehicles are assigned routes, and as routes become congested (volume to capacity comparison) the vehicles

Route 85 A.M. Peak Hour and Average Daily Traffic (ADT) Volumes

LOCATION	24-HOUR ADT	A.M. PEAK HOUR					
		NORTHBOUND DIRECTION			SOUTHBOUND DIRECTION		
	24-HOUR Two-Way Usage ④	6 LANE Freeway Demand ①	6 LANE Freeway Usage ②	Commuter HOV (2+) Demand ③	6 LANE Freeway Demand ①	6 LANE Freeway Usage ②	Commuter HOV (2+) Demand ③
Route 101		1,910	1,660	410	3,340	3,290	720
Bernal		1,910	1,660	410	3,340	3,290	720
		2,240	1,920	480	5,670	5,280	1,220
Great Oak		2,240	1,920	480	5,670	5,280	1,220
		2,690	2,340	580	6,630	5,900	1,430
Cottle		2,310	1,970	500	6,040	5,020	1,300
Snell	113,000	2,940	2,290	630	7,710	6,000	1,660
Blossom Hill		2,810	2,130	600	6,650	5,130	1,430
		5,320	4,460	1,140	7,590	5,880	1,630
Route 87		4,210	3,230	910	5,970	4,600	1,280
		5,040	3,940	1,080	6,300	4,760	1,350
Almaden Exwy		4,150	2,790	890	5,850	4,340	1,260
		6,520	4,790	1,400	7,140	5,280	1,540
Camden		4,980	3,770	1,070	6,530	4,970	1,400
Liegh	145,000	6,660	5,440	1,430	6,780	5,230	1,460
Union		5,810	4,300	1,250	6,520	4,860	1,400
		7,690	5,460	1,650	6,860	5,060	1,470
Bascom		7,200	5,080	1,550	6,560	4,750	1,410
		5,320	3,540	1,140	5,610	4,150	1,210
Route 17		6,720	4,730	1,440	6,210	4,600	1,340
		5,600	3,780	1,200	4,720	3,520	1,010
Winchester		6,040	4,020	1,300	5,600	4,080	1,200
Pollard	126,000	7,080	4,640	1,520	6,350	4,650	1,370
Quito		5,870	3,440	1,260	5,120	3,830	1,100
		6,510	4,350	1,400	5,430	4,120	1,170
Saratoga		6,250	4,210	1,340	4,230	3,530	910
		7,040	4,970	1,510	4,400	3,690	950
Prospect		6,230	4,330	1,340	3,690	3,110	790
		7,230	5,270	1,550	3,890	3,310	840
Saratoga-Sunnyvale		5,940	4,330	1,280	3,140	2,720	680
Stelling	111,000	7,150	5,160	1,540	3,470	3,000	750
Stevens Creek		5,970	4,500	1,280	2,750	2,360	590
		7,870	6,450	1,690	3,770	3,430	810
Route 280		4,710	4,000	910	2,590	2,350	420
		7,000	6,000	1,510	3,170	3,570	680

Notes:

① Capacity Constrained Demand

② Capacity Constrained with Ramp Metering and HOV

③ High Occupancy Vehicle Demand (included in Usage) - Carpools and Buses containing Two or More Persons projected to be 21.5% of the 6 Lane Freeway Demand

④ Project Alternative (6 total lane Freeway) 24-Hour Weekday

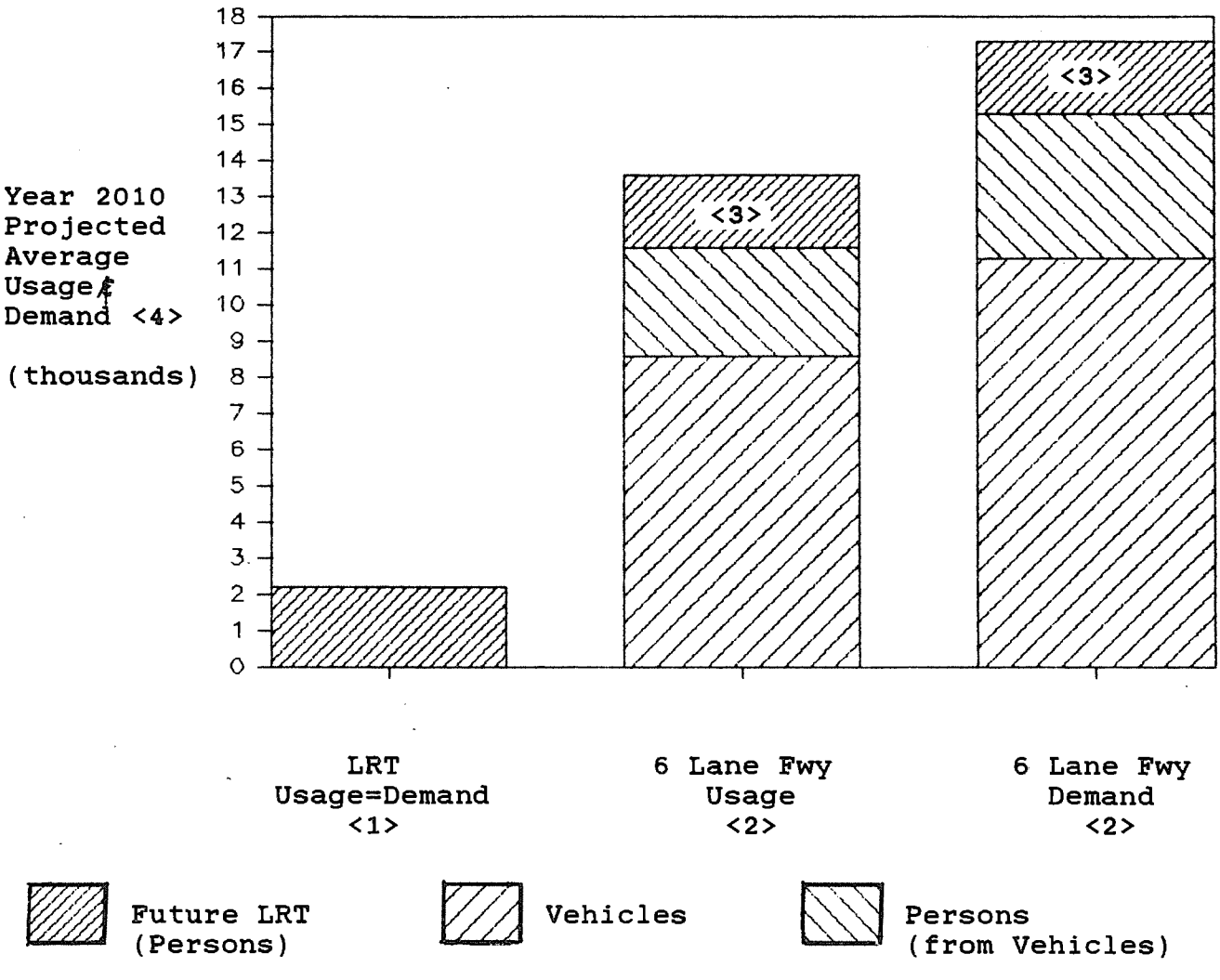
YEAR 2010 TRAVEL PROJECTIONS

TABLE III-1

T R A V E L P R O J E C T I O N C O M P A R I S O N

A.M. Average Two-Way Peak Hour Volumes Year 2010

Route 85 - Route 101 Northerly to Route 280



<1> Future LRT Usage/Demand if only LRT constructed.
<2> Project Alternative includes provisions for LRT.
<3> Projected Future LRT Usage with Project Alternative.
<4> Typical Average Two-Way Volume throughout the 18 mile corridor.

LRT- Light Rail Transit
Chart derived from Table III-1 and includes LRT.

TRAVEL PROJECTION COMPARISON

FIGURE III-3

are sent to other routes (four iterations are employed to reach equibilirum).

VEHICLES

The vehicles considered are automobiles, buses, and trucks. The percentage of trucks was projected to be 3%. High Occupancy Vehicles (HOV) are considered to be carpools, vanpools, and buses containing two or more people.

FREEWAY USAGE

The projected maximum number of vehicles that can use the constructed facility in 2010. USAGE volumes in the AM peak directions are for a capacity constrained ramp metered facility.

HOV

High Occupancy Vehicle (HOV)-commuter lane vehicles require 2 or more passengers per vehicle. HOV USAGE is estimated to be 21.5% of the total FREEWAY DEMAND.

ADT

Average Daily Traffic (ADT) is the total amount of vehicle USAGE (two-way) in a typical 24 hour weekday period for the constructed facility in the year 2010. The factor used to arrive at the projected daily freeway usage (ADT) in vehicles was 13.6 X the two-way AM peak hour usage.

PERSON USAGE/DEMAND

The person USAGE/DEMAND is the amount of people estimated for the freeway facility in the year 2010. The vehicle occupancy factor used for the person USAGE/DEMAND used in Figure III-3 was 1.35 X vehicle USAGE/DEMAND.

LIGHT RAIL TRANSIT

The project alternative includes the provision for a median of sufficient width to accommodate future transportation options, one being a Light Rail Transit (LRT) system. The patronage projections for a future LRT system are based on the projected completion of a LRT system loop in the county. This loop was to be done by extending the Guadalupe Corridor LRT westerly to Great America and by following the Route 85 corridor north to Mountain View then east to Great America.

TRANSIT PATRONAGE

Transit Patronage is the projected average number of LRT riders (patronage) on the possible future LRT system within

the 18 mile corridor limits. The number and frequency of transit vehicles was designated to meet the demand and can be expanded as demand increases. Therefore, the projected LRT patronage demand equals the usage.

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, 880/17, 101, 237, and 680/280) 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 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").

D. Modal Interrelationships and System Linkage

The project alternative is a multi-modal transportation facility containing freeway and high occupancy vehicle lanes. It also provides a wide median for future mass transportation. Development of a bicycle plan is also part of the project alternative. 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 north on Route 17 and wishing to continue 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.

E. Implications of No Project Alternative

Had the No Project Alternative (NPA) been selected, no transportation facilities would be constructed within the Route 85 transportation corridor other than those already planned. The existing transportation corridor right of way would be sold. This would, in turn, have allowed development of the corridor to the extent permitted by the local jurisdictions. The development of the corridor for purposes other than a transportation facility would generate additional traffic which would worsen an already congested traffic condition in the County.

As of October 1986, the sale of the owned right of way would generate approximately $100,000,000. This money would be returned to the Caltrans general fund for use on transportation projects throughout the state.

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

IV

ROUTE 85 TRANSPORTATION CORRIDOR ANALYSIS PROCESS

IV. 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 the DEIS/DEIR.

After public circulation and review of the DEIR and DEIS, the PAB considered all the written and oral comments which were generated during the review period. After careful consideration, the PAB unanimously selected the preferred alternative at their September 17, 1986 meeting. Based on their selection, which is virtually identical to the project alternative approved by Caltrans, this Final Enivronmental Impact Statement was prepared thus completing the environmental review process for this project.

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 than those already planned would be constructed within the Route 85 transportation corridor. The Caltrans owned right of way would be sold.

C. DEIS/DEIR Project Alternatives

There were nine (9) project alternatives under consideration in the DEIS/DEIR. They comprise those alternatives which the Policy Advisory Board and Technical Advisory Committee had defined and approved for study. The alternatives are outlined below and are 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 in the Route 85 corridor, west of Route 87, 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 in the Route 85 corridor, west of Route 87, 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 two HOV lanes. Between each HOV lane and first mixed flow traffic lane, 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 possible future Bus/HOV transitway, LRT system, or mixed flow lanes.

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 other major transportation projects and is indirectly related to several more.

Widening of Existing Route 85 Freeway

A study is currently underway which would widen the existing Route 85 freeway from Stevens Creek Boulevard and Interstate Route 280 on the south to Route 101 on the north. This study, called the "Triangle Study", includes widening of the existing Route 85 and modifications to the Route 85/280, Route 85/Route 82, Route 85/237, Route 85/Central Expressway, and Route 85/101 interchanges and others along Route 85. This project would be funded largely by Measure "A" money. A interim separate project will widen existing Route 85 in the median from north of Homestead Avenue to just north of Route 237.

Route 101 Widening

Median widening of most of Route 101 from Bernal Road north to the San Mateo County line is currently under study as part of several environmental documents. However, median widening of Route 101 from Route 87 to the Lawrence Expressway is already completed. Median and bridge widening of Route 101 from the Lawrence Expressway to the San Mateo County line is expected to begin in 1987. Environmental clearance for the segments of southern Route 101 - from Bernal Road to Route 87 - is not ex-

pected until 1988. These proposals are funded largely by Measure "A" money.

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 freeway with LRT in the median is under design from Route 85/Route 87 in south San Jose to Great America in the City of Santa Clara. The LRT utilizes surface streets north of Route 280 but is in the median of the grade separated, access controlled, freeway to Route 85 south of Route 280. The Route 85 transportation corridor overlaps the Guadalupe Corridor for a distance of approximately 4 miles from Miyuki Drive to the Route 87/85 interchange and north on Route 87 to Branham Lane. The Guadalupe Corridor/Route 85 overlap section will be upgraded to a freeway facility with grade separations and interchanges between Branham Lane and Route 101. Figure IV-1 depicts this overlap as approved in the August 1983 Guadalupe Corridor Environmental Document.

Route 82 (Monterey Road) Widening

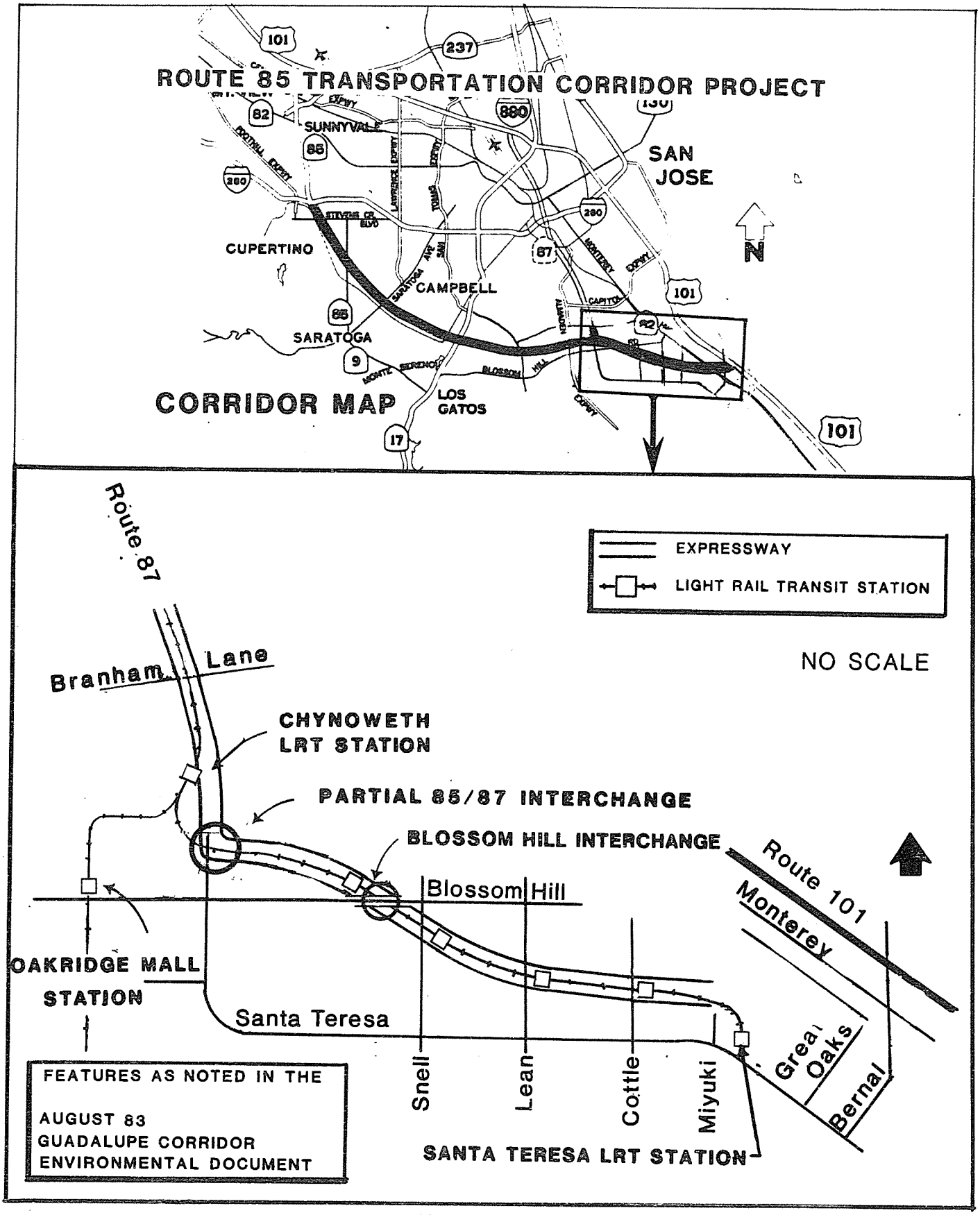
Caltrans and the City of San Jose propose to widen Monterey Road from 4 to 6 lanes. This would be done between Blossom Hill Road in south San Jose northerly to Curtner Avenue, a distance of approximately 4.6 miles. This widening is considered to be completed and operational for all aspects of this study.

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 a point within the study area. Phase I has been completed with the selection of nine alternatives for further study. Phase II - an in-depth study of transit modes - was authorized by UMTA in April, 1986 and work began in August 1986. The Alternatives Analysis should be completed by Spring of 1988.

Peninsula Corridor Study (Route 85 Transit Plan)

The Peninsula Corridor study, conducted by the Peninsula Transit Alternatives Project Committee (PENTAP), is in response to Senate Concurrent Resolution #74 and requires that a connection between the Guadalupe Corridor LRT and the peninsula rail system be investigated. This study has been completed and sent to the State Legislature for further action.



GUADALUPE CORRIDOR OVERLAP

FIGURE IV-1

Bicycle Element

Bicycle facilities are elements of local, city, and county plans. Their consideration, along the Route 85 transportation corridor, will be included concurrently with the construction of the Route 85 transportation corridor project. A bicycle plan will be developed for, and in conjunction with, the corridor jurisdictions during Freeway Agreement negotiations and final design of the project.

E. Project Alternative

The recommended project alternative consists of a new freeway facility constructed along the unconstructed adopted Route 85 alignment between Route 101, near Bernal Road, and Miyuki Drive, and between Route 87 and Route 280, and that the Guadalupe Corridor Project be revised to provide a freeway facility, instead of the presently proposed expressway, on Route 85 on the overlap section between the Route 87/85 interchange and Miyuki Drive. In addition, all interchanges, separations, bridge structures, retaining walls, sound walls, grading, and other design features are to be designed as appropriate to accommodate future mass transportation options in the corridor. The Route 85 project is to be as follows:

Typical Section

Provide a freeway with 6 total lanes consisting of 4 mixed flow lanes and 2 lanes designated as commuter lanes for buses and high occupancy vehicles (HOV's) occupied by 2 or more people. Commuter lanes to be used as such during peak periods only, and will be used for mixed-flow through traffic at other times of the day. The median will be of sufficient width for future mass transportation. Figure V-11 is the typical section for this project.

Interchanges

Interchanges (I/C) will be provided for at the locations shown on Figure V-12. Right of way (R/W) acquisition and the construction of portions of the freeway to freeway interchanges (Routes 85/101, 85/87, 85/17, and 85/280) and all other interchanges as determined during the freeway agreement negotiation/execution process will be provided as necessary to permit staged development based on available funding at the time of construction.

Profile, Mitigation

Figure V-13 depicts the project profile. In addition to the profile, all mitigation measures such as noise attenuation, landscaping, sequence of construction work, etc., as appropriate, will be consistently applied throughout the corridor to minimize adverse impacts of the project. The project profile may be modified to mitigate impacts at various locations along the corridor,

(for example, at schools, etc.) and/or as a result of the freeway agreement negotiation/execution process.

Bicycle, Pedestrian Crossings, Park & Ride, Ramp Metering

Develop a bicycle plan for the corridor jurisdictions, consider pedestrian crossings in addition to onsite park and ride facilities, and provide ramp metering with a county wide traffic control center, and bus and carpool by-pass lanes at all on-ramps.

V

PROJECT ALTERNATIVES AND COSTS

V. Alternatives and Costs

A. Introduction

This chapter contains a description of the project alternatives studied in the DEIS and their associated costs. These alternatives were finalized in June 1984 by the Route 85 Policy Advisory Board. State and Federal policy required 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, project data, and reasons for rejecting each alternative. The project data includes such items as right of way costs, construction costs, vehicle requirements and costs, operation and maintenance costs, and construction phasing. This chapter also describes the Preferred/Project Alternative.

B. DEIS/DEIR Alternatives

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 throughout the state. The current estimated value of the owned right of way in 1986 dollars is over $100,000,000.

This alternative was not chosen as the Project Alternative for the following reasons:

1. It would not meet the projected transportation needs of the Route 85 corridor.
2. It would have no effect on improving the existing traffic congestion in the Route 85 corridor.
3. It was not selected by the Policy Advisory Board.

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 Routes 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-3.

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.

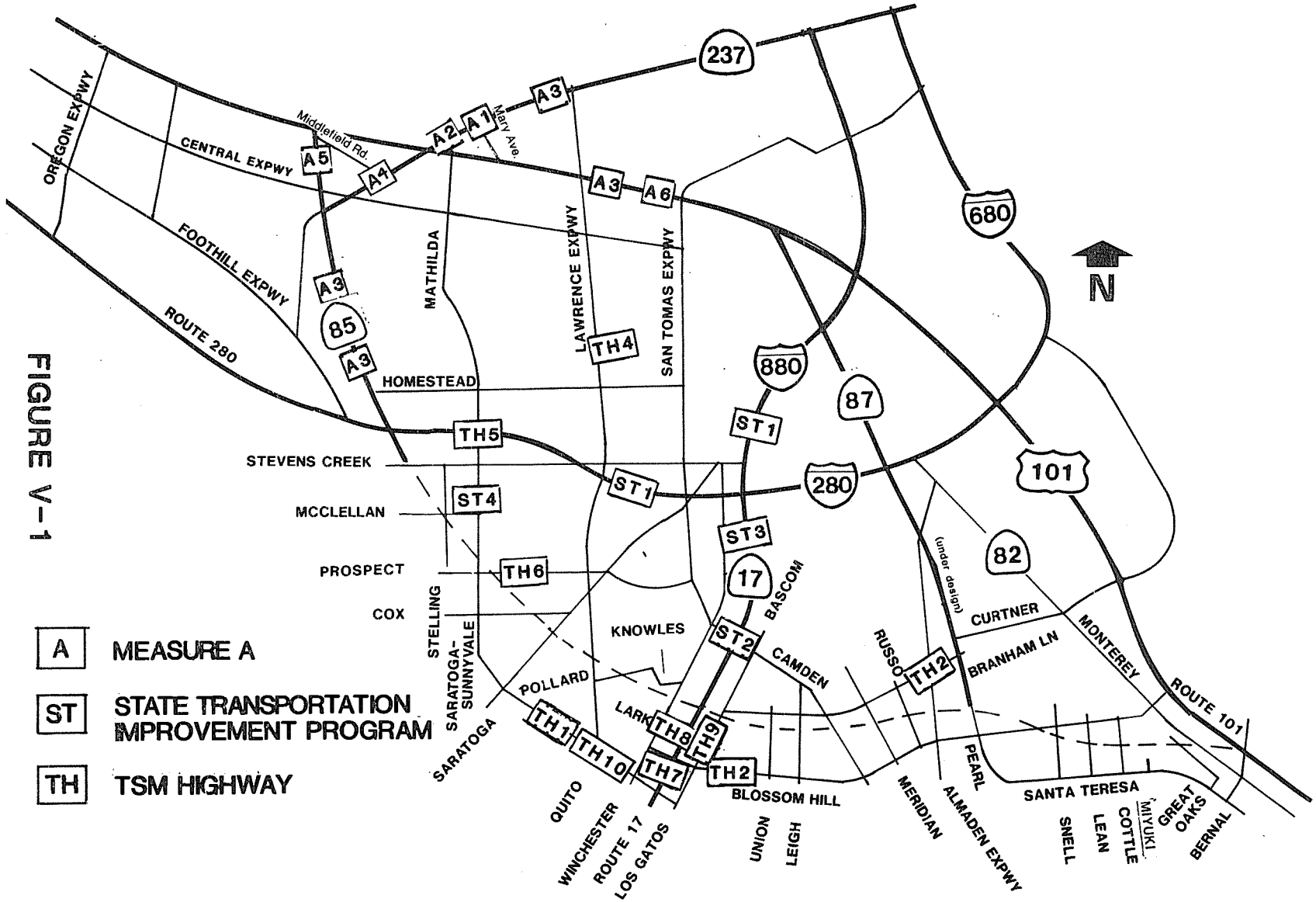


FIGURE V-1

NO SCALE

TRANSPORTATION SYSTEM MANAGEMENT

A6 Add ramp metering on Route 101 at various locations.

TSM Transit Capital Improvements

The 1985 estimates of capital costs for these measures total $50 Million. Transit improvements are constantly being studied, revised, and implemented by the state, Metropolitan Transportation Commission, 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 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.

State Transportation Improvement Plan (STIP)

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 has been renumbered as 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.

TSM Highway Improvements

The 1985 estimated capital cost for the following measures totals $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 signals 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- and 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.

This alternative was not chosen as the Project Alternative for the following reasons:

1. It would not meet the projected transportation needs of the Route 85 corridor.
2. It would have a minimal effect on congestion

relief.

3. It was not selected by the Policy Advisory Board.
4. Most of the proposed TSM measures are currently being implemented throughout the County.

3. Alternative Characteristics

The following characteristics are part of the appropriate alternative. Typical alternative cross sections are shown in Figure V-2.

The FHWA has a policy that federally funded HOV lanes carry 3+ or more passengers per vehicle. Whether the Route 85 HOV lanes will be 2+ or 3+ or more passengers has not been decided. Caltrans has requested the FHWA make an exception for Route 85 and allow 2+ HOV operations on this federally funded facility. Some of the criteria on which the FHWA will make their decision are: existing and projected HOV traffic volumes (both 2+ and 3+), hours of projected HOV operation, construction cost, public acceptance, and existing county wide policy.

HIGHWAY ALTERNATIVES

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

All would have metered on-ramps with a county wide traffic control center.

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.

All would extend Route 85 to Route 101.

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.

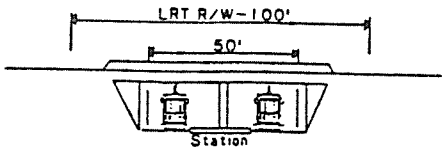
BUS/HOV TRANSITWAY

Two lanes in the median.

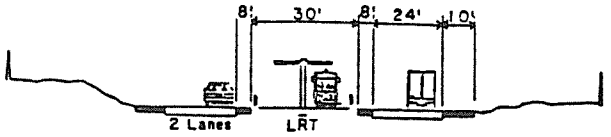
Peak directional operation only -- reversible lanes.

HOV's and buses only.

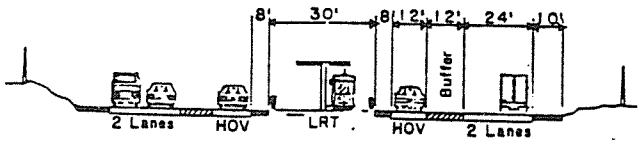
- NO PROJECT ALTERNATIVE (NPA)
- TRANSPORTATION SYSTEM MANAGEMENT (TSM)
- LIGHT RAIL TRANSIT (GRADE SEPARATED)



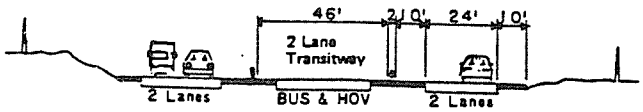
- 4 LANE FREEWAY WITH LRT



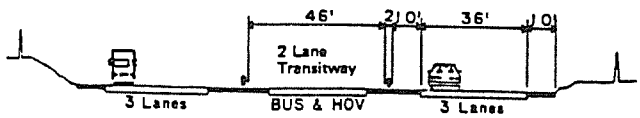
- 4 LANE FREEWAY WITH HOV AND LRT



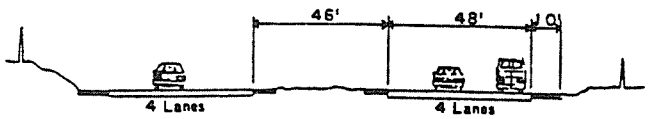
- 4 LANE FREEWAY WITH BUS / HOV TRANSITWAY



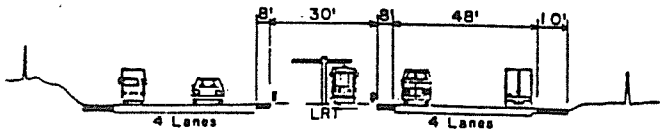
- 6 LANE FREEWAY WITH BUS / HOV TRANSITWAY



- 8 LANE FREEWAY



- 8 LANE FREEWAY WITH LRT



TYPICAL SECTIONS

ALTERNATIVES TYPICAL SECTIONS

FIGURE V-2

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

HOV's and buses only.

Limited intermediate access.

Buffered from number one mixed flow lane.

No stations or station access.

PARK AND RIDE FACILITIES

All facilities will have a minimum of 100 parking spaces.

Parking is assumed to be free of charge.

All facilities will be accessible to the elderly and handicapped.

TRANSIT STATIONS

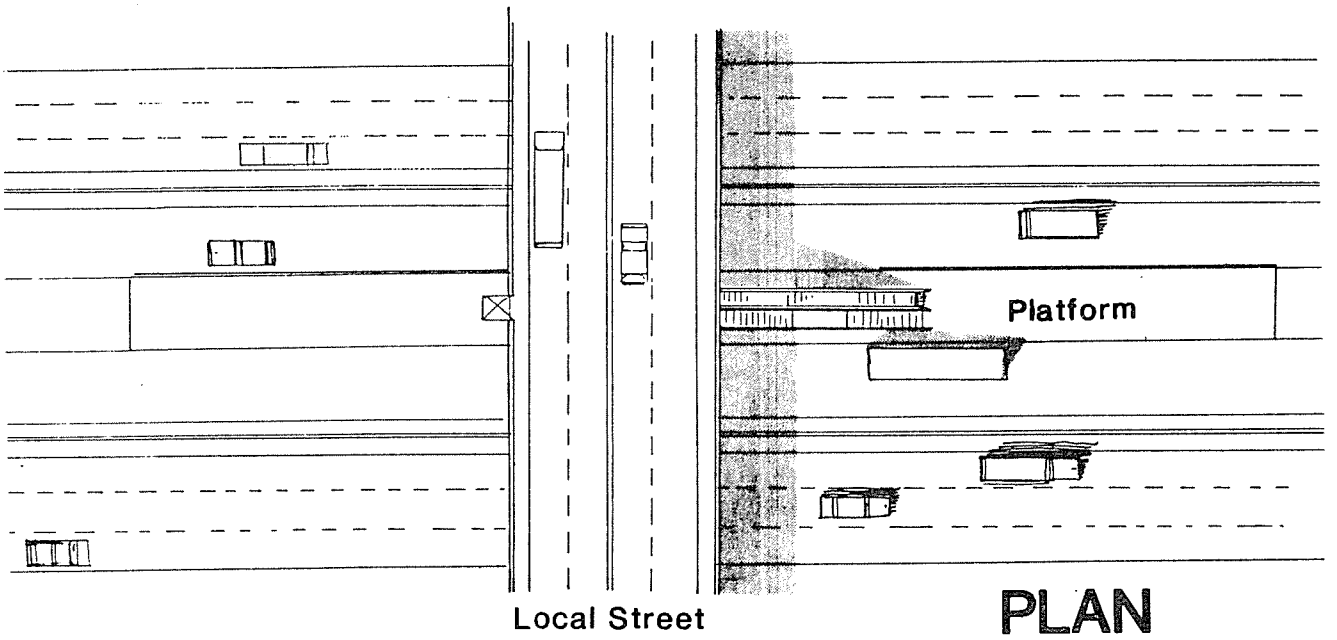
Figure V-4 depicts typical rail and bus stations.

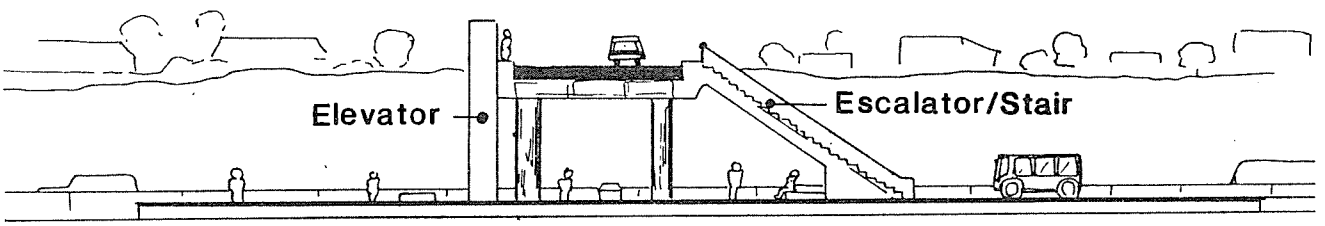
All bus stations will be convertible to rail.

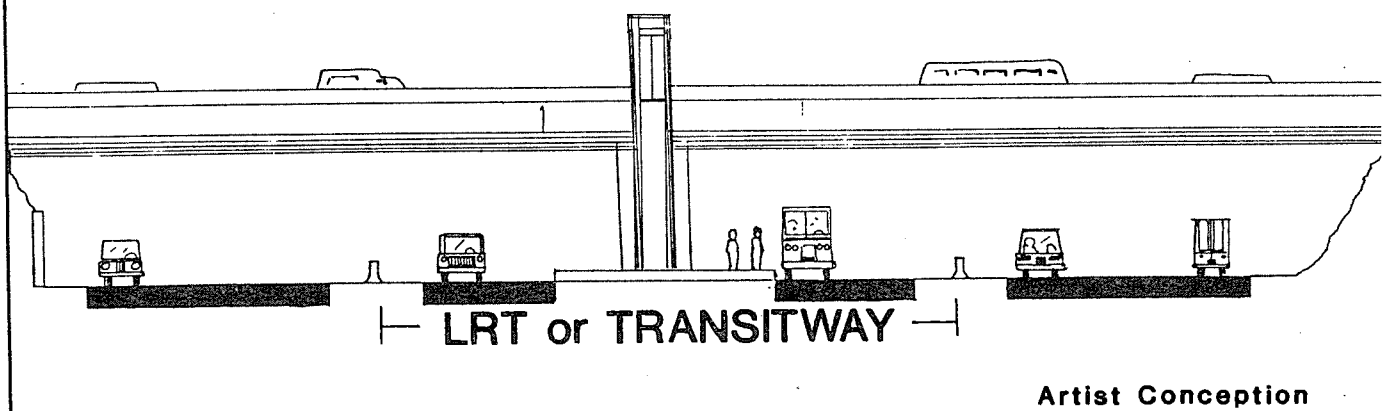
All stations will have center platforms.

BUS/HOV INTERMEDIATE ACCESS

FIGURE V-3







TYPICAL BUS OR RAIL STATION
FIGURE V-4

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 (BASE)

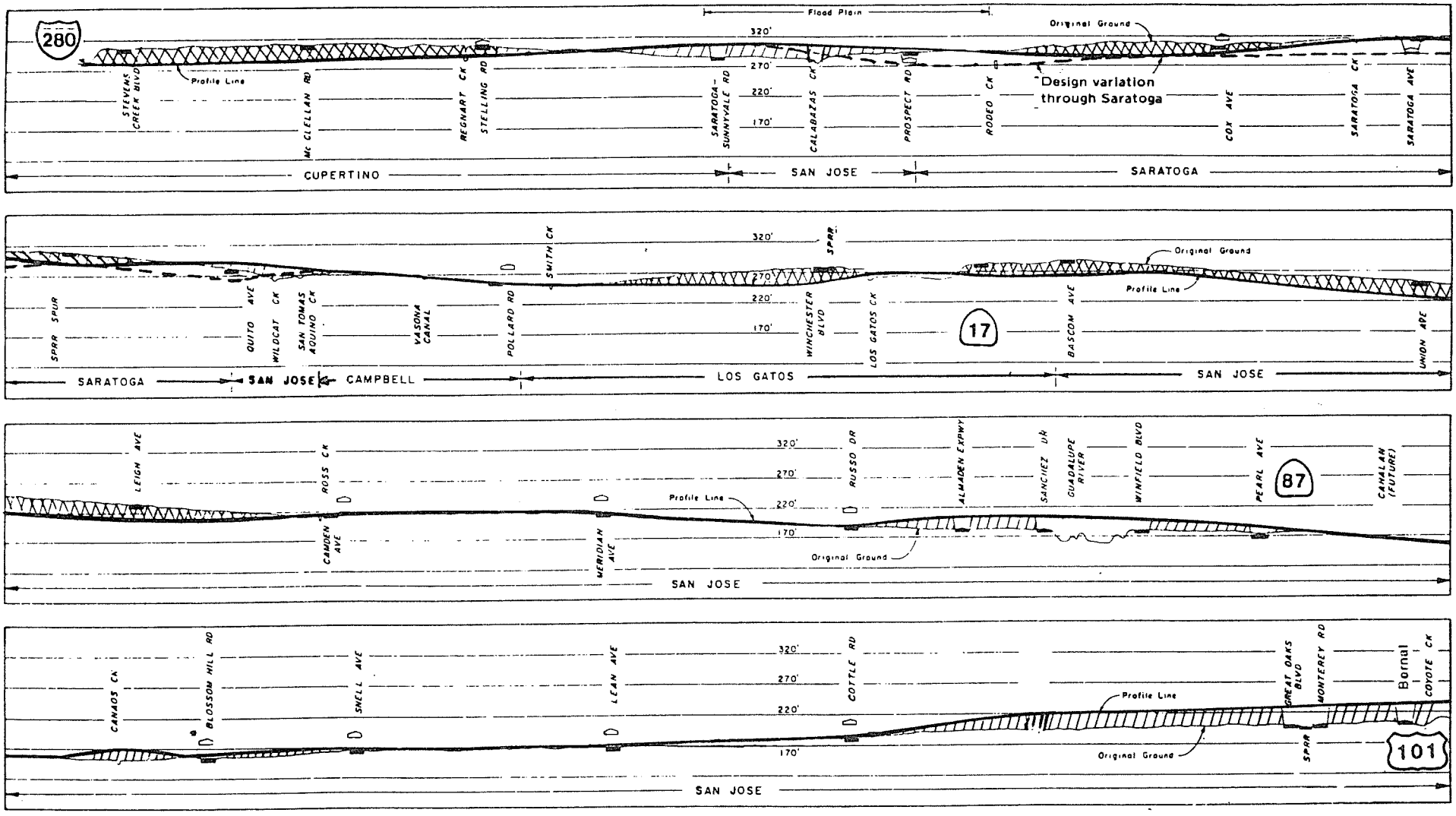
All of the construction alternatives studied in the DEIS/DEIR used the same vertical profile as depicted in Figure V-5. This profile is comprised of approximately 5.8 miles of at grade, approximately 5.9 miles of above grade construction, and approximately 6.2 miles of below grade construction.

This "Base" profile met 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) was selected. In addition, a profile design variation through the City of Saratoga was also studied. This design variation is discussed on page V-22. The base profile is shown in Figure V-5 on page V-12.

Interchanges

Figures V-6 through V-9 depict the proposed interchange and station locations for the various alternatives. Figure V-6 depicts the LRT alternative and its approximate station locations. Figure V-7 illustrates the freeway and LRT alternatives. Figure V-8 depicts the freeway and Bus/HOV transitway alignment and interchange locations. Figure V-9 depicts the freeway only alternative and its interchange locations.

ROUTE 85 TRANSPORTATION CORRIDOR PROJECT



* Constructed under Guadalupe Corridor Project

Proposed Street Relocation

Fill

SCALE IN FEET
0 750 1500 2250

DEIS PROFILE

FIGURE V-5

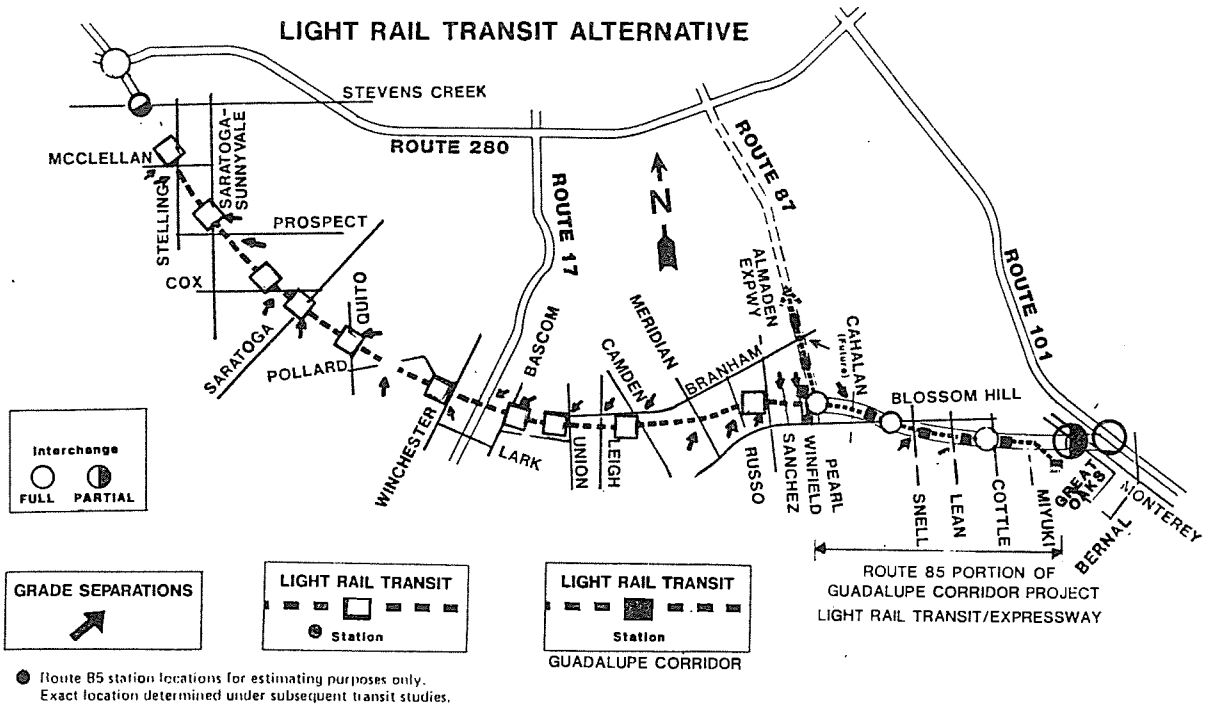


FIGURE V-6

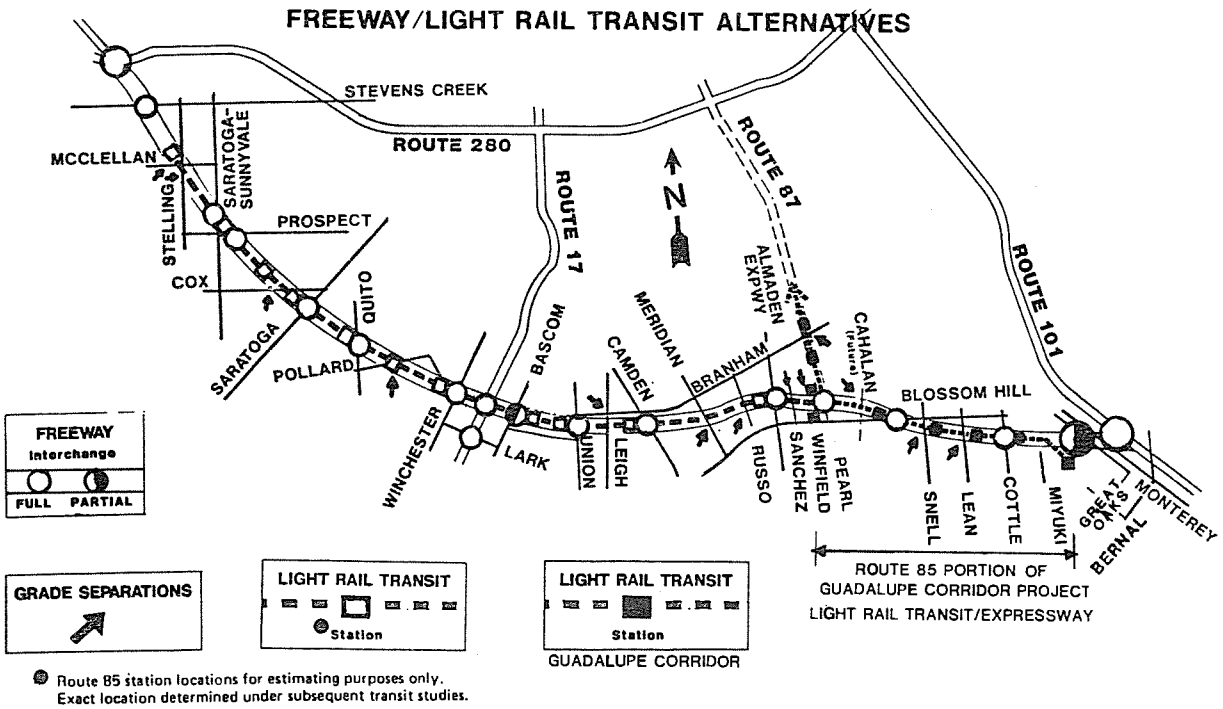


FIGURE V-7

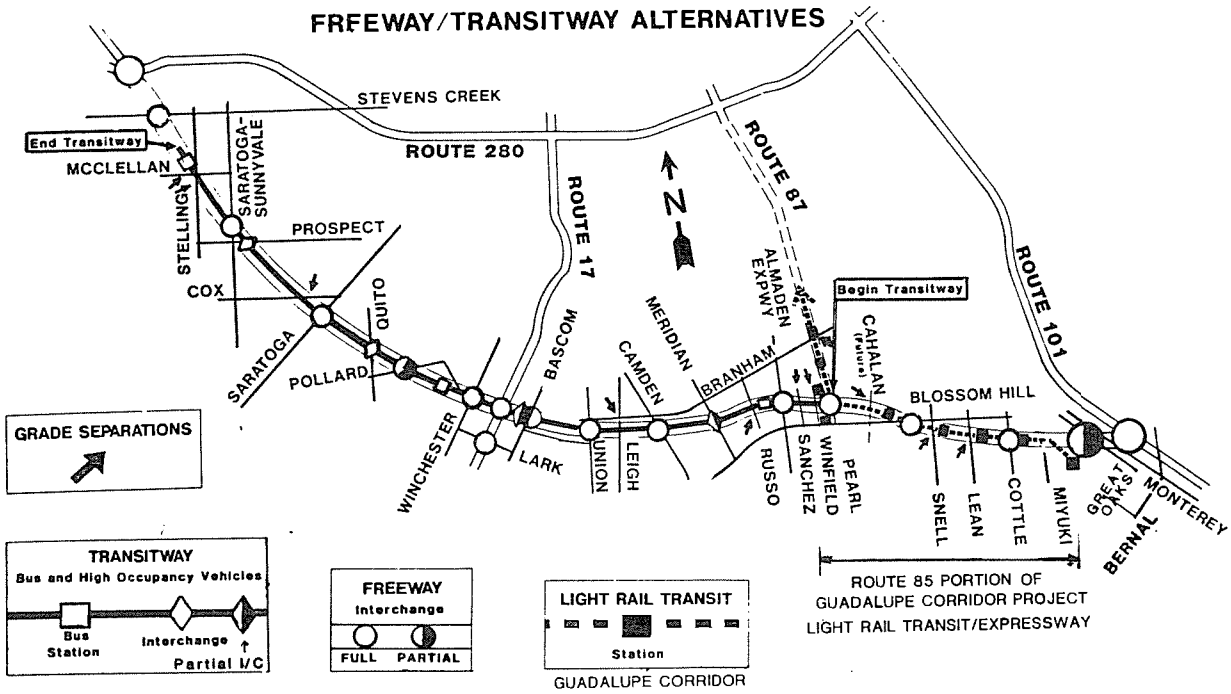


FIGURE V-8

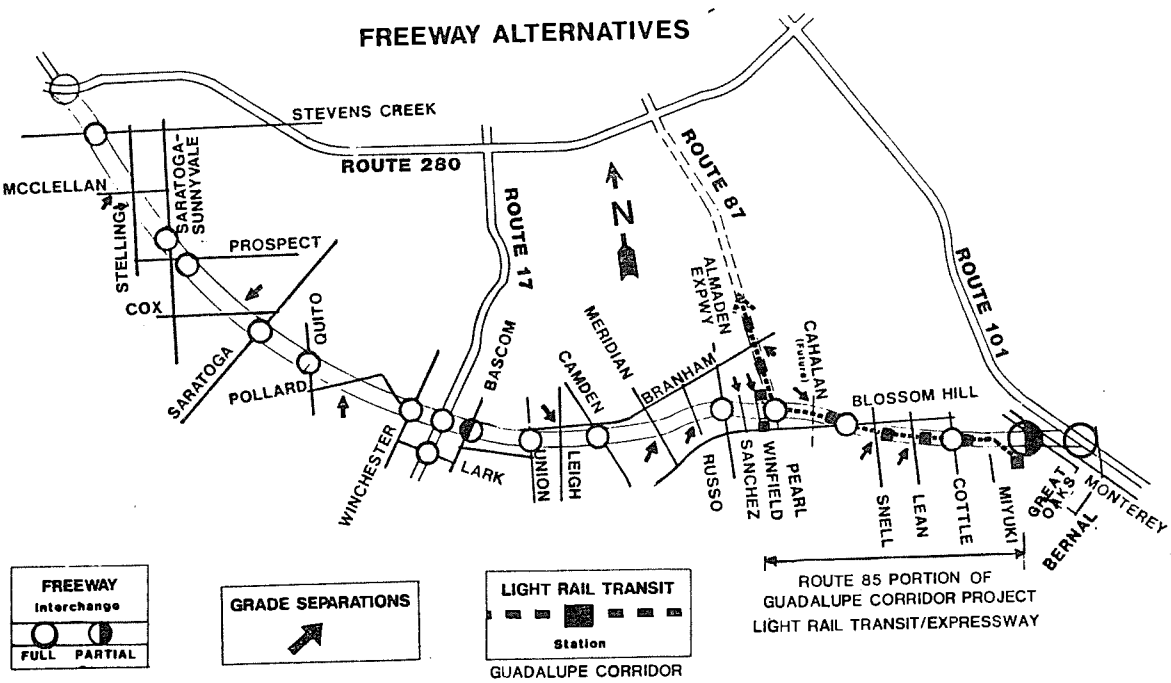


FIGURE V-9

4. Light Rail Transit

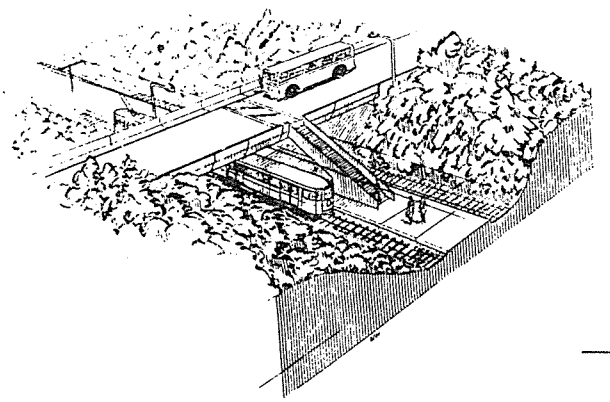
The Light Rail Transit (LRT) alternative would have provided for an exclusive grade-separated right-of-way, trackage, signals, vehicles, and stations for a double-tracked LRT system within the Route 85 corridor study limits. The Route 85 corridor LRT alternative would have included extending the Guadalupe 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 would have meandered within the existing right of way to reduce its impact on the surrounding areas. The figure below depicts a typical cross section of this alternative.

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

The 1985 cost was estimated to be $300 million which includes right of way. If the LRT only alternative had been chosen, funding for LRT construction would not have used 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 been reimbursed prior to the construction of the LRT alternative. In addition, the State could have sold the excess right of way which would not be needed for the construction of this alternative.

This alternative was not chosen as the Project Alternative for the following reasons:

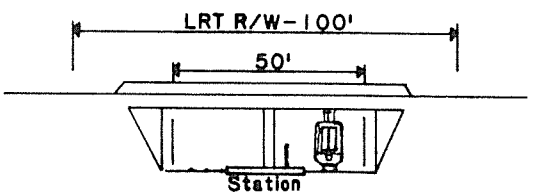
1. It would not meet the transportation needs of the corridor.
2. It is ranked 5th out of nine for transit on a regional priority.
3. At present, there is no funding available for an LRT system in this corridor.
4. It was not selected by the Policy Advisory Board.



LIGHT RAIL TRANSIT

(GRADE SEPARATED)

TYPICAL SECTION



5. 4-lane Freeway with LRT

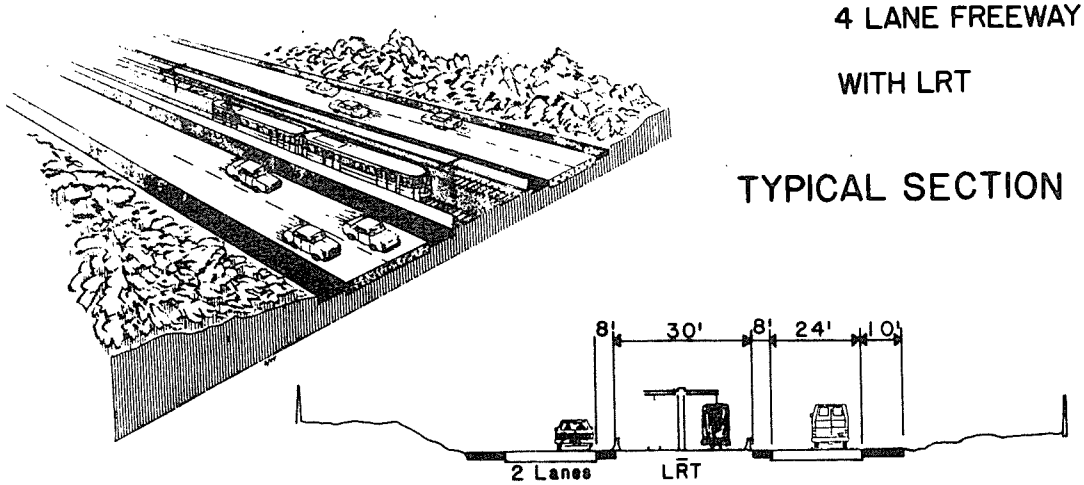
This alternative included a 4-lane freeway between Route 280 in Cupertino and Route 87 and also provided a multi-lane freeway from Route 87 to Route 101 in south San Jose.

The LRT portion of this alternative extended the LRT of the Guadalupe Corridor project from the Route 85/Route 87 interchange westerly in the Route 85 freeway median to the vicinity of Stevens Creek Boulevard in Cupertino. Below is a typical cross section of this alternative.

The 1985 estimated capital costs for this alternative were $480 million. These costs included all the costs associated with the LRT system.

This alternative was not chosen as the Project Alternative for the following reasons:

1. Corridor LRT patronage was too low to justify the selection of this alternative.
2. Regional priority for LRT in this corridor is low.
3. LRT funding in the near future is doubtful.
4. Highway capacity is less than half of the projected demand traffic.
5. This alternative was not selected by the Policy Advisory Board.



6. 4-lane Freeway with LRT and High Occupancy Vehicle Lanes

This alternative included a 4-lane freeway between Route 280 in Cupertino and Route 87, and provided a multi-lane freeway from Route 87 to Route 101 in south San Jose.

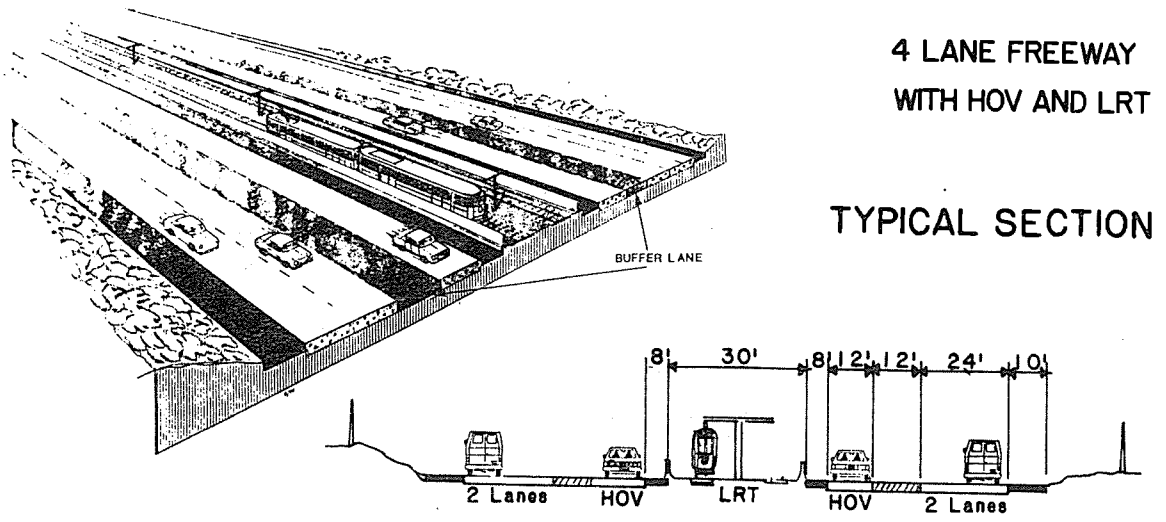
The LRT portion of this alternative extended the LRT of the Guadalupe Corridor Project from the Route 85/Route 87 interchange northerly in the Route 85 median to the vicinity of Stevens Creek Boulevard in Cupertino.

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

A typical cross section for this alternative can be seen below.

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

This alternative is closest to the Project Alternative except that the median is to be reserved for future mass transportation options only when funding is available.



7. 4-lane Freeway with Bus/HOV Transitway

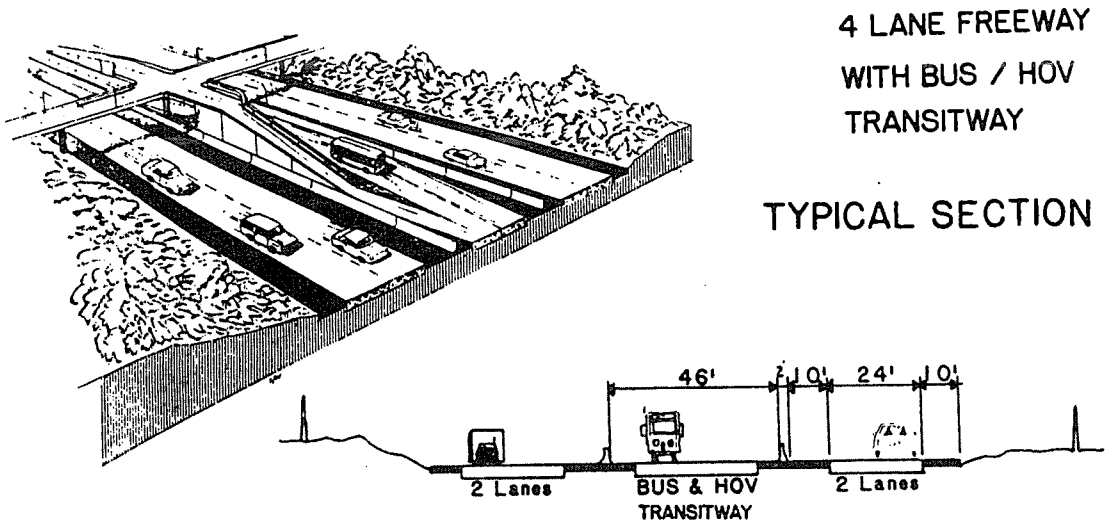
This alternative included a 4-lane freeway between Route 280 in Cupertino and Route 87 and also provided a multi-lane freeway from Route 87 to Route 101 in south San Jose.

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

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

This alternative was not selected as the Project Alternative for the following reasons:

1. Operational problems such as entering and exiting transitway from mainline and at interchanges, service to stations, signing and lane markings, and accessibility of emergency vehicles.
2. Conversion difficulties to other transportation options.
3. Higher cost and possible additional right of way requirements at station locations to meet latest clearance standards.
4. PAB opposition to the concept of a 2-lane reversible roadway in the median.



8. 6-lane Freeway with Bus/HOV Transitway

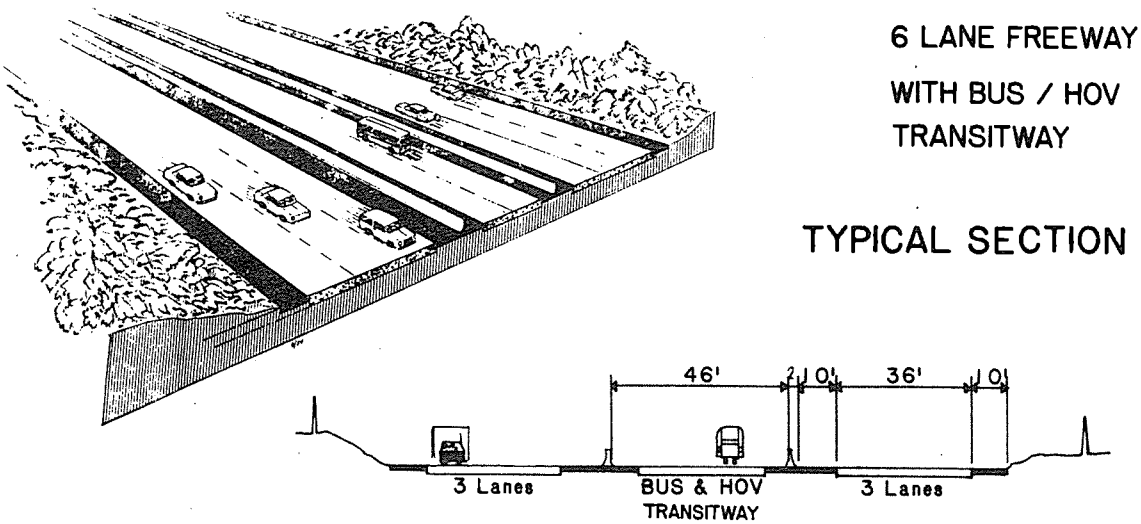
This alternative included a 6-lane freeway between Route 280 in Cupertino and Route 87 in San Jose, with a multi-lane freeway between Route 87 and Route 101 in south San Jose.

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

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

This alternative was not selected as the Project Alternative for the following reasons:

1. Operational problems such as entering and exiting transitway from mainline and at interchanges, service to stations, signing and lane markings, and accessibility of emergency vehicles.
2. Conversion difficulties to other transportation options.
3. Higher cost and possible additional right of way requirements at station locations to meet latest clearance standards.
4. PAB opposition to the concept of a 2-lane reversible roadway in the median.



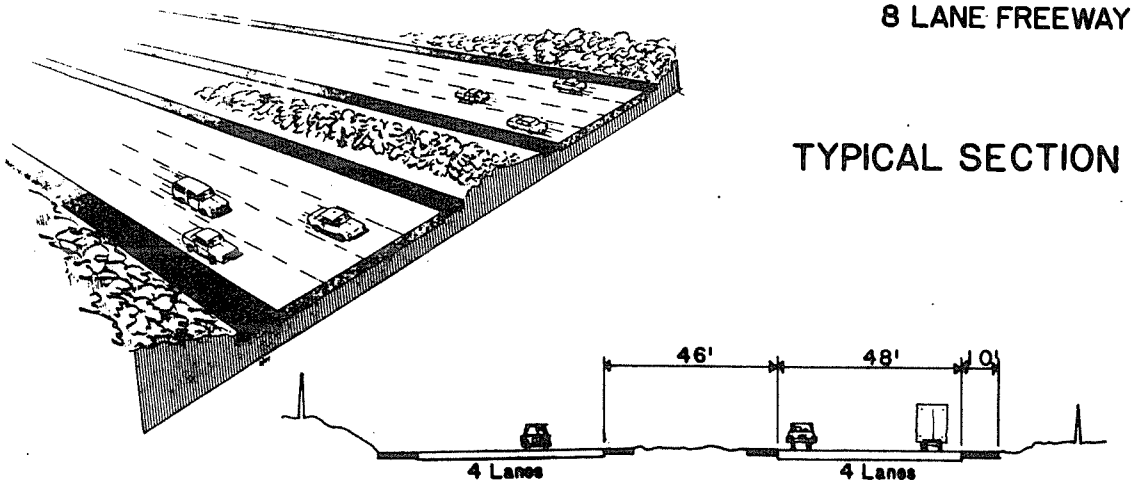
9. 8-lane Freeway

The freeway only alternative would have full control of access and grade separation at intersections. It have would included a wide median that could accommodate an LRT system, or future median widening for mixed flow or Bus/HOV lanes. The following figure is the typical section for this alternative.

Between Route 101 and the Route 85/Route 87 interchange, the Guadalupe Corridor, a proposed four lane expressway with LRT in the median, would have been widened to a multi-lane facility and the at-grade intersections would be grade-separated. Figure II-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 were $400 million.

This alternative was not chosen as the Project Alternative because of considerable community and Policy Advisory Board opposition at this time.



10. 8-lane Freeway with LRT

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

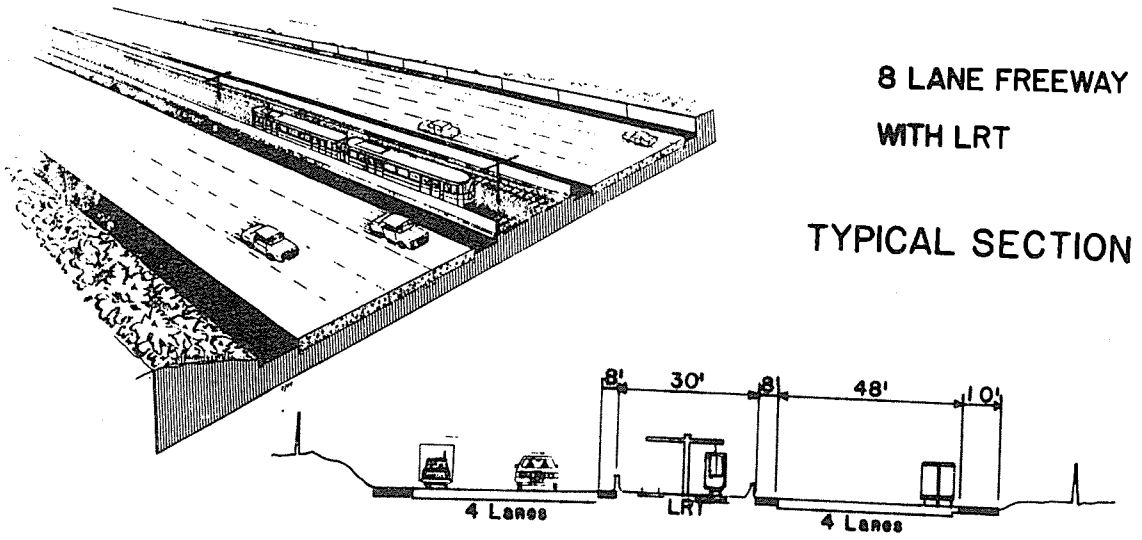
The LRT portion of this alternative extended the LRT of the Guadalupe Corridor Project from the Route 85/Route 87 interchange northerly in the Route 85 freeway median to the vicinity of Stevens Creek Boulevard.

The following figure depicts the typical section for this alternative. Both the interchanges and LRT station locations are depicted in Figure V-7.

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

This alternative was not chosen as the Project Alternative for the following reasons:

1. The eight lane freeway alternative was not chosen due to considerable community and Policy Advisory Board opposition.
2. Regional priority for LRT in this corridor is low.
3. LRT funding in the near future is doubtful.



11. Saratoga Design Variation

The Saratoga Design Variation evaluated in the DEIS/DEIR consisted of a change in the base profile of Route 85 through the City of Saratoga. Figure V-10 depicts this design variation. It would have caused the vertical alignment of Route 85 to be fully depressed through much of the city, instead of the base profile which was partially depressed. This variation was requested by the City of Saratoga.

The benefits of this design variation would be the reduction of noise and aesthetic impacts. However, the depressed roadway would be subject to flooding because it would lie below the base floodplain of Saratoga Creek, Calabazas Creek, and Rodeo Creek. According to the "Preliminary Phase I Report Route 85 West Valley Transportation Corridor Study" prepared by TJKM Transportation Consultants for the City of Saratoga,

> "The depressed profile appears to be marginally superior when compared to the at grade base profile because it would be less disruptive, less visually apparent, less noise intrusive, and would maintain land values at a higher level. The tradeoffs involved with this alternative may be the need for additional right of way acquisition at interchange locations and the higher degree of construction noise and pollutant emissions from construction equipment. In addition, haul trucks may be routed through surface streets to dispose of excavation spoils."

This variation applied to all of the build alternatives except LRT only, and was estimated to cost an additional $40 to $60 million 1985 dollars depending on the selected alternative. This cost includes $10.0 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.

The SDV was not chosen as part of the project profile for the following reasons:

> Full depression of the freeway facility for visual and noise mitigation is not cost effective.
> Full depression of the freeway facility would involve significant impacts to Saratoga, Rodeo, and Calabazas Creeks. It would also involve aqueducting Saratoga and Rodeo Creeks across the freeway. These aqueducts, during a seismic event, or storms in excess of the design year, could fail and flood the freeway facility.

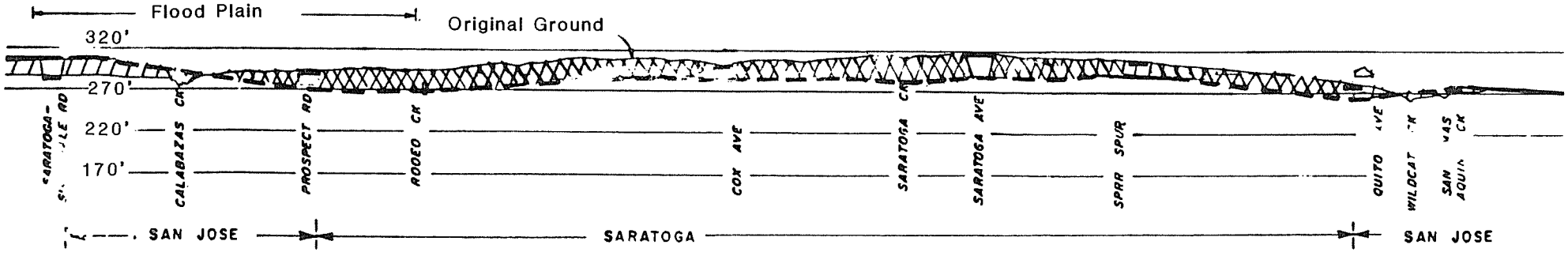


FIGURE V-10

SARATOGA DESIGN VARIATION PROFILE

12. Capital Costs

Table V-1, DEIS/DEIR Alternative Costs, details the costs of the various alternatives. It itemizes each alternative's cost into individual items such as: right of way costs; construction costs; vehicle costs; and total costs.

The Saratoga Design Variation evaluated in the DEIS/DEIR was estimated to add between $40 and $60 million dollars to each alternative.

13. Operation and Maintenance Costs

Table V-2, following, shows the annual operation and maintenance costs for all the DEIS/DEIR 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.

ROUTE 85 TRANSPORTATION CORRIDOR PROJECT

CAPITAL COSTS
DEIR/DEIS ALTERNATIVES
TABLE V-1

* ALL COSTS ESTIMATED IN 1985 $ MILLION *

ALTERNATIVE	CONSTRUCTION COST			R/W COST				BASE PROFILE TOTAL COST, $M	SARATOGA DESIGN VARIATION	
	HIGHWAY	TRANSITWAY	TRANSIT	ALIGNMENT	UTILITY RELOC.	PARK & RIDE ***	BUS OR LRT VEHICLES		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 COST INCLUDES TRACK, ELECTRIFICATION, COMMUNICATION, STATIONS AND STRUCTURES.
2. BUS TRANSIT COST INCLUDES STATIONS AND MAINTENANCE FACILITY.
3. THE ADDITIONAL COST FOR THE DESIGN VARIATION THROUGH SARATOGA IS FOR 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.
6. TOTAL COSTS INCLUDE LANDSCAPING AND REVEGETATION.
7. NO PROJECT AND TSM ALTERNATIVES WOULD RESULT IN THE SALE OF STATE OWNED R/W YIELDING $85 MILLION (1985 DOLLARS)

TABLE V-2
DEIS/DEIR ALTERNATIVES
ANNUAL MAINTENANCE AND OPERATION COSTS
(MILLIONS OF 1985 DOLLARS)

	MAINTENANCE COSTS (1)			OPERATION COSTS (1)			
		TRANSIT (2)			TRANSIT (2)		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	0	0	0	0	1.1
8-FWY & LRT	1.1	2.7	0	0	4.0	0	7.8

(1) Does not include costs of personal automobile, and costs from LRT and Bus stations or stops.
(2) Does not include 5% General Administration Costs.

C. Preferred/Project Alternative

1. Description

The project alternative is a facility consisting of a new freeway to be constructed along the unconstructed adopted Route 85 alignment between Route 101 near Bernal Road and Miyuki Drive, and between Route 87 and Route 280, and that the Guadalupe Corridor Project be revised to provide a freeway facility, instead of the presently proposed expressway on Route 85 on the overlap section between the Route 87/85 interchange and Miyuki Drive. In addition, all interchanges, separations, bridge structures, retaining walls, sound walls, grading, and other design features are to be designed as appropriate to accommodate future transportation options in the corridor. Table V-3 lists the interchanges and grade separations for the project alternative. The Route 85 project is to be as follows:

Typical Section

Provide a freeway with 6 total lanes consisting of 4 mixed flow lanes and 2 lanes designated as commuter lanes for buses and other high occupancy vehicles (HOV's) of 2 or more persons. Commuter lanes will be in operation during peak periods only, mixed flow at other times of the day. The commuter lanes will be located on the inside, adjacent to the median and separated from the mixed flow by a buffer area as appropriate/required. The median will be of sufficient width for future mass transportation options. Figure V-11 depicts the typical section of the Project Alternative.

Interchanges

Interchanges (I/C) will be provided for at the designated locations shown on Figure V-12. This figure does not refer to the interchanges as partial or full as do Figures V-6 to -9. Final interchange configurations will be determined during the freeway agreement process. Figure V-12a depicts typical interchange configurations. Right of way acquisition and the construction of portions of the freeway to freeway interchanges (Routes 85/101, 85/87, 85/17, and 85/280) and all other interchanges and configurations as determined during the freeway agreement negotiation/execution process will be provided as necessary to permit staged development based on available funding at the time of construction.

Profile, Mitigation

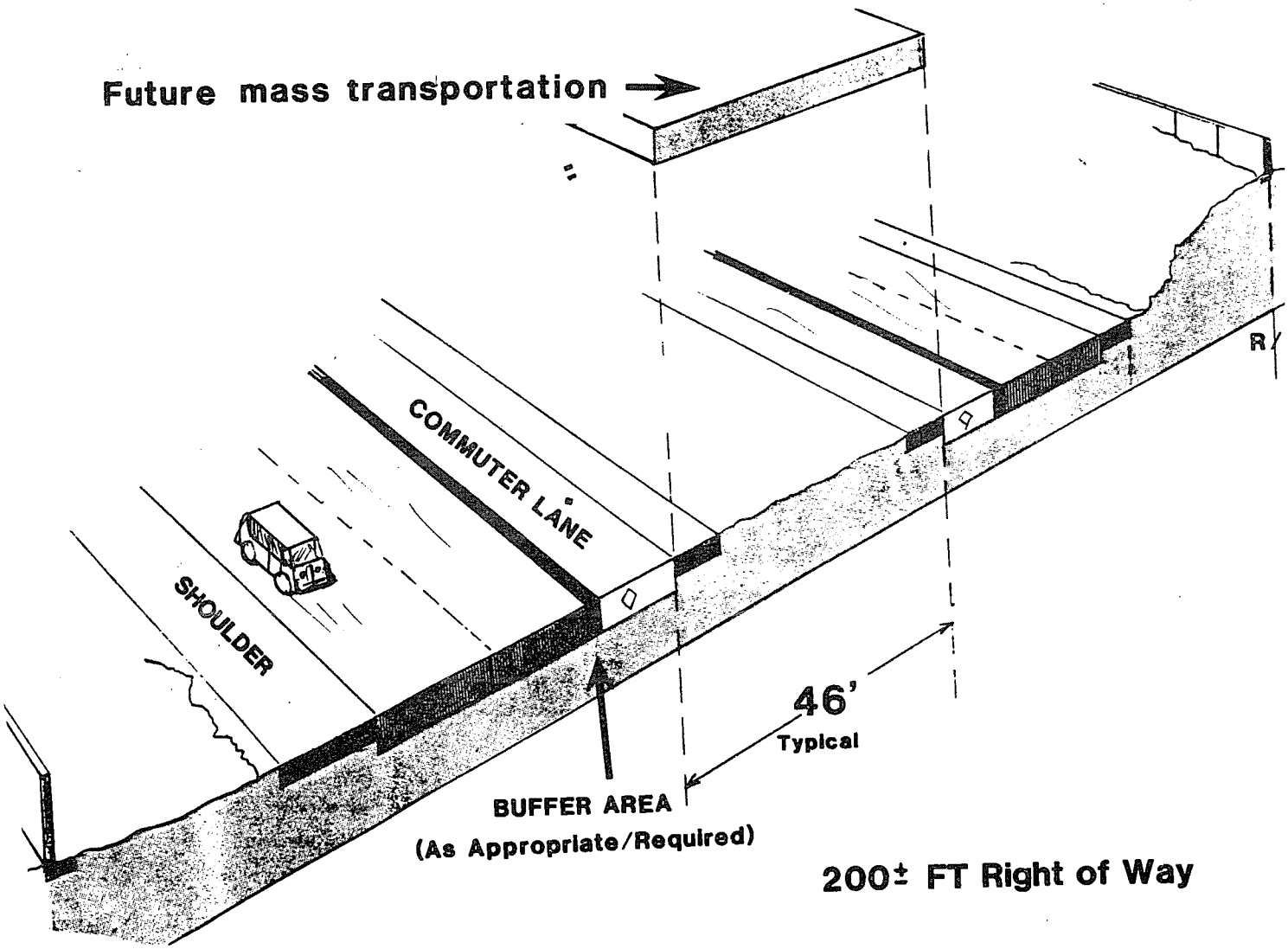
The project is to contain a freeway profile that addresses the concerns of all communities through which the freeway traverses, and a profile that adheres to State, Federal and local

6 Lane / HOV Freeway ---- 46 Foot Median

2 of the 6 Lanes designated as

High Occupancy Vehicle (HOV) Commuter Lanes

during peak periods



PROJECT TYPICAL SECTION

FIGURE V-11

TABLE V-3
MAJOR STRUCTURE LOCATIONS

LOCATIONS	PROJECT ALTERNATIVE OVER(1)	UNDER (1)	INTERCHANGE YES/NO (P.M.)
Route 101/ Bernal Road/Tennant Ave.	X		YES (R0.0)
Monterey Road	X		NO
Southern Pacific R.R.	X		
Great Oaks Boulevard	X		YES (R0.3)
Via Del Oro (2)	X		NO
Miyuki Drive vicinity (2)	X		NO
Cottle Road		X	YES (R1.8)
Lean Avenue		X	NO
Snell Avenue		X	NO
Blossom Hill Road		X	YES (R3.7)
Cahalan Avenue	Future ?	Future ?	NO
State Route 87/ Santa Teresa Blvd.	X		YES (R5.0)
Branham Lane (3)		X	NO
Winfield Boulevard	X		NO
Guadalupe River	X		NO
Sanchez Drive	X		NO
Almaden Expressway	X		YES (R6.0)
Russo Drive		X	NO
Meridian Avenue		X	NO
Camden Avenue		X	YES (R8.0)
Leigh Avenue		X	NO
Union Avenue		X	YES (R9.1)
S. Bascom Avenue		X	YES (R10.2)
Lark Avenue (4)		X	YES
State Route 17		X	YES (R10.5)
Los Gatos Creek	X		NO
Southern Pacific R.R.		X	
Winchester Boulevard		X	YES (R11.0)
Pollard Road		X	NO
Quito Avenue	X		YES (R12.8)
Southern Pacific R.R.		X	
Saratoga Avenue	X		YES (R13.7)
Saratoga Creek	X		NO
Cox Avenue		X	NO
Prospect Road	X		YES (R15.3)
Calabazas Creek	X		NO
Saratoga-Sunnyvale Road	X		YES (R15.9)
Stelling Road		X	NO
McClellan Road		X	NO
Stevens Creek Boulevard		X	YES (R17.7)
Route 280	X (5)		YES (R18.4)

(1) Refers to the freeway profile. (2) Private Crossing Facility
(3) Route 87/85 interchange. (4) Part of Route 17/85 interchange
(5) Existing Route 280/85 interchange modifications

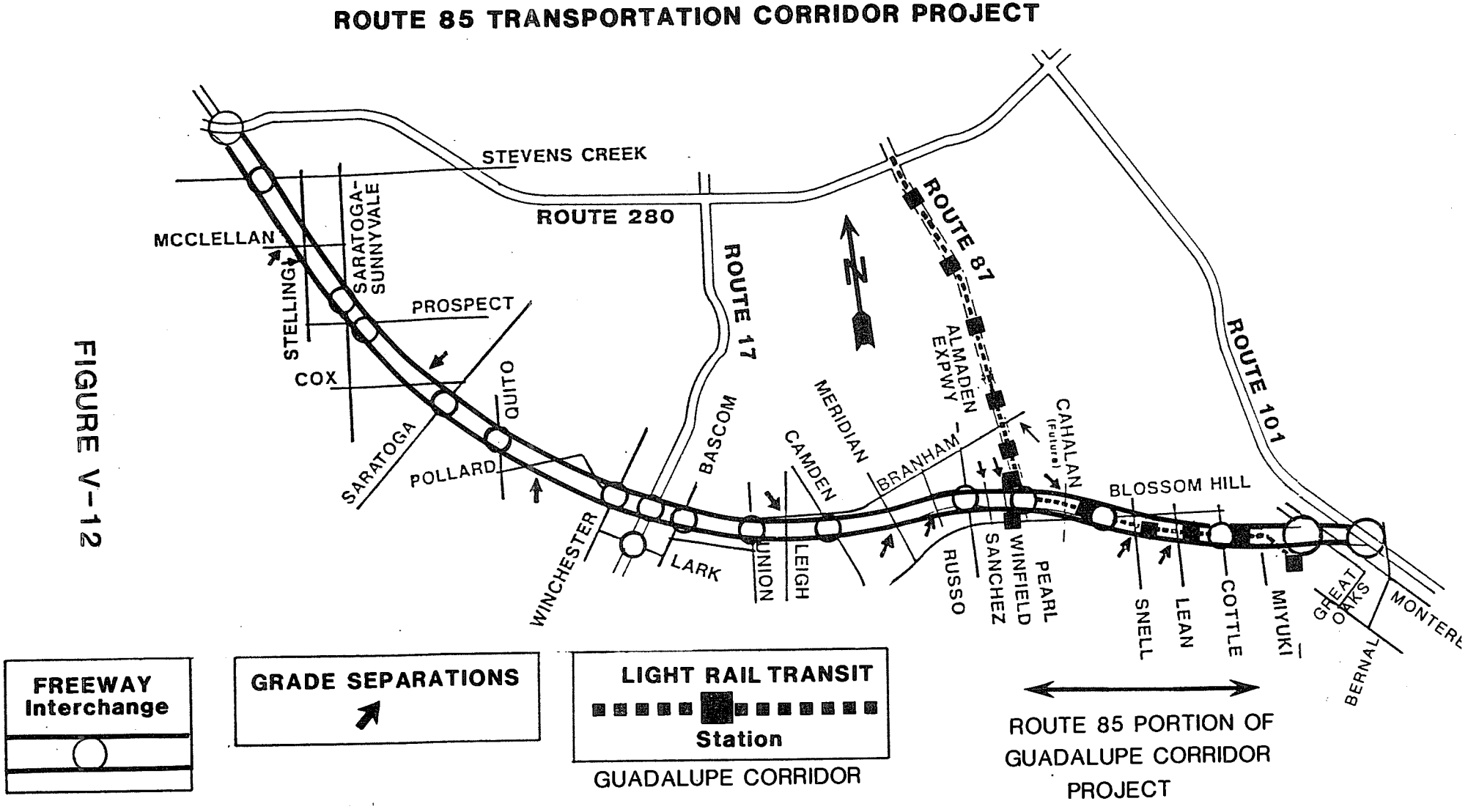
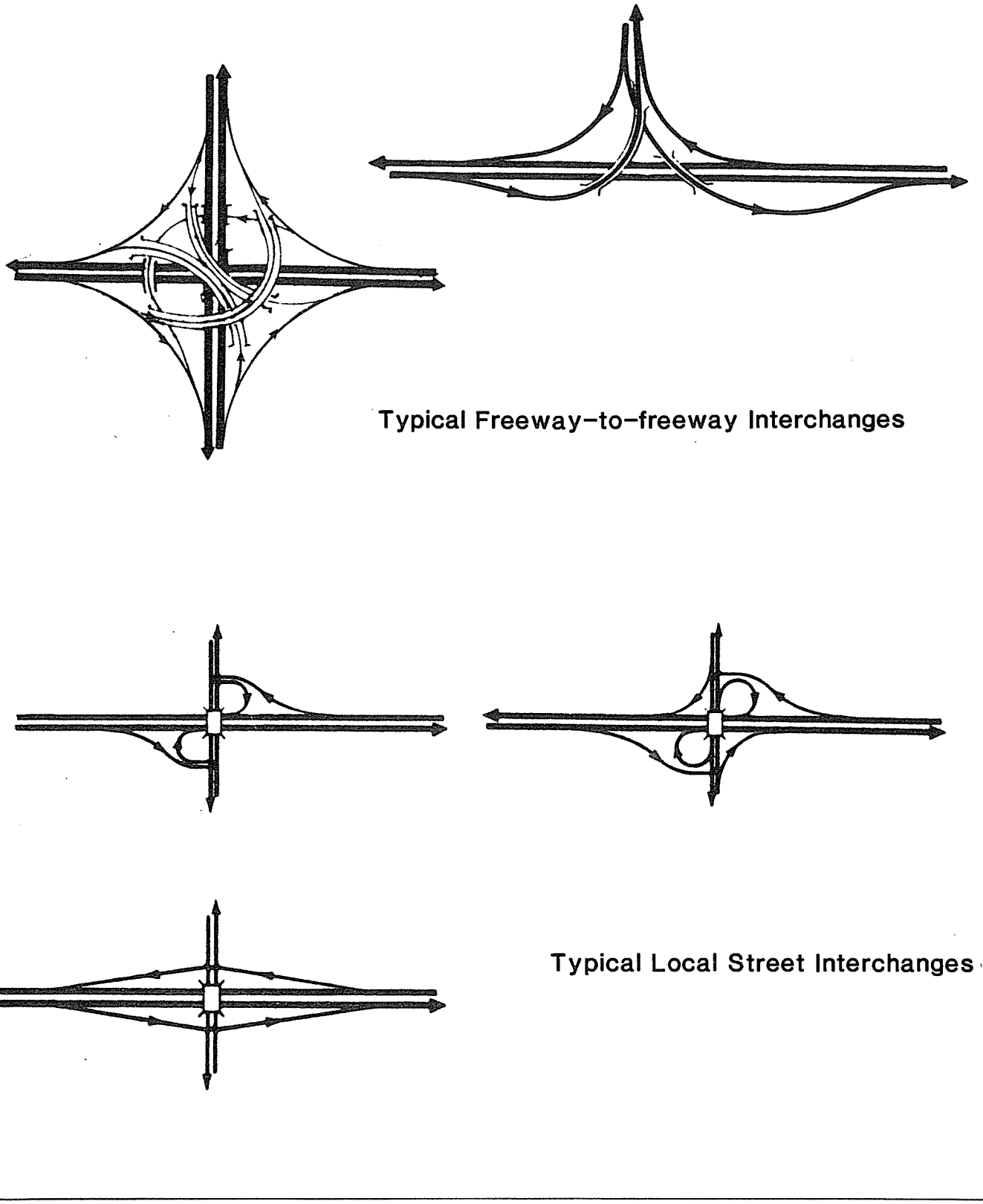


FIGURE V-12

PROJECT INTERCHANGE LOCATIONS



TYPICAL INTERCHANGES

FIGURE V-12a

design/policy standards and funding guidelines. Figure V-13 depicts the Project Alternative profile. This profile is essentially the same as the base profile studied in the DEIS/DEIR, except for a change at Meridian Avenue. This change was necessary to mitigate the impacts to Branham High School and Athenour Elementary School. The project profile may be modified further to mitigate other impacts at various locations along the corridor and/or as a result of the freeway agreement/execution process. In addition to the profile, all mitigation measures such as noise attenuation, landscaping, sequence of construction work, etc., as appropriate, will be consistently provided throughout the corridor.

Bicycle, Pedestrian Crossings, Park & Ride, Ramp Metering

The project includes the development of a bicycle plan for the corridor jurisdictions, consideration of pedestrian facilities, onsite park and ride facilities, ramp metering with a county wide traffic control center, bus and carpool by-pass lanes at all on-ramps, and other facilities as appropriate to provide incentives to use bicycles, transit, carpools to maximize the use and efficiency of the corridor as a transportation facility.

2. Project Alternative Cost Data

The construction cost of the project alternative is $365 Million (January 1987 $'s). The cost of the remaining right of way to be acquired is $130 Million as of January 1986. Figure V-14 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 needs to be acquired. The costs include $8.0 Million 1987 dollars for landscaping and revegetation of those areas disturbed by the construction of the project alternative. Landscaping will be included in the construction project or will be a separate project to be underway within one year of the completion of the contract construction. The utility relocation costs of the project are estimated to be $10 Million. Table V-4 describes the utilities that need to be relocated. If during the final design of the project, additional utilities are located, they will be relocated with the coordination of the appropriate utility company. In this FEIS, the utility relocations costs are included in the construction costs of the project. Table V-5 details the costs of the project.

The annual operation and maintenance costs of the project are $1.2 Million (1987 dollars).

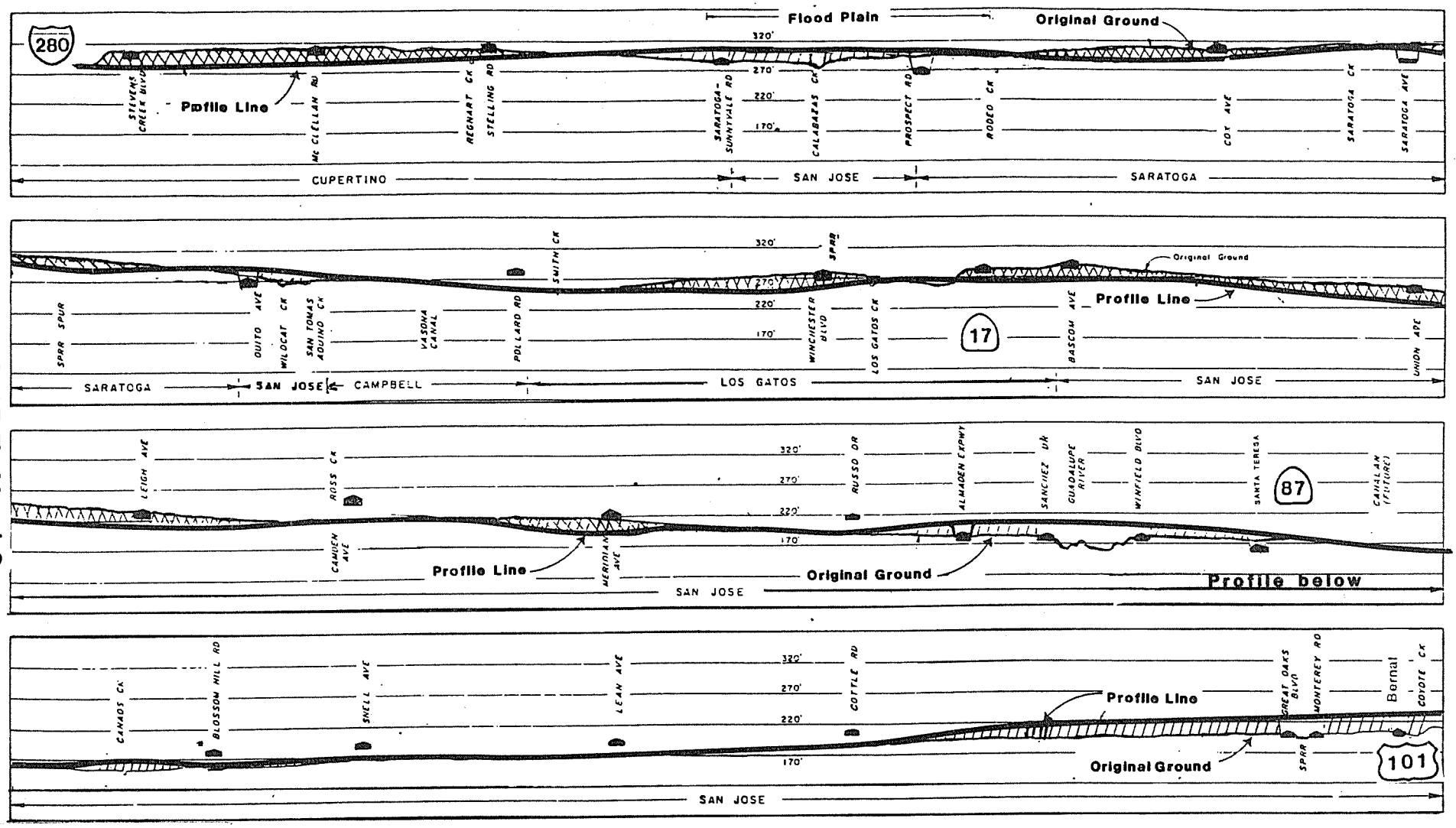


FIGURE V-13

SCALE IN FEET
0 750 1500 2250

* Constructed under Guadalupe Corridor Project

Proposed Street Location

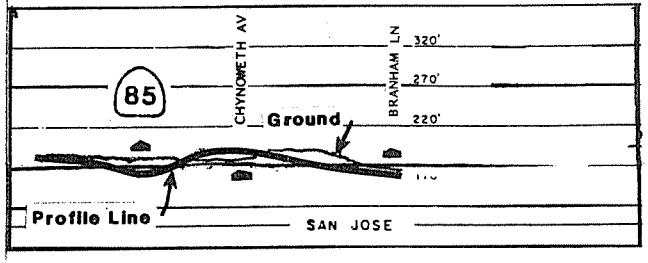
Fill

Cut

ROUTE 85 TRANSPORTATION CORRIDOR PROJECT

PROJECT PROFILE

Santa Teresa/Rte 87 Profile



RIGHT OF WAY

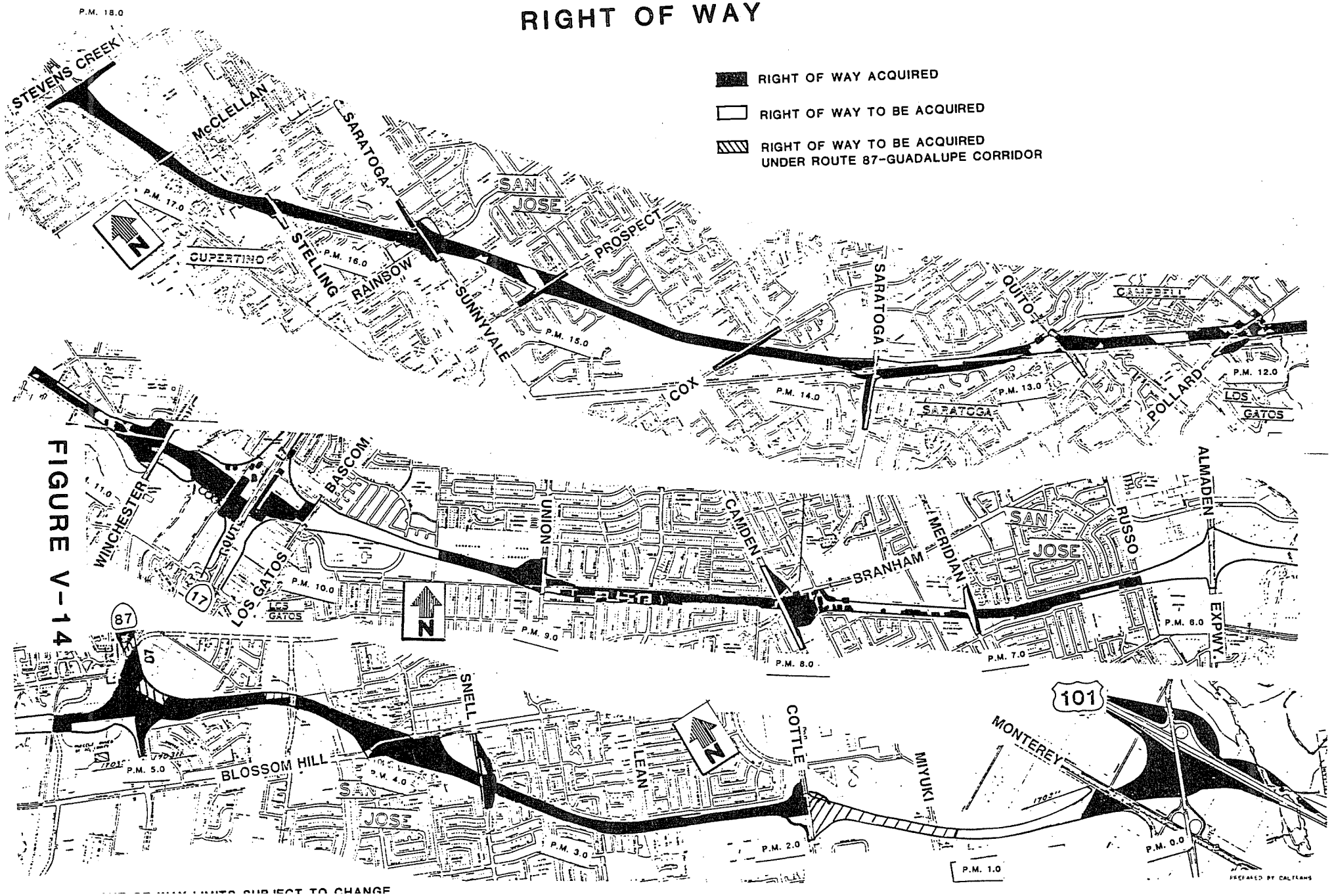


FIGURE V-14

RIGHT OF WAY LIMITS SUBJECT TO CHANGE

TABLE V-4

UTILITY RELOCATION REQUIRED
(PROJECT PROFILE)

	PUBLIC UTILITIES							
LOCATION	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		
Glen Brae 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

TABLE V-5
ROUTE 85 TRANSPORTATION CORRIDOR

CAPITAL COST ESTIMATE (MILLIONS $) FOR THE ROUTE 85 PROJECT

6 LANE/HOV FREEWAY (1)

Construction Cost (2)				R/W Costs	Total Costs
Route 101 at Monterey Road to Route 87/ Santa Teresa	Guadalupe River to Route 280	GCP-Measure "A" Portion (3)	Total Constr. Cost	Alignment	Project
122	230	13	365	130 (4)	495

Notes: (1) Two of the six lanes designated High Occupancy Vehicle (HOV)-Commuter Lanes during Peak Periods.

(2) a. Includes the cost for mass transportation compatability, additional structure width, retaining walls, ETC. to provide for future mass transportation.
b. Park and Ride / Bike costs assumes all facilities are on-site (No Additional R/W).
c. Includes Utility Relocation Costs
d. The above costs do not include Project engineering, and Construction Engineering costs.
e. Estimated in Millions of January 1987 Dollars.

(3) GCP - Guadalupe Corridor Project. Advanced funds to GCP for facilitating the revision of GCP to freeway.

(4) Remaining Right of Way (R/W) Cost (1/86 $). (See Figure V-14)

3. Construction Phasing

In a project of this magnitude, construction would take a number of years and be done in multiple phases. Listed below is an example of one possible approach to the construction stages for the project alternative in the corridor once environmental clearance is obtained, design documents completed, and all the necessary right of way within each contract section 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 State's policy, each section will be broken down into many smaller contracts.

Possible Construction Phasing

Location	Activity
Guadalupe River	Construct Bridge
Prospect Road to Route 280/Stevens Creek Boulevard	Construct Freeway, Modify and Construct Interchanges
Route 101 to Route 17	Excavate material from Route 17 to Route 87 and build a 6 lane 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 lanes and modify Interchanges on existing Route 85 **

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

** This portion is under a separate study called the Triangle Study".

The above construction sequence, read from top to bottom, would take approximately 5 to 7 years to complete. Other sequences of construction are possible, depending on the availability of funds, movement of earthwork material, right of way acquisition, utility relocation, local agreements, environmental mitigation, etc. The final sequence will be developed during final design.

4. Funding

Funding for the project will be primarily from funds generated by "Measure A", a ten year Santa Clara County 1/2 cent sales tax allocated to the improvement of specific highways, one of which is Route 85. State and Federal funds will also be sought for construction when available. The amount of future Federal and State

fund participation to be sought, will depend on the then applicable allocation and budgeting processes of the California Transportation Commission, Regional Planning Organizations, and appropriate local agencies. If local communities desire mitigation measures not required under federal or state regulations, such measures will have to be funded from local monies. Additional detail on mitigation measures is contained in Table VI-30 on page VI-174.

VI

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

VI. Affected Environment and Environmental Consequences: Setting, Impacts, and Mitigation

Technical studies were developed to provide background data and to assist in evaluating the environmental consequences of the project alternative. The following studies were prepared for the Route 85 transportation corridor and are incorporated by reference:

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.
9. Final Relocation Impact Statement
   Caltrans Right of Way, November 1986.
10. Final Travel Projections Report
    Caltrans, Transportation Studies Branch, April 1987.

All of these technical studies are on file at the Caltrans District Office at 3333 California Street and also 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 III-1 on page &COUNTMAP. 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 Area and contains a full range of urban land uses, along with some of the last remaining agricultural land in the Bay Area. 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

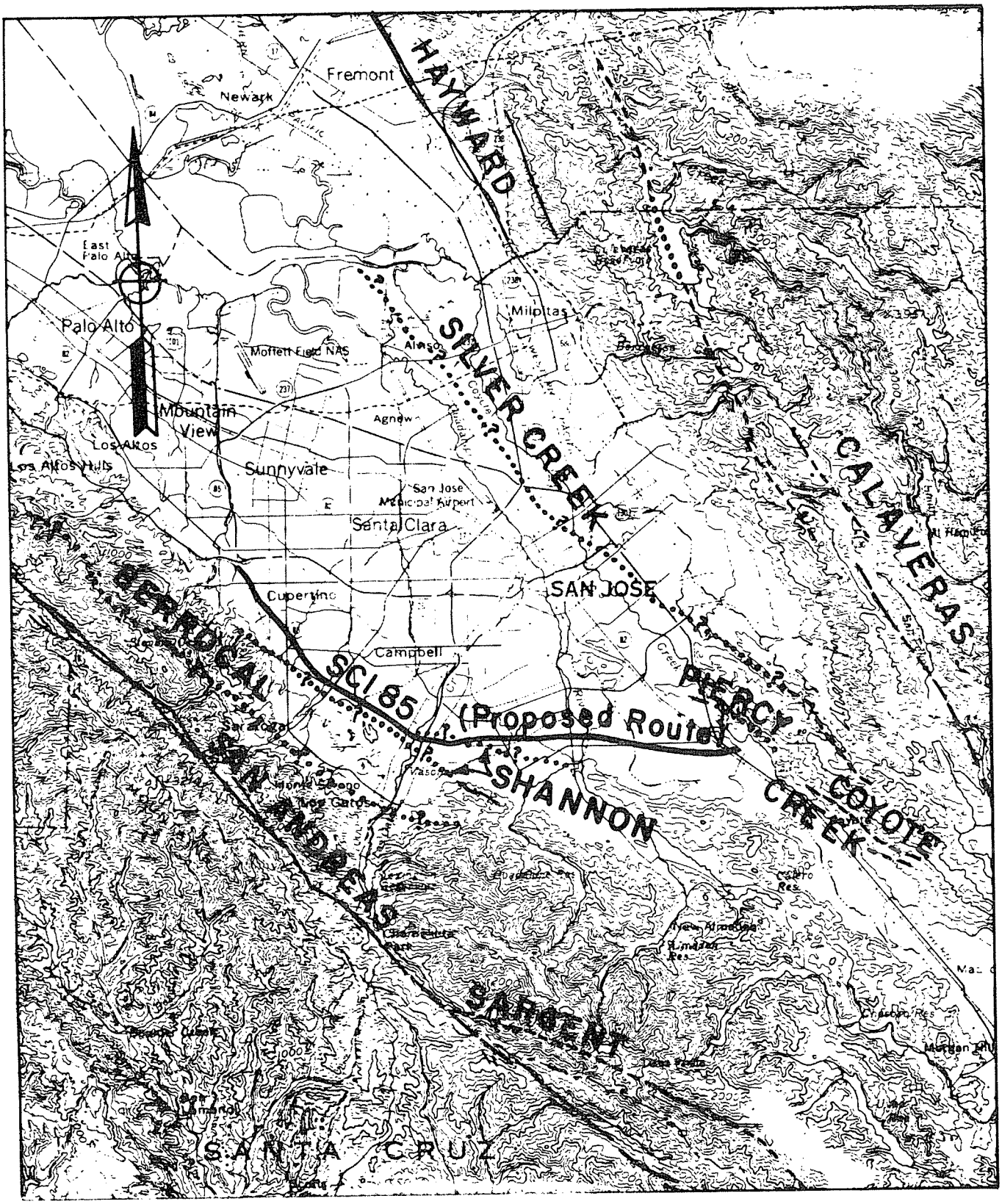
The Santa Clara Valley is within a zone of moderate to high seismic hazard which lies between the San Andreas fault zone and the Hayward-Calaveras fault zone. These faults trend in a northwest direction, are seismically active, and have been associated with significant earthquakes. The San Andreas fault 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 is the suspected source of a 1911 6.6 magnitude (Richter) earthquake, 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 Route 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*

FAULT LOCATION MAP

Scale 1" = 4.5 Miles

FIGURE VI-1

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	6.7 *
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 BEDROCK 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 is 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 sands and silts due to vibration).

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

Liquefaction.
(Liquefaction is the phenomenon whereby loose saturated sands and silts 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-3 on page I-29. 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.

If portions of the Saratoga Design Variation are included in the project profile, as described in an executed freeway agreement, it would require the aqueducting of Saratoga and Rodeo Creeks across the freeway facility. These structures could fail during a seismic event and flood the facility.

3. Hydrology

a. Floodplains

The Route 85 transportation corridor crosses 12 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 East Br.	Wedgewood Avenue, 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

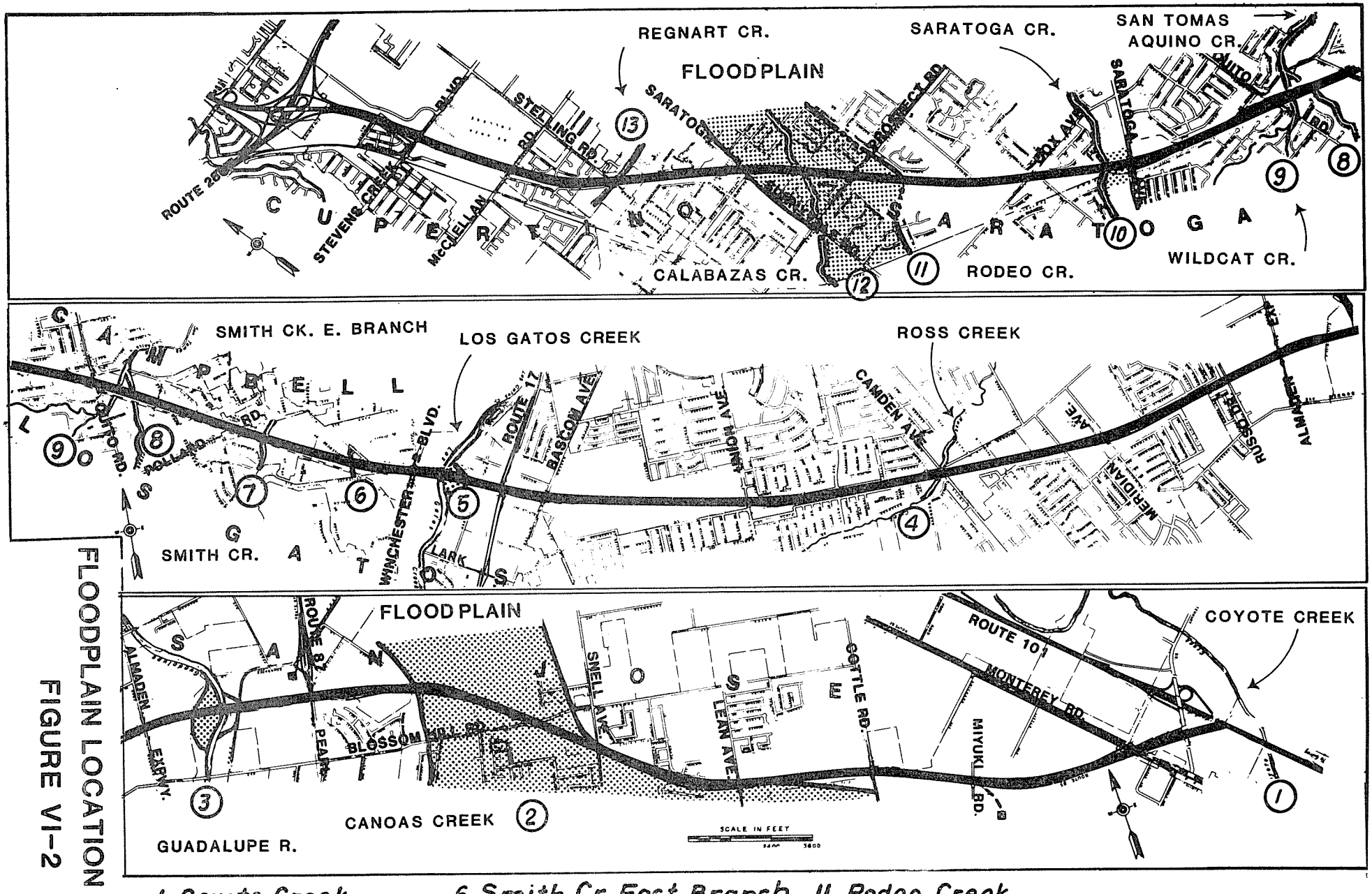
* Rodeo Creek is the eastern edge of the Calabazas Creek Floodplain.

With the exception of the Smith Creek, East Branch, all of the above floodplains are based on the Santa Clara Valley Water District Flood Control Facility and 1% Flood Maps , dated November, 1983.

The project 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 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 (23 CFR 650 subpart A). According to subpart A,

> " 'Natural and beneficial floodplain values' shall include but are not limited to fish, wildlife,



FLOODPLAIN LOCATION MAP

FIGURE VI-2

1. Coyote Creek
2. Canoas Creek
3. Guadalupe River
4. Ross Creek
5. Los Gatos Creek
6. Smith Cr. East Branch
7. Smith Creek
8. San Tomas Aquino Cr.
9. Wild Cat Creek
10. Saratoga Creek
11. Rodeo Creek
12. Calabazas Creek
13. Regnart Creek

FLOODPLAIN

plants, open space, natural beauty, scientific study, outdoor recreation, agriculture, aquaculture, forestry, natural moderation of floods, water quality maintenance, and groundwater recharge."

Discussions of these items are found in other sections of this chapter which are referenced by section as follows:

fish, wildlife, plants	B-4	Biotic Community
open space	G-3-c	Open Space
natural beauty	D	Aesthetics
outdoor recreation	F-1	Parks and Recreational Lands
agriculture	G-3-d	Agricultural Land
natural moderation of floods	B-3-a	Hydrology
water quality maintenance	B-3-b	Water Quality
groundwater recharge	B-3-e	Groundwater Level

The Route 85 project alternative, where it overlaps with the Guadalupe Corridor, will be a longitudinal and transverse encroachment on the base floodplain of Canoas Creek, and as outlined below, constitutes an insignificant encroachment according to the 23 CFR 650.105(q). 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 facilities 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 project will have no effect on the base floodplain as it will be contained entirely within the median. There is no practicable alternative to this longitudinal encroachment. If the alignment were shifted to the north or south it would cause displacement of developed residential areas and/or further longitudinal encroachments onto the Canoas Creek floodplain. Significant encroachments are addressed in the Floodplain Findings form on page VI-10.

A portion of the Saratoga Design Variation profile discussed in the DEIR/DEIS impacts the Calabazas Creek floodplain by causing the Route 85 roadway to be below the floodplain. This is not the case in the project profile; however, if during the freeway agreement negotiation/execution process, it is decided that the portion of the Saratoga DEIR/DEIS Design Variation profile affecting the Calabazas Creek floodplain will be part of the final project design, the impacts to and construction on Calabazas Creek, which are necessary to confine its floodplain, will be addressed in a separate appropriate environmental document that would be prepared by the Santa Clara Valley Water District

Below is the Floodplain Finding as required by Executive Order 11988.

ONLY PRACTICABLE ALTERNATIVE FLOODPLAIN FINDING

Pursuant to: Executive Order 11988 - Floodplain Management

The Guadalupe River and the Coyote, Los Gatos, Saratoga, and Calabazas Creeks and their associated floodplains are all located within the corridor of the Route 85 project alternative and, according to 23 CFR 650.105(q), will suffer a significant encroachment with the construction of the project alternative.

All of these watercourses are perpendicular to the corridor and are impacted transversely. These encroachments cannot be avoided with the realignment of the corridor, either north or south of its present locations, without having an equivalent or greater encroachment on the watercourses. In addition to the direct impact to the watercourses, additional right of way would need to be purchased, displacing residential and commercial developments, if the alignment were shifted north or south of its present location. Therefore, shifting the alignment to avoid the encroachment is not practicable.

The construction of the drainage facilities for the project alternative will conform to the applicable federal, state, and local floodplain protection standards.

All necessary permits, as described on page VI-14 will be obtained prior to any construction in any of the floodplains associated with the Route 85 project alternative.

Based on the above considerations, it is determined that there is no practicable alternative to the proposed construction across the watercourses and that the proposed construction includes all practicable measures to minimize harm to the watercourses and their associated floodplains.

TABLE VI-3
FLOODPLAIN ENCROACHMENT

	FLOODPLAINS												
IMPACTS	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
Affect Natural and Beneficial Floodplain Values?	Yes **	No	Yes **	No	Yes **	No	No	No	No	Yes **	No	Yes **	No
Special Mitigation to Minimize Impacts Required?	No	No	No	No	No	No	No	No	No	No	No	No	No
Significant Encroachment?	Yes	No	Yes	No	Yes	No	No	No	No	Yes	No	Yes	No
Location Hydraulics Study Available?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

* See Text for explanation.
** See Section B.4 of this chapter for further information.

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

(SCVWD). The SCVWD estimates the cost of these improvements to be approximately $10 million dollars. These improvements, which are currently in its upcoming projects program, would eliminate the base floodplain associated with Calabazas Creek and allow the Route 85 transportation facility to cross the creek on a short

:IS

bridge. With these channel improvements, the depressed section of the facility would no longer be in the base floodplain.

In addition to Calabazas Creek, if portions of the Saratoga Design Variation are included in the project profile, as described in an executed freeway agreement, it would require the aqueducting of Saratoga and Rodeo Creeks across the freeway facility. These structures could fail during a seismic event, or storms in excess of the design year, and flood the facility.

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

b. Water Quality

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

The surface water quality is generally considered good with total dissolved solids of 149 parts per million (ppm) and 183 ppm 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.

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 are the same as a number of those required by the

California Department of Fish and Game. In addition to following Caltrans Standard Specifications, mandatory minimum sized desilting basins based on the amount of acreage disturbed will be required at each watercourse crossing for erosion control.

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.

There has been considerable research on developing predictive models to estimate pollutant loadings from pavement runoff on highways and their subsequent impact on receiving waters. However, there is still no approved FHWA model for assessing impacts of such pollutants, even though FHWA has extensive ongoing research to determine the most significant parameters under various highway types and conditions with which to develop a predictive model for determining pollutant loadings.

As the construction of the project alternative requires the crossing of the Guadalupe River and the Los Alamitos Percolation Ponds, special construction measures will be followed. These include erection of a temporary wooden trestle as a construction platform, diversion of the incoming water by the Santa Clara Valley Water District from 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. At this time it does not appear that dewatering will be necessary; however, if dewatering does occur, there will be no discharge into the Guadalupe River. Therefore, a National Pollutant Discharge Elimination System permit from the Environmental Protection Agency will not be required. If dewatering does become necessary, the proper procedures for obtaining this permit will be followed.

As mitigation for construction impacts at the Guadalupe River crossing and the Los Alamitos Percolation Ponds several measures have been proposed by the Santa Clara Valley Water District including:

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

c. Wetlands

There are two wetlands which will be impacted by the construction of the project alternative 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-33 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, except for several underground fuel tanks. All fuel tanks, and any other hazardous waste material encountered during right of way acquisition, will be cleared prior to the construction of the project. If, during construction, any additional hazardous waste site/sites are 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. If improperly abandoned agricultural wells are encountered during the construction of the project, the Santa Clara Valley Water District will be contacted immediately.

e. Groundwater Level

Preliminary information indicated that none of the ground water resources underlying the corridor will be affected by the project alternative. Fourteen borings were performed along the corridor which indicated that the ground water level was well below the proposed depressed sections of the project profile. These borings will be monitored through the next rainy season to determine if there is an appreciable rise in ground water depth which could impact the project profile.

f. Permits

The following permits will be required for the construction of the Route 85 project alternative.

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

The U. S. Army Corps of Engineers Section 404 of the Clean Water Act has jurisdiction over all of the watercourses which cross the Route 85 corridor. The Corps of Engineers has been invited to be a cooperating agency. The following water courses will require a

Section 404 permit depending on final design of the project alternative.

Calabazas Creek	Saratoga Creek
Los Gatos Creek	Guadalupe River and Percolation Ponds
Coyote Creek	

The following water courses are covered by the nationwide permit for purposes of Section 404 provided the associated fills are less than one acre in size per crossing.

Regnart Creek	Rodeo Creek
Wildcat Creek	San Tomas Aquino Creek
Ross Creek	Canoas Creek

If no fill is placed below the ordinary high water line on the watercourses listed below, then Section 404 of the Clean Water Act does not apply.

Rodeo Creek	Vasona Canal
Smith Creek	Smith Creek East Branch

All necessary easements and/or use permits will be issued to the appropriate agencies.

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

United States Department of the Interior

FISH AND WILDLIFE SERVICE
SACRAMENTO ENDANGERED SPECIES OFFICE
1230 "N" Street, 14th Floor
Sacramento, California

RECEIVED
MAR 30 1984
ENVIRONMENTAL PLANNING

MAR 28 1984
In reply refer to: SESO
#1-1-84-SP-257

Mr. E. W. Blackmer, Chief
Environmental Analysis
Department of Transportation
1120 "N" Street
Sacramento, California 95814

Subject: Request for List of Endangered and Threatened Species in the Area of West Valley Transportation Corridor, Santa Clara County, California

Dear Mr. Blackmer:

This responds to the letter from your agency dated March 15, 1984, requesting a list of endangered and threatened species and those proposed for listing that may be present within the subject project area. This fulfills the requirement of the Fish and Wildlife Service to provide information on listed species pursuant to Section 7(c) of the Endangered Species Act of 1973, as amended.

To the best of our knowledge, there are no listed or proposed threatened or endangered species within the project area. However, we are attaching a list of candidates which might, within the foreseeable future, be proposed and then undergo a final rulemaking. We urge that you consider informal consultation to avoid any conflicts at a later date should the species become listed and be present within the area of the proposal. Informal consultation should be requested of our office at the letterhead address.

Should you have additional questions regarding this list or your responsibilities under the Act, please contact Mr. Ralph Swanson at (FTS) 448-2791 or (916) 440-2791. Thank you for your interest in endangered species.

Sincerely yours,

Gail C. Kobetich

Project Leader

Attachments

LETTER 1

LISTED AND PROPOSED ENDANGERED AND THREATENED
SPECIES, AND CANDIDATE SPECIES THAT MAY OCCUR
IN THE AREA OF THE PROPOSED
WEST VALLEY TRANSPORTATION CORRIDOR
SANTA CLARA COUNTY, CALIFORNIA
#1-1-84-SP-257

LISTED SPECIES

None

PROPOSED SPECIES

None

CANDIDATE SPECIES

Salt marsh yellowthroat, Geothlypis trichas sinuosa (2)

(2) = Category 2

observed in the upper reaches of Coyote Creek, the Guadalupe River, and Los Gatos Creek. Lack of recent observations could be attributed to the disturbance of creek channels and loss of riparian vegetation, although this conclusion is not based on any specific scientific study.

Only one recent comprehensive study, "Status of the Salt Marsh Yellowthroat in the San Francisco Bay Area, California, 1975-1976" by Margaret L. Foster, describes the salt marsh yellowthroat distribution within the Route 85 project area. While this study produced no evidence of use of habitat by the yellowthroat within the Route 85 corridor, its author hypothesizes that two years of drought may have influenced the distribution of the salt marsh yellowthroat. A new study of the salt marsh yellowthroat distribution was completed by the San Francisco Bay Bird Observatory in late 1985. The results of this study indicated that the salt marsh yellowthroat is no longer in the project area. Based on this study, the USFWS deleted the salt marsh yellowthroat from their most recent Species of Concern list.

Due to the amount of time that had passed after receiving the initial USFWS letter, a second List of Species of Concern was requested. This letter, dated August 15, 1986, deleted the salt marsh yellowthroat, but added the Bay Checkerspot Butterfly (BCB), (Euphydruas editha bayensis), as a proposed endangered species and the California tiger salamander, (Ambystoma tigrinum californiense), as a candidate species.

The BCB's habitat is restricted to native grasslands containing both the primary larval host, Plantago erecta, and the obligate secondary host plant, Orthocarpus densiforus. Such habitat is most often associated with serpentine soils. The Route 85 corridor does not contain serpentine soils or native grasslands. The nearest known location for the BCB, known as the Morgan Hill Colony, is located in the western foothills of the Hamilton Range east of US Route 101 and approximately 5 miles to the south of the Route 85 southern terminus.

The salamander's habitat is primarily vernal pools and occasional abandoned farms ponds. The Route 85 corridor contains no vernal pools. Although the Route 85 corridor does contain agricultural land, no farm ponds will be impacted by the construction of the Route 85 project alternative.

b. Habitats

Historically, 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.

United States Department of the Interior

FISH AND WILDLIFE SERVICE

SACRAMENTO ENDANGERED SPECIES OFFICE
2800 Cottage Way, Room E-1823
Sacramento, California 95825-1846

August 15, 1986

Mr. E.W. Blackmer, Chief
Environmental Analysis
Department of Transportation
1120 N Street
Sacramento, California 95814

Subject: Revised List of Endangered and Threatened Species in the West Valley Transportation Corridor, Santa Clara County (Case No. 1-1-86-SP-463)

Dear Mr. Blackmer:

As requested by letter from your agency dated July 16, 1986, you will find attached a list of the proposed endangered and threatened species (Attachment A) that may be present in the subject project area. To the best of our knowledge no listed species occur within the area. The list is intended to fulfill the requirement of the Fish and Wildlife Service to provide a list of species under Section 7(c) of the Endangered Species Act, as amended. Should you determine that a proposed species may be adversely affected, then you should initiate Section 7 conference proceedings with our office.

Also, for your assistance, we have included a list of species that are candidate species. These species are presently being reviewed by our Service for consideration to propose and list as endangered or threatened. Candidate species have no protection under the Endangered Species Act and are included for your consideration as it is possible the candidates could become formal proposals and be listed during the construction period. We have deleted the salt marsh yellowthroat from the attached list as recent surveys for this species have been negative.

Should you have any additional questions regarding this list or your responsibilities under the Act, please contact Dr. Jack

LETTER 1a

Williams at (916) 978-4866 or FTS 460-4866. Thank you for your interest in endangered species, and we await your assessment.

Sincerely yours,

David L. Harlow

for Gail C. Kobetich
Project Leader

Attachments

cc:
Chief, Endangered Species, Portland, OR (AFA-SE; Attn: Ralph Swanson)
Field Supervisor, Ecological Services, Sacramento, CA (ES-S)

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND CANDIDATE SPECIES THAT MAY OCCUR IN THE AREA OF THE PROPOSED WEST VALLEY TRANSPORTATION CORRIDOR, SANTA CLARA COUNTY (Case No. 1-1-86-SP-463)

Listed Species

None

Proposed Species

Insects

Bay checkerspot butterfly, *Euphydras editha bayensis* (PE)

Candidate Species

Amphibians

California tiger salamander, *Ambystoma tigrinum californiense* (2)

(E)--Endangered (T)--Threatened (CH)--Critical Habitat
(PE)-Proposed Endangered
(1)--Category 1: Taxa for which the Fish and Wildlife Service has sufficient biological information to support a proposal to list as endangered or threatened.
(2)--Category 2: Taxa for which existing information indicated may warrant listing, but for which substantial biological information to support a proposed rule is lacking.

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 main 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 17% 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, for either row crops or orchards. This classification accounts for 420 acres of the land or approximately 57% 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

Impacts and Mitigation

Approximately 9 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 describes the watercourses which would be affected by the construction of the project alternative. 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.

Coyote Creek - Coyote Creek is crossed by the Route 85/Route 101 interchange at the southeastern 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, 3.0 acres of riparian habitat will be created or enchanced. This new habitat will as closely as possible replace in kind the habitat lost as the result of this project. The replacement site is discussed in the Summary of Riparian Woodland Impacts and Mitigation Measures section on page VI-26.

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

TABLE VI-4
RIPARIAN BIOTIC VALUE

WATERCOURSE	WIDTH OF RIPARIAN HABITAT	BIOTIC VALUE IN/OUT (1)	RIPARIAN ACREAGE IMPACTS(2)
Coyote Creek	300'	High/High	1.0
Canoas Creek	< 50'	Low/Low	0.3
Guadalupe River	1100+'(3)	Low/High	0.7
Ross Creek	< 50'	Low/Low	0.3
Los Gatos Creek	180 - 310'	High/High	3.0
Smith Crk. East Br.	< 50'	Low/Low	0.3
Smith Creek	75 - 170'	Medium/Low	0.6
San Tomas Aquino Ck.	< 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	~180'	High/Medium	0.8
Regnart Creek	50 - 180'	Low/Low	0.4
		TOTAL ACREAGE =	9.1

(1) Biotic Value relates to the continuity of the riparian vegetation. An unbroken vegetation canopy would have a high value, while a broken canopy would have a low value. "In" is within the corridor, "out" is both upstream and downstream from the corridor.
(2) Based generally on 200 foot right of way.
(3) Includes percolation ponds on both sides of the Guadalupe River.

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 fol-

lowing: brown towhee, scrub jay, kingfisher, red-winged blackbird, Caspian tern, barn swallow, snowy egret and others.

3.0 acres of riparian habitat will be impacted by new shadows that would be created. The creation of these shadows should not significantly alter the wildlife habitat of the area. However, as mitigation for this impact at Los Gatos Creek, 9.0 acres of riparian habitat will be enhanced or created. The replacement site is discussed in the Summary of Riparian Woodland Impacts and Mitigation Measures section beginning on page VI-26 and shown in Table VI-5.

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. The replacement site is discussed in the Summary of Riparian Woodland Impacts and Mitigation Measures section on page VI-26.

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 0.8 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.

2.4 acres of habitat will be created or enhanced in the vicinity of the Route 85 corridor to compensate for loss of the 0.8 acres. The replacement site is discussed in the following Summary of Riparian Woodland Impacts and Mitigation Measures section.

Summary of Riparian Woodland Impacts and Mitigation Measures

There will be a loss of approximately 9.1 acres of riparian habitat associated with the construction of the project alternative. Of this 9.1 acres, 5.3 acres is considered to be high quality, 1.2 acres medium quality, and 2.6 acres 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.

Construction of the project alternative will require the modification to the stream channels which cross the corridor. This requires that 1601/1603 agreements be reached with the California 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. This construction will also require the issuance of a 404 permit from the US Army Corp of Engineers on several of the streams. These streams are listed in the Permits Required section on page VI-14.

The U.S. Fish and Wildlife Service has indicated that replacement of high quality riparian habitat should be at a ratio of three acres developed for each acre lost. The Department of Fish and Game has a policy of tree replacement on a five to one basis, with these replacements being of five gallon size for all trees except willows. Caltrans replacement policy permits tree replacement of up to a ratio of 10 to 1. The final ratio will be determined during the final design of the planting and revegetation plans.

Mitigation Plans

Mitigation measures for the loss of riparian habitat have been developed by Caltrans and the Federal Highway Administration in consultation with the California Department of Fish and Game, the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, and the Santa Clara Valley Water District. 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.

An advisory committee composed of representatives from the above agencies will oversee the design, implementation, and monitoring phases of all riparian/wetland mitigation plans. The committee will take the following actions to insure the successful establishment of the riparian/wetland replacement areas:

1. Site elevations for plantings will be determined by a qualified hydrologist, and will be closely monitored by a hydrologist and a biologist during construction grading.

2. Mitigation plantings shall make maximum use of locally adapted plant materials. Ideally, these materials will be collected on or near the project site. the feasibility of salvaging existing riparian trees with a commercial tree spade will be evaluated.

3. Collection, propagation and planting of native plant materials will be carefully timed to optimize the potential for successful establishment.

4. A monitoring program will be an integral part of each mitigation site plan. Monitoring will be conducted for a period of not less than five years following initial plantings. The monitoring programs will be designed to document the development of riparian/wetland vegetation and habitat values on the sites, and to recommend remedial measures if it appears that site conditions are not conducive to wetland establishment.

Table VI-5 describes the biology mitigation plan. This table includes the impacts to each creek, the amount of replacement acreage, and the site on which the mitigation will be done.

Coyote Creek Mitigation Plan - The Coyote Creek Mitigation Plan (CCMP) entails the creation of 13 1/2 acres of riparian woodland adjacent to Coyote Creek County Park at the Route 85/Route 101 interchange in south San Jose. The CCMP was developed through the joint efforts of Caltrans, California Department of Fish and Game, US Fish and Wildlife Service, EPA, Santa Clara County Parks and Recreation, and the Santa Clara Valley Water District and is expected to create a habitat of exceptional value to the wildlife of the area. If additional acreage is needed, work in the area of the Metcalf Ponds may be considered.

This acreage designated will mitigate the impacts on Coyote Creek (1 acres), a portion of Los Gatos Creek (3 acres), Calabazas Creek (0.8 acres), Saratoga Creek (0.5 acres), San Tomas Aquino Creek (0.4 acres), and Wildcat Creek (0.6 acres), respectively, by the development of new riparian woodland habitat.

The following actions will be taken to create a riparian woodland habitat at this location:

The area to be developed as riparian habitat will be graded to the level of the existing Coyote Creek low flow channel by the removal of the existing dikes. All grading will occur prior to breaching of the existing dike. Several high points or "islands" will not be graded so as to create refuge points for the wildlife.

Table VI-5

BIOLOGY MITIGATION PLAN

LOCATION	BIO MIT REQ'D	ACREAGE AFFECTED	MIT REQ'D (RATIO)	MIT PROP SITE
Coyote Creek	yes	1.0	3.0 (3:1)	CCMP
Canoas Creek	yes	0.3	0.3 (1:1)	GRPP
Guadalupe River	yes	0.7	0.7 (1:1)	GR
Guadalupe River PP *	yes	6.0	6.0 (1:1)	GRPP
Ross Creek	yes	0.3	0.3 (1:1)	GRPP
Los Gatos Creek	yes	3.0	9.0 (3:1)	85/17 & CCMP
Smith Crk. East Brn.	yes	0.3	0.3 (1:1)	GRPP
Smith Creek	yes	0.6	1.2 (2:1)	GR
San Tomas Aquino Creek	yes	0.4	0.4 (1:1)	CCMP
Wildcat Creek	yes	0.6	1.2 (2:1)	CCMP
Saratoga Creek	yes	0.5	1.5 (3:1)	CCMP
Rodeo Creek	yes	0.2	0.2 (1:1)	GR
Calabazas Creek	yes	0.8	2.4 (3:1)	CCMP
Regnart Creek	yes	0.4	0.4 (1:1)	GRPP
TOTAL		15.1	26.9 (1.8:1)	

GRPP = Guadalupe River Percolation Ponds (7.3 acres)
CCMP = Coyote Creek Mitigation Plan (13.5 acres)
85/17 = 85/17 Interchange area (4.0 acres)
GR = Guadalupe River area N & S of 85 crossing (2.1 acres)
* Even though the Guadalupe River Percolation Ponds are considered wetlands, they are included here for continuity within the overall biology mitigation package.

Water will be diverted from Coyote Creek in order to maintain the excavated area as a riparian woodland. This diversion will be coordinated with the SCVWD.

The area will be planted with plant material to match the existing Coyote Creek riparian plant material. A detailed planting scheme will be developed in cooperation with the appropriate permitting agencies at the time of final design. 15 gallon specimen trees will be planted as appropriate to provide a semblance of age-class distribution and to help mitigate the loss of established mature trees. The planting plan will be developed with the consultation of the California Department of Fish and Game, US FWS, and the SCVWD.

The new plant establishment period will be a minimum of three years. During this period, Caltrans or its contractor will maintain the plant material and replace it as necessary or required.

The newly developed riparian area will be given to Santa Clara County to be included as part of the existing Coyote Creek County Park.

Guadalupe River Percolation Ponds - The Guadalupe River Percolation Ponds (GRPP) mitigation plan entails the creation of approximately 7.3 acres of open water wetland.

This acreage will mitigate the impact to the Guadalupe River Percolation Ponds (6 acres), Canoas Creek (0.3 acres), Ross Creek (0.3 acres), Smith Creek East Branch (0.3 acres), and Regnart Creek (0.4 acres).

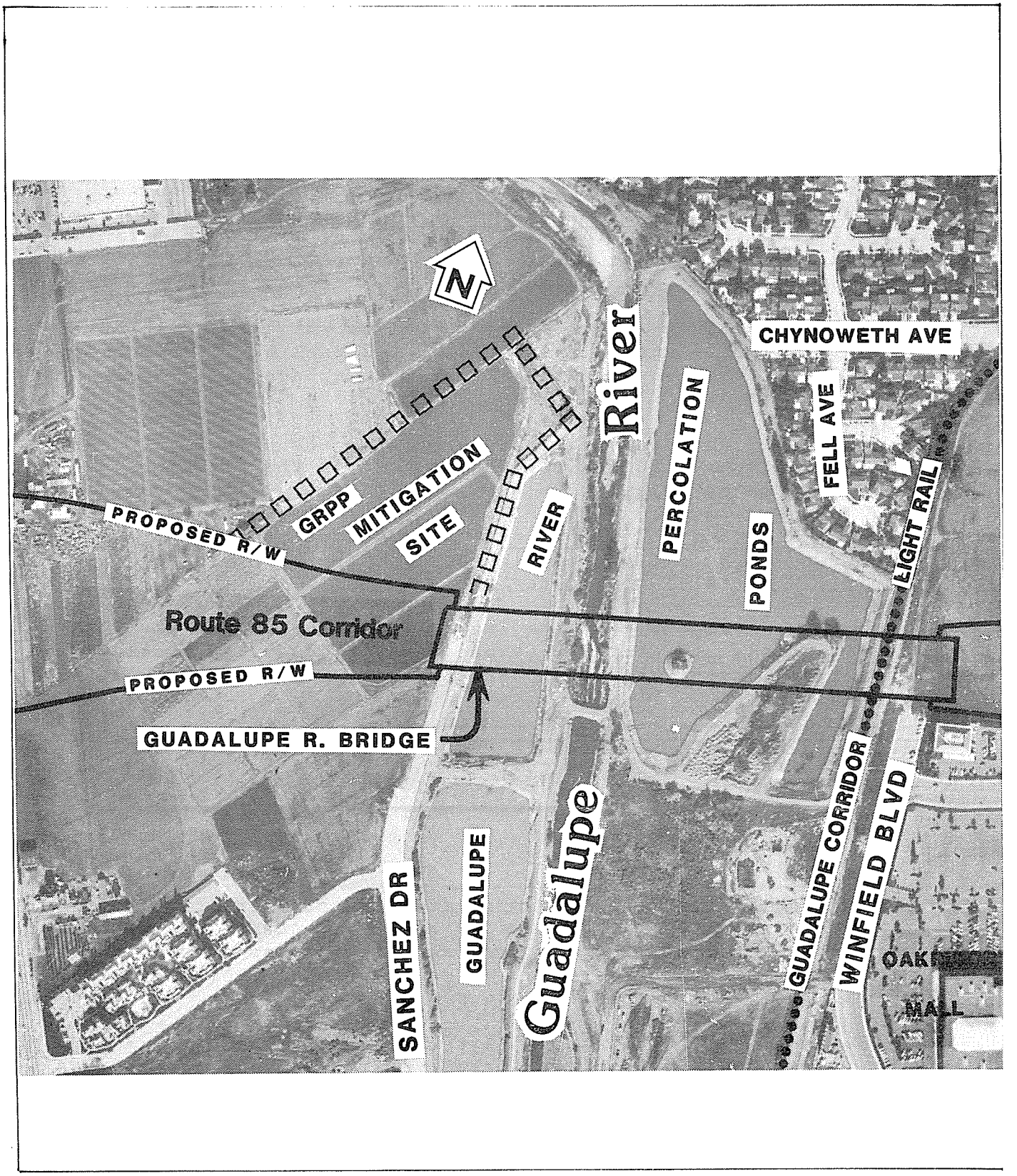
The following actions will be taken to create a open water wetland of approximately 7.3 acres:

The area shown in Figure VI-3 will be excavated in such a manner to connect with the existing northwestern percolation pond.

In addition to the open water wetland at this location, riparian woodland may be created on the slopes of the percolation pond. An island to replace the island lost during construction will also be constructed. All of these actions will be in coordination with the SCVWD.

Subsequently, this area will be given to the Santa Clara Valley Water District as mitigation for the impacts to their groundwater recharge efforts.

Guadalupe River - The Guadalupe River (GR) mitigation plan entails the augmentation of approximately 2+ acres of riparian



GUADALUPE RIVER PERCOLATION PONDS

FIGURE VI-3

woodland on the Guadalupe River. If sufficient acreage is not available on the Guadalupe River, acreage will be sought on other streams under the jurisdiction of the SCVWD.

This acreage will mitigate the impact to the Guadalupe River (0.7 acres), Smith Creek (0.6 acres), and Rodeo Creek (0.2 acres).

The following actions will be taken to augment approximately 2 acres of riparian woodland at this site:

With the cooperation and coordination of the SCVWD, appropriate sites along the Guadalupe River will be revegetated in an augmentation program. This augmentation would provide continuity of the riparian habitat along the waterway.

An exact planting scheme will be developed in cooperation with the SCVWD during final design of the mitigation package. 15 gallon specimen trees will be planted as appropriate to mitigate loss of established mature trees.

Route 85/Route 17 Interchange - Within the Route 85/Route 17 interchange (85/17) approximately 4 acres of riparian woodland may be created adjacent to and between Los Gatos Creek Park and the Oka Lane Wildlife Reestablishment area. The exact acreage and location will be determined during final design of the interchange. Additional acreage may be developed depending on the final interchange configuration.

This acreage will mitigate the impact to a portion of Los Gatos Creek (4.0 acres) with the remainder (approximately 5.0 acres) designated to the CCMP.

During final interchange design and in conjunction with the SCVWD, approximately 4 acres of riparian woodland may be created that could entail a possible new connection to Los Gatos Creek or an extension of the connection into the Vasona pumping station.

An exact planting scheme would need to be developed in cooperation with the SCVWD during final design of the mitigation package. 15 gallon specimen trees will be planted as appropriate to mitigate loss of established mature trees.

Concurrence

Based on the all above information, the US FWS issued the following letter concurring with the Route 85 biological mitigation measures.

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Division of Ecological Services
2800 Cottage Way, Room E-1803
Sacramento, California 95825

November 21, 1986

Mr. Chuck Morton
Associate Transportation Planner
State of California
Department of Transportation
Box 7310
San Francisco, CA 94120

Dear Mr. Morton:

We have reviewed the biological assessment and mitigation plan for the Highway 85-West Valley Corridor project. The mitigation plan contains all of the elements recommended by this office to offset expected project related impacts. We would like to emphasize the importance of maintenance of the mitigation sites until the vegetation has successfully established.

We appreciate Caltrans coordination effort on this project. If there are any changes in the selected design plan for the freeway, please contact Kent Nelson at (916) 978-4613.

Sincerely,

James D. Carson

James D. Carson
Acting Field Supervisor

LETTER 1b

4. Wetlands

According to the 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.

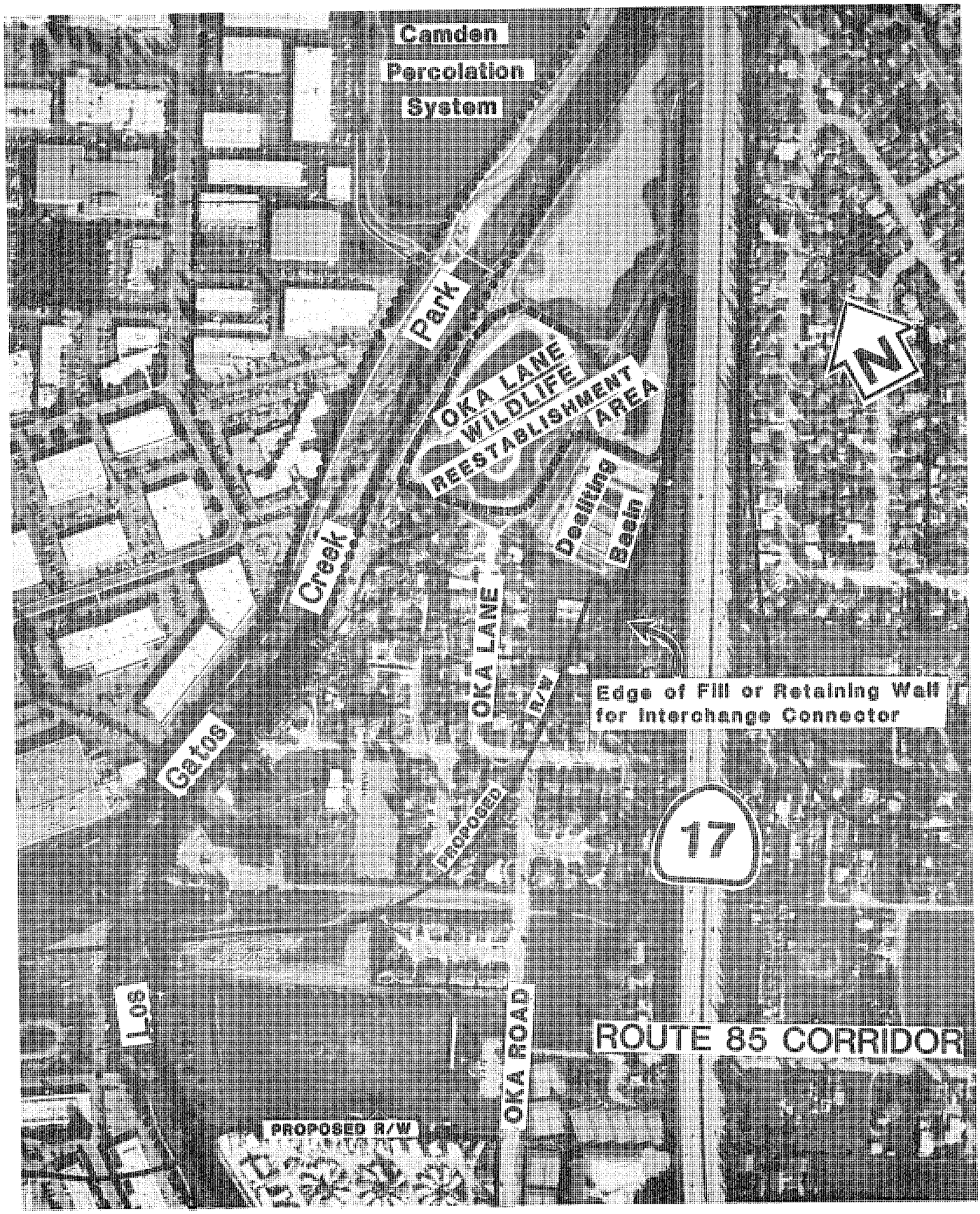
Two wetlands have been identified within the Route 85 project. These are the Oka Lane Wildlife Reestablishment Area and the Guadalupe River Percolation Ponds. These areas would also be designated as wetlands under the classification system of the U.S. Fish and Wildlife Service. These two wetlands comprise 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 Guadalupe River 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 freshwater 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 desiltation pond is periodically drained and is surface scraped to remove any surface sediments which have collected. The remaining ponds are managed and used as percolation ponds.

The Oka Lane Wildlife Reestablishment Area is depicted in the aerial photograph included as Figure VI-4. The wildlife reestablishment area depicted is described in the report, "Los Gatos Creek, A Master Plan for Environmental Development" which was completed in 1974. 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 permanent impacts to the Oka Lane Wildlife Reestablishment Area as a result of the construction of the project alternative and therefore no Section 4(f) involvement. The determination that there are no Section 4(f) impacts is based on the above cited report and on the following letter from the Santa Clara Valley Water District. There are, however, direct temporary adverse impacts which will be associated with construction activity. These impacts are primarily increased noise and dust.



OKA LANE WILDLIFE REESTABLISHMENT AREA

FIGURE VI-4

Santa Clara Valley Water District

5750 ALMADEN EXPRESSWAY
SAN JOSE, CALIFORNIA 95118
TELEPHONE (408) 265-2600

September 25, 1986

Chuck Morton
Associate Transportation Planner
State of California
Department of Transportation
Box 7310
San Francisco, CA 94120

Dear ~~Mr. Morton~~:

The District agrees with your conclusion that construction of the Route 85/Route 17 interchange in Los Gatos will have no long-term physical impact on the Oka Lane Wildlife Reestablishment Area as defined in the report entitled "Los Gatos Creek, A Master Plan for Environmental Development, 1974".

Sincerely yours,

Bernard Goldner
Environmental Specialist
Project Development Branch

LETTER 2

These 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.

The Route 85/Route 17 interchange is an element of the project alternative. The proposed Route 17/Route 85 interchange has been designed to minimize impacts to the desilting basin, which is not part of the Oka Lane Wildlife Reestablishment Area as shown in Figure VI-4. Screening of the area with the planting of appropriate trees and shrubs on the connector slopes will be done to provide additional visual separation of the wildlife area.

Guadalupe River Percolation Ponds

The Guadalupe River freshwater 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-3.

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

Approximately 6.0 acres of the Guadalupe River percolation pond wetlands would be impacted by the construction of the project alternative. This impact is due to the construction of a bridge across the ponds. 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 210+ foot wide, 1100 foot long bridge structure which would bisect the pond area as it carries Route 85 across the ponds.

Wetlands Mitigation Measures

The wetland mitigation measures are fully described earlier in this section on page VI-29.

The avoidance of impacts to the wetlands has been considered during the design of the project alternative. Realignment of the corridor north or south of the existing right of way would not reduce the impact of the project alternative on the wetlands. Changing the vertical alignment of the alternative also would not change the amount of impacted area.

There are no feasible alternatives to reduce the wetland impacts for the project alternative. Also see the Wetland Finding page VI-38.

Below is the Wetland Finding as required by Executive Order 11990.

WETLANDS FINDING

Pursuant to: Executive Order 11990 - Protection of Wetlands

ALTERNATIVES:

The open water wetlands affected by the proposed construction of the Route 85 project alternative are part of the Guadalupe River Percolation Ponds. The impacted area consisted of approximately 6.0 acres of open water. The impact will be caused by the construction of a bridge approximately 1100 feet long and 210+ feet wide. This bridge connects the Route 85/Route 87 interchange to the Almaden Expressway interchange. The withdrawn build alternatives would have resulted in essentially the same impact to the wetlands. The no project alternative would not impact the wetland but would result in increased traffic congestion and decreased air quality. As can be seen on Figure VI-3, shifting the alignment of the project alternative bridge to the north from its present location to avoid any impact to the wetlands would require the displacement of 75+ residential units at a cost in excess of $18 millon dollars and the redesign of the Route 85/Route 87 interchange. To shift the alignment to the south of its present location would require the removal of Oakridge Mall in addition to the redesign of the Route 85/Route 87 and Route 85/Almaden Expressway interchanges.

MEASURES TO MINIMIZE HARM:

A wetlands evaluation was conducted with representatives from the U.S. Fish and Wildlife Service, Environmental Protection Agency, the U.S. Army Corps of Engineers, California Department of Fish and Game, and the Santa Clara Valley Water District. To compensate for the impact to the open water wetlands, a new percolation pond of comparable size, capacity, and operation will be constructed adjacent to the existing percolation ponds.

FINDINGS:

Based upon the above considerations, it is determined that there is no practicable alternative to the proposed new construction in wetlands and that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use.

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.

The project alternative will not affect or be adversely affected by the regional climatic conditions of the area.

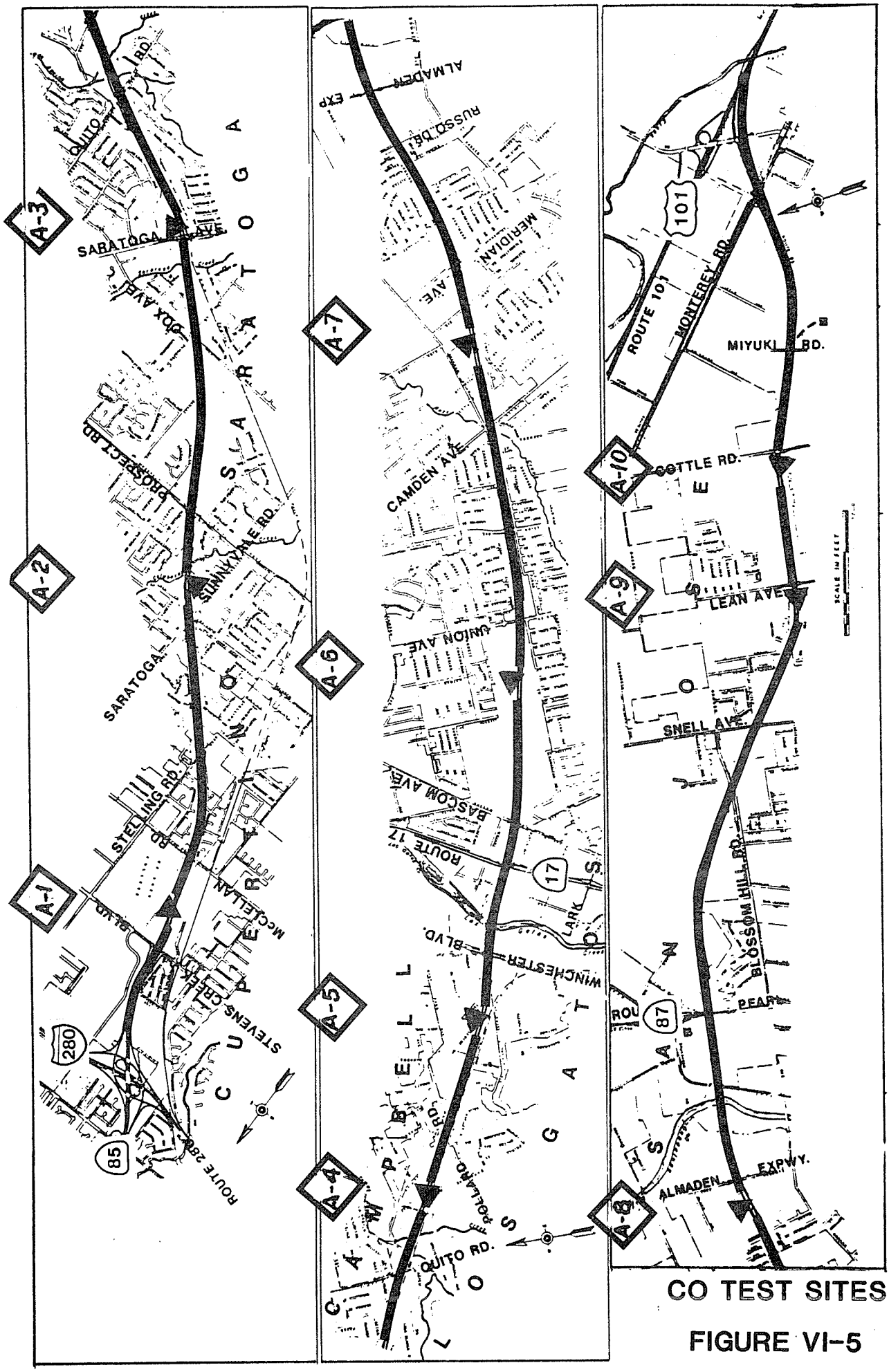
b. Air Quality

This section is based on an air quality analysis which is part of the Route 85 Corridor Technical Studies Report, completed in February 1985 and updated in November 1986 to reflect the project alternative.

1. Existing Air Quality

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 depicts these locations. Table VI-6 summarizes the ambient CO levels.

Figure VI-6 shows a comparison of Caltrans' sampling for the SCL-85 area (the sites marked by black squares) and the Bay Area Air Quality Management District's (BAAQMD) sampling for an area centered roughly near downtown San Jose. The Fourth Street monitoring station in downtown San Jose, site #6 in Figure VI-6, showed 16 exceedances of the federal and state 8 hour CO standard of nine parts per million (ppm), and five exceedances on two days of the federal ozone standard of .12 ppm during 1985. The County experienced 7 days on which the federal ozone standards were exceeded for the same time period. The state oxidant (measured as 03) standard of 0.10 ppm was exceeded 12 days during the same time period at the 4th Street station and 40 days in the entire county. In 1983, the federal Total Suspended Particulates (TSP) secondary standard was exceeded twice. (Data for general TSP levels from more recent years are unreliable due to construction.) For each of these pollutants, some of the highest



CO TEST SITES

FIGURE VI-5

TABLE VI-6

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	5
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

concentration levels in the Bay Area are recorded at this monitoring station.

This indicates, then, that the air quality of downtown San Jose is about the worst in the Bay Area. However, the sampling for this proposed project indicates that downtown San Jose is not a good measure of air quality in the West Valley Corridor.

2. Mesoscale

Nevertheless, for pollutants with regional effects, such as Ozone (03), the entire area must be considered as a whole. This regional analysis is both traditionally and currently performed by the BAAQMD using transportation and planning information provided by MTC and ABAG. This project is part of the transportation network used as a basis for this regional modeling of pollutants.

Since the detailed regional studies include the effect of this project, a similar quantitative mesoscale analysis was not considered necessary. Nevertheless, some qualitative area-wide conclusions can be reached. At slower speeds, especially the stop-and-go conditions of local streets, the amount of CO and HC emitted from vehicles increases. (On the other hand NOx emissions decrease with slower speeds.) Since traffic flow on the local streets and other freeways will be improved with the build alternates, we can conclude that the project will tend to reduce HC, and CO levels in the region. Reduction of HC also will tend to reduce O3, and increases in NOx will increase O3. The project alternative, with the encouragement of HOV and bus ridership, will especially help reduce person-trips made on other facilities, thereby aiding traffic flow and the concurrent pollutant reductions.

Although the regional strategy of the BAAQMD, contained in the BAAQP (1982) and its updates, has been approved by the EPA as an acceptable plan to reduce O3 and CO, there is recent concern the goals will not be met by the 1987 deadline. Reasonable further progress in reducing CO and O3 was not met in 1984, the last year a determination is available. If a failure to meet federal standards should occur, further efforts may need to be implemented to assure reduction of CO and O3 levels within a reasonable time frame.

3. Health Effects

Air pollution reduction efforts are of major interest and concern, since the health effects of excessive pollutant levels can be quite serious. The federal government has found these effects serious enough to set standards for CO, O3 and Lead, and many other pollutants. These three all have vehicles as a significant source.

Ozone, the primary constituent of photochemical smog, is produced through a complex series of chemical reactions involving hydrocarbons (HC) and oxides of nitrogen (NOx) in the presence of sunlight. High ozone levels, occuring primarily in the summer and early fall, aggravate asthma, bronchitis, and other respiratory ailments, as well as cardiovascular disease. High concentations may also cause dizziness, headaches and nausea. The federal standard is 0.12 ppm for 1 hour, but due to considerable recent concern that serious damage may be occuring below these levels, the standard is under further consideration and could be lowered. The state standard is 0.10 ppm.

CO is almost exclusively emitted by motor vehicles. This pollutant binds to hemoglobin, the oxygen-carrying protein in blood, and thus reduces the amount of oxygen reaching the heart and brain. Exposure to CO, even at low levels, can endanger people with coronary artery disease and cause headaches, fatigue, and slow reflexes among healthy people.

Lead is also produced primarily by motor vehicles. It can cause anemia, brain damage and damage to enzymes in the liver, kidneys and reproductive organs. Increased use of unleaded gasoline has dramatically reduced the concentrations of lead in urban areas and further reductions are expected.

Benzene and diethylene dibromide, both constituents of gasoline emitted by automobiles, are currently being studied for possible regulation. They are associated with increased risk of cancer. 58% of the ambient benzene is from mobile sources.

Further details of health effects is contained in the BAAQMD "Air Quality Handbook", the ARB pamphlet "How Air Pollution Damages Health", and the EPA "Santa Clara Integrated Environmental Management Report."

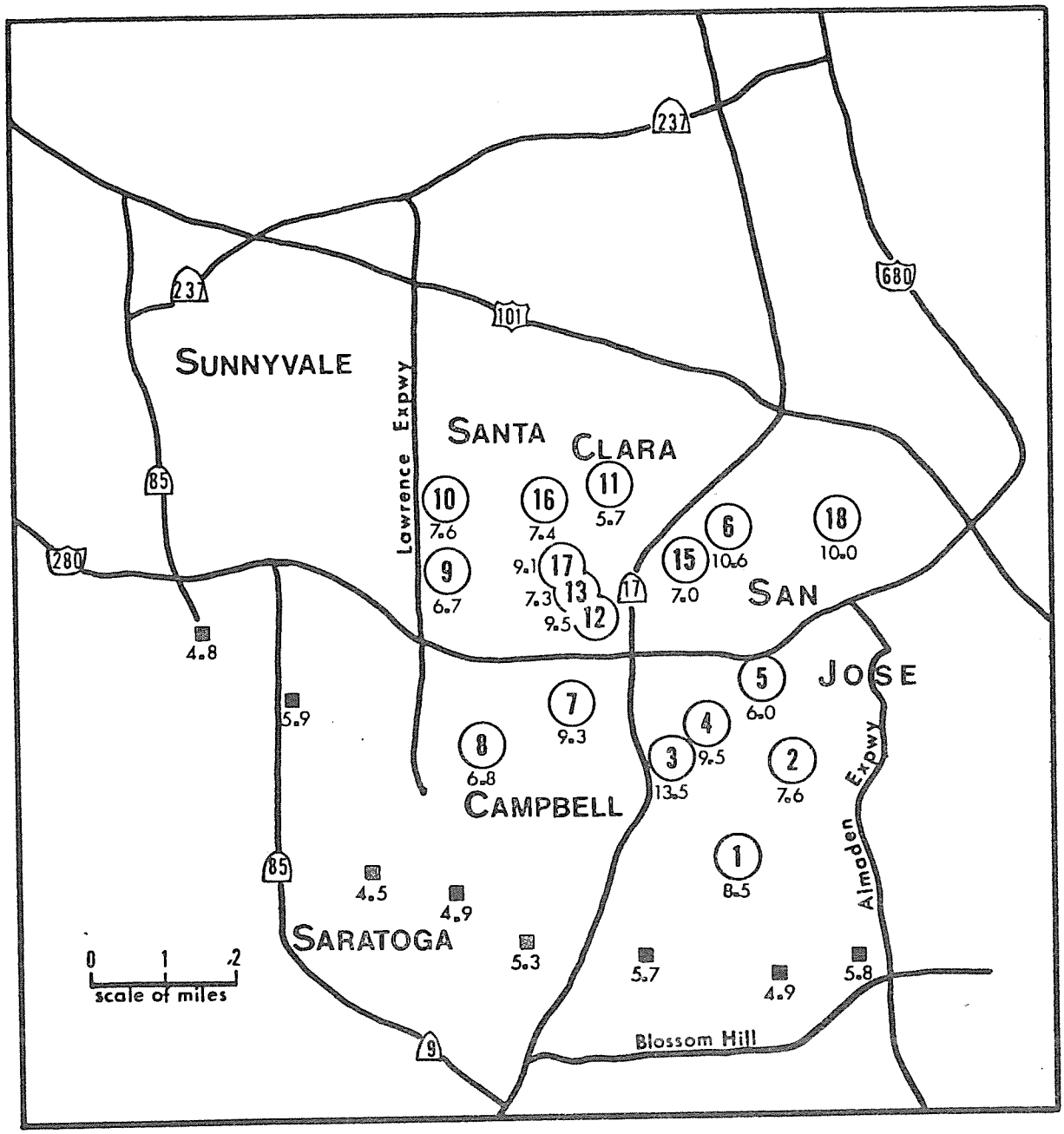
4. Microscale

The highest carbon monoxide concentrations, if a Route 85 transportation facility is built, are generally expected to be found in the areas adjacent to the freeway. The adjacent property (microscale) analysis for this project is a worst case analysis made by using the Caline3 and Caline4 computer models. The inputs to these models 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 emissions that the model yields is directly proportional to traffic volumes and emission factors (which are inversely related to traffic speed). Low wind speed and stable air conditions produce the highest CO concentration; higher wind speeds and more turbulent conditions tend to disperse the pollutants over a wider area and reduce the concentration.

In terms of air quality, the distinctions between the DEIR/DEIS alternatives are the traffic characteristics, (that is, speed, volumes, and vehicle mix), profile variations, and transportation control measures (TCM's) implemented. Differences in the horizontal alignment of the DEIR/DEIS build alternatives studied create only insignificant differences in the computer input.

Table VI-7 summarizes the maximum expected carbon monoxide values for the various DEIR/DEIS alternatives in 1990. A study year of 1990 was chosen to conform to studies for the Guadalope Corridor project. Since ramp metering provides free flow on the project route and the year 2010 traffic estimates therefore do not vary greatly from the 1990 traffic, the 1990 air analysis adequately reflects the CO concentrations of the various alternates. For the project alternate, though, a microscale analysis has also been performed for the year 2010 (Table VI-7A). Also include in



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.

AIR QUALITY SAMPLING SITES

FIGURE VI-6

the table are figures representing values if there were no medium or heavy duty truck on the facility.

The following features of the project alternative are designed to minimize any air pollutant increases which might occur as a result of its construction and are considered required.

1. Construction of park and ride facilities in state owned right of way.

2. Inclusion of HOV lanes in the freeway design.

3. Ramp metering.

4. Carpool and HOV bypass lanes on all metered ramps.

5. Provisions for future mass transportation improvements

To estimate the 2010 CO background levels for the project alternate, Caltrans assumed no reduction from the 1990 predicted ambient CO levels. These ambient CO levels reflect a 19% reduction for vehicle inspection and maintenance and a 14% reduction for TCM 12. TCM 12 aims to reduce the peak hour drive alone trips by 14% and thereby increase the county wide vehicle occupancy rate.

These ambient carbon monoxide levels were then added to the roadway produced carbon monoxide obtained using the Caline4 computer model. A 19% reduction credit was taken off the project alternative Light Duty Auto (LDA) contribution for Inspection/Maintenance (I/M).

The totals shown on Table VI-7a include future ambient concentrations of 5ppm and 9ppm for the year 2010 8-hour and 1-hour CO levels, respectively. Worst case estimates for ramp meters (2.5ppm/1-hr) and park and ride lots (1ppm/1-hr extra) are also included, though their influence is extremely local and quite exaggerated.

The project alternative is not expected to cause any 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 project is in an air quality nonattainment area which has transportation control measures in the State Implementation Plan (SIP), which was approved by the Environmental Protection Agency

TABLE VI-7

MAXIMUM "WORST CASE" MICROSCALE CO LEVELS
(1990)

DEIR/DEIS 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

on December 28, 1983. The FHWA has determined that both the Transportation Plan and the Transportation Improvement Program conform to the SIP. The Federal Highway Administration has determined that this project is included in the Transportation Improvement Program for the Metropolitan Transportation Commission. Therefore, pursuant to 23 CFR 770, this project conforms to the SIP.

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

TABLE VI-7A

PROJECT ALTERNATIVE
2010 "WORST CASE" MICROSCALE CO LEVELS

1-hour

Project Alternative	Trucks (ppm)	No Trucks (ppm)
High Profile	17.0	16.9
Low Profile	17.1	17.0

8-hour

Project Alternative	Trucks (ppm)	No Trucks (ppm)
High Profile	8.7	8.6
Low Profile	8.8	8.7

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 the national standards by 1987. Vehicle emission controls and the Inspection/Maintenance program are two of the more important control measures as well as the Transportation Control Measures (TCM's).

5. Transportation Control Measures

Table VI-8 depicts the Transportation Control Measures included in the 1982 Bay Area Air Quality Plan. TCM's 1-3 involve transit goals and improvements to be implemented by the MTC transit districts and do not apply, per se, to any of the DEIS/DEIR alternatives studied. TCM 4, a committment to support the incorporation of HOV lanes into freeways and expressways, was included in those DEIR/DEIS alternatives, and the project alternative, which were described as including HOV lanes.

TABLE VI-8

TRANSPORTATION CONTROL MEASURES

TCM	EXPLANATION
1-3	These involve transit development 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	Commute Alternatives
10	Local Government Information
11	Gas CAP Program
12	Commuter Transportation Program

TCM 5, the promotion and marketing of Ridesharing programs, applies to the project alternative and to all of the DEIR/DEIS alternatives except the NPA and LRT. TCM 6, Long Range Transit, including the construction of the Guadalupe Corridor LRT, only applied to DEIR/DEIS Bus/HOV and highway with LRT alternatives. TCM 6 applies to the project alternative in the fact that a median of sufficient width to install future mass transportation options is being reserved. TCM's 7 and 9-11 were not applicable to the project alternative. TCM's 7 & 9 apply only the TSM alternative described in the DEIS/DEIR, while TCM's 10 & 11 do not apply to any of the alternatives. TCM 8, Park and Ride, applied to all the DEIR/DEIS alternatives, except the NPA, and the project alternative. TCM 12, Commuter Transportation Program, applies to all DEIR/DEIS alternatives and the project alternative. The goal of the Plan is to achieve a 50% reduction in the "drive alone" trips with those trips being made on the various modes of available mass transit or in carpools.

Table VI-8a shows the Transportation Control Measures that were incorporated into each alternatives studied in the DEIS/DEIR. The NPA develops no Transportation Control Measures even though

it will result in lower microscale carbon monoxide levels in the project area. The project alternate, by including HOV lanes, ramp metering, park and ride lots, and a median area available for future mass transportation options, develops all the applicable TCM's. Table VI-8b shows the TCM's which are incorporated into the project alternative. Following is a copy of the EPA letter agreeing with Caltrans air quality mitigaiton proposals.

TABLE VI-8A

DEIS/DEIR ALTERNATIVE TCM INCORPORATION

	DEIS/DEIR ALTERNATIVES (YES/NO or N/A (Not Applicable))								
TCM's	NPA	TSM	LRT	4FWY & LRT	4FWY & HOV & LRT	4FWY & Bus/ HOV	6FWY & Bus/ HOV	8FWY	8FWY & LRT
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	N	Y	Y	Y	N	N
5 Ridesharing	N	Y	N	Y	Y	Y	Y	Y	Y
6 Long Range Transit	N	N	Y	Y	Y	Y	Y	N	Y
7 Preferred Parking	N	Y	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 Commute Alternatives	N	Y	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 Program	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
12 Commuter Transportation Program	Y	Y	Y	Y	Y	Y	Y	Y	Y

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
San Francisco, Ca. 94105

Mr. Chuck Morton
California Department
of Transportation
150 Oak Street, Rm. 666
San Francisco, CA 94112

Dear Mr. Morton:

The Environmental Protection Agency (EPA) appreciates your office's cooperation in addressing our air quality concerns on the Draft Environmental Impact Statement (DEIS) for the STATE ROUTE 85 TRANSPORTATION CORRIDOR, SANTA CLARA COUNTY. Based on the draft materials you sent us, our meeting of August 7, 1986, and our follow-up discussions, EPA believes that our initial air quality concerns have been largely satisfied. However, we still have concerns regarding other aspects of the project as discussed below.

Our concerns about the Air Quality portion of the DEIS have been satisfied in the supplementary environmental information we have reviewed. We also understand that a modified alternative has been selected as the proposed action, which will help to reduce the project's air quality effects. This also reduces EPA's air quality concerns. Therefore, EPA agrees that a supplemental EIS is not needed if the agreed upon changes are made and included in the Final EIS.

On November 17, 1986, we verbally expressed our continuing concerns on the draft biology and wetland section for the Route 85 Final EIS. As you know, we remain concerned about the proposed project's impacts on beneficial uses and water quality and the adequacy of proposed mitigation measures. The Final EIS should address these concerns and commit to measures that will offset project impacts.

We look forward to reviewing the Final EIS and trust that it will reflect the commitments we have received to date. If you have any further questions, please contact Mark Brucker, Air Programs Branch, at (415) 974-8068 or David Powers, Federal Activities Branch, at (415) 974-8193.

Sincerely,

Rule Hoffman

for Loretta Kahn Barsamian
Chief, Federal Activities
Branch

cc: Willis Kisselburg, Jr., Federal Highway Administration
Donna Lott, California Air Resources Board

TABLE VI-8B

PROJECT ALTERNATIVE TCM INCORPORATION

	PROJECT ALTERNATIVE (YES/NO or N/A (Not Applicable))
1-3	N/A
4 HOV Lanes	YES
5 Ridesharing	YES
6 Long Range Transit	YES *
7 Preferred Parking	N/A
8 Park and Ride	YES
9 Commute Alternatives	N/A
10 Local Government Policies	N/A
11 Gas CAP Program	N/A
12 Commuter Transportation Program	YES

* Median area available for future Mass Transportation Options.

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 U.S. Route 101, State Routes 17, 85, 9, the Almaden Expressway, Blossom Hill Road, and Branham Lane. 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.

The results of several 24-hour ambient noise measurements indicate the hourly peak noise to be an average of 56 dBA Leq along the unoccupied corridor, compared to 76 dBA at Branham Lane, a relatively short occupied sector of the Route 85 corridor. dBA is a numerical expression of the relative loudness of a sound. Leq is the average noise energy for a stated period of time. These noise levels are the projected ambient noise levels for the corridor and are used as a basis for comparison. Where the alignment is adjacent to Branham Lane, now used as a major 2-lane thoroughfare, the receptors should benefit due to the shifting of many vehicles to the proposed facility which will be depressed and have sound walls.

The project 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.

Although maximum noise attenuation measures within allowable and practical means were applied to the barrier noise height selection, the project 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 Leq within the corridor. This increase will especially impact the approximately 1,350 residences which border directly on the Route 85 corridor.

Table VI-9, lists the typical unmitigated peak hour noise levels of all the DEIR/DEIS 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.

Table VI-9
PEAK NOISE LEVELS

DEIS/DEIR ALTERNATIVES	UNMITIGATED 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	56	56
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
Project Alternative	77	72	67

* If there are intervening buildings, the above noise levels may be further reduced.

Potential sensitive receptors located adjacent to the corridor include over 1,350 residences, seven schools, three parks, two hospitals and a recreational facility. Of the 1,350 residences, approximately 405 (30%) of them are two story homes. The second story usually contains the bedrooms and is not mitigated for noise impacts. There are no other known noise impacts for which there is no apparent solution. The non-residential sensitive receptors are listed on the next page:

RECEPTOR	PEAK HOUR NOISE LEVELS IN Leq/dBA APPROXIMATE AMBIENT (1)	UNMITIGATED	MITIGATED (2)	CHANGE
Gunderson High	48	63	N/A	+15
Almaden Elementary	48	74	67	+19
Branham High	51	67	64	+13
Athenour Elementary	51	67	64	+13
Rolling Hills Junior High	49	75	66	+17
Blue Hills School	51	63	N/A	+12
De Anza Junior College	54	62	N/A	+ 8
Good Samaritan Hospital	45	67	62	+17
Kaiser Foundation Hospital	49	63	N/A	+14
Coyote Creek (3)	51	55	N/A	+ 4
Congress Springs Park	54	65	60	+ 6
Kevin Moran Park	51	63	59	+ 8

(1) Ambient noise measurements were either taken for a one half hour period near the structure or were estimated from the nearest 24-hr measurement site. The listed receptors are recessed back at various distances from the right of way and therefore, the ambient noise levels are lower than the average peak hour noise level of Leq 56 dBA taken near the right of way.
(2) Mitigation required under State and Federal requirements and regulations.
(3) This reading was taken approximately 850 feet from the freeway alignment.

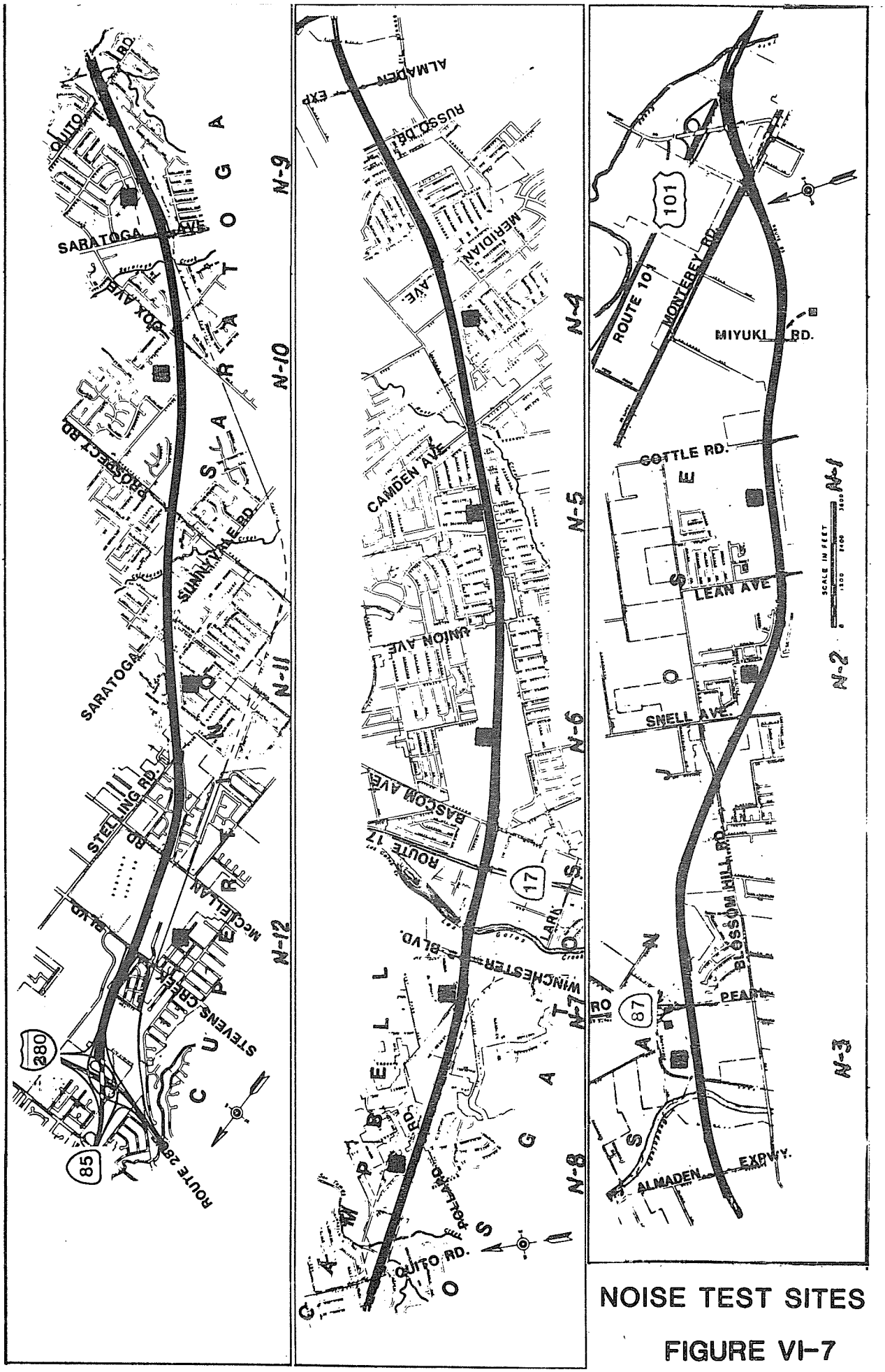
Noise readings were taken at 12 representative sites in or adjacent to the corridor. These sites were all single family residences. These locations are shown on Figure VI-7. Table VI-10 lists these locations, the ambient noise readings in decibels (dBA), and the projected noise level for the project alternative, the mitigated noise levels, and the change.

As shown in Appendix A, noise attenuation walls will be provided in the vicinity of Branham Lane north of the Route 85/Route 87 interchange. On the east side of Route 87, north of Branham Lane, a noise wall varying in height from 8′ to 14′ will be provided on the right of way (R/W) line. On the west side of Route 87, north of and on Branham Lane, a 16′ high noise wall will be provided on the R/W line. South of and on Branham Lane extending to Chynoweth Avenue on both the east and west sides of Route 87, a noise wall varying in height from 8′ to 14′ will be provided on the R/W line.

TABLE VI-10
AMBIENT AND PREDICTED 24 HOUR PROJECT ALTERNATIVE NOISE LEVELS (DBA/LEQ)

MEASUREMENT LOCATION and SITE NUMBER	24 Hr. AVERAGE AMBIENT Leq NOISE READINGS	UNMITIGATED PREDICTED PEAK HOUR PROJECT ALTERNATIVE NOISE LEVEL	MITIGATED PREDICTED PEAK HOUR PROJECT ALTERNATIVE NOISE LEVEL	CHANGE FROM AMBIENT
156 Herlong Avenue San Jose Site N-1	51	70	65	14
5797 Orchard Park Dr. San Jose Site N-2	52	72	67	15
5299 Fell Avenue San Jose Site N-3	50	65	N/A	15
1393 Dentwood Avenue San Jose Site N-4	53	72	67	14
14305 Branham Lane San Jose Site N-5	71	67	N/A	-4
2334 Monaco Drive San Jose Site N-6	51	68	62	11
628 Vasona Avenue Los Gatos Site N-7	53	63	59	6
4767 Roundtree Drive Campbell Site N-8	48	79	66	18
18902 Afton Avenue Saratoga Site N-9	59	67	N/A	8
19732 Solana Drive Saratoga Site N-10	52	68	63	11
1130 Scotland Drive Cupertino Site N-11	52	79	66	14
10130 Bubb Road Cupertino Site N-12	54	68	63	9

N/A = Not Applicable



NOISE TEST SITES

FIGURE VI-7

The schools immediately adjacent to the corridor will be impacted by the construction of the project alternative. 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 project. Gunderson High School noise impacts have been determined in conjunction with the design of the Route 85/Route 87 interchange. Noise attenuation wall adjacent to the Gunderson High School playing field were considered. However, they are not considered appropriate and will be not constructed do the less than 5 dBA Leq noise attentuation which would result. Due to the distance between the transportation facility and the nearest school building, approximately 120', the interior noise level is projected to be less than 52 dBA and do not need to be mitigated.

The noise impacts on Kaiser Foundation Hospital have been studied in detail during the design of the Route 85/Cottle Road interchange. Calculations indicate that there will not be a noticeable noise impact to the patient residence area and no mitigation is proposed as part of this project. Interior noise levels at the Kaiser Foundation Hospital are expected to be approximately 48 dBA Leq and do not need to be mitigated. The noise impacts associated with Good Samaritan Hospital shall be mitigated by the construction of a noise attenuation barrier approximately 12' high. The interior noise levels at Good Samaritan Hospital are expected to be approximately 47 dBA Leq and do not need to be mitigated.

None of the libraries, listed on page VI-166, are sensitive noise receptors due to their distance (ranging from 0.5 to 3 miles in distance) from the proposed transportation facility.

Predicted exterior building noise readings for the schools listed below, either mitigated or unmitigated, are at or below 62 dBA Leq. Ordinary building construction, even with the windows open, assumes a loss of 10 dBA Leq (FHPM 7-7-3). Therefore, none of the schools interior noise levels will exceed 52 dBA Leq and therefore require no noise mitigation.

School	Ambient Noise Level	Distance from Freeway	Mitigated Noise Level	Predicted Interior (-10dBA)
Gunderson High School	48	200'	62	52
Almaden Elementary	48	280'	59	49
Athenour Elementary	51	320'	51	41
Rolling Hills Junior HS	49	400'	57	47
Blue Hills School	51	590'	52	42
De Anza Junior College	54	60'	62	52

The construction of the project alternative will require the relocation of approximately 5,100 feet of railroad track between Saratoga Avenue and Quito Road. This relocation is more fully described on page VI-160. Currently, there are approximately 6

train movements per week with a duration of about 3 minutes. Measurements taken at approximately 100' from the train tracks revealed a noise level of 60 dBA Ldn (60 dBA Leq, as there are no night time train movements). Unmitigated projected traffic noise levels at this location are approximately 73 dBA Leq. Therefore, the traffic noise will mask the train noise. The construction of the planned 14' high noise attenuation barrier along the right of way line will result in mitigated noise levels of approximately 61 dBA Leq. This, combined with the infrequency and short duration of the train passage, will not have a significant noise impact on the residents as they are currently impacted by the existing unmitigated train noise. Due to the infrequency and short duration of the train noise event, it is not practicable nor reasonable to attempt to further mitigate the noise impact associated with the locomotive. Also see question Environmental/Noise 21 on page XI-56.

Coyote Creek County Park

The Coyote Creek County Park, as shown in Figure VI-20 on page VI-101, is approximately 2,000 acres in area, and is administered by Santa Clara County Park and Recreation Department. This park was established in 1960. It will be impacted in the vicinity of the Route 85/Route 101 interchange with the construction of the northbound freeway to freeway connector from Route 101 to Route 85. The park facilities in the area of the freeway to freeway connector will be converted to riparian habitat as proposed in the Coyote Creek Mitigation Plan. This plan is fully explained in the biology section of this chapter. The existing bike/pedestrian path will be relocated to the east side of Coyote Creek.

Estimations indicate that the impact to the park, at approximately 850 feet from the Route 101 roadway will be an increase in the ambient noise level from approximately 51 dBA to 55 dBA. This increase is not significant and no mitigation is required. The point chosen, approximately 850 feet from the roadway, is a point on the existing bike path. This point, if it were to remain as a bike path, would be the closest point to the Route 85 onramp which could be differientated from the Route 101 noise. Mitigation plans call for the removal of this portion of the bike path and its relocation to the east of Coyote Creek, a distance in excess of 1500 feet.

As shown in Figure VI-20, the rerouted bike and pedestrian path traffic will follows an existing bike path from the proposed southern bike bridge, under Route 101, to the edge of the Caltrans right of way. From that point, a new bike path will be constructed as described on page VI-100. The rerouted bike and pedestrian path traffic will follow an existing bike path under the existing Coyote Creek/Route 101 bridge. Noise readings taken in this area revealed an ambient reading of 67 dBA Leq. After the construction of the Route 85/Route 101 interchange and the

rerouting of the bike traffic onto the existing eastside bike path, the predicted noise levels will be approximately 70 dBA Leq. This increase of 3 dBA is hardly discernable and the noise contribution from the Route 85 connector is negligible according to the noise model prediction results. A noise attenuation barrier to achieve the necessary attenuation would cost in excess of $800,000 and is not practicable at this location due to the infrequent human use (between 100 and 500 users per day). Based on the above information and the fact that the park is linear in nature, used primarily by hikers, bikers, and joggers, no noise mitigation is proposed.

Oakridge Golf Course

No noise mitigation is proposed at the privately owned Oakridge Golf Course. Noise mitigation at this location is not considered reasonable because of the planned land use changes to mixed office/commercial in the next 2-3 years.

Congress Springs Park

Congress Springs Park, as shown in Figure VI-8 on page VI-60, is immediately adjacent to the Route 85 right of way northerly of Saratoga Avenue, in the City of Saratoga, and is 19.5 acres in area. This park was established in 1980 and is owned and administered by the City of Saratoga.

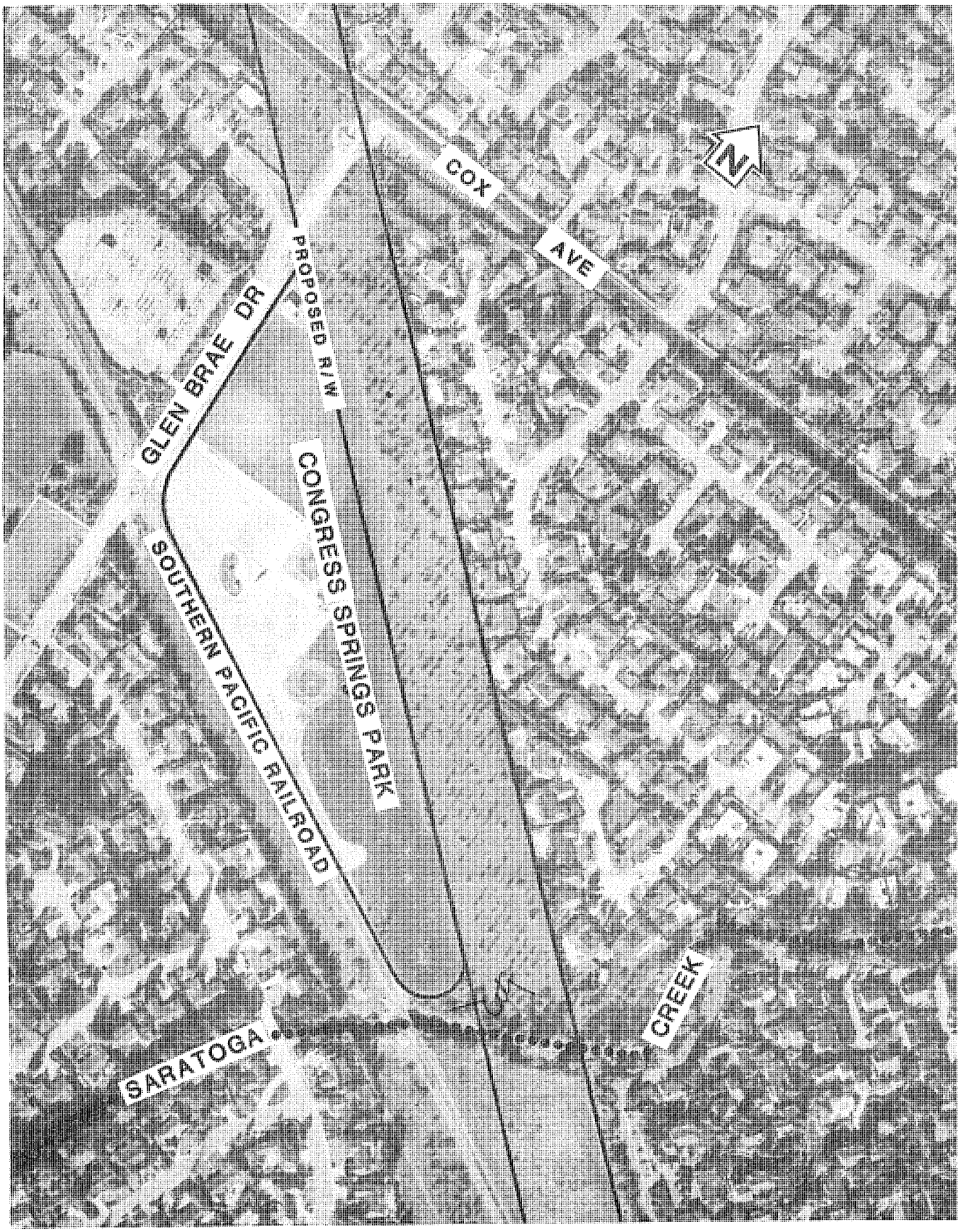
The park facilities include 3 baseball diamonds, several soccer fields, a tennis court, bleachers, park benches, slide & swing sets, jungle gym, a teeter-totter, picnic tables, and a snack bar. Figure VI-8 depicts these facilities and their relationship to the Route 85 transportation corridor.

The outfields of the baseball diamonds and side lines of the soccer fields lie directly adjacent to the Route 85 right of way for approximately 1600 feet. The ambient noise level ranges from 52 to 56 dBA. While there will be no actual taking of parkland, based on the construction of the project, 2010 traffic, and a depression of approximately 5 feet, the unmitigated noise noise level will increase to approximately 65 dBA.

This impact will be mitigated with the construction of an estimated 12 foot high noise wall along the Route 85 right of way line. The noise wall will reduce the noise level to approximately 60 dBA, a decrease of 5 dBA.

Kevin Moran Park

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.



CONGRESS SPRINGS PARK

FIGURE VI-8

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 1250 feet. Figure VI-9 shows these facilities and their relationship to the Route 85 transportation corridor.

Like Congress Springs Park, there will no actual taking of property but the ambient noise level of 51 dBA will be increased with the construction of the project. Based on 2010 traffic, and a depression of approximately 15 feet, the unmitigated noise level will be approximately 63 dBA.

This impact will be mitigated by the construction of a estimated 10 foot high noise attenuation wall along the Route 85 right of way line. This noise wall will reduce the noise level to approximately 59 dBA, a reduction of 4 dBA.

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 noise mitigation policy used for the Route 85 project is as follows:

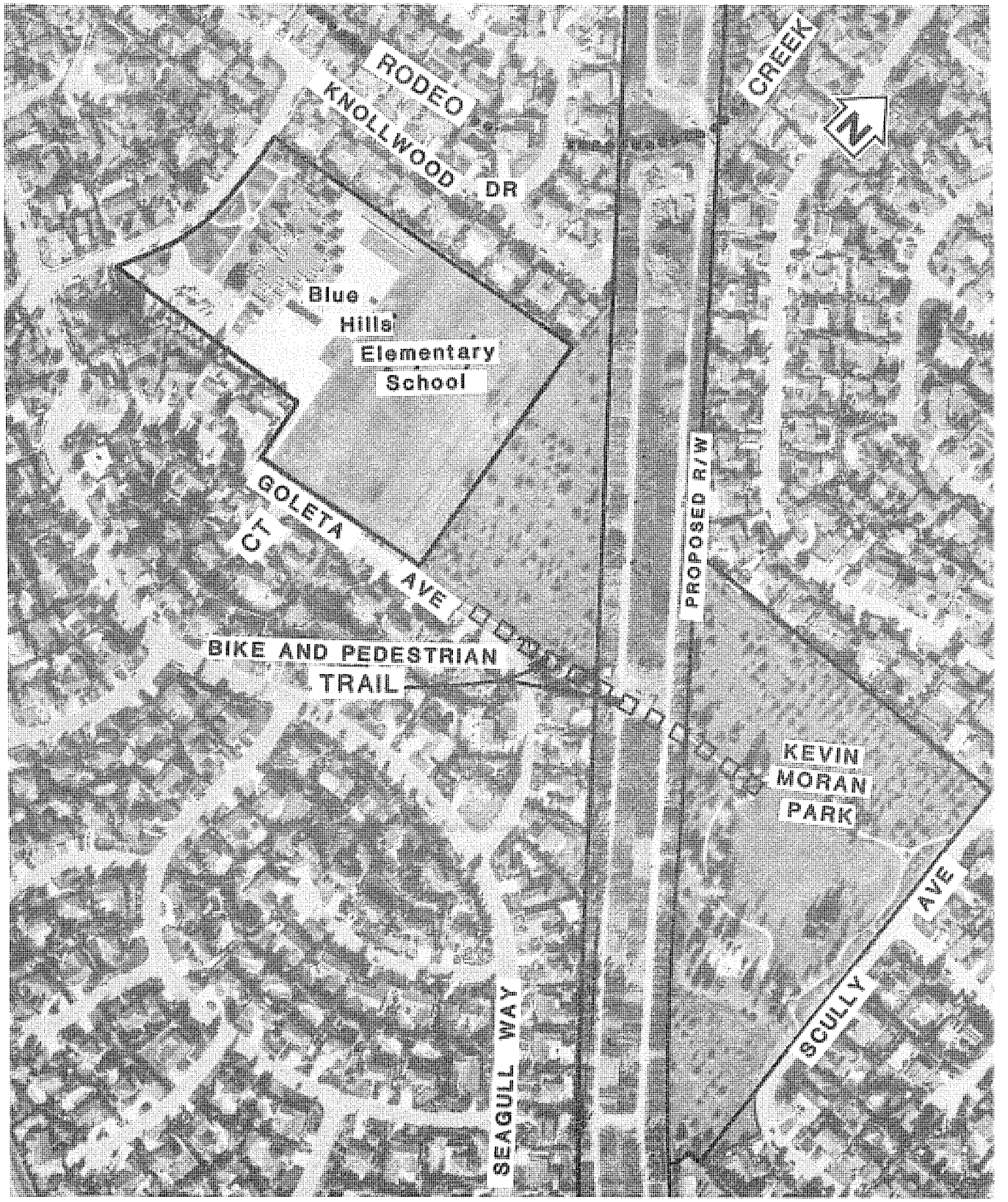
Noise Mitigation Policy

The following features are designed to minimize any increase in noise levels which occur as a result of construction of the project alternative.

1. Noise walls necessary for noise mitigation as warranted by Caltrans Design Bulletin 58 and Federal Highway Program Manual 7-7-3 shall be constructed. Noise walls shall be considered to be any wall which will attenuate the noise impact by at least 5 dBA Leq and be a minimum height of 6 feet. Any wall which does not attenuate the noise impact by at least 5 dBA Leq or which is not warranted under state or federal regulations will be considered to be a community wall and will be funded by local monies. If additional wall height is necessary to meet local noise standards or desires, the additional height cost would be paid for with local monies.

2. All warranted noise walls constructed in at-grade or cut sections of the facility will be placed adjacent to the right of way line.

3. Warranted noise walls constructed on fill sections will be placed at the fill hinge point.



KEVIN MORAN PARK

FIGURE VI-9

4. Warranted noise walls will be continued over bridge structures when the highway facility crosses over a local street.

5. Where warranted, noise attenuation walls will extend along freeway-to-freeway connectors and down the on- and off-ramps to the freeway access control points.

6. Normally, noise mitigation walls are not warranted on local street separations which are constructed as a result of this project.

Lengths and heights of the barrier were calculated based on traffic data and conditions that would normally produce the loudest noise for the project typical section and profile. For this, the Level of Service C with 1500 vehicles at 55 mph per lane for both directions was used. When trucks were included, heavy and medium were considered to be 0.5% and 2.5%, respectively, of the total traffic.

The results of the calculations are shown in Table VI-11. These barrier selections were based on the Federal-Aid Highway Program Manual 7-7-3 noise abatement criteria levels (see Table VI-11a) and the guidelines set forth in Caltrans' Design Information Bulletin 58. Between the Route 85/Route 87 interchange and Miyuki Drive, these State and Federal noise criteria will be adhered to. Table VI-11b is a breakdown of the wall heights and lengths for the entire Route 85 corridor. Wall locations and heights, both which may change during final design, can be seen in Appendix A. These results represent a balancing of what may be desirable and that which is achievable. Every effort will be made to achieve the maximum reduction of noise levels within reason. The FHWA design levels will not automatically be considered the lower limit of attenuation. On the other hand, achievement of these levels may have adverse social, economic, and environmental effects; and under these circumstances partial noise abatement measures will be considered. Wherever a noise barrier is proposed, it should achieve a minimum attenuation of 5 dBA, except under certain circumstances such as where a gap in a barrier is closed to provide continuity to avoid lateral end "cutoff" walls.

Noise barrier walls shall have a minimum height of 6 feet, shall not exceed 14 feet above the pavement when located on the edge of shoulder, and shall not exceed 16 feet above the ground line when placed between the shoulder and the right of way line, unless there is special justification. Earth berms or berm and wall combinations will be considered when feasible.

Community walls (6+ foot high walls) will be considered throughout the Route 85 corridor, including areas not protected by the noise mitigation walls of the project. The community walls would

Table VI-11a
FHWA Noise Abatement Criteria
Hourly A-Weighted Sound Level - decibels (dBA) (1)

Activity Category	Leq(h)	L10(h)	Description of Activity Category
A	57 (Exterior)	60 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	70 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	75 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	--	--	Undeveloped lands.
E	52 (Interior)	55 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

(1) Either L10(h) or Leq(h) (but not both) may be used on a project.

Source: Federal-Aid Highway Program Manual, Vol.7,CH. 7 Sec. 3, Attachment, Transmittal 348, August 9,1982

be of similar type adopted for the Guadalupe Corridor and would be constructed using local funding sources.

TABLE VI-11

SUMMARY OF PROJECT ALTERNATIVE * NOISE WALL LENGTHS AND HEIGHTS

Wall Heights *	8′	10′	12′	14′	16′	Community **
Wall Length (Nearest 0.1 Mile)	0	7.0	8.9	5.8	0	2.7

* This table includes only the Route 85 project alternative noise wall information and does not include the noise walls associated with the Guadalupe Corridor overlap section of the Route 85 corridor.

** A community wall is defined as a wall not warranted under Caltrans Design Bulletin 58 or under FHPM 7-7-3, yet which is desired by the local community.

The 21.7 miles of required noise walls have a cost of 19.9 Million January 1987 dollars. The community walls are an additional community cost of 1.7 Million January 1987 dollars. These community walls will be paid for with local monies. These attenuation measures will protect approximately 1,350 residences.

TABLE VI-11b
SOUNDWALL AND COMMUNITY WALL DATA

Interchanges/Break in Project	Soundwalls 8′	10′	12′	14′	16′ (in 100′ increments)	Comm. Walls
Beginning of Project, Rte 101	-	-	(18)	-	-	(13)
End Rte 101/Monterey Rd I/C	-	-	-	-	-	-
Miyuki Dr (Beg of break in project) (Guadalupe Corridor Overlap)	29	26	25	246	-	-
Winfield Blvd (End of break in project)	-	-	-	-	-	-
Begin Almaden Expwy I/C	-	(10)	-	-	-	-
End Almaden Expwy I/C	-	140	-	-	-	-
Begin Camden Ave I/C	-	(20)	-	(22)	-	(32)
End Camden Ave I/C	-	48	-	46	-	-
Begin Union Ave I/C	-	-	(10)	(5)	-	(15)
End Union Ave I/C	-	-	-	34	-	-
Begin Rte 17 I/C	-	-	(86)	(48)	-	(17)
End Rte 17 I/C	-	36	58	36	-	-
Begin Quito Rd I/C	-	-	(34)	(10)	-	(22)
End Quito Rd I/C	-	-	-	44	-	-
Begin Saratoga Ave I/C	-	(11)	(33)	-	-	-
End Saratoga Ave I/C	-	-	110	-	-	-
Begin Prospect Rd I/C	-	(10)	(10)	(20)	-	(20)
End Prospect Rd I/C	-	-	26	-	-	-
Begin Saratoga-Sunnyvale Rd I/C	-	(10)	(10)	(26)	-	(22)
End Saratoga-Sunnyvale Rd I/C	-	86	17	14	-	-
Begin Stevens Creek Blvd I/C	-	-	(60)	-	-	-
End Stevens Creek Blvd I/C-280						
Individual Total (0.1 mi)*	0.5	7.5	9.4	10.4	-	2.7

Soundwall Total = 27.8 miles Community Wall Total = 2.7 miles
Grand Total * = 30.5 miles ( ) = within I/C
* Includes Guadalupe Corridor Overlap Noise Attenuation Walls

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.

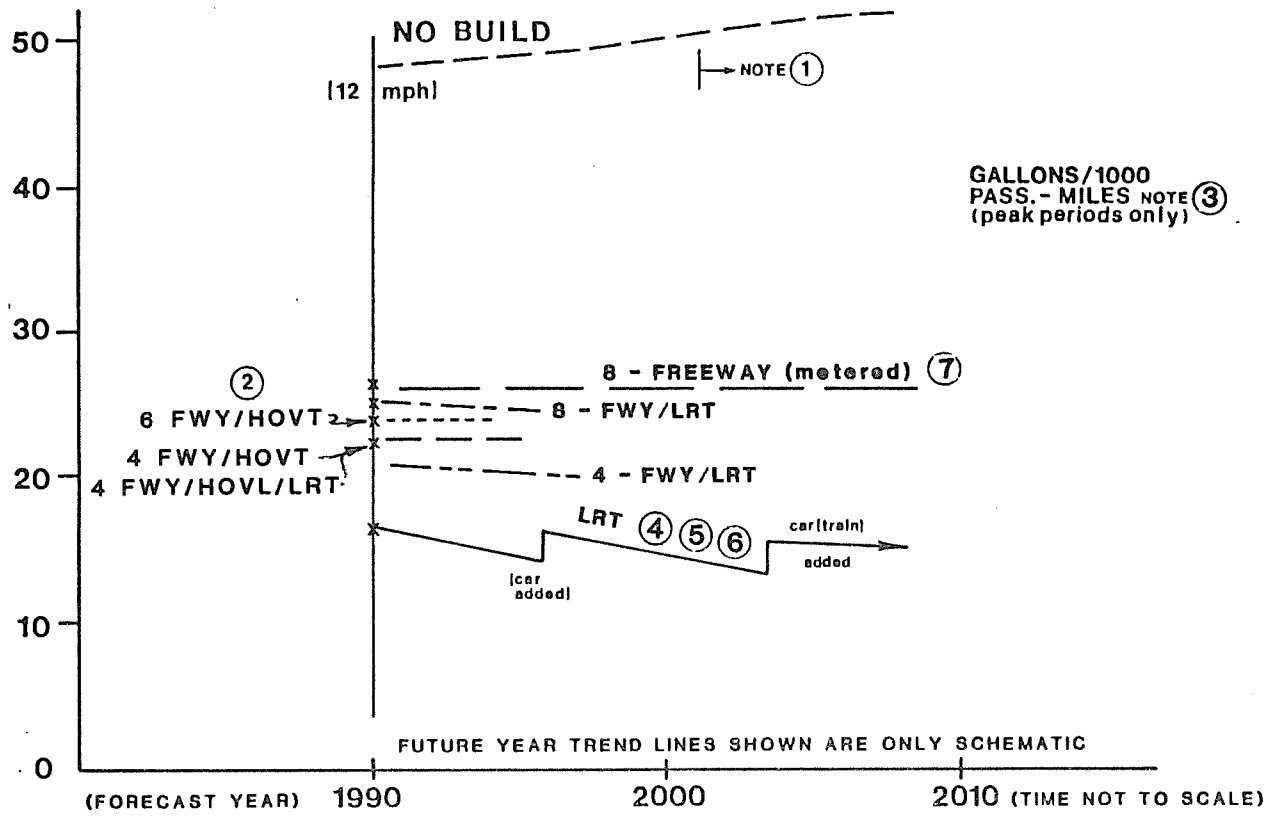
There are complementary ways in which to measure relative energy conservation, no one of which results in an entirely adequate picture. These include operational fuel efficiency (gallons/1000 passenger miles), construction energy payback period (years), and energy conservation in the form of reduced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

Figure VI-10 compares the peak period operational fuel efficiency of the DEIS/DEIR 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-11 compares the energy payback periods for the DEIS/DEIR alternatives. The eight lane freeway has the shortest energy payback period while the LRT has the longest.

Figure VI-12 compares the DEIS/DEIR 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-12, 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.

Based on the year 2010 traffic and the project alternative, as many as 30,000 gallons of gas may be saved per day as the result of the construction of the project alternative.



NOTES

1. Congestion discourages further growth.
2. Ground rules for the Bus/High Occupancy Vehicle Transitway (HOVT) would change whenever lane became congested.
3. Gallons of fuel can be visualized as proportional to fuel dollar costs.
4. The lesser used modes (LRT, HOV Lane), 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).
5. Off peak penalties of weekend and evening service would lower overall efficiency in LRT. However, buses in the HOVT would have a similar penalty- but since cars outnumber buses on HOVT, there is less apparent effect.
6. Signal preemption on LRT operation is asumed.
7. Future MPG improvements will be somewhat offset by ramp meter delay and circuity penalties.

All "Build" alternatives 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).

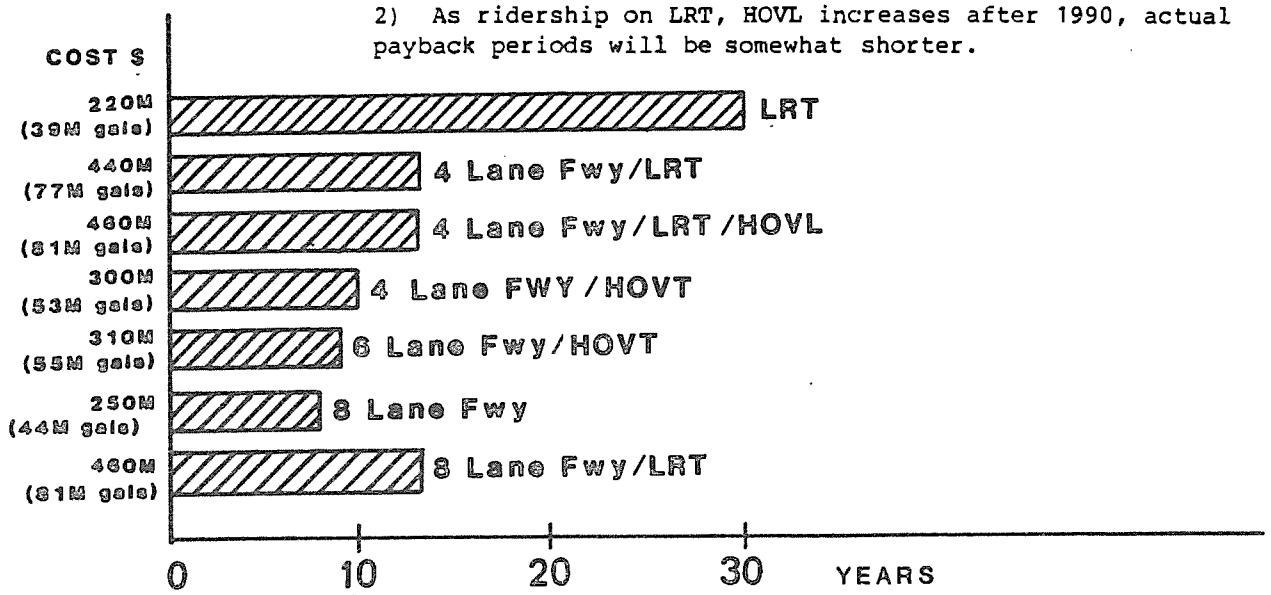
OPERATIONAL FUEL EFFICIENCY
(PROPULSION FUEL ONLY)

FIGURE VI-10

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.

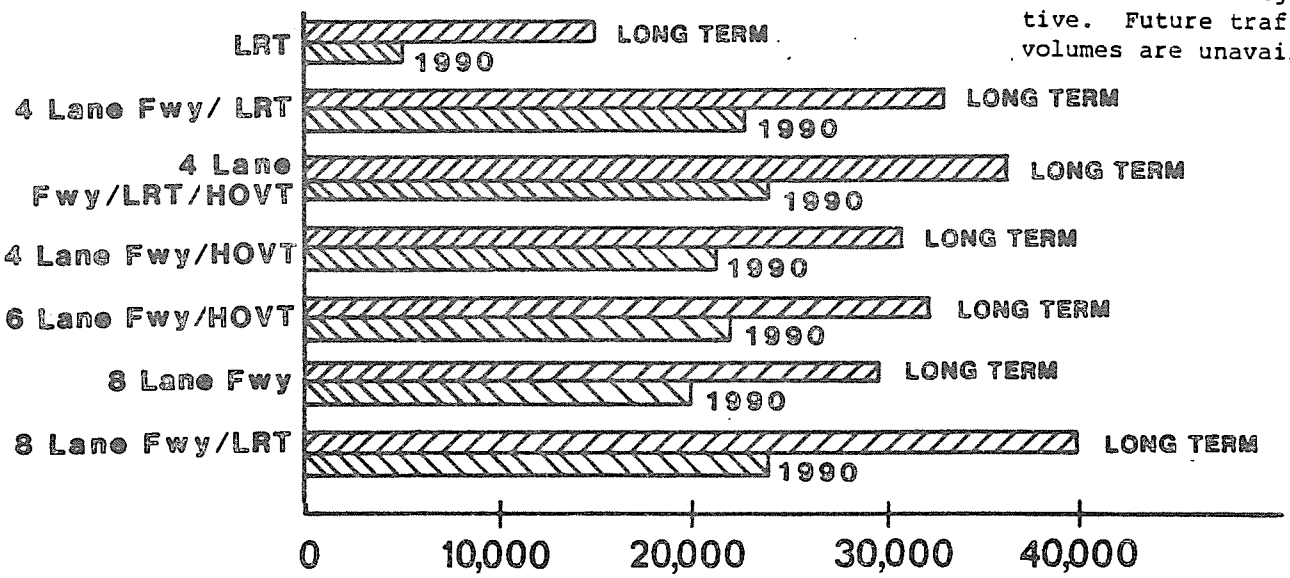


CONSTRUCTION ENERGY PAYBACK PERIOD
(at 1990 Saving Rates)

FIGURE VI-11

HOVT High Occupancy Vehicle Transitway

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



GALLONS SAVED IN PEAK PERIODS
EACH WEEKDAY

FIGURE VI-12

D. Aesthetics and Visual Resources

The information in this section is based on the Visual Analysis Report done by Caltrans in May 1985 which is available for public review at Caltrans District office during normal working hours. The following information reflects the specifics of the 4 lane freeway with HOV lanes and 46' wide median project alternative.

The project is divided almost equally between sections developed at grade, on fill, and depressed (also called "cut" or excavated). The project area is fully urbanized with most of the land used for residential development with some commercial/office development throughout the limits.

Figure VI-13 is an example of short-, mid-, and long-range views to and from the Route 85 corridor.

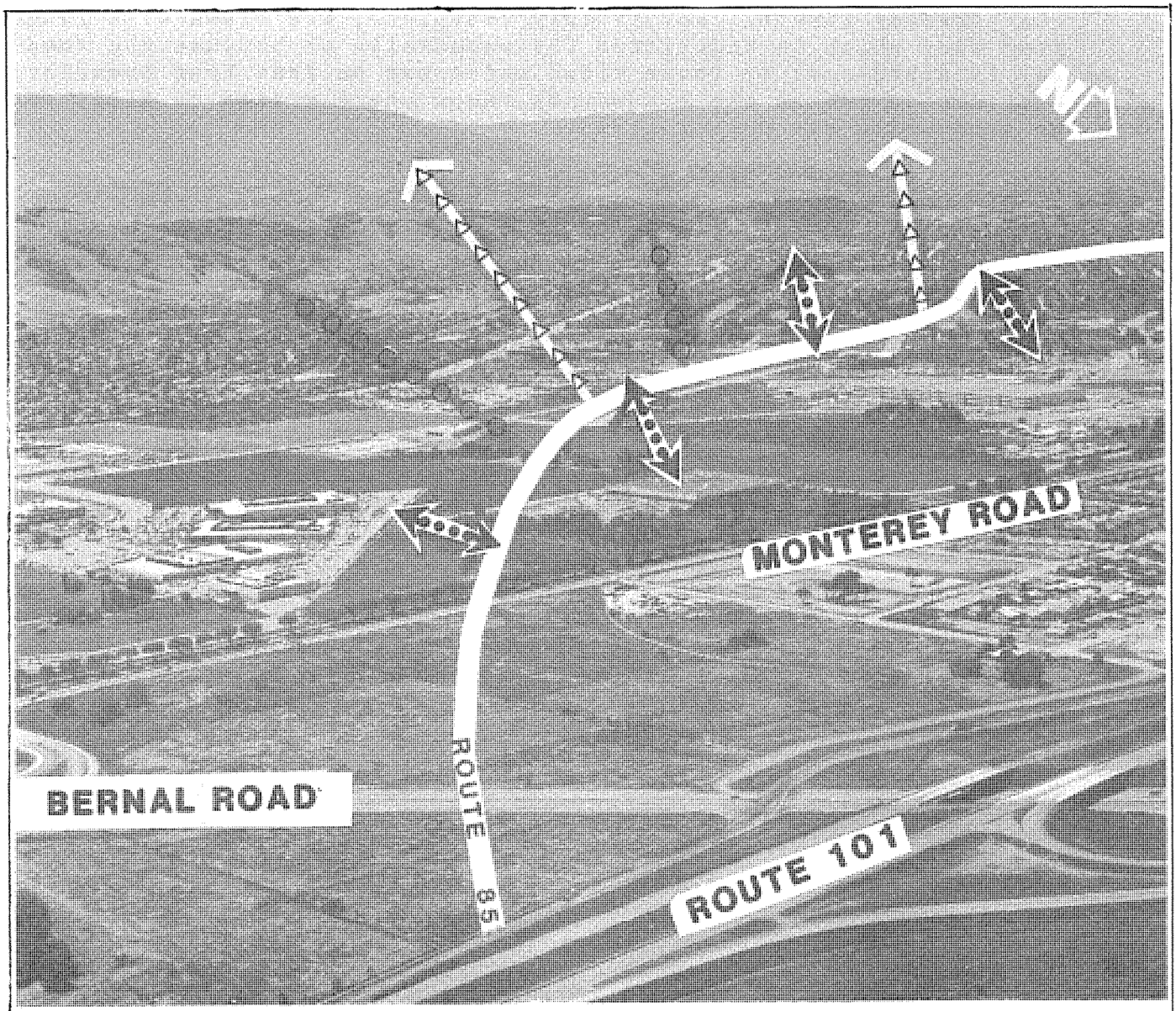
1. Visual Changes

General Overview

Construction of the project alternative in the Route 85 corridor will result in substantial visual impacts. Although the Route 85 corridor has been planned as a transportation corridor for over 30 years, for people living and /or working in the area, it has functioned as a greenbelt in many areas. This existing visual setting along the areas immediately adjacent to the corridor will substantially change due to grading and excavation, importation of fill, construction of interchanges and bridge structures, and the placement of soundwalls. Once the freeway is in operation, visual impacts may also take the form of increased light and glare from moving vehicles and the nighttime lighting of signs and some roadway areas. Although the project will incorporate the use of landscaping, depressed sections, and soundwalls to reduce the visual and aesthetic impacts, it is not possible to reduce these effects to non-significant levels at all locations along the corridor.

The visual impacts described in the previous paragraph will decrease as one moves away from locations immediately adjacent to the freeway. As an example, since the topography of the project area is generally flat, existing development may minimize the visual effects of the freeway as close as one block from the facility. However, the freeway with its bridges and interchanges structures would be visible to persons living on the hillside areas along the corridor in Cupertino, Saratoga, Los Gatos,and San Jose.

In addition to the visual/aesthetic effects of the freeway as viewed by persons in the areas adjacent to the corridor, there are visual/aesthetic effects as viewed by persons traveling on



● ● ● **Short Range View**

○ ○ ○ ○ ○ **Mid Range View**

◁ ◁ ◁ ◁ ◁ ◁ ◁ ◁ ◁ **Long Range View**

Views within the project limits are broken into six major groups, short, mid and long range from the project corridor and short, mid and long range views onto the project corridor.

VIEWS FROM PROJECT

FIGURE VI-13

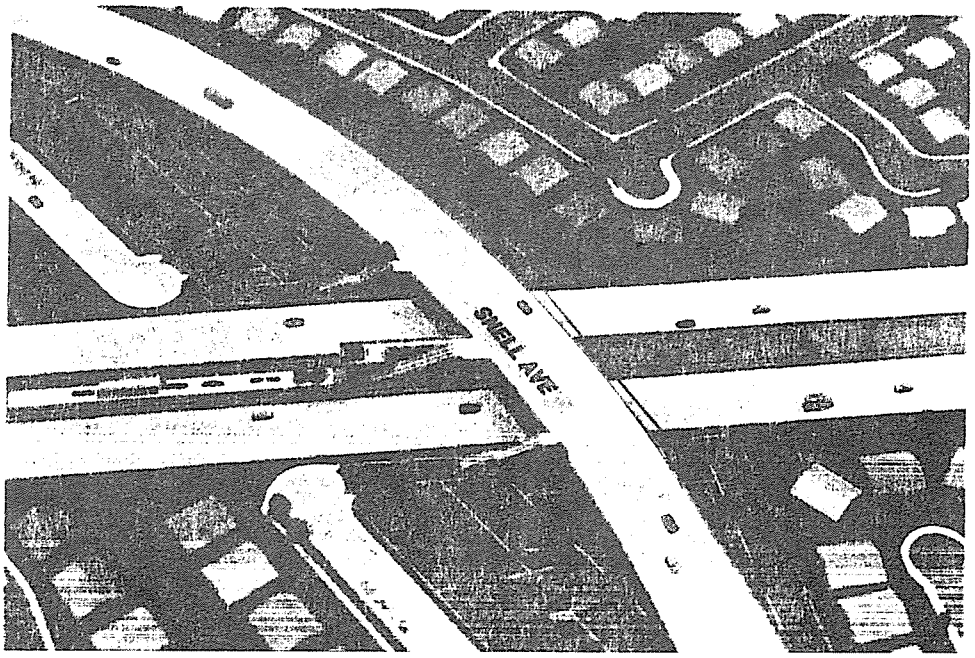
the freeway itself. For freeway travelers, the views will range from what which is restricted (by soundwalls or because the roadway is depressed) to those views which may be free from immediate obstruction (where the roadway or ramps are elevated on fill and no soundwalls are constructed).

Discussion of Substantial Visual Impacts

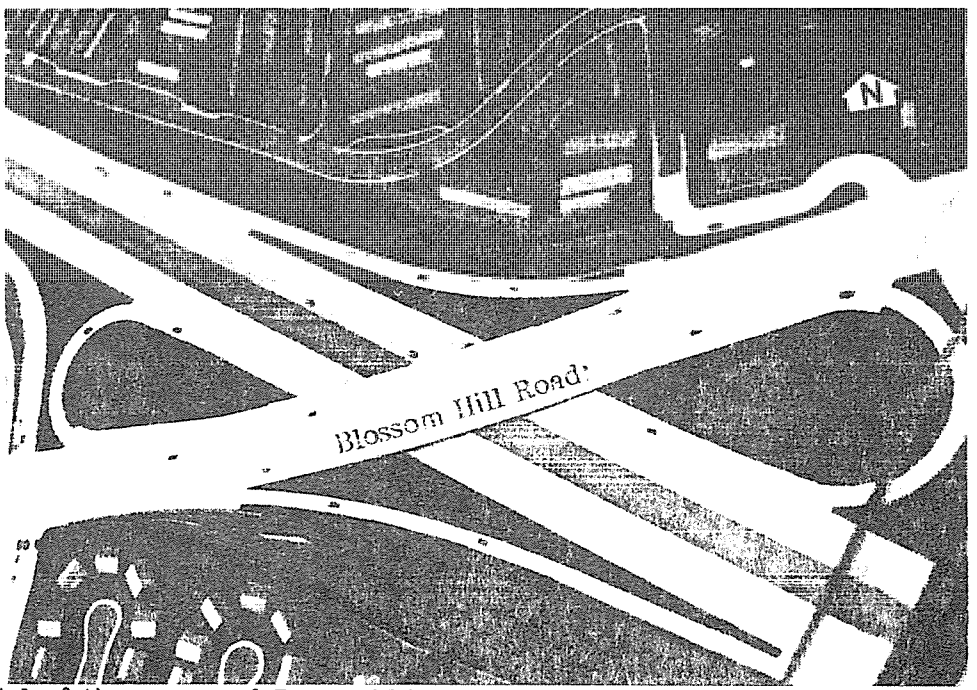
As noted in the overview above of visual impacts, the substantial visual effects of the proposed freeway will occur in those areas immediately adjacent to the Route 85 corridor. These visual effects will primarily occur where the roadway is elevated on fill, soundwalls are constructed, and in the vicinity of bridges and interchange structures. The largest structures will be the freeway to freeway interchanges, Routes 85/101, 85/87, 85/17, and 85/280. Other interchanges are planned at up to 14 locations and structures for creek crossings and local street grade separations at approximately 23 locations (refer to Table V-3 on page I-29). Although the design of many of these structures and interchanges is not finalized (see the discussion on page &INTER.), it is possible to describe typical visual impacts which will occur along the corridor for two reasons: First, many components of the proposed Route 85 freeway will be similar in design and scale to other existing freeways in Santa Clara County. Secondly, design of some of the interchanges and grade separations in the Guadalupe Corridor overlap section of the Route 85 corridor freeway are in the design stages.

Examples within Santa Clara County where freeways have been constructed in depressed sections (also referred to as "cut" or "excavated" sections) include Route 280 in the vicinity of Bascom and Meridian Avenues, portions of Route 680 through east San Jose, and Route 880 in the vicinity of The Alameda. An example of a local freeway which is elevated above the surrounding area (i.e., a freeway constructed on fill) is route 280 in the vicinity of the Lawrence Expressway. Lastly, a good example of a local freeway constructed at-grade through a residential area is a portion of Route 101 (Bayshore Freeway) through Sunnyvale. Soundwalls have recently been erected along this segment of Route 101.

By looking at the various portions of existing freeways described above, one can obtain a generalized visual image of the future Route 85 as it would be constructed on at-grade, depressed, and elevated profiles. in addition, examples of where Route 85 will be elevated can be found in the Guadalupe Corridor overlap portion of the project in the vicinity of Blossom Hill Road. Figure VI-14a illustrates two views where fill has been placed for the future freeway/LRT facility. The view shown in the upper photo of Figure VI-14a will be further changed by the addition of a soundwall at the hinge point. A hinge point is where the embankment slope meets the outer edge of the freeway shoulder.

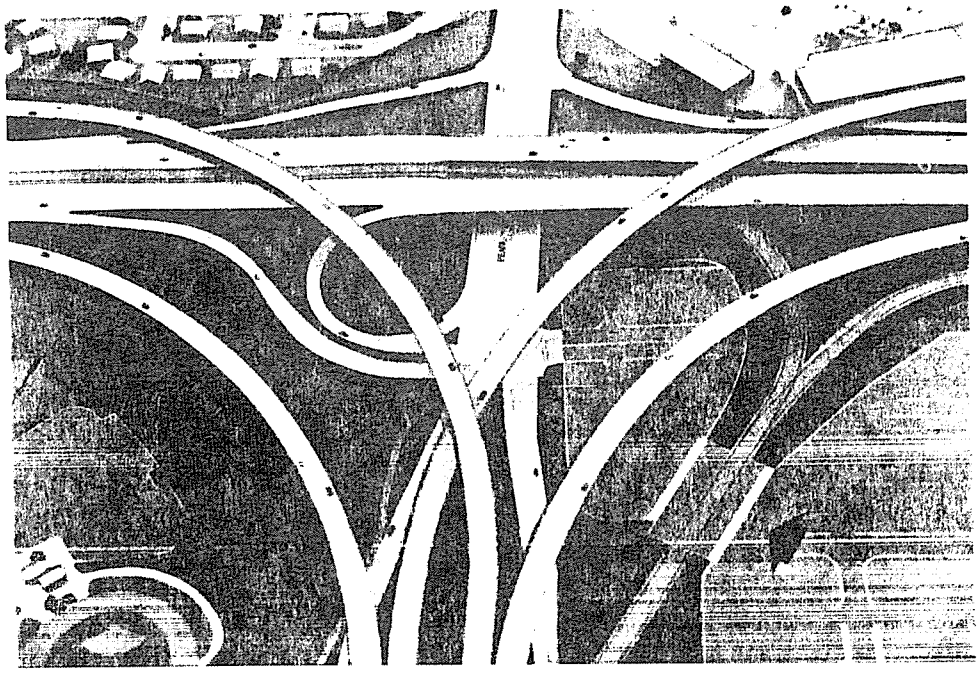


This is a photograph of the model of the proposed Route 85/Snell Avenue grade separation. Note that the freeway will be passing under Snell Avenue, with the profile of the freeway being that of the existing grade. Beneath the Snell Avenue overcrossing is the future park-and-ride lot which will serve the Snell LRT station (the LRT tracks and station are in the median of the freeway).

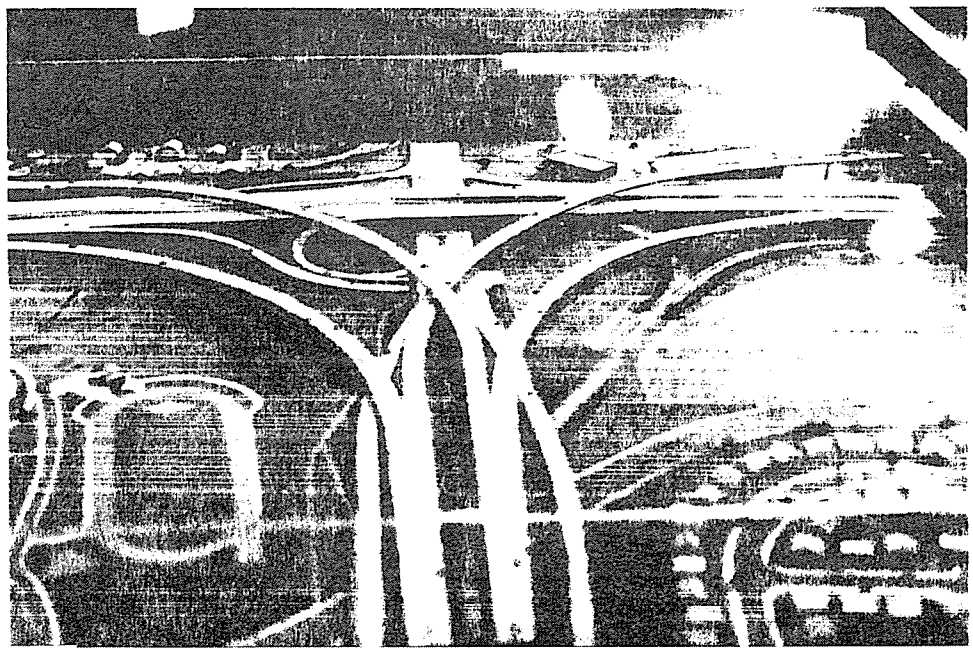


The model of the proposed Route 85/Blossom Hill Road interchange is shown in this photograph. Blossom Hill Road will be constructed over the freeway, with the profile of the freeway being that of the existing grade. Four on and off-ramps are also shown.

FIGURE VI-14a

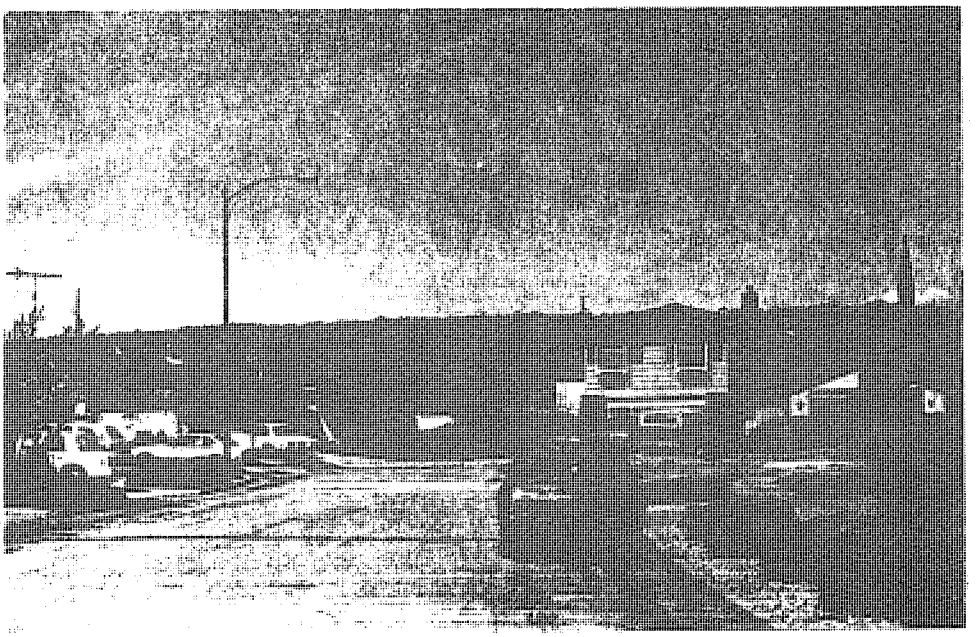


A view of the model of the proposed Route 85/Route 87 freeway-to-freeway interchange. South is toward the top of the photograph. Route 85 is the main roadway shown, running horizontally across the picture. The Ohlone-Chynoweth LRT station of the Guadalupe Corridor is indicated by the arrow.

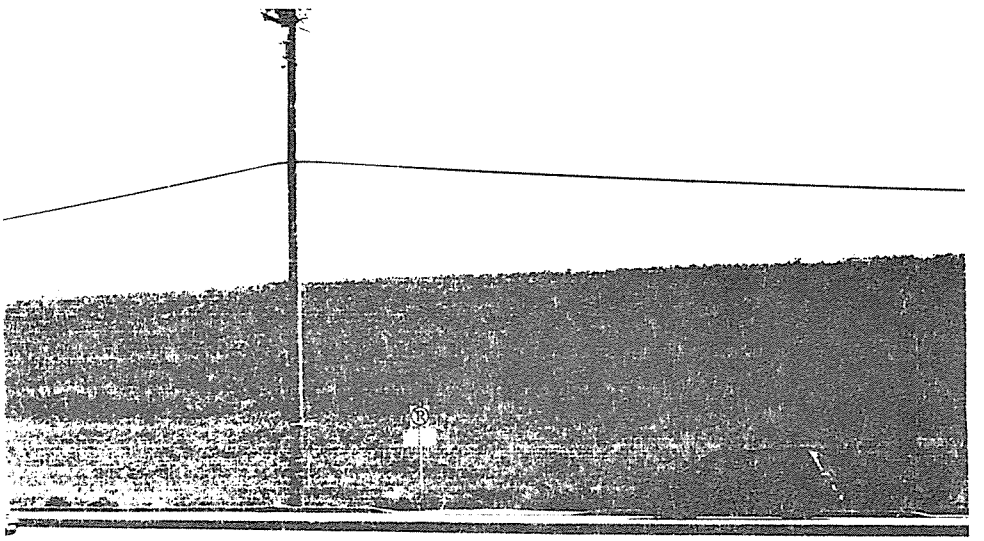


A view of the model of the proposed Route 85/Route 87 freeway-to-freeway interchange looking in a southerly direction. In the foreground is Route 87 under which will cross Chynoweth Avenue. A portion of the Gunderson High School athletic facilities can be seen at the left. The large open area to the right is a proposed park-and-ride lot which will serve the LRT station.

FIGURE VI-14b

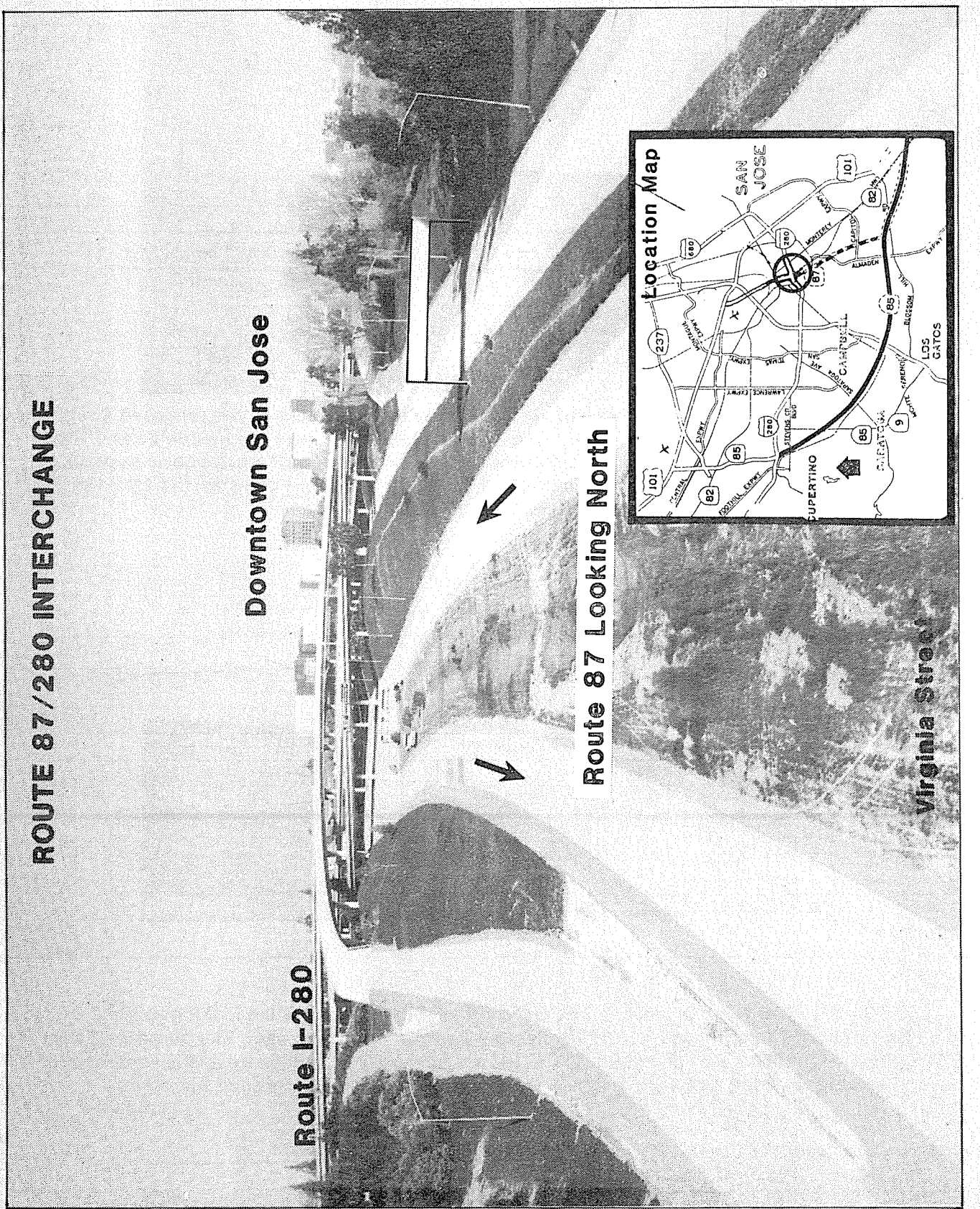


This photo was taken on a cul-de-sac in a neighborhood adjacent to the proposed Route 85/Blossom Hill Road interchange. The fill for the interchange is in place behind the homes. Soundwalls are likely to be erected on top of the fill to attenuate noise impacts. Note that the fill without the soundwall is roughly the same height as the two-story home shown in the photo - a significant visual impact.



This photo was taken from the northerly side of Blossom Hill Road looking south at the location of the proposed Route 85/Blossom Hill Road interchange. The purpose of this photo is to illustrate the height of the fill necessary for an adequate grade separation. The height of the no parking sign and car can be used as a reference for scale.

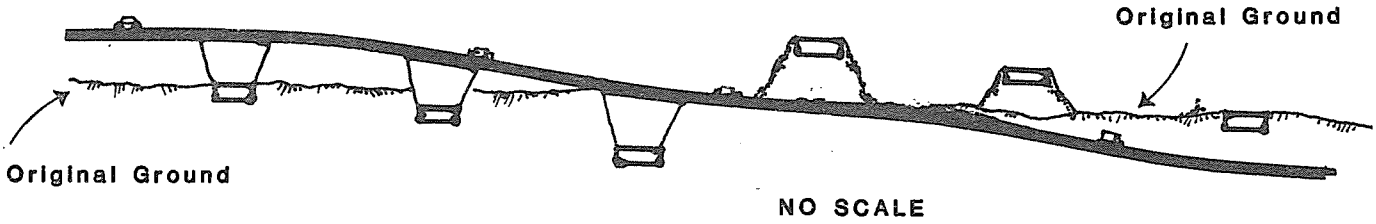
FIGURE VI-14c



ROUTE 87/280 INTERCHANGE

FIGURE VI-14d

ROUTE 85 TRANSPORTATION CORRIDOR PROJECT



NO SCALE

	1	2	3	4	5	6
FREEWAY	Elevated Approximately 16'-22'	Elevated Approximately 4'-16'	At-Grade 0'- 4'	At-Grade 0'- 4'	Depressed Approximately 4'-16'	Depressed Approximately 16'-22'
	Fully Elevated	Partially Elevated	At-Ground Level	At-Ground Level	Partially Depressed	Fully Depressed
CROSS-STREET	Approximately At-ground Level	Partially Depressed	Fully Depressed	Fully Elevated	Partially Elevated	Approximately At-Ground Level
SEPARATIONS	Monterey Road Via Del Oro Miyuki Dr. Winfield Bl Sanchez Dr	None	None	Lean Ave Snell Ave Branham Lane (1) Russo Dr Pollard Rd	Cox Ave Stelling Rd	Meridian Ave Leigh Ave McClellan Rd
INTERCHANGES	Bernal Rd. Great Oaks Bl Almaden Expwy Saratoga-Sunnyvale Rd	Santa Teresa Bl Quito Rd Prospect Rd	Saratoga Ave	Cottle Rd Blossom Hill Bl Camden Ave	None	Union Ave S. Bascom Lark Ave (2) Winchester Bl Stevens Creek Bl

NOTES Separations and Interchanges are derived from Table V-3.
(1) Branham Lane part of Route 87/85 interchange.
(2) Lark Ave part of Route 17/85 interchange.

VISUAL CHANGES

FIGURE VI-14e

Examples of future interchanges and grade separations in the Guadalupe Corridor Route 87 & 85 overlap portion of the Route 85 corridor freeway are shown in Figures VI-14b, -14c, and -14d. Figure VI-14b contains photographs of models of the proposed Route 85/87 freeway to freeway interchange. Figure VI-14c contains photographs of models of the proposed Route 85/Snell Avenue grade separation and the Route 85/Blossom Hill Road interchange. Figure VI-14d contains a photograph of the Route 280/87 freeway to freeway interchange that depicts possible visual impacts and mitigation associated with the Route 85/17 interchange in Los Gatos and the Route 85/101 interchange in south San Jose.

The Route 85/Snell Avenue grade separation is an example of a cross street proposed to be elevated over the top of the freeway facility which will be constructed at the existing grade. Other similar locations along the Route 85 corridor would include Lean Avenue, Branham Lane, Russo Drive, and Pollard Road. In addition to Snell Avenue, Lean Avenue, Branham Lane, Russo Drive, and Pollard Road, the proposed freeway will also cross under a number of other roadways, except that in these locations the freeway would be depressed below the existing grade. Examples of this can be found at Meridian Avenue, Leigh Avenue, Cox Avenue, Stelling Road, and McClellan Road. Where the freeway will be depressed below the existing grade, visual impacts will be less than where the freeway will be at-grade. (See Figures V-13 and VI-14e).

The Route 85/Blossom Hill Road interchange shown in Figure VI-14c is an example of a future interchange where the cross street is proposed to cross over the top of the at-grade freeway facility. Other similar locations along the Route 85 corridor would include Cottle Road and Camden Avenue. In other cases, street crossings are left at the natural grade and the freeway is depressed by constructing it below the natural grade of the cross street. Examples of this can be found at Union, South Bascom, and Lark Avenues, and Winchester and Stevens Creek Boulevards. Where the freeway will be depressed below the existing grade, visual impacts will be less than where the freeway will be at-grade. (See Figures V-13 and VI-14e).

At a number of locations along the Route 85 corridor the freeway will cross over local streets and roadways. These locations will include Bernal Road, Monterey Road, Great Oaks Boulevard, Via Del Oro, Miyuki Drive, Santa Teresa Boulevard, Winfield Boulevard, Sanchez Drive, Almaden Expressway, Quito Road, Saratoga Avenue, Prospect Road, and Saratoga-Sunnyvale Road. At these locations, the freeway will generally be elevated above the existing grade on fill except at Saratoga Avenue and Prospect Road where the freeway would be at approximately ground level (See Figures V-13 and Figure VI-14e).

As noted previously in this discussion, as well as in Chapter V of this FEIS, further design of the proposed grade separations and interchange structures will occur should the project be ap-

proved. None of these structures are expected to result in visual impacts greater than those described in this section. All structures are expected to be typical of those found throughout Santa Clara County on existing freeways; no unusual designs for these structures are proposed or anticipated.

2. Light and Shadows

New shadows will be created by the construction of the project alternative. Shadows will be caused by the new bridge structures in the area of the creeks, interchanges, and by the installation of soundwalls along the edges of the right of way.

Soundwalls constructed in at-grade or cut sections of the corridor will be placed on the right of way line, separating the freeway property from the property of the adjacent homes. Where the freeway will be built on fill section the sound walls will be placed on the fill hinge point, adjacent to the roadway.

The new shadow patterns will most severly affect adjacent homes where the freeway is constructed at grade or in cut section. Shadows affecting adjacent homes will be created during daylight hours on the northerly side of the corridor from Cottle Road to Pearl Ave. in San Jose and from Russo Drive in San Jose to Saratoga Avenue in Saratoga; and on the westerly side of the corridor in the morning, and easterly side in the afternoon from Saratoga Avenue to Prospect Road in Saratoga, and from Stelling Road to Route 280 in Cupertino.

Figures VI-15a and -15b depict the shadows that a ten foot wall would cast at various times during the year.

3. MITIGATION

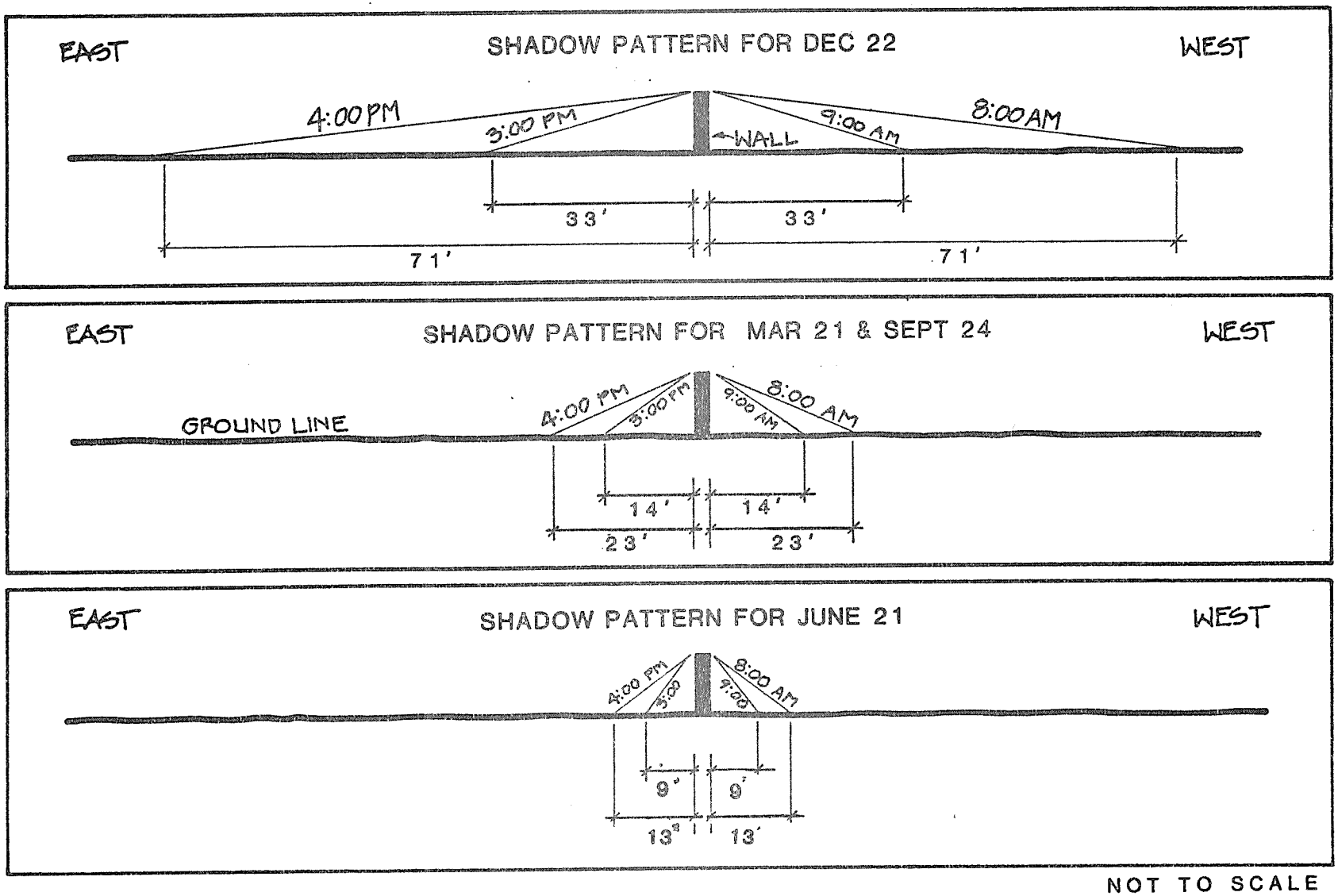
Mitigation for the adverse affects of construction include a depressed roadway, soundwalls, architectural treatments, and project landscaping.

The goal of the visual impact mitigation measures is to incorporate the proposed Route 85 transportation system into the existing urban development without substantially diminishing the visual quality. This would likely occur where the roadway is in cut sections below viewer sightlines, and in areas with extensive landscaping.

Mitigation would substantially lessen the adverse visual affects caused by the construction of the project alternative. However, the negative impacts to areas directly adjacent to the right of way would permanently lessen the quality of short-range views as

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

NORTH-SOUTH SHADOW



NOT TO SCALE

FIGURE VI-15a

FIGURE VI-15b

well as impair the mid- and long-range views of the surrounding hillsides.

a. Depressed Roadway

Areas of depressed roadway occur throughout the project limits. The roadway in these areas will be depressed below the existing ground by up to twenty five feet so that the freeway can pass under existing local streets. By depressing the roadway, many transportation facilities will be below viewer sightlines, or obstructed by soundwalls. Within these areas soundwalls will be placed on the right of way line with landscaping installed between the edge of pavement and the soundwall.

Major depressed roadway sections would occur in the vicinity of Meridian Avenue, from north of Camden Avenue in San Jose to south of Pollard Road in Los Gatos, from north of Quito Avenue Saratoga Avenue, Saratoga Creek to Rodeo Creek in Saratoga, and from south of Stelling Road to Route 280 in Cupertino.

b. Soundwalls

Soundwalls would reduce the attention drawn to transportation facilities and structures from surrounding neighborhoods and provide a visual screen for the community, but may block views, depending on the freeway profile, from the Route 85 corridor to the Coastal Foothills and Santa Cruz Mountains.

While soundwalls would mitigate some of the negative impact caused by construction of the project alternative for adjacent residents, the walls may have a negative impact in themselves. High walls along the right of way line in close proximity to adjacent residences, may block views to surrounding landforms and could create undesirable shadow patterns over many residential backyards.

There would be substantial negative visual affects to residents facing soundwalls in cut and at grade sections because the walls make up a large percentage of the resident's field of view. The apparent height of the walls will be reduced by providing patterns and textures on both surfaces where appropriate throughout the project limits. The visual impact of soundwalls upon adjacent properties will be lessened but cannot be fully mitigated.

Shadows created in these areas will have the greatest impact on adjacent properties due to the placement of the walls close to existing homes. The negative impacts caused by new shadow patterns cannot be mitigated.

The impacts would be less severe for residents, where roadway development occurs on fill section because proposed soundwalls would be constructed furthest away from homes.

c. Architectural Treatments

Interchanges, separations, and bridges, will be provided at locations listed in Table V-3 on page I-29. Interchange configurations and the construction staging of portions of the freeway to freeway interchanges (Routes 85/101, 85/87, 85/17, and 85/280) and all other interchanges will be determined during the freeway agreement negotiation/execution process. All of the interchanges, separations, walls, and bridges will be constructed with similar or complementary textures or patterns (architectural treatments), on highly visible surfaces. This will help reduce a disjointed appearance when viewed in conjunction with the adjacent walls, either sound, retaining, or community.

d. Landscaping

Highway landscaping would help the proposed freeway blend into the landscaped residential and business areas adjacent to the right of way. Landscaping will have varying degrees of success as visual mitigation depending on the profile of the roadway and width of available planting area.

Landscaping in fill sections will be placed between the right of way line and the soundwalls constructed on the fill hinge point. Planting will soften the appearance of the walls and fill slopes and will be primarily visible to adjacent residents.

Landscape planting within the Route 85 interchanges will consist of functional and aesthetic planting of trees, shrubs, and ground covers to make the freeway right of way visually compatible with adjacent properties. Large trees will be placed to visually buffer freeway structures and create a skyline silhouette from the surrounding neighborhoods.

Landscaping will be most successful in mitigating the affects of soundwalls for motorists in cut and at-grade profiles. Landscaping would be installed in front of soundwalls to soften their appearance for motorists and provide a transition between the walls and the roadway. Landscaping would have a minimal mitigating effect on properties adjacent to soundwalls placed on the right right of way line since the planting will be on the freeway side of the walls. Landscaping in these areas will be visible only to motorists, with tops of trees visible above soundwalls to adjacent residents.

Landscaping will not be placed in at grade portions between Cottle Road and Snell Ave. in San Jose due to the lack of planting

area on either side of the existing soundwalls. The impacts of freeway structures and shadows in this area cannot be mitigated.

Highway landscaping will consist of trees, shrubs, ground covers and vines installed with automatic irrigation systems. Trees will be installed at a minimum size of 5 and 15 gallon and in highly visible areas will be 24" box size. Shrubs and vines will generally be 1 gallon size.

Trees will generally have the quickest impact in mitigating the adverse impacts of soundwalls. Trees will be used extensivly in interchanges between the right of way and soundwalls in fill sections and where planting widths allow in cut sections. Trees will not be installed in narrow areas where the freeway is constructed at grade.

Landscaping will be included with the highway construction project or as a separate highway planting project to be installed within one year after completion of the highway construction contract.

E. Cultural Resources

Section 106 of the National Historic Preservation Act of 1966 requires that a Historic Property Survey Report (HPSR) be prepared for projects receiving federal funds. A Historic Properties Survey Report for this project 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 IV-1 on page IV-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. Upgrading of the Guadalupe Corridor expressway to a freeway with a grade separation for Snell Avenue will not invalidate the current Data Recovery Plan for this site. The Data Recovery Plan examines the entire right of way needed for the freeway upgrade and park and ride facilities and has determined that the site boundaries include the proposed construction area for the Snell Avenue overcrossing. The pier footings necessary for the overcrossing will be constructed during the construction of the LRT platform. The additional piers necessary for the viaducted section of the overcrossing are within the boundaries of CA-SCl-137, but are in an area of low sensitivity.

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 Route 85 project alternative, new 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 Route 85 right of way boundaries and those properties immediately adjacent to it (which comprise the APEI for historical resources). Properties adjacent to the Guadalupe Corridor (Route

87) project area were not resurveyed as the State Historic Preservation Office has determined that the Guadalupe Corridor project will not affect any historic properties. For those buildings constructed within the last quarter century, a few representative samples were surveyed.

As a result of the survey, three properties within the Route 85 transportation corridor were found to be potentially eligible for the National Register of Historic Places. Subsequently, the Keeper of the National Register determined on June 10, 1985 that these three properties are eligible for inclusion on the National Register of Historic Places. They are located at the addresses listed below and shown in Figures VI-16 through -18, and Figure VI-23.

The David Greenawalt Farm	14611 Almaden Expressway, SJ	Fig. VI-16
The Le Fevre House & Barn	1444 More Avenue, San Jose	Fig. VI-17
The Warner Hutton House	13495 Sousa Lane, Saratoga	Fig. VI-18

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.

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 represent 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. See Figures VI-16 and VI-16a.

The David Greenawalt Farm meets National Register Criteria B and C at the local level and was determined eligible for inclusion on the National Register of Historic Places on June 10, 1985.

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.

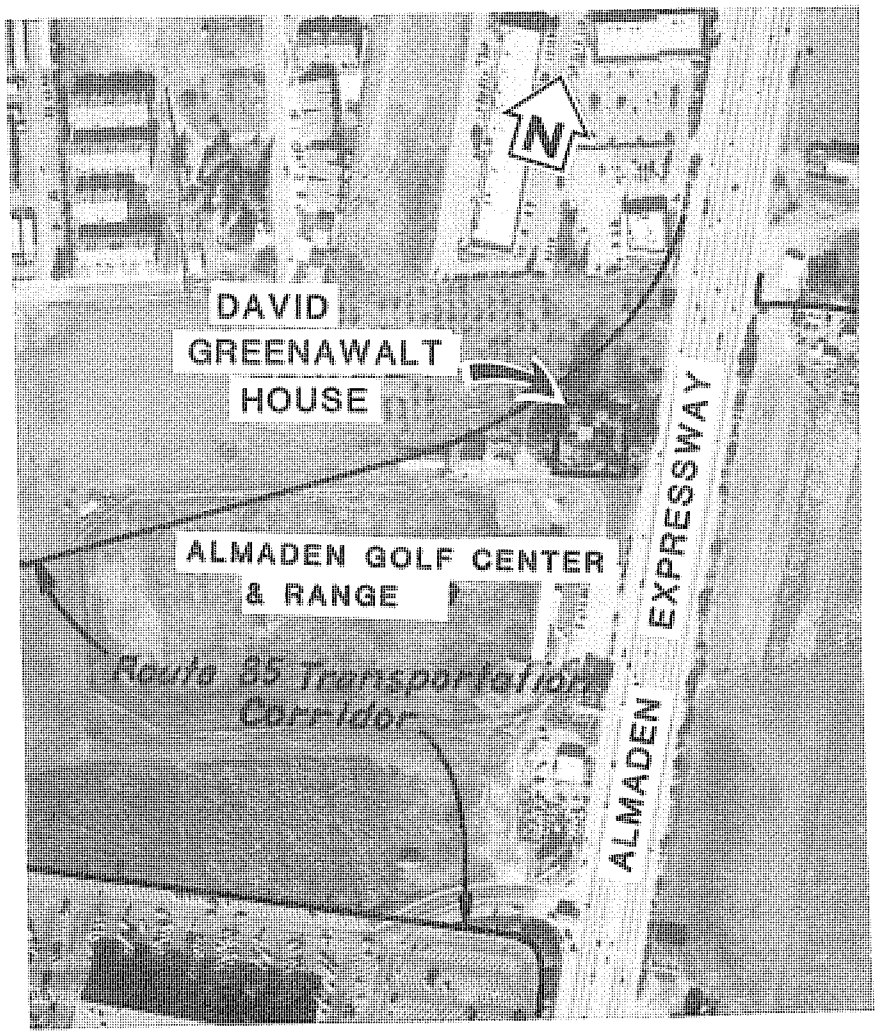
The David Greenawalt Farm is an extremely rare survivor of the period of early agricultural development of the Santa Clara Valley which led to the area being termed the "garden of the world" by the late 19th century. With much of the area today given over to tract subdivisions and the technological industries 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 very 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. See Figures VI-17 and VI-17a.

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

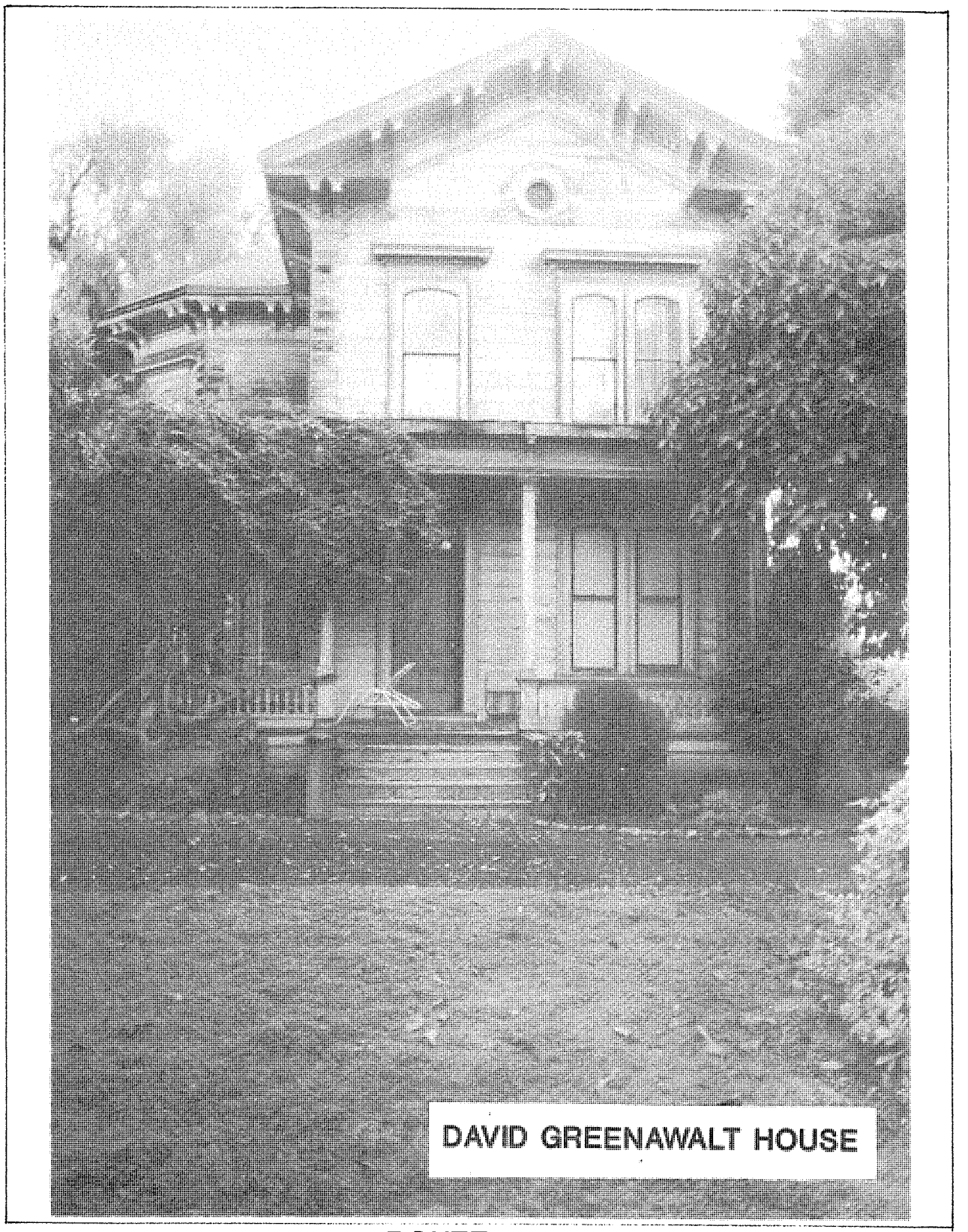
Remnants of the original walnut orchard which the house and barn served can still be seen in adjoining parcels. With its high degree of architectural integrity, mature period landscaping and a fine barn, this small complex represents an increasingly rare and good example of an early 20th century farmstead of which relatively few remain in Santa Clara County. In the context of both



DAVID GREENAWALT HOUSE

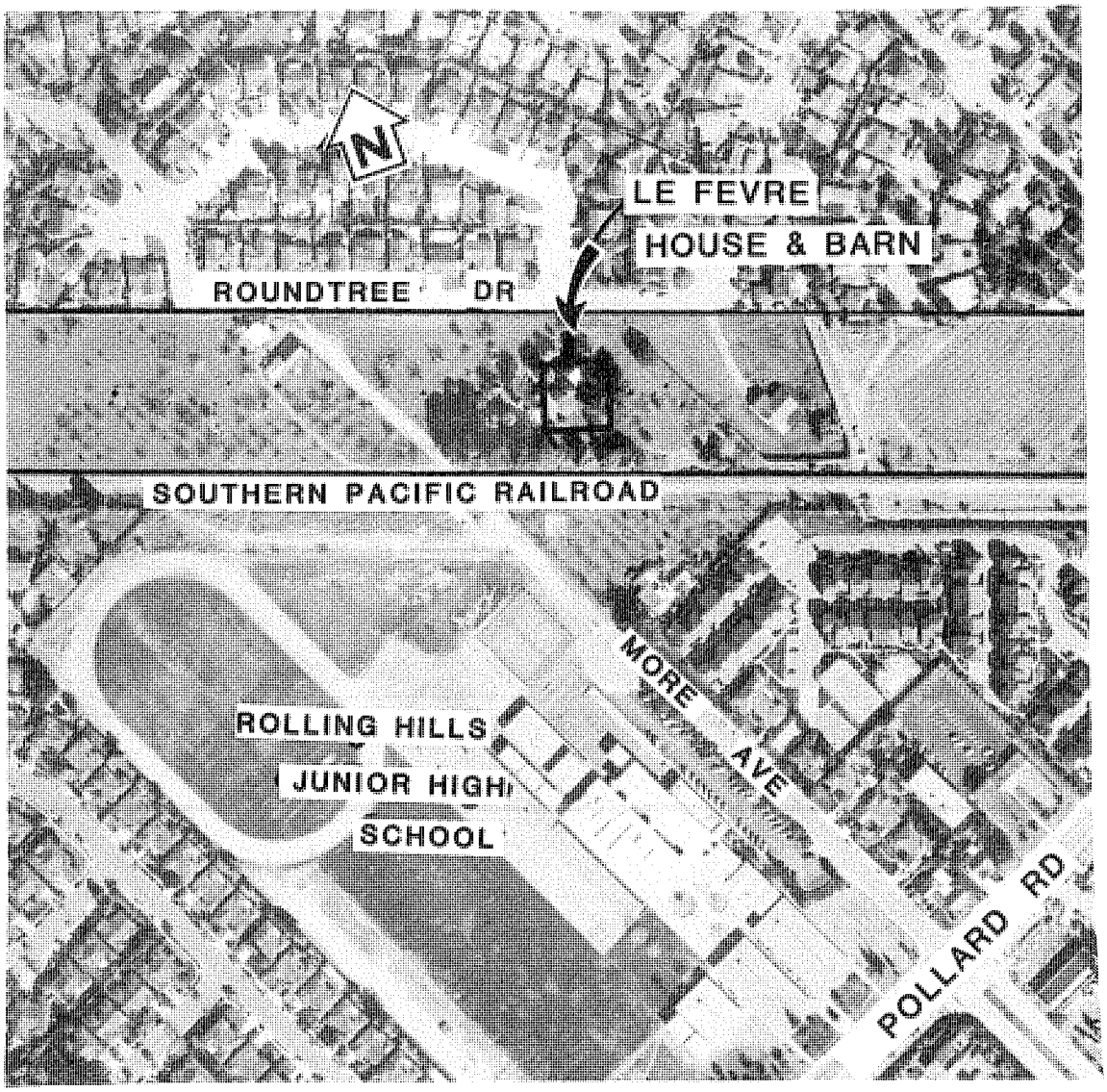
AERIAL PHOTO

FIGURE VI-16



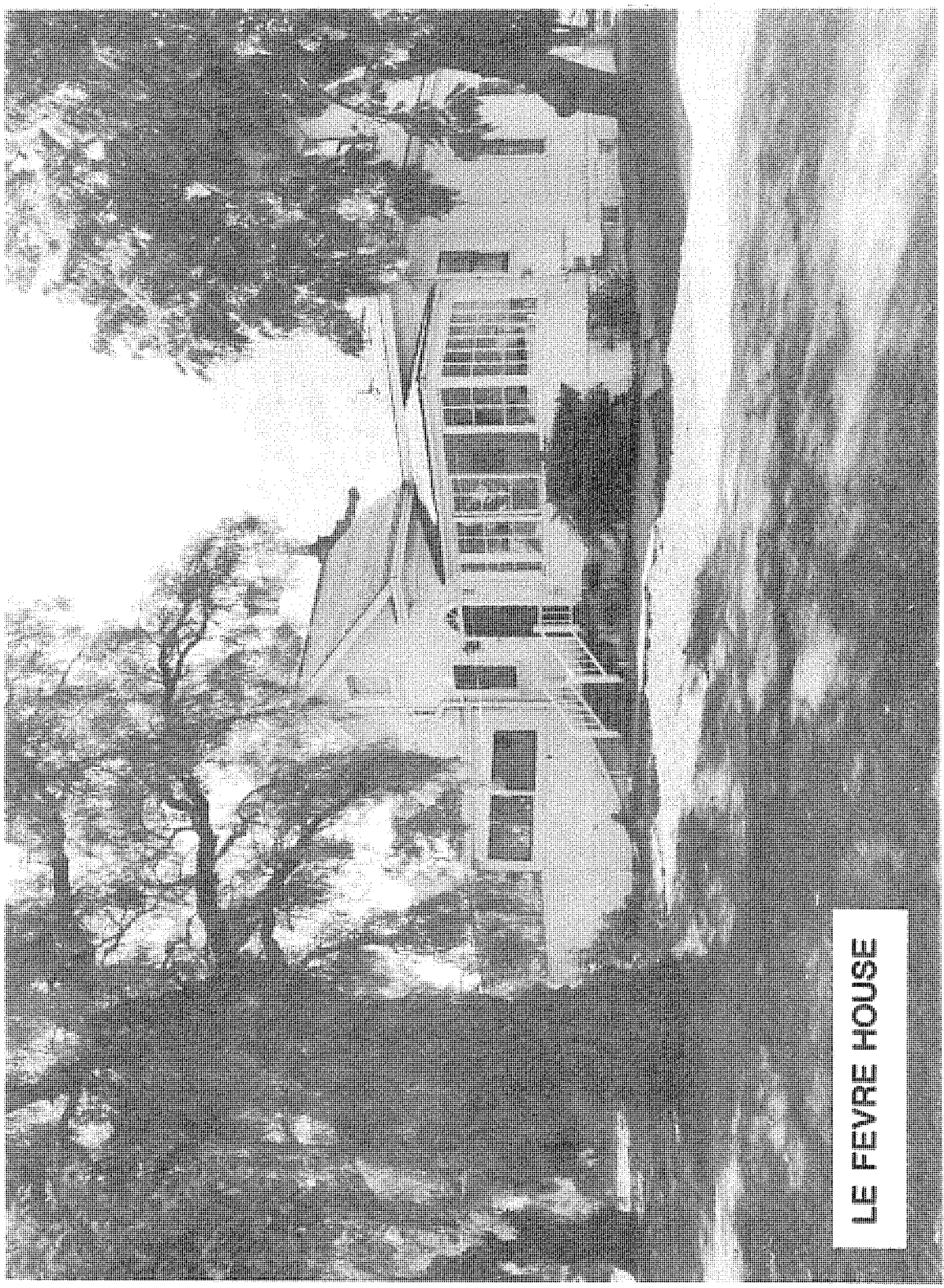
ROUTE 85
HISTORICAL PROPERTY

FIGURE VI-16a



LE FEVRE HOUSE AND BARN
AERIAL PHOTO

FIGURE VI-17



ROUTE 85
HISTORICAL PROPERTY
FIGURE VI-17*a*

this area and the era represented, this property meets National Register criterion C at the local level and was determined eligible for the National Register of Historic Places on June 10, 1985.

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. See Figures VI-18 and VI-18a.

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.

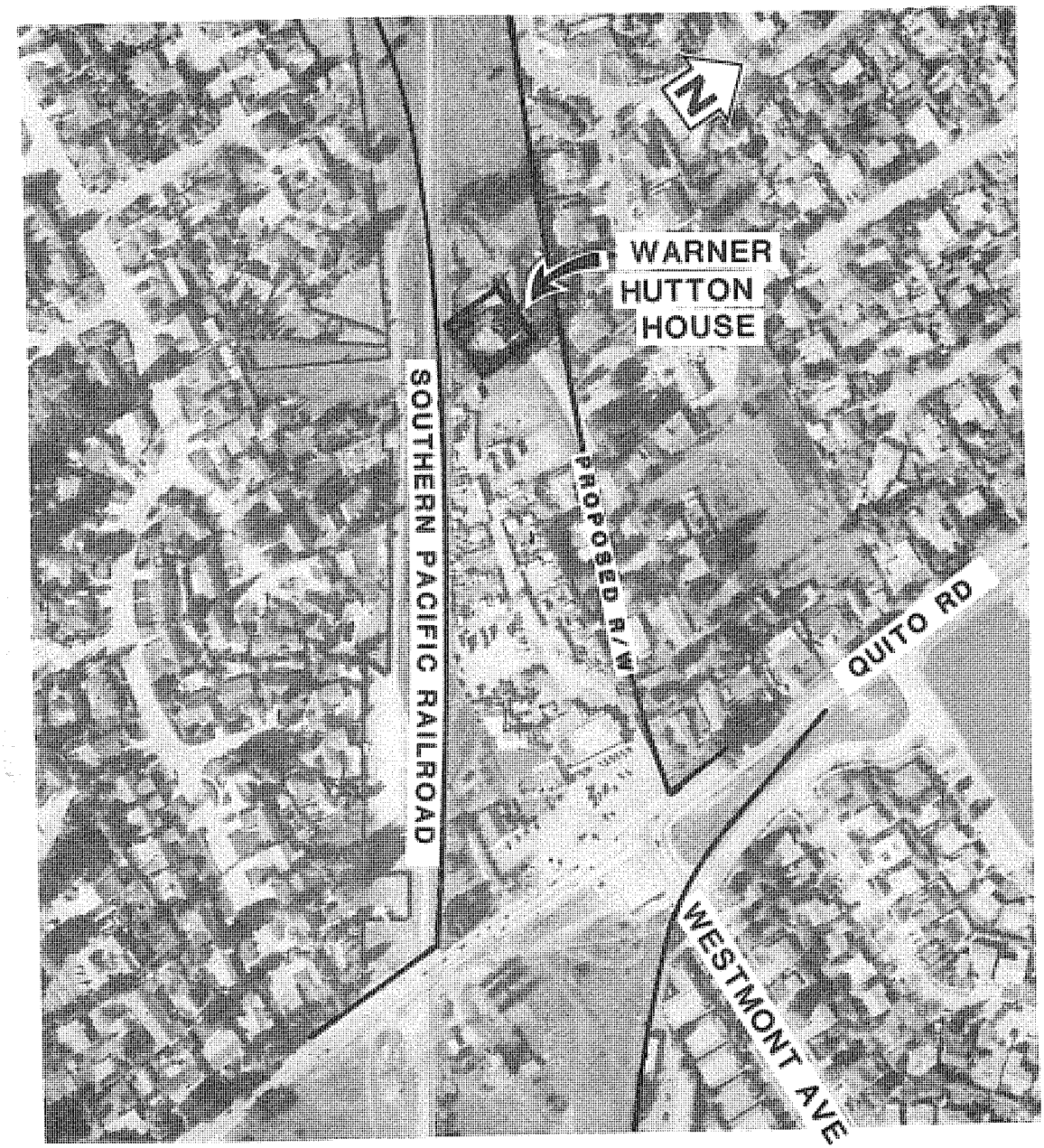
The Warner Hutton House has a high degree of architectural integrity, and in the context of the Santa Clara Valley, is one of very few remaining houses of its period with this degree of design detail. This property was determined eligible for inclusion on the National Register of Historic Places on June 10, 1985.

All three historic properties lie within the proposed alignment of the Route 85 project alternative.

Generally adverse effects occur when an eligible 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. Table VI-12a shows which of the DEIS/DEIR alternatives and project alternative will require acquisition of the historic properties and summarizes the potential effects of each of the nine alternatives and project alternative on the properties. As shown in the table, all six of the highway alternatives and the project alternative would require removal of the properties, which would constitute a significant adverse environmental impact. The LRT alternative would require removal of the Le Fevre House and Farm only. The project alternative will require the acquisition of all three properties as noted in Table VI-12a.

The project alternative cannot be modified to avoid adverse effects and will necessitate removal of the historic structures, the impact will be mitigated by either of the following measures:

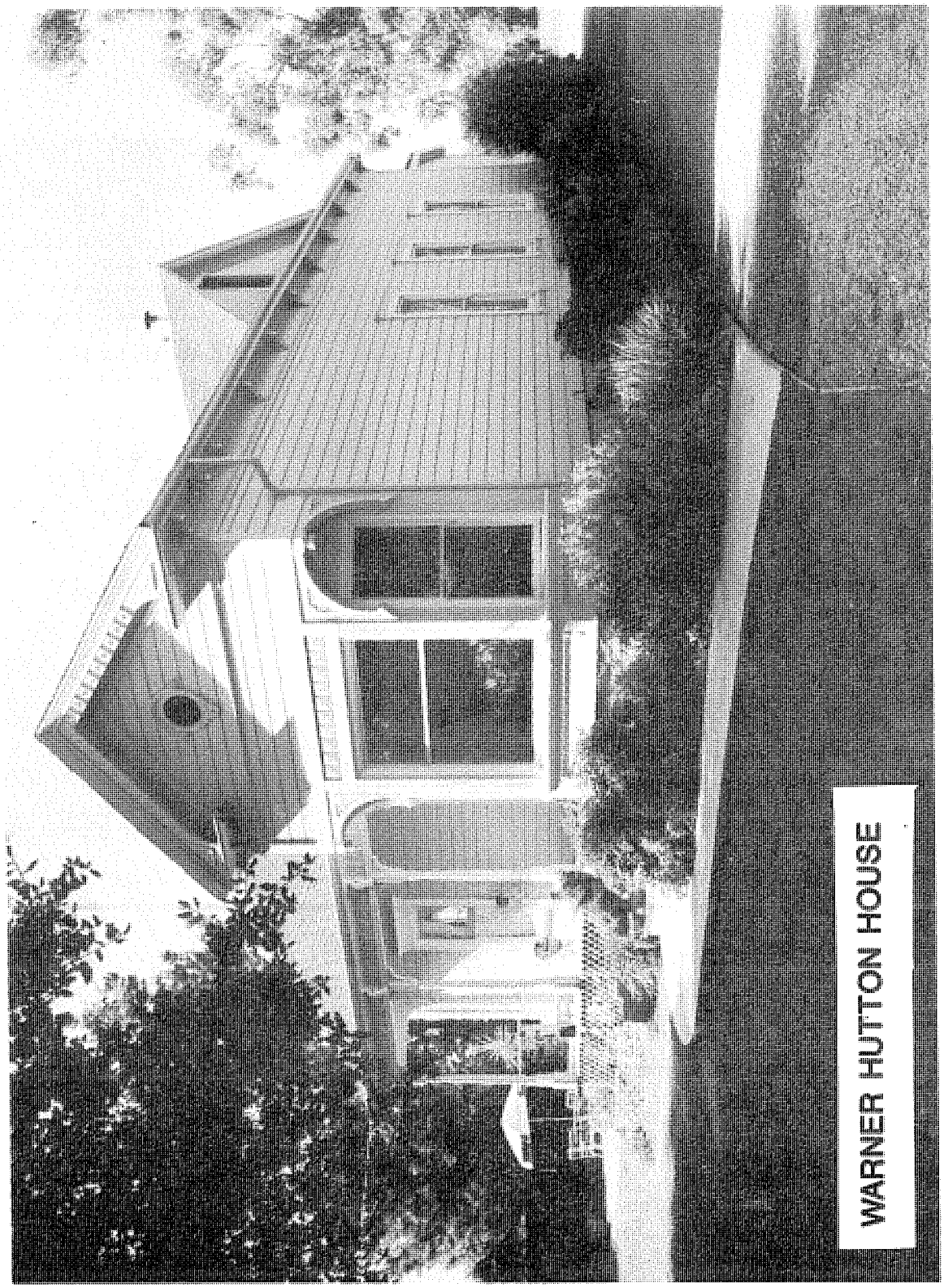
1) After recordation to HABS standards, the structure(s) would be relocated to an appropriate site; the site would be chosen to be as similar as possible to the historic setting of the property and would be selected in consultation with the SHPO. The parcels onto which they are moved will be landscaped to approximate the landscaping of the original parcel. Provisions will be developed, also in consultation with the SHPO, to ensure long-term protection



WARNER HUTTON HOUSE

AERIAL PHOTO

FIGURE VI-18



ROUTE 85
HISTORICAL PROPERTY
FIGURE VI-18a

TABLE VI-12A
ALTERNATIVE EFFECTS ON HISTORICAL PROPERTIES

Alternative	David Greenawalt Farm	LeFevre House & Farm	Warner Hutton House
NPA Effects Acquisition ?	Sale No	None No	Sale No
TSM Effects Acquisition ?	Sale No	None No	Sale No
LRT Effects Acquisition ?	Poss. Visual No	Removal Yes	Poss. Visual No
4-FWY & LRT Effects Acquisition ?	Removal Yes	Removal Yes	Removal Yes
4-FWY w/ LRT & HOV Effects Acquisition ?	Removal Yes	Removal Yes	Removal Yes
4-FWY w/ Bus/HOV Effects Acquisition ?	Removal Yes	Removal Yes	Removal Yes
6-FWY w/ Bus/HOV Effects Acquisition ?	Removal Yes	Removal Yes	Removal Yes
8-FWY Effects Acquisition ?	Removal Yes	Removal Yes	Removal Yes
8-FWY & LRT Effects Acquisition ?	Removal Yes	Removal Yes	Removal Yes
Project Alternative Acquisition ?	Removal Yes	Removal Yes	Removal Yes

of the properties, whether they remain in State ownership or are transferred to an appropriate local government or group.

2) If relocation is not feasible, the affected properties will be recorded to the Historic American Building Survey (HABS) standards before demolition.

Mitigation measures to be applied will be determined by Caltrans and the Federal Highway Administration in consultation with the SHPO and the Advisory Council on Historic Preservation. Coordination with SHPO and ACHP is documented in the MOA found on page VI-114.

The City of Saratoga, in their council meeting of November 19, 1986, resolved to provide a vacant parcel of land next to their civic center complex for the Warner Hutton House. Coordination with the city will continue as to the disposition of this house.

Coordination with the City of San Jose will also continue. Site and property specific information will be developed after the approval of the MOA with SHPO, FHWA and the ACHP.

F. Final Section 4(f) Statement

Section 4(f) of 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 any 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.

This Final Section 4(f) statement is the second-tier evaluation for the Route 85 transportation corridor. The first-tier evaluation was done in conjunction with the right of way protection document entitled "Environmental Impact Statement/Report, West Valley Transportation Corridor, Unconstructed State Route 85, Santa Clara County." That report served to protect the Route 85 transportation corridor from further development. Based on that report, a Record of Decision was approved for the project by the Federal Highway Administration on May 26, 1982. This statement addresses the specific Route 85 project alternative impacts to properties covered by Section 4(f).

The first tier Section 4(f) statement approved by the FHWA was based on reserving the corridor for a transportation facility. To relocate the Route 85 transportation corridor alignment, established in 1956 and '57, in order to avoid impacts to Section 4(f) properties listed in the first tier document and in this document, is not feasible or prudent. (As can be seen in Appendix A, the area surrounding the reserved transportation corridor has

been fully developed). Such a relocation would cause severe socio-economic impacts (in excess of 1000 residential and business relocations, impacts to community facilities, community and neighborhood division, traffic circulation alterations, etc.). Such a relocation would still result in equal or greater impacts to linear parks, streams, schools, and may impact other, as yet unidentified, archaeological and historic sites. Based on this information, the validity of the first tier Section 4(f) statement is upheld.

Project activities have taken no action since the approval of the first tier Section 4(f) statement to eliminate opportunities to minimize harm to Section 4(f) properties.

This current statement is based on sufficient design detail to clearly assess the individual impacts of the project alternative on the Section 4(f) properties.

Section 4(f) requires that the alternative(s) which would minimize harm to Section 4(f) properties, if prudent, be chosen as the project alternative. For this second tier Section 4(f) evaluation and this project, those alternatives would have been the No Project Alternative (NPA), Transportation System Management (TSM), and Light Rail Transit (LRT). However, it was not prudent to select any of these alternatives for the following reason:

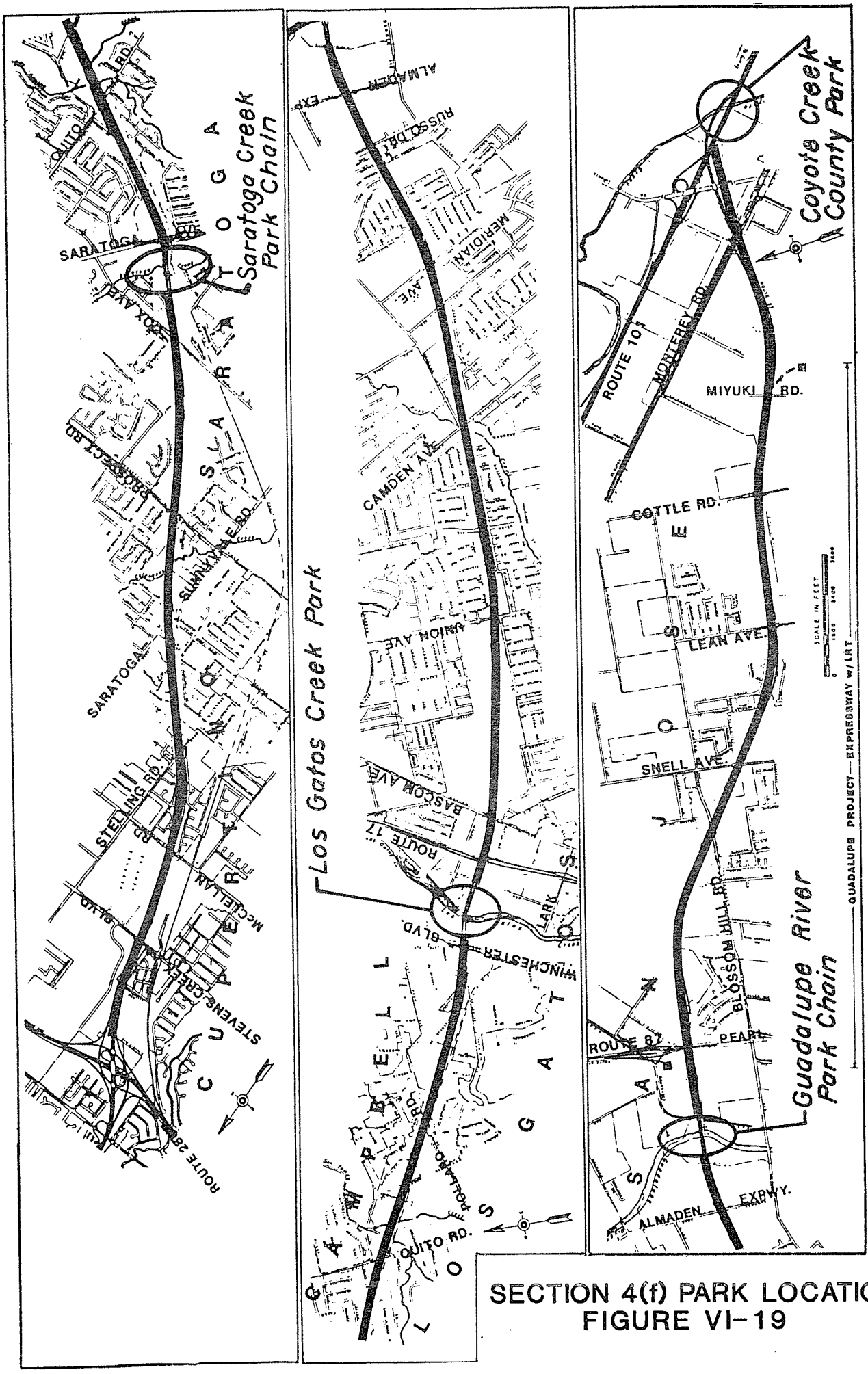
> None of the above alternatives, NPA, TSM, or LRT, would meet or approach the projected transportation needs of the Route 85 corridor. Neither would they have any meaningful effect on improving the existing traffic congestion in the community surrounding the corridor.

1. Parks and Recreational Lands

There are 4 parks and one recreational site which will be impacted by the construction of the project alternative. The parks are listed below and are shown on Figure VI-19.

Coyote Creek County Park
Guadalupe River Park Chain
Los Gatos Creek Park
Saratoga Creek Park Chain

Table VI-13 is a summary of the parks, impacts, and proposed mitigation measures. All of the parks will be impacted by the intrusion of the transportation facility. Mitigation of the impacts, as required, will lessen this intrusion to an acceptable level.



SECTION 4(f) PARK LOCATIONS
FIGURE VI-19

TABLE VI-13
SUMMARY OF IMPACTS ON PARKS

PARK	IMPACT	MITIGATION (1)
Coyote Creek Park Chain	Loss of 0.35 acres of parkland. Relocation of Bikepath (2)	None; Property owned by Caltrans. See Noise Section
Guadalupe River Park Chain (undeveloped)	Impact to 1.1 acres of parkland.	Bridge to Clearspan River.
Los Gatos Creek Park (Bikepath only)	Disruption during construction	Relocation/Replacement of the bikepath on its existing alignment
Saratoga Creek Park Chain (undeveloped)	Loss of 0.4 acres of parkland	Design for future park trails
Congress Springs Park (3)	Noise Impact Only	Construction of a Noise wall. Depression (See Noise Section)
Kevin Moran Park (3)	Noise Impact Only	Construction of a Noise wall. Depression (See Noise Section)

1 Landscaping will be included in all of the mitigation proposals.
2 The existing bikepath will be relocated to the east side of Coyote Creek in conjunction with the mitigation package for the riparian and biology impacts. See the Biology section of this chapter for details.
3 These Parks are protected by Section 4(f). However, Section 4(f) does not apply because there is no direct or constructive use of these parks.

Coyote Creek County Park

Figure VI-20 depicts the area of the Coyote Creek County Park which will be impacted by the Route 85 project alternative. 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 and Section 4(f) clearance with the Route 101 Final Environmental Impact Statement and Section 4(f) Statement (Report Number: FHWA-CA-EIS-74-13-F; SCH #

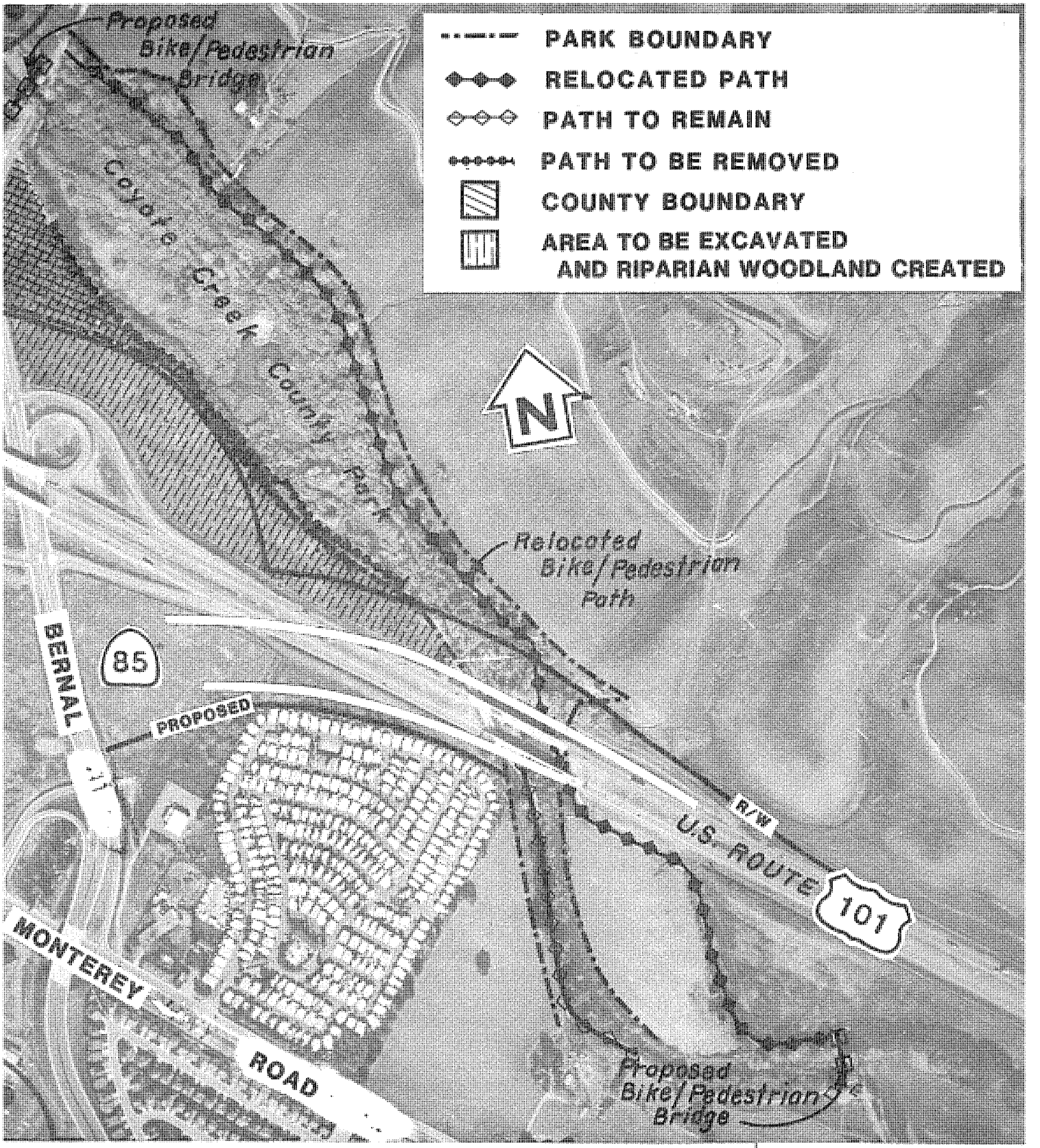
75011504) approved by the Federal Highway Administration and Caltrans in July, 1978. No additional right of way is required. Current park usage is moderate with between 100 and 500 users per day. These users are people bicycling, hiking or horseback riding.

As mitigation for the riparian woodland impacts along the Route 85 corridor, a Caltrans-owned 13+ acre upland parcel adjacent to Coyote Creek County Park will be converted to riparian woodland. In order to do this, the dike between Coyote Creek and the Route 101 freeway and Route 101/Route 85 interchange location will be removed. Along the top of the dike is a paved bike trail/path. As mitigation for the impact of removing the bike trail/path and at the recommendation of the Santa Clara County Parks and Recreation Department, the bike trail/path will be relocated to the east side of Coyote Creek. This relocation will involve the construction of two new bike bridges over Coyote Creek and the construction and paving of approximately one mile of new bike trail/path. The old bike trail/path will be abandoned with only two stubs left in operation. Figure VI-20 also shows the location of the planned construction. All possible planning to minimize harm to the park has been done. The use of this recreation land is a mitigation measure for impacts along the Route 85 transportation corridor. Relocation of the bikepath to the east side of the creek will have a positive impact on the bike path users as they will be moved further away from the highway facility. This further separation will also be beneficial to all the park users and will allow the creation of the riparian area adjacent to the freeway and as part of the park. There will be no impairment to the use or value of the park at the completion of construction.

Conclusion

Based on the above considerations, it is determined that there is no feasible and prudent alternative to the use of land from Coyote Creek County Park and that the proposed action includes all possible planning to minimize harm to Coyote Creek County Park resulting from such use. 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. The interchange design has been modified to decrease its impact to the park to the largest extent possible. Caltrans will issue all the necessary easements and use permits to maintain the existing use of this park.

Construction of the project alternative, with the above mentioned mitigation measures, will not substantially impair the use or value of this park.



COYOTE CREEK COUNTY PARK
BIKE/PEDESTRIAN TRAIL
FIGURE VI-20

Guadalupe River Park Chain

Figure VI-3 on page VI-30 is an aerial photograph of the Guadalupe River/Guadalupe River Percolation Ponds. The Guadalupe River Percolation Ponds are not part of the Guadalupe River Park Chain. Although wildlife uses this area, it is not considered a wildlife refuge. Therefore, the requirements of Section 4(f) do not apply to the ponds. Further information relating to the percolation ponds is contained in the biology section of this chapter.

This undeveloped Guadalupe River Park Chain was established in the 1970s, and is approximately 500 acres in size. This park property is owned by the Santa Clara Valley Water District but is administered by the City of San Jose Parks and Recreation Department. Caltrans will purchase from the Santa Clara Valley Water District approximately 1.1 acres of land which is being used as part of the park. There are no facilities in this area of the park as it is primarily a natural area. This park is used for walking, hiking, and nature observation. Usage is low with less than 100 users per day. Currently there are no plans for any future uses or facilities in this area. A description of the vegetation in this area can be found in the Biology section of this chapter.

The bridge structure necessary to cross the Guadalupe River and its percolation ponds will impact approximately 1.1 acres of park. This impact will be caused by the intrusion of structures, the creation of new shadows and an increase in the noise level.

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 and the bridge will clearspan the river. Ambient noise readings show a noise level of approximately 50 dBA. As a result of the construction of a bridge structure necessary to cross the Guadalupe River and its 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 Abatement Criteria for not requiring noise mitigation. Therefore, no noise attenuation wall is proposed under State or Federal regulations. However, community walls (to mitigate the noise impact) could be considered for inclusion on the bridge structures during final design of the project alternative as additional community mitigation measures. Community walls are further defined in the noise section of this chapter. These walls would be funded with local monies. If community walls are selected, the visual impact of bridge will be much greater to the surrounding community.

Conclusion

Based on the above considerations, it is determined that there is no feasible and prudent alternative to the use of land from Guadalupe River Park Chain and that the proposed action includes all possible planning to minimize harm to Guadalupe River Park Chain resulting from such use. 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. Caltrans will issue all the necessary easements and use permits to maintain the existing use of the affected park land.

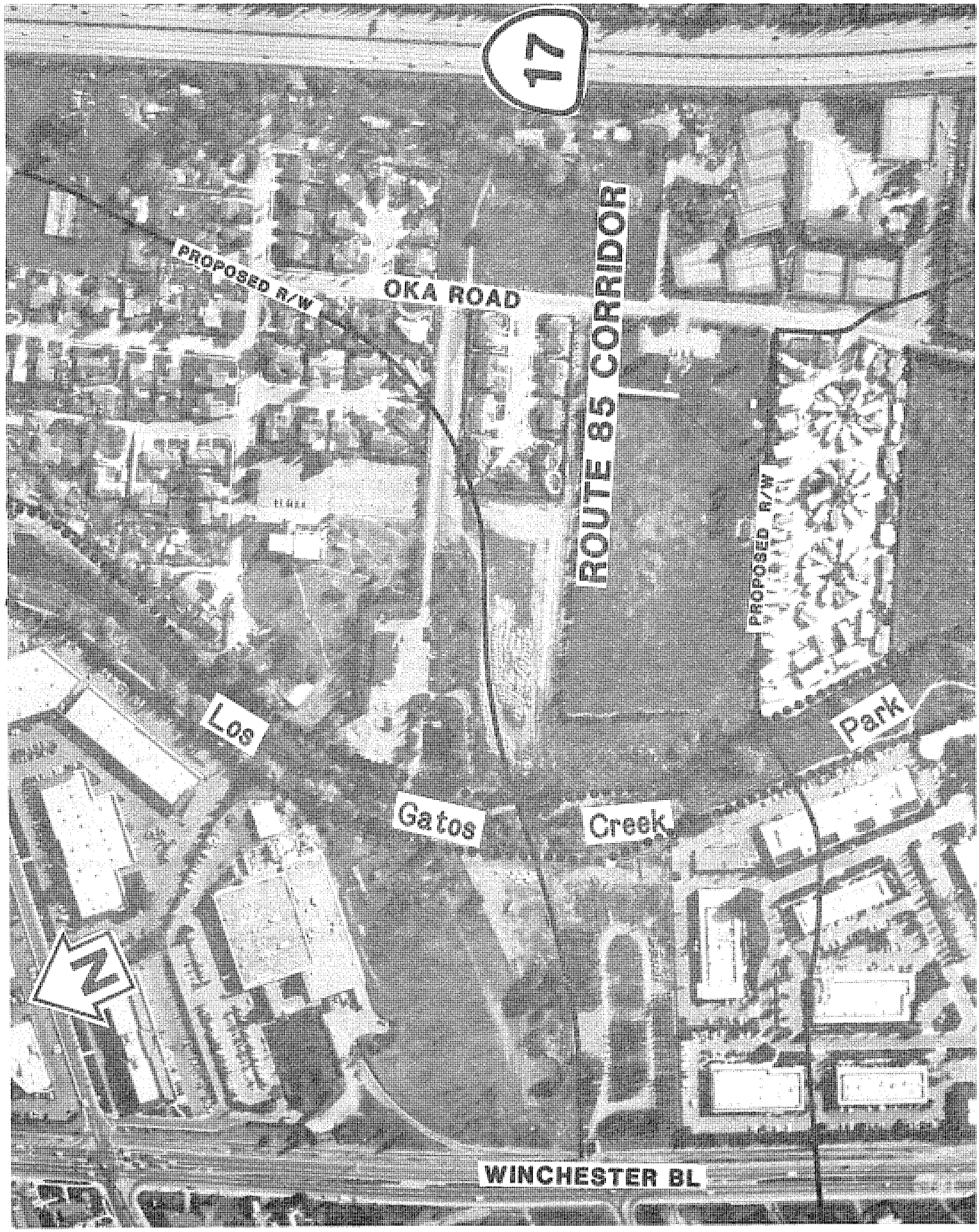
Construction of the project alternative, with the above mentioned mitigation measures, will not substantially impair the use or value of this park.

Los Gatos Creek Park

Los Gatos Creek Park, administered by the County of Santa Clara, is approximately 80 acres in size and was established approximately 20 years ago. Figure VI-21 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 80 acre percolation ponds across the Route 85 corridor, then to Vasona Lake County Park in Los Gatos and Lexington Reservoir County Park south of Los Gatos. This park is primarily a natural area. A description of the vegetation in this park can be found in the Biology section of this chapter.

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 structures. 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 and the Water District. Caltrans will purchase approximately 0.9 acres of Water District property which is being used as part of the park. The only facility within the creek park in the area of the interchange is a recently constructed county bike path some of which is on right of way owned by Caltrans. The remainder of the bike path is on Santa Clara Valley Water District property. That portion of the bike path on Caltrans property is under encroachment permit and is considered to be temporary in nature. Required easements will be issued to the SCVWD and Santa Clara County Parks and Recreation as necessary. This park is currently used for hiking, walking, cycling, and nature observation. Usage in this area of the park averages less than 100 users per day. There are no plans for any future uses or facilities in this area.



LOS GATOS CREEK PARK

FIGURE VI-21

The bike path will need to be temporarily relocated during construction of the interchange. There is no mitigation proposed for this temporary disruption other than the construction of a relocated temporary facility. A permament replacement bike path will be incorporated as part of the interchange design and will be constructed on approximately its existing alignment except nearer to the creek to conform to the existing upstream and downstream bike path. The bike path will experience 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. This 14 dBA increase in noise level is considered significant according to the Federal Highway Administration noise guidelines. Noise walls will be constructed on the appropriate bridge structures to mitigate the noise impact.

There will be six 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. These bridges will also change the visual aspects of the creek in this area and would provide shelter during inclement weather.

Conclusion

Based on the above considerations, it is determined that there is no feasible and prudent alternative to the use of land from Los Gatos Creek Park and that the proposed action includes all possible planning to minimize harm to Los Gatos Creek Park resulting from such use. Additional enhancement however, as appropriate, will be considered during the final interchange design and may be incorporated into the project. 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. Caltrans will issue all the necessary easements and use permits to maintain the existing use of the affected park land.

Construction of the project alternative, with the above mentioned mitigation measures, will not substantially impair the use or value of this park.

Saratoga Creek Park Chain

Saratoga Creek Park Chain is a proposed undeveloped County linear park along Saratoga Creek from Monroe Street (City of Santa Clara) to Sanborn Skyline County Park near the Santa Cruz County line for a distance of approximately 12 miles. Except for approximately 0.1 acres of land which is in private ownership, Caltrans owns all the land necessary to construct the project in the area of this undeveloped park.

As of June 1987, this park chain is undeveloped; there are no existing facilities and there are no provisions for right of way

acquisition or park development. There is no usage of this park. Any future park development would be limited to creekside trails.

The construction of a transportation facility would impact approximately 0.4 acres of the proposed park. This impact would be an increase in noise from approximately 52 dBA to 67 dBA with the construction of the project alternative. There would also be the creation of new shadows and visual impacts.

There is no mitigation for the intrusion of the new bridge structure or the creation of new shadows. Noise walls will be constructed in the vicinity of the park to shield it from the roadway noise. To provide for the future construction of the creekside trails, provisions will be incorporated into the design of the project alternative bridge to allow adequate clearance between the trail and the transportation facility.

Conclusion

Based on the above considerations, it is determined that there is no feasible and prudent alternative to the use of land from Saratoga Creek Park Chain and that the proposed action includes all possible planning to minimize harm to Saratoga Creek Park Chain resulting from such use. 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. Caltrans will issue all the necessary easements and use permits to maintain the existing use of the affected property.

Construction of the project alternative, with the above mentioned mitigation measures, will not substantially impair the use or value of this park.

Congress Springs Park

While there is no acquisition of land from Congress Springs Park, there is a noise impact. This impact is addressed in the noise section of this chapter on page VI-59. The construction of the project alternative along the northerly boundary of the park will not change access to the park. The construction of a noise wall, as discussed on page VI-59, will not have an adverse impact on the park. The wall will shield the view of existing houses to the north of the park, across the transportation facility. The wall will also shield the park from viewing the transportation facility which will be partially depressed in this area.

Construction of the project alternative, with its above mentioned mitigation measures, will not substantially impair the use or value of this park.

Kevin Moran Park

While there is no acquisition of land from Kevin Moran Park, there is a noise impact. This impact is addressed in the noise section of this chapter on page VI-59. The construction of a noise wall, as discussed on page VI-59, will not have an adverse impact on the park. The wall will shield the view of existing houses to the south of the park, across the transportation facility. The wall will also shield the park from viewing the transportation facility which will be depressed in this area. There will be an impact to the bike path between Kevin Moran Park and the Blue Hills Elementary School. This impact is discussed in the bicycle section of this chapter on page VI-157.

Construction of the project alternative, with its above mentioned mitigation measures, will not substantially impair the use or value of this park.

RECREATIONAL LAND

Branham High School Playing Field

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 construction of a baseball backstop, planting of grass and the installation of sprinkler systems.

The Branham High School playing field is the only non-park public recreational land required by the construction of the project alternative within the Route 85 transportation corridor. Figure VI-22 depicts this recreational 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 the project alternative. 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 baseball diamond and backstop will be relocated away from the corridor as they currently encroach into it. The soccer field will have to be reoriented. There will be a noise impact to both the Branham High and Athenour Elementary school playing fields. This impact, as briefly described in the noise section of this chapter, will be mitigated to the largest extent feasible by the construction of a noise wall.

There is no prudent and feasible alternative to avoid impact to this recreational land. To shift the alignment south of its pre-

sent location would impact the Athenour Elementary School which is not currently affected by the Route 85 transportation corridor. This property would also be covered under Section 4(f). To shift the alignment to the north would cause impacts to the Branham High School football stadium.

As mitigation for this impact, the project alternative will be constructed in a cut section. This will allow the transportation facility to be depressed approximately 15 feet in the vicinity of the school. This construction method will allow the continuation of the existing Meridian Avenue roadway and sidewalk at nearly its present location, the entrance/exit into the housing tract to the east of the high school to remain, and the entrance/exit of the high school parking lot to remain. Also, it easily allows for the construction of a pedestrian overcrossing in the vicinity of Dent Avenue. This overcrossing is explained more fully on page VI-158.

This method of mitigation is reasonable and practical in that it minimizes the impacts of the project alternative which are noise, visual, and safety impacts. The noise impact is mitigated with the construction being in a cut section and with the construction of noise walls of a lesser height. The visual impact is lessened by the construction of the walls and their texture treatment. The safety impact is eliminated in that Meridian Avenue remains essentially at grade with virtually no change in its sight distances at the school entrance and the entrance to the housing tract to the east of the school.

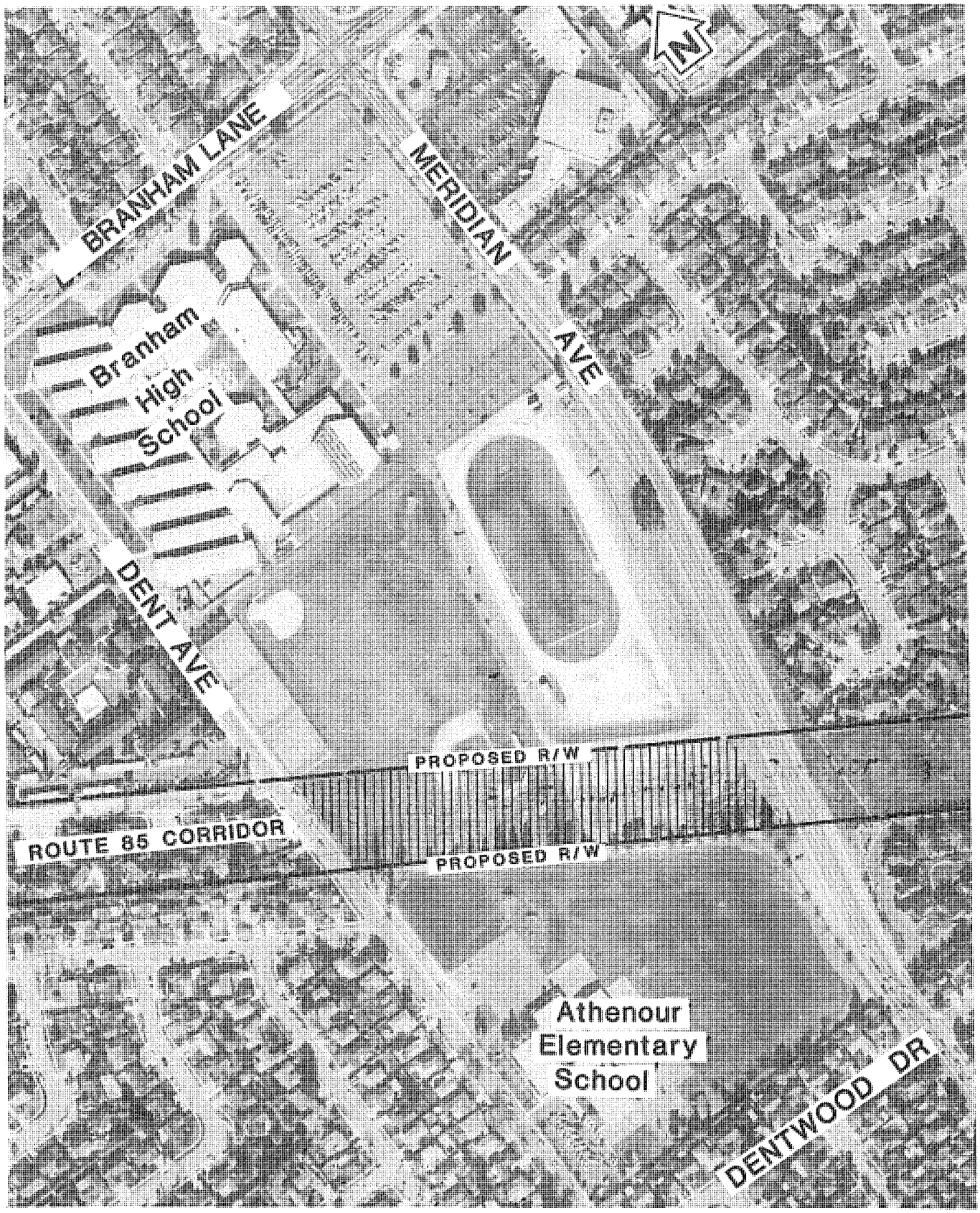
Conclusion

Based on the above considerations, it is determined that there is no feasible or prudent alternative to the use of land from the Branham High School playing field as described above and that the proposeed action includes all possible planning to minimize harm to the Branham High School playing field from such use. To shift the alignment to the north or south of its present position would further impact either Branham High School or Athenour Elementary School.

OTHER RECREATIONAL LANDS

Recreational lands, playgrounds or playing fields, from the following public facilities are adjacent to the Route 85 transportation corridor:

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



BRANHAM HIGH SCHOOL RECREATIONAL LAND

FIGURE VI-22

All of these schools make their facilities available for public use after school hours. These activites include such sports as soccer, baseball, basketball, football, etc. The construction of the project alternative will not change the access now available to each one of the schools. None of the playing fields, as shown in the chart below, will exceed federal or state noise criteria (67 dBA Leq) for this activity or site.

School	Ambient Noise	Unmitigated Noise	Mitigated Noise	Change
Gunderson High School	48	66		+18
Almaden Elementary	48	65	61	+13
Athenour Elementary	51	67	64	+13
Rolling Hills Junior HS	49	75	65	+16
Blue Hills School	51	64	61	+10
De Anza Junior College	54	62	55	+1

There will be little or no visual impact on these facilities as a result of the project because of their distance from the transportation facility or the construction of a noise wall along the right of way line.

There will be no air quality proximity impact on any of the above sites. The project alternative does not exceed the state or federal air quality standards.

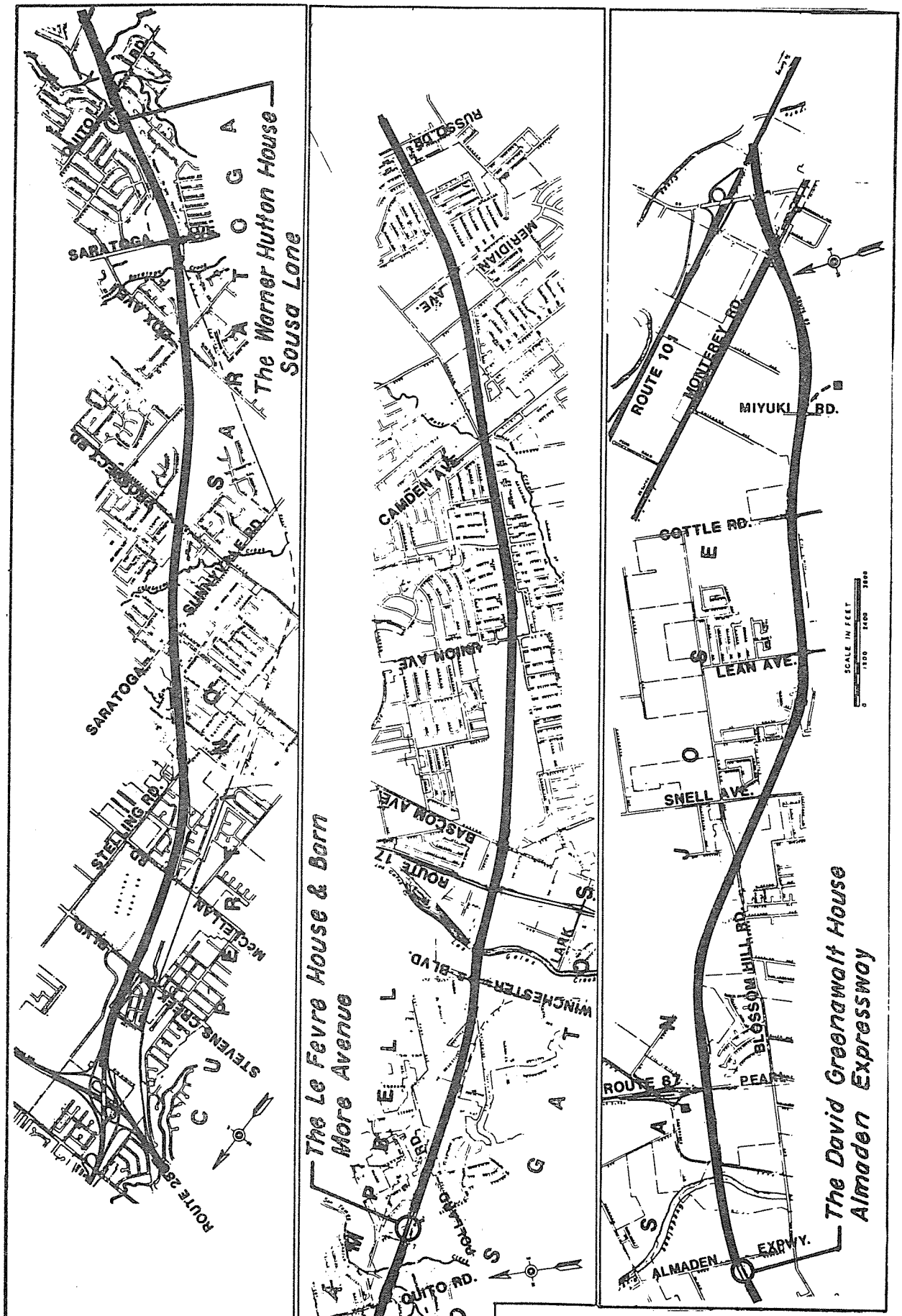
Based on the above information and information contained in other sections of this chapter, there are no proximity impacts which would substantially impair the recreational functions of these Section 4(f) resources.

2. Historical Properties and Archaeological Site

Section 106 of the National Historic Preservation Act of 1966 requires that a Historic Property Survey Report (HPSR) be prepared for projects receiving federal funds. A Historic Properties Survey Report for this project was prepared by Caltrans in November 1984 and is available for public inspection at the Caltrans District 04 office in San Francisco.

There are 3 historical properties and one significant archaeological site which will be impacted by the construction of the project alternative.

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-23.



HISTORICAL PROPERTY SITES

FIGURE VI-23

These three properties are 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.

These three properties will be impacted by the construction of the project alternative. They are all in the Route 85 right of way. Any shift in the project alternative alignment would impact developed areas and would require new right of way acquisition and displacement of people and businesses.

The construction of the Route 85/Almaden Expressway interchange will require the removal of the David Greenawalt Farm.

Realignment of the Route 85/Almaden Expressway interchange to miss the David Greenawalt Farm would require the acquisition of over 130 residential units, removal of Almaden Elementary School, removal of over 1,000 parking spaces from the Emporium parking lot, removal of the Emporium department store (in excess of 250,000 square feet of retail space, removal of at least 7 commercial/office buildings, further impact to the Los Alamitos Percolation Ponds, and the possible reconstruction/redesign of the Route 85/Route 87 interchange. This work and acquisition is estimated to cost in excess of $50 million dollars. These impacts are of an extraordinary magnitude and cost.

As 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. If relocation is not possible, the house and farm will be recorded to standards of the Historic American Buildings Survey and demolished.

The project alternative requires 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 Farm, including house and barn, will be recorded to standards of the Historic American Buildings Survey. Relocation of this property is the preferred mitigation measure. If relocation is not possible, the house will be recorded and demolished.

The Warner Hutton House will be impacted by the construction of the Route 85 project alternative. There are no feasible design changes which can be incorporated which would reduce or eliminate the construction impact on the property. The project alternative will require the removal of the Warner Hutton House.

As mitigation for this impact, the Warner Hutton house will be recorded to the standards of the Historic American Building Survey. Relocation of this property is the project mitigation measure. The City of Saratoga has expressed interest in acquiring this building and placing it in an appropriate setting. If relocation is not possible, the house will be recorded and demolished.

To realign the project alternative and eliminate the impact to the Le Fevre and the Warner Hutton properties would require the acquisition of an additional 126 housing units at a cost in excess of $24 million dollars. It would also require the truncation or elimination of 5 local streets, causing undue hardship on those non-affected residents. These impacts are of an extraordinary magnitude and cost. Shifting of the established alignment is not a feasible or prudent alternative.

All mitigation measures pertaining to the above historic structures will be in accordance with the Memorandum of Agreement which has been signed by Caltrans, the FHWA, the State Historic Preservation Officer, and the Advisory Council on Historic Preservation. A copy of this MOA follows.

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 85/Route 87 interchange. (Figure II-2 on page II-5 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 further or other impact to this site as a result of the construction of the Route 85 project alternative.

Conclusion

Based on the above information, it is determined that there is no feasible and prudent alternative to the use of the above properties and that the proposed action includes all possible planning to minimize harm to them.

Based on the following letter, the U.S. Department of the Interior, concurs that there is no feasible or prudent alternatives to the proposed use of the Route 85 Section 4(f) properties.

MEMORANDUM OF AGREEMENT
Regarding
Route 85 Transportation Corridor between Route 101
in South San Jose and Route 280 Near Stevens Creek Boulevard
in Cupertino, California

WHEREAS, the Federal Highway Administration (FHWA) has determined that the construction of a freeway in the Route 85 Transportation Corridor in Santa Clara County, between Route 101 in South San Jose and Route 280 near Steve Creek Boulevard in Cupertino will have an adverse effect upon three histor properties eligible for inclusion in the National Register of Historic Places, and has requested the comments of the Advisory Council on Historic Preservation (Council) pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. 470) and its implementing regulations, "Protection of Historic Properties" (36 CFR Part 800);

WHEREAS, the three historic properties specified in this Agreement are kno as the Warner Hutton House, located in the City of Saratoga; the LeFevre House and Farm, located in the City of San Jose; and, the David Greenawalt Farm, located in the City of San Jose;

WHEREAS, the Cities of Saratoga and San Jose have expressed interest in th Warner Hutton House and David Greenawalt Farm, respectively, and the City San Jose and the Santa Clara County Historical Resources Commission have expressed willingness to help in the identification of suitable sites and owners for the LeFevre House and Farm;

NOW, THEREFORE, FHWA, the California Department of Transportation (Caltran the California State Historic Preservation Officer (California SHPO), and Council agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on historic properties.

STIPULATIONS

FHWA shall ensure that the following measures are carried out:

I. Conveyance of Historic Properties to Non-Federal Properties:

A. Caltrans may convey one or more of the historic properties to t City of Saratoga and/or the City of San Jose, if such agency(ie provides an appropriate site and agrees to accept title to the historic property(ies) with protective covenants. Such covenant shall be developed in consultation with the California SHPO and the Council and acceptable to the signatories to this Agreement prior to their execution.

B. Caltrans shall develop and implement a marketing plan that is acceptable to the California SHPO and that is in accordance wit Section I.D. of the Council's Manual of Mitigation Measures (MO for all historic properties for which the City of Saratoga and/ the City of San Jose does not accept title or for which a party identified by such Cities does not accept title as provided in stipulation I.A., above. In lieu of the protective covenants a

provided in stipulation I.A., above, such a party may, as a condition of transfer, donate a valid conservation easement to the historic property(ies) to an approved governmental entity or 501(c)(3) corporation that has been previously accepted by the California SHPO.

C. Subject to the prior written approval of the California SHPO, Caltrans may transfer historic properties without protective covenants or a conservation easement, if there is no party with an acceptable proposal conforming to the requirements of stipulations I.A. and I.B., above. In such case, Caltrans shall record the historic properties in accordance with Section I.G. of MOMM prior to the transfer.

II. Relocation of Historic Properties

A. Caltrans shall afford the California SHPO 30 days to review and comment on the news site(s) for the historic properties to be relocated and shall take the California SHPO's comments into account in selecting the new sites.

B. Caltrans shall ensure that the historic properties are relocated in accordance with the recommended approaches of the Department of the Interior's Moving Historic Buildings, in consultation with the California SHPO, by a professional building mover who has the capabilities to move the historic properties properly.

C. Within 90 days of the relocation of historic properties, Caltrans shall request the California SHPO to evaluate such historic properties at their new sites and to make a recommendation to the Secretary of the Interior regarding their continued inclusion in the National Register.

III. Landscaping of Historic Properties

Caltrans shall ensure that a landscaping plan(s) for relocated historic properties is developed in consultation with and subject to the approval of the California SHPO and is implemented as approved by the California SHPO.

IV. Recordation, Architectural Salvage, and Demolition of Historic Properties:

A. Prior to architectural salvage, deterioration, and/or demolition, Caltrans shall ensure that the historic properties to be demolished are recorded to the standards of the Historic American Buildings Survey, as provided for in Section I.G. of MOMM, and that copies of this documentation are made available to the California SHPO and appropriate local archives designated by the California SHPO.

B. After recordation, Caltrans shall afford the California SHPO or her designee 30 days to select architectural elements from historic properties to be demolished for curation or use in other projects. Caltrans shall ensure that the items selected are

removed in a manner that minimizes damage and are delivered to the California SHPO or her designee.

C. With the prior written approval of the California SHPO, Caltrans may demolish historic properties if, after implementation of stipulations I and II above, no party is found willing to accept title to the historic properties.

V. Dispute Resolution Mechanism:

At any time during the implementation of the measures stipulated in this Agreement, should there be an objection, disagreement, or question among the signatories to this Agreement, a local government, or other member of the public, FHWA and Caltrans shall consult with the party raising the matter and shall endeavor to satisfactorily resolve the matter. Should no satisfactory resolution be forthcoming, FHWA shall forward all documentation relevant to the matter to the Council. Within 30 days after receipt of all pertinent documentation, the Council shall:

A. Notify FHWA that it concurs in FHWA's position regarding the matter.

B. Advise FHWA of changes that would make FHWA's position acceptable, agreement with which by FHWA would resolve the matter; or

C. Notify FHWA that it will comment pursuant to 36 CFR Section 800.6(B).

VI. Failure to carry out the terms of this Agreement requires that FHWA again request the Council's comments in accordance with 36 CFR Part 800. If FHWA cannot carry out the terms of the Agreement, it will not take or sanction any action or make any irreversible commitment that would result in an adverse effect with respect to National Register or eligible properties covered by this Agreement or would foreclose the Council's consideration of modifications or alternatives to the undertaking.

VII. If any of the signatories to this Agreement determines that the terms of the Agreement cannot be met or believes that a change is necessary, the signatory will immediately request the consulting parties to consider an amendment or addendum to this Agreement. Such an amendment or addendum shall be executed in the same manner as the original Agreement.

VIII. Within 90 days after carrying out the terms of this Agreement, FHWA and Caltrans shall provide a written report to all signatories to this Agreement on the actions taken to fulfill the terms of this Agreement.

Execution of this Memorandum of Agreement evidences that the FHWA has afforded the Council a reasonable opportunity to comment on the Route 85 Transportation Corridor freeway project and its effects on historic properties and that the FHWA has taken into account the effects of its undertaking on historic properties.

FEDERAL HIGHWAY ADMINISTRATION

By _____ Jan 21, 1987
for BRUCE E. CANNON Date
Division Administrator

CALIFORNIA STATE HISTORIC PRESERVATION OFFICER

By _____ 1-23-87
KATHRYN GUALTIERI Date

ADVISORY COUNCIL ON HISTORIC PRESERVATION

By _____ 13 March 87
CYNTHIA GRASSBY BAKER, CHAIRMAN Date

California Department of Transportation concurs with this Agreement:

By _____ Jan 20, 1987
E. W. BLACKMER, Chief Date
Environmental Analysis

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

IN REPLY REFER TO:

ER 86/617

JUN 2 3 1986

Mr. Bruce E. Cannon
Division Administrator
Federal Highway Administration
P.O. Box 1915
Sacramento, California 95809-1915

Dear Mr. Cannon:

This is in response to the request for the Department of the Interior's comments on the draft environmental/Section 4(f) statement for SR-85 Transportation Corridor between US-101 and IH-280, Santa Clara County, California.

SECTION 4(f) STATEMENT COMMENTS

We concur that there are no feasible and prudent alternatives to the proposed use of 4 parks, one recreational site, 3 historical properties and one significant archaeological site. We also concur with all measures to minimize harm to Section 4(f) property.

ENVIRONMENTAL ASSESSMENT COMMENTS

The Environmental Impact Statement adequately addresses the concerns of the Department of the Interior on this project.

FISH AND WILDLIFE COORDINATION ACT COMMENTS

The Environmental Impact Statement indicates that a Section 10/404 permit would be required for project implementation. The U.S. Fish and Wildlife Service advises that it would not object to the issuance of a permit for the highway project if Service mitigation recommendations, pursuant to the November 25, 1985 pre-project coordination letter, are made a part of the project's final plans and specifications.

LETTER 5

Mr. Bruce E. Cannon, Division Administrator

SUMMARY COMMENTS

The Department of the Interior has no objections to Section 4(f) approval of this project.

The opportunity to review this document is greatly appreciated.

Sincerely,

Bruce Blanchard, Director
Environmental Project Review

cc: Ron Lemmon
Study Manager
California Department
of Transportation
District 4
P.O. Box 7310
San Francisco, CA 94102

3. Wildlife and Waterfowl Refuge

The Oka Lane Wildlife Reestablishment Area, is in excess of 7 acres in size. It lies between Route 17 and Los Gatos Creek in the Town of Los Gatos and is administered by the Santa Clara Valley Water District. Further details can be found on page VI-33.

The Santa Clara Valley Water District, in their letter of September 25, 1986, on page VI-35, states that there will be no long term impacts to the Oka Lane Wildlife Reestablishment Area that result from the construction of the Route 85/Route 17 interchange.

The ambient noise level in the area of the wildlife reestablishment area is approximately 62 dBA Leq. The construction of the Route 85/17 connector will increase this noise level to 69 dBA Leq. Although not shown on Appendix A, the construction of a 10 foot high noise attenuation wall on the hinge point will reduce this level to 64 dBA. While this is an increase of 2 dBA over the ambient, it is below the Federal Highway Administration FHPM 7-7-3 noise criteria "B" of 67 dBA Leq. Additional noise information can be found in the noise section of this chapter.

In order to reduce the visual impact of the Route 85/17 connector, that area, as depicted as "Edge of Fill or Retaining Wall" in Figure VI-4 on page VI-34, will be landscaped to the maximum feasible extent.

Construction of the Route 85/Route 17 interchange to the south of the Oka Lane Wildlife Reestablishment Area will not reduce the access to or movement within the wildlife area. Also see question HWF-2 on page XI-96.

The water quality of the wildlife area will not be impacted by the construction of the Route 85/Route 17 interchange. All highway runoff will be directed to storm drains and will not affect the wildlife area. Further water quality information can be found in the water quality section this chapter.

Construction of the project alternative, with its above mentioned mitigation measures, will not substantially impair the use or value of the Oka Lane Wildlife Reestablishment Area.

G. Social and Economic Profile

1. Political Jurisdictions

The unconstructed Route 85 transportation corridor passes through five cities or towns from its proposed interchange at Route 101

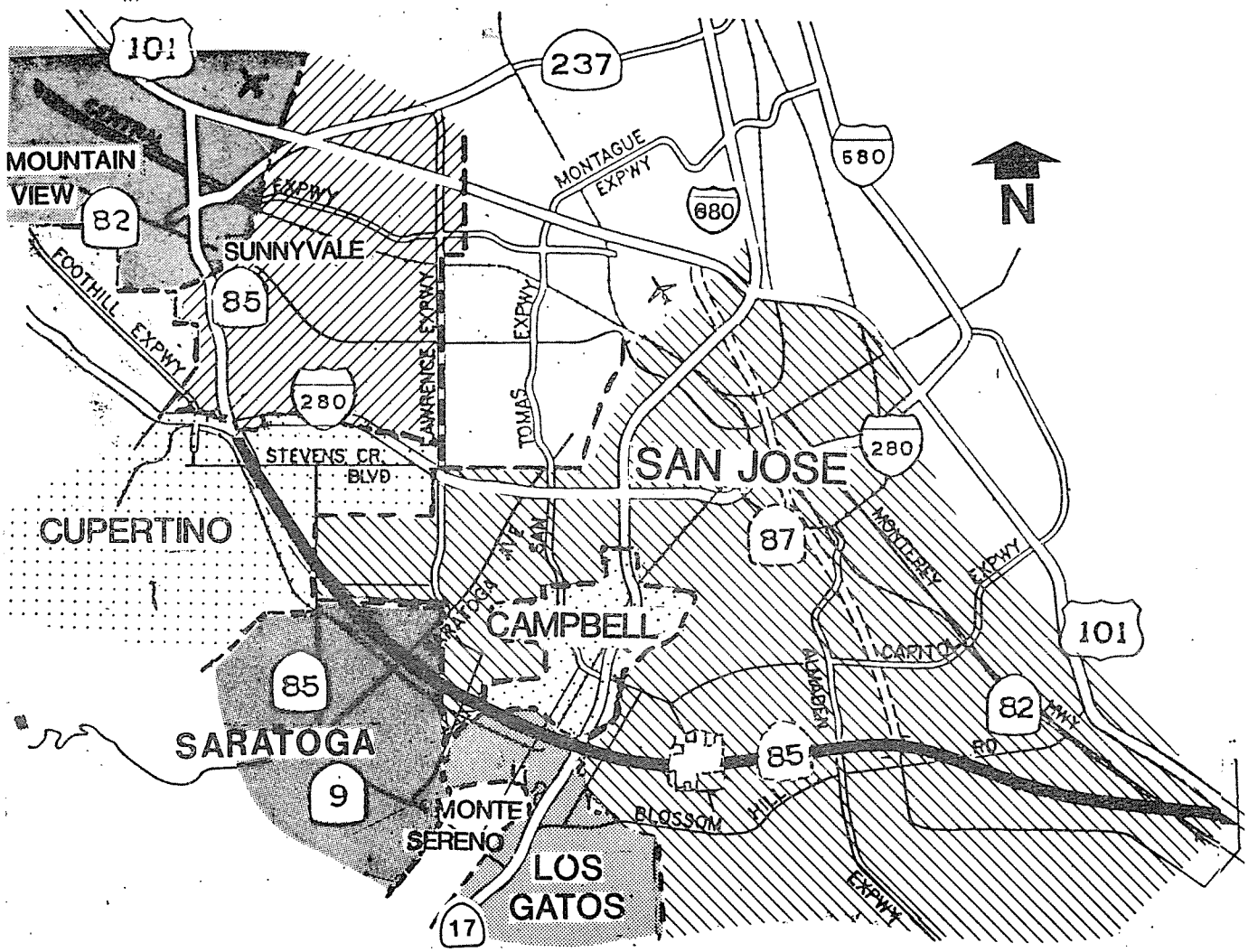
in south San Jose to Stevens Creek Boulevard in Cupertino, a distance of approximately 18 miles. The cities include San Jose, Campbell, Cupertino, Saratoga, and the Town of Los Gatos. Figure VI-24 depicts the corporate city boundaries in relationship to the Route 85 transportation corridor.

2. Population and Demographics

Table VI-14 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.

The project alternative will not significantly alter the population characteristics of the Route 85 transportation corridor.

ROUTE 85 TRANSPORTATION CORRIDOR PROJECT



CITY BOUNDARIES
(Shown for reference only)

FIGURE VI-24

TABLE VI-14
ROUTE 85 POPULATION CHARACTERISTICS
(1980 & 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
Population Density (P/Sq. Mi.)	4275	2510	3810	2530	6740	1040
% White* (1)	73.1	96.9	94.9	95.4	90.5	79.1
% Hispanic*	22.3	2.8	4.3	4.3	8.3	17.5
% Black*	4.6	0.3	0.8	0.3	1.2	3.4
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
(1) Includes all other Racial Groups

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 DIES/DEIR 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 DEIR/DEIS construction alternatives and the project alternative 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:

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 DEIR/DEIS highway alternatives and the project alternative will provide improved transportation service for the region and its commuters, the 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 the DEIR/DEIS alternatives and the project alternative are supportive of the Strategy's goals to provide and expand public transportation and reduce dependence on individual auto use.

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

Land use within the Route 85 transportation corridor includes residential, commercial, industrial, open space, and agricultural. Figure VI-25 depicts these various land use types in the corridor.

The construction of the project alternative 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.

CORRIDOR LAND USE

FIGURE VI-25

a. Housing

Immediately adjacent to the Route 85 transportation corridor there are approximately 1350 housing units. This represents 0.5% of the 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. This information is based on the Housing Vacancy Survey, San Jose PMSA, September 1985. This report is prepared for the Federal Home Loan Bank of San Francisco.

TABLE VI-16
ROUTE 85 HOUSING CHARACTERISTICS
(SEPTEMBER 1985 DATA)

	Housing Number, Type & Vacancy Rates				
City	Single Family Detached/ Vacancy Rate %	Single Family Attached/ Vacancy Rate %	Multi-Family/ Vacancy Rate %	Mobile Home/ Vacancy Rate %	Overall Vacancy Rate %
Cupertino	11111/1.1	1437/5.1	4740/6.6	1/0	17289/2.9
Saratoga	9216/0.8	0/NA	920/3.3	0/NA	10136/1.0
Campbell	8540/1.0	1353/7.4	752/3.5	412/10.0	17833/2.8
Los Gatos	13094/1.3	1820/2.6	2939/5.3	143/5.6	17996/2.1
San Jose	55085/0.9	4223/2.8	15215/2.7	1050/1.9	75573/0.9

Based on Federal Home Loan Bank of San Francisco
Housing Vacancy Survey, September 1985

The DEIS/DEIR construction alternatives and the project alternative 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 and the project alternative all require that the right of way width be approximately 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 final design of the project 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 DEIR/DEIS alternatives

and the project alternative. The 200 foot alternatives would remove 408 units or 0.1% of the housing units of the corridor cities. 141 residences 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. There is no shortage of replacement rental units within the corridor cities.

TABLE VI-17
RESIDENTIAL DISPLACEMENTS

	ALTERNATIVE I 200 foot Right of Way >>PROJECT ALTERNATIVE<<	ALTERNATIVE II 100 foot Right of Way
Single Family Residential	300	119
Multiple-Family Units	66	15
Mobile Home	0	0
Condominiumns	12	12
Hospital Beds	30	0
TOTAL	408	146
Total STATE Owned Units	141	63
Approximate Number of Persons Displaced	900	356

Source: Caltrans

Based on the Final Relocation Impact Statement, a total of 408 residential units will be displaced with the construction of the project alternative. Of these, 267 will be eligible for relocation assistance as defined in the next paragraph.

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. The Uniform Relocation Assistance and Land Acquisition Policies Act of 1970 provides specific rights and benefits to displaced residents, businesses, non-profit organizations and farm properties. Discrimination based on race, color, religion, age, na-

tional origin, and handicap is prohibited by Title VI of the Civil Rights Act of 1964. Therefore, all benefits and services provided to residential and business relocatees must be given fairly and equitably. Construction of the project alternative will not cause any impact to minority populations within the corridor. The project will require the displacement of the 30-bed Lark Manor Convalescent Hospital housing elderly and handicapped residents. An effort will be made to relocate the Lark Manor Convalescent Hospital patients to the same facility. To qualify for relocation assistance, Caltrans must purchase the residence. Tenants who occupied state-owned property after acquisition by the State are not eligible for relocation payments. The Conceptual Stage Housing Study and the Final Relocation Impact Statement concluded that there was adequate replacement housing available.

b. Business and Commercial

The businesses affected by the DEIS/DEIR construction alternatives and project alternative 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 >>PROJECT ALTERNATIVE<<	ALTERNATIVE II 100 foot Right of Way
Non-Residential	68	16
Non-Profit *	1	0
TOTAL	69	16
Total STATE Owned Units	16	10

* This is a church which is leasing a State owned building.

Source: Caltrans

Based on the Final Relocation Impact Statement, a total of 69 non-residential units (business or commercial) will be displaced with the construction of the project alternative.

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 negotiation of the freeway agreements and detailed design.

c. Open Space

Approximately 420 acres of open space will be utilized with the construction of the project alternative. This land is primarily abandoned orchards and grassy fields.

d. Agricultural

The Route 85 project alternative will neither directly nor indirectly affect any of the farmlands subject to protection under the Farmland Protection Policy Act (FPPA) of 1981.

The U.S. Department of Agriculture, Soil Conservation Service (SCS) Final Rule implementing the FPPA became effective on August 6, 1984. This rule established criteria for identifying and considering the effects of federal programs on the conversion of farmlands to non-agricultural uses.

A total of 790 acres of right of way is required for this transportation corridor project. Caltrans has been buying this right of way ever since 1956-1957 when the California Highway Commission first adopted this corridor as Route 85. Since then, local plans have depicted this corridor as the "West Valley Freeway." This land has been committed to use as a transportation corridor, and this committment is reflected in the Santa Clara County zoning maps. The U.S. Soil Conservation Service State Conservationist, in a letter dated October 29, 1985, stated that the 69 acres of prime farmland was not subject to protection under the FPPA and had "received adequate consideration" in the environmental impact document.

As required by the FPPA, a Farmland Conversion Impact Rating Form (Form AD-1006), shown after the above referenced letter, and the preliminary geometrics for the project were submitted to the SCS field office in Gilroy for their evaluation of this project's impacts on the farmlands. The SCS determined that within the entire right of way of 790 acres, there are no unique farmlands or

United States
Department of
Agriculture

Soil
Conservation
Service

U.S.D.A. Soil Conservation Service
2828 Chiles Road
Davis, CA 95616-4999

October 29, 1985

Ron Lemmon, Study Manager
Cal Trans, Transportation Studies
P.O. Box 7310
San Francisco, CA 94120

Dear Mr. Lemmon:

We appreciate the opportunity to comment on the State Route 85 Transportation Corridor Environmental Impact Statement of September 1985.

All but one of our areas of concern are adequately addressed if stated mitigation measures are implemented. No mention of provisions for stockpiling or conserving topsoil is made, but page VI-127 addresses hauling and disposal of excess material. Will topsoil be stockpiled for revegetating disturbed soils?

Sincerely,

Gene Andreuccetti

EUGENE E. ANDREUCETTI
State Conservationist

LETTER 6

United States Department of Agriculture
Soil Conservation Service
2828 Chiles Road
Davis, CA 95616
(916) 449-2853

Subject: ECOL SCI - ENVIRONMENTAL IMPACT STATEMENT REVIEW

Date: October 7, 1985

To: Thomas H. Carlson, DC, SCS, Gilroy

File Code: 190-15-13

DOCUMENT TITLE: EIS - STATE ROUTE 85 TRANSPORTATION CORRIDOR

Please arrange for review and comment on the enclosed draft Environmental Impact Statement (or Report). The review should follow guidelines in the General Manual, Section CA410.20.

In order for the Service to make a timely reply your comments (typed for State Conservationist's signature) along with a completed Form CA-ECS-1 should reach the state office by November 1, 1985 Please return the draft document also.

Your assistance in this review is appreciated.

ROBERT DELZELL
State Resource Conservationist

Enclosure

The Soil Conservation Service is an agency of the United States Department of Agriculture

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☆ U.S. Government Printing Office: 1983—420-035/1578

ENVIRONMENTAL IMPACT STATEMENT REVIEW WORKSHEET*

(Write NA "Not Applicable", NAC "Not Adequately Considered", or RAC "Received Adequate Consideration", as appropriate. Give brief narrative description of exceptions.)

Points of Consideration	Comment
1. Suitability or limitation of soils for proposed action .	RAC
2. Provision for erosion control and water management during construction.	RAC
3. Provisions for conservation treatment on project lands, rights of way, access.	RAC
4. Effects of water discharge from project lands; water quality.	RAC
5. Effects of disruption of natural drainage patterns.	RAC
6. Impact on existing conservation systems; provision for protecting existing systems.	RAC
7. Amount of prime land or significant water resource being lost to project.	69 Acres of prime land Sect VI-84+85 RAC not subject to protection under FPPA-1981
8. Impacts of severance; provision for access corridors.	RAC

Points of Consideration	Comment
9. Impact on wetlands; provision for reducing adverse effects.	RAC
10. Provision for stockpiling, conserving, or properly disposing of topsoil.	RAC - proper disposing of topsoil at dumpsite - no provisions for stockpiling and use of topsoil in landscaping.
11. Pollution impacts and provision for minimizing adverse effects.	RAC
12. Other related resources evaluated as to effect of proposed action.	Riparian Habitat - 9.6 AC. Loss RAC
13. Effect on SCS or other agency projects. Projects not recognized in EIS.	RAC
14. Consideration and provision for floodplain effects.	RAC
15. Impact on historical or archeological resources.	RAC

*Federal Register, June 3, 1974, Volume 39, Number 107, Part III

Additional Comments

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request January 30, 1985
Name Of Project West Valley Transportation Corridor	Federal Agency Involved Federal Highway Administratic
Proposed Land Use HIGHWAY (Route SC1-85)	County And State Santa Clara, Calif.
PART II *(To be completed by SCS)*	Date Request Received By SCS 1-30-85

Does the site contain prime, unique, statewide or local important farmland? Yes ☐ No ☒
(If no, the FPPA does not apply – do not complete additional parts of this form).

Acres Irrigated | Average Farm Size

Major Crop(s)	Farmable Land In Govt. Jurisdiction Acres: %	Amount Of Farmland As Defined in FPPA Acres: %
Name Of Land Evaluation System Used	Name Of Local Site Assessment System	Date Land Evaluation Returned By SCS 1-30-85

PART III *(To be completed by Federal Agency)*	Alternative Site Rating Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	790			
B. Total Acres To Be Converted Indirectly	0			
C. Total Acres In Site	790			
PART IV *(To be completed by SCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland				
B. Total Acres Statewide And Local Important Farmland				
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value				
PART V *(To be completed by SCS)* Land Evaluation Criterion Relative Value Of Farmland To Be Converted *(Scale of 0 to 100 Points)*				
PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(These criteria are explained in 7 CFR 658.5(b)*	Maximum Points			
1. Area In Nonurban Use				
2. Perimeter In Nonurban Use				
3. Percent Of Site Being Farmed				
4. Protection Provided By State And Local Government				
5. Distance From Urban Builtup Area				
6. Distance To Urban Support Services				
7. Size Of Present Farm Unit Compared To Average				
8. Creation Of Nonfarmable Farmland				
9. Availability Of Farm Support Services				
10. On-Farm Investments				
11. Effects Of Conversion On Farm Support Services				
12. Compatibility With Existing Agricultural Use				
TOTAL SITE ASSESSMENT POINTS	160			
PART VII *(To be completed by Federal Agency)*				
Relative Value Of Farmland *(From Part V)*	100			
Total Site Assessment *(From Part VI above or a local site assessment)*	160			
TOTAL POINTS *(Total of above 2 lines)*	260			

Site Selected: | Date Of Selection | Was A Local Site Assessment Used? Yes ☐ No ☐

Reason For Selection:

(See Instructions on reverse side)

Form AD-1006 (10-83)

farmlands of statewide or local importance. There are approximately 69 acres of land at various locations within the corridor right of way which because of their soil characteristics might be considered a prime agricultural land. However, since this land has already been committed to urban development prior to the August 6, 1984 effective date of the FPPA, it is no longer subject to protection under the FPPA. This land is temporarily being farmed with nurseries, row crops and seasonal produce. The majority of it is located near the eastern end of the corridor between Route 101 and Cottle Road.

Another area of consideration is the Cambrian Park which was a golf course until 1984 and which is located north of Branham Lane between Jacksol Drive and Union Avenue. In 1984, the Cambrian Park Golf Course was converted into two industrial parks with the proposed Route 85 transportation corridor splitting the parcel. On account of the soil characteristics, this land would have been considered a prime agricultural land, but its conversion into industrial park rendered it a land already committed to urban development. Consequently, it is no longer subject to protection under the FPPA.

In their letter of October 29, 1985, the U.S.D.A. Soil Conservation Service mentions the conserving or stockpiling of topsoil from the construction of any of the build alternatives. Topsoil will be stockpiled at appropriate locations and in sufficient quantity for use in the revegetation of disturbed areas which will be landscaped.

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 '85.

The construction of any of the DEIS/DEIR alternatives would 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 DEIS/DEIR alternatives and project alternative and the number of new jobs which may be created.

TABLE VI-19
ROUTE 85 CORRIDOR CITY EMPLOYMENT

CITY	Total	Agriculture & Mining	Manufacturing	Retail	Service	Other
Campbell	22840	150	5120	4900	6740	5930
Cupertino	41130	300	22960	7020	7730	3120
Los Gatos	15590	150	2360	3920	6360	2800
San Jose	276380	2360	83590	47980	76450	66000
Saratoga	6000	130	310	950	3150	1460
Santa Clara County	811640	7720	351460	109970	201480	141010

Source: ABAG Projections '85

H. Transportation Network

The impact on the transportation network can be divided into two categories: 1) operational impact; and 2) physical impact.

1. Operational Impact

The project will have major impacts on the existing roadway network, which consists of the highway network and the local road network. The proposed project will accommodate a significant amount of the projected demand. In order to study the effects on the roadway network, the Guadalupe Corridor model of Santa Clara County's transportation network was used. This model was updated to incorporate State Transportation Improvement Program projects, Measure "A" improvements, existing Route 85 between Routes 280 and 101 as a 6-lane freeway, and planned local street improvements for the year 2010, including those improvements listed under Transportation 2000.

With the project alternative, 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. Figure VI-26 depicts the AM local street analysis for the year 2010 for the project. Figure VI-27 depicts

TABLE VI-20
CONSTRUCTION COSTS AND PROJECTED EMPLOYMENT INCREASES

Alternative	Cost Million (1)	Employment (In person-years)		
		Basic (2)	Service (3)	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
Project Alternative	365	4563	6753	11316

Source: Caltrans

(1) All costs are in January 1985 dollars except project alternative which is January 1987.
(2) Basic = approximately 12.5 person years for each $1,000,000 of construction spending.
(3) Service = approximately 18.5 person years for each $1,000,000 spent.

the PM local street analysis using the City of San Jose's model for the year 2000. Figures VI-28 and -29 indicate the peak direction Level of Service (LOS) using the San Jose model for the NPA and the project alternative, respectively. Table VI-21a is a brief description of the City of San Jose's traffic model. Table VI-21b describes the traffic quality for the different level of

A.M. LOCAL STREET ANALYSIS
FIGURE VI-26

P.M. LOCAL STREET ANALYSIS
FIGURE VI-27

NPA-P.M. LEVEL OF SERVICE

FIGURE VI-28

PROJECT P.M. LEVEL OF SERVICE

FIGURE VI-29

NOTE:

services. The level of service values reported by the City of San Jose's model relate to roadway capacity (constrained by downstream intersections) and not intersection capacity.

TABLE VI-21B
LEVEL OF SERVICE DESCRIPTIONS
(LOCAL ROADS)

Level of Service	Traffic Quality 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; often 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-21a

CITY OF SAN JOSE TRAFFIC MODEL

The City of San Jose traffic model is based on the TRANPLAN software model, which is commonly used for traffic simulation studies of large urban areas. The City's model is a sophisticated analytical tool with more than 600 trip generating zones and thousands of network lines. It assigns nearly 500,000 trips to its network during the peak hour and [illegible] network, given the available network capacity. Planning assumptions built into the model for the year 2000 are as follows:

* Year 2000 data used matches the ABAG 2005 projections reasonably well.
* Calibration was to 1980 census data and 1980 traffic counts.
* Partial build-out of Coyote Valley to 27,000 jobs.

* Full build-out of North San Jose.
* Completion of the following projects:

  - The Guadalupe Corridor
  - Expansion of I-280 to 8 lanes from I-880/Route 17 to Magadalena Avenue
  - I-880 widened to 6 lanes north of Route 101
  - Route 101 widened to 8 lanes from San Mateo/Santa Clara County line to Bernal Road
  - Route 237 upgraded to freeway with 8 lanes between I-880 and Lawrence Expressway
  - Widening of existing Route 85 to 6 lanes

* Increased diversion to transit and carpools -- expanded countywide "commuter lane" program, which include I-280, Routes 101 and 237, San Tomas, Capitol, Montague, Lawrence and Central Expressways.

Source: City of San Jose

2. Physical Traffic Impacts

The physical impact of the project on the local roads is based on the project alternative as described in Chapter V. This reflects existing freeway agreements and designs. The exact streets that would be affected, will be determined by the new freeway agreement/execution process and final design of the project. Execution of these agreements will be after completion of this Final Environmental Impact Statement. However, there are some consequences the project will have 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 adjacent 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-22, 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.

TABLE VI-22
PROJECT ALTERNATIVE POSSIBLE LOCAL ROAD CLOSURES

Local Road to be Closed	Closest Alternative Route
Cleo Avenue	Saratoga-Sunnyvale Road
Rainbow Drive	Saratoga-Sunnyvale Road
Oka Lane	Winchester Boulevard
Harwood Road	Camden Avenue
Carter Avenue	Camden Avenue
Dent Avenue	Meridian Avenue

In the second major area, local roads might be relocated or realigned, extended, or partially eliminated. Those roads near a

proposed interchange or grade separation are the most likely to be impacted.

The following streets, listed in Table VI-23, would be physically affected by the construction of the project, excluding grade separated or interchange streets.

TABLE VI-23
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 Avenue, Los Gatos
Wanda Lane, Los Gatos	Oka Lane, 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
Caroline Way, San Jose	Emporium Way, San Jose
Cheynoweth Avenue, San Jose	Pearl Avenue, San Jose
Cahalan Ave.(Future), S.J.	Blossom Hill Road, San Jose
Linwell Court, San Jose	Perimeter Road, San Jose
Bathurst Way, San Jose	Bernal Road, San Jose

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.

Although the exact impact is unknown, during final design efforts will be made to keep the physical impacts to a minimum and to mitigate any impact that remains.

3. Transit Facilities

There are two aspects of how the transit facilities, within all of Santa Clara County, would be impacted by the project alternative and the No Project Alternative (NPA): (1) The impact of each specific element on the transit network; and (2) 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. Table VI-24 compares the project passenger trips to the NPA for each transit mode.

TABLE VI-24
2010 COUNTYWIDE AM PEAKHOUR TRANSIT PASSENGER TRIPS
MTC MODEL PROJECTIONS

	LOCAL BUS	EXPRESS BUS	LRT	SOUTHERN PACIFIC (CalTrain)	TOTAL PEAK HOUR TRIPS
NPA	23,200	16,000	10,900	6,500	56,600
Project	22,900	14,300	10,700	6,400	54,300

a. Buses

Within the Route 85 transportation corridor, Santa Clara County Transit operates 22 local and 9 express bus lines. Figure VI-30 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.

Local 2010 AM peakhour bus ridership is projected to decrease by approximately 300 passenger trips. Express 2010 AM peakhour bus ridership is projected to decrease approximately 1,700 passenger trips.

b. Rail

There are three rail elements: Guadalupe Corridor Light Rail Transit (LRT), Heavy Rail Transit (HRT) which includes Bay Area Rapid Transit (BART) and the Southern Pacific Railroad (CalTrain).

SANTA CLARA COUNTY TRANSIT SYSTEM
REGULAR ROUTES
SPECIFIED TRIPS ONLY
EXPRESS ROUTES
BONUS BUS ROUTES
CALTRAIN COMMUTER RAILROAD
GUADALUPE CORRIDOR LIGHT RAIL PROJECT
ROUTE NUMBERS
MAJOR SHOPPING CENTERS
POINTS OF INTEREST
COLLEGES & UNIVERSITIES
HOSPITALS
CITY HALLS
PARK & RIDE LOTS
EXISTING COUNTY TRANSIT ROUTES
OCTOBER 1986

FIGURE VI-30

Construction of the Route 85 project alternative is projected to result in a decrease of approximately 200 AM peakhour passenger trips on the Guadalupe Corridor LRT system.

Ridership on BART would not significantly change with the construction of the project. The CalTrain would lose about 100 passengers trips per day.

c. Transit Network

The overall effect on the transit system is that the total number of transit trips would, at most, decrease by only 4.1% or 2,300 trips.

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-137).

d. Existing LRT Facilities

The LRT facilities in the Guadalupe Corridor overlap are considered as existing. The existing LRT facilities will be upgraded. These upgrades will include but not be limited to the following measures:

LRT Park and Ride facilities which may be impacted will be redesigned so as to minimize or eliminate any loss of parking;
Access to Park and Ride facilities will be maintained.
LRT Platforms will be modified to facilitate grade separation and maintain full passenger access;
Rail infrastructure, including signal systems, trackage, catenary, electrical, communication, and others will be modified so as to not delay operation of the LRT system;
Construction impacts will be minimized and access to the LRT system will be maintained;
Existing LRT bus feeder routes will be modified to provide the same level of service on surface streets;

4. Parking Facilities

There are two aspects to the impact on parking facilities that the project could have: 1) the elimination of parking facilities due to the construction of the project alternative and the measures that could be taken to reduce this impact; and 2) where new parking facilities could be located.

a. Existing Facilities Impacts

There are 4 parking lots, outside the Guadalupe Corridor, tha would be eliminated or reduced. Table VI-25 gives the locatio of these lots and the impacts. Figures VI-31 through -34 depic the actual location of these parking lots in relationship to th Route 85 corridor.

TABLE VI-25
PARKING FACILITY IMPACTS & MITIGATION

TYPE OF LOT	LOCATION	NUMBER OF SPACES LOST (APPROXIMATE)	NOTES
Business Parking Lot See Fig. VI-31	Berg Avenue (east of Great Oaks, north of Tennant Road)	175	1
Park and Ride See Fig. VI-32	Corner of Camden & Branham	150	1
Business Parking Lot See Fig. VI-33	Corner of Route 85 and Almaden Expressway	0-10	1 & 2
Business Parking Lot See Fig. VI-34	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 Sant Teresa and Miyuki Drive, an expressway with LRT has been approve with parking facilities at Cottle Road, Snell Road, and Blosso Hill Road, Branham Lane, Chynoweth Avenue, and Santa Teresa When this portion is converted to a freeway under the Route 8 project, the conversion will be designed to minimize the loss o parking spaces to the existing parking facilities. The exac number of spaces lost, if any, will depend on the final design o Route 85.

Some residential parking (local on-street parking) would be elim inated at various locations along the corridor where local road are severed or eliminated. However, the need for roadside park ing would also be eliminated or substantially reduced with th

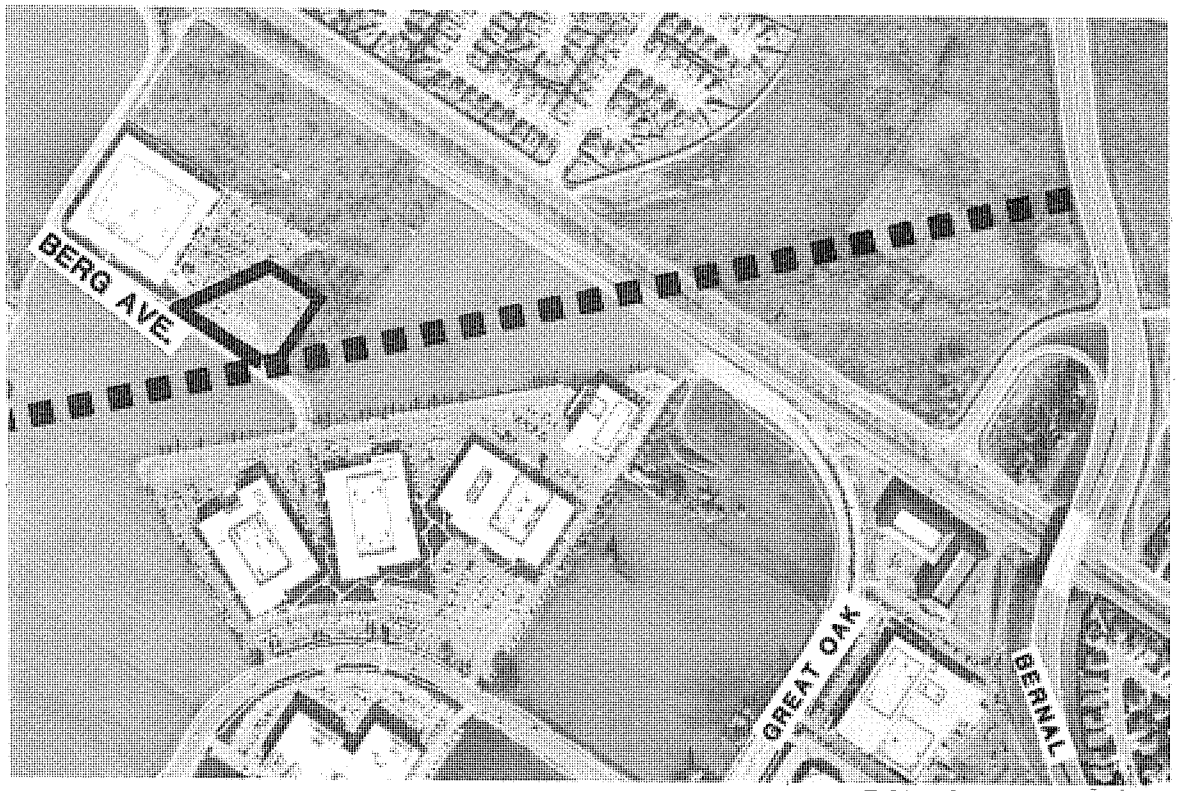


FIGURE VI-31 BERG AVE. SITE

EXISTING PARKING IMPACTED BY CORRIDOR

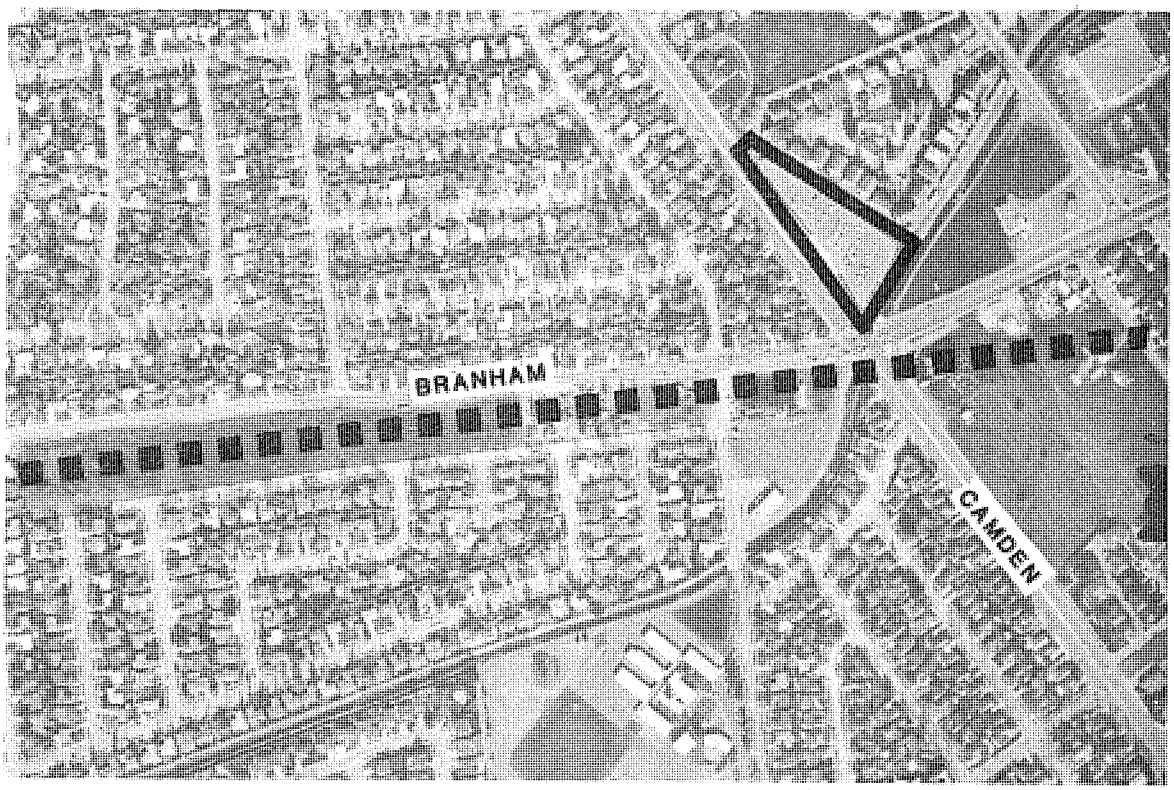
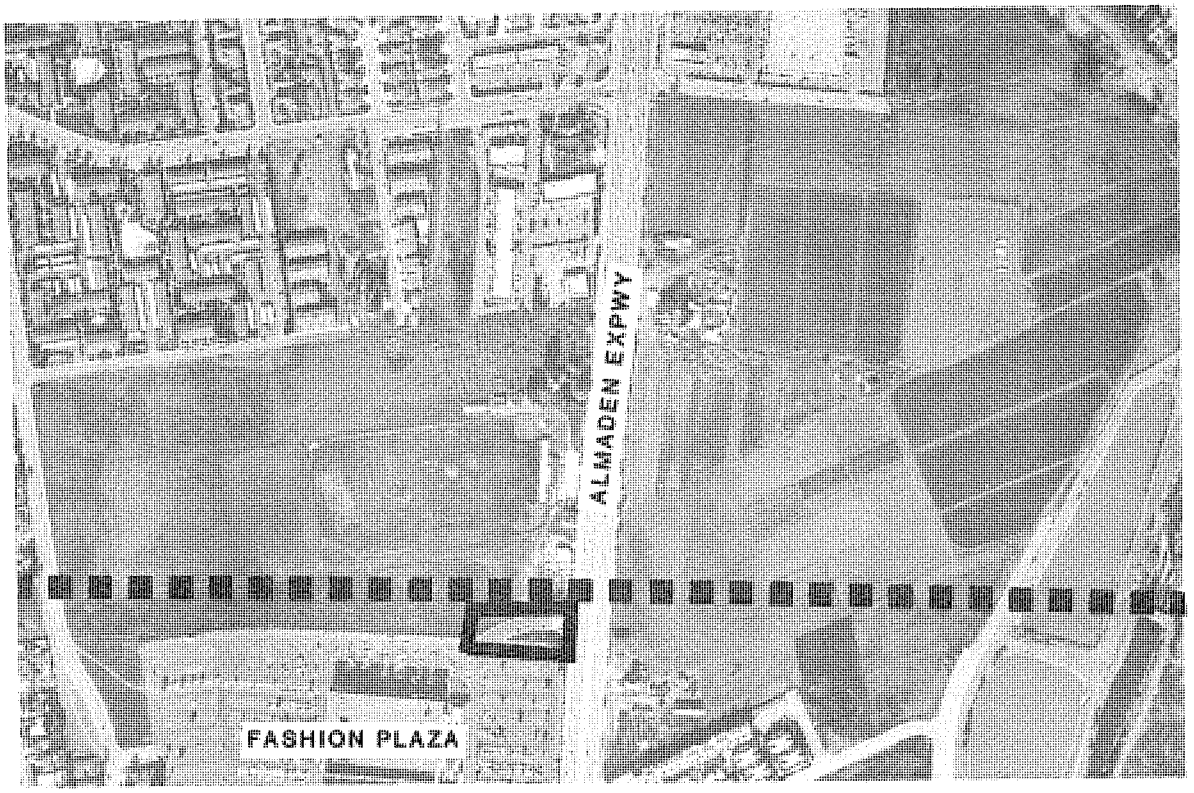


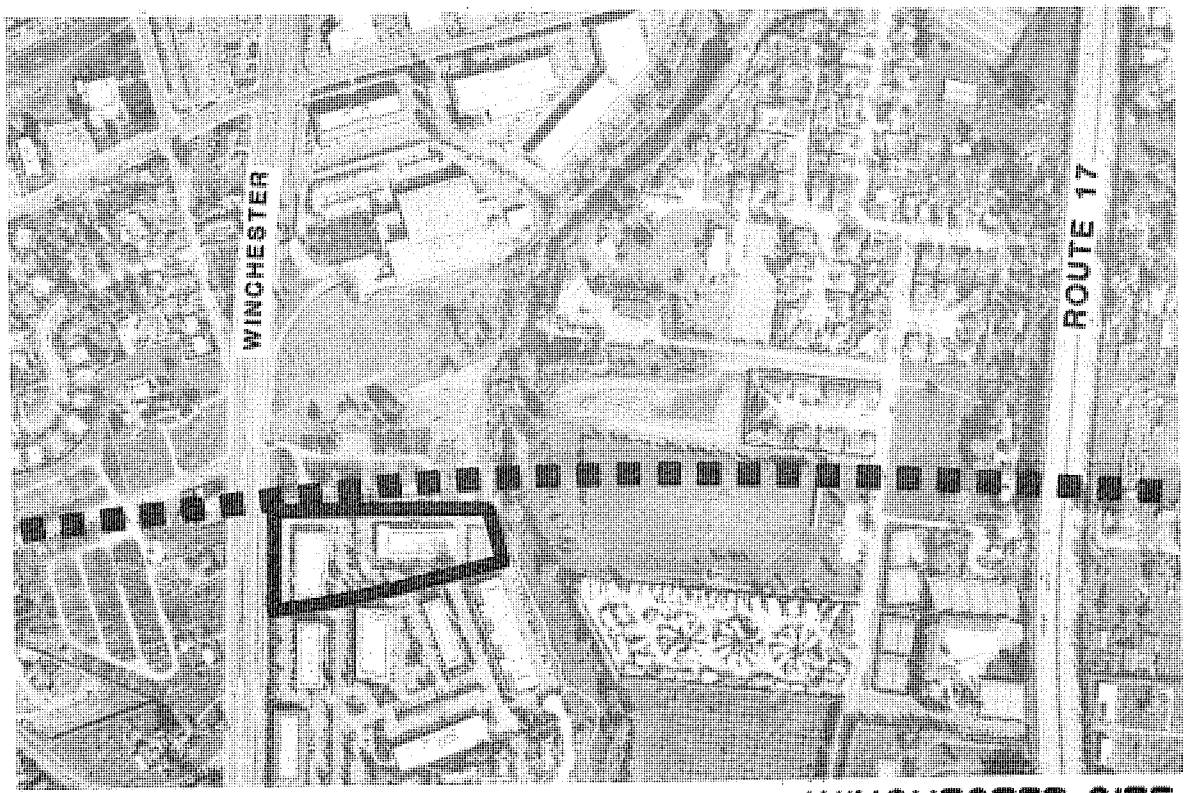
FIGURE VI-32 CAMDEN AVE. SITE



ALMADEN EXPWY SITE

FIGURE VI-33

EXISTING PARKING IMPACTED BY CORRIDOR



WINCHESTER SITE

FIGURE VI-34

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 project has reached the appraisal and acquisition stage and a final design prepared, the overall impact and the most appropriate mitigation measure cannot be determined. Business owners will be compensated for loss of parking where appropriate.

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. It would not be possible to completely close those parking lots located within the Guadalupe Corridor/85 overlap during construction because of the considerable inconvenience that it would cause the commuters along the Guadalupe Corridor. 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

Onsite parking facilities would be provided where right of way is available. Figure VI-35 depicts these tentative onsite park and ride locations. These parking facilities would be incorporated within the existing right of way in the interchanges.

At the Almaden Expressway, Camden Avenue, Union, South Bascom and Pollard, parking facilities may be incorporated in the inter-

change design without acquiring additional right of way. The exact locations and sizes of the parking facilities will be determined during the final design of the project alternative.

5. Airports

San Jose International Airport, located north of the Route 85 corridor, is the commercial airport closest to the corridor. The airport network would not be directly affected by the project; however travel to the airport could be impacted.

Construction of the project 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 880/17 would be reduced, especially on weekends, because travellers heading south would be able to use Route 85 to connect to Route 880/17 and Route 101.

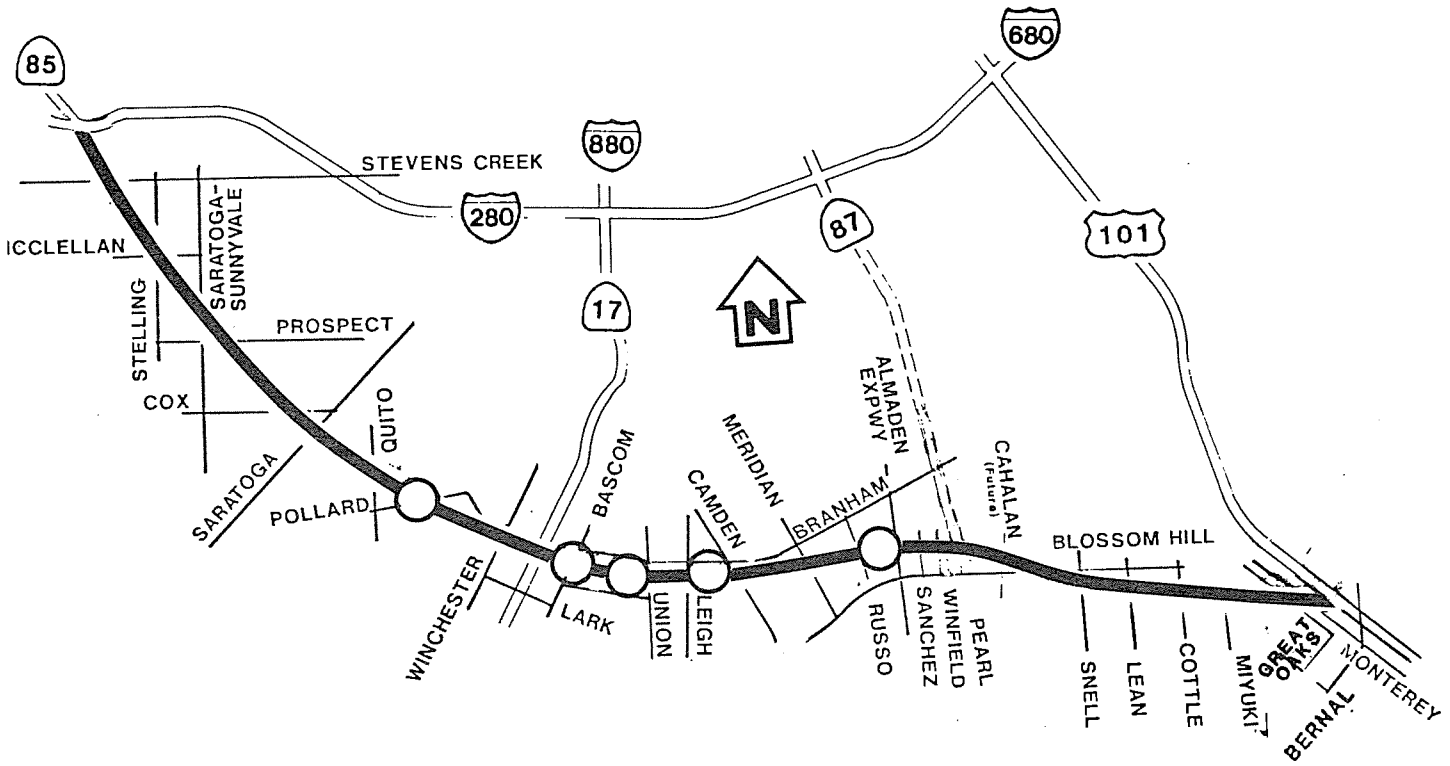
6. Bicycle Routes

Bicycle travel is not now permitted within and along the corridor. Therefore, only those bicycle facilities or routes that cross the corridor would be affected.

The major existing bike routes in the corridor area are shown on Figure VI-36. There are three paths not on existing roads. These are the route paralleling Los Gatos Creek, the short path between Kevin Moran Park and Blue Hills School, and the bike and pedestrian path adjacent to Coyote Creek in the area of the proposed Route 85/Route 101 interchange in south San Jose.

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 future years. For this project, 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 project alternative as well as how the existing bike routes would be affected.

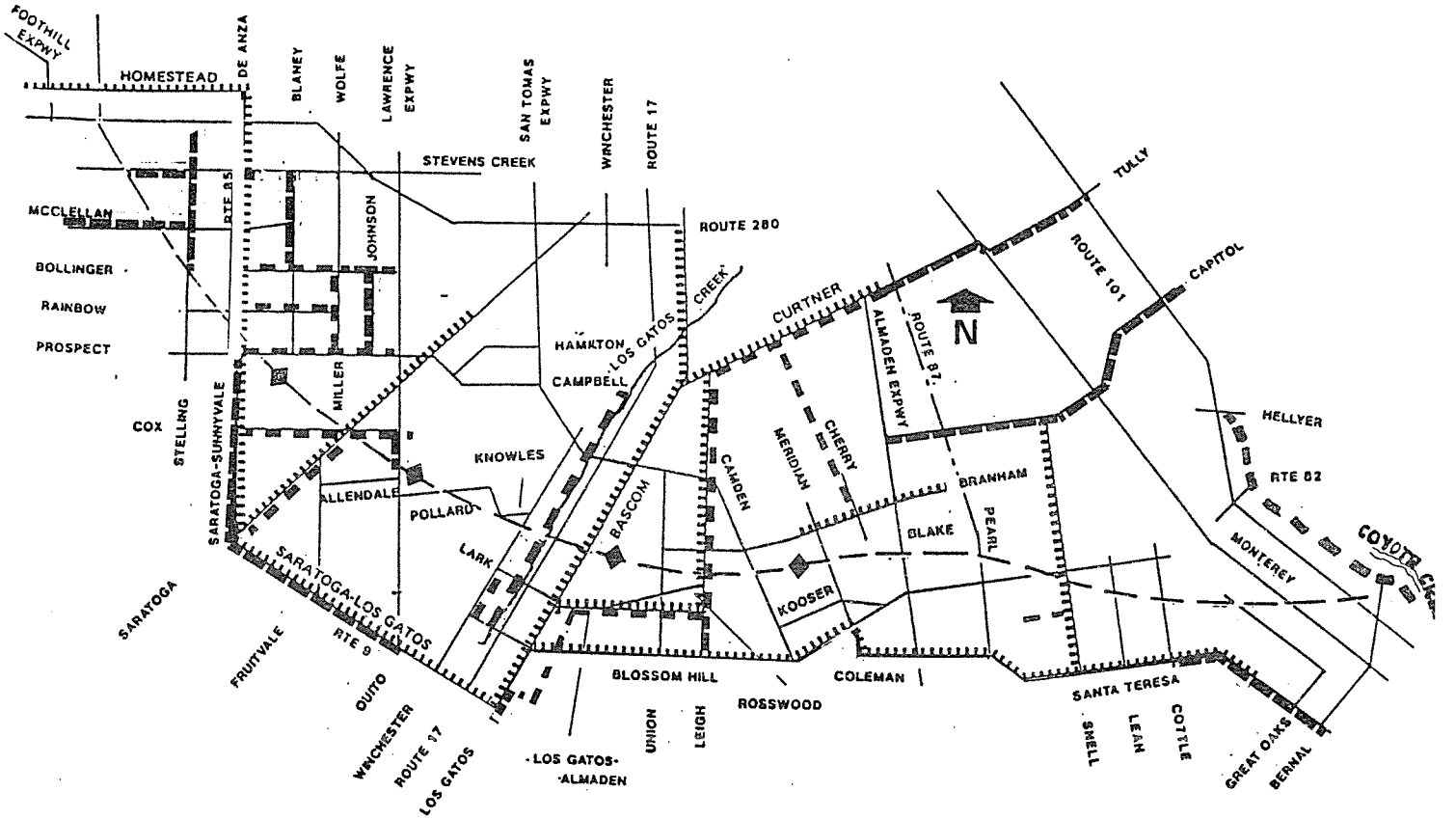


INDICATED LOCATIONS ARE WITHIN THE ROUTE 85 PROPOSED RIGHT OF WAY

PROPOSED PARK AND RIDE LOTS

FIGURE VI-35

ROUTE 85 TRANSPORTATION CORRIDOR PROJECT



EXISTING BIKE ROUTES/LANES/PATHS
(Santa Clara County 1/87)

EXISTING BIKE ROUTE
(CALTRANS 6/84)

ROUTE 85 ALIGNMENT

OTHER BICYCLE ROUTE LOCATIONS
CROSSING CORRIDOR

EXISTING BICYCLE ROUTES

FIGURE VI-36

The project will replace in kind existing major bicyle routes (non motorized) severed or destroyed by freeway construction. As part of the project, a bicycle plan for the corridor jurisdictions will be developed during the final design of the project alternative.

a. Impacts

Some roads would be permanently closed to traffic across the corridor and others would be detoured or closed for short periods as appropriate during construction. Those roads that might be permanently closed to traffic across the corridor are as follows:

Road	City
Cleo Avenue	Cupertino
Rainbow Drive	Cupertino
Glen Brae Dr. (Dirt)	Saratoga
Oka Lane/Road	Los Gatos
Harwood Road	San Jose
Carter Avenue	San Jose
Dent Avenue	San Jose

At each interchange and/or grade separations, local roads may have to be detoured or closed for short periods of time as appropriate during construction, although access to homes and businesses will be maintained.

The bike route at Los Gatos Creek will be closed during construction of the Route 85/Route 17 interchange and will be reconstructed. A detour will be provided if determined feasible during construction.

The bike path between Kevin Moran Park and Blue Hills School will be severed. This bike path was constructed on Caltrans owned property which was acquired as right of way for the Route 85 transportation corridor. This path is permitted under a Caltrans encroachment permit to the City of Saratoga. The permit states that this usage " ... is temporary and does not commit the State for a future bike and pedestrian facility." (Caltrans Encroachment Permit No. 477-E-769618, dated July 7, 1977).

b. Mitigation

Table VI-26 lists the alternate routes which the bicyclists would be able to use, and the approximate distance and time from the affected street. 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.

* At all the grade separations and interchanges, there would be shoulders to facilitate bicyclists use of each local road.

* For the bicycle route along Los Gatos Creek, the Route 85 overcrossing will be designed so that a paved bike lane will be provided.

* For the bike path between Kevin Moran Park and Blue Hills School, a pedestrian overcrossing and bike path will be constructed.

* The bike path in Coyote Creek County Park as shown in Figure VI-20 will be relocated to the eastern side of Coyote Creek and will include the construction of two new bicycle and pedestrian bridges for access across Coyote Creek.

7. 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 major routes severed by any 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. 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 the project on local roads.

The impact of the project 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 detoured or closed for short periods as appropriate during construction.

TABLE VI-26
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 (Dirt)	Cox Avenue	NS	NS	1450'	1.7 Min
Oka Road	Winchester Boulevard	3000'	3.4 Min	3400'	3.9 Min
Harwood Road	Camden Avenue	360'	0.4 Min	1300'	1.5 Min
Carter Avenue	Camden Avenue	750'	0.9 Min	2200'	2.5 Min
Dent Avenue	Meridian	2250'	2.5 Min	1700'	2.0 Min

* Assume the bicyclist travels at a rate of 10 mph
** NS = not significant

Those roads that might possibly be permanently closed are as follows:

Road	City
Cleo Avenue	Cupertino
Rainbow Drive	Cupertino
Glen Brae Dr. (Dirt)	Saratoga
Oka Road	San Jose
Harwood Road	San Jose
Carter Avenue	San Jose
Dent Avenue	San Jose

Also, at each interchange and/or grade separation, local roads would have to be detoured or closed for short periods of time as appropriate 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. A detour may be provided if determined feasible during construction.

Efforts to minimize the impact of the project construction 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-154.

In addition to the efforts mentioned above, there would be additional measures taken to mitigate the impacts as follows:

* Each interchange or grade separation would include provisions for pedestrians -- sidewalks.

* Newly constructed or reconstructed local roads would replace in kind any existing pedestrian facilities as appropriate.

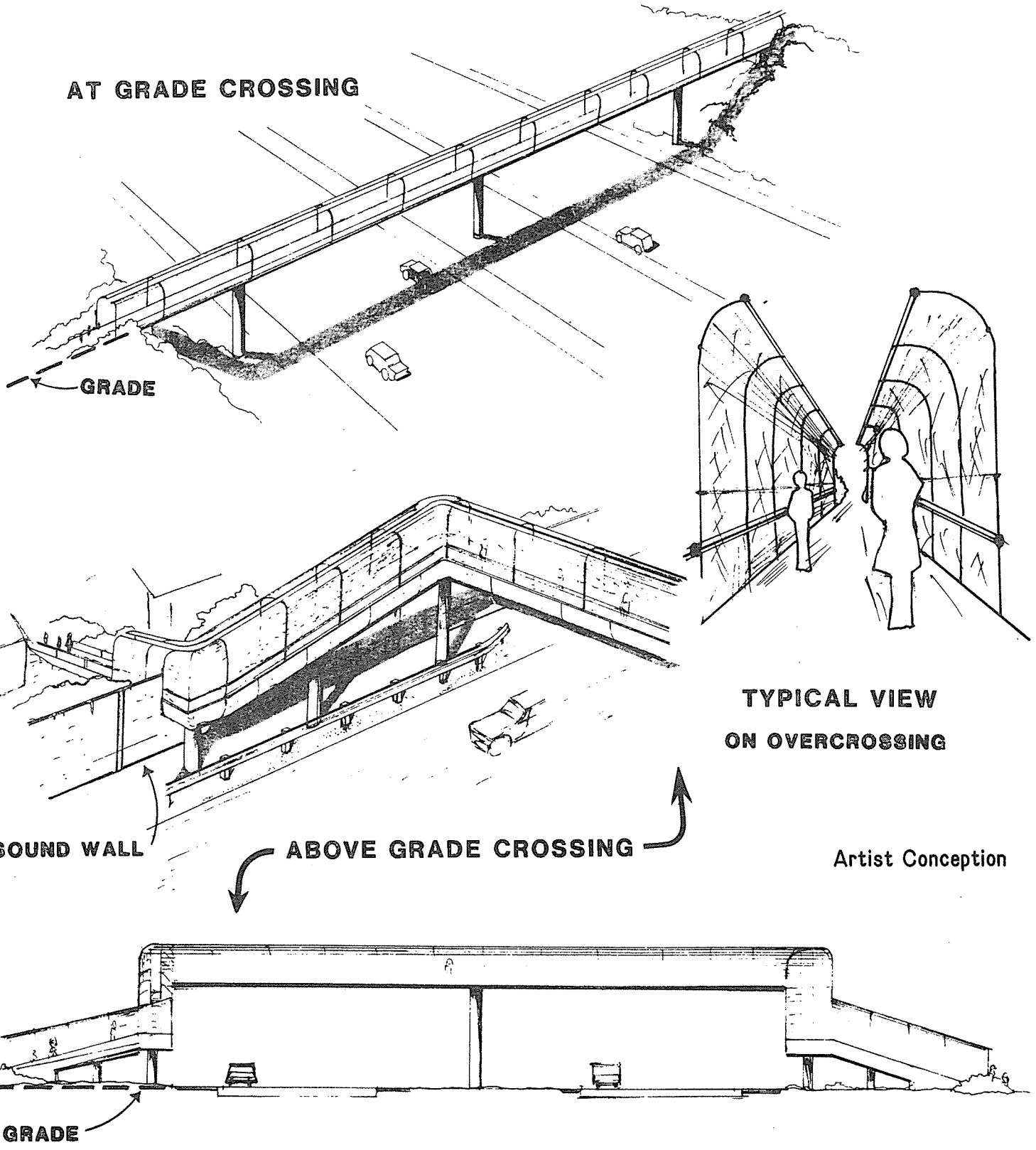
* Pedestrian facilities will be constructed at the following locations:

    1. Between Kevin Moran Park and Blue Hills School
    2. At More Avenue
    3. At White Oaks Road
    4. At Dent Avenue
    5. At the Route 85/87 Interchange.

Figure VI-37 depicts a typical pedestrian facility. This figure is an artists conception and is one of many available designs.

8. Railroads

The Southern Pacific (SP) railroad tracks will be impacted by the project. This will necessitate the relocation of the SP tracks between approximately Saratoga Creek and 750 feet west of Quito Road. The SP spur leading into the former Paul Masson Winery will be removed. This spur would only be reconstructed if warranted. At the present time, the Saratoga City Council has decided not to permit any industrial activities on the Paul Masson site, therefore, alleviating the need for the spur. Figure VI-38 depicts the location of the trackage which will be relocated. The project will also cross over the SP railroad tracks at Mon-



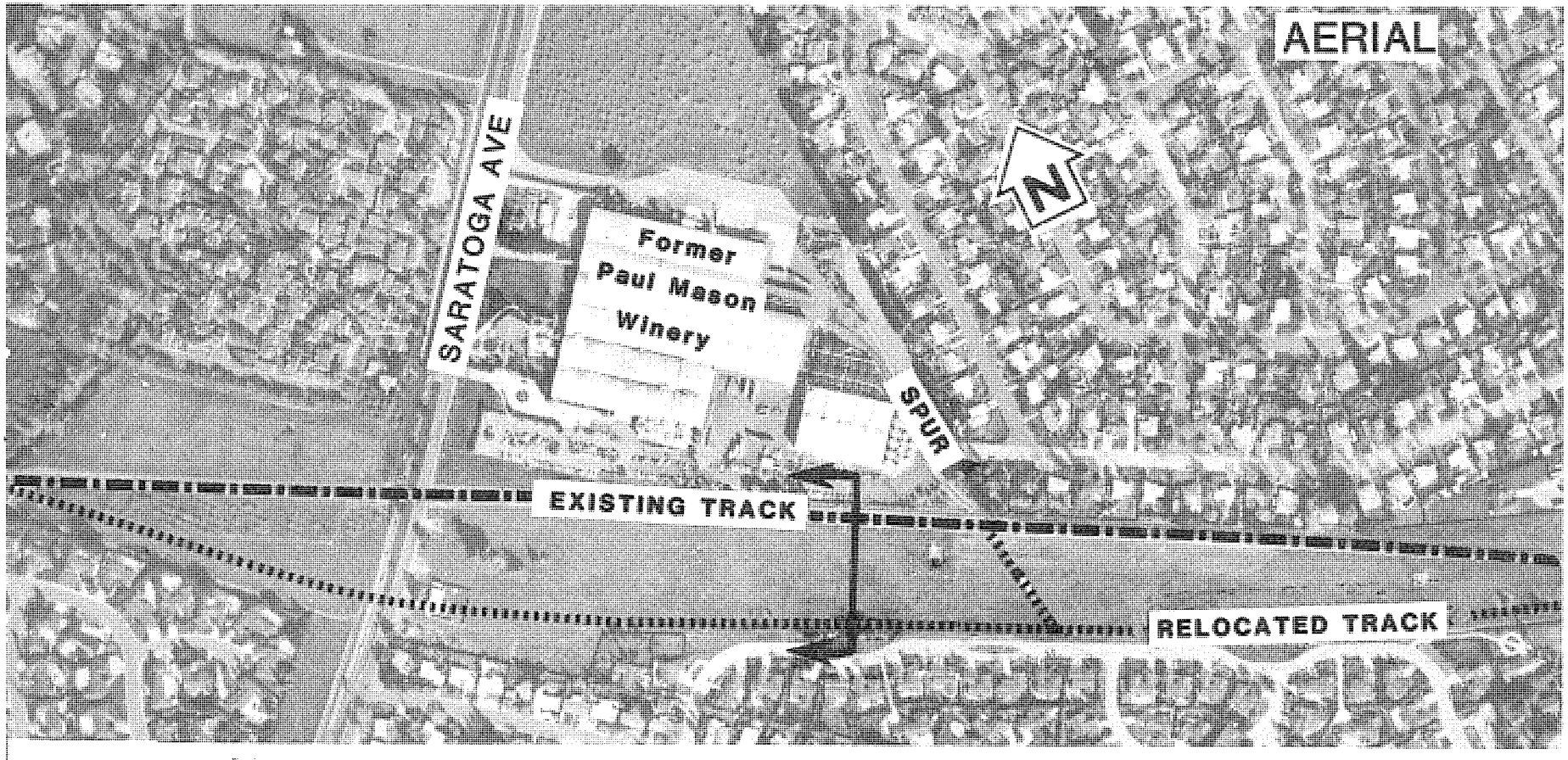
TYPICAL PEDESTRIAN OVERCROSSINGS

FIGURE VI-37

terey Road and Winchester Boulevard, and the tracks of the Guadalupe Corridor LRT in the vicinity of Winfield Boulevard.

The purpose of the SP relocation is to keep the railroad trackage on the south side of the Route 85 corridor. Figure VI-38 also 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 railroad trackage. The SP track at Saratoga Avenue will be grade separated to allow Saratoga Avenue to pass under the freeway.

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. Right of way for the proposed SP relocation is currently owned by Caltrans.



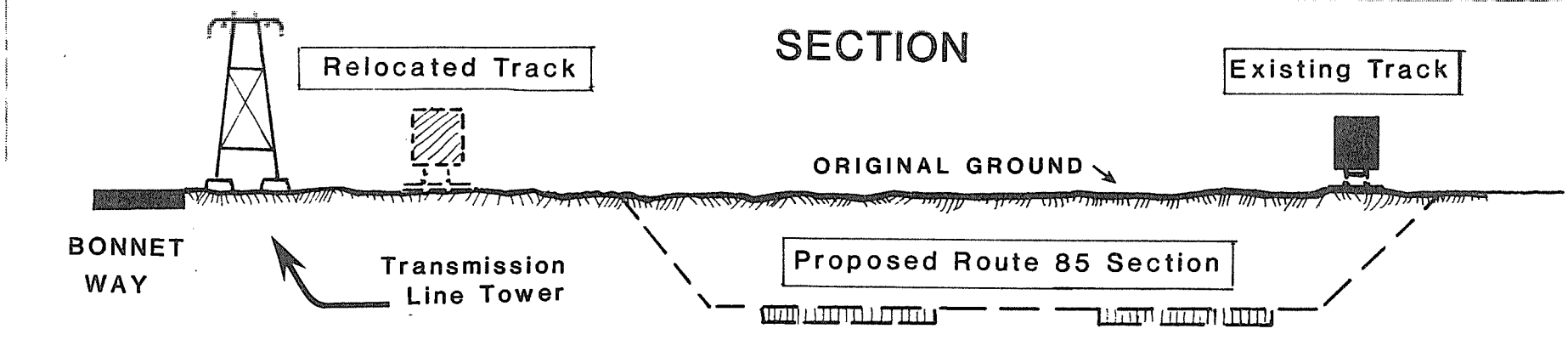


FIGURE VI-38

RAILROAD RELOCATION

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. The precise location of the utility facilities will be determined during the project development process. Conflicts, if 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 include:

* 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-4 on page I-35.

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 to accommodate the construction of the project alternative. Right of way for the proposed relocation is currently owned by Caltrans.

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-27 lists the schools which are located either within or in close proximity to the Route 85 transportation corridor.

TABLE VI-27
SCHOOL LOCATIONS

SCHOOL	LOCATION
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
San Tomas Elem.	Westmont Ave., Campbell
Quito Elem.	Quito Rd.,
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

Branham High Schools' playing field will be impacted by the construction of the project. It will lose approximately 4 1/2 acres of its 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-52.

3. Parks

Table VI-28 lists the parks which are in the vicinity of the Route 85 transportation corridor. Those parks which will be impacted by the construction of the project are described fully in Section F, Section 4(f), and in Section C-2, Noise, of this chapter. The construction of Route 85 will result in improved access to all of the parks in the vicinity of the Route 85 transportation corridor.

TABLE VI-28
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
Hough Park	
Los Gatos Creek Park *	Oka Lane/Road, Los Gatos
Saratoga Creek Park Chain *	Saratoga Ave., Saratoga
Congress Springs Park	Glen Brae Drive, Saratoga
Kevin Moran Park	Scully Road, Saratoga
Three Oaks Park	Shadowhill Lane, Cupertino
Jollyman Park	Stelling Road, Saratoga

* Section 4(f) Impact described on page VI-96.

4. Libraries

Table VI-29 lists the libraries which are in the study area of the Route 85 transportation corridor. These libraries will benefit from the construction of Route 85 because of the improved access to them.

TABLE VI-29
LIBRARY LOCATIONS

Almaden Branch Library 6455 Camden Avenue San Jose, CA 95120	Calabazas Branch Library 1230 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 Ave. 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 will be a noise impact on Good Samaritan Hospital as a result of the construction of the project. This noise impact will result in the construction of a noise wall of appropriate size to mitigate the impact and is more fully described in the noise section of this chapter. Due to the design of the Route 85/Cottle Road interchange, and the fact that there are no patient accommodations in the vicinity which would experience a noise increase in excess of federal and state standards, no noise barrier will be constructed at the Kaiser Foundation Hospital facility in south San Jose.

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

The project will not increase the ambient interior noise levels above the Federal Highway Administration recommended levels for hospitals.

6. Emergency Services

There will be a beneficial impact from the construction of Route 85 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 a northwest/southeast direction in the Route 85 corridor between Route 280 and the Santa Cruz Mountains foothills.

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.

8. Coastal Zone Management Plan

The Route 85 transportation corridor is not in the State's Coastal Zone and therefore would not be covered by the Coastal Zone

Management Plan. The proposed material disposal sites, as discussed at the end of this chapter, which may be covered by the Coastal Zone Management Plan, are all existing, environmentally cleared material disposal locations. The construction of the project would not affect any lands covered by the Coastal Zone Management Plan.

J. Construction Impacts

Construction impacts will be very significant due to the tremendous amount of construction that would occur and the length of time it would take to complete the project. Construction is expected to take from five to seven years to complete.

The following are types of construction impacts that 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

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.

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

The construction of the project 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.

Construction phasing, as explained on page I-36, will strive to reduce any construction related traffic impacts associated with the opening of sections of new freeway.

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, and traffic congestion, as discussed on page VI-169, 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 nearby businesses if access to their facilities is impeded.

The distance from the business or residence to the construction site would determine the severity of most construction impacts 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 during construction as before because of the many trucks in the area and construction going on in the corridor. Section 6 below describes the safety issues in more detail.

4. Disruption and/or Relocation of Utility Services

Construction of the project alternative would require major relocations of utilities. Efforts will be made to minimize the amount of inconvenience to nearby residences.

5. Rerouting of Emergency Services

The construction impacts 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

Because of the length of the construction period and the size of the construction area, there would be 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 parts 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. Provisions for continued safe access across the corridor during construction will be developed during final design of the project.

7. Material Transportation and Removal Problems

The construction of the project will require the hauling and removal of materials within the corridor.

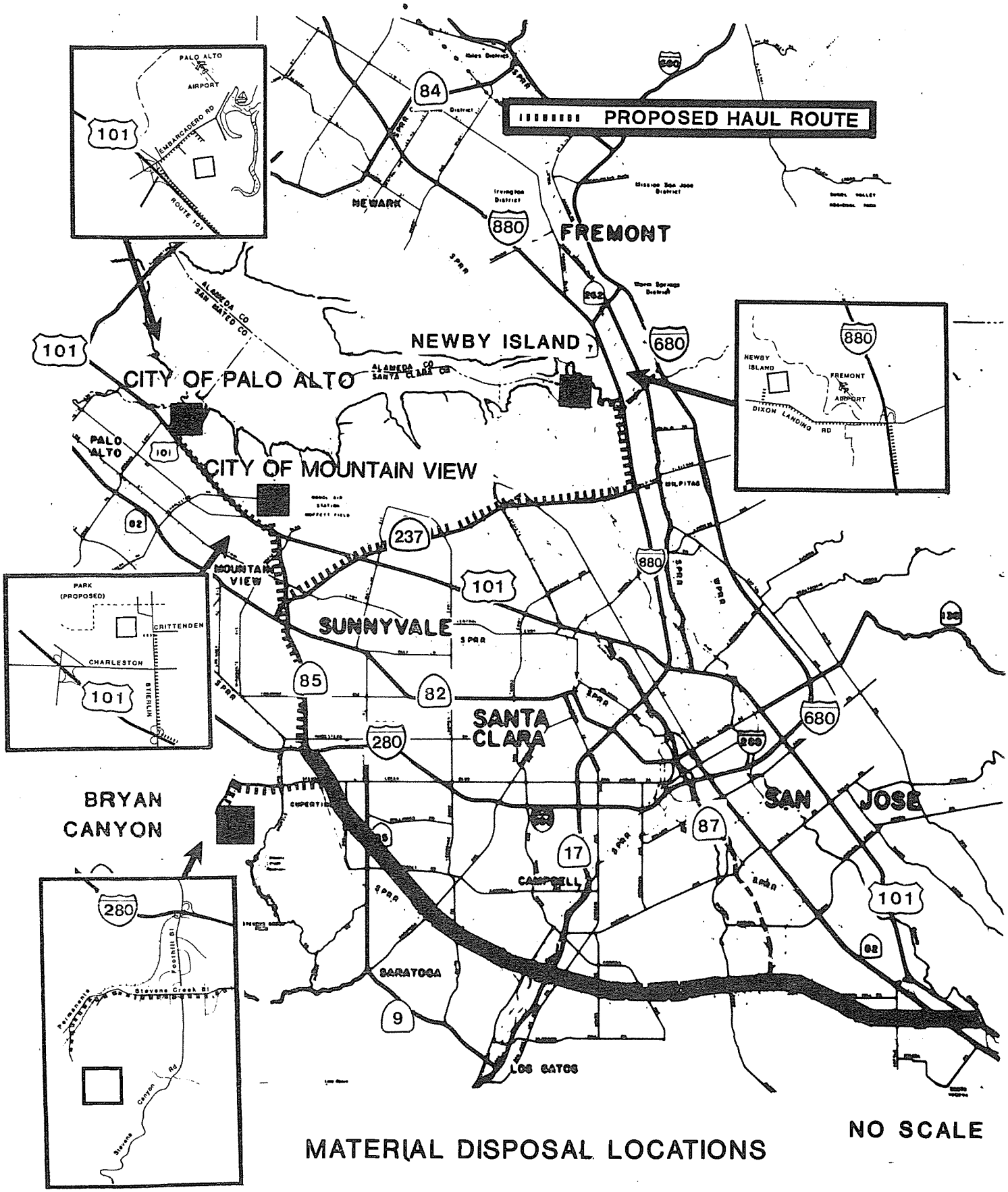
Haul roads would be established to ease movement within the corridor for the contractors and to reduce the amount of time that equipment and trucks would be travelling on local roads. However, these haul roads would begin and end where local streets intersect the corridor. There would be problems with trucks crossing these streets without the benefit of a signalized intersection. Unless properly controlled, these trucks could be a hazard to local traffic and/or cause a disruption in the traffic flow. Such control could consist of temporary traffic signals and/or the use of flagpersons.

The use of these haul roads during dry weather would cause a considerable amount of dust which could be controlled by keeping the road moistened. If 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.

The disposal of any excess material would mean additional truck trips on and through the local streets along the corridor communities depending on the location of the disposal sites.This truck traffic would increase the disruption of the existing traffic flow. This material could be disposed of in any of these commer-

cial disposal sites or other environmentally-cleared location. If during final design, it is determined that there will be excess material, this material would be used on other Measure "A" jobs on Routes 101 and 237. If no material is needed for those jobs, then the excess material could be disposed of at the sites located on Figure VI-39.

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.



NO SCALE

MATERIAL DISPOSAL LOCATIONS

FIGURE VI-39

K. Mitigation Summary

Table VI-30 is a summary of the required and possible additional community mitigation measures associated with the Route 85 project alternative. Additional community mitigation measures are defined as those measures which do not qualify for federal funding or are in excess of what the federal or state regulations require. These measures would be paid for with local monies.

Table VI-30
SCL-85 FEIS Mitigation Measures

	State/Federal Requirements	Additional Community *
Biology	As Described in text	None
Air	Park & Ride (P&R) in R/W; HOV Lanes; Ramp Metering/HOV Bypass Lanes; Future transit provisions	Banning Trucks P&R outside R/W
Noise	Warranted by Caltrans Design & Bulettin 58 FHPM 7-7-3	Community Walls; Banning Trucks; Additional Profile Depression
Visual	Landscaping/textured walls	Additional Profile Depression
Section 106	Relocation/Demolition of 3 structures	Relocation of other structures
Section 4(f)		
Schools	Branham High School; 4+ Acres; Profile Depression	Additional Profile Depression
Parks	Noise & Visual	Additional Profile Depression
Socio-Economic	R/W Process	None
Transit Network		
Transit Fac.	Ongoing in Overlap New in median	Additional Transit Facilities
Parking	As required	None
Bike	Replace in kind & develop bike plan	Paths, Structures, Signing, etc.
Pedestrian Facilities	Install at 5+ Locations	Additional Pedestrian Facilities
RailRoad	Replace in kind	None

* Mitigation that exceeds that mitigation which is required under State and Federal requirements and regulations. Extent of this mitigation to be determined during final design and by local funding availability.

VII

GROWTH IMPACTS

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.

The construction of the project alternative will be growth inducing. This is because of the decrease in travel time between the primarily residential south and east portions of the valley and the commercial and industrial areas in the north and west and extreme southeast portions of the valley.

B. Background

In a report issued in November, 1979, the Santa Clara County Industry and Housing Management Task Force stated the following about 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 recruit and retain 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.

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.

C. Impacts

The project alternative will shorten the commute time to jobs in North and South County from homes in West County. The alternative supports 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 existing transportation network constrains industrial expansion in North County. Automobile commuter access (as measured by travel time) to Silicon Valley will be substantially improved by DEIR/DEIS 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, ending 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 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 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 businesses that cater to transit patrons to concentrate near 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.

It should be noted that none of the alternatives are likely to induce growth in the adjacent areas of the corridor as they are nearly fully developed.

The Coyote Valley contains acres of flat, developable land which are presently vacant or in agricultural use. These provide ideal sites for industrial parks and high tech firms, and the pressure to develop this land is great. The completion of the Route 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, would reduce the relative isolation of Coyote Valley. These facilities will 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 potential employment centers in the South. It would enable West County residents to have a reasonable commute time to South County jobs.

As compared to the other alternatives, the LRT requires the least amount of right of way. The LRT alternative and those alternatives which contain LRT would tend to make Edenvale's industrial sites, which are 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 of 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. With freeway construction, housing demand could increase substantially, putting severe pressure on the residential communities along the corri-

dor, 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 would be 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 its latest general plan, 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 or "triggers" for the development of the urban reserve areas.

Table VII-1, Growth Inducement, summarizes Caltrans assessment of 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. The project alternative is also rated on this table.

TABLE VII-1

GROWTH INDUCEMENT

ALTERNATIVE	AREA		
	NORTH COUNTY	STUDY AREA	COYOTE VALLEY
NPA	12	11	12
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
PROJECT ALTERNATIVE	2	2	2

VIII

UNAVOIDABLE ADVERSE IMPACTS

VIII. Probable Unavoidable Adverse Environmental Effects

In Chapter VI, all the environmental impacts of the project alternative are presented in detail, along with the mitigation measures intended to reduce or eliminate these adverse 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. Noise Impact

The construction of the project alternative will result in an change in the current noise levels along the Route 85 transportation corridor. These changes, ranging from -4 dBA to +30 dBA, will occur at various points along the corridor. Noise walls will be constructed to mitigate these noise impacts to the largest degree feasible.

B. Visual Impact

There will be visual impacts as a result of the construction of the project alternative. There will be changes in the views from and to the Route 85 transportation corridor. There will also be the visual impact of the noise walls and the creation of new shadows along the Route 85 corridor. These impacts will be partially mitigated by the construction of noise walls and landscaping.

C. Residential Displacement

The Route 85 transportation corridor project alternative will require the displacement of 408 residential units. Adequate replacement housing is available in the Route 85 transportation corridor cities and the surrounding cities.

D. Business Displacement

The Route 85 transportation corridor project alternative will require the relocation of 69 businesses. Some of the businesses will not be able to relocate locally because of the unavailability of large parcels of vacant land.

E. Traffic Impacts

The Route 85 transportation corridor project alternative will have both positive and negative impacts on the existing traffic network. On those streets which do not have interchanges with the freeway, a decrease in traffic is expected. Those streets which have interchanges with the freeway can expect an increase in traffic.

IX

SHORT TERM/ LONG TERM RELATIONSHIPS

IX. Relationship between Local Short Term Uses of Man's Environment and Maintenance and Enhancement of Long Term Productivity

Implementation of the project alternative will have short-term impacts on the corridor's land use, population and natural environment. These impacts or uses of the environment should be considered in the context of the long-term impacts 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 Route 85 transportation corridor project alternative 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 the project alternative, the valley as a whole, will experience benefits. Specifically, the project alternative, 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.

X

COMMITMENTS OF RESOURCES

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 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 project alternative will 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.

Any excess material that needs to be disposed of will become the property of the contractor, who shall furnish to the Caltrans resident 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-39, Material Disposal Locations, depicts the location of possible disposal sites.

C. Public Funds

The monies needed for the construction of the project alternative will be raised by the Santa Clara County 1/2 cent sales tax under Measure "A", and sought from the State and Federal Highway Administration if necessary. The estimated cost for the construction of and right of way purchases for the project alternative is 495 Million January 1987 dollars.

D. Energy

The construction of the project 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.

Energy savings will result from the construction of the project. The savings for the year 2010 range could be as many as 30,000 gallons of gasoline per day.

XI

COMMENTS AND COORDINATION

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 project 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, interfacing 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 were assessed in the DEIR/DEIS. A project alternative was selected after the review of the Draft Environmental Impact Statement by the appropriate regulatory agencies, the public, and the Policy Advisory Board members. 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. Final engineering and design will take place followed by the staged construction of the project.

B. Consistency with Local, Regional, and State Plans

Route 85 was adopted by the state highway commission in 1956-1957 and portions constructed as a freeway in 1965-1971 from Route 101 in Mountain View to Stevens Creek Boulevard/Route 280 in Cupertino. The uncompleted portion of Route 85 between Stevens Creek Boulevard in Cupertino and Route 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 jurisdictions 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 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.

TABLE XI-1

ROUTE 85 CHRONOLOGY

EVENT	DATE
Final Environmental Document For R/W Protection	May 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 DEIR/DEIS	June 1984
Circulate DEIR to Public	September 1985
DEIR Public Hearings	October 1985
Ciruclate DEIS to Public	April 1986
DEIS Public Hearing	June 1986
Selection of Project Alternative	September 1986
Completion of Final Environmental Impact Report/Statement	Early 1987
Begin Construction	1988

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. The Draft Environmental Impact Statement focused on the transportation corridor concept.

The Metropolitan Transportation Commission (MTC), the regional transportation agency, and the local and county planning depart-

ments have been involved in all phases of this project and recognize that the Route 85 transportation corridor is an integral part of the planned county wide transportation system.

The project is included in the MTC approved 1986 Regional Transportation Improvement Plan (RTIP). This RTIP was also approved by the FHWA and forms the basis for the State Implementation Plan (SIP). This project is in the 1986 State Transportation Improvement Plan (STIP) as project # 426 and in the 1987 Proposed STIP (PSTIP). The breakdown of funds for a project has not been clearly defined. However, in November 1984, the voters of Santa Clara County passed "Measure A", a 10 year 1/2 cent sales tax increase to fund highway construction on several routes including Route 85. It is expected that a major portion of the funding for the construction of Route 85 will come from monies generated from "Measure A".

C. Public Participation

The public participation effort has taken several forms including direct public meetings and mass mailings of a series of newsletter (see Table XI-2). 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.

One example of this effort was during the week of July 22, 1985, a public notice (Figure XI-1) was published in 11 newspapers of general circulation in the Route 85 transportation corridor. This notice was published to update the public on the status of the Route 85 study and to provide them with a tentative schedule.

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, three newsletters were mailed to all those listed. Additional names were added to the mailing list per individuals requests. Table XI-2, Public Participation Events, lists the public events of the Route 85 corridor study.

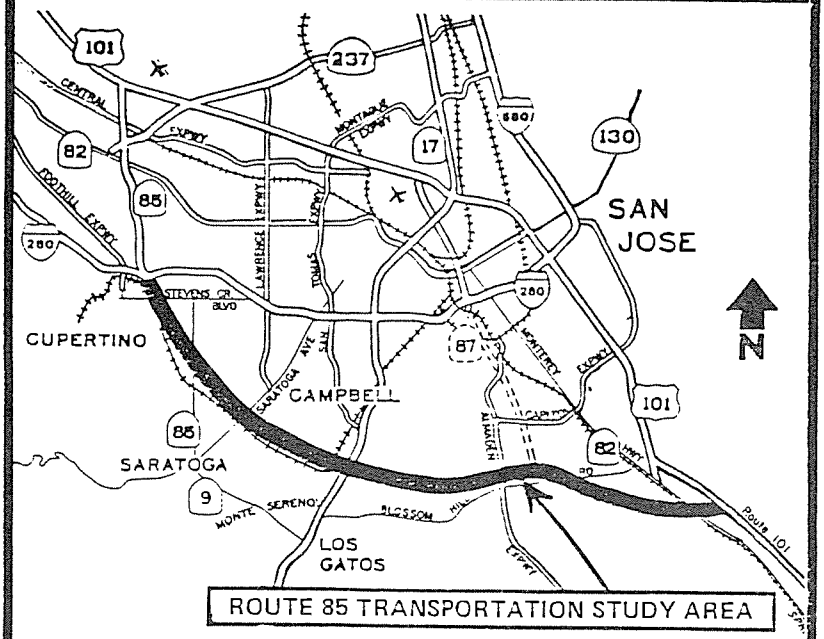
The DEIR for this project was circulated in September of 1985. Public hearings on the transportation proposals presented in the DEIR were held on October 23 & 24, 1985. Attendance was in excess of 1,000 people. Figure XI-2 is a copy of the newspaper public notice for this DEIR public hearings.

The Route 85 DEIS was circulated in April of 1986. A public hearing, in fact a continuation of the public hearings held on the DEIR in October 1985, was held on June 11, 1986. Attendance

Public Notice

JULY 1985 UPDATE
ROUTE 85

TRANSPORTATION STUDY IN SANTA CLARA COUNTY



This notice is to inform you of the tentative schedule for the availability of the Draft Environmental Impact Statement (DEIS) and Public Hearing for the Route 85 Transportation Study in Santa Clara County.

Draft Environmental Impact Statement (DEIS) Available to the Public	August – September 1985
Public Hearings	October – November 1985

Look for notices to be published in this newspaper.

For more information about this project or any transportation matter, contact Caltrans Information Center at (415) 557-1840 (voice or TDD) or write to:

Caltrans

BURCH C. BACHTOLD
District Director
Department of Transportation
P.O. Box 7310
San Francisco, CA 94120 P.H. 207

PUBLIC NOTICE

FIGURE XI-1

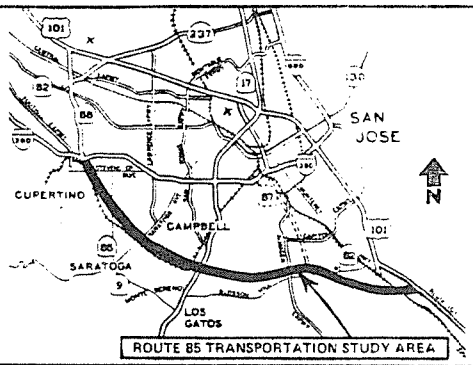
TABLE XI-2

MAJOR PUBLIC PARTICIPATION EVENTS

EVENT	DATE
Public Meetings	April 6 & 12, 1983
Monthly Policy Advisory Board (PAB) Meetings	Early 1983 to September 17, 1986
Public Meetings	March 15 & 29, 1984
Alternative Reduction Booklet	June 1984
Newsletter #1	January 1985
#2	September 1985
#3	May 1986
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
San Jose	June 1985
Los Gatos	June 1985
Public Hearings	
DEIR San Jose	October 1985
DEIR Saratoga	October 1985
DEIS San Jose	June 1986

Public Notice

Notice of Public Hearing and Availability of the Draft Environmental Impact Report for the Route 85 Transportation Corridor Study



ROUTE 85 TRANSPORTATION STUDY AREA

WHAT'S BEING PLANNED

The California Department of Transportation (Caltrans) has completed a study of various transportation alternatives for the Route 85 (West Valley) corridor in Santa Clara County. The limits of the study are Route 101 in south San Jose and Stevens Creek Boulevard/Route 280 in Cupertino. The corridor is 16 miles long and runs through San Jose, Los Gatos, Campbell, Saratoga and Cupertino.

There are 9 alternatives under consideration ranging from "No Project" to an eight-lane freeway with light-rail transit. All of the "Build" alternatives will encroach on wetlands. The 6 freeway alternatives will have an impact on floodplains. All practical measures are being studied to minimize harm in these areas.

WHY THIS AD

Caltrans has studied the affects all the alternatives may have on the environment. Our studies show it will not significantly affect the quality of the environment. The report that explains why is called a Draft Environmental Impact Report (DEIR). This notice is to tell you of the preparation of the DEIR and of its availability to be read.

A hearing will be held to give you an opportunity to talk about the study with Caltrans staff before a preferred alternative is selected. The tentative schedule for the purchase of land for right of way and construction will be discussed and Caltrans staff will explain the Department's relocation assistance for residents moved by the project.

WHAT'S AVAILABLE

You can look at or buy the DEIR at the Caltrans District Office, 3333 California Street, San Francisco (entrance is on Laurel Street) at the Caltrans office at 150 Oak Street, San Francisco; or at the Caltrans office at 1754 Technology Drive, San Jose on weekdays from 7:30 a.m. to 5:00 p.m. Maps, technical reports and other information are also available. There are also copies of the DEIR available for review at the following locations during normal business hours:

CITY HALLS	LIBRARIES
Campbell City Hall 75 North Central Avenue Campbell	Almaden Branch Library 6445 Camden Avenue San Jose
Cupertino City Hall 10300 Torre Avenue Cupertino	Calabazas Branch Library 1230 South Blaney Avenue San Jose
Los Gatos City Hall 110 East Main Street Los Gatos	Campbell Library 70 North Central Avenue Campbell
Monte Sereno City Hall 18041 Saratoga-Los Gatos Rd. Monte Sereno	Cupertino Library 10400 Torre Avenue Cupertino
Mountain View City Hall 540 Castro Street Mountain View	Los Gatos Library 110 East Main Los Gatos
San Jose City Hall 801 North First Street San Jose	Pearl Branch Library 4270 Pearl Avenue San Jose
Saratoga City Hall 13777 Fruitvale Avenue Saratoga	San Jose Main Branch Library 180 West San Carlos San Jose
Sunnyvale City Hall 456 West Olive Avenue Sunnyvale	Saratoga Community Library 13650 Saratoga Avenue Saratoga
	Village Library 14410 Oak Street Saratoga

WHERE YOU COME IN

Have the potential impacts been addressed? Do you have information which should be included? Comments, oral and written, received at the public hearing will be part of the public record. Written comments received by December 6, 1985, will also be included in the public record. Written comments should be addressed to:

Ron Lemmon
Chief, Transportation Studies
Department of Transportation
P. O. Box 7310
San Francisco, CA 94120

WHEN AND WHERE

The public hearing will be held:

Wednesday, October 23, 1985, 7:30 p.m.
Branham High School Cafetorium
1570 Branham Lane, San Jose

—continuing—

Thursday, October 24, 1985, 8:00 p.m.
West Valley College, Campus Center
14000 Fruitvale Ave., Saratoga

Map displays will be held:

Wednesday, October 16, 1985, 2:00 p.m. – 10:00 p.m.
Branham High School Cafetorium
1570 Branham Lane, San Jose

Thursday, October 17, 1985, 2:00 p.m. – 10 p.m.
Campbell Community Center, Building "B", Room 27
1 West Campbell Ave., Campbell

Friday, October 18, 1985, 2:00 p.m. – 10:00 p.m.
West Valley College, Campus Center
14000 Fruitvale Ave., Saratoga

CONTACT

For more information about this study or any transportation matter, please call the Caltrans Information Center at (415) 923-4444, or write to:

Burch C. Bachtold, District Director
Department of Transportation
P. O. Box 7310
San Francisco, CA 94120

Caltrans

This notice of Public Hearing appeared in the following newspapers:

Newspaper	Dates
SAN JOSE MERCURY NEWS	9-24-85 10-15-85
EL OBSERVATOR	10- 2-85 10-16-85
MEREDITH NEWSPAPERS	10- 2-85 10-16-85

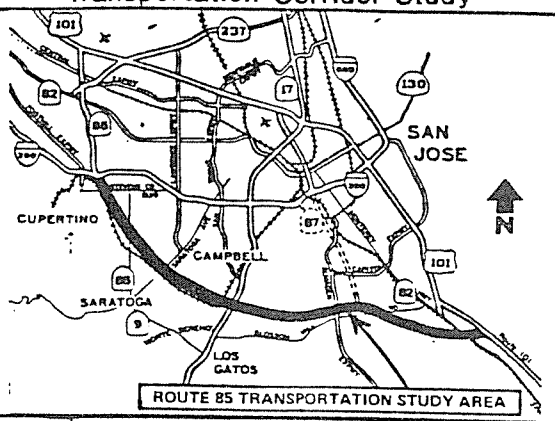
DEIR PUBLIC NOTICE

FIGURE XI-2

was in excess of 400 people. Figure XI-3 is a copy of the newspaper public notice for this DEIS public hearing.

Public Notice

Notice of Public Hearing and Availability of the Draft Environmental Impact Statement for the Route 85 Transportation Corridor Study



WHAT'S BEING PLANNED

The California Department of Transportation (Caltrans) has completed a study of various transportation alternatives for the Route 85 (West Valley) corridor in Santa Clara County. The limits of the study are Route 101 in South San Jose and Stevens Creek Boulevard/Route 280 in Cupertino. The corridor is 18 miles long and runs through San Jose, Los Gatos, Campbell, Saratoga and Cupertino.

There are 9 alternatives under consideration ranging from "No Project" to an eight-lane freeway with light-rail transit. All of the "Build" alternatives will encroach on wetlands. The 6 freeway alternatives will have an impact on floodplains. All practical measures are being studied to minimize harm in these areas.

WHY THIS AD

Caltrans has studied the effects all the alternatives may have on the environment. Our studies show it will not significantly affect the quality of the environment. The report that explains why is called a Draft Environmental Impact Statement (DEIS). This notice is to inform you of the preparation of the DEIS and of its availability to be read.

A hearing will be held to give you an opportunity to talk about the study with Caltrans staff before a preferred alternative is selected. The tentative schedule for the purchase of land for right of way and construction will be discussed and Caltrans staff will explain the Department's relocation assistance for residents moved by the project.

WHAT'S AVAILABLE

You can look at or buy the DEIS at the Caltrans District Office Information Center, 3333 California Street, San Francisco (enter on Laurel Street); the Caltrans office at 150 Oak Street, San Francisco, or at the Caltrans office at 1754 Technology Drive, San Jose. Hours are on weekdays from 7:30 a.m. to 5:00 p.m. at all locations. Maps, technical reports and other information are also available. There are also copies of the DEIS available for reviews at the following locations during normal business hours:

CITY HALLS	LIBRARIES	
Campbell City Hall 75 North Central Ave. Campbell	Campbell Library 70 North Central Ave. Campbell	San Jose Main Library 180 West San Carlos San Jose
Cupertino City Hall 10300 Torre Ave. Cupertino	Cupertino Library 10400 Torre Ave. Cupertino	Almaden Branch Library 6455 Camden Ave. San Jose
Los Gatos City Hall 110 East Main Street Los Gatos	Los Gatos Library 110 East Main Street Los Gatos	Calabazas Branch Library 1230 South Blaney Ave. San Jose
Monte Sereno City Hall 18041 Saratoga-Los Gatos Rd. Monte Sereno	Mountain View Library 585 Franklin Mountain View	Cambrian Branch Library 1001 Foxworthy Ave. San Jose
Mountain View City Hall 640 Castro Street Mountain View	Saratoga Community Library 13650 Saratoga Ave. Saratoga	Pearl Branch Library 4270 Pearl Ave. San Jose
San Jose City Hall 801 North First St. San Jose	Village Library 14410 Oak St. Saratoga	Santa Teresa Branch Library 290 International Circle San Jose
Saratoga City Hall 13777 Fruitvale Ave. Saratoga	Sunnyvale Library 665 West Olive Ave. Sunnyvale	West Valley Branch Library 1243 West Torres Aguena Rd. San Jose
Sunnyvale City Hall 456 West Olive Ave. Sunnyvale		

WHERE YOU COME IN

Have the potential impacts been addressed? Do you have information which should be included? Comments, oral and written, received at the public hearing will be part of the public record. Written comments received by June 23, 1986, will also be included in the public record. In 1985 two public hearings were held and public comments were recorded. All of these comments, along with all written comments, were made an official part of the public record.

To comply with the Federal Highway Administration procedures, a third public hearing will be held. This third hearing will consist of the same exhibits and project proposals as presented at the two previous hearings. If you or your agency made comments on the Route 85 Draft Environmental Impact Report (DEIR), dated September 23, 1985, those comments will also apply to this DEIS. All of the comments received on the Route 85 DEIR and this DEIS will be addressed in Route 85 Final Environmental Impact Statement (FEIS).

WHAT'S TO COME

A public hearing will be held on June 11, 1986, at 7:00 p.m. on this Draft Environmental Impact Statement at the following location:

Cambrian Park Methodist Church
1919 Gunston Way
San Jose, California

CONTACT

Caltrans

For more information about this study or any transportation matter, please call the Caltrans Information Center at (415) 923-4444 (voice or TDD), or write to:

Burch C. Bachtold,
District Director
Caltrans
P. O. Box 7310
San Francisco, CA 94120

This notice of Public Hearing appeared in the following newspapers:

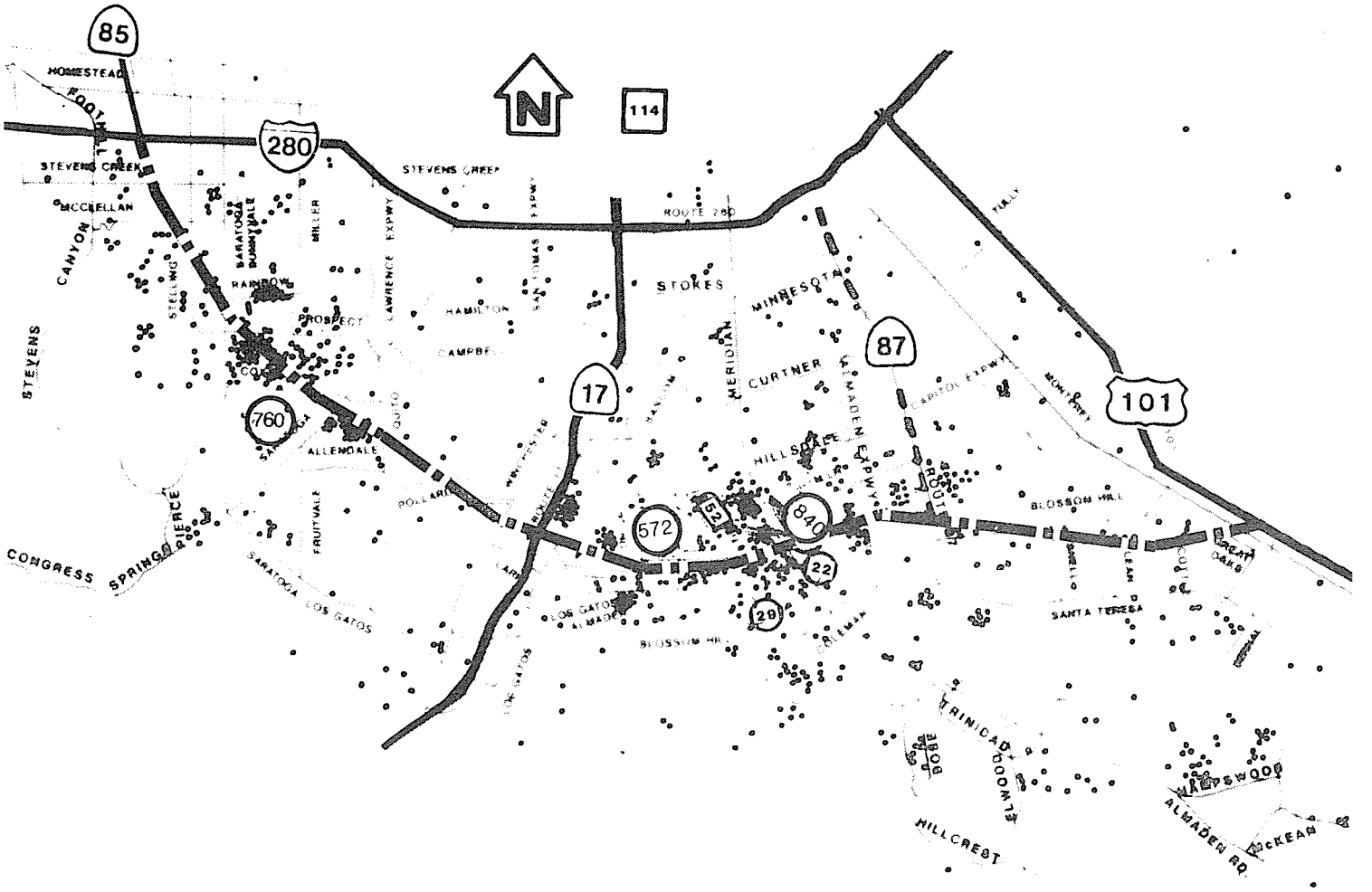
Newspaper	Dates
SAN JOSE MERCURY NEWS	5- 7-86 6- 4-86
MEREDITH NEWSPAPERS	5- 7-86 6- 4-86

DEIS PUBLIC NOTICE

FIGURE XI-3

D. DEIS/DEIR Comment and Question Responses

The following section is a compilation of the comments and questions which were received on the DEIS and DEIR that require a response. These have been culled from the letters which were received during the public review period from comments received during the DEIS/DEIR public hearings which were not answered at that time. Copies of all these comments and questions can be found in Volume II of this FINAL EIR/EIS. Figure XI-4 depicts the locations from which the comments were generated. At each question in the letters is a reference to a generic question and answer in this chapter. The DEIR and DEIS are referred to in the responses as the DRAFT unless there is a reason to distinguish between the two documents. The comments, questions, and responses are grouped by following topics:



TOTALS

Individuals, groups, officials, organizations

Comments and Questions received	505	
Petition signatures	2810	(11 petitions)
	3315	

Total number of comments, questions and signatures received from those areas ○

Number of comments received from north part of county □

GEOGRAPHICAL LOCATIONS
Comments Received on DEIR/DEIS
FIGURE XI-4

1. COSTS / FUNDING

INTRODUCTION

Project costs for Route 85, including right of way, construction, and operation costs, are presented in Section V of this volume. These costs will generally be paid with Measure "A" funds. If necessary, state and federal (FHWA) funding will be sought for highway construction. The costs of state or federally required mitigation for biology, wetlands, air, noise, and visual impacts, as well as impacts to cultural resources, park and recreation areas and to the transit network, are included in these cost estimates. Costs for mitigation of historic properties (relocation/demolition of three structures) and socioeconomic (relocation) impacts are included with right of way costs. All other federal or state required mitigation, such as landscaping, noise walls, and replacement of impacted biological habitat, is included under construction costs.

Additional community mitigation, or that which exceeds federal or state required mitigation, is addressed in various sections of the responses to comments presented in this chapter. If provided, this mitigation could be paid for with local funds and could include community walls, additional transit facilities, bike paths, and additional pedestrian facilities. The level of possible community mitigation will be determined during freeway agreement negotiations and based on the priorities of the individual communities and their local funding availability.

1. What is the breakdown of finances for all major projects to be funded under Measure "A", including all chargeable expenses for all projects until maintenance responsibilities are assumed by Caltrans?

   Measure "A" funds will be utilized to construct the Route 85 facility, but no cost breakdown is available for them at this time. The Santa Clara County Traffic Authority has developed a "Strategic Plan", which presents a strategy for achieving the objectives of the Measure "A" program in face of an estimated shortfall in sales tax revenue. The Plan is available for public review and is expected to be adopted by the Traffic Authority in early 1987. The Plan distinguishes between improvements that may be funded as part of the "Initial

Plan" and other improvements included in the "Completion Plan". The Initial Plan represents those individual components of Routes 85, 237, and 101, which, through the prioritization element of the Strategic Plan process, were determined to be the most important in accomplishing the objectives of the Measure "A" highway improvement program. Estimates for these project components, based on 1986 dollars are included. The Completion Plan adds to the Initial Plan those projects necessary to accomplish the full Measure "A" program as originally envisioned by Santa Clara County voters. Supplementary state, federal, and local funding is assumed to be available to implement the Completion Plan. Estimated costs for these project components are also presented.

2. Is sufficient money being received from Measure "A" to build Route 85?

Yes, the total revenue from Measure "A" is adequate to fund Route 85; however, other projects on Routes 101 and 237 could not be built if Measure "A" monies alone were to be used for this project. See the response to question CTS-1.

3. What is the additional yearly cost of maintaining, landscaping and patrolling Route 85? Where will this money come from?

This cost is approximately $1.5 million per year. The money will come from the State Highway Fund, gas tax, and Department of Motor Vehicles funds.

4. Will the state pay the homeowners for additional taxes, higher mortgage rates, etc. if they must relocate? If yes, where will this money come from; if not, why not?

Yes, see Section VI-G-3-a of this volume and the Housing/Neighborhoods questions. The money would come from various sources, Measure "A", FHWA, gas tax, etc.

COSTS / FUNDING

5. Will the state reimburse local governments, including school districts, for the tax revenues which will be lost after the state acquires the remaining right of way?

   No. See R/W-5.

6. If the state will reimburse these costs in the above question, where in the DEIS are these costs assessed to the construction of any of the project alternatives? If these are not reimbursed , who is expected to bear the burden?

   These costs are not reimbursed by the state. The remaining taxpayers in each community and any new, transportation-oriented commercial development will make up the loss.

7. Why were the expressway and expressway-with-LRT alternatives superceded by the freeway-only alternatives? Is it because Measure "A" money is only for the freeway?

   The nine alternatives in the DRAFT were selected for detailed study by the Policy Advisory Board. Their choice reflects an earlier decision that the freeway alternatives would have measurable advantages over the expressway alternatives. Funding for an expressway is not prohibited by Measure "A".

8. The costs of patrolling the freeway should be included in the operational costs of the freeway; approximately what are they?

   The California Highway Patrol (CHP) estimates that the cost of patrolling this portion of Route 85 will be approximately $600,000 per year. The CHP believes that the fines paid by inattentive drivers and, especially, the reduced accident costs on patrolled roadways will provide an overall benefit to the community.

9. Cost figures in the DEIR are not correct. For example, the 8-lane freeway alternative costs include costs of Park and Ride lots and transit vehicles. The no-build and TSM alter-

natives should include greater costs of these items to deal with greater congestion.

There were several errors in the costs published in the DEIR. Park and Ride lot costs were correctly included with each alternative. Transit vehicle costs were deleted for the DEIS where they were erroneously listed in the DEIR. Tables V-8, 9, and 10 were modified for the DEIS. There is no cost for the No Project alternative, and the TSM alternative did include costs for the items listed.

10. All the alternatives will require additions to the bus fleet, therefore the cost of the extra buses should be included.

The No Project Alternative and 8-lane freeway alternative did not require any additional buses. All of the other alternatives did have this cost included; however, buses required for the feeder service to the transitway or LRT were not included. It is assumed that the Santa Clara County Transit District will provide the necessary feeder bus service.

11. Have the costs associated with the loss of land been calculated and assigned to any of the project alternatives based on the number of acres lost to each of the alternatives?

Yes. The costs were based on proposed right of way widths rather than for each alternative (1986 dollars):

NPA/0' Width	LRT/100'	Freeway/200'
+$100M	-$95M	-$130M

These costs are detailed in Section V-B-12, Table V-1 of the FINAL in 1985 dollars. The NPA, 0' alternative represents sale of the state owned right of way. The LRT/100' figure is based on sale of one half of the existing state owned right of way, plus additional property needed ($38 million). The Freeway/200' alternative represents the various freeway and freeway/transit alternatives, but does not include the cost of the Route 85/Guadalupe Corridor overlap ($34 million).

COSTS / FUNDING

12. The construction of a freeway alternative would divert public funds from other transportation projects throughout the county that would make traffic conditions better. Why not use Measure "A" funds to work on Lawrence Expressway, Saratoga-Sunnyvale Road, and the Route 280/17 interchange.

The voters approved raising Measure "A" money primarily for Routes 85, 101, and 237. Improvement projects on other routes may be considered if the planned projects are completed without exhausting Measure "A" revenue, or the completion of one or more of those projects becomes impossible for legal or other reasons. The amount of public funds diverted, if any, is not known at this time. The availability of Measure "A" funds for the designated projects means that county funds previously obligated to those same projects will be released for improving other roads and streets in the county.

13. Where is the Measure "A" money going today ?

The funds generated by the 1/2 cent sales tax enhancement are being used to widen Route 101 west of the San Jose International Airport (one portion of which has been completed), and to prepare environmental and engineering studies for a variety of projects to improve Routes 101, 85 and 237. The remainder is being invested, to be available when those projects arrive at the construction stage.

14. Estimate costs of a 6 regular + 2 commute lane alternative, given an acceptable safety and enforcement configuration of the lanes.

The construction cost for this variation would not be significantly more than Alternative #8, the freeway with 8 mixed flow lanes. The additional striping, signing, and enforcement costs to operate 2 HOV lanes would be comparatively minor. No buffer (see Alternative #5) would be provided as it would prohibit preserving a 46' median.

15. What would be the effects on costs if minimum standard widths for lanes, shoulders, and medians were to be used instead of the maximums?

Appropriate minimum standard widths were proposed for all cross section elements except median widths (including left shoulder widths, as they are part of the median) for all of the highway alternatives presented in the DRAFT.

The one geometric feature for which the minimum standard is not proposed is the median width. The costs of constructing a freeway with the proposed 46' median width and the minimum 22' width have been compared. There is no difference in the cost of the 200 foot wide right of way(no matter what the median width is) to be acquired but the costs of construction, including the cost of retaining walls and the cost of earth work, etc., are $365M vs. $345M, for a savings of $20M with the narrower median. Were a freeway to be constructed with the Saratoga Design Variation profile, the cost comparison would be $420M vs. $375M, a savings of $45 million with the narrower median.

16. If funding through Measure "A" falls short of projections, how will the Traffic Authority determine which projects will be done and which must wait? What impact will there be on the entire transportation system if some components are not completed?

While the Traffic Authority is firmly committed to improvements to all of the routes for which Measure "A" was primarily intended, the cost to fully implement the Measure "A" system is prohibitive. Its committment is to accomplish some improvements in all of the designated areas, but the specific scope in each area is determined through the prioritization element of the Traffic Authority's Strategic Plan. These priorities were established based on an analysis of system-wide wide impacts and benefits. Since not all Measure "A" projects can be funded, some transportation improvements will be delayed or curtailed. See questions CTS-1 and 17.

17. If the Saratoga Design Variation is estimated to cost $60 million and there is already a shortfall of Measure "A" monies, won't the construction of the Saratoga Design Variation have a direct impact on other highway improvement projects?

According to the Policy Guidelines of the Strategic Plan, route depression will be considered where it is shown to address community concerns, and where the Traffic Authority has determined that the cost is warranted. Otherwise, less expensive forms of mitigation will be considered. Funding decisions will be based on the Strategic Plan, see question CTS-1.

18. Any costs for deviation from the proposed profile should be borne by applicable cities. Should other cities agree with profile changes, this matter should be referred back to the respective City Councils for discussion.

Agreed. The Traffic Authority's Strategic Plan details Measure "A" monies available for the Route 85 project profile (see CTS-1). Funding for additional features will be determined when freeway agreements are negotiated, and will be based on monies available from each city. This funding process is described in Section V-C-4 of this volume.

19. How were the cost effectiveness measurements of the Bus/HOV system determined (footnote 4, Table XIV-3 of the DRAFT)? Costs should be apportioned to all riders, or the costs split between the bus system and the HOV system.

The cost effectiveness measurements are derived from cost and traffic data bases. The capital costs associated with the Bus/HOV transitway are comprised of projected costs for buses, transit stations, and maintenance facilities. These costs were then annualized for a 12 year period (corrected from the 30 years as published in the DRAFT) for all buses and 50 years for associated fixed facilities. Trip numbers were determined from A.M. peak hour transit passenger miles generated by a computer model.

The bus user's portion of the Bus/HOV transitway alternative costs was chosen because of its comparability

with LRT for the variables listed. Other tables (Tables XIV-4 to XIV-6) present Bus/HOV as a combined transit option for various alternatives and give public costs per passenger mile.

20. Costs for each alternative should include costs for right of way acquisition; relocation of utilities; construction costs; interchange/station costs; local street improvements required for added demand; noise/impairment mitigation measures; and preparation of plans and contract administration.

The costs tables in Section V-B were compiled to combine essential cost elements of each alternative, except as noted in the footnotes. Local street improvements would be paid by local jurisdictions (see TRF 6-c). Preliminary engineering costs would approximately $12 million; construction engineering costs would be approximately $15 million. Administrative costs are included in the above estimates.

21. Not constructing anything in the corridor and selling the state owned property will produce funds which can be combined with Measure "A" funds to increase capacity on the other freeways and expressways in the valley.

Only approximately $6 million would be returned to the Santa Clara County for replenishment of its Federal Aid Urban funds. The rest of the money would return to the state-wide transportation program, except that receipts from parcels purchased since 1984 with Measure "A" funds would return to Measure "A" projects.

2. DOCUMENTS

1. What independent means of professional review and assessment of the DEIS in particular, and the Route 85 corridor project as a whole, exists to remove any suggestion of a conflict of interest on the part of Caltrans personnel who are both active as the evaluators and the executors of any selected alternative?

   The environmental impact assessment process provides the means of review. The following types of groups review the environmental impact statement, the plans, and the execution of the project: citizen groups; local, regional, state and federal agencies inside and outside the transportation field; interested individuals; finally, the Federal Highway Administration and Environmental Protection Agency. All review the plans and, to varying extents, the execution of the projects.

2. Will the DEIR section regarding traffic, noise, air pollution and cost estimation be upgraded prior to the selection of a preferred alternative to include adequate data on the methods used, the results obtained and the likely human impact? If so, how much is it likely to delay the selection of a preferred alternative?

   Revised traffic, noise, and air impacts of the Project Alternative have been included in the preparation of the FINAL. Additional information on the modeling of the traffic is included in Section III and the "Modeling" section of these responses. The projections of air, noise, and health impacts are based on the traffic projections. The Policy Advisory Board selected a preferred alternative August 6, 1986, and Caltrans approved it as the Project Alternative on Sept. 19, 1986.

3. Which group has the final approval or disapproval authority over the DEIS? What documents/agreements provide this authority?

   The Federal Highway Administration has the final approval authority over the DRAFT and FINAL Environmental Impact Statement. This authority is granted by Paragraph 771.123 of 23 CFR Part 771, FHWA approved the DRAFT on April 4, 1986.

4. The DEIS is very qualitative, seriously lacking in the kind of quantitative data and definitions of assumptions that would allow proper evaluation of the alternatives. Are supplemental working papers available that can answer questions?

Yes. The DRAFT and FINAL Environmental Impact Statements contain summary information derived from technical studies conducted for this project. These technical reports are listed on page VI-1 of the FINAL and are available by contacting the Public Information Office of Caltrans, (408) 971-6777 or (415) 923-4301.

5. Can Caltrans separate the section of Route 85 between Routes 101 and 87 from the more controversial section between Routes 87 and 280, to obtain rapid approval of a Project Alternative so the design coordination of the Route 85 facility with the Guadalupe LRT may proceed with minimum delay?

No. FHWA approval would be required, and this would cause more time lost than gained, if the Route 85 Corridor Project approval process proceeds normally.

6. The DRAFT fails to discuss the primary impact of freeway construction which is to promote more long distance car commuting, and so it is legally deficient.

The DRAFT was written to fulfill requirements set forth in the National Environmental Policy Act (NEPA), the California Environmental Quality Act (CEQA), and other federal and state statutes, regulations and executive orders. These laws require that project conditions and impacts be studied and described and that measures be considered to mitigate adverse impacts where practical. This information is provided to other agencies and the public for review, comment and approval. Then the decision makers consider the alternatives studied, their impacts, and the comments from the public and local, state and federal agencies to decide which alternative (including the no project alternative) provides the best overall service to the public. The legal sufficiency of the DRAFT and FINAL Environmental Impact Statement will be carefully considered by all reviewers. See TRF-30 and the "Modeling" section for more comments on the trip distribution question.

7. Why does the DEIS contain no details about landscaping the corridor after construction or relinquishment? Details must be in the EIS, for example trees must be replaced at a 5:1 ratio with 15 gal. trees, not 1:1 as in the DEIS.

The figures referenced are those described for the loss of riparian wetlands. Only the most general landscaping details have been included in the FINAL, see Section VI-D-3-c and VI-B-4-b. Detailed landscape design will be accomplished as the roadway design is done as the two must be closely coordinated. The exact planting system will be determined in cooperation with affected agencies.

8. Will the FINAL explore the impacts on local streets, with and without ramp metering? Extensive coordination with the local communities is required before the EIS proposes interchange locations and local street connections.

The Local Street Analysis Report has evaluated potential traffic impacts on local streets, with ramp metering. This may be assumed to be a worst case analysis since ramp metering may result in more traffic through local streets than without ramp metering (See TRAF-3). An Analysis of traffic impacts on local streets without ramp metering will not be done, as the metering system is considered essential.

The FINAL includes all interchange locations in the original Freeway Agreements from the early years of the project. The possible deletion of some of these original interchange locations included in the FINAL will be negotiated into the Freeway Agreements between each community and the state. An expanded discussion of the impacts on local streets is contained in Section VI-H of this volume.

9. There are several errors in the tables of Chapters V, VI, and XIV.

Multiple corrections of errors which appeared in the DRAFT have been made in this volume. See corresponding figures and tables for corrected data.

10. Public notice was given for "DEIR" hearings but the document presented was a "DEIS"; was this proper and acceptable legal notice?

The public hearings of October, 1985, were to combine the DEIR/DEIS and Systems Level Planning Study. However, an unexpected delay prevented issuance of a DEIS. The DEIS cover could not be changed in time, and bore the DEIS title. Consideration of the DEIS was delayed until the June 11, 1986, public hearing. Therefore, public notification and hearings were held for both reports, satisfying legal requirements.

11. On what basis was the schedule for review of the DRAFT established? What disadvantages will occur in the event the schedule is not met?

The PAB established the schedule according to the requirements of NEPA, CEQA, federal and state regulations, and the need for consultations by individual community councils, etc. A delay in review of the DRAFT delayed preparation of the FINAL and subsequent submittals to Caltrans headquarters and FHWA. The ultimate impact has been a delay in the preparation of Freeway Agreements and design of the project.

12. Table V-9 should be located after the discussion of construction costs.

Comment noted.

13. There are several errors in the figures in the DRAFT: (1) Route 17 north of I-280 should be changed to Interstate 880;(2) The Guadalupe Corridor map (figure V-1) should show the Almaden Transit Station; (3) the right of way map should be updated to reflect current Route 85 acquisition status.

Appropriate figures have been revised to correctly show Interstate 880 and current Route 85 right of way acquisition status. Figure V-1 does not show the Almaden (Oakridge) Transit Station, south of Oakridge Mall, because it is outside the boundaries of the base maps used in the FINAL.

14. Table V-4 should include all required relocations of City of San Jose sewer and water facilities.

Section V-B has been revised to indicate that additional relocation of sewer and water facilities will be identified by consultation with the appropriate local officials.

3. ENERGY.

1. What supporting data was used to conclude that each highway alternative would save more gallons of fuel in peak periods each day than would a light rail system? If the Route 85 study had included year 2010 ridership forecasts the "gallons saved" comparisons would have been much different.

In the DRAFT presentation, LRT is already depicted (in Figure VI-10) as the most fuel efficient alternative in "gallons/1000 passenger miles." The "gallons saved in the peak periods", is simply a matter of scale. The potential ridership forecasted for LRT only in 1990 is only 10-15% of those potentially using an 8-lane freeway. If the Route 85 study had included the year 2010 ridership forecasts, the "gallons saved" comparisons could have been different. It might well be that in 20 or 40 years an exclusive LRT facility might develop the ridership forecast, and the "gallons saved" comparisons could have been different.

The energy figures are included in the FINAL for the Project Alternative. See Section VI-C-3.

2. What impact on energy consumption will there be if the growth inducement projected by the DRAFT occurs?

The energy consumption associated with newly developed areas may seem, at first glance, to mean increased fossil fuel consumption. And indeed it will, for Santa Clara County. But viewed on a national scale, we must realize these "newcomers" were living and working somewhere else, consuming roughly the same amount of fuel. Energy conservation concerns come into play only if it could be shown that these newcomers had moved from a less energy-intensive existance into a worsened or higher energy-intensive situation.

3. What will be the energy impact of traffic generation caused by the selection of any of the highway project alternatives?

This question seems to address other aspects of traffic growth than discussed in question ENG-2. Consider whether the number of trips/dwelling/day will increase with the various alternatives; one authority feels that 40% less vehicle miles will accrue on a former commuter's car now left at home, while he switches to bus or rail. (L.C. Cooper-7/81) In general, however,

there is insufficient evidence available to permit us to identify different traffic generation rates that may or may not be associated with the various alternatives.

4. What comparisons were made between fuel consumption for commuters on the major freeways in the Bay Area with commuters on Bay Area rail systems such as BART, Caltrain, Muni, etc., and with bus transit systems? If no comparisons were made, why not?

For the purposes of this study, the Guadalupe Corridor FEIS figure (pg. 3.11-3) of 11 KWH/vehicle-mile was used, corrected for thermal generation losses. The auto fuel consumption rates (Caltrans manual entitled "Energy and Transportation Systems" July, 1983, pg. C-23) are predicated on urban congestion conditions. These rates were recently corroborated by field testing at a number of Bay Area points of freeway congestion, using cars equipped with precise fuel-metering devices.

Bus transit system analysis assumed 5 miles per gallon for the 1990 fleet. This value was selected (see Caltrans handbook above, pg. C-33) as an average of the various bus operations listed, adjusted slightly for bus improvements expected by 1990.

The literature search originally conducted on bus-rail-auto comparisons revealed considerable disagreement among authorities. The most impressive analysis was found in "Urban Rail in America" (1980), which summarizes modal comparisons: (translated into seat-miles/gallon)

Mode	Seat-miles/gallon
Urban Auto (24 mpg, 5 seats)	120
Light rail, high patronage, large system	243
Light rail, low patronage, small system	72
Bus (60 seats)	135

5. What consideration was given to fuel consumption by autos in stalled traffic such as occurs daily?

The auto fuel consumption rates assumed are predicated on urban congestion conditions. Since the freeway proposal would be relatively free of congestion in 1990,

congestion considerations principally applied to evaluation of paralleling city street operation under the "No Build" alternative.

6. With the 40% reduction in the number of service stations since 1973, what will be the impact on commuters for each project alternative if another fuel crisis occurs?

In answering this question, we will draw heavily on New York state's experience, since it is by far the best documented (Hartgen 5/80). As gasoline prices increase, the public responds by reducing travel. During the 1979 shortage, about 15% switched to transit for their travel. As a rule of thumb, one would expect a transit ridership increase of 15-20% during a gasoline shortfall like 1979, then dropping to 3-4% (depending on the price rise) as the shortage lessened. The real question becomes: what is the effect of transit ridership increase on highway travel? In areas of N.Y. State analogous to Santa Clara County, even large increases in transit ridership had negligible effect on highway vehicle-miles traveled (VMT) because transit ridership was relatively small.

7. What are the costs and benefits of each project alternative if the next decade includes an escalation in fuel prices comparable to the last decade?

This question is largely a paraphrase of question ENG-6. In California, the 4% average annual gain in vehicle miles traveled from 1972-1981 fell to a minus 1.5% in the '73-'74 fuel crisis, and slowed to a plus 1% in the '78-'79 crisis. Currently VMT is climbing at 5.7%. The coefficient of elasticity (short term) depicting the relationship between gas price and VMT is believed to be between -.15 and -.30, depending on the authority quoted. That is, a doubling of the price would be expected to reduce VMT (and thereby gas consumption) by 15% to 30%. This reduction in VMT would be brought about in the manner described in the above question. Bus and/or rail facilities would be more heavily utilized, and the lessened auto travel would increase travel speeds on freeways and city streets, improving fuel efficiencies.

8. It can not be assumed that there are no costs associated with commuting by car for the commuter. There are capital and operating costs associated with automobile ownership and these costs must be considered for any valid comparisons with the cost effectiveness of other project alternatives such as mass transit.

Energy consumption is a fairly good surrogate for automobile operating costs, insofar as it permits relative rankings of each alternative. The energy savings/weekday shown for each alternative in the DRAFT did include capital costs. Whether or not the commuter utilizes his auto for his daily commute, he still has the capital and operating cost of owning the vehicle.

9. Because much of the Route 101 traffic diverted to the West Valley Corridor will involve longer trips more energy will be used: have you calculated how much?

Drivers will divert to Route 85 because of a perceived savings in trip time. Since energy consumption has a high correlation with trip time (over 70%), energy savings are expected, rather than excess consumption. See also question Traffic-5a concerning the diversion of traffic from Route 101.

10. Chart VI-10 is misleading. It omits the HOV lanes and feeder routes.

The HOV lanes are included in calculating the fuel efficiency of three of the alternatives. The bus feeder routes are omitted; the relationship between the existing bus routes and a feeder system for express buses or LRT system is projected to be close from a fuel efficiency aspect.

4. ENVIRONMENTAL - GENERAL

1. What is the impact of Park and Ride lots relative to air pollution and crime rates?

No exceedances of federal or state air quality standards at Park and Ride lots are likely to occur. The actual contribution of Park and Ride lots will be in the order of 1 ppm/hour in the conditions of "worst case" assumptions. The crime rate is not expected to increase due to the construction and use of Park and Ride lots. See H/N-12.

2. The FINAL must provide adequate consideration of all aesthetic impacts, particularly in the areas of:

Depressing freeway
Extensive landscaping
Structure and interchange design
Soundwalls and berms

The individual alternatives were analyzed by their right of way requirements of 0', 100' and 200'. Most of the above items are design detail items and are not appropriate in the DRAFT for a project of this size; however, discussion of visual impacts of the greater features of the project is included in Aesthetics and Visual Resources, Section VI-D of the FINAL.

3. Can the City of Saratoga acquire and move the Warner Hutton House and be reimbursed for the costs?

Caltrans would be willing to enter into an agreement with a financially sound non-profit community group which would allow that group to accept responsibility for the building. Caltrans would sell the building for a nominal fee, incur the expenses related to the relocation of the building, including the foundation but excluding the purchase of land. This may be one of several possible forms of mitigation of the impacts of Route 85 on the Warner Hutton House.

4. Many potential historic sites have not been identified. Each alternative should have a list of impacted historic sites and mitigation measures.

People's ideas differ as to what constitutes a "potential historic site". Qualified architectural historians and archaeologists have evaluated all properties immediately adjacent to the Route 85 corridor (and within the proposed right of way) and have identified certain properties as being eligible for the National Register of Historic Places as federal regulations require. The DRAFT and FINAL EIS summarize the findings of detailed technical studies conducted for this project. The Historic Property Survey Report and Archaeological Survey Report are both available for review and list all of the houses and archaeological sites which were investigated for this report.

5. The David Greenawalt House should be included on the National Register of Historic Places and, hence, should be preserved. The local Historic Landmark Commission should be included in the process of determining final mitigation measures.

The Greenawalt House is eligible for the National Register of Historic Places, as determined by the Keeper of the National Register on June 10, 1985. The City of San Jose Planning Department's Historic Preservation Officer has been in contact with Caltrans regarding the historic properties on Route 85 within that city. The City of San Jose may make the formal request that the building be included on the National Register of Historic Places if the building is removed from the right of way and preserved.

6. Some studies have shown that the ground some distance from the freeway becomes so polluted that it becomes useless for growing anything. Please provide information from such studies and comment on them relative to this corridor.

In some areas where acid rain occurs, air pollution does have some effect on the suitability of the soil for ag-

riculture. However, studies indicate that there is no problem with this in the San Francisco Bay Area. Generally plant life, not the soil it grows in, is affected by air pollution.

7. What will be the impacts to wildlife on Los Gatos Creek during and after construction? Are there alternatives to filling and dredging? A minimum of nine acres of riparian habitat will have to be recreated as mitigation, can this be done north and south of the corridor?

Wildlife will undoubtedly be displaced during construction, and there will be a local decrease in wildlife after construction due to habitat reduction. Very little filling and dredging will occur in the Los Gatos Creek area because of its environmental sensitivity. Determining the location and extent of the mitigation has involved ongoing consultations with wildlife, soil and water management agencies. Additional discussion and letters from those agencies have been added to Section VI-B-4 of this volume.

8. The relative environmental impacts of fully and partly depressed roadways were not explored in the DRAFT. Impacts on ground water and economics of each profile should be developed with the participation of the Town of Los Gatos.

No ground water impacts are expected to occur as a result of any of the proposed alternatives or profiles. Impacts during the construction process are described in Section VI-B-3 of the FINAL as being minor and temporary, involving dewatering percolation ponds, temporary dikes, etc. The environmental impacts of depressed profiles are considered in the technical report Noise Impact Analysis For Route 85 which is available for inspection at 3333 California or 150 Oak Street, San Francisco. Also see E/A-22 . The relative economic impacts of elevated/at-grade/depressed profiles are primarily confined to the construction costs of the project, since right of way is not greatly affected on this long-planned corridor and variations in the neighborhood impacts are slight. The cost of required flood control measures is included as part of construction costs in Section V-B-2 of the FINAL. Also see E/N-15 and E/N-11.

9. Mitigation measures for seismic exposure for each alternative should be provided.

Seismic hazard mitigation measures are listed in Section VI-B-2-c of the DRAFT. The variations in seismic exposure among the build alternatives is in the number and scale of structures rather than in differences in design. The costs of these variations is included in the construction costs.

10. Why are the Congress Springs Park and Kevin Moran Park not considered Section 4(f) properties? Please describe mitigation efforts for the noise impacts and protecting motorists from sportsmen.

These parks are considered Section 4(f) properties; however, they are not impacted by this project except by noise. Detailed descriptions of the noise impacts are included in Section VI-C-2 of the FINAL. Noise mitigation will include those measures detailed in Caltrans Design Bulletin 58 and Federal Highway Program Manual 7-7-3. These measures are discussed in the noise section of the FINAL in Section VI-C-2. If additional motorist protection is warranted, an appropriately sized chain link fence may be placed on top of the sound wall.

11. Why can't the freeway be depressed at Camden Avenue? Please identify, evaluate and compare the environmental impacts of depressing and not depressing the profile at that location.

The freeway can be partially depressed at Camden. The final interchange design and profile will be determined during the Freeway Agreement execution process with the City of San Jose. In depressing the freeway, the noise and visual impacts are lessened; however the impact on Ross Creek would be greater. The remaining impacts would be mitigated to the extent possible with the construction of sound walls and community walls and appropriate landscaping.

12. Will an Environmental Impact Statement be produced, in addition to the EIR?

Although the Draft Environmental Impact Report and Draft Environmental Impact Statements were published separately (in October, 1985 and April, 1986, respectively), this final environmental document is a combined FEIR/FEIS, written to satisfy both state and federal requirements.

13. Over 50 major engineering changes have occured to the Route 87 project already, and Route 85 will necessitate more. Will a new EIS/EIR be prepared for Route 87/Guadalupe Corridor?

No. Environmental impacts associated with the overlap of the Guadalupe Corridor project and Route 85 are considered in this document. The County of Santa Clara Transportation Agency has determined that the design revisions on the Route 87/Guadalupe Corridor project do not require a new EIS.

14. Will the DRAFT data be reassessed as a result of the revised standards being developed by the USGS, due to recent higher magnitude earthquakes? Will the cost of implementing revised standards be considered in analyzing the feasibility of constructing the Route 85 freeway?

The USGS does not issue standards for earthquake magnitude, or for building design purposes. The National Earthquake Prediction Advisory Council, within the USGS, has in recent years been reviewing the probability and potential for earthquakes in California; however, there has been no publication of their findings to date.

Caltrans revised its design standards for highways, and particularly bridges, following the 1971 San Fernando earthquake. Should any new official data become available which would influence these standards, they would be reviewed and revised as necessary.

15. It should be noted that the air quality is positively related to the number of commuters who use a LRT system, and that noise is definitely less with the LRT.

Agreed, and Tables VI-7 and VI-11 of the FINAL reflect this.

16. Is the project consistent with the Coastal Zone Management Plan, particularly with respect to material disposal sites?

Yes. Sections VI-I-8 and VI-J-7 of the FINAL contain descriptions of the possible impacts of the project on material disposal sites in Bay waters.

17. It is requested that a special study be conducted of the visual impact upon the neighborhood in which the Lawson Court and Popejoy Court homes are located.

The development of the Route 85 freeway will have varying degrees of visual impact on the residents of Lawson and Popejoy Courts in San Jose, depending on the proximity of homes to the freeway right of way.

These homes are currently at the edge of an established residential neighborhood which will become divided by roadway construction, breaking the visual integrity of the neighborhood. Removal of the existing homes and landscaping from Pinmore Drive would impact the overall visual quality of the Lawson/Popejoy area and create substantial visual impacts to residents immediately adjacent to the right of way.

Community walls two feet higher than existing fencing will be constructed along the right of way adjacent to three homes on Popejoy Court and one on Lawson. Due to the proximity of houses to the right of way line, the community walls will create shadows in residential back yards during the afternoons. Shadow lengths will vary from approximately 7' to 56', depending on the time of day and season of the year.

There are no significant mid or long range views within the neighborhood. Views from the top stories of the homes on Lawson and Popejoy Courts will be changed from those inherent in a residential environment to those of

roadway pavement, transportation structures and vehicular movement.

In summary, the homes on Lawson and Popejoy Courts will experience a general reduction of visual quality which cannot be mitigated with the current freeway alignment. The four homes immediately adjacent to the right of way will be affected to a greater degree due to their close proximity to the freeway. Landscaping will have some mitigating effect for the three nearest homes on Popejoy Court.

18. What mitigation measures to prevent soil loss will be undertaken for construction during the winter months?

All contractors involved in highway construction will be required to adhere to the California Standard Specifications for erosion control and highway planting. These specifications cover irrigation, hydroseeding, stabilization emulsions, etc. Additional special specifications may be incorporated into each contract to prevent runoff and control unusual situations.

19. Can the topsoil be stockpiled for revegetation of disturbed soil?

This project will cross a fertile portion of the Santa Clara Valley overlain by Class I and Class II agricultural soils, 69 acres of which are still utilized for agriculture. The project could provide topsoil for the landscaping of other Measure "A" and other current highway construction projects. A provision has been added to Section VI-G-3-d of the FINAL to stockpile topsoil for use in landscaping during the project.

20. The FINAL should address potential impacts to the Guadalupe River Park Chain, Branham High School Playing Field, Los Gatos Creek and Coyote Creek parkchains, and Cornucopia Community Garden.

Section VI-F of the FINAL has been expanded to more fully discuss potential impacts to the recreation uses noted above. Caltrans is in communication with the City

of San Jose regarding the Cornucopia Community Garden. Improvements to the garden are considered additional community mitigation and, if provided, would be financed with local funds.

21. What is the mitigation for the loss of riparian habitat and farmable land?

A mitigation plan for the loss of riparian habitat, which was developed with the California Department of Fish and Game, U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, Santa Clara Valley Water District, and local communities, is included in the FINAL. See Section VI-B-4. The U.S. Soil Conservation Service determined that the prime agricultural land which will be affected by the project is not subject to protection under the Farmlands Protection Policy Act of 1981. However, topsoil from the job will be stockpiled. See Section VI-G-3-d.

22. The U.S. Fish and Wildlife Service would not object to the issuance of a permit for the project by the Department of the Interior if their mitigation recommendations of Nov. 25, 1985, (Letter 2, Section VI), are made a part of the projects's final plans and specifications.

The recommended mitigation measures will be met or exceeded by the final project plans.

23. What about the salt marshes, salt marsh yellowthroat bird, and water tables?

These issues are addressed in this volume. Salt marshes and the salt marsh yellowthroat are discussed in Section VI-B-4 and hydrological issues, including the water tables, are presented in Section VI-B-3.

5. ENVIRONMENTAL - AIR

1. The DRAFT bibliography does not contain any reference to air quality studies of air pollution effects on health by various project alternatives. Are there any?

   The report, "Air Quality Analysis for the Route 85 (West Valley Transportation Corridor) between Route 101 in San Jose and Stevens Creek Boulevard in Cupertino, Santa Clara Valley," dated 5/6/85, was prepared and is available for public inspection. This report includes general air pollution information, but detailed health effects are not within the scope of the environmental document. The federal and state standards incorporate detailed consideration of health effects; our study considers the compliance with these standards as sufficient comment on health effects.

2. In as much as the micro-climate of the West Valley Corridor region can differ in terms of precipitation, wind speeds, wind direction and temperatures from other Santa Clara Valley regions, why are there no climate data in the DRAFT for the dates and locations of the monitors in the Route 85 Corridor?

   The air quality monitoring stations were located to obtain the worst case background carbon monoxide (CO) information during the winter. Worst case conditions occur during fall and winter temperature inversions when winds are very light and air movement is stagnant or gently drifting. Because worst case assumptions were used for the climatic variables, actual wind speeds and directions are not needed for worst case conditions. Air quality will normally be better throughout the rest of the year. Our worst case analysis assumes for the future a coinciding of the average lowest January temperature (over three years), the wind direction yielding the highest CO levels for each receptor, peak-hour traffic, low wind speeds (0.5 to 1 meter/second), and a minimum fluctuation of wind direction.

   The statistical validity of the sampling schedule was checked by using the OBSMAX program from the technical report entitled "Measurement and Analysis of Ambient Carbon Monoxide Concentrations for Project-Level Air Quality Impact Studies" by the Office of Transportation Laboratory, Caltrans.

3. What assumptions were made concerning the mix of vehicles for which there are exhaust emission standards and those for which there are no standards?

Project traffic projections for each alternative were used in the air quality studies. This traffic included expected percentages of light duty vehicles (cars and light duty trucks), medium trucks, motorcycles, heavy duty gas trucks and heavy duty diesel vehicles. The Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have estimated percentage of vehicle ages for future years and the corresponding composite pollutant emission rates for each of these classes of vehicles for various years. These estimated rates (in the ARB computer program EMFAC6D) were used in the project air quality study.

4. Why were there no assessments of the environmental impacts of the project alternatives on existing standards for oxidants, particulates and oxides of nitrogen?

According to the 1982 Bay Area Air Quality Plan (BAAQP), approved by the EPA, these pollutants in both cause and effect are a regional problem, and are addressed with approved reduction strategies in the BAAQP. Nitrogen and particulates are within federal and state standards. Ozone or oxidant is a secondary pollutant formed from precursor hydrocarbons and nitrogen oxides in the presence of strong sunlight over a period of time. Ozone, therefore, would be expected to form a considerable distance from the point of origin of the precursor pollutants and is best analyzed on a regional basis. CO levels can usually be taken as an indication of microscale freeway air quality. Table VI-6 and Section VI-C-1-b present a summary of the results of CO projections for this project.

5. Were any measurements made or consideration given to the potential for lead contamination of air and soil by each of the alternatives?

No lead measurements were obtained from air or soil for the Route 85 study. Lead monitoring has been performed by the BAAQMD and has been within both federal and state standards since 1978 when the standard was last exceeded

at the San Jose Station. The quantity of lead in gasoline has been systematically reduced by EPA regulations, which have been able to reduce air borne lead levels dramatically in recent years, and the EPA has proposed to ban leaded gasoline by 1988. The freeway will not be completed before that date, so lead from auto emissions is not expected to be a problem.

6. Was any consideration given to the impact of the various project alternatives on the production of sulfates in the air?

No study was made of the possible impact of sulfates by the various alternatives. The state standard for sulfates, 25 micrograms per cubic meter (24 hours), has not been approached. The highest reading in the Santa Clara County in 1984, as published in the CARB, Air Quality Data, Vol. XVI, was 0.5 micrograms per cubic meter. We believe the potential increase in diesel vehicles in the corridor will not produce an increase in the pollutant measurable or calculable with our state of the art technology.

7. Were any measurements made of the potential production of carcinogenic pollutants such as ozone, benzene, etc., by each alternative?

For ozone, see E/A-4 above. Other carcinogens, such as benzene et al, have not been studied in this Air Analysis because research concerning their origins and effects has not yielded methods of addressing them in regards to highway projects or applicable legal statutes. The EPA, in cooperation with other agencies, is currently studying pollutants such as benzene in the "Santa Clara Valley Integrated Environmental Management Project." Preliminary results are reported in their Stage One Draft Report dated October 11, 1985.

8. "Air quality will improve rather than deteriorate with any build alternative"? The final report should contain an analysis of the CO concentrations in the valley and include area-wide impacts of build and no-build alternatives.

This quote must be qualified to apply only to the 1990 projection, and no other. The quoted statement is thought to be accurate, when refered to the year of construction of the new facility. Air quality for the design year 2010, as represented by CO concentration, is illustrated in Table VI-7a. The net result of the use of the new freeway will be less total pollution than would be produced if the same number of vehicles used the existing road network for the number of trips projected for 2010.

Extended discussion with the Air Resources Board and the Environmental Protection Agency have resulted in the determination that a mesoscale analysis of CO concentrations in the West Valley is not required for this project. See Section VI-C-1-b-2.

Subsequent improvements in air quality will be closely related to efforts by the EPA to apply control measures to bring pollutant concentrations down to the CO and ozone goals specified by the Clean Air Act of 1970 and its amendments.

9. For each project alternative, what will be the annual projected cost for health care that will result from air pollution related illnesses as well as from accidents causing deaths and disabilities?

Regional air quality is projected to meet federal standards by the end of 1987 and these standards are designed to reduce or eliminate air pollution related health effects. The President's Council on Environmental Quality has estimated that the number of lives saved nationally, because of air pollution controls is 14,000, with 21 billion dollars selected as the best estimate of dollar savings. See also question H/S-1.

10. What kinds of air pollution can be expected in the properties adjacent to the project and how do these compare with the no project and federal standards?

Motor vehicles emit CO, hydrocarbons, nitrogen oxides, sulfur oxides, particulates, and lead. Less of these pollutants (except for nitrogen oxides) are emitted, per vehicle mile, in steady freeway driving than in stop-and-go operation on local streets. No exceedances

of federal or state air pollution standards are expected from the Project Alternative.

11. Why was the Los Gatos air quality measuring station not shown in Fig. VI-6? Why were the comparison sites close to the freeway not measured?

The Los Gatos BAAQMD station no longer monitors CO. Background CO levels were measured along the Route 85 freeway corridor. The computer generated CO levels from the expected freeway traffic were added to the background CO levels to obtain the expected future CO concentrations adjacent to the proposed freeway.

12. CO loads of 35 ppm along Route 280 and up to 50 ppm along Los Angeles freeways demonstrate that projections of 6 ppm & 9 ppm along West Valley Corridor are not realistic.

Caltrans has no knowledge of either one-hour or eight-hour CO levels of 35ppm along Route 280. There may be some confusion because there are CO standards for a one-hour average (35ppm, federal and 20ppm, state standards) and for an eight-hour average period (9ppm, federal and state standards). CO concentrations were analyzed for both one-hour and eight-hour periods. The projected worst case one-hour CO levels ranged from 12 to 17ppm and the projected eight-hour worst case CO levels ranged from 5 to 7ppm for the Route 85 corridor alternatives. These projections have been reviewed by the BAAQMD and the ARB.

13. Table VI-8 should be revised, and the discussion of TCM's expanded.

Agreed. Section VI-C-1-b has been amended.

14. The FINAL should include a more complete discussion of TCM's, their nature and impact in a regional context.

The discussion in Section VI-C-1-b has been expanded and revisions made to Tables VI-8 and VI-8a.

15. What is Transportation Control Measure #12 and why is it special to San Jose? What is San Jose doing to warrant special leeway? How does it actually reduce CO?

The Transportation Control Measures (TCM's) are described in the 1982 Bay Area Air Quality Plan published and are available from the Association of Bay Area Governments (ABAG). The TCM's will provide further reduction in Bay Area air pollution emissions. TCM #12, Commute Transportation Program, is a series of measures to be adopted by Santa Clara County Transit to reduce CO emissions. The measures include ridesharing programs, express bus service, park and ride lots, upgrading Caltrain service, and high occupancy vehicle lanes. See Section VI-C-1.

16. How could Route 85 improve air quality in the West Valley when it is inducing growth in the region, adding another 59,000 to 130,000 auto trips per day, causing diversion and extension of trips, and inducing greater congestion of the connecting traffic?

The Route 85 freeway alternatives relieve over-all congestion and improve the flow of traffic; thus improving air quality (except NOx). Also see E/A-10. On the larger scale, users of the freeway will be traveling more directly, efficiently, and quickly to ther destinations and will, compared to the existing conditions, use less energy and produce less pollution per mile and per trip. The figures of 59 to 140 thousand "new" trips are not supported by Caltrans' travel projection methods.

17. The effects of the build alternatives on the air quality have been downplayed in the DRAFT.

The air quality studies stress microscale CO impacts as these directly impact persons living along the transportation corridor. Other pollutants emitted by motor vehicles are well within standards in the Bay Area and, along with ozone (which requires regional analysis), are considered on a regional basis in the 1982 BAAQP.

18. Was any consideration given to the costs which may be associated with the risk assessments described in the "Santa Clara Valley Integrated Environmental Management Project: Draft Stage One Report" prepared by the EPA?

See response to question E/A-7 and E/A-9.

19. At the interchanges at various cross streets, because of congestion: how much air pollution will result and what will be the pattern of air pollution?

The CO levels shown in Table VI-6 of the FINAL are the worst case concentrations expected at the houses closest to the proposed alternatives during a ground based inversion episode (stagnant air) once a year. At other locations, such as at interchanges, where homes are farther from the proposed facility, the CO levels would be somewhat lower. Even the worst case levels at the closest homes are within the health goals enacted by congress.

20. Because much of the 101 traffic will be diverted to Route 85, what will be the magnitude of the redistribution of ozone and CO in West Valley?

In Caltrans' judgement, a moderate amount of traffic will be diverted from Route 101 to Route 85, resulting in a slight improvement in air quality on Route 101. Most of the traffic on Route 85 will be diverted from local roads and the air quality on these local roads would also be expected to improve. Additionally, improving level of service will improve air quality. See also TRF-5a and DOC-8.

21. Actual air quality should be used as a base and actual air quality on existing freeways should be measured and used as a basis of comparison for each alternative.

Caltrans has measured the CO levels adjacent to other freeways in the Bay Area such as Routes 101, 237, and 880. This information cannot be used directly for the Route 85 study because the ambient or background CO levels, truck percentages, traffic volumes, terrain, and

location of dwellings relative to the freeway are different for each freeway. These differences all affect pollutant levels. That is why the computer models are used to calculate the projected future worst case CO levels at homes adjacent to the Route 85 corridor.

Actual existing (1984) CO levels were measured extensively in the corridor. The CALINE4 computer program used in predicting future CO levels has been validated by comparison with actual CO levels measured on freeways. Since the FHWA has approved the use of this model, no further validation studies are necessary.

22. What will be the relative exposure to air pollution, CO levels, near an at-grade roadway, depressed roadway, elevated roadway?

Studies have shown that air pollution levels are somewhat higher adjacent to at-grade sections of roadway than the levels at depressed or elevated sections. A limited number of tests by Caltrans indicate that CO levels tend to be slightly lower on the homeowner side of noise walls than on the freeway side. Air pollution levels are expected to be below state and federal standards for CO adjacent to the Route 85 corridor.

23. Expand comments relative to the long term effects on the users of Blue Hills School which is adjacent to the corridor.

The health effects on users of Blue Hills School will be less than that of the worst case receptors mentioned in the SCL-85 Air Quality Technical Report. The health concerns of air pollution are discussed in the FINAL and apply to the Blue Hills School as well as to all other sites near other freeways.

24. The recent EPA report highlights that people who live near busy intersections have higher than average risks of cancer. An independent Saratoga survey indicated that mobile emissions will be approximately 18 ppm. Please confirm that this is near the 20 ppm maximum set by Caltrans and report what danger this will be to the public.

The studies which have supported the observation that higher than normal cancer rates are found near intersections have ascribed the creation of risk to pollutants for which no air quality standards have been set. Benzene, for example, has been mentioned as a possible risk factor. CO, while potentially having serious effects on health (as indicated in the FINAL) when occurring in high concentrations, is not listed among these carcinogens.

CO levels are usually taken as an indication of microscale air quality nonetheless. The State of California (not Caltrans) has set a one hour air quality standard of 20 ppm for CO. The 18 ppm cited is close to the CO levels mentioned in our studies in the DRAFT and FINAL.

25. How will you deal with increased pollution due to Route 85?

See Sections VI-C-1,2 for discussions of pollution impacts of Route 85.

26. Air quality analysis must be based on the same future traffic hour and emission profiles as the traffic analysis.

Extensive discussions and comparisons of 1990 vs 2010 data on the freeway has revealed that, with the ramp metering and assignment of commuter lanes, traffic volumes on Route 85 will be similar, within narrow limits, throughout the period. Use of 1990 traffic data in the air quality analysis for comparisons of alternatives has been acceptable to CARB.

27. The MTC recommends use of 19% CO reduction, for motor vehicle emissions due to the California biennial motor vehicle inspection and maintenance program, throughout the calculations.

Agreed. The calculations have been revised.

28. On Table VI-5 of the DRAFT, what were existing CO levels at Cox & Saratoga-Sunnyvale, Main at Saratoga-Los Gatos Rd., Lark at 17, Blossom Hill at Los Gatos, etc.

The air analysis for this project consists of a micro-scale analysis from air sampling sites in or immediately adjacent to the West Valley Transportation Corridor. Pollutant levels in neighboring communities are of concern to residents of those communities but are unnecessary for the environmental analysis. Air pollutants generated by static and mobile sources generally diffuse throughout a community with few localized hot spots significantly higher than background. There can be some "worst case" conditions when such spreading is inhibited. Table VI-6 in the FINAL lists the highest readings from the sampled period for the three sites in the Los Gatos/Saratoga area, and they show the consistency expected for these conditions: five of the six maximums listed occurred on the same day, 1/04/85, reflecting that "worst case" conditions are community-wide, not localized.

29. The DRAFT is incorrect in predicting an increase of CO (Section I-D.), the LRT alternative will create no CO.

Although LRT vehicles are electrically powered and will create no CO themselves, local CO increases would be expected if the LRT alone was adopted as the Route 85 corridor transportation alternative. Some CO associated with the LRT will be generated by LRT-bus feeder lines and commuters traveling to park and ride facilities at the LRT stations. Low LRT ridership figures, compared to the Project Alternative, would also result in predicting a CO increase from commuters choosing existing roadways if land use regulation allows person and vehicle populations to increase.

30. The DRAFT presents unrealistic CO figures; the 8 lane freeway is given nearly the same rating as NPA and LRT.

The projected 1990 air quality data for NPA and LRT include CO levels resulting from future traffic using existing roadways. Although increases in the numbers of vehicles on the existing roadways may not be as high as with the freeway alternatives, level of service on ex-

isting roads will decrease and CO levels will rise with the two alternatives without new freeways (NPA and LRT). See E/A-29.

31. How many miles of bus feeder lines were computed into the CO Worst Case Levels, Table VI-6?

The modeling methods for CO levels did not require input of miles of bus feeder lines. Non Route-85 contributors of CO, including buses on Route 85 feeder lines, are considered part of the local ambient air quality. Projections for local, 1990 ambient air quality utilized a rollback method based on yearly changes in CO concentrations from past and 1987 (BAAQP 1982 projections) grams/sec. of CO. The 1987 figures were then reduced in accordance with the yearly changes and TCMs to derive 1990 ambient CO figures. This ambient air quality data was added to the average projected CO contribution from the roadway to obtain expected CO concentrations at various receptors. The worst case analysis used only sites with high concentrations. An "Air Quality Analysis for Route 85" provides details on the methods used for EIS Section VI-C-1. This technical report is available for inspection from Caltrans.

32. The authors of the DRAFT should not have concluded that "The highest CO concentrations... are generally expected to be found adjacent to the freeway", and should not have ignored BAAQMD studies which state "8-hr CO averages under worst case conditions are almost independent of local traffic volumes; that is, streets adjacent to the monitor".

The assertion that the BAAQMD study referred to was ignored is incorrect. Not only does the technical report for the SCL-85 air quality quote this document, but Caltrans provided some of the input for the study.

There appear to be two errors in the conclusion that there are direct conflicts between the two statements. First, the quotation from the BAAQMD study refers to local streets and not to freeways. This is an important distinction in that the lower vehicle volumes involved in local traffic would generally not be expected to have as dramatic a <u>microscale</u> CO impact as a freeway under the same, worst case, conditions. The background con-

centration, as opposed to local traffic, would tend to dominate. Secondly, the reference specifies time as a parameter. The 8-hour CO values do not depend on high local traffic (i.e. they occur at times independent of local traffic highs and lows). We fully agree with this BAAQMD conclusion. But at any given time the higher values, during the worst case conditions, will be near the freeway as opposed to, for example, 500 feet away.

This discussion does lead to the underscoring of a very important point: the worst case analysis assumes the coinciding of both worst case meteorological conditions and worst case traffic. This is not likely to occur.

33. The often used argument that air pollution is reduced when cars move swiftly on freeways is patently false; the opposite is true. "The production per vehicle mile of CO and HC decreases, but the output of leads and oxides of nitrogen increases as cars go faster." In addition, higher speeds result in increased output of sulfates from both diesel-powered vehicles and gasoline engines burning high sulfur fuels. Lead, sulfates, and NOx are all notoriously bad actors in terms of health.

This comment on vehicle speeds in relation to air pollution is to some extent correct, but the conclusion is not. The DRAFT is correct in stating that lead and NOx emissions increase with increases in speed. Certainly, though, as stated, CO and HC emissions decrease with increases in speed. The claim that "the opposite is true", that air pollution increases with an increase in speed, is incorrect. In fact, the increases in lead are not significant when considering the year 2010, since no-lead gasolines will by then eliminate lead as an air pollution concern. As for the increases in NOx, the primary health effect related to NOx is not NOx itself but ozone, which has NOx as one of its reactants. In the Bay Area the approved strategy for reducing ozone is to reduce HC, another reactant in ozone formation. Because of this and the unusual characteristics of the complex reactions leading to ozone, a decrease in NOx actually creates higher concentrations of ozone (see discussion in the 1982 Bay Area Air Quality Plan). Increase of NOx levels (which in themselves are of secondary concern) is not as important as the reduction of CO and HC.

Hence, in general, the claim that air pollution is less with increased vehicle speeds is definitely true.

Sulfates are emitted mostly by industry. Their increase with increased speeds is very peripheral in discussion of traffic impacts on air quality, as most experts know. Citing sulfates as "notoriously bad actors in terms of health" in this context is certainly misleading even if unintentionally so.

34. The DRAFT should be supplemented to provide more information on existing conditions, a more thorough discussion of project impacts and mitigation, and an analysis issues relating to conformity with the State Implementation Plan to obtain EPA concurrence with the FINAL.

The Air Quality Section of the FINAL has been expanded at the suggestion of the EPA in the discussions of the items listed. See Section VI-C-1-b.

35. In view of (1) the underestimation of travel demand by Caltrans' modeling methods, (2) the large increase in congestion which can be caused by small increases in traffic volumes, (3) the pollutant emission/traffic volume relationship, and (4) the worst case projections are within 15% of state and federal standards, don't you agree that the state and federal standards will be exceeded if we build the freeway?

The state and freeway standards will not be exceeded when the freeway is built or for some years thereafter. Eventually the standards may be met and exceeded in later years if: (1) vehicle emission control regulations are eased, (2) standards are not revised downwards, (3) meteorological conditions surpass "worst case" assumptions, (4) population, hence traffic, growth continues, (5) industrial growth continues, and other factors too numerous to mention. The effect of the construction of the Project Alternative for Route 85 will be to delay the year that those standards are exceeded, by providing a freeway where vehicles using existing roads can operate in a more efficient and less polluting manner.

6. ENVIRONMENTAL - NOISE

1. A noise contour map, from properties adjoining the project, to the distance it takes the noise to dissipate, is required. What is the basis for the model and has it been validated by previous use?

A noise contour map could not adequately be drafted without great effort due to effects of microtopography, vegetation and the built environment that need to be considered. The result of such contour maps are not always accurate. The same impacts may be assessed in a more meaningful way with the methods used. The reduction of noise with increasing distance from the various proposed alternatives is shown in Table VI-9 of the FINAL. This table could be extended by reducing the noise shown at 500 feet by approximately 4 decibels to obtain the noise at 1000 feet. An intervening house would further reduce this noise by approximately 5 decibels. The noise projection model used was the Caltrans LEQV2 model which is based on the FHWA RD-77-108 Highway Traffic Noise Prediction Model. Both models have been extensively validated during the past seven years of use.

2. During construction of major segments of various alternatives, how many truck trips per day and at what hours of the day are anticipated, compared to the present conditions? Will all noise mitigation barriers be in place before construction starts?

Construction details will be finalized during the future detailed preparation of plans and specifications for construction units of the Project Alternative. It would be expected that construction would be limited to normal weekday working hours (approximately 7AM to 5PM). The number of construction truck trips is not known at this time.

It is expected that noise walls will be built as a first item of work where practical in cut and at-grade areas. In fill areas, the noise walls can not be built until after the fills are completed.

3. The noise impact has not been analyzed properly. For example, the noise level comparison on a section of the Route 85 was made with readings taken on Branham Lane which has high existing noise levels. An analysis should be made for homes

located 250' or so away that do not have high existing noise levels.

Representative noise measurements were made throughout the Route 85 transportation corridor to describe the existing noise levels and conditions. Branham Lane was used as an example of the noise levels along a very busy existing thoroughfare. Other noise measurements were taken in very quiet areas away from any major streets. Many readings were taken with noise meters that measured the noise throughout the 24 hours of the day. Computer projections for future freeway traffic were then used to determine the expected freeway noise levels and to design noise attenuation walls.

4. Sound walls should be provided universally.

Sound walls will be provided at all locations where warranted. See the Noise Mitigation Plan, Section VI-C-2 of the FINAL. Also see Appendix A.

5. How much will the noise increase along connecting routes due to congestion and diversion of traffic from Route 101 to West Valley Corridor project?

See the responses to questions E/A-20,TRF-5a, and E/N-13.

6. Can Caltrans provide studies of existing unmitigated and mitigated conditions which would demonstrate that the proposed mitigation efforts would accomplish the sound reductions which have been calculated? More detail is required in the noise analysis. Differing types of sound mitigation measures should be analyzed - berms, walls, landscaping, depression, etc.

Caltrans has been using current models for noise studies since about 1980. The Caltrans noise models are based on the FHWA RD-77-108 Highway Traffic Noise attenuation model that is used and has been verified nationwide. Caltrans does measure behind complete noise attenuation walls to check the models and actual attenuation ob-

tained. Usually the model agrees within one or two decibels of the actual as-built conditions (this degree of variation is to be expected). Recently, noise attenuation has been checked at the completed noise wall at Route 92/101 in San Mateo and on Route 280, northerly of Route 17 in San Jose. The actual levels checked were within about one decibel of the calculated attenuation.

More detailed noise wall studies will be done during the detail design phase of the project. Sound attenuation walls, depressing the freeway, and banning of trucks seem to be the practical noise mitigation measures applicable to this project. There is not enough space in the right of way to construct earth berms, and landscaping is mainly a psychological noise barrier and does not provide much real attenuation.

7. Do actual measurements show that sound walls achieve the reductions they are calculated to achieve?

Yes. See the question above.

8. Does Caltrans recognize that the noise mitigation measures will not meet the goals of the San Jose General Plan? What modifications will be made to achieve the required mitigation?

Yes. In those areas where additional wall height is desired (over state and federal standards) to meet local noise goals or statutes, the cost of the additional height would be paid for with local monies. Additional wall height in the vicinity of schools and hospitals will be evaluated in the same way. See the introduction to the Costs/Funding questions.

9. Will truck traffic be banned as an effort to meet noise standards not otherwise obtainable?

The Policy Advisory Board has recommended that truck traffic in excess of 9,000 pounds be banned from the Route 85 freeway. Section 35701 of the Vehicle code authorizes cities to pass ordinances denying use of a

street to commercial vehicles or vehicles exceeding a stated gross weight provided certain requirements for alternate routes are approved by the Calif. Department of Transportation. Each city would have to pass an ordinance under Section 35701. It should be noted that truck prohibition could affect the justification for sound walls. See Section VI-C-2 of the this volume.

10. What additional measures would be required to reduce the noise level 50' from the roadway to 60 dBA?

The Caltrans/FHWA noise descriptor of Leq 62 dBA for the noisiest hour of the day is approximately equal to Ldn 60 dBA. Some locations adjacent to areas with depressed sections, wider right of ways, etc. are expected to be at or below Leq 62 dBA with the conditions and noise attenuation walls described in the DRAFT, Table VI-9. A truck ban would reduce vehicle noise by up to 4 decibels and this would bring the noise levels in most areas to 62 dBA or below if the noise wall heights proposed in the DRAFT are maintained.

11. What is the cost trade off between depressing the freeway and providing 14' walls for similar noise reductions?

Noise reduction calculations for the Project Alternative equate an at-grade profile with a 14' sound wall and a profile depressed 20' with an 8' sound wall. Either design would be expected to result in a 61 dBA Leq sound intensity at a receptor 20' outside the right of way, given the predicted 1990 ADT between Routes 87 and 101 without a ban on trucks.

The calculated cost of the 14' sound wall at 1985 costs is $1,901,000 per mile, versus, for the depressed roadway, the combined cost of $1,373,000 for an 8' (required) soundwall, $15,840,000 for retaining wall, $5,650,000 for excavation, or approximately $22,860,000 per mile, not including flood control costs or factors which do not vary.

12. What is the basis for the 67 dBA noise standard? If the interior noise standard of 55 dBA cannot be met when the ex-

terior level is 70 dBA, would added noise reduction measures be required to meet the more restrictive standard?

The FHWA requires that noise mitigation measures be considered when exterior noise levels in residential areas approach or exceed 67dBA. See Section VI-C-2 for descriptions of the mitigation required to meet FHWA and community criteria. The 67 dBA criteria level will enable people to converse outside in a normal voice, and studies have found that annoyance and complaints about traffic noise escalate when above this level.

Freeway noise mitigation measures are considered primarily to benefit outside use areas near the freeway. When exterior areas are at 67 dBA or less, interior areas will normally be below Leq 52 dBA and no further mitigation will be required. Interior noise levels are considered only at schools and at dwellings where there are no exterior use areas.

13. How much will noise increase along the streets connecting to the freeway? What mitigation will there be?

Route 85 will alter existing traffic patterns resulting in both increases and decreases in feeder traffic volumes and noise, depending upon location (see TRF-20). For example, on Los Gatos/Alamaden Road between Harwood and Union, the 1990 A.M. peak traffic flowing to the west is projected to increase by 75 to 100%. This will result in a maximum noise increase of between 2 and 4 dBA. On Branham Lane, 1990 A.M. easterly peak traffic is expected to decrease by about 50%, resulting in a decrease in traffic noise by 2 to 4 dBA (assuming trucks are not banned from Route 85). Westbound Branham traffic near the intersections of Camden, Carter, and Dent will experience 100 to 130% increases in volume. Noise increases should be between 2 and 5 dBA, maximum. A 5 dBA increase in noise is described as very noticeable, while a change less than 3 dBA is usually not detected on a day to day basis.

Noise mitigation measures will be undertaken, where necessary, along the Route 85 corridor and at local freeway interchanges. Noise mitigation measures along the feeder streets beyond the interchanges will become the

responsibility of the local jurisdictions. See also HSG-5.

14. How will you address the problem of noise at Branham High School if the highway is built above the ground?

This issue is considered in this document in Sections VI-C and VI-F, with discussion of Section 4(f) impacts. The freeway will be partially depressed at Branham High School, and sound walls will also be constructed as warranted. Additional wall height and screens may be considered during the design phase to reduce safety hazards present when the playing fields are in use.

15. What is the noise impact of elevated vs depressed vs ground level roadways?

The range of freeway elevation on the project profile is 0' to 20'+/-. There is an advantage to elevating or depressing a freeway, but it is not a cost effective measure to reduce noise impact. A 10' sound wall is as effective as elevating or depressing a freeway by 15' and is not as costly. Depression and elevation would be about equally effective for the homes immediately adjacent to the proposed freeway until the elevation difference exceeds 15', at which point a freeway on fill becomes noticeably quieter than a depressed freeway. For homes further away from the highway, the depressed freeway is considerably quieter than the elevated or ground level freeways under the same conditions.

16. Is a fully depressed freeway the most desirable from the standpoint of noise suppression for adjacent residents? If so, what is required to assure that the freeway is depressed to the maximum degree possible? What assurance does the citizenry have that the funds will be used to provide the safest and quietest freeway possible?

As indicated above and in the FINAL, the noise levels will be lower with a depressed freeway. Using depression as a mitigation measure for noise reduction is, however, a matter of cost effectiveness and engineering

competence. It is more cost effective to mitigate the noise level by construction of sound walls (see Questions E/N-11, E/N-15). The Traffic Authority has the responsibility to see that the available funds are spent in the most effective manner. See Section VI-C-2 for the noise mitigation policy for this project.

17. Why can the freeway be depressed through Saratoga Creek and not through Ross Creek and south of Camden?

None of the current design alternatives calls for freeway depression below Saratoga Creek. Caltrans avoids facility construction below streams and flood plains whenever possible. See the above question.

18. Can the freeway be put up without sound barriers if they run out of money?

No. Whatever portions of the freeway are constructed will be built with adequate sound walls where warranted by Caltrans and FHWA guidelines. See Section VI-C-2 in the FINAL.

19. What will be the noise impact of Route 85?

See Section VI-C-2 of the FINAL.

20. The proposed alternatives conflict with Saratoga's noise standards and Santa Clara County's noise laws; how is this to be reconciled?

Mitigation of noise impacts to the standards described in Caltrans Design Bulletin 58 and Federal Highway Program Manual 7-7-3 is assured. The status of further mitigation is described in the Noise Mitigation Plan, Section VI-C-2 of the FINAL. See also E/N-27.

The cities and counties have General Plans with noise elements containing noise goals and guidelines for various types of landuse. While it would be desireable to meet local noise goals, it is often not practical to do

so immediately adjacent to busy major streets and freeways.

21. The FINAL should discuss the many residences which would be affected by noise and vibration from the railroad relocation.

Railroad noise data can be found in the noise section of Chapter VI on page VI-57.

Along that reach of the railroad relocation, approximatley 3 roundtrip trains operate per week. These trains are typically 55 cars long and travel at a maximum speed of 25 miles per hour. This would provide a duration of approximately 3 minutes/train past a given point.

Data from previous Caltrans studies reveal that vibration damage from train passes most often occurs within 25 feet of the railroad track, while no damage would be expected at distances of 100 feet with typical Bay Area soils.

There are approximately 37 residences on the northerly side of the existing track which may currently be impacted by vibration from the train. After the relocation of the track, approximately 5000 feet long, to the south of its present alignment, approximately 62 residences, all on the south side of the track, and all of which are equal to or greater than 100 feet from the track, could experience train vibration.

Even at distances equal to or greater than 100 feet, vibration may be felt on the south side of the relocated tracks. (Those residences northerly of the relocated track will be buffered from potential rail vibration by the transportation facility). However, in order to minimize the vibration impacts of the relocated tracks various construction methods will be used. The use of continuously welded rail, deeper ballast, and elastomer pads (vibration dampening material) between the rail and the ties, will be utilized.

22. The eight remaining homes on Popejoy and Lawson Courts will be exposed to higher noise levels than currently exist. The residents take exception to the values on Table VI-9 for both the mitigated and unmitigated levels for the Branham area.

We contend that traffic levels on Branham will increase, producing greater sound levels than at the present time.

Table VI-9 shows a 24 hr. average Leq for the front yard of a home, Site N-5, on Branham Lane. This level is significantly higher than Popejoy Ct., and, as shown, will be dramatically reduced by the creation of an alternate route for vehicles along the 85 corridor. This projection is not based on the assumption that trucks will be prohibited from using Route 85. The traffic between Carter and Dent is projected to increase significantly on Branham if the preliminary on/off-ramp design is constructed, resulting in a probable increase in the noise level on Branham along that section. The corresponding noise level at Popejoy and Lawson will be lower than Branham but higher than the current level. Concerns of the residents and the City of San Jose have led to further studies of variations on the layout of the Camden Ave interchange. The ultimate layout will be included in the renegotiated Freeway Agreement between the state and the City of San Jose.

23. Will sound walls be erected on raised portions of on-ramps where cars can be viewed from backyards?

Soundwalls will not be constructed solely to screen view of on/off-ramps from the surrounding properties, but will be constructed when the federal standards for noise reduction warrant their use. Community walls may be erected in locations where the visual screening is desired. Criteria for community walls have not been established at this time, and are influenced by the funds available for this and other projects. See the Noise Mitigation Plan, Section VI-C-2.

24. Can the "alley" between the soundwall and right of way fence be blocked or the fence eliminated?

The placement of soundwalls and right of way fences is dependent upon several factors. The soundwall will be placed immediately inside the right of way when the freeway is not on an elevated profile and the terrain permits drainage away from the outside of the soundwall,

unless there is a concern that children could become trapped between fences and the soundwall, for example on the Guadalupe Project where a 3' opening was left between fences and soundwalls. The outer surface of the wall will have an attractive surface texture and may be painted to maintain the appearance of the neighborhood.

When the freeway is on fill or a bridge above the original ground, the soundwall will be built at the shoulder of the road and, when on fill, a fence will be placed near the right of way line. When surface water drains toward the roadway, however, and the soundwall would normally be at the right of way line, drainage facilities must be constructed to protect neighboring property from flooding. When no more than a simple ditch with occasional inlets is required, no fence will normally be provided; but, if facilities requiring maintenance or representing a safety hazard are required, a fence will then be constructed on the right of way line and the wall will be placed on the freeway side of the drainage structure.

25. What will be the noise impacts of Route 85 in Saratoga?

See Section VI-C-2 of the FINAL.

26. What are the economic impacts from noise level increases? What are effects on property values?

There are few studies on the impacts of noise from California highways. Previous studies have had difficulty quantifying results, and some paradoxical situations have not been adequately explained. Current freeway projects provide mitigation for noise impacts (see Table VI-11a) and deal with extraordinary impacts on properties on a case by case basis.
Also see H/N-5 and the introduction to the Right of Way section of this chapter.

27. How will noise level standards be guaranteed for residents along Route 85?

The Santa Clara County Traffic Authority has developed policy guidelines for soundwalls as part of its Strategic Plan. Soundwalls will generally be provided consistent with FHWA and Caltrans criteria. However, noise attenuation will be provided in school and residential areas whenever forecasted noise levels exceed 67 dBA, provided that proposed mitigation otherwise satisfies state and FHWA costs and decibel reduction criteria.

28. The construction of the Cottle Road on-ramp will result in significant noise impacts to the Santa Teresa medical office buildings. Can a sound wall be built to mitigate the noise impacts?

Caltrans conducted additional analysis of potential noise impacts at four locations at the Santa Teresa Medical Center, including medical office Building Two-North. Because patients are only housed at the main hospital, the federal noise criteria used was 72dBA; this is the exterior noise level permitted for businesses, according to FHWA regulations. The analysis showed that the projected exterior noise levels at these medical office buildings would be less than 72dBA; the exterior noise level at Two-North would be 70dBA. Therefore, consistent with federal criteria, no sound mitigation would be required. Actual exterior noise levels would probably be lower than these projected levels, because (1) the analysis assumed that the existing medical center site is an open grassy field, with no existing noise attenuation, such as trees; and (2) the entrance ramp location at Cottle road has now been revised; the on-ramp is now located further away from the medical office buildings which would result in lower exterior noise levels. See also R/W-16.

29. The DRAFT is deficient in that:

- Projected noise levels were used.
- Noise readings should be taken at existing configurations.
- The readings should vary by day, time, and distance.
- The data should be delineated in graphic and tabular form.

- Various types of mitigation should be explored.

The noise analysis methodology was adopted in consideration of the particularities of the Route 85 corridor. The technical study Noise Impact Analysis for Route 85 prepared by the Environmental Analysis Branch of Caltrans contains the detailed tabulation of the noise investigations for this project. This report may be reviewed at the Public Information Office of Caltrans in San Francisco.

Projected noise levels were used since a great majority of the West Valley Corridor does not have any type of public transportation facility in its unoccupied area.

Generally speaking there is only one configuration -- flat. Noise level measurements were taken throughout the unoccupied corridor (Section VI-C-2). The noise readings in the corridor were taken on various days and are tabulated extensively in the Noise Impact Analysis. All of the noise measurements were taken adjacent to the receptors.

The various distances to a non-existing facility in the corridor are irrelevant. The proximity of a heavily traveled local street, paralleling or crossing the corridor, would be a factor. The data were in both tabular and graphic plan form with respect to the various alternatives. These are included in the Noise Impact Analysis. Since the corridor is relatively narrow, it was agreed that the sound barriers would have to be soundwalls or a combination of retaining wall/soundwall.

30. Table VI-9 does not show a) depressed sections with walls, b) walls higher than 10', c) walls on earth berms.

Table 2 of the Noise Impact Analysis contains these data by alternative, right of way width, and cut/fill condition. This report is available for inspection at the Public Information Office. A Saratoga Design Variation table is included in this FINAL (Section VI-C-2). Placing the soundwalls on earthen berms would require a wider right of way than is available. Due to the restriction on the width of the corridor it was decided that sound barriers would be sound walls.

31. The FINAL should address increased noise levels resulting from increased traffic on the existing portion of Route 85. The feasibility of constructing soundwalls along appropriate portions of the existing Route 85 must be discussed.

These impacts will be addressed as part of the Route 85 median widening study. See TRF-17.

32. The FINAL should differentiate between noise impacts from the LRT and from the freeway alternatives.

Projected noise exposure levels from the LRT operations vary depending upon vehicle speed, number of cars, per train passing by, and the design of the trackway. Table VI-10 of the DRAFT lists the typical unmitigated peak hour noise levels of all traffic alternatives. The table shows that the average peak hour LRT noise level is less than the freeway alternatives.

33. Where did Caltrans take measurements for their predictions of a possible increase is sound level of 30dB? At what time of day? At what physical conditions?

The technical report Noise Impact Analysis for Route 85 which was prepared by Caltrans, describes the methods and conditions of the field measurements of the existing noise levels and the procedure for predicting future sound levels. This report is available for inspection at Caltrans Public Information Office, 3333 California St, San Francisco, Ca. Also see Table VI-10 in Chapter VI, Site N-8.

34. Has Caltrans compared the health costs attendant to the predicted increase in noise level to the predicted cost benefits of installing the freeway? If not, why?

The EPA has published this description of the difficulty of determining health effects of noise: "Person health includes a wide variety of conditions and mental states. The complexity of the human body is great, and coupled with the complexity of human mental function, it is extremely difficult to quantify the "health effects" in the wake of stimulation by noise. Individual variations

from day to day in susceptibility to physical and mental health conditions add a further complication factor.

Mental set, orientation, personality, general health, and a myriad of other personal factors confound the attempt to fully and comprehensively recognize all of the ramifications of the effect of noise on general health and mental health. In all, there is relatively little known about the effects of noise upon general health and mental health."

Caltrans has not identified any health effects peculiar to the nature of noise from freeways, roads and streets. (Public Health and Welfare Criteria for Noise)

7. ENVIRONMENTAL - WATER

1. The magnitude of pollution of the aquifers caused by the crossing of creeks and percolation ponds by Route 85 must be investigated.

Roadway pollutants from Route 85 will represent a very small percentage of the total highway related runoff in the Santa Clara Valley into surface and subsurface drainages. While some approximations can be made of the magnitude of the various roadway pollutants, there is no formal FHWA method for determining roadway pollutant impacts on general receiving waters and their related aquifers. The Regional Water Quality Control Board has made previous and ongoing studies related to impacts of roadway runoff on receiving waters and has had difficulty in quantifying results.

2. Will crossing over creeks, which are the primary recharge areas for the valley's aquifers, and over percolation ponds cause lead, cadmium, nickel, zinc and polycyclic organics to percolate into the aquifers?

All structures overcrossing creeks and percolation ponds will have gutters and drainage systems which will discharge into the existing drainage systems which serve all local roads and streets and which discharge into local creeks. The creeks themselves will receive the pollutants at the end points of the storm sewer systems; however the percolation ponds will be partially protected by the confining effect of the barriers and/or walls on the highway bridges. The net effect of routing through traffic on a freeway rather that local arterials should be a reduction in pollutants produced.

3. The issue of possible impact on water quality due to roadway runoff into the nearby creeks should be addressed in the FINAL. Santa Clara Valley Water District facilities may be potentially affected by the project. Pollutants entering creeks from paved acreage because of oil and fuel from vehicles may be substantial. Details of the proposed crossings of the district facilities and proposed mitigation measures should be made available.

See above response.

4. The DRAFT does not outline specific mitigation measures for wetlands losses and riparian habitat losses.

   The FINAL contains details in Section VI-B-4.

5. The FINAL should discuss roadway pollutants.

   These concerns are covered in Section VI-B-3-b, Water Quality, in the Final.

6. The FINAL should address maintenance of water quality and protection of beneficial uses of the affected streams.

   These concerns are covered in Section VI-B-4, Biotic Community Impacts, and Section VI-B-3-b, Water Quality, of the Final.

7. The FINAL should address the interception of ground water contamination plumes.

   The proposed freeway alignment passes by three currently known areas of ground water contamination. However, the freeway profile is on fill in these areas and there will be no ground water interception.

   Coordination with the Regional Water Quality Control Board will be maintained during the design phases of any of the depressed sections of the freeway. Ground water sampling and testing will be done during soils and foundations investigations of these areas.

   Also see section VI-B-3-d.

8. FLOODING

1. Fills of less than one acre, which the DRAFT says could be placed under blanket permit authority, could substantially impact upstream areas, causing many residential areas now free of flooding to flood and many which experience periodic flooding to be subject to additional hazard. A detailed Location Hydraulic Study has been prepared for this project and is available for inspection at Caltrans offices.

   None of the proposed Route 85 drainage facilities will cause any additional flooding in the Route 85 corridor.

2. The DRAFT states that Route 85 would be the only roadway open to traffic between the Santa Cruz Mountains and Route 280 in the event of a 100 year flood. Route 17 from the mountains to Route 280 and Route 280 to the north would not be subject to flooding.

   Agreed. Route 85 would be the only facility open which would allow travel in a northwest/southeast direction during such a flood.

3. Explain the comment on the 100 year flood. What do people do now to cross the valley during a 100 year flood? Would the comment be true after flood control work is done?

   Saratoga has not experienced a 100 year flood event since the establishment of the community. Based on floodplain analysis for the area, there would be no east/west route across the flooding west of Route 17 between the Santa Cruz Mountains and Route 280. This comment would not be true if the flood control project required to eliminate the Calabazas Creek floodplain were done by the proper agency. This is the project which would be required to construct the Saratoga Design Variation. See Figure VI-2 for the location of this floodplain.

4. The DRAFT refers to an area of flooding in the vicinity of Wedgewood Ave. in Los Gatos which is not associated with any watercourse. The East Branch of Smith Creek is the source of this flooding. The Santa Clara Valley Water District maps referred to in the DRAFT do not show the creek in this area

as it is not a District facility but under local city jurisdiction.

Comment noted. A change has been made in the text of the report and on the graphic.

5. Detail the scope and costs of the flood control measures required on Calabazas Creek for the Saratoga Design Variation. It has been suggested that major flood control work will be undertaken by the local flood control agency which will reduce the cost of this design variation. Please comment.

In order to depress the Route 85 profile through the City of Saratoga, the Calabazas Creek floodplain must be eliminated. This is necessary to protect the depressed freeway from flooding annually. This flood control work should be completed prior to the construction of the depressed section and will entail channelizing Calabazas Creek from a mile south of the Southern Pacific Railroad right of way to Route 280. The Santa Clara Valley Water District will be responsible for preparing the necessary environmental documents, designing the project and administering the construction. The cost estimate has increased to approximately $10M for eliminating the floodplain. This flood control work would be classified as "additional mitigation" and would not reduce the cost of the Saratoga Design Variation.

6. The FINAL should clarify that the Route 85 facility will be designed so that flood water is accepted and passed without increasing the depth or width of the flood.

This is implicitly addressed in Table VI-3, Floodplain Encroachment Matrix. There will be no increase in the depth or width of floodwaters as a result of this project.

7. How will the proposed flood control improvements affect the neighborhood parks in the City of San Jose?

FLOODING

The impacts of the flood control facilities on the neighborhoods, parks, and other land uses, will be determined during the Environmental process of the Calabazas Creek flood control work by the Santa Clara Valley Water District. The impacts on parks are not yet known well enough to begin planning mitigation measures.

9. GENERAL

1. Can Caltrans provide baseline interchange designs and indicate at which locations each might be applied, keeping in mind that the interchanges will be constrained to lie within the existing right of way?

   Yes. The interchange designs and locations, including the possible deletion of some connections studied in the FINAL, will be a part of the Freeway Agreement negotiations with each local jurisdiction. For these discussions, general and specific interchange designs will be proposed for each connection to the freeway. The limitation of staying within right of way (R/W) lines drawn up to twenty years past is a significant influence on the design variations possible in some areas. More R/W may be needed at interchange areas, depending on the geometric configuration agreed upon during Freeway Agreement negotiations. Approximately 45% of the required right of way has yet to be acquired by the State; in these areas more flexibility is possible to satisfy current and future conditions.

2. What is the extent of commitment (quantitatively) of Caltrans to the mitigation measures as part of the design specifications? Is the cost included in the estimates? If not, what is the estimate of these costs? Which independent agency will be hired to monitor proper implementation of these measures?

   The elements of required mitigation, as described in Section I-D, SCL-85 FEIS Mitigation Measures, will be constructed and/or carried out. These costs are calculated as an element of the construction costs in Section V. The items described as Additional Community Mitigation will be constructed with local monies as agreed among the various communities and agencies involved. These potential costs are not included in the prepared estimates. No independent agency will be hired to monitor these measures. The many involved agencies, FHWA, Caltrans, COE, CDFG, USFWS, SCVWD, and others, will provide their own monitoring of the entire project or the elements and features for which they have responsibility.

3. Is it necessary to elevate a new freeway between Prospect and Saratoga-Sunnyvale Road?

Both the project profile and the Saratoga Design Variation (SDV) profile propose that the freeway itself pass over Calabazas Creek, and Saratoga-Sunnyvale Road immediately beyond. The depression of the SDV, as requested by the City of Saratoga, allows the freeway to pass under a portion of the Calabazas Creek floodplain. The flood control project required to allow the freeway to be placed under Calabazas Creek and the expense it would involve are the greatest difficulties with that design. The City of San Jose has not requested that the option of putting the freeway under Calabazas Creek be studied, nor a design which would put the freeway under Saratoga-Sunnyvale Road.

4. Why were the bicycle facilities originally planned for the corridor, deleted from the current proposal?

Separate bicycle facilities were included in a few of the preliminary alternative designs. However, the restricted right of way width available for the Project Alternative, including HOV lanes and transit provision (46´ median), prohibits freeway features in addition to the necessary sound walls, retaining walls, cut/fill slopes, and landscaping.

Caltrans normally does not include bike paths on the shoulder of urban freeways when alternate street routes are available. A bike plan will be developed among Caltrans, the affected communities, and interested citizens to ensure that adequate street access from one end of the corridor to the other is available to bicyclists. Additionally, Caltrans is responsible for replacing existing bike crossings severed by the freeway (e.g. Los Gatos Creek/ 85 crossing) and providing pedestrian and bicycle over-crossings at selected locations along the corridor (see HWF-1).

5. The DRAFT is deficient in not providing bicycle transportation as a viable mode in each alternative. The need for a separate bicycle path along or within the actual Route 85 right of way is reaffirmed by a number of schools, parks, libraries, wineries, hospitals, etc., next to the corridor.

The planned bicycle facilities for the Route 85 project are described in Section VI-H-6 of this volume. See also the above question.

6. Why were no provisions for reasonable access to Blue Hills School and other elementary schools provided in any alternative? What means for alleviating the impact of this loss of access to schools that may be implemented are being considered?

Pedestrian access will be provided for Blue Hills School. Please see the response to HWY-1.

7. What benefits are anticipated for the users of parks and libraries from the implementation of any of the Route 85 alternatives? On the balance, are the impacts positive or negative?

Increased access to parks and libraries is the primary benefit of transportation improvements in the Route 85 corridor. Adverse impacts on the park facilities are delineated in Section VI and Section VIII, Unavoidable Adverse Environmental Effects. Increased noise and shadows, loss of privacy and perhaps disturbance of wildlife can be expected in the parks in the immediate vicinity of the freeway. The effects cannot be quantified in a manner to produce a balance sheet which considers the entire range of park users. The impacts on libraries seem to be, on the balance, positive.

8. What justification exists for the selection of the Park and Ride lot locations? What alternative locations were considered and what trade-off criteria, including environmental impacts, were considered in arriving at the locations presented? How would property be acquired for the new lots? How many homes and businesses displaced? Why are the lots so small?

Ridesharing and Long Range Transit are major TCM goals to reduce carbon monoxide and other pollutants due to traffic congestion. For Route 85, these goals are promoted by a 46' median for transit, HOV lanes and Park

and Ride lots (most of which are associated with future transit stations). Although the precise locations for Park and Ride lots remain to be determined, several examples of possible locations are presented in Section VI-H-4-d. Among the principal selection criteria are the following: 1) convenient access to and from freeway; 2) adequate lot size for potential demand; and 3) user security.

Current plans call for locating Park and Ride lots within existing state owned right of way at some intersections. See Section VI-H. The exact lot size will be determined during final design.

9. If an 8 lane freeway is chosen as the preferred alternative, a design modification should be made to the Guadalupe Corridor section to have the same number of lanes from Routes 87 to 101.

Design of the Guadalupe Corridor overlap section is being coordinated to unify the facility as a 6 lane freeway with commuter lanes (the Project Alternative) on both portions.

10. A "Reciprocating Shuttle, Transfer Transitway" is suggested as a better alternative than any of those proposed and should be considered.

Comment noted. The Policy Advisory Board decided which alternatives would be studied for this report. The suggested facility seems more appropriate for community for which the road network can be designed with the shuttle system in mind, rather than a situation where the system must be integrated into a developed community.

11. Is it necessary to provide a barrier between the LRT and freeway and a buffer zone between the commute lane and freeway? Is it necessary to provide separate approaches and connections to the cross streets for the HOV/Transitway?

Yes, a barrier must be provided between the LRT and freeway lanes for safety reasons, for example to reduce

the chance of, for example, a car/transit collision which could cost many lives.

A buffer lane is not required when an HOV lane is added to an existing roadway, but is appropriate/required to separate the commuter lane from the mixed traffic lanes on newly constructed freeways.

The separate connections for HOV/transitway users, when properly designed, would provide safety and a great increase in efficiency. This should tend to increase usage, thereby reducing the duration of congestion in the mixed flow lanes during peak hours.

12. Is there a legal way to increase the number of riders required for a vehicle to be classified as a HOV so future congestion of HOV lanes can be reduced?

Yes, local authorities may request Caltrans to increase the occupancy factors when warranted by increased traffic on the Route 85.

13. What would be the effect of placing HOV lanes on the outside, rather than the inside, of the mixed flow lanes of a freeway? Would this eliminate the need for stations, or could they be placed away from the corridor?

Experience has shown that placing HOV lanes on the outside of mixed flow lanes would cause an increase in accidents, safety problems, and signing problems. HOV lanes are designed for a smooth flow of through traffic with minimal use of interchanges. This kind of traffic flow is best accomplished in the inside lane. In general, there would be a great many operational difficulties and significant losses in the advantages HOV users weigh against the advantages of traveling alone. Some other jurisdictions have attempted to create HOV lanes at minimum cost by utilizing existing freeway shoulders and have found greatly increased rates of minor accidents and driver resistance. Santa Clara County contains some examples of HOV lanes operating on the outside lane of expressways, utilizing the traffic signal system to promote orderly entry and exit, and safe operation of the system.

The location of transit stations in the median would be an efficient use of very limited right of way but also

creates operational problems. All structures on the Route 85 project will be planned to be compatible with some form of passenger access in the median. Placing HOV lanes on the outside would not eliminate the need for stations, nor would it be more practical to locate stations away from the corridor, as that would involve great right of way costs and more complicated access for transit vehicles.

14. If trucks were banned on Route 85, would that diminish the intensity of demand for depression of the profile and thus save some money?

Probably not, but see E/N-9.

15. The DRAFT needs more specific design information to facilitate making informed decisions about the alternatives. For example, interchange designs and dimensions, bridge locations, heights and widths, bike path locations, soundwall location and height, pedestrian crossings, etc.

The requested data is developed at various stages in the project design process and the level of detail requested is not available at this time. The interchange dimensions are generally limited by the right of way lines established many years ago, but the project is just moving from the planning to the design stage and the solutions to many technical layout difficulties are in the early stage of development. Except for a few specific locations, every attempt will be made to avoid designs requiring more acreage. The resulting designs will be throughly discussed during the negotiations for the new Freeway Agreements. Bridge locations are indicated on Table V-3, but exact lengths and heights have been subject to change as the project profile has been developed. The exact vertical alignment will be determined in the final design process.

Bicycle facilities are described in Section VI-H-6, and a system of routes paralleling the corridor will be developed during the design process in answer to the mandate from the PAB. The required soundwalls and pedestrian facilities are described in Section VI, but the decisions to provide additional facilities to reduce impacts further will be made at a later stage.

16. The freeway alternatives bring commute traffic directly through residential areas in complete contradiction to the California Urban Strategy land use priorities. Therefore freeway alternatives do not conform to the County General Plan.

The Land Use Plan and how it relates to the Route 85 study is detailed on Section VI-G-3 of the FINAL.

17. Please comment on the effects that construction of proper interchanges on Route 280 at Lawrence and San Tomas Expressways might have on the Route 85 corridor.

Because there is little likelihood that San Tomas and Lawrence Expressways will be greatly modified, no significant benefits are to be expected for Route 85 in the foreseeable future. Geometric constraints prohibit an interchange at San Tomas Expressway as long as the connections from Route 280 to Saratoga Road and Winchester Boulevard remain. The current Route 280 widening project, scheduled for construction beginning in 1987, will not modify the ramps at Lawrence Expressway, however, consideration is being given to a separate project to widening several of those ramps to two lanes and adding metering systems in the future. These steps will be taken if studies indicate that smoother flow on Route 280 will result. The same physical constraints which influenced the original design of that interchange still prevent any significant revision of the layout.

18. When and approximately where will construction begin?

This large project will be divided into many smaller construction projects for economic and logistic purposes. The first project in the construction stage is presently unknown; however, construction of the Guadalupe LRT from Route 87 to Miyuki Drive will probably not be completed before construction of Route 85 begins on that section. Concurrent construction of the two facilities will have some advantages. See Section V-B-6 of the FINAL.

19. It has been suggested that soundwalls and landscaping be the first order of work on any section of the project to mitigate

construction impacts. If this is not possible, what will be the first phase of each contract?

Early construction of soundwalls and community walls is generally quite desirable from the contractors' viewpoint, as well as that of the state and the neighbors. Where fills are required to support the roadway and walls, the earthwork must be placed first. Landscaping, on the other hand, is usually left until after major construction has been completed because of the risk to plants and irrigation systems during construction. Construction of flood control facilities, at-grade overcrossings, abutment fills, and major cuts and fills can be expected to be among the earliest phases of each project.

20. Why can't trees and shrubs be planted now for abutting property owners?

Landscaping will be provided as soon as the construction procedures no longer endanger the new plants. A major project of this type is divided into many smaller contracts built over a period of several years, so it is impossible to anticipate, at this stage, when landscaping will be possible in any given area.

21. How can we protect swimming pools and solar water heating systems from the dust generated by construction?

Dust will be generated primarily by dirt hauling operations early in each construction contract. Caltrans has detailed specifications requiring contractors to control dust inside and outside the right of way by watering, dust palliatives, etc. Contractors must also comply with all air pollution control rules, regulations, ordinances and statutes. The contractors are legally responsible for any damage due to their operations. Normal pool and solar collector cleaning operations should be sufficient even during highway construction.

22. Could the power lines between Quito Road and Saratoga Avenue be placed underground? If not, would the current tower design be used or could a less objectionable design be found?

Either option would be possible from an engineering standpoint. Placing the relocated lines on tubular steel towers is feasible and is a possibility for PG&E to consider. Underground line placement, according to PG&E, would be excessively expensive for such a short section of the transmission line. It would require two transition stations, each requiring one to two acres of land. It would also cost approximately $6 to $10 million to construct.

23. What impact on the profile and alignment would result from the closing of the Paul Masson railroad spur in the summer of 1986? Is it not best to have the railroad on one side, the PG&E lines on the other and the highway in the middle between Saratoga Avenue and Quito Road? Is it possible to combine the LRT and trains on the same tracks where the corridor is adjacent to the railroad?

Abandonment of the Paul Masson Champagnery will not affect the alignment of Route 85, nor the relative locations of the railroad, highway and power lines. If an LRT is to be built at a later date it will probably be aligned along the median of the freeway constructed by this project. Sharing the existing track or alignment with the railroad may not be an option for the LRT for technical and legal reasons; however, both the railroad and the quarry which it serves have recently changed ownership, so future conditions may allow further consideration of the possibility.

24. What is the width of the 18 mile corridor as studied?

The study could not be confined to specific limits such as the 200′ right of way width. For instance, the traffic analysis spreads over the entire valley . Noise, on the other hand, has been studied primarily within a few hundred feet of the right of way.

25. Why is access control necessary on the freeway through Saratoga?

Total access control is the distinguishing feature of freeways compared with all other roads. The limited access promotes travel in the same direction at approximately the same speed. Vehicles entering the traveled way at any point other than the interchanges would reduce speed, capacity, and safety.

26. How are the Guadalupe Corridor project and Route 85 being coordinated? Of particular interest are coordination of design and contract details and use of the report, "Potential Mitigation Measures for the Measure 'A' Impacts on the Guadalupe Light Rail System" as a basis for impact analysis and project planning.

The Guadalupe Corridor/Route 85 plans are coordinated through the Santa Clara County Traffic Authority Board and the Joint Powers Board of the Guadalupe Corridor. For the overlap section both boards must approve major actions. Since some members serve on both boards, there is considerable familiarity with both projects. The staffs of both projects are working together to assess impacts and incorporate many of the recommended mitigation measures into the project design. See TRN-2, TRN-6, TRN-34 and HWF-30 for further discussion of impacts and mitigation for the Guadalupe Corridor project.

27. Would a community such as Saratoga have more influence in choosing and building the facility than neighborhood groups such as Cambrian Park?

Yes. The Policy Advisory Board and the Technical Advisory Committee contained representatives from the governments of all the charter and general law cities and towns directly impacted by the Route 85 corridor project. These committees made the essential early decisions about the nature of the facility to be built in the Route 85 corridor. In addition, each city and town on the corridor will participate in negotiations for new Freeway Agreements with the state. Neighborhood groups

are generally restricted to unofficial contacts with Caltrans, local transportation agencies and the elected officials of their respective cities and towns.

28. Will Narvaez Avenue be open across the previous Southern Pacific right of way for north/south traffic when Cottle Road, Snell Avenue, Camden Avenue, Pearl Avenue, and Almaden Expressway are closed during construction?

Construction of facilities within the Route 85 Corridor will be staged to interfere as little as possible with local traffic patterns. Detours and alternate routes of the shortest possible length for emergency vehicles and local traffic will be provided. It is not anticipated that a Narvaez Avenue extension will be necessary.

29. When is the appropriate time to give written input and pester public officials about project profile, not alternatives?

The public is urged to present to their elected representatives their concerns about the proposed profiles before the Freeway Agreements are re-negotiated between the local jurisdiction and the state. Contacts with the Public Works or Engineering Departments of the various community governments will be necessary to determine when those negotiations will be taking place, and the profile designs under active consideration at any point. Presentations made directly to Caltrans will also be reviewed and considered during negotiations. Public hearings will be held in most cities to enable residents to be informed about and express reactions to the Freeway Agreements.

30. Which is more important: serving transportation for all the community or individual home ownership/moving people out?

There is no absolute answer to this question. The individual sacrifice and discomfort of each homeowner within the right of way results from a project which ultimately benefits many more individuals using the freeway. In cases such as this, the "greatest good for the greatest number" philosophy often prevails.

31. Why didn't Caltrans publish notices of meetings more often?

Notices for all public meetings were widely published in accordance with provisions of the National Environment Policy Act and the California Environmental Quality Act. See Table XI-2 of the this section for the list of public meetings.

32. Why did Caltrans have literature supporting Route 85 and none to the contrary?

In December, 1982, Caltrans was specifically directed by local and regional agencies in Santa Clara County to investigate and develop transportation alternatives for the Route 85 (West Valley) Corridor. The Caltrans response required distributing materials describing the alternatives developed and their capabilities. Publishing material specifically supporting the No Project Alternative would have been as inappropriate as publishing material supporting a specific alternative. The DRAFT and FINAL EIS contain discussion of the No Project Alternative. Persons and groups opposing Route 85 provided comments to the public hearings and in writing which are incorporated as part of this FINAL EIS.

33. Is there other land for Route 85 outside Saratoga?

Because the majority of the existing corridor has been held out of development for many years, it is the most reasonable and prudent route available for this facility. Saratoga has developed over the years in other areas which were once alternate route possibilities. The residents of these areas will be served by the new highway and will recognize that use of the current corridor will result in minimal displacement of county residents.

34. Why are two forms of transportation (freeway and LRT) proposed in one alternative? Aren't the two systems competing?

When properly designed and sized, the two modes will complement each other, and individuals will have the op-

portunity to choose which of the two provides the most advantages for a given trip. The subsidies required to support the LRT system include a large portion contributed, through general taxes and diversion of highway funds, by persons who are primarily freeway users. Their gain is a certain degree of improvement in the traffic conditions on the highways they choose to drive.

35. Please comment on the feasibility of a covered freeway design in Saratoga.

The cost of this variation would be prohibitive. It costs approximately $110 to $170 million per mile, depending on the depth of the cut and geological conditions, to depress and cover the freeway. To "cut and cover" the Route 85 corridor through Saratoga, a distance of about 2.5 miles, would cost approximately $340 million over the cost of the project profile shown in the FINAL. Also see GEN-52.

36. How much will the work commute time be shortened?

When an existing roadway is rerouted, widened, or otherwise changed, it is possible to calculate commute time savings. To produce a meaningful estimate for a new route is not possible. The time savings the new highway will offer each commuter or carpool is primarily dependent on the proximity of home and worksite to the freeway, and comparing the extent of freeway driving to local roadway or other freeway usage. Also commuters who travel in the northwest/southeast directions parallel to the portion of Route 85 west of Route 17 will enjoy the reduction in distance traveled in comparison to the "stairstep" combination of north/south and east/west routes which must now be used, and/or a reduction in the commute traffic on those existing roads.

37. How much will the commute time increase during construction?

In contrast to other Measure "A" projects, the construction of Route 85 will primarily occur in an unoccupied corridor without interfering with commute traffic. Some impact will be unavoidable during the construction

of new interchanges at Routes 101, 87, 17, and 280 as a variety of temporary traffic handling facilities will be required. At local street crossings some temporary detours may be required when bridges are under construction and dirt hauling equipment is in operation; however, interference with commute traffic will be minimized by careful planning by the contractors and Caltrans. In general, we can expect relatively minor impacts on commuters and in localized areas, not along the major commuter routes.

38. Describe the decision procedure. Who makes the decisions and how can they be appealed?

The final decision as to what is to be constructed in the Route 85 Transportation Corridor is made by Caltrans (California Department of Transportation).

Caltrans, by legislative law (statutes), is required to provide for the transportation needs of the people of California by implementing and maintaining adequate, safe and efficient transportation facilities and services. In the case of the Route 85 Transportation Corridor, the need for a transportation facility has long been established and reaffirmed many times, most recently by the passage of the Measure "A" ballot proposition in 1984, providing local funds for a facility, and the unanimous recommendation of a 6-lane freeway alternative to Caltrans by the Route 85 Policy Advisory Board.

Caltrans has conducted an extensive study, along with the local jurisdictions, to gather public input on this project. A comprehensive public availability phase has been carried out with numerous public meetings, workshops, council meetings and public hearings evaluating many alternatives for the corridor. After careful consideration of the substantial public input received and the local jurisdictions' unanimous recommendation, Caltrans made the decision and prepared the Final Environmental Impact Statement (FEIS) on the selected Project Alternative.

This document is subject to the approval of other state and federal agencies along with local, state, and federal commitment of funds and the permits allowing construction to begin.

Following federal approval of the FEIS, there is a 30 day public review availability period in which any appeals or challenges may be made concerning the environmental process.

39. Capital and operating costs of privately owned automobiles should be factored into the costs for each highway alternative.

The capital and operating costs of privately owned automobiles are the same regardless of alternatives. Including operating costs in the cost of each highway alternative would not provide any additional comparative information. The "cost effectiveness" of each alternative is a better measure than total cost. Cost effectiveness data is included in Section XIV of the DRAFT.

40. Consider the relationship of this project to the San Jose project to widen Route 82.

A discussion of that project has been added to Section IV-D of the document.

41. The most disruptive construction should take place during the summer school vacation.

The scale of construction is so great that it is not practical to restrict any operation to the mid-summer months. The contractors are obligated to minimize noise, dust, safety hazards, traffic disruptions, etc., while their forces are at work. The Caltrans engineer in charge of each project will monitor all operations to assure that those obligations are met. And, as is noted in this document, Section VI-H-5 & 6 and J-6, provisions will be made for continued, safe passage across the corridor. Soundwall construction will be among the first construction goals along those sections of the freeway

which are depressed, for example between Branham High School and Athenour School.

42. What will be the impacts expected at railroad crossings on and about the Route 85 corridor vis-a-vis accidents, traffic, etc.? What mitigation will be utilized?

The railroad crossings of the arterials and local streets in Saratoga, Campbell and Los Gatos will not be moved or modified except at Saratoga Avenue. The project profile proposes that the railroad and freeway be grade separated from Saratoga Ave. in contrast to the present crossing which is at grade. This will prevent any new safety hazards from arising.

An alternate design which has been studied and rejected included the reconstruction of the railroad crossing approximately 200' southwest of its present location. This design includes a three lane eastbound exit ramp from Route 85, which would provide sufficient storage for vehicles in the worst case condition: a train closing Saratoga Avenue during the P.M. peak hour. No increased hazards to through traffic due to the relocation of the crossing or increased traffic volumes on Saratoga Avenue was foreseen.

Traffic projections at the other railroad crossings indicate decreases or no significant change at all locations except Quito Road, where the increase of 20% +/- is not expected to present any new or unforeseen problems. The movement of equipment along this branch is approximately 6 trains per week, usually during the P.M. peak traffic. The industrial nature of the usage of this line and the fact that it services only one patron and no through traffic would indicate a possibility of negotiations between the local communities and the new owners of the quarry and railroad to reschedule the trains to avoid peak traffic.

43. Why was a corridor chosen between Athenour and Branham Schools?

The schools were built after the corridor was chosen. The location of State Route 85 was adopted in 1956 and 1957 by what was then the California Highway Commission.

The setting at that time consisted of open fields, vineyards, orchards and a sparse population. The property around the schools was privately held and was later purchased for the construction of Athenour and Branham Schools in 1965-1966. The schools were built with full knowledge that they were separated by the adopted Route 85 Corridor; that the state was purchasing right of way for the Route; and that build out of properties available for alternate routes in the area was well underway. There is now no prudent and feasible alternative to using the adopted alignment in that vicinity. See Section VI-F-1 for more discussion of the question.

44. The DRAFT shows that many alternatives will not satisfy peak demands, but does not show how this will impact drivers. If the freeway is built too narrow, what will be the impact on streets and arterials, as well as air pollution?

Local street congestion, air quality and Route 85 level of service will all decrease with increasing Route 85 congestion. The exact degree of degradation is dependent upon many variables outside the scope of this report. Available data on the various alternatives can be used as a general guide.

45. How will the cities know about Caltrans' construction schedule so that they can inform the citizens of work progress?

While construction projects are underway, the Caltrans Construction Branch will regularly provide the Public Information Office with schedules for lane closures, night operations, establishment of detours, etc. Local governments and the press will be encouraged to track these conditions so commuters and emergency services can avoid road closures. In addition, advance signing for street closures and detours will be provided.

46. The DRAFT (pages VI-111,113, and 114) should be corrected to show that there will be no closure of Glen Brae Drive either short term or long term.

Agreed. The appropriate pages of the text have been revised. It should be noted that pedestrians and bicy-

clists can presently use Glen Brae Drive to cross the unconstructed Route 85 to Cox Avenue. Therefore, its closure has been reflected in the Bicycle and Pedestrian Routes sections of this volume, Sections VI-H-6 and 7.

47. Is Caltrans proposing to widen Blossom Hill Road to make it adequate for a bicycle route?

Caltrans and others will produce a bicycle plan with specific routing recommendations (see GEN-4). No specific routing recommendations for widening Blossom Hill Road have been made at this time. If widening Blossom Hill Road is recommended, then the primary financial responsibility would go to the Town of Los Gatos and the City of San Jose. The implementation of any recommendation from the plan is dependent upon land ownership and legal responsibilities among the affected communities.

48. Why is there inconsistency in the shoulder widths for various alternatives (page I-6)?

Currently FHWA standards require a minimum 10' shoulder width; however, Caltrans can request an exception if the right of way is restricted. The right of way requirements for alternatives studied in the DRAFT vary depending on the lane and HOV requirements. The project alternative is designed for two 8' inside shoulders and a 30' median, for a total of 46', for a possible future mass transportation facility.

49. Clarify statement on page III-4, paragraph 2 regarding morning peak hour ridership.

This statement in Section III-A has been corrected in the FINAL.

50. Why don't we use Seattle's express lanes design on existing freeways an the new Route 85 to help move our traffic?

The highway designers of the Washington Department of Transportation have initiated several creative and unu-

sual (on the west coast) measures to enhance freeway operation in the Seattle area. Their problems are predominantly related to great numbers of commuters destined for a compact central business district and a few major employers, somewhat similar to the city of San Francisco. Similar, also, in that the commuters must use a few bridges which cannot be readily expanded for traffic growth. These measures are not quite as well suited for Santa Clara Valley, with its quite different geographical pattern.

The express lane system occupies the central portions of Interstates 5 and (soon) 405 north and southeast of Seattle. The 2-4 lanes are physically separated from the outer lanes so that they can be reversed twice each day without creating hazards for contra-commute vehicles. These lanes are provided with dedicated on- and off-ramps with no opportunities for entrance and exit to the standard lanes. Recently an HOV lane was added to the express lanes (which were constructed with the original I-5, not converted from previously existing standard lanes).

In operation, the express lanes are open for traffic flowing away from the business district from approximately noon to 6 AM; then the lanes are reversed to allow traffic to flow toward the city until noon. Due to the recent construction of an additional lane, HOV lanes which operate many miles beyond the express lanes now continue <u>within</u> the express lanes, thus saving users additional time when compared to the standard lanes.

A typical morning traffic count, before the new express HOV lane opened, indicated 7800 vehicle used the 4 standard southbound lanes at the Lake Washington Ship Canal Bridge, 6000 vehicles (including high occupancy vehicles) use the express lanes southbound, and 5000 vehicles traveled northbound in the 4 standard lanes. This illustrates the pattern where reversible express lanes can be useful: a 73% / 27% split between peak and off peak directions in vehicle usage, an even greater split in person usage, considering the greater average vehicle occupancy southbound.

The Bus/HOV transitway of alternatives 6 and 7 studied in the DRAFT would have operated similarly to the express lanes in that it would be reversible and have some entrances and exits separate from the standard lanes. Traffic projections for 1990 indicate that it would op-

erate efficiently in the northwest direction in the A.M. and reverse in the P.M. along the length of Route 85 west of Route 87. The 2010 projections indicate, however, that the heaviest volume would be in the southeast direction for the A.M. peak on the freeway portion east of Union Avenue. This reflects the development of employment centers in Coyote Valley.

The geographical arrangement of residential and employment centers in the Santa Clara Valley and San Francisco Peninsula is less localized than Seattle and many other Bay Area regions, and, therefore, generally less suited to the construction and use of reversible express lanes. Although there are locations where the A.M. peak/off-peak directional split is great enough to justify consideration of these facilities, the P.M. traffic is usually much more balanced and the trip lengths are relatively short and unsuited for limited on/off opportunities. Other areas, for example Interstate 280 between Foothill Expressway and Magdalena Avenue, has the heavy west bound morning traffic split and available median width, but will not have the congestion which requires such measures after the HOV lanes are constructed in the project now underway.

Many sections of Routes 101, 880, and 280 which are congested today do not exhibit such a pattern of extreme peak/off-peak direction split, according to traffic counts previously taken. An apparent great difference in traffic congestion, which may be observed by users, sometimes reflects the fact that the difference between Levels of Service C and F (see Table VI-21) may be only a few hundred vehicles per hour per lane, or 10% of lane capacity.

Industrial and residential development of the valley is spread widely enough that it is unlikely that reversible lanes will become practical solutions to congestion problems on freeways in the area north of Morgan Hill, and there only if the preservation of agricultural land is emphasized strongly in the development of land use policies in the county so that the rural nature of the valley is maintained.

51. Will the power lines along Route 85 near the railway tracks be moved?

Yes. the lines will be relocated in the area between Quito Road and Cox Avenue.

52. Why not build Route 85 as a tunnel with a park on top?

The estimated cost of constructing Route 85 as a freeway within a tunnel and supporting a park is $110 to $170 million per mile. Measure "A" was enacted to construct Route 85, and improve Routes 101 and 237. The current projection is approximately $0.9 billion in total tax revenues for the ten years for which the tax enhancement will last. The cost of 18 miles of Route 85 as a tunnel would be at least $2.0 to $3.1 billion. For this and other reasons the PAB did not consider tunneling or cut-and-cover to be feasible or prudent as alternatives for Route 85.

53. Isn't the capacity of the 8 lane freeway for two rush hours approximately equal to 2,000 cars per lane per hour multiplied by 4 lanes multiplied by 2 hours = 16,000 cars?

The capacity, even in rush hour, would be twice the number calculated for one direction. However, the Route 85 freeway will be metered to maintain a level of service of D or better, indicating speeds of 45 mph or more. At this LOS, the capacity per lane per hour will be 1700-1850, which would total 13,600-14,800 each direction, 27,200-29,600 in both directions.

54. Why did you not show a TSM target value, such as 16,000 cars off the road at rush hour? Was it because it might show that the 8 lane freeway "benefit" is not really as great as some might suppose?

The goals of TSM are primarily qualitative, as they are intended to optimize the operation of the existing facilities. Of the four categories of measures, see Section V-A-2 of this volume, only the TSM Transit Capital Improvements allow quantifying results, for example in terms of numbers of users who can be switched from a drive-alone mode to a more efficient mode. These kinds of transit improvements are being studied, revised and

implemented by the state, Metropolitan Transportation Commission, local entities, transit operators and businesses. Detailed studies of the effectiveness of proposed transit capital improvements have not been made.

The description of the results of TSMs, in Section VI-H-1 of the DRAFT, is as accurate as can be composed, based on the TSM measures described in Section V-2. Table VI-21 of the DRAFT indicates the relative impact each proposed alternative would have on the existing transportation system and is thought to be correct.

55. Which of the TSM measures on pages V-2,4,5 of the DRAFT are included in the Guadalupe 1990 build trip table? What reductions in traffic would the ones not included produce?

The analytical model that was used for the Guadalupe Corridor project included many of the TSM Highway Improvements listed in Section V-A-2 of the DRAFT. Specifically, improvements TH2, TH9, ST1, and ST3, were included in that model. Increasing the county bus fleet to a 750 bus system was also included in the Guadalupe Corridor 1990 build model. These improvements are intended to improve the operation of existing roadways, as are the majority of the other TSMs identified in the DRAFT.
It is not possible to calculate the exact number of vehicles these measures will remove from the highways. The Table VI-21 in the DRAFT is thought to accurately reflect the relative congestion relief provided by instituting these measures.

56. Do you consider the Technical Advisory Committee to be made up of people that have a good record of coming up with innovative ideas?

Yes.

57. Since paying people not to drive or park could do, at about 2% of the cost of the freeway, just as well (at removing vehicles from the existing transportation system during peak hours), why weren't these ideas mentioned?

The TAC members obtained, from their respective city and county jurisdictions, the TSM measures they believed to be useful and feasible for increasing the efficiency of the transportation network in the Route 85 corridor and vicinity. The suggestion above was not among the measures they proposed.

58. What evidence can you show that you asked citizens' groups or other study groups or offered money for good ideas or, in general, made any real concerted effort to identify new TSM measures?

See the above question.

59. Why did the paragraph in Section III-A, on the passage of Measure "A", fail to mention the amount of money spent by supporting groups and the fact that in the city of Saratoga voters rejected the measure?

The statements concerning the passage of Measure "A" were not intended to imply that the vote was unanimous, but reflected the dramatic majority of the public which favored the measure. The proponents of Measure "A" raised approximately $500,000, the opponents a estimated $1000, according to press reports after the election.

60. Didn't both Caltrans and the PAB participate in a manipulation of the public's participation in the campaign for Measure "A", by virtue of their failure to stop the printing and dispertion of misinformation about a previous decision of the PAB to build a freeway in the corridor?

It would not be appropriate for a public agency, such as Caltrans, to participate in a political campaign, especially one in which a direct interest in the result might be assumed.

10. GROWTH INDUCEMENT / DEVELOPMENT.

1. Knowledge of the proposed Route 85 by the local businesses and residents since 1956 and the effect this knowledge may have had on the development in the area has not been documented properly.

   It is true that the Route 85 corridor has been on the "books" since 1956 and 1957 when it was approved by the California Highway Commission. Most local cities have reserved the corridor for a transportation facility since that time. Local developers have consistently used the right of way lines as the edge of their developments.

2. The no-build alternative should discuss the fact that the promise of Route 85 triggered large scale development in the West Valley for the past twenty years.

   This point may partially explain why current traffic so far exceeds existing capacity. We are, however, principally concerned with future growth and the potential impact of the Route 85 project on this growth and traffic conditions. Urban development that has already occurred is considered an existing condition.

   Potential projected impacts are important considerations in the FINAL. The no project alternative and summary of probable impacts are discussed in Sections III-E, V-I, and VII. While the no project alternative would allow development of the Route 85 corridor to the extent individual cities permit, the construction of any of the build alternatives would be growth inducing. See HWY-24 for further discussion on the relationship between growth and freeway development.

3. The FINAL should spell out measures against growth triggered by building Route 85.

   It is inappropriate for this document to advocate pro- or anti-growth measures. The choice of the Project Alternative for Route 85 is largely in response to growth which has already occurred. A high portion of the developable land near the corridor has been developed to the limits the local jurisdictions allow, although new development in the Coyote Valley is calculated into the 2010 projections.

4. Since any build alternative is growth inducing, any freeway alternative will only make sense if growth does not increase too.

The Route 85 Policy Advisory Board is endeavoring to identify land use policies which are acceptable to the communities in the West Valley area. Each community has considered the presence of the Route 85 corridor and the probability that some transit or highway facility would be constructed within it for almost thirty years and have developed their zoning and General Plans accordingly.

5. The relative growth inducement hasn't been explored for each alternative to the extent that choices can be made. Projections should be made for each alternative in residential units, office space, commercial space, etc. Specific growth impacts for each alternative in each city should be tabulated.

Specific development regulation within each city is a city decision, and is not seen as defined by the precise nature of the adopted alternative for Route 85 . There is no model available which will make reliable projections of that detail based on the differences between the six freeway alternatives, and we can observe that the majority of developable land adjacent to the corridor has been developed to some degree. The anticipated growth is primarily assumed to be accurately reflected in ABAG's Projections '85 , see Section III.

11. HEALTH / SAFETY IMPACTS.

1. How many additional deaths and injuries can be estimated to occur annually as a consequence of construction of each of the project alternatives?

Approximately eight hundred million vehicle miles per year are projected for this corridor for 2010. Based on similar highway facilities within the state, approximately 0.012 deaths per million vehicle miles (MVM) can be expected to occur. The injury rate will be approximately 0.50 per MVM. These resulting accident totals, however, are not necessarily additions to the regional accident totals. Other roads and freeways would experience a decrease in accident rates due to the transfer of some of their traffic to Route 85. In fact, the Route 85 projections for injury rates are significantly less than the rates for arterials similar to Camden, Lawrence, Saratoga, etc., which experience injury rates of approximately 1.1 to 1.6 injuries and 0.020 to 0.027 deaths per MVM.

2. It is important to spell out who will experience greater exposure to power lines before they are moved. Studies have been documented about people around high tension wires suffering leukemia and brain cancer. Power lines should be placed underground.

One journal article reviewed by Caltrans concluded that those who worked near power lines were more likely to contract all types of cancer. Even though the study (a study of death certificates, generally considered rather weak evidence in risk analysis, by Wertheimer and Leeper) showed a definite correlation between occupations where exposure to electrical power lines is involved, the authors concluded that despite the accumulation of epidemiologic evidence, the interpretation remains uncertain. It is not known whether the increased risk of brain tumors and leukemia observed among the electrical workers in the study was due solely to the magnetic fields, or possibly to chemical exposure, such as polychlorinated biphenyls (PCBs), organic solvents or heavy metal fumes, associated with these occupations.

Findings such as these, as well as the failure to confirm that residents in the vicinity of powerlines in fact experience higher cancer rates, indicates that risk has yet to be determined. Because of the relatively low magnetic intensity or strength associated with electric

and magnetic fields from power transmission lines, little scientific interest has been generated for investigating their potential carcinogenic effects due to induced body currents. A study of biological effects from high voltage AC transmission lines, by Sheppard, concluded that potential health risks appear to be insignificant. However, because human physiology is affected by intensive magnetic fields and the possibility of increased cancer rates raised by the Wertheimer and Leeper study, some may wish to reduce exposure when possible.

Power transmission line alignment and wire placement will be determined by PG&E in consultation with Caltrans and regulatory agencies. If it is determined that emitted electromagnetic radiation from these lines poses a public health threat, the residents may require the owners to apply appropriate mitigation measures. See also question GEN-22.

3. Have any costs been calculated for potential health problems which may result from exposure to toxic chemicals as a result of living adjacent to or nearby each of the project alternatives? If not, why not?

No, such a study is outside the scope of this report.

4. Has Caltrans adequately explored the social impacts of Route 85 as a barrier to public safety agencies in San Jose? Crime and fire control facilities might be hampered by extensive detouring in responding to calls if facilities are not relocated.

The public safety agencies' response time will not be hampered by the proposed facility. In fact, response time may decrease due to the decreased traffic volume on the local streets and more direct routes available through the use of Route 85. Detours during construction will be inevitable. All affected agencies will be informed of these detours so that they may coordinate their emergency response routes with construction schedules. The Caltrans San Jose Public Information Office, (408) 971-6777, will be able to advise any member of the press or public when a detour is scheduled 24 or 48 hours in advance.

Advance signing will also be provided.

5. How safe would a dome over the freeway at the Branham High School be, specifically with regard to earthquake hazards?

Should the freeway be covered or domed at Branham High School, the structure will be designed to those standards in Section VI-B-2-c of this document. Such a structure would not be among the most seismically sensitive on the project but could, in fact, be built to be exceptionally stable and safe.

6. How safe can the Routes 85/87 interchange be, with homes and a school so close?

The interchange will meet FHWA construction standards which include right of way fencing, soundwalls and other physical barriers where appropriate. These standards are designed to provide for public safety for land uses adjacent to transportation facilities.

12. HIGHWAY FEATURES

1. Because the Route 85 Transportation Corridor cuts through approximately 3 1/2 miles of the Union School District, pedestrian crossings are needed at Meridian Avenue, White Oaks Avenue, Union Avenue, Leigh Avenue, Camden Avenue, Carter Avenue, and Dent Avenue.

   There has been concern regarding school children crossing the Route 85 corridor at various locations. These locations are:

   1. White Oaks Road
   2. Union Avenue
   3. Leigh Avenue
   4. Camden Avenue
   5. Carter Avenue
   6. Dent Avenue
   7. Meridian Avenue
   8. East of Prospect (Blue Hills School, Kevin Moran Park)

   Locations 2, 3, 4, and 7, as indicated in the FINAL, Section VI-H-7, and all other local streets crossing the Route 85 corridor, will have shoulders and sidewalks. The DRAFT in the same section refers to possible needs for pedestrian overcrossings near the Dent-Carter Avenue area and east of Prospect Road in the vicinity of Blue Hills School. Pedestrian facilities will be provided for these areas and at White Oaks Road. In addition, pedestrian facilities will be provided at the More Avenue/Route 85 interchange area. Please refer to Section VI-H-6 for the location of pedestrian facilities. Also see HWF-19.

   Another issue raised regarding schools was whether school districts boundaries would change because of the Route 85 corridor. As explained at the public hearing, this is not a decision made by Caltrans. Changing school district boundaries is decided by school district officials.

2. Incorporate a pedestrian and bicycle crossing of Route 17 at the proposed interchange in the vicinity of Mozart Avenue.

   Either Oka Lane or Mozart Avenue will extend across Route 85 or Route 17, respectively, to provide egress for residents of Oka Lane, Paseo Laura, etc., who would be otherwise cut off by the interchange construction. The optimum arrangement has not yet been determined and will be discussed as the Freeway Agreements are negotiated. Whichever road is built will have full shoulders

and sidewalks for bicycles and pedestrians. If it is determined that Mozart Avenue will not go under Route 17, the construction of a pedestrian facility, usable by bicyclists and the handicapped, will be considered as additional community mitigation.

3. Because there is no east/west cross street along the corridor between Prospect Road and Cox Avenue, a distance of about 4000', it is appropriate that a pedestrian/bicycle overcrossing be provided in the vicinity of Blue Hills School/Kevin Moran Park.

A pedestrian facility will be provided in the area of the Blue Hills School and Kevin Moran Park. Also see Question HWF-1.

4. What alternatives were considered to overhead relocation of the railway crossing of Saratoga Avenue, and why was the option presented in the DRAFT selected?

Two distinct options were presented in the DRAFT: (1) the base profile, which proposed that Saratoga Avenue pass under the railroad and the Route 85 facility, and (2) the Saratoga Design Variation profile, which proposed that the new facility pass under both Saratoga Avenue and the railroad. In neither alternative was the grade of the railroad to be significantly changed.

The project profile of the FINAL proposes that Saratoga Avenue be depressed to pass under the railroad and freeway. An alternative studied was to relocate the crossing 200' southwest of the current location, leaving an at-grade crossing of Saratoga Avenue, and passing Saratoga Avenue over the freeway. Depressing either Saratoga Avenue or the Route 85 freeway puts one or the other under the floodplain of Saratoga Creek. Further studies will be made and the final vertical alignment will be determined in the design phase of the project. The profile of the railroad is not expected to change significantly in any of the proposals. See Section VI-H-8 and GEN-42.

5. There is no agreement that the proposed profile is satisfactory to San Jose, yet the DRAFT seems to state that agreement has been reached. Has consideration been given to the disposal of dirt produced by an unbalanced design with excessive excavation, in light of San Jose's objections to the original proposal?

Further discussion of the proposed profile has led to the development of the project profile which reflects more completely the concerns of San Jose with respect to noise, safety and access to the freeway in the vicinity of the Branham and Athenour schools. The exact vertical alignment will be determined during the final design of the project. The project profile allows the balancing of earthwork to avoid the expense of off site hauling. Several alternative disposal sites, including other Measure "A" projects, are available in case the ultimate project produces an excess of material.

6. How will design and channelization of freeway connections with local arterials (e.g. Camden and Saratoga Avenues) be changed so that they can be more acceptable to local residents?

The geometric design of this and other interchanges will be discussed with the City of San Jose during the Freeway Agreement negotiations. Signalization and channelization of freeway connections with local arterials will be completed with extensive coordination with the local community's traffic officials. This procedure has successfully resolved community concerns in the past.

7. The distance between the proposed interchanges at Quito Road and Winchester Boulevard is almost two miles. Would it not improve traffic dispersal and service if an interchange at Pollard were to be constructed?

The choice of interchanges in and around the City of Saratoga has been under continuous review. A traffic analysis with an interchange at Pollard Road will be prepared for Saratoga to consider with the Freeway Agreement. A study of the results of eliminating all or some of the other interchanges in Saratoga will also be prepared for their review. The Santa Clara County Traf-

fic Authority will be conducting a traffic analysis, using San Jose's model for P.M. peak hour traffic, to evaluate possible interchange locations in Saratoga. This analysis will be completed prior to the negotiation of freeway agreements. See HWF-25 for more information on interchange location selection.

8. Why are interchanges planned at locations as close together as Prospect and Saratoga-Sunnyvale Road? How much does each add to the cost? What criteria will be used to determine the number and location of interchanges?

See question #25 of this section. This document has considered all of the interchanges included in the early Freeway Agreements in the interest of completeness and conformity with those agreements. The distance between these interchanges is below the normal standards for non-urban areas, however, and this does present special problems in construction, at a reasonable cost, within the available right of way. Revision of the project to construct one or two partial interchanges at this location may be considered in consultation with local officials and in drafting the Freeway Agreements. See above response.

9. Will traffic on Saratoga-Sunnyvale Road increase if no interchanges are constructed in Saratoga?

The Santa Clara County Traffic Authority, using the City of San Jose model for P.M. peak hour traffic, will analyze the impacts on local streets if no interchanges are constructed in Saratoga, and will provide the results to San Jose and Saratoga. Caltrans' projections for the A.M. peak hour indicate that the traffic on Saratoga-Sunnyvale Road will be significantly improved by the full set of interchanges. However, these reductions in traffic density will not be as dramatic if the Saratoga interchanges are not constructed.

10. How can I find out details about the Lean Avenue Overcrossing?

The detailed design of interchanges and crossings will commence after acceptance of this FINAL; acquisition of any smaller parcels of land required, if any, will follow. Contacts with the Caltrans San Jose Public Information Office, (408) 971-6777, will allow you to stay current on the designs as they progress.

11. Can a frontage road (similar to the San Tomas type) be built through the Branham High School playing field area?

Local community governments are sensitive to the need for frontage roads and the problems they create. Frontage road locations have been addressed in discussions between the cities and Caltrans. Further consultations will occur as the project enters the design phase and Freeway Agreements are drafted.

12. How high will the 87/85 interchange be built, how many levels? What events led to the height of the interchange? Has any consideration been given to depressing Route 85 to lower the interchange? Is there a model of the interchange to be inspected?

The preliminary geometrics indicated a three level interchange at 85/87, putting the highest bridge 70'+/- above grade, except at one location four levels may be necessary, with the lowest depressed 5'-20'. The current height was determined because of the need to meet full freeway standards. In August, 1983, the Guadalupe Corridor project section overlapping Route 85 was planned as an expressway, which would have allowed in a lower interchange. However, the decision to make Route 85 a full freeway requires that the 85/87 interchange be upgraded to meet those standards. A model of the early designs has been constructed and may be seen by contacting the Santa Clara County Traffic Authority. In response to community concerns, a revised design to reduce the maximum height to about 60' is being considered. However, if adopted, this revision may delay the construction and increase costs. A final decision on this revised plan has not been made as of this date.

13. What adverse impacts will the 85/87 interchange have on the neighborhood? What mitigation plans are offered? What alternatives are available?

Anticipated neighborhood impacts from the 85/87 interchange will primarily be increased noise levels and visual impacts. Noise and aesthetic impacts are described in Sections VI-C-2 and VI-D-1 respectively. Mitigation of these impacts include soundwalls and project landscaping.

There is no alternative to a major interchange at this location, which must be constructed to freeway standards for safety. Reconsideration of the scale of the structures is underway to minimize neighborhood impacts. See HWF-12

14. How many lanes will be built along the Guadalupe Corridor overlap, between Blossom Hill Road and Route 101?

The Project Alternative for that section, as well as the rest of the Route 85 project, will be a six lane freeway, including two commuter lanes for use during peak hours. At other times, the commuter lanes would contain mixed traffic. The Guadalupe LRT will be in the median from Chenowyth Station at Route 87 to Santa Teresa Station at Santa Teresa Boulevard. For the remainder of the Route 85 corridor, a 46′ median will be left for future transit expansion.

15. How can the Meridian Overcrossing be set at ground level to minimize safety problems for Meridian Villa residents? What consideration has been given to depressing the freeway in the vicinity of Meridian Avenue for pedestrian safety, noise, and visual benefits?

The project profile has been revised from the base profile of the DRAFT to partially depress the freeway to pass under Meridian Avenue. Studies reveal this to be a prudent and feasible method to provide mitigation for the noise and safety impacts of Route 85 on the neighborhood schools and Section 4(f) properties. In the interests of safety for pedestrians and drivers, the

profile of Meridian Avenue will be raised only slightly where it passes over Route 85.

16. What form of retaining wall and landscaping are going to be used between the highway and the adjacent houses?

Such design details have not been determined at this stage of the project. The nature of the walls and associated landscaping will depend on such things as profile, height, right of way available, and subsurface conditions. Conventional concrete walls, tie back walls, and bulkhead walls are commonly required on projects of this scope. Generally the retaining walls and sound walls will be chosen to complement one another at any given location.

17. What can be done to minimize the impact of Route 85 at South Bascom Avenue, and to prevent major on/off-ramp configurations?

The precise interchange configuration at South Bascom Avenue is not fixed at this time; the layout is subject to reconsideration and modifications as the detailed design is completed. Bascom Avenue will be a prime connection to the freeway section east of Route 17. The ramp use is projected to be as high as 2300-2500 vehicles per hour (vph) at the A.M. and P.M. peak hours in the year 2010. Measures to minimize the impacts of this traffic on local residents and traffic will be included on the project.

18. What traffic analysis has been performed at Union Avenue regarding the proposed interchange, and what reasoning is there for an interchange at this location?

An interchange at Union Avenue was proposed because of the local traffic generation capacity of the residential areas north and south of Route 85 and the desire to reduce the need for additional capacity at Bascom and Camden Avenues. Projections indicate 1900-2100 vph using the connectors during the A.M. and P.M. peak hours.

19. Will a pedestrian overcrossing be included between New World Drive and Plaza Del Rey to provide a path between Gunderson High School and Steinbeck Junior High School?

The replacement of this path and provision for a facility at this location is presently being designed as part of the Guadalupe Corridor Project in conjunction with the City of San Jose.

20. Between Camden Avenue and Bascom Avenue, how far below the surface will the roadway be and how high the walls? Where will the crossovers be?

As indicated in the FINAL, Figure V-13, the project profile is proposed to be at grade at Camden Avenue and Ross Creek, 10'-20' below grade to Bascom Avenue and Route 17. The wall heights will be approximately 10' to 14' throughout this section. Four streets, Bascom, Union, Leigh, and Camden, will cross the freeway in this area when the project is complete. See also Question HWF-8.

21. Why is the state proposing to put a freeway off-ramp at Ross Avenue, which is already overloaded?

There has been much concern expressed regarding the interchange design at Camden Avenue. The preliminary geometrics have indicated the need for an off-ramp at Ross Avenue for many years; however, many recommendations for modified designs are being studied by Caltrans, San Jose, etc. to develop a layout which will not create additional problems on Ross Avenue and neighboring streets. Presently, Caltrans is reviewing designs which will take all the community concerns into consideration.

22. Why isn't a proposal for a 6 or 8 lane freeway without a median being considered? It would reduce the required corridor width.

The alternatives studied in the DRAFT were selected by the Policy Advisory Board. A 46' median was proposed with all the alternatives to accommodate current or fu-

ture mass transportation option. Federal standards require that a freeway constructed in any urban area should have a minimum median of 30'. The PAB and local communities have selected a configuration with the 46' median for the corridor.

23. Is it true that Route 85 will be elevated over Meridian Avenue and that the necessary land fill to raise it will be brought in from Saratoga's depressed profile?

The "base" profile (Figure V-5 in the DRAFT) proposed that Meridian Avenue would cross over the freeway which is at ground level in that area. The "project" profile, however, includes a partially depressed freeway at Meridian. This would also provide depression between the Athenour and Branham Schools. Meridian itself will be slightly elevated for this profile. See Section VI-J-7 for a discussion of the disposal of excess material.

24. Has Caltrans considered the effects of freeways in Los Angeles as the best solution to transportation needs?

The development of Los Angeles, like any local jurisdiction, is governed by local planning policies and guidelines. These policies define the type, phasing, and location of future growth. The development of the city's infrastructure, including water, sewer, and transportation systems, is developed consistent with these planning guidelines. In the City of Los Angeles the development of the surface transportation system is but one of many variables that influence and/or accommodate the area's growth. The choice of transportation systems (e.g. transit, freeways) depends upon many factors including cost effectiveness, community and institutional preferences, and demand (i.e. patronage potential). Similarly, development of the Route 85 freeway will accommodate existing growth as planned within local jurisdictions. The freeway, along with other variables, will have some growth inducing impacts as described in Section VII of the FINAL.

25. Why have so many off-ramps been proposed for Route 85?

The interchanges studied in the DRAFT are based on the old Freeway Agreements executed with each local jurisdiction in the 1960s. These agreements include 13 local and 4 freeway to freeway interchanges in the 18 mile corridor. Generally, in accordance with FHWA and AASHTO standards, minimum interchange spacing is 1 mile in urban areas and 2 miles in rural areas. In the Route 85 corridor, our current and past (1960's) travel projections indicate high traffic demands for frequent access to Route 85. In situations like this, the minimum urban spacing is often difficult to obtain; however spacings of less than 1 mile can be and have been developed in urban areas. With the exception of the freeway to freeway interchange areas at Routes 87 and 17, only the interchanges at Prospect Road and Saratoga/Sunnyvale Road are less than the 1 mile spacing minimum. Previous freeway agreement interchanges are being reevaluated as to the number, spacing, and configuration necessary to provide adequate service to most projected demands. Any interchange additions, deletions or modifications would be part of renegotiated Freeway Agreements to be ratified individually by all local communities.

26. What will Caltrans provide as a barrier between the freeway and homes in elevated areas, such as the Calabazas Creek area?

For noise and visual mitigation, the new road may carry soundwalls, as required, across fills and bridges. In locations where the sound wall warrants are not met, locally funded community walls may be placed for aesthetic purposes. Both wall designs would act as a positive barrier between the traffic and residents. See Section VI-D.

27. Route 85 should be depressed enough to allow Russo Drive to be at or only slightly above ground level for safety reasons.

The profile of Route 85 must be elevated over the Guadalupe River and Almaden Expressway east of Russo Drive. This makes it difficult to depress the freeway at Russo and maintain the high design standards of the rest of the profile. The profile has been established in consultation with the City of San Jose, with consideration of engineering factors as well as the needs of the local

residents, drivers, pedestrians, etc. The elevation of the Russo Drive Overcrossing should not be a safety hazard for students or pedestrians as shoulders and sidewalks will be provided as described in Section VI-H-7 of this volume.

28. What is the alternative planned for the area between Blossom Hill Road and Route 101, that being the narrowest section of the corridor?

This section is not narrow enough to present any difficulty in building the Project Alternative, a six lane freeway including two commuter lanes with the Guadalupe LRT utilizing the median.

29. How high above fence lines will the overpass on Branham go (for the residence at 4518 Carnaby Court)?

The residence at Carnaby Court is actually located about 150' away from the overpass. The overpass will be about 20-25' above the fence lines, or about 10' above the soundwalls already constructed.

30. Please include in the FINAL the necessary analysis to provide environmental clearance for: (1) a grade separation at Miyuki Drive for two traffic lanes and pedestrian traffic between north and east sides of Route 85; (2) a grade separation at Via Del Oro to provide continued access for IBM; and (3) a northbound off-ramp and southbound on-ramp at Via Del Oro.

Possible future grade separations at Miyuki Drive and Via Del Oro are shown and discussed in the FINAL (Table V-3). Caltrans has determined that these facilities do not alter the environmental impacts or require any additional studies to be made. Subsequent determination of financial responsibilities for these facilities would be established during the freeway agreement process with the local jurisdictions and during the right of way acquisition process. A freeway interchange at Via Del Oro is not included as part of this environmental document. Additional studies required to establish the environmental impacts of a Via Del Oro interchange will neces-

siate another environmental document or possibly a supplement to this one. Also, an interchange at this location was not recommended by the Technical Advisory Committee or selected by the Policy Advisory Board to be studied.

31. Will the existing Route 85 interchanges with Routes 101, 237, and 280 be redesigned, and will the dangerous traffic weaving within interchanges be eliminated?

Existing interchanges are being studied and, within Measure "A" funding limits, improvements will be instituted. The Preferred Alternative Report, approved September 19, 1986, recommends that all major interchanges along Route 85 (Routes 85/101, 85/280, 85/17, and 85/87) be provided as necessary to permit staged development and be designed to accommodate future transportation options. Route 85 interchanges with Routes 101 and 237 are also assessed as part of the Measure "A" "Triangle Study" (see TRF-17).

Caltrans recognizes the potential hazards associated with weaving sections and matches appropriate level of service and freeway structures, including weave sections. According to preliminary designs for the Route 280/85 interchange improvements, for example, the weave between northbound traffic from Route 85 to Route 280 north and northbound Route 280 traffic changing to Foothill Expressway will no longer occur in the auxiliary lane, but will take place on a 2 to 3 lane, grade separated collector/distributor road, greatly increasing traffic capacity and safety.

32. Table V-3 should indicate the possibility of structures at Cahalan Avenue, Miyuki Drive, Via del Oro, and Chynoweth Avenue (part of 85/87 interchange) and include a statement that the Camden Avenue interchange is subject to further design review.

The Cahalan Avenue overcrossing and grade separations at Miyuki Drive and Via Del Oro are now reflected in the FINAL (Table V-3). The Chynoweth Avenue structure was not added because it is part of the Route 87 project. For further information on the Camden Avenue inter-

change, see E/G-11. See HWF-30 for additional discussion on structures at Miyuki Drive and Via Del Oro.

13. HOUSING / NEIGHBORHOODS.

1. As for the assurance that all private homeowners will be compensated for their properties at the appraised value and that all owners will be assisted with relocation, the question is: will property owners be able to find equivalent housing in the same communities for the price paid for their properties?

   Our relocation study, available for inspection at the Caltrans District Office, 3333 California Street, San Francisco, indicates that there will be adequate availability of equal or better housing to accommodate relocation in the same communities, with the payments for the homes being supplemented with "Purchase Differential" entitlements, when necessary.

2. Most of the dwellings which will be removed can not be replaced. Even if the dwellings themselves could be duplicated, the cost to current residents will be much higher, about 2 1/2 to 3 times higher, than the existing buildings.

   Caltrans will provide supplemental differential payments in those cases that are warranted.

3. There is unprecedented inflation of housing prices in Santa Clara Valley and most predominantly in the West Valley. Over 1000 West Valley residents will be heavily impacted by displacement by a freeway alone and between 3 and 10 times that number for widening of the north/south connecting routes. Some may find replacement housing but will pay much higher costs. Some may have to travel long distances to work and some may become homeless. The DRAFT is insufficient in analyzing these problems.

   Housing impacts of the Route 85 have been studied and described in the Final Relocation Impact Study, available for review at the Caltrans office at 3333 California Avenue, San Francisco.

4. The DRAFT reports that there will be at least 346 dwellings removed for a 200' wide freeway alternative, not counting losses at interchanges. This is not accurate because the connecting routes equivalent to 8 to 16 lanes will also have to be built. They will result in far more dwellings lost.

See the preceding question.

5. What about the deterioration of property values in the vicinity? Does the state intend to compensate past and present property owners for the losses they could sustain if their properties can not be developed to the highest and best use?

No. If the resident feels that his property value has been decreased due to the proximity of the transportation facility, then the resident may file a claim against the state. If the state determines that there has been "damage" to the property value, then it will compensate the owner for such damage. The assistance of an attorney is not required to file such a claim.

If the proposed project proceeds to the right of way acquisition stage, the department will accept and consider claims for damage to real property values allegedly caused by the project. In cases where damages are identified and legal entitlement established, property owners will be contacted concerning settlement of claims.

Any perceived loss of value as a result of the inability to develop property to the highest and best use should be handled in the same manner.

6. Have any costs been calculated for the deterioration of properties adjacent to the corridor, including loss in appraised values and sale prices, for each of the project alternatives?

See the above question.

7. All the homes bordering Route 85 will be losing about $10,000 in property value. All these homeowners should be compensated.

Comment noted. See above.

8. What about the revenues that local governments will lose based on development of housing and/or commercial uses of the corridor?

The undeveloped portions of the corridor have been vacant for many years and were predominantly orchards and fields. The cities and local governments have been receiving no significant tax revenues from this vacant land. The state will not pay tax revenues for something that might have been .

9. Has any consideration been given in the FINAL for the loss of privacy of residents adjacent to the freeway; closure of local streets that go to the stores, schools, churches, etc., the loss of quietness in the area and the psychological impact of accidents on the people?

There is no compensation for loss of privacy or quietness in the area. See response to question H/N-5. There will be very little closure of local streets and only minor changes in traffic patterns. The psychological impact on the residents due to accidents on the facility should be minimal as they would not be able to see nor easily hear the accidents, and the shifting of traffic to the freeway should produce a reduction of local street accidents and total accidents, which should have a beneficial impact.

10. The DRAFT states that there is no shortage of rental housing within the corridor cities and that housing is available in the West Valley to replace that loss; yet the DRAFT, under the growth inducement discussion, reports especially low vacancy rates in the same area. There is such a shortage of housing that people in Santa Clara Valley are renting motel rooms.

A Conceptual Stage Housing Study was done for this project. It stated that, although the rental vacancy rate is low overall, there is adequate housing available in the Route 85 cities for the residents who may be displaced. If adequate housing of comparable worth cannot be found, then Caltrans will pay a rental differential. Also, see HSG-14.

11. Will the state pay the additional taxes which those who are relocated will have to pay under Proposition 13 for new homes? For how long?

The State of California provides for the transfer of the existing tax basis to the repalcement home to prevent the increase in real estate taxes due to purchase of the replacement home. Property purchased by individuals to replace properties they were required to sell to public agencies may be deemed comparable to the property replaced if it is similar in size, utility, and function, or if it conforms to state regulations defined by the Legislature governing the relocation of persons displaced by governmental actions. The taxes on such properties may remain the same as those on the property sold. Article XIII of the California Constitution was amended in 1984 to provide this protection for displaced homeowners. A real estate agent or tax advisor will be able to provide specific advice for a specific property.

12. It has been often suggested that the proximity of freeway on/off-ramps may be positively related to crime rates. Please provide data to support or debunk that theory.

We have been unable to find reports of any study addressing crime specifically at on- and off-ramp locations. Generally, the crime rates of any given area are related to the amount of through, not local, traffic in the vicinity, according to the San Jose Policy Department. It is likely that if the particular on- or off-ramp in question will draw traffic from out of the immediate residential area to the freeway access, then crime rates will definitely be increased because of the freeway's construction. However, the San Jose Police Department states that, as freeway construction often will result in less traffic on the local streets and it could cause outside traffic to appear more conspicuous. This could result in a decrease in crime rates. An area located near a freeway ramp access may experience a decrease in total crime rates because, while some traffic is drawn to the ramp access, a greater amount of "foreign" traffic is diverted from the residential area as a whole.

13. Some houses purchased by Caltrans are or will be rented by Caltrans to tenants less concerned about the condition of the neighborhoods than the permanent residents, and deterioration of the neighborhoods has and will continue to result.

Caltrans recognizes that these problems have occurred in the West Valley Corridor, and elsewhere when developed properties are acquired some time before construction. Caltrans seeks to minimize the problems and remove objectionable tenants when these situations arise. Please contact the District Director or the Deputy District Director for Right of Way, (415) 923-4419, P.O. Box 7310, San Francisco, 94120, as often as necessary to get the problems resolved.

14. Table VI-16 and the discussion of residential displacement should be expanded to consider the economic resources of displaced persons and relative costs and types of available housing

The Final Relocation Impact Study contains data relevant to the breakdown of available units by cost and location, as well as demographic data concerning residents to be displaced by the freeway construction. Additions have been made to the FINAL, see Section VI-G-3-a, and additional analysis has been performed for the Project Alternative. This report is available for review at Caltrans Offices at 3333 California Street and 150 Oak Street, San Francisco.

15. Shouldn't the figure for countywide housing increase be 65,000 instead of 150,000 (Sect. III-A) the population increase for San Jose 21%, and San Jose's job market increase be 51% of the county's?

These figures in the DRAFT were extracted from ABAG's Projections '79. The countywide housing figures were accurate, but the figures given as San Jose's job growth were actually calculated for the entire county also, not San Jose alone.

14. LEGAL AUTHORITY

1. Who has the final design authority, who has a say in the design and could Saratoga oppose the whole project if they chose to?

   The Federal Highway Administration (U.S. Dept. of Transportation) has the final authority with respect to any portion of the project for which they commit federal financial participation. Some features have been requested and planned which are beyond federal requirements, especially with respect to mitigation of impacts, and these will be financed by Measure "A" funds under the control of the Santa Clara County Traffic Authority. Features relating to engineering, safety, traffic handling, interchanges, etc., will be influenced by discussions among Caltrans, federal, state and regional agencies, the cities, the county and county agencies, etc. The City of Saratoga could oppose the project, but has agreed to participate in the Route 85 project and has voted for the preferred alternative recommendation by the Policy Advisory Board, which has become the Project Alternative. A Freeway Agreement will be negotiated between the City of Saratoga and the state.

2. Does Caltrans, the PAB, the Traffic Authority, or any other organization have the authority to construct a freeway alternative through any or all of the cities along the Route 85 corridor without getting new approvals and agreements with the affected communities?

   In some cases this has been possible, for the state legislature has passed modifications to Section 100 of the Streets and Highways Code which has allowed a freeway to be constructed within a city without a Freeway Agreement. However, since the original agreements were written, the number of existing streets which the freeway will close and reroute has increased; this and other changes do generally require new agreements.

3. Will the answers to the above questions be entered into the record?

   Yes.

4. All cities in the corridor have freeway agreements with the state; can they rescind them?

Yes.

5. How does the law delineate control between a particular city or its county?

Generally, cities have jurisdiction over all matters within city limits, unless preempted by statute. Counties primarily have jurisdiction over matters within the unincorporated areas, unless they have preempted the cities, by statue, in the provision of specific services within the county. As an example, the Santa Clara County Transportation Agency has jurisdiction over all transit issues within the transit district and it administers transportation policies and services within the County.

6. When must matters be brought to a vote and when can Caltrans make the decisions on their own?

Public referendums about projects which Caltrans proposes, involving state highways and bridges, are exceedingly rare, and usually related to community, county and regional land use and environmental issues, or local financing of state highway facilities. No Caltrans project has <u>required</u> an public vote for approval.

See question GEN-38 for a description of the decision process.

7. What is the necessity of executing new freeway agreements, rather than building through recalcitrant cities on the basis of the earlier agreements?

At the beginning of the study of the West Valley Corridor, it was decided to renegotiate the old freeway agreements in each community. Changes in local streets and traffic patterns, as well as the pattern of development and public facilities (schools, parks, etc.) have affected the justification for various interchange lo-

cations, freeway connections, pedestrian facilities, etc. See LEG-2.

8. How can the proposal for Route 85 change an existing use agreement for Route 87 paralleling Herlong Avenue?

The historic Freeway Agreement for Route 87 has been modified by a Resolution of Change drafted by Caltrans and executed by the City of San Jose. A new Freeway Agreement will be prepared when design of the Route 85 facility is stabilized. An interim agreement has been drafted for the construction of the Guadalupe LRT along the Route 85 alignment, and a new Freeway Agreement will be prepared for that section when the concerned agencies have finished discussions on the ultimate design features.

9. Is there a class action suit against Route 85 yet?

The first legal action against Route 85 was filed October 15, 1986, in Sacramento County Superior Court. The plaintiffs seek a design change and further noise mitigation on a section of Route 87 which will be revised by this project; they do not wish to halt the entire project. Caltrans knows of no further legal action to be filed as of the date this volume was submitted to the FHWA for review.

10. Can Saratoga block the freeway even if the rest of the freeway is built? Can Saratoga block the use of Measure "A" money for the project?

The City of Saratoga agreed to participate in the Route 85 project and has accepted the preferred alternative selected by the Policy Advisory Board. A Freeway Agreement will be negotiated between the City of Saratoga and the state.

15. MODELING

TRAVEL MODEL

The travel model system used for this study is a version of the Metropolitan Transportation Commission's (MTC) regional model system, tailored to meet the needs of this study.

It is a disaggregate behavior model, based on individual household observations, that is used in an aggregate forecasting package. Most of the models in this system use logit equations and the system is independent of zone size.

The travel models were developed for MTC by a team of consultants (Cambridge Systematics, Inc., COMSIS Corporation, and Barton-Aschman Associates, Inc.) in a two year effort starting in July, 1975. The models are documented in a three volume Final Report prepared by Cambridge Systematics, Inc., June, 1980. Volume 1, Summary Report, gives an overview of the model system, which we will refer to as MTCFCAST. It presents its conceptual basis, the component models and their mathematical forms. Each model is given with its function, variables, and coefficients in both aggregate and disaggregate forms. Volume 2, Detailed Model Descriptions, gives the complete step by step process of estimation and development for each component model. Volume 3, MTCFCAST Users' Guide, provides the aggregate demand forecasting package with documentation of the programs and data files used in the system.

The travel models are used in conjunction with the Federal Highway Administration's battery of computer programs, Urban Transportation Planning System (UTPS), to provide the complete package of trip forecasting.

1. Will the modeling be updated to 2010? When will this occur and what time frame will be used? Data used should be revised to reflect the most recent projections to 1990, and projections to 2010 must be used for the design year and should also be used to select the best alternative.

   Yes, all projections and models have been extended to 2010 for the FINAL, accomplished in September and October of 1986. The results have been included in Section III-B.

Projections used in the DRAFT are based on the PAB decision to utilize the Guadalupe Corridor model for efficiency's sake and with the conviction that comparisons between alternatives would be valid even while using the older data.

2. It is not a valid argument that it is unfeasible to compute trip tables for each alternative. It is the only way to do the modeling.

Trip tables, as defined in question MOD-19, were calculated for each alternative.

3. There is reason to doubt the claims of local traffic reductions produced by the modeling.

The traffic reduction projections have been validated by the use of the San Jose's TRANPLAN Model. Many areas which experience an initial traffic reduction will see that benefit eliminated by traffic growth which later results from further development, and the same amount or more traffic will be found in future years.

4. Did the computer model used include any assumptions concerning traffic generation caused by growth induced by the constructed facility?

Yes. The model has been in use for the Route 85 and Guadalupe Corridor projects. It has been approved by the PAB, FHWA, and Caltrans. It uses the ABAG socio-economic descriptors; the 1990 projections are based on ABAG's 1979 values, updated to approximately match their Projections '83 figures. The 2010 model is based on ABAG's Projections '85. See Section III-B for more information. The later model includes development projections induced by the construction of a transportation facility in the Route 85 Corridor and contained in the General Plans of the cities in and near the corridor.

5. The potential LRT ridership would be much greater if a projection to 2010 had been included in the DRAFT as it should have.

If the preferred alternative had included an LRT, these projections would have been included in the FINAL, but the relative magnitudes with respect to highway users would have been expected to be approximately the same.

6. Do the San Jose Model assumptions lead to significant errors in traffic estimations?

The San Jose's TRANPLAN Model is neither more or less likely to produce significant errors than the MTCFCAST model Caltrans has used for traffic projections on this project, although there are real differences between the models. San Jose's model produces P.M. peak hour projections which include a significant number of trips additional to the home/jobsite trips used in the A.M. peak hour figures from MTCFCAST. It also gives greater weight to the distances between origin and destination than MTCFCAST, which uses Logit formulas to establish probability of behavior to predict trips. Other differences exist but, although the results, in absolute numbers, will vary between the two models, the relative usage of routes will generally be quite similar, in terms of increase and decrease, as factors, such as land use, change.

7. Changes made in the A.M. Peak Hour travel projections, between the DEIR and DEIS, should be explained, as well as the basis of change and the corresponding air and noise analysis changes.

The Table III-1 in the DEIR contained incomplete summations of the computer generated travel projections; these were corrected in the DEIS, and the table format was changed to display volumes rather than percentages. The air quality and noise analyses were independent of the production of these tables and needed no revision. Table III-1 and Figure III-3 of the DEIS displayed data concerning the ability of the studied alternatives to meet demand. These have been updated to the design year

2010 for the Project Alternative and are illustrated in Figure III-3 in this volume.

8. Parameters of the present model should be reviewed along with alternate growth parameters. Comparative statistics should be derived and commented on in the DEIS.

The traffic models prepared for this document are based on the Association of Bay Area Governments' PROJECTIONS '85 socio-economic projections. The traffic model in use is MTCFCAST, utilized in the Guadalupe Corridor project study, as agreed by the Policy Advisory Board.

In fact, we do have an alternate model and set of parameters available, as the City of San Jose has used their TRANPLAN model and the planning assumptions of the year 2000 to also produce traffic demand projections for the same area, although their target year differs, causing some differences in the results. Compare the figures for P.M. Peak Hour Traffic and Level of Service (San Jose) with the A.M. Peak Hour (Caltrans) for confirmation that similar results are seen from the differing data bases. Copies of the ABAG publication can be obtained from the Association fo Bay Area Governments, Center for Analysis and Information, P.O. Box 2050, Oakland, Ca., 94604. A description of San Jose's TRANPLAN model can be reviewed at the Department of Public Works, City of San Jose, 801 N. First Street, San Jose, Ca., 95110.

MODELING #9

9. How were the utilization numbers obtained? What do they really mean?

Please see Section III-B of the FINAL and the introduction to this topic. For a detailed discussion of the MTCFCAST models which have been used to produce the usage numbers, see Working Paper #4, Volume I, Guadalupe Corridor Alternatives Analysis, available in many libraries, the Santa Clara Valley Transit District, or the Metropolitan Transportation Commission.

In basic terms, the process creates mathematical models representing the producers and attractors of the A.M. peak hour traffic, primarily home to work, for future

years. For this purpose the geographic area is divided into many individual zones. Each zone is included in source models describing demographic, economic, employment, and land use characteristics. The resulting models are capable of describing the trip generators (residences-homes, apartments, etc.) and attractors (employment centers-offices, factories, shopping centers, schools, etc.) in each zone. All major and many minor roads are described in the transportation network model by their physical and operational characteristics. Such zone specific variables as parking costs, walk terminal times and time to find parking areas are included for the auto mode of travel. Transit routes, stations, fares, capacities, etc. are entered for the transit network model.

The trips to and from each zone are calculated and balanced by the computer programs, then are assigned to the roadway network initially without regard for restraints imposed by the capacity limitations. This is referred to as the "demand" trip table, and describes the distribution of users on a network of roads of infinite capacity, the shortest route (by time) for each traveler directly to the destination. The "vehicle demand" and "person demand" figures in Table III-1 of the DRAFT are from the "demand" trip table. They differ by the factor of 1.35, the average rate of vehicle occupancy in the corridor.

The inclusion of the limitations of capacity for each road in the calculation produces the "constrained" trip tables, which represents the number of users at each point on each roadway under the assumed condition that each driver makes immediate and accurate decisions about which route will best enable him/her to reach the destination, the "attractor", most efficiently. These figures appear as "vehicle usage" and "person usage" in Tables III-1 and III-2.

The computer provides that all generated trips successfully travel the roadway network within the peak hour and will, if necessary, assign trips in excess of 100% of capacity to the roadways in a given area to achieve this. For this and other reasons, the resulting trip tables, in graph, table, map, or other form, are very useful in comparing alternative roadway and transit systems in a given set of circumstances and yet not totally accurate in predicting absolute future traffic volumes.

10. The EIS should be supplemented with TRANPLAN forecasts for Route 85 alternatives, which will provide a more accurate data base.

See MOD-8 and the figures for Local Street Analysis, Section VI-H. TRANPLAN forecasts have been used to increase confidence in the projections used in the FINAL, but basic differences in the parameters prevent the planning assumptions from being entered into the MTCFCAST model. As an indicator of the growth planned within the City of San Jose relative to that city's General Plan, TRANPLAN forecasts have been helpful.

11. Compute traffic carrying potential of the HOV lanes using 2010 data and data that reflect the most recent, actual ridesharing experience on Route 237 and San Tomas / Montague Expry.

All traffic projections in the FINAL are based on data for 2010 unless otherwise stated.

The HOV travel volume (vehicle trips) used in the DRAFT was 21.5% of the demand, based on data available on 2 and 3 or more person carpools. These usage estimates are somewhat more conservative than current HOV usage on Route 237 and San Thomas/Montague Expressway. Based on October, 1986 traffic counts by DKS and Associates, HOV (2 person carpools) on Route 237 (near the Great America and Lafayette Street interchanges), averaged 22.9 %(AM peak) and 30.2% (PM peak) of total vehicle through traffic. HOV usage on the San Thomas/Montague Expry. averaged 21% (AM peak), according to 1985 traffic counts available from the Santa Clara County Transportation Agency.

12. The revised EIR should indicate whether the data is based on unconstrained or capacity restrained projections.

The projected travel demand data in the FINAL does indicate whether it is based on unconstrained or capacity restrained models or both. In the draft environmental documents, the "demand" data represented unconstrained demand and the "usage" data represented a capacity re-

strained condition that included ramp metering. The data, however, was presented in a comparison type format, indicating the relative differences between the alternatives for evaluation purposes.

13. In light of all the logic of the Bullock to PAB letters of 5/07/84 and 7/16/84, and the growth inducement information in the DRAFT, shouldn't different trip tables have been prepared for at least 3 of the alternatives - LRT, 8 lane freeway, and the "no-build" with a verified level of service assumption for each? Why not?

Different trip tables, with different level of service data, were derived for each of the Alternates even though only one distribution was used for all the Alternatives. They were produced by the mode split process and consisted of Drive Alone, Shared Ride, and Transit trip tables. The Drive Alone and Shared Ride trips were converted to vehicle trips and assigned to the Highway Networks, the Transit trips were assigned to the Transit Networks. Also see the answer to question MOD-19.

The Caltrans model is a "home to work" model. The "productions" (employed residents) and 'attractions' (jobs) are set in each zone by the socio-economic data. Without changing the employed residents or the jobs in a zone, the impact of Route 85 on the trip distribution would not be significant enough to justify going through distribution each time.

The projected highway trips on the metered freeways are assigned by the program UROAD, repeating the four iteration capacity restraint process described in MOD-9. This has a tendency to balance the trips on the various facilities. The amount that the original highway volumes are over capacity in relation to the size of the facility would have an impact on volumes changing because of the shift to paths that are not as crowded.

Reruns would be justified if there is a change in the land use planning according to the alternative, recognized by ABAG and the local planners. Otherwise there is no adequate justification.

It seems logical that the pattern of urban activities should be influenced by the transportation system, otherwise the process implies that the location and intensity of activities and trip generation are independent

of the transportation system. Clearly, this is not the case. Never the less, the current forecasting process has been shown to work quite well over extensive periods of time with major changes in the amount of activity in the area, rising affluence of households, and changes to the transportation system.

14. Do you agree that the DRAFT contains no adequate explanation of the transportation modeling method?

Yes. An adequate explanation to fully describe the modeling process would have been too lengthy to include in this document. The modeling methods used for this project are the same as those used for the Guadalupe Corridor study, and the process description in Working Paper #4, Volume II, of the Guadalupe Corridor DEIS equally describes the origin and nature of the model used in this study.

15. Do you agree that the explanation in the 2nd paragraph of the Bullock to PAB letter of 5/07/84 or the 4th paragraph of the Shanteau to Bullock letter of 12/15/84 does an adequate job of explaining modeling?

No. Mr. Bullock left out an important phase: the mode split, which assigns percentages of the transportation network users to the various available modes and creates Highway and Transit trip files. Additionally, trip generation and distribution do not need to be done for each alternative, when modeling peak hour trips, unless there are significant changes in the socio-economic data on which the projections are based.

Caltrans does not dispute any of Mr. Shanteau's statements. He wrote accurately on modeling in general, without having a knowledge of the specifics associated with the Route 85 modeling process.

16. Could you explain in ordinary language the following terms in the second paragraph of page III-5: "socio-economic", "network", "level of service".

Socio-economic data is the geographical distribution of population, housing, income, employment and land use.

Network is a system of points and links that describes the transit and highway transportation system.

Level of Service (travel model usage), in the model, consists of nine separate zone to zone matrices representing highway distance, highway in-vehicle travel time, highway tolls, walk time in a transit journey, auto access time to transit service, transit in-vehicle travel time, transit first wait time, transit transfer-wait time, and transfer fare. From these the total time and cost between zones are converted to impedance units for imput into the models.

Level of Service (highway capacity usage) is a quantitative measure describing operational conditions within a traffic stream.

17. Isn't "level of service" important, because it has to do with impedance to travel?

Yes, the level of service is important.

18. How was the "demand" computed for Tables III-1, III-2, and Figure III-3?

The demand assignment consisted of assigning the transit and highway trips to each respective network using free flow speeds and unlimited capacity. This represents the volume that would want to use the facility if the capacity was available, without also including traffic diverted from other full routes.

19. Did the transportation modeling, upon which much of the results of the DRAFT are based, use as its basic trip table the no-build (with respect to Route 85) trip table, which is actually the "build" trip table left over from the Guadalupe Corridor Alternative Analysis? What level of service (LOS, highway capacity usage) was assumed in order to compute the trip table?

The 1990 no-build trip table (Guadalupe Study build trip table) was not used as the basic trip table. The basic trip table was created by the distribution model.

The 1990 Guadalupe model created three trip tables using the mode split model. They were the Drive Alone trip table, Shared Ride trip table, and Transit trip table. The Drive Alone and Shared Ride trip tables were converted to vehicle trips. The vehicle trips were input into the Urban Transportation Planning System (UTPS) program Uroad. Using four iterations of capacity restraint, the trips were assigned to the Highway network for each alternate to arrive at the congested speeds. These speeds were used in creating the highway level of service.

The transit network speeds for the Route 85 corridor were calculated using acceleration and deceleration times, with a maximum running speed of 50 MPH. These networks were used to create the transit level of service.

The new model level of service data for each alternate, with the basic trip table and the auto ownership, were input into the mode split process to obtain new Drive Alone, Shared Ride, and Transit trip tables for each alternate.

20. At that level of service, how long would it take to drive from Coyote Valley (Routes 101 and 85) to Cupertino (Routes 85 and 280) at morning rush hour?

Using the above methods, we arrived at running times, for the 18 mile corridor, of 35 minutes for the LRT, 41 minutes for the 8 lane freeway, and 43 minutes for the 6 lane metered freeway (the Project Alternative). These results were incorporated into the mode split.

21. How long does it take today (average) to make that same drive?

There are several reasonable routes to choose for the same drive, but Caltrans has not performed tests to determine the best route or average duration under present conditions. On the 1990 No Build Alternate it would take 54 minutes to complete the 18 mile trip. In choosing the proper Alternate it is best to consider data produced by

similar methods. Using different methods could bias the results.

22. Does the difference the answers for the two questions above suggest that the level of service assumption for the trip table gave good results?

Yes.

23. Was the "demand" Caltrans computed for Route 85 based on the GCAA trip table?

The 1990 build trip tables from the Guadalupe were not used at all for the "demand modeling". The process we used for this is the same as in the answer to question MOD-19, with the exception that we input the free flow speeds on the highway networks instead of using the iterative process that we used to arrive at the congested speeds.

24. If the number of trips in a trip table cannot be handled by a given transportation system network, doesn't that mean that the level of service that was assumed in order to compute the trip table is wrong for that transportation system network?

No. You can see the results on many of the streets today. Drivers will queue up and sit in traffic, even though the system cannot handle the traffic and the trip will take longer. This would also result in a longer peak period.

25. Does Caltrans dispute any of the comments in the Bullock to PAB letter of 5/07/84 as they relate to the DRAFT modeling? What corrections would you make?

Some of the areas where we differ follow:

The first sentence is in error.

In the second paragraph, the mode split should appear between steps 3 and 4.

In the third paragraph, a change in land use will change the distribution considerably. Note that the land use descriptions used in the model development are necessarily those produced by the agencies making decisions in that area; Caltrans inputs their development programs into the database. The travel times on the corridor are not used directly in the model. The model uses the total impedance (cost and time) between zones; see the "level of service" explanation above.

On page 2, first paragraph, with the forecasted land use that is in the model, it is necessary to meter the on-ramps so that the freeway can handle the generated volumes.

In the second paragraph, the number of trips in the matrix would probably change slightly between individual cells. If the trips increased in some cells, there would also be a corresponding decrease in other cells. Total trips going out of a zone should equal the total generations for that zone and total trips coming into a zone should equal total attractions for that zone. The generations and attractions are functions of the distribution of employed residents and jobs, when refering to a peak hour model. With the capacity constrained method of assigning trips to a facility, and the effect of metering the facility, there may be a slight change in volumes on the facility as mentioned above.

On page 2, third paragraph, most of the traffic travels over only a portion of the freeway. Less than 10% of the northbound traffic at Stevens Creek comes from Route 101 at the south end of Route 85. Most of the traffic flow is from south to north in an westerly direction. Cambridge Systematics,Inc., in their Travel Model Development Project Phase 2 Final Report (Volume 1, Summary Report), date June, 1980, has the following statement in the distribution model: "the probability of choosing a given attraction zone decreases as trip distance increases, for all distances greater than three miles" in this model. This would also be true for a gravity model.

26. Does Caltrans agree that the growth inducing effects of the alternatives, as described in the Bullock letters to the PAB and Caltrans, and in the DEIS, are in no way taken into account in the modeling done for the DEIS?

Yes. The freeway may improve the level of service of the entire network slightly, but the already planned growth would produce traffic which would exceed the capacity of any freeway alternative that could be proposed. In all cases, the freeway alternate will provide capacity much under demand, even with the socio-economic data and 1990 trip table we are using for this study.

27. Does the comment by Mr. Green in his letter to Bullock of 6/21/84 that "To speculate that cities would change land use...would be grossly in error, when present policy does not indicate that is so" still makes sense when some land use changes are explicitly connected to transportation facilities and level of service?

Yes. To fully understand Mr. Green's position, it is important to read the complete letter and be reminded that land use policy in the Route 85 Corridor has been influenced by the expectation of the construction of some kind of facility since 1957. It is land use planning, based on that presumption, which has been input into the GCAA model, which is, therefore, not precisely a "no-build" model with respect to Route 85.

28. Do you agree with the TAC statement of 9/09/84 that "New trip tables for each alternate would likely change projected volumes no more than +/- 3% in some locations? On what evidence?

Yes. Without changing the socio-economic data, namely the distribution of employed residents and jobs, the volumes on Route 85 will not change in the projections. Caltrans is not in the position of revising the economic data as predicted by the planning agencies which have influence in that area. In the minutes of the Nov. 28, 1984 meeting of the Route 85 Policy Advisory Board, Mr. Glen Roberts, from the City of San Jose, reported that the City ran their model with Mr. Bullock's suggestion and the difference in the output was within 1% of the earlier projections.

29. How could the new trips generated by the build out of Coyote Valley, to be triggered by the construction of Route 85, ac-

cording to the San Jose General Plan, fail to increase projected volumes on Route 85 by more than 3%.

Residential and commercial development of Coyote Valley are anticipated to increase traffic volumes near the eastern end of Route 85 after Route 85 is constructed. The City of San Jose has specifically scheduled some development of the urban reserves in and near the Coyote Valley with restrictions related to the construction of Route 85, and development further south in the valley is certain to occur. This development, however, is reflected in the difference in the traffic demand figures for the 1990 and 2010 years, as the build out of Coyote Valley is included in ABAG's Projections '85s

30. Why didn't Caltrans respond to the charges in the Bullock to PAB letter of 7/16/84, that Caltrans deliberately tried to mislead the Policy Advisory Board?

The Policy Advisory Board did not request that Caltrans should respond to the letter addressed to it.

31. Are there substantive points in the Bullock to PAB letter of 7/16/84 with which Caltrans disagrees? What are they and what corrections would they make?

Most of the points of difference are discussed in the answers above. The formula for the "Gravity Model" in general use for modeling, as shown below, is considerably different from the version Mr.Bullock described.

$$Tij = \frac{Pi*Aj*F(t)ij}{\sum_{j=1}^{n} Aj*F(t)ij}$$

Tij = Trips from zone i to zone j
Pi = Trips produced in zone i
Aj = Attractions in zone j
F(t)ij = Friction factors for the travel time between zone i and zone j.

The denominator is equal to the sum of the Aj*F(t)ij's for all the zones in the study area.
K (behavior constant) was also left out of our formula.

32. For the model used, are the number of trips more or less dependent on travel times, as compared to the simple gravity model equation? Why wasn't this question answered earlier?

The total number of trips is a function of the generations (productions and attractions) in our model and the gravity model. The travel times do influence the trip distribution. The decision on where to go is represented by comparing the relative attractiveness and accessibility of all zones in the area. A person is more likely to travel to a nearby zone with a high level of activity than to a distant zone with a low level of activity.

In the past, travel time was used in the gravity model to measure separation between zones and to develop trip tables. We now have the capability to include other factors, such as fares and parking costs,in the impedance function, which more accurately represent the sep-

aration between zones. Travel time, therefore, is somewhat less of a factor than in a simple gravity model.

33. Isn't the 1990 data the wrong data on which to base decisions when the FHWA requires that projections be developed for 20 years beyond the year of construction?

Preparing projections for 20 years beyond the year of construction is general planning practice, but is not encoded in federal regulations. Use of 20 year projections for both stages of a two tier environmental impact analysis process is not required; the first stage (project alternative selection) is not invalidated by using projections of travel demand of lesser scope to make comparisons between alternatives.

34. Why does the DRAFT say, on page III-5, "At the time of the selection" some work with 2010 data will be done, when you mean "just after"? What effect could such work have on the primary decision to be made?

The authors of the DRAFT were aware that preparing the subregional model would require some months work, which would be done after the last of the public presentations for the DEIS were prepared, and while the deliberations of the PAB and local community councils proceeded. In fact, the 2010 model was first run the same month that the PAB selected the preferred alternative they recommended to Caltrans.

The decision to utilize the 1990 projections as a basis for comparing the nine studied alternatives was made early in the process, and with the concurrence of all planning agencies involved. It was apparent from the initial studies that no reasonable alternative would fully satisfy demand, and that the capacities of the alternatives would remain the same from construction to the design year. Therefore, since the prime differences between the 1990 and 2010 were foreseen to be in volume of demand, which could not be satisfied, and the direction of heaviest flow at the east end of the project, which could be considered even though numbers were not available, proceding to make the project alternative se-

lection on the basis of the earliest available model was practical, desirable, and acceptable to all agencies.

16. NATURAL RESOURCES.

1. The creeks are now relatively well connected to the foothills. Won't any construction alternative permanently disrupt the access to the foothills for wild mammals?

   Yes, to some degree the wildlife will be discouraged from crossing the Route 85 corridor, although all creek crossing will be designed as effectively as possible to permit the movement of local animals along the creeks. The proposed alternate profile through Saratoga, however, may require extensive flood control work which will effectively separate the lower section of Calabazas Creek from the upper. The Environmental Impact Report for the flood control project will be prepared by the Santa Clara Valley Water District as a separate project.

2. Wildcat Creek is an all year creek with prime riparian habitat. Ducks nest on it every year. This creek should be left undisturbed. The transit alternative shows an outline square on top of it indicating that this is vacant land suitable for a parking facility; this plan should be changed.

   All locations for transit stations and parking facilities are tentative, and were primarily located with concern for potential LRT stations and where the required land was readily available. A more detailed study of appropriate locations will be undertaken during the design stage for the project. Environmental, traffic, and zoning concerns will be considered as the final locations are determined. The locations illustrated in the DRAFT at Goleta Avenue and atop Wildcat Creek were preliminary and have been revised, as is illustrated in Figure VI-35.

3. The assumption that there is no prudent alternative to the taking of parklands is incorrect because the DRAFT does not consider the prudent transportation alternatives like a mass transit system constructed over the right of way of the existing Santa Clara County highways. That would not require parklands.

   This study only examined the Route 85 corridor and its relationship with the greater community and facilities. Study of placing a mass transit system over the rights of way of other Santa Clara County highways is beyond the scope of this project.

NATURAL RESOURCES

17. OTHER PROJECTS

1. Why can't the Joint Powers Board of the Guadalupe Expressway Project meet when people can attend?

   The Joint Powers Board operates under the guidelines set forth in the Joint Powers Agreement which was initiated in the early 1980's. While the meeting times were established when the Board was created, the Board will meet at special times for special agenda items. To petition the Board for a special meeting, citizens may contact Ron Diridon, Chairperson of the Joint Powers Board and a member of the Santa Clara County Board of Supervisors.

2. Is there a drawing of the interchange at 85/87 for public viewing?

   See HWF-12

3. Why do diesel tractors start at 5:45 A.M. rather than 7-8 AM on the Route 87 project?

   Caltrans' normal work day starts at 7 A.M.; however, diesel tractors assemble and start up earlier for any repair and maintenance work. Because of complaints received by nearby residents, future Caltrans contracts for Measure "A" projects will require that diesel trucks assemble away from residential areas. Citizen complaints about construction problems can be referred to the Caltrans Public Information Office (408) 971-6777.

4. Why is the overpass at Route 87 and Chenowyth Street so tall? Why was Chenowyth Street not lowered (somewhat)?

   The freeway to freeway interchange at 85/87 interchange extends to Chenowyth Street. The fill in this area may be 30' tall as the structure must extend over Chenowyth Street street and the light rail tracks at this location. Reaction to the Routes 85/87 interchange design has initiated studies to lower the maximum height structures at that point even if delays and greater expense

result. Mitigation for visual impacts from the fill will include trees, shrubs and hydroseeding.

5. I was under the impression that it (Guadalupe Corridor) was to be "light rail". What happened?

The project alternative for the Guadalupe Corridor project was an expressway with Light Rail Transit. The Project Alternative for the West Valley Corridor project, which includes the section of the Guadalupe Corridor from Route 87 to Miyuki Drive, is the six lane freeway including two commuter lanes. As a result, that portion of the Guadalupe expressway will not be built and the designs will be changed to construct a freeway in its place. The LRT will be completed as planned in the corridor ahead of the freeway construction. Some modifications to both LRT and freeway plans have been required and coordination between the projects is continuous.

6. Were Cupertino's modifications to Miller Avenue/Wolfe Road Cupertino's decision or Caltrans'?

Miller Avenue is a local arterial and not a state highway, so no modifications of it, except within the interchanges with Routes 101, 280 or 237, have been initiated by Caltrans.

7. When is the Almaden Expressway exit off Route 280 going to be finished?

The exit for the Almaden Expressway, from Route 280, will be Route 87, the Guadalupe Parkway for most motorists. The Routes 280/87 interchange is expected to be completed approximately 1989. The 280/87 interchange will lighten the traffic volume on Almaden Avenue and Almaden Expressway.

8. The proposed widening of Route 82, Monterey Highway, in the City of San Jose and Santa Clara County, should be included in the FINAL.

A description of the impacts of this project has been included in Section IV-D of the FINAL.

9. Why is Route 280 west of Route 17 only 3 lanes in each direction? Why is the Saratoga Interchange on 280 always a bottleneck?

The project to widen Route 280 from Leigh Avenue to Magdelana Avenue is expected to be under construction in 1988. This project will add lanes along the median and widen 280 at 17 to four lanes beneath the structure. A separate project will widen the Saratoga Avenue Overcrossing and add double left turn lanes, which is expected to relieve that bottleneck.

10. The DRAFT fails to acknowledge the conflict between the assumed widening of the existing Route 85 and the Mountain View General Plan that currently supports a maximum of four lanes on the existing Route 85. Mountain View would consider amending its General Plan, but only upon careful consideration of the environmental impacts and a demonstration that the amount of traffic will justify the added freeway lanes.

The interim widening of existing Route 85, by adding two lanes in the median of the existing facility, is being studied as a separate project. All traffic projections for this Route 85 Corridor project have been based on the added capacity provided to Route 85 by this widening project. A unique and separate environmental document is being prepared for that project and is expected to be available for public review in the first half of 1987. See also TRF-17.

11. Solutions to traffic problems can be achieved by first widening existing freeways, such as 85, 101, 17, and 280, and completing the Guadalupe Corridor projects before considering the building of the Route 85 Corridor. A total plan for the whole valley should be considered by Caltrans and local communities.

The entire network of state freeways in Santa Clara Valley has been carefully reviewed in response to current traffic patterns and anticipated growth. Measure "A"

was conceived and passed by the electorate to hasten improvement of freeways in the valley without dependence on funds available from external sources. These projects include widening Route 101 from the San Mateo County line to Bernal Road, the first portion of which opened to traffic in November 1986 as the first Measure "A" project completed. Reconstruction of Route 237 as a freeway and widening of the existing portion of Route 85 are also projects being developed for Measure "A" funding.

Other projects often considered necessary to create a unified, balanced transportation system in Santa Clara County are in the California State Transportation Improvement Plans (STIP) for the coming years 1987 to 1991 with state and federal funding, e.g. widening 280 from Leland Avenue to Magdalena Avenue and the addition of HOV lanes to Route 17 from Route 9 to Camden Avenue. Included in the Santa Clara County's Transportation 2000 plan is the widening of Route 17/880 from that point north.

These projects will create an integrated, whole system which would not be entirely functional or as cost effective without the completion of Route 85.

18. RIGHT OF WAY.

The majority of the properties acquired for a transportation project are purchases of the entire property based on fair market value. A second category of acquisitions are partial takings of properties based on fair market value of the part taken with additional payment of the remaining property for any loss in value due to severance damages and any offsetting special benefits. A third category of acquisitions consists of limitations on access to properties which are appraised on a before-and-after basis with payment of any indicated loss in value due to the taking or limitation on access.

In all cases, the properties are appraised and acquired on the basis of a taking of property rights. This is a procedure which has been clearly established over a long period of time. Where there is no taking of property rights, there is no procedure for appraisal and acquisition.

As to the issue of proximity to the transportation facility and resultant elements such as noise, there is no provision under law, regulation, or procedure for appraisal or acquisition. There would be evaluation problems on the relative economic impacts on properties at different distances from the facility due exclusively to the transportation facility and the equity of considering some properties and not others. In many cases, the existing noise level in areas with heavily traveled local streets may well improve with the diversion of traffic due to the introduction of the new transportation facility. Much of the concern in these areas adjacent to the proposed facility is due to the uncertainty and fear of the unknown and is temporary in nature. Some of the changes which may result are that homes adjacent to the facility may take longer to sell. It is almost impossible to evaluate the extent of any change in the surrounding area until the facility is built, in operation and all mitigation measures, such as noise walls and landscaping, are in place.

In some cases, properties which are adjacent to a state-owned 200-foot corridor have already been influenced by the long term existance of the proposed transportation facility.

As explained, the homeowners whose properties are adjacent to the right of way, but are not required for the project, cannot normally be compensated. Once the project is in the final design and partial-take-acquisition phase, any claims for damage to real property values will be evaluated both as to legal entitlement and as to whether or not there are any damages.

1. Caltrans should buy the remaining 8 homes of the Lawson and Popejoy Courts because of noise and access problems created by the Camden Avenue interchange.

   Comment noted. See above.

2. Has Caltrans agreed that no construction should start until all the right of way has been acquired, as implied in the discussion of construction phasing?

   Any unanticipated right of way needs will be identified with greater precision as detailed design of the project proceeds, section by section. Acquisition of the remaining whole and partial parcels will proceed at a corresponding pace. The state will not attempt to purchase all parcels at one time, thereby putting all displaced homeowners in the market at once, and construction will not be delayed until all purchases are made. Construction in the vicinity of the Guadalupe Corridor may proceed directly following the construction of the LRT facilities.

3. Is any of the land still to be acquired at Lean Avenue residential? North or south, east or west of Lean Avenue? Will additional property be needed for future rail/bus stations?

   Preliminary designs indicate that the right of way still to be acquired at Lean Avenue are north of Route 85 and on the west side of Lean; these parcels are predominantly city owned. Detailed design has not yet begun on either the overcrossing or any future transit station, so right of way requirements are not fixed.

4. Please explain why the Route 85 corridor is routed to border Pinewood Lane rather than the railroad tracks.

   In the vicinity of Pinewood lane, there is an easement for PG&E high tension power lines between the railroad and the Route 85 corridor. Preliminary investigation indicated that relocating the utility easement to the south of the railroad would require acquisition of approximately twice as many homes as are required for the

proposed highway corridor. The final determination will be made during the detailed design phase.

5. What is the total value of the impact on tax revenues in terms of tax generating property being removed from the tax rolls as the highway right of way is acquired?

The latest right of way estimate for the value of property yet to be acquired is $130 million (January, 1986). A very approximate estimate of the loss in tax revenue is 1% of the current market value, or $1.3 million. This would reflect only the approximate loss to the county, but not any loss to the various assessment districts.

6. Do the residents who will be displaced have any recourse against the city which allowed development of the long-proposed right of way?

Caltrans can only recommend consulting an attorney for legal advice.

7. Was purchase of Southern Pacific's right of way considered for a corridor? If not, why not?

Purchase of the Southern Pacific corridor and neighboring properties was not considered. In addition to the fact that the existing right of way was acquired many years ago, the Southern Pacific right of way is irreplaceable, and public use of Route 85 would likely be incompatible with heavy rail use. Southern Pacific is still conducting freight operations on their rail line.

8. If an 8-lane freeway with 46' median is built, which houses on Rebel Way will be taken for the highway?

The homes on Rebel Way were not required for any of the alternatives.

RIGHT OF WAY

9. Is it possible for the Routes 85/17 interchange to avoid the corner of Longfellow and Kilmer Avenues?

   The historical interchange design for this area has indicated removal several of the homes at the corner of Kilmer and Longfellow Avenues. The geometrics, however, will evolve before construction begins and the severity of the physical impact depends on the final design as determined by the negotiations between the county and the state. Both agencies will be interested in minimizing the impacts on the neighborhood.

10. What will be the effect of the interchange at Routes 17/85 on the neighborhood near Kilmer and Holmes Avenues? What will the effect be on Holmes Avenue?

    See previous question.

11. What portions of Branham Lane, between Camden and Leigh Avenues, will be used?

    The preliminary design indicates that Branham Lane, in this area, will function as a local road on the north side of the freeway. The exact geometrics have not been determined and will be influenced by the concerns of the City of San Jose for the access to residences and neighborhood impacts.

12. Will there be an interchange at or near the intersection of Camden Avenue and Branham Lane? What areas will be taken over by this interchange? Will Branham Lane dead end at Camden Avenue to accommodate the interchange there?

    As indicated in the FINAL (Figure V-9), there will be an interchange at Camden Avenue; however, the detailed design of this interchange is not complete and the connector layout may be refined to accommodate the concerns of neighbors and City of San Jose. It is expected that any variation adopted will conform to the limits of the existing state right of way.

13. How and when will I know about the status of my house on Hecate Court?

The right of way lines on the east side of the Bascom Lane/Route 85 interchange provide sufficient width for all proposed configurations of this interchange; therefore, we expect to purchase no more property on Hecate Court. Generally, the owners of homes and property required for the new highway will be contacted directly by Caltrans as promptly as possible after an authorization for general purchases of right of way is obtained.

14. It is suggested that Caltrans buy the remaining eight homes on Lawson and Popejoy Courts and use the property to construct a westbound on-ramp to Route 85.

Possible redesign of the geometrics of the Camden Avenue interchange is unlikely to alter the amount and location of land required for Route 85. The City of San Jose and residents have encouraged Caltrans to reexamine the historic layout of ramps for that location, and Caltrans is currently doing so. See also the introduction to the right of way questions.

15. Section V-B-1 should be revised to note that Caltrans is purchasing right of way. Table V-3, Note 4, should indicate that Measure "A" money will be used to purchase some parcels outside the scope of the Guadalupe Corridor project.

Correction noted, however these portions of the DRAFT are not included in the FINAL.

16. The proposed Cottle Road on-ramp for the Guadalupe Corridor project cuts through the Santa Teresa Community Medical Center surface parking areas and a future medical office building. Can the right of way be adjusted to avoid these impacts?

The on-ramp location at Cottle Road, adjacent to the Santa Teresa Community Medical Center, has been revised

and the changes have been accepted by the Medical Center. The realigned on-ramp is now 50 feet from the planned "Four North" medical office building, which would make unnecessary any revision to the site plan and relocating the "Four North" building. The new on-ramp location would also not compromise the surface parking plans for the site.

17. How is the house at 402 Lyon Cross , in Saratoga, affected?

This parcel is outside the Right of Way requirement for the Route 85 corridor and will not be acquired.

19. SARATOGA DESIGN VARIATION

1. Why is only Saratoga being considered for the 20 ft. below grade option, and what needs to be done to have the same consideration for the rest of the communities?

   The study by Caltrans of the Saratoga Design Variation (see Section V-B-11 of this volume) was done as a result of a request the City of Saratoga made to the PAB. Subsequently, other communities have suggested that other sections of Route 85 could be depressed as well and Caltrans has studied those options. The exact vertical alignment will be determined during the final design stage for the Project Alternative.

2. The Saratoga Design Variation description estimates that 120,000 to 140,000 truck loads of dirt would have to be removed from Saratoga to depress the construction. It will require 80 truckloads per hour for 8 hours per day to do it in one year. That doesn't sound possible.

   The calculation is correct; however, the Saratoga Design Variation does not follow standard engineering practices in terms of economic cost and constructibility. The original base profile through the City of Saratoga was partially depressed and provided for a balance between cut and fill throughout the project. The figure of 80 trucks per hour is based on a one year excavation period; however, it is anticipated that the excavation would be performed in stages and spread out over several years. Note that truck movement would primarily be along the corridor itself and on arterials, avoiding streets not designed for such loads. The project profile has been designed to reflect earthwork coordination with other Measure "A" projects to reduce the overall haul distances and costs. See also E/N-2.

3. Why are there no additional costs for maintenance for the Saratoga Profile?

   Additional maintenance costs have been projected to be minor in comparison to the capital cost of the design change.

4. Would there be additional costs for seismic exposure mitigation for the Saratoga Design Variation? (Mountain View Council)

No.

5. Please detail the various cost elements which go into the $40-$60 million estimate for the Saratoga Design Variation, as suggested in the report.

Most major elements of the constructions costs for Route 85 increase for the Saratoga Design Variation and vary between the alternatives studied and presented in the DRAFT. These major element additional costs include (1985 Dollars) for earthwork, $12.8 to $15.0 million increase; for structures, $0.7 decrease to $0.8 million increase (dependent on the feature in the median); for retaining walls, $7.5 to $23.9 increase, depending upon total width; for sound walls, $1.1 to $1.6 million decrease; for drainage, $8.6 to $10.3 million increase, including $5.6 million for improvements to Calabazas Creek and $1 million for a pumping station; for mobilization and contingencies, $9.5 to $15.7 million increase.

The estimated additional cost for constructing the Project Alternative design with the Saratoga Design Variation (depressed profile) is $50 million (1985 Dollars).

6. Why not lower the profile between Saratoga-Sunnyvale Road and Prospect Road to maintain property values in areas such as Eddington Place?

The profile which places the freeway under, rather than over, the Calabazas Creek flood plain requires extensive and costly improvement and channelization of the creek and further work detailed in Section V-B-11 of the FINAL. The proposed justification for depressing the profile has not been based on preserving property values.

7. Is it legally possible that Saratoga residents could cause taxpayers' money to be used to pay for a depressed freeway?

Yes, it is legally possible if it is decided to spend Measure "A" funds on the modified design. Funding for the Saratoga Design Variation will be determined by the Traffic Authority which is responsible for funding decisions for all the Measure "A" projects.

8. Why can't we afford to depress Route 85 for its entire length, or wait until we can afford it?

Depressing the Project Alternative (6 lanes including HOV lanes) for the entire length of the project would cost approximately $300 million in addition to the project profile cost. Additional funds would be required for flood control on the series of creeks along the route and almost complete redesign and reconstruction of that portion of the Guadalupe LRT project which overlaps Route 85. Depressing the freeway through the Guadalupe River portion would not be considered reasonable from an engineering view. This $300 million would come from local sources and Measure "A" funds, which could substantially delay or curtail other needed Measure "A" Projects.

9. How deep is it possible to depress the freeway through Saratoga and how will it affect noise pollution?

A 20' depressed profile, including sound walls, would reduce the highway generated noise an average of 4 dBA. Depression to a deeper level would not produce more significant noise reduction.

10. In a design alternative with the depressed profile, both Saratoga Creek and Rodeo Creek will need to be carried over the highway in aqueducts.

Agreed, Section VI-B-3-a has been corrected accordingly, with the note that the environmental document that would be required will be prepared by the Santa Clara County Water District.

11. The FINAL should not reference the Preliminary Phase I Case Report, Route 85 West Valley Transportation Corridor Study, since this report was based on limited data available from Caltrans.

Comment noted.

12. The FINAL should clarify the flood plain impacts and potential need for channelization for the Saratoga Design Variation. Any increased costs for this work should be associated with the Saratoga alternative and impacts noted on the summary page on page VI-21,

Comment noted. Impacts of the SDV represent a greater portion of the impacts to all riparian areas. Also, see FLD-5.

20. TRAFFIC.

1. The FINAL should clarify whether travel projections included on pages III-4,5,8 and 9 and Tables III-1 and 2 pertain to the Route 85 corridor or to Santa Clara Valley as a whole.

   All data on travel projections in the text are based on county-wide growth, but specific numbers are for the Corridor. Data in the tables and Figure III-3 pertain to the Route 85 corridor only.

2. What assumptions were made concerning the projected traffic volumes over time, traffic speed, congestion caused by traffic accidents, and the traffic congestion on surface streets by the ramp metering for the various project alternatives?

   The intermittent traffic congestion caused by accidents is not considered in the modeling of the traffic patterns and volumes. The use of ramp metering to manage freeway traffic volumes and level of service has been shown to reduce accidents and, therefore, reduce non-recurrent congestion on the freeway. Drivers choosing to remain on surface streets will experience traffic congestion less severe than the conditions preceding the freeway construction, see Section VI-H, and improvements in traffic speed and safety. The traffic demand will increase in the coming decades in most areas of the Route 85 Transportation Corridor, resulting in congestion during peak periods on Route 85 and on surface streets and increased demands for mass transit systems.

   ABAG's PROJECTIONS '85 assumptions and projections were utilized for the projections of traffic distribution. This publication is available from the Association of Bay Area Governments, Center for Analysis and Information Services, P.O. Box 2050, Oakland, Ca., 94604.

   The ramp metering operation will be regulated to establish volume on the freeway at a level just below maximum capacity flow. This should produce a level of service (see Table VI-21) of C or D during peak hours. Adjusting the ramp meter rates will be a continuing operation to obtain the most efficient use of both the freeway and surface streets. High Occupancy Vehicles will not be delayed by the metering system. The level of congestion of the surface arterials was assumed to vary by the degree to which each alternative satisfied the peak hour vehicle demand, being greatest for the no-project alternative and least for the 8-lane freeway with LRT. The level of service projection based on the Project Alter-

native, which was not studied in the DRAFT, is illustrated in the figure for P.M. Peak Hour Level of Service in Section VI-H.

3. What will the traffic be like on the city streets for 1990 and 2000 for the project alternatives? Do any of the build alternatives reduce the city traffic?

This information was provided for all the project alternatives in the Local Street Analysis distributed at the PAB meeting of January 29, 1986. Depending on the local street, section, and direction, there may be either an increase, decrease, or no change in traffic as the result of any of the alternatives. Copies of this analysis is available for inspection at the Caltrans District Office, 3333 California St., San Francisco. Figures VI-26 and VI-27 also depict the traffic impact on local streets.

4. Will any of the "build" alternatives reduce the long term traffic problem or will it just delay the inevitable? The traffic on the city streets would approach saturation levels regardless of the decision on Route 85. If this is true then it seems that any construction to relieve it is temporary and trades our long term environment for a short term reprieve. Is this true?

Traffic congestion can be expected to increase whether or not Route 85 is constructed, but the duration of A.M. and P.M. congestion may be markedly reduced in the vicinity of the freeway after construction. Construction will actually improve some areas of the environment, such as air quality. Further traffic congestion problems are closely related to long term land use. See Section VI-G-3 and Section VII of the FINAL.

5. Is there a need for a West Valley belt route?

a. What proportion of automobiles, which currently use the 101 corridor, will detour to a West Valley freeway and then require space on Route 17, San Tomas Expressway, Saratoga Avenue, Lawrence Expressway, Miller Avenue, and Saratoga/Sunnyvale Road? Virtually all traffic using the

West Valley Corridor will require use of north/south routes also.

Total northbound trips on Route 101, just south of Route 85, are approximately 5600. 2300 of these will turn on to northwest bound Route 85, according to our projections for 1990.

The following trips originated from the 2300 that turned onto Route 85 from Route 101. A point north of Route 85 was used as the screenline. These numbers are from the demand trip table.

Traveled Street	Total trips	%
Route 17	60	2.6
San Tomas	23	1.0
Saratoga	0	0
Lawrence	67	2.9
Miller	0	0
Saratoga-Sunnyvale	9	0.4

On Route 85, just north of Route 280, the following trips occurred which originated on Route 101:

Traveled Street	Total trips	%
Route 85	228	9.9

On Route 280, just west of Route 85, the following trips occurred which originated on Route 101:

Traveled Street	Total trips	%
Route 280	64	2.8

The 2300 vehicles which enter Route 85 at Route 101 primarily depart at the following cross streets:

Traveled Street	Total trips	%
Cottle Rd	402	17
Route 87	791	34
Almaden	117	5

71% of the 2300 vehicles will leave Route 85 before reaching Route 17.

The preliminary Local Street Analysis for the Project Alternative projects the following changes on the north/south routes at points north of Route 85 during the A.M. peak hour. These numbers are for constrained traffic patterns, the assumption is that each vehicle operator makes accurate decisions at each intersection to minimize the time required to get to his destination, considering the traffic congestion on all possible routes:

Traveled Street North Bound	Change
Route 17	No Significant Change
San Tomas Expry	No Change
Saratoga Avenue	Decrease
Lawrence Expry	No Change
Miller	No Change
Saratoga/Sunnyvale	Decrease

b. Where are the additional feeder lanes to be located and how will they be paid for?

The nearest major intersection will be the limit of construction on local streets, within the Measure "A" project. Providing additional lanes on streets approaching the freeway, beyond that point, will be the responsibility of the local jurisdictions.

c. How much of the projected traffic is due to growth inducing impacts which will occur in Coyote Valley as a direct result of the construction in the West Valley Corridor?

San Jose's Horizon 2000, their General Plan approved in November, 1984, states on pages 99 and 101, that "The Specific Area Plan (for the South Almaden Valley Urban Reserve and Coyote Valley Urban Reserve)" does not become effective until the City Council finds that Route 85 is substantially complete and is expected to open to traffic within one year." In addition, the

Specific Area Plan can not be implemented until at least 25,000 jobs are created in the North Coyote Campus Industrial Area.

Traffic studies predict that approximately 2,000 vehicles will exit the freeway onto local streets in Saratoga during the A.M. peak hour. This indicates that at least 2,400 people (assuming a vehicle occupancy rate of 1.2) during the peak hour are entering Saratoga to go to work or school. In addition, the traffic study indicates that 4,400 vehicles (5,280 people) are entering the freeway from the Saratoga on-ramps (A.M. peak hour direction).

d. Has this growth been accounted for?

Yes, see the discussion of growth inducement in this volume.

e. Will the growth of Coyote Valley be at the expense of displacement of several thousand people in the West Valley?

No. The maximum number of residents displaced is estimated at less than one thousand, 40% of whom are renters in dwelling already owned by the state.

f. How much traffic which originates in the West Valley will require use of the freeway for daily trips? Both studies cited in the DRAFT, purporting to show the need for a freeway, actually show traffic flow is primarily north/south, not parallel to the corridor.

For the 2010 design year, we have totaled the on-ramp demand volumes for all interchanges from Winchester Blvd. to Saratoga/Sunnyvale Road, inclusive. The result is 14,000 vehicles, or 19,000 people from the West Valley area who would use the freeway each morning during the A.M. peak hour if the capacity of the freeway permit it. The available capacity would, however, permit only 8000 of those vehicles to enter at those interchanges, much fewer if any of the inter-

changes in Saratoga are not constructed. Also see T-5a above.

6. Connection traffic impacts and distribution are not sufficiently described. If there are interchanges at some combination of the various cross streets:

a. How will the traffic be distributed?

The Local Street Analysis referred to in question TRF-3 was prepared by Caltrans to answer this question for the officials and residents of the affected communities. See also the Local Street Analysis Figures in Section VI-H of the FINAL. The Santa Clara County Traffic Authority has proposed to prepare an analysis of that area using San Jose's TRANPLAN model to assist in evaluating the interchange locations. The results of that analysis will be available to Saratoga.

b. How does this compare to current capacity of these cross streets?

There are only a few locations where the connecting traffic could be expected to exceed current road capacity. See TRF-20.

c. Who will pay the cost of widening them? Is there any potential source of funding at all that can be cited?

Widening of local streets from interchanges at Route 85 to the first major intersection and intersection improvements will be Measure "A" responsibilities. Any street improvements beyond the immediate vicinity of the interchange would be the responsibility of the local jurisdictions. Local monies would be needed to pay for any improvements.

d. Who will maintain them?

The local jurisdiction would maintain any local street improvements needed.

e. What will be the level of congestion and average trip-time increase due to congestion? Will the level of service be consistent with the City of San Jose's Level of Service Policy?

Congestion and the average trip time increase or decrease will vary depending on the location of the cross street and its proximity to the freeway. Generally, traffic will increase around interchange locations and decrease at separations. Increases in congestion will be minimized by interchange design, signalization and other traffic handling techniques at these locations. The trip times of vehicles using both Route 85 and local streets will generally decrease. The level of service (LOS, see Table VI-21) should be C or D on the metered freeway after completion. See the figure for the LOS on surface streets for the P.M. peak hour, calculated by San Jose utilizing their TRANPLAN model, Figure VI-29.

7. Why is the projected usage of TSM so much greater than any other alternative?

TSM affects travelers on a large number of expressways, arterials and local roads, only a fraction of whom are traveling parallel to Route 85. Their number is, therefore, much greater than the users of the proposed freeway.

8. The two studies cited, Santa Clara Valley Corridor Evaluation, and 1979 Transportation/Land Use Planning Outlook, do not support the construction of a freeway but supports the fact that most traffic in the West Valley is north/south. The only way there would be substantial demand for travel at all along the corridor would be the diversion from more direct routes and growth in Coyote Valley induced directly by a freeway.

The vehicle demand for Route 85 is shown graphically in Figure III-3. There is no more direct route than that which is proposed for these vehicles. Coyote Valley growth is discussed in question TRF-5c and Section VII of this volume.

9. The DRAFT does not address adverse impacts of build and no-build alternatives on existing streets with respect to economics, social costs of traffic, safety, air pollution, and noise impacts. Mitigation of impacts along existing local streets is much more difficult to manage than on new construction. This difficulty is not reflected in the DRAFT.

An expanded description of the impacts of the Route 85 facility upon existing streets and neighborhoods, and the difficulty of mitigating those impacts, can be found in Section VI-H of the FINAL.

10. The effects of interchanges routing traffic onto local streets is not explored in the document but is a major impact on the surrounding neighborhoods, as great as the cutting of local roads. Can Caltrans provide a discussion of those impacts and mitigation measures?

Such a discussion is included in the FINAL, SECTION VI-H.

11. The FINAL should analyze the impact of the no project alternative on the City of San Jose.

Under the no project alternative traffic impacts will steadily worsen if growth continues as described in San Jose's General Plan. Increased congestion will not be localized, but will be typical of the entire West Valley Corridor except that, if Coyote Valley development proceeds without Route 85, exceptionally severe congestion will soon develop at the eastern end of the corridor.

12. What is the definition of "demand"?

The "vehicle demand" is the total amount of vehicles (automobiles, buses and trucks) that would want to use the facility if its capacity was unlimited regardless of the alternative. The "person demand" is the total amount of people who would want to use the facility.

The "person demand" is calculated as 1.35 X vehicle demand, plus transit patronage where applicable.

13. What level of service is assumed to exist on adjacent streets?

Level of service was not used as a basis of comparison of the various alternatives in the DRAFT. A Local Street Analysis was done on adjacent streets and its results summarized in Table VI-21 in the DRAFT. It compared congestion relief between alternatives for 1990. The Final contains more details on the effects on local streets by a comparison of the 2010 A.M. Caltrans data and 2000 P.M. peak hour San Jose model volumes to the no-build condition, see Section VI-H. See also the level of service diagram produced from the City of San Jose's TRANPLAN model, Section VI-H, for the local street service level for 2000.

14. Since none of the alternatives satisfies demand characteristics it would be aggravated when analysis is based on the design year of 2010.

Yes, demand grows for the 2010 projection while capacity remains as designed. Small operational improvements, perhaps revision of HOV requirements, will not significantly change this fact. Existing routes are and will be available as alternate routes for those wishing to travel parallel to the corridor without using the proposed freeway. Usage of these routes may return to pre-Route 85 levels if increased population and economic activity locates near the corridor.

15. The FINAL must include quantitative analysis of the traffic on local streets in 1990 and 2010 so officials can make informed decisions.

This information for 1990 is included in the Local Street Analysis Report which was distributed at the PAB meeting of Jan. 29, 1986. Projections of the 2010 traffic were not begun until July 1986, but the relative changes resemble the earlier figures. See Section VI-H in this document.

16. Has Caltrans developed comparisons of the relative effectiveness of mixed flow, HOV, and busways for moving the traffic expected in 2010?

No.

17. What is the Triangle Study? Analysis of the capacity of the existing Route 85 and especially the Route 85/101 connectors is missing from the DRAFT. If Caltrans has plans to match the capacity of a new freeway in the Route 85 corridor with improvements to the north end of Route 85, the plans must be presented in some form in the EIS.

Route 85, north of Route 280, is assumed, for analysis of this project, to be a 6 lane freeway. This stretch of Route 85 is currently under study. The Triangle Study EIS covers interchange improvements on Route 101, from the Fair Oaks Interchange to Old Middlefield Way, and additional improvements to Route 85 (from Stevens Creek Boulevard north to Route 101) and Route 237 (from Route 85 to the Fair Oaks Interchange). The DEIS is scheduled to be completed in June, 1987. An interim project will widen Route 85 in the median, from north of Homestead to Route 237.

18. A study should be done showing the effects of Route 85 on Branham Lane, Dent Avenue, Rebel Way, Dentwood Drive and Meridian Avenue.

An operational report, Local Street Analysis, was completed in January, 1986, for 1990 A.M. peak hour traffic. Traffic moving southeasterly from Curtner Avenue toward Blossom Hill Road on Meridian Avenue will not appreciably change with any of the alternatives. Traffic moving toward the northwest on Meridian Avenue from Camden Avenue, by Almaden Meadows Park, toward Branham Lane will increase 50% with the Project Alternative. On Camden Avenue, traveling northwest from Blossom Hill Road toward Branham Lane, there is an expected 40% increase with a 6 lane freeway. Branham Lane traffic flowing toward the west will drop an average of about 70% except at Dent, Carter, and Camden which will increase appreciably (100% - 130%) because of the Route 85 interchange

at Camden. Traffic moving toward the east drops an average of 50% except at Meridian Avenue.

19. Does Caltrans agree that Route 101 should remain Santa Clara County's prime north/south route, not to be displaced by a freeway in the Route 85 corridor?

Route 101 will not be displaced by Route 85 as the prime north/south route. Approximately 2300, out of 5600, vehicles during the peak hour will move from Route 101 to Route 85. Only 10% of these vehicles will remain on Route 85 to beyond Route 280 in Mountain View. See question TRF-5a.

20. Traffic projections indicate a number of autos on local arterials far beyond their capabilities. What is the result if these are correct? Does Caltrans or any agency, other than local jurisdictions, fund the resulting required improvements to accommodate this increase?

The projections have indicated significant increases on only a few cross streets and predominantly in the blocks immediately adjacent to the highway. On the majority of streets, the average daily traffic is projected to decrease upon the completion of the new freeway, thus reducing associated costs for local jurisdictions. The communities will be responsible for improvements to handle increased traffic and will enjoy the benefits of reduced traffic on most local arterials.

21. Why meter all the entrance ramps? Will this serve any purpose other than to pressure users to ride buses?

Ramp metering is a procedure for controlling on-ramp and freeway volumes to reduce total travel time along a corridor when there are alternate routes available. Ramp metering, by limiting freeway traffic volumes, can reduce recurrent congestion, reduce the number of accidents caused by congestion and, therefore, reduce nonrecurrent congestion. The metering controls prevent the volume of vehicles on the freeway from exceeding ca-

pacity at level of service D, thereby maintaining smoother flow and shorter net trip time.

The buses and HOVs will have bypass lanes available to avoid being delayed in the queues of drive-alone vehicles on the ramps.

22. What will be the effect of Route 85 on Lawrence and San Tomas Expressways?

The projections for 1990 show no significant changes (<10%) on either of these roads. Projections to 2010 indicate that northbound traffic on Lawrence Expressway may be 10-20% lower than the no-build condition in that year. Southbound traffic will be greater than the no-build but in the A.M. peak hour it is still relatively light, significantly less than capacity. San Tomas Expressway will see an increase of 10% northbound between Winchester Boulevard and Budd Avenue, all other sections and directions will be 10-30% less than the no-build condition in 2010.

23. Is the traffic volume on Camden Avenue, south of Branham Lane, expected to increase or decrease as a result of the construction of any of the major alternatives?

Northbound traffic on Camden Avenue south of Branham Lane (southbound traffic is light in the AM) will be 40% greater with Route 85 operating than with the existing road network in 1990. In 2010, the corresponding vehicle volumes will be 20-30% lighter with Route 85 in place than without. This reversal reflects the very great increase in congestion to be expected on the local streets by 2010 should Route 85 not be finished.

24. Saratoga's consultants projected that traffic on Prospect and Saratoga Avenues and Quito Road would increase due to construction of Route 85, but Caltrans projected the opposite; how are the differences explained?

The variations noted are primarily in the manner of reporting. Because Caltrans' data was the basis for all projections, the resulting projections by Caltrans and TJKM, Saratoga's consultant, are quite similar for the sections of cross streets immediately adjacent to the freeway interchanges:

Two Way Traffic - 1990 - A.M. Peak Hourly Volume

	Prospect	Saratoga		Quito	
		NE	SW	N	S
No Build	360	2510	2150	1090	1090
Caltrans	2400	2650	2330	2300	1400
TJKM	2200	2500	2700	2300	1500

Note: the projection for Prospect is only for the single block between Blaney Avenue and the freeway connectors.

25. A study should be made of the traffic impact upon the entrance to and from Popejoy and Lawson Courts, and the results of that study be included in Section VI-H-2 of the FINAL. The potential for property acquisition should be investigated as a possible mitigation measure.

The configuration of the connections at this interchange is being reviewed with the intent that traffic impacts upon the residents in the immediate area should be minimized. Within the restriction of avoiding the purchase of additional property in the area, several alternative arrangements are being developed for cooperative analysis with the City of San Jose and negotiation during the preparation of the Freeway Agreement between the city and the state. If no agreement can be reached, the pos-

siblity of acquiring additional right of way may be considered if necessary for engineering purposes. The properties on Popejoy Court were developed after the adoption of the Route 85 Corridor in an imprudent location for residences.

26. The time benefit and traffic reduction benefits have not been addressed.

The traffic impacts on the local roads are described in the Local Traffic Analysis, distributed to the PAB 1/86, and incorporated by reference into this document. Benefits in terms of time are subject to too many variations to be meaningful. Significant impacts on peak hour traffic on cross and parallel roads appear limited to a few miles either side of the corridor.

27. How long will traffic congestion last?

It is not possible to accurately predict, for a new facility, the duration of the morning or evening traffic congestion. The freeway will be designed and constructed with metering at all access ramps, but with bypass lanes intended for HOVs and buses. The number of users, after adjustment of the metering rates in the early days of the operation of the completed highway, should not exceed the 3400 vehicles in the mixed flow lanes, plus up to 1000 HOVs in lane #1, which can travel the freeway at level of service D, approximately 42-46 mph. The calculated demand for the 6-lane freeway is generally 50% greater than capacity, so congestion may occur in the vicinity of the interchanges, regardless of the provision for storage of vehicles in the queue on metered entrance ramps. As long as the numbers of vehicles arriving at the freeway entrances exceed the available capacity, congestion will occur. The duration of those periods cannot be determined at this time.

28. The daily use figures are unclear. It is also unclear why the 8 lane freeway figures in the DEIR do not match with the Alternative Reduction Working Paper.

The DEIS figures are more detailed and refined than those published in the Alternative Reduction Working Paper. The tables in the DEIS and FINAL should be easier to comprehend and the Local Street Analysis Figures in Section VI-H have been added to better illustrate the changes in traffic densities which will result from the completion of Route 85.

29. What routes are currently being used to meet the "project demand" (Table VI-21)? Quantify the congestion relief on the current arterial system in the Saratoga area.

This information was prepared for all the project alternatives in the Local Street Analysis of January, 1986. See also the Local Analysis Figures, Section VI-H of the FINAL. The Santa Clara County Traffic Authority has proposed to prepare an analysis of that area using San Jose's TRANPLAN model to assist in evaluating the interchange locations. The results of that analysis will be available to Saratoga.

30. The DRAFT fails to acknowledge that auto oriented transport promotes additional auto use beyond study boundaries.

In cases where there is no auto facility to get from point A to point B, a new connecting route will generate additional trips. For the Route 85 corridor, however, there are numerous existing routes, so a new route would make little difference in deciding to go to work or shop. Section VII in this volume discusses the growth inducement fostered by the various transportation alternatives. New and more convenient routes may affect some home and business siting decisions; however, these are primarily affected by community land use regulations and there is no reliable model available for simulating such decisions which are outside the local land use plans.

31. Patronage totals for the Route 85 corridor are unclear. DRAFT Table III-2 shows daily patronage at four intersections, but does not show the entire Route 85 total daily patronage. Further, these figures are not in agreement with earlier traffic projections.

It is standard engineering practice to present traffic totals at or between interchanges along a route. These multiple figures, rather than a single value, are considered the total patronage for a route. The values presented are a representative sample from these studies.

Travel projections have been constantly updated since presented in the June, 1984, Route 85 DEIS/DEIR Alternative Working Paper. Travel projections for the Route 85 FEIS are for the year 2010.

32. The DRAFT does not explore the effects of freeway on-ramp metering on local street traffic.

A Local Street Analysis for 1990 A.M. peak hour traffic was submitted to the PAB in January, 1986. The model used for this support document, and the FINAL, utilized metered entrance ramps. Copies can be reviewed at Caltrans offices at 3333 California Street and 150 Oak Street, in San Francisco. Drivers who do not carpool will find a choice to be made in the peak hours between using the metered entrance ramps and returning to the roads they are currently using to get to their destinations. The vehicles which continue to use existing roads are calculated in the Local Street Analysis. Entrance ramps will be designed with storage capacity for vehicles delayed by the metering system,. so no blockage of local streets will occur.

33. The DRAFT does not address large scale benefits that would occur for residents well away from the immediate corridor area.

Based on findings from the Local Street Analysis, January, 1986, for 1990 A.M. peak hour traffic, reduction of local street congestion would extend to only about 2 miles from the Route 85 corridor. Traffic within the local highway network will experience a relatively large degree of relief from congestion as a result of the proposed Route 85 Project Alternative.

34. What would be the effect of Route 85 on streets near interchanges, for example Miller Avenue, between Prospect Road and Cox Avenue?

The Local Street Analysis, January, 1986, indicates that most Route 85 interchange streets, during 1990 peak A.M. commute hours, will experience an increase in traffic congestion when compared with the no build alternative. For example, Prospect Road, between Blaney Avenue and Saratoga Avenue, will experience an appreciable increase in traffic in both directions. Cox Avenue, between Saratoga Avenue and Saratoga-Sunnyvale Road, will experience a peak direction increase, but a total traffic decrease of about 40%.

Detailed analyses of the numerous non-interchange streets, such as Miller Avenue, are beyond the scope of the FINAL. In most instances Measure "A" is not responsible for traffic controls beyond the interchanges.

35. For each alternative discussed, what will be the present peak hour and peak (3 hour) period level of service (LOS), volume/capacity (V/C), and travel speeds for screenline locations near the Route 85 corridor for Route 17/880, Route 101, I-280, and existing Route 85?

Of primary importance to the optimum use of the expensive new and improved freeways planned for Santa Clara Valley will be the operational improvements to maximize the total number of vehicles which can travel on each section of highway. Foremost among those measures will be the effort to maintain level of service (LOS) D throughout the network by metering the entrance ramp volumes in most sections of the system. Without this measure, the freeways improvements will be ineffective in easing the traffic conditions during peak hours. When the vehicle flow can be maintained at the vicinity of LOS D and E, the vehicle to capacity ratio will be approximately 0.85, at speeds around 40-45 mph, during the peak flow.

36. What would be the present peak hour V/C ratios and travel speeds for the proposed LRT, HOV lanes, and HOV/bus facili-

ties in the Route 85 corridor with each alternative under consideration?

The projected fleet size, vehicle capacity and trip schedules for the LRT and bus systems in Section XIV of the DRAFT were established as the minimum necessary to meet the demand, and it was on this scale that the cost comparisons were calculated. The projection of HOV demand and usage for this project is 21.5% of the total demand (see Section III-B) for two person minimum carpools. As the HOV vehicles will bypass the ramp metering devices, usage should effectively meet demand; therefore, the HOV volume is independent of the specific freeway alternative studied.

The proposed bus and LRT systems were expected to operate well below theoretical capacity as long as the percentage of residents desiring to use mass transit remains at its very low level in Santa Clara County. The operation of the LRT will not be influenced by physical capacity restraints in the foreseeable future. Usage of the HOV lanes will, on some sections of Route 85, approach the capacity of the dedicated lane at LOS C before the year 2010.

37. Has thought been given to a transition plan to avoid diversion of traffic from Route 85 onto local streets, should land not be available to expand the present highway north of 280?

A study of potential impacts of the median widening of this portion of the existing Route 85 is currently underway; see TRF-17. Measures to minimize impacts on local streets prior to this widening will be developed with local communities prior to construction of the new portions of Route 85.

38. The FINAL should analyze the impacts of the Route 85 extension on the existing portion of the Route 85 freeway.

Impacts to existing Route 85 will be analyzed as part of the Triangle Study, which includes environmental analysis of the median widening of existing Route 85 and appropriate modifications to existing interchanges. See TRF-17. Completion of the Route 85/280 interchange will

relieve some potential congestion where new and existing freeway sections connect.

39. The following San Jose streets should be added to table VI-22, regarding possible local road closures: Mary Jane Way, Tilden Drive, Trent Drive, Anna Drive, and Toney Avenue.

During renegotiation of the freeway agreements, the possibility of constructing frontage roads connecting these local roads will be discussed. However, since these roads may be partially closed, they are listed in Table VI-23 of the FINAL.

40. Will Route 85 commuters who go north on Route 280 continue to have a single lane interchange?

The preliminary design for the Route 85/280 interchange was determined by the number of intersection legs, expected directional traffic volumes (1990), topography, interchange spacing, and design controls. The preliminary Route 85/280 interchange design proposes semidirectional interchange with loops on the minor left movements. Multiple lane connectors and semidirectional movements will be utilized to maximize merge lengths and minimize speed changes. This interchange will also be studied under the "Triangle Study". The final configuration will be determined during final design. See HWF-30 for weave considerations.

41. Has a transportation study been conducted for residents of the Cambrian Park and Blossom Hill Road areas who commute to the north Sunnyvale area?

Although a specific study has not been made for Cambrian Park and Blossom Valley residents traveling to the north Sunnyvale area, the "Local Street Analysis" provides relevant information on these commutes. Route 85 is not expected to greatly affect traffic beyond 2 miles from its corridor, so conditions north of Route 280 are expected to neither improve nor deteriorate as a result of Route 85.

For the peak A.M. commute from Blossom Valley to Route 280, Route 85 will improve the the east to west travel time from the Blossom Hill Road interchange to the Quito Road interchange. Traffic between Route 85 and Saratoga Avenue is projected to increase by 20% and the northbound traffic on the Lawrence Expressway between Saratoga Avenue and Route 280 is projected to be unchanged by Route 85.

The A.M. peak hour commute for Cambrian Park residents using existing streets would decrease from pre-Route 85 conditions due to diversion of east to west traffic by Route 85. Campbell Avenue, between the San Tomas Expressway and Hamilton Avenue, would have about 20 to 50% less traffic. Prospect Avenue, from Miller Avenue to the Lawrence Expressway, would decrease between 20 and 50%. Traffic volume on the Lawrence Expressway between Saratoga and Route 280 would remain the same.

21. TRANSIT

1. If Caltrans cannot separate the Route 87/101 section of the Route 85 project out to speed up the construction of that section, can the later construction be arranged so that there will be no interference with the construction of the Guadalupe LRT between Routes 87 and 101?

   Yes, the coordination of the Guadalupe LRT construction and the design of Route 85 is well underway with regular communications between the engineers for both projects and the Traffic Authority. The Traffic Authority advanced some funds to add to Guadalupe Corridor LRT Stage I construction some features of Stage II facilities to prevent waste of money in the design and construction of incompatible portions of the original Stage I design.

2. Will it be possible to maintain access to the LRT stations for pedestrians and vehicles if the LRT is in operation while Route 85 construction is proceeding?

   Yes, although the access may be restricted at some stations at various stages of the Route 85 construction, and users of Park and Ride lots may also be inconvenienced occasionally. It is already foreseen, by Caltrans and CSC Transit, that some lots will be modified by the construction of Guadalupe Corridor LRT Stage II facilities. Nevertheless, the construction projects can be designed and built in a manner that will provide adequate access for the LRT patrons at all times.

3. Consideration of extending an LRT along Route 85 to the Southern Pacific/Caltrain station in Mountain View is not responsible since no environmentally acceptable route appears to exist. If such a route is proposed, it must be described in the DRAFT for the PAB to exercise its judgement. The assumption of a bus route from the LRT to the Southern Pacific/Caltrain station is unjustified from a logistical view since the peak hour bus traffic volume, given the projected LRT ridership, would be unacceptable to any community.

   Extension of the LRT and/or bus service to the SP station in Mountain View was considered for modeling purposes only. No specific alignment has been chosen or proposed. The value of a direct connection from an LRT system to the Caltrain station is evident to all who have investigated mass transportation possibilities, so

the proposal may be revived and studied at some future date. See Table XIV-1 in the DRAFT.

4. The construction costs of the light rail include only that section in the corridor from Miyuki Drive to Stevens Creek Blvd. What is the anticipated cost of the entire loop? How does this affect cost per rider estimates?

The costs of the remaining portions of the loop can be derived from Table XIV-3 of the DRAFT. These are in 1985 dollars and are somewhat speculative, but should give an idea of the relative costs and the benefits of completing the loop through the heavily developed northern section of the region. See also Table XIV-1 in the DRAFT or estimates of the patronage the completed "loop" might obtain.

5. What would happen to the LRT ridership if the completion of the loop were never constructed?

The LRT ridership would not approach its projected levels. See Tables XIV-1 and XIV-3 in the DRAFT.

6. Will it be possible to maintain the acreage of the Park and Ride lots at the LRT stations on the Lick Branch of the Guadalupe LRT in the event that a freeway is built as part of the Route 85 project? What will be the additional cost of right of way ?

Yes, Caltrans is committed to maintaining the Park and Ride lots and will make such modifications as necessary to ensure that their capacity is not diminished. The design of the freeway section corresponding to the Lick Branch of the LRT is coordinated with the LRT designers. The County of Santa Clara Transportation Agency staff's report, "Potential Mitigation Measures for the Measure 'A' Impacts on the Guadalupe Corridor Light Rail System", is a being used to begin the mitigation effort.

The right of way expense has not been estimated, but the state will attempt to utilize whatever excess property

is available before making additional purchases of property for this purpose.

7. Any LRT assumptions about ridership or other characteristics based on Guadalupe Corridor studies are inaccurate because Santa Clara County is now revising Guadalupe Corridor usage projections.

Agreed, LRT patronage estimates in the DRAFT are based on "Guadalupe Corridor Alternatives Analysis" data. Revised patronage forecasts will be available from the Santa Clara County Transportation Agency in early 1987. They are expected to be considerably reduced from previous estimates.

8. Why is the maximum load point of the LRT at El Camino Real, neither a major job source or residential area?

This is the last loading point/station before the Southern Pacific/Caltrain station and the Lockheed industrial park areas and would have the most onboard passengers.

9. Why are transit stations needed at this time, when light ridership allows buses to swing off freeway, pick up passengers, then go back on again?

Transit stations will not be constructed on this project, but the freeway and structures will be designed to be compatible with any transit stations required by a future transit system. The presence of stations on the transitway would allow the express bus system to save time at each station and would thereby encourage ridership.

10. Why is it necessary to construct a Park and Ride lot for each freeway alternative? If built, should this cost be charged to our County transit budget?

Park and Ride lots are considered essential to increase the vehicle occupancy rate. A prime strategy for meeting the state and federal air quality standards in the Santa Clara Valley involves reducing the percentage of "drive alone" trips. See the discussion of Transportation Control Measures, Section VI-C-1-b.

11. What is the total daily express bus ridership today?

Latest estimates from the Santa Clara County Transportation Agency are 4500 express bus passengers per day, out of 94,000 total local and express bus passengers per day in the County.

12. What population density would justify an LRT system? Would West Valley qualify, after currently projected population growth, to connect the LRT to other areas (e.g. from Bernal Road to Route 237 and to Edenvale and Coyote Valley)? How would the LRT be funded?

Justification for an LRT is based on several variables in addition to relieving traffic congestion caused by increased population density. The Guadalupe Corridor EIS identified nine goals for evaluating the relative success of various transportation alternatives, including the following: improving transportation service, improving quality of the natural environment, conserving energy and land resources, stimulating economic growth, maximizing community and institutional acceptance and maximizing economic efficiency.

The proposed LRT corridor was selected after several studies, including the "Rapid Transit Development Project", and the two phased Alternative Analysis process required by UMTA to make informed funding decisions on major urban mass transit improvement projects. The first phase of the Analysis process was the Santa Clara Valley Evaluation Study and the second phase was an analysis of 14 highway/transit alternatives. A project alternative was selected following the preparation of the DRAFT and presentation to public and local decision makers. LRT connections to other locations would need to undergo similar detailed analysis and evaluation based on the goals set forth above and the Alternative Analysis required by UMTA, the federal funding source.

13. How will people get to work from the rail system at their stops?

In Section XIV-C of the DRAFT, it is assumed that the Santa Clara County Transportation Agency would provide sufficient feeder bus service to the Route 85 corridor stations to facilitate efficient and effective operation of transit alternatives, either express buses or LRT.

14. Why are pollution and energy requirements for the LRT not addressed in the EIR?

These issues were addressed in the DRAFT. For energy see Section VI-C-3, with Figures VI-10,12, for air pollution see Section VI-C-1-b, and for noise Section VI-C-2 and Table VI-10.

15. Why do light rail mass transit systems work in every city in the world and not in Santa Clara Valley?

Because a modern LRT system has not been completed in Santa Clara Valley, its potential is yet to be tested. Ridership of the Guadalupe LRT will provide preliminary indications of the acceptance of light rail transit in the county.

16. Why are we developing a Route 85 freeway when we have much more viable alternatives in BART and the new "rapid transit" being built? Why is BART not an alternative?

The background of the Route 85 project is discussed in Section I-A of the FINAL. The alternatives evaluated were those recommended by the Technical Advisory Committee and Policy Advisory Board. The type of transit system selected is based on costs, institutional and community preferences and other factors. Expansion of the Guadalupe LRT system seemed to have advantages over BART. See Figure III-3 for more reasons why other alternatives were considered. See TRN-12 for more background on transit alternatives studied.

17. Table I-1 indicates that the Bus/HOV combinations do not include vehicles within the construction costs itemized while Table V-6 shows the same costs but indicates that it includes vehicles. Which is correct?

The notes on Tables V-6, V-8, & V-9 were incorrect in the DRAFT. Vehicles costs are not included within the construction costs of the Bus/HOV Transitway

18. Won't the LRT have to be heavily subsidized?

Yes. See Section XIV-I of the DRAFT for a discussion of subsidies and comparisons between the alternatives, and Table XIV-14 for the projected subsidies in tabular form.

19. Why is there no review of the DRAFT or FINAL by UMTA? Or is there?

UMTA has reviewed the DRAFT only with respect to its adequacy as a "systems level plan" for the corridor. See following question.

20. It is imperative that an Alternative Analysis of a Route 85 transit alternative be started as soon as possible.

The preparation of an Alternative Analysis could proceed when the steps and conditions required by UMTA, which would provide funds for the study, have been satisfied. Among such conditions are the requirements that the transit system project studied be of the highest priority among all transportation projects in the community and that no other major project be under construction at the same time. Although the Project Alternative has provided that the freeway and all structures be compatible with a future mass transportation option, the construction of such a system is not foreseen until after the Measure "A" tax enhancement has expired, and the highway improvements for which it was enacted have been accomplished. Further mass transportation system de-

signs for the Route 85 corridor are not under consideration at this time.

21. The LRT costs were misleading because they included construction costs for the Guadalupe LRT which have already been appropriated.

The Guadalupe LRT portion costs were not included in the Route 85 portion estimates. Neither were the projected costs of "closing the loop" from Stevens Creek Boulevard back to Great America, except in Table XIV-3 of the DRAFT.

22. The vehicle cost of the express buses should have been based on a useful life of 12 years, not 30 years.

We agree. The correct figure for the annualized capital cost in Table XIV-3 in the DRAFT, for the Bus/HOV Transitway, should be approximately $4.7 million, not $3.8 million.

23. How would ridership of the bus/Hov transitway alternative be impacted if these special lanes were extended to connect with similar facilities at each end?

Extending this facility to the north would not be cost effective due to the relative balance of commute traffic in both directions. This condition makes reversable lanes less effective in moving commuters than alternate systems. In the 2010 design year, the peak direction on Route 85 will be southeast bound between Routes 17 and 101; whereas a HOV/Transitway on Route 87 at Blossom Hill would be moving north, the peak direction on that section. The two systems would therefore be operating in different directions and very few commuters could combine use of both facilities.

24. All the alternatives must contain a statement that a network of HOVways is a goal set in the County General Plan.

Comment noted.

25. The document did not address growth inducing effects of the LRT.

Section VII-C of the DRAFT addresses growth impacts of the LRT and highway modes. Any judgements about the relative merits of low density versus high density development is not appropriate to this analysis.

26. Traffic congestion, pollution and accidents resulting from streetcar use are not discussed in enough detail.

All of the proposed LRT alternatives included grade separated designs within the Route 85 Transportation Corridor, which prevent the LRT from crossing or sharing streets with other vehicles; this would reduce the accident and congestion problems usually associated with streetcar systems. Pollution is discussed in Section VI-C.

27. What is the LRT route?

The LRT system is described in Sections V-A-4 and XIV of the DRAFT.

28. Doesn't someone have to vote to reject or accept the LRT?

See question Gen-38 for a description of the decision making process.

29. Why not use articulated buses as a basis for the costs of express bus service instead of the smaller buses which gave a "worst case" analysis?

For calculating the required fleet size, it was apparent that not all buses would leave each station with full loads, due to the variables influencing station usage and patron arrival times. To simulate a fleet of buses running at less than 100% capacity, a fleet of smaller buses operating at 100% seated capacity was assumed. A similar approach was used to calculate an estimate more realistic than ideal for the cost/revenue figures for

the LRT. Each rail vehicle was considered to have a full capacity of 168 for those calculations, although the crush capacity of the vehicles studied is 258.

30. Why are costs for 12 new bus lines included in the bus system cost, while no such costs for feeder bus service is included for light rail transit?

See Section XIV-C-1a and -2 in the DRAFT. The 12 bus routes comprise the "express bus service" on Route 85. The personnel and equipment are additional to the existing bus system and the assumed "feeder" bus service required by either the express bus system or the Route 85 LRT system. As such, the express bus system costs are not equivalent to the feeder system costs for the LRT. Creating a feeder system out of the existing local bus system is projected to be primarily an effort in rescheduling and rerouting bus lines; significant additional vehicles and operators will not be required.

31. There is a discrepancy between the diagrams for the grade-separated LRT, Fig. I-2 in the DRAFT, and the ground level system shown with the other alternatives.

After the PAB eliminated the expressway alternatives from those to be analyzed by the DRAFT EIS, all build alternatives were fully grade separated. The LRT appears grade separated from the cross street in the drawing mentioned; however, it is also grade separated in the other typical sections, but may not appear so because the freeways with which it shares grade are fully grade separated from surface streets. In other words, the LRT, as proposed, would pass under or over all cross streets, whether built in conjuction with a freeway or alone.

32. The electricity cost projected for the LRT are far too low at $0.06 per KWH.

According to the Santa Clara County Transportation Agency, the projected KWH costs for the LRT is estimated at approximately $0.069791.

33. Are there Caltrans or FHWA standards for HOV lane construction? How would safety and ridership be influenced by more economical approaches such as used on county expressways?

Route 85 will be designed with the geometric cross section the FHWA considers appropriate/required for safety. The county has added HOV lanes, (in some cases on the outside of the mixed flow lanes) without buffers, as is standard practice when expanding existing facilities. The higher standard for new construction is somewhat more expensive and the expected advantage in safety has not been clearly confirmed by experience, but the expense is relatively small and the room is available within existing right of way lines.

34. Will there be adequate parking facilities if the Lean Avenue LRT station is developed? If not, it should be dropped from the Guadalupe Corridor project plans.

The FINAL assumes that all LRT stations will have Park and Ride facilities (see Section VI-H-4-d) However, due to the proximity of this station to the Snell and Blossom Hill stations, the County of Santa Clara Transportation Agency is petitioning UMTA to delete the Lean Avenue station from the Guadalupe Corridor Plans.

35. The projections for use of the 1990 transit system on page XIV-1 appear high, since the 5% annual increase is higher than has ever been experienced. Clarify.

The 1990 projections on page XIV-1 are based on the Guadalupe Corridor Alternatives Analysis data which is currently being revised by the Santa Clara County Transportation Agency. This estimate assumes 40,000 riders on the LRT, rather than 20,000 riders per day. The remaining 155,000 trips are for the bus system and Caltrain, which would be consistent with past growth.

36. How much will the LRT fare be? $0.85 or $1.00?

The actual LRT fares have not yet been finalized by the Santa Clara County Transportation Agency. However, the most recent thinking is that the fares would be comparable to the express bus fare, which is $1.00.

37. The document should have described the LRT as a streetcar.

The authors of the DRAFT have assumed that references to the Guadalupe LRT are sufficient to describe the nature of the vehicles and operation system. Unlike "streetcar" operations, routing of the LRT along existing streets with mixed traffic modes is not proposed for this grade separated system within the Route 85 corridor.

38. Why aren't the impacts of no transit evaluated for each alternative?

The negative impacts of building no transit system would be related to insufficient roadway capacity. Each alternative considered includes Transportation Control Measures (e.g. ridesharing, park and ride lots, etc.). See Sections XIV-E & I of the DRAFT, which include an evaluation of the cost/benefits of mass transit versus additional highway improvements. Also see Figure III-3 for an illustration of the relative capacity an LRT system would provide.

39. Do any of the alternatives work toward the 40% commute period ride sharing target in the County Plan?

The Project Alternative works toward a similar goal through Transportation Control Measures. As shown in Tables VI-7 and VI-8, HOV lanes, ridesharing, Park and Ride lots, and long range transit are Route 85 TCMs designed to increase HOV use and mass transit.

40. Will the LRT improve the use of the San Jose Airport?

The Guadalupe Corridor project includes an LRT station one mile from the airport. If shuttle buses are pro-

vided, more convenient airport access should be possible; this could result in increased use of the airport. See Section VI-H-5 of the FINAL for further discussion.

41. Why was there no maintenance facility for the LRT to Stevens Creek Boulevard? One would be needed.

The Guadalupe LRT maintenance facility would be sufficient for the development of the system to Stevens Creek Boulevard. If the system were to be completed through Mountain View and back to Great America, another, smaller, facility might be added in the NW quadrant.

XII

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XII. DISTRIBUTION LIST

This Final Environmental Impact Statement will be available for public review at the following locations:

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Los Gatos, CA 95030

Pearl Ave. Branch Library
4270 Pearl Avenue
San Jose, CA 95136

San Jose Main Branch Library
180 West San Carlos
San Jose, CA 95113

Saratoga Community Library
13650 Saratoga Avenue
Saratoga, CA 95020

Village Library
14410 Oak Street
Saratoga, CA 95020

Santa Teresa Branch Library
290 International Circle
San Jose, CA 95119

West Valley Branch Library
1243 San Tomas Aquino Road
San Jose, CA 95130

Cambrian Branch Library
1601 Foxworthy Avenue
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Sunnyvale, CA 94086

Mountain View Library
585 Franklin
Mountain View, CA 94042

Rose Garden Library
1580 Neglee Avenue
San Jose Ca 95126

The following is the list of agencies, organizations and individuals to which this Final Environmental Impact Report/Statement has been distributed.

GOVERNMENT OFFICIALS

The Honorable Pete Wilson
U.S. Senator
450 Golden Gate Avenue
San Francisco. CA 94102

The Honorable Alan Cranston
U.S. Senator
45 Polk Street
San Francisco, CA 94102

The Honorable Don Edwards
U.S. Representative
1042 W. Hedding Street
San Jose, CA 95126

The Honorable Tom Lantos
U.S. Representative
520 S. El Camino Real
Suite 800
San Mateo, CA 94402

The Honorable Ernest L. Konnyu
U.S. Representative
456 El Paseo de Saratoga
San Jose, CA 95130

The Honorable Norman Mineta
U.S. Representative
1245 S. Winchester Boulevard
San Jose, CA 95128

STATE LEGISLATORS

Rebecca Q. Morgan
State Senator
830 Menlo Avenue
Suite 100
Menlo Park, CA 94025

Dan McCorquodale
State Senator
100 Paseo de San Antonio
Suite 211
San Jose, CA 95113

Alfred E. Alquist
State Senator
100 Paseo de San Antonio
Suite 209
San Jose, CA 95113

Henry Mello
State Senator
701 Ocean Street
Room 318
Santa Cruz, CA 95060

Delaine Eastin
Assembly Member
39245 Liberty St., Suite M
Fremont, CA 94536

Byron Sher
Assembly Member
785 Castro Street
Suite C
Mountain View, CA 94041

John Vasconcellos
Assembly Member
100 Paseo de San Antonio
Suite 106
San Jose, CA 95113

Dominic Cortese
Assembly Member
100 Paseo de San Antonio
San Jose, CA 95124

Rusty Areias
Assembly Member
7415 Eigleberry Street #B
Gilroy, CA 95020-5711

Charles Quackenbush
Assembly Member
456 El Paseo de Saratoga
San Jose, CA 95130

FEDERAL AGENCIES

Environmental Protection Agency (EPA)
Office of Federal Activities
401 "M" Street, SW
Washington D.C., 20460

Director
Office of Environmental Review
U.S. Department of Interior
18th & "C" Streets, NW
Washington D.C. 20242

Director
Division of NEPA Affairs
U.S. Department of Energy, RM 4G-085
1000 Independence Avenue, SW
Washington D.C., 20585

Chief, Airports Branch
Federal Aviation Administration
831 Mitten Road
Burlingame, CA 94010

EIS Coordinator, Region 9
Environmental Protection Agency
215 Fremont Street
San Francisco, CA 94105

District Engineer
U.S. Army Corps Of Engineers
211 Main Street
San Francisco, Ca 94105

Environmental Clearance Officer
Department of Housing and
Urban Development
450 Goldengate Avenue
P.O. Box 36003
San Francisco, CA 94102

Director
Federal Railroad Administration
Office of Policy and Plans
400 7th Street, SW
Washington D.C., 20590

Regional Director
Federal Emergency Management
Agency
Building 105
Presido of San Francisco
San Francisco, CA 94129

State Conservationist
U.S. Soil Conservation Service
2828 Chiles Road
Davis, CA 95616-4999

Director
Office of Environmental Affairs
Department of Health and
Human Services
200 Independence Avenue, SW,
Room #537-F
Washington D.C., 20201

U.S. Fish and Wildlife Service
Div. of Ecological Services
2800 Cottage Way Rm. E-2727
Sacramento, CA 95825
Attn: Kent Nelson

Stuart Eurman
US Urban Mass Trans Ad.
211 Main St Ste 1160
San Francisco CA 94105

STATE AGENCIES

Assistant Vice President
Budget, Analysis, and Planning
247 University Hall
University of California
Berkeley, CA 94720

Curator
Museum of Vertebrate Zoology
2593 Life Science Building
Berkeley, CA 94720

Commander
California Highway Patrol
Golden Gate Division
455 Eight Street
San Francisco, CA 94103

Executive Director
California Public Utilities
Commission
350 McAllister Street
San Francisco, CA 94102

California Air Resources Board
P.O. Box 2815
Sacramento, CA 95812

Executive Secretary
California Natural Areas
Coordinating Council
1505 Sobre Vista Way
Sonoma, CA 95476

State Clearinghouse
Office of the Governor
Office of Planning and Research
1400 10th Street, Room 250
Sacramento, CA 95814

Director
Department of Water Resources
1416 Ninth Street
Sacramento, CA 95814

Executive Officer
State Lands Commission
1807 13th Street, Room 101
Sacramento, CA 95814

Secretary
Resources Agency
13th Floor, 1416 Ninth Street
Sacramento, CA 95814

Director
Department of Conservation
1416 Ninth Street
Sacramento, CA 95814

Executive Director
Energy Resources Conservation
and Development Commission
1516 9th Street
Sacramento, CA 95814

Director
State Department of Housing and
Community Development
921 Tenth Street
Sacramento, CA 95814

Director
Department of Parks
and Recreation
1416 Ninth Street
Sacramento, CA 95814

Director
Department of Health Services
744 P Street
Sacramento, CA 95814

Director
Department of Fish and Game
1416 Ninth Street, 12th Floor
Sacramento, CA 95814

Executive Officer
State Water Resources
Control Board
1416 Ninth Street
Sacramento, CA 95814

Executive Officer
Solid Waste Management Board
825 K Street, Suite 300
Sacramento, CA 95814

Executive Officer
State Air Resources Board
1102 Q Street
Sacramento, CA 95814

REGIONAL AGENCIES

Executive Director
Association of Bay
Area Governments
(Areawide Clearinghouse)
Metrocenter
Eight & Oak Streets
P.O. Box 2050
Oakland, CA 94604

Executive Director
Metropolitan Transportation
Commission
Metrocenter
101 Eight Street
Oakland, Ca 94607

Bay Area Air Quality
Management District
939 Ellis Street
San Francisco, CA 94109

San Francisco Bay Regional
Water Quality Control Board
1111 Jackson Street, Room 6040
Oakland, CA 94607

Natalie McConnell
MTC
101 8th Street
Oakland CA 94607

Mike Kim
Bay Area Air Qual Dis
930 Ellis St.
San Francisco CA 94115

Jean Royyen Kamp
Bay Area Air Qual Dis
930 Ellis St.
San Francisco CA 94115

General Manager
Bay Area Rapid Transit Dist.
800 Madison St.
Oakland, CA 94607

LOCAL AGENCIES

County of Santa Clara
70 W. Hedding
San Jose, CA 95110

Santa Clara County
Transit District
1555 Berger Drive
San Jose, CA 95112

Santa Clara County
Parks and Recreation
298 Garden Hill Drive
Los Gatos, CA 95030

Santa Clara Valley
Water District
5750 Almaden Expressway
San Jose, CA 95118

Don Weden
Santa Clara County
Office of Planning
70 W. Hedding Street
San Jose, CA 95110

City of San Jose(Mayor)
801 N. First Street
San Jose, CA 95110

Chief of Park Planning
City of San Jose
Parks and Recreation
151 West Mission Street
San Jose, CA 95110

County Sanitation
District No. 4 of
Santa Clara County
100 E. Sunnyoaks Avenue
Campbell, CA 95008

City of Cupertino (Mayor)
10300 Torre Avenue
Cupertino, CA 95014

Town of Los Gatos (Mayor)
P.O. Box 949
Los Gatos, CA 95030

City of Monte Sereno (Mayor)
18041 Saratoga-Los Gatos Road
Monte Sereno, CA 95030

City of Saratoga(Mayor)
13777 Fruitvale Avenue
Saratoga, CA 95070

City of Campbell(Mayor)
75 N. Central Avenue
Campbell, CA 95008

City of Mountain View(Mayor)
540 Castor Street
Mountain View, CA 94042

City of Sunnyvale(Mayor)
456 West Olive Avenue
Sunnyvale, CA 94086

Campbell Union High
School District
3235 Union Avenue
San Jose, CA 95124

Campbell Union School
District
155 N. 3rd Street
Campbell, CA 95008

Rod Annable
Chairperson
Cambrian Community Council
1625 de Alameda, Suite 700
San Jose, CA 95126

Santa Clara County Supervisors
Supervisors; Wilson, Legan
McKenna,Lofgren, Diridon
70 W. Hedding St.
San Jose CA 95110

Will Kempton, Santa Clara
County Traffic Authority
675 N. First St., #800
San Jose CA 95112

David K. Gill
Water Supply Mgr. SCVWD
5750 Almaden Expwy.
San Jose CA 95118

Clint Reeder
Campbell High Sch. Dist
3235 Union Ave.
San Jose CA 95124

Kim Clemans
SCC Airport Div.
1555 Berger Road
San Jose CA 95112

City of Los Altos
North San Antonio Rd
Los Altos CA 94022

City of Morgan Hill
17555 Peak Ave.
Morgan Hill CA 95307

City of Gilroy
7351 Rosanna St.
Gilroy CA 95020

John Fleming
Cupetino Sanitary Dis
20065 Stevens Creek
Cupertino CA 95014

Santa Clara County
Transportation Commission
524 Co. Administration Bldg.
70 West Hedding Street
San Jose, CA 95110

Commissioner Candace Arvin
1964 Hostetter Road
San Jose, CA 95131

Commissioner James Beall, Jr.
801 No. First St., Room 600
San Jose, CA 95110

Santa Clara Transportation
Agency
1555 Berger Drive
San Jose, CA 95112

ORGANIZATIONS AND INDIVIDUALS

California Wildlife
Federation
1023 J Street, Suite 203
Sacramento, CA 95814

Sierra Club
6014 College Avenue
Oakland, CA 94618

Friends of the Earth
530 7th Street S.E.
Washington, D.C. 20003

Business Manager
Operating Engineers Local #3
474 Valencia Street
San Francisco, CA 94103

Greyhound Lines, Inc.
Greyhound Tower
Phoenix, AZ 85077

Peerless Stages Inc.
228 Broadway
Oakland, CA 94607

Environmental Impact
Coordinator
California Native
Plant Society
909 12th Street, Suite 116
Sacramento, CA 95814

Kaiser Sand and Gravel
3311 Stanley Boulevard
P.O. Box 580
Pleasanton, CA 94566
Attn: Bob Good

Southern Pacific
Transportation Company
One Market Plaza
San Francisco, CA 94105
Attn: Engineering

Pacific Gas and
Electric Company
111 Almaden Boulevard
San Jose, CA 95115
Attn: Charlie Byrne

Pacific Bell
1333 Lawrence Expressway
Building 300
Santa Clara, CA 95051
Attn: Steve Petrocchi

Cupertino Municipal
Water Service
20065 Stevens Creek Blvd.
Cupertino, CA 95014
Attn: Chuck Auderheide

General Telephone Company
P.O. Box 68
Los Gatos, CA 95031
Attn: Don Jay

Gill Cable TV
1302 No. Fourth Street
San Jose, CA 95112
Attn: Gary Azeredo

IBM
General Products
Division
5600 Cottle Road
San Jose, CA 95193
Attn: R. R. Sillan

Peninsula Times Tribune
1912 Church Lane
San Pablo, CA 94806

San Jose Mercury News
750 Ridder Park Drive
San Jose, CA 95131

Meredith Newspapers
10950 N. Blaney Avenue
Cupertino, CA 95014

Michael J. Bogart
5233 Dent Avenue
San Jose, CA 95118

Bette Rose
Government Publications
The University Library
University of California
Santa Cruz, CA 95064

Reference Assistant
Evergreen Valley College
L.C.-Library
3095 Yerba Buena Road
San Jose, CA 95121

Richard Gaines Associates
340 Johnson Avenue
Los Gatos, CA 95030

M. J. Bishop
Manager, Mineral Resources
Kaiser Cement Corporation
Permanente, CA 95014

Edie Dorosin
SCC Manufacturing Grp
12 S 1st St. Ste 1220
San Jose CA 95113

Julie Bonds
Los Gatos Weekly
P.O. Box 65
Los Gatos CA 95030

J Hamburg/Planning Dep
Good Samaritan Hosp
2425 Samaritan Dr
San Jose CA 95124

Mike Bullock
21831 Hermosa Avenue
Cupertino CA 95014

Charles E. Newman
Vallco Park Ste SW2-130
10050 N Wolfe Rd
Cupertino CA 95014

Akos Szoboszlay
MTS Guldeway
1348 Sierra Ave.
San Jose CA 95126

Laramie Trevino
Saratoga News Ste 8
12378 Sartoga-Sunnyvale
Saratoga CA 95070

Steve Crawford
c/o Ruth & Going Inc.
P.O. Box 26430
San Jose CA 95159

Hal Kalish
86 W. Rincon Ave.
Suite 14
Campbell CA 95008

Steve Levin
760 Finchwood Way
San Jose CA 95120

Pam Kramer
Mercury News
2165 S Bascom Ave.
Campbell CA 95008

Shelley S. Williams
12960 Sartoga-Sunnyvale
Saratoga CA 95070

Joan Hershkowitz
19364 Shubert Ct.
Saratoga CA 95070

Omar Chatty
18216 A Hale Ave.
Morgan Hill CA 95037

David Fadness
445 Stratford Park Ct
San Jose CA 95136

Thomas J. Clausen
4637 Chabot Dr Ste 214
Pleasanton CA 94566

Stan Anticouni
SVCBA
P.O. Box 23525
San Jose CA 95153

Marie Rector
104 Oka Ct
Los Gatos CA 95030

Jack L. Shoenhair
LMSC Bldg 101 Fac 1
1111 Lockheed Way
Sunnyvale CA 94086

Peter B. Giles
12 So First St.,Suite 1220
San Jose CA 95113

James E. Veny/FMC Corp.
881 Martin Ave.
P.O. Box 58123
Santa Clara CA 95052

James E. Burke
495 Java Drive
Sunnyvale CA 94086

Manny Diaz
P G & E Room 309
111 Almaden Blvd.
San Jose CA 95115

Uday Kapoor
13430 Holiday Court
Saratoga CA 95070

Deborah Swartrage
526 Oroville
Milpitas CA 95035

Will Lester
20360 Sartoga-LosGatos
Saratoga CA 95070

Stephen Wight/Manager
Marrison-Knudson Eng
P.O. Box 2390
Newport Beach CA 92660

Stevens Sturlock
820 Menlo Ave.
Suite 100
Menlo Park CA 94025

Ann Maziotis
1140 Sartoga-Sunnyvale
San Jose CA 95014

Dony Ettenborough
c/o Honeywell
1130 OldMtView-Alviso
Sunnyvale CA 94089

Clovis Mirasson
147 Old Orchard Road
Los Gatos CA 95030

Ken Gast
13272 Via Arriba Dr.
Saratoga CA 95070

Dave Sponseller
48501 Milmont Dr.
Fremont CA 94538

Dianna Poole-Schefke
c/o Sen H. Mellow Off.
7949 Wren Ave Ste D
Gilroy CA 95020

Jack Rosenthal
19960 Stevens Creek
Cupertino CA 95014

Lawrence Noon
Cambrian Group Inc.
20 S Sta Cruz Ave #319
Los Gatos CA 95030

Steve Lohr
2021 The Alameda
Suite 145
San Jose CA 95126

Mark B. Lanchart
1600 S Main Plaza
Suite 170
Walnut Creek CA 94596

Jawanza Asayimese
Mawrins & Marktell
P.O. Box 31
Redwood City CA 94064

George S. Erskine
Gibbs & Hill Inc #200
226 W Brokaw Rd.
San Jose CA 95110

Allan Sumner
12243 Goleta Avenue
Saratoga CA 95070

Mrs Rose Otter
14836 Elton Drive
San Jose CA 95124

Mr. Earl Dahl
18325 McCoy Avenue
Saratoga CA 95078

Mr. Jeff Fisher
1350 Elwood Drive
Los Gatos CA 95030

Mr. Jefferey Fell
12020 Plumas Drive
Saratoga CA 95070

Mrs. Florence Sharps
12061 Marilla Drive
Saratoga CA 95070

Mr. Vitali Vizir
19902 Seagull Way
Saratoga CA 95070

Ed Tallstrom
20360 Sartoga-LsGatos
Saratoga CA 95070

Spiro Rifalovich
20360 Sartoga-LsGatos
Saratoga CA 95070

Pat Flynn
20360 Saratoga-LsGatos
Saratoga CA 95070

Frank Jelinch
20245 Stevens Creek Blvd.
Cupertino, CA 95014

Tom Dicato
435 Mat Ave.
San Jose, CA 95123

Derek Goes
6167 Ufe Drive
San Jose, CA 95123

Sarah Flynn
1390 Market St.
Fox Plaza Suite 902
San Francisco, CA 94102

Norman Bergrun
Bergrun Properties
26865 St. Francis Road
Los Altos Hills, CA 94022

Dennis DeChampeaux
14519 Bercaw Lane
San Jose, CA 95124

Marianne Mix
Power Engineering
P.O. Box 1066
Hailey, Idaho 83333

California Institute of
Public Transportation
42 Camino Encinas
Orinda, CA 94563

The following Home Owner Associations were provided copies of the FEIS.

CAMPBELL

White Oaks
Westmont Roundtree

LOS GATOS

Pollard Oaks
Los Gatos
Bonnie View Mobile Park
Golden State Mobilehome Owners League
Wedgewood Manor
Los Gatos Woods
Pollard Road
Wimbledon Place
Riconada Hill

SAN JOSE

Ballantree Park
Meridian Villa
Green Hills of Almaden
Almaden Valley
Blossom Hill
Sunny Haven South
Good Samaritian
Cambrian Park
Houge Park
Ponderosa Homes
Carlton Neighborhood Association
Woodside

VEP
Hacienda Quito

SARATOGA

Prides Crossing
Saratoga
Greenbriar Taxpayer Association
Blue Hills
Saratoga Park
Saratoga Oaks
Arroyo De Arguello
Wildwood Heights
Montalvo
Vineyards of Saratoga
Brookside

MONTE SERENO

Canyon

CUPERTINO

West Cupertino
Commons of Cupertino
Portal Plaza
Rancho Deep Cliff

MISCELLANEOUS

Monte Vista Improvement Association

XIII

EVALUATION PERSONNEL

XIII. ENVIRONMENTAL EVALUATION PERSONNEL

The following people were principally responsible for preparing this Final EIS/EIR or significant background papers.

Charles Morton - Transportation Studies; Associate Transportation Planner; Bachelor of Arts: Biology, Master of Science: Environmental Planning, California State University, Dominguez Hills; 6 years Caltrans experience with 4 years in transportation analysis.

Jo Ann Cullom - Environmental Analysis; Associate Environmental Planner; Bachelor of Arts: Environmental Studies, San Jose State University; Master of Science: Environmental Studies, California State University, Dominguez Hills; Master of Urban and Regional Planning, San Jose State University; 8 years Caltrans experience in environmental analysis.

James Spinello - Transportation Engineering Studies; Senior Transportation Engineer; Bachelor of Science: Civil Engineering, Northwestern University; 21 years Caltrans experience with 4 years in Transportation Studies.

Saaid Fakharzadeh - Transportation Engineering Studies; Associate Transportation Engineer; Bachelor of Science: Civil Engineering, University of Lowell, Massachusetts; 7 years Caltrans experience, 3 years experience in transportation studies.

Tillie Blackwell - Socioeconomics; Associate Environmental Planner; Bachelor of Arts: Economics, Hunter College; Master of Arts: Urban Sociology, San Francisco State University; 11 years Caltrans experience in social/economic studies.

William Shoemaker - Energy; Associate Transportation Engineer; Bachelor of Science: Civil Engineering, University of Arizona; Certificate in Environmental Planning, University of California, Davis; 11 years Caltrans experience in energy studies.

David Mayfield - Biology; Associate Environmental Planner; Bachelor of Arts: Environmental Studies and Planning, California State University at Sonoma; Master of Arts: Historical Biogeography, California State University at San Francisco; 5 years Caltrans experience in environmental analysis.

Chris Corwin - Air & Noise Report; Transportation Engineer; Bachelor of Arts: Math and English, San Francisco State University;

Master of Arts: Linguistics, University of Texas at Arlington; 6 years Caltrans experience in air and noise studies.

George Matsumoto - Air & Noise Report; Transportation Engineer; 23 years Caltrans experience in transportation engineering; 12 years Caltrans experience in air and noise studies.

Greg King - Historical Property Survey Report; Environmental Planner; Bachelor of Arts: History, Master of Arts: Public Historical Studies, University of California, Santa Barbara; 1 year Caltrans experience in historical studies.

Larry Weigel - Archaeological Survey Report; Environmental Planner; Bachelor of Arts: Anthropology, Humboldt State University; 2 years Caltrans experience in archaeological studies.

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.

Russell Ruhlen - Transportation Studies; Transportation Engineer; 18 years Caltrans experience in construction and design.

James Bane - Transportation Studies; Transportation Engineer; Bachelor of Science: Civil Engineering, California State University, Fresno; 4 years Caltrans experience in studies, design and construction.

Larry Layne - Transportation Studies; Transportation Engineer; Bachelor of Science: California Polytechnic, San Luis Obispo; 15 years Caltrans experience in transportation facilities planning and engineering.

XIV

TRANSIT PLAN

XIV. TRANSIT PLAN

The Transit Plan presented in the DEIR/DEIS addressed alternatives that included LRT or a Bus Transitway. The transit plan was a system level plan which represented the first of the two phases required by the Urban Mass Transportation Administration (UMTA). The project alternative does not provide for the construction of any transit facilities and therefore the second phase - an Alternatives Analysis (A/A) - was not pursued at this time. However, the project alternative does provide a median of sufficient width for future mass transportation facilities. The freeway will be geometrically designed to provide for such facilities, but the construction of any such facilities will not proceed until an Alternatives Analysis has been completed and approved by UMTA and funding has been provided.

XV

BIBLIOGRAPHY

XV. BIBLIOGRAPHY

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XVI

GLOSSARY

XVI. 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.

Base Floodplain: Area subject to flooding from the flood or tide having a one percent chance of being exceeded in any given year.

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 divided by the number of passengers. 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, other high occupancy vehicles would also use the facility.

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. Construction energy also includes the energy content of materials and the energy used to haul and place them.

dBA: The sound level obtained through the use of A-weighting characteristics specified by the American National Standards Institute (ANSI) Standard S1.4-1971. The unit of measure is the decibel (dB), commonly referred to as dBA when A-weighting is used.

Densification: A decrease in the volume of sands and silts due to vibration.

EBO: Equivalent Barrels of Oil

EIR: Environmental Impact Report. A state-required report to analyze potential environmental effects of state or local agency funded and privately funded projects. An EIR may be combined with an EIS.

EIS: Environmental Impact Statement. A federally required report to analyze the potential environmental effects of federally funded projects. An EIS may be combined with an EIR.

Endangered Species: According to the Federal Endangered Species Act of 1977, endangered species are any species in danger of extinction throughout all or a significant portion of its range.

EPA: Environmental Protection Agency.

Epicenter: The point on the earth's surface directly above the focus of an earthquake.

Expressway: An arterial highway with at least partial control of access, which may or may not be divided or have grade separation at intersections.

Feeder Bus: A bus line which provides service to a transit station.

FHWA: Federal Highway Administration

Freeway: A divided arterial highway with full control of access.

Hardship and Protection: Hardship is defined as a situation where unusual personal circumstances accrue to an owner of property and are aggravated or perpetuated by reason of pending

transportation facility purchase and cannot be solved by the owner without acquisition of the property by the State. Protection is defined as an acquisition of right of way where substantial building activity is both likely and imminent in the event early purchase is not undertaken.

HC: Hydrocarbons. Non-methane hydrocarbons contribute to the formation of photochemical oxidants, primarily ozone.

High Occupancy Vehicle (HOV): As used in this report, an HOV is any vehicle carrying two or more passengers, such as a carpool, vanpool, or bus.

HOV Lane: A roadway lane exclusively for the use of buses, carpools and vanpools.

Leq: A sound level equivalent to the average sound energy of a stated time period.

Leq(h): The hourly level of Leq.

Level of Service: Qualitative measure that represents the collective factors of travel under a particular volume condition.

Light Rail Transit (LRT): Electrically propelled rail vehicles operating singly or in trains which generally operate on their own right of way. However, they can operate in mixed traffic conditions along with automobile traffic.

Linehaul: A transit line which provides express service on a transitway. Linehaul is normally associated with bus operations.

Liquefaction: The phenomenon whereby loose saturated sands and silts behave like a liquid when an earthquake occurs.

Modal Split: Percentage of total person trips using a particular transportation mode.

Multimodal: The combination of two or more transportation modes, such as: car and bus, car and LRT, etc.

National Historic Preservation Act of 1966: A law requiring federally licensed, permitted, or funded projects to consider project impacts to historic and archaeological sites prior to ground disturbance. Projects must evaluate the National Register of Historic Places eligibility for historic and archaeological properties under Section 106 of the Act.

National Register of Historic Places (NRHP): A listing of historic and archaeological structures, districts, and sites significant to the Nation's history and, therefore, worthy of protection.

NPA: No Project Alternative.

NOAA: National Oceanic and Atmospheric Administration.

Nonattainment Area: An area designated by the Environmental Protection Agency as presently violating the National Ambient Air Quality Standards.

NOx: Oxides of nitrogen (nitrogen monoxide and nitrogen dioxide). Pollutants released during combustion of fossil fuels.

Park-and-Ride Lot: An automobile parking area near a highway or public transportation mode to allow patrons to drive to the parking lot, park the vehicle and ride in a carpool or on public transportation to the trip destination.

Peak Hour: The one hour period in a typical weekday which accommodates the largest number of automobile or transit patrons.

Project Limits: The project limits extend from Route 101 at Bernal Road (post mile R0.0) in South San Jose to the existing Route 85 at Stevens Creek Boulevard/Route 280 in Cupertino (~post mile R18.0).

Protection: Protection is defined as an acquisition of right of way where substantial building activity is both likely and imminent in the event early purchase is not undertaken.

Rare Species: A designation in the State of California for animals that are not presently threatened with extinction but which occur in such small numbers throughout their range that they may become endangered if their environments deteriorate 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 Habitat: 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 receiving 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.

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APPENDIX A