ROUTE CONCEPT REPORT

ROUTE 61

MARCH, 1986

TRANSPORTATION PLANNING
DEPARTMENT OF TRANSPORTATION

DISTRICT 4

SUMMARY

FINAL

MAR 14 1986

ROUTE CONCEPT REPORT
ROUTE 61

ALA 0.000 - ALA 31.508

This report defines the development concept for Route 61 in District 4, over a 20 year planning period (1985-2005).

ROUTE CONCEPT:

Segment A

ALA 00.000 - 12.700	Route 84 - Unconst. Route 238	D-40	4-Lane Freeway
ALA 12.700 - 14.800	Unconst. Route 238 - Route 112	D-40	6-Lane Freeway

Segment B

ALA 14.800 - 16.070	Route 112 - Hegenberger Rd	D-40	6-Lane Freeway
ALA 16.070 - 18.520	Hegenberger Rd - Island Dr	D-40	6-Lane Expressway
ALA 18.520 - 21.967	Island Drive - Route 260	D-35	4-Lane Conventional

Segment C

ALA 21.967 - 31.508	Route 260 - Route 580	To Remain Unconstructed

CONCEPT RATIONALE:

Route 61 would serve as a commuter and commercial route, relieving congestion on Route 880 in Alameda County. The route would parallel Route 880 from Route 84 near Newark to Route 80 in Oakland, and parallel Route 80 from Oakland to Route 580 in Albany. The location of the existing route and its combined residential, commercial, industrial and airport related traffic have created congestion on this route and intersecting Route 112 (known locally as Davis Street), and Route 260 (Webster Street). The close proximity of the highly utilized Route 880 directs additional traffic onto this highway.
The objective is to provide a facility that would minimize congestion for nearby residential communities, businesses, and the Oakland Airport area, in addition to accommodating traffic demands in the Route 880 corridor. To achieve this objective, Route 61 would need considerable improvements from Route 112 in the city of San Leandro to Route 260 in the city of Alameda. As a parallel facility for Route 880, Route 61 could provide considerable relief in this corridor between the cities of Newark and Oakland.

Based on the current and anticipated traffic problems on the various routes in the Nimitz corridor it is evident that a route by route assessment of future highway needs may not be the appropriate approach to identify future route concepts. It is felt that a Systems Analysis would be more appropriate. This analysis would identify highway and transit solutions. The constructed and unconstructed highway routes to be included in the highway network study would be: North-South, ALA 61, 238, 580, 880 and East-West, ALA 13, 77, 84, 92. Because of the problems identified in previous studies it would appear that a high priority should be placed on a feasibility study to relocate route 61 across San Leandro Bay or along Swan Way with a connection to Route 880 at 66th Avenue and possible extension to Route 80.

SUMMARY

ROUTE CONCEPT REPORT
ROUTE 61

ALA 0.000 - ALA 31.508

AREAS OF CONCERN

Several areas along constructed Route 61 are of concern to state, regional and local government agencies. Expansion of the Oakland International Airport, and residential and business development within the last ten years have contributed to the increase in demand for Route 61 between Route 112 (Davis Street) in the city of San Leandro and Route 260 (Webster Street) in the city of Alameda. Industrial development along Doolittle Drive, and near the airport is expected to have the greatest impact on traffic along Route 61 south of Harbor Bay Parkway. The development of the Harbor Bay Business Park and Residential community in the city of Alameda is expected to create additional traffic demand to the entire constructed portion of Route 61, especially to the portion north of Hegenberger Road and south of High Street in Alameda. The remainder of the constructed portion of Route 61 is nearly built out. Commercial development along Webster Street and military activity at the U. S. Naval Air Station will have the greatest affect on traffic along the constructed portion north of High Street.
As Route 880 becomes more congested, Route 61 will serve as an alternate route for short trips.

PROBLEM LOCATIONS

ALA 61	14.80	Junction Route 112 (Davis Street)	AM & PM Congestion.
ALA 61	15.94	Intersection with Hegenberger Road	AM & PM Congestion.
ALA 61	18.55	Intersection with Island Drive	AM & PM Congestion.
ALA 61	21.97	Junction Route 260 (Webster Street)	AM & PM Congestion.

IMPROVEMENTS *

The following are the improvements necessary to achieve the proposed concept for Route 61:

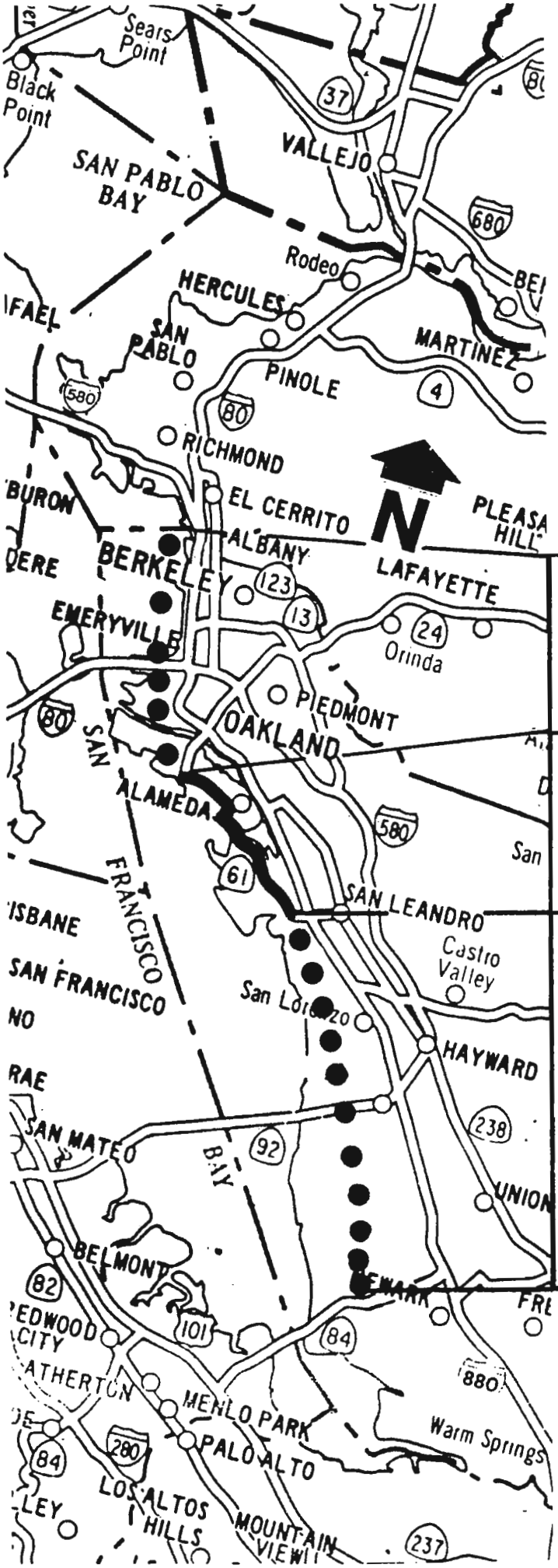
The construction of a four lane freeway between Route 84 (PM 0.00) and unconstructed Route 238 (PM 12.70).
The construction of a six lane freeway between unconstructed Route 238 (PM 12.70) and Route 112 (PM 14.80).
The improvement and realignment of the four lane conventional highway to a six lane freeway between Route 112 (PM 14.80) and Hegenberger Road (PM 16.07).
The improvement of the two to four lane conventional highway to a six lane expressway between Hegenberger Road (PM 16.07) and Island Drive (PM 18.52).

No improvements are proposed for Route 61 north of Island Drive.

* The ultimate type of improvements would depend upon the findings of the study mentioned in the "Concept Rationale".

LOCATION MAP

Route 61



C	ALA 31.508 ALA 21.967
B	ALA 14.800
A	ALA 0.000

ROUTE CONCEPT REPORT

ROUTE 61

ALA 0.000 to ALA 31.508

Prepared under the direction of:

3/7/86

CECIL L. SMITH, Chief — Date
Transportation Planning
District 4

Recommended Approval:

MAR 10, 86

GEORGE GRAY — Date
Deputy District Director
Planning and Programming

I approve this Route Concept Report as the guide toward which today's decisions and/or recommendations should be directed.

Approved:

3/13/86

BURCH C. BACHTOLD — Date
District Director
District 4

Approved:

D. L. WIEMAN, Chief — Date
Division of Transportation
Planning

Approved:

ALLAN HENDRIX, Chief — Date
Division of Highways
and Programming

Approved:

VINCE PAUL, Chief — Date
Division of Project
Development

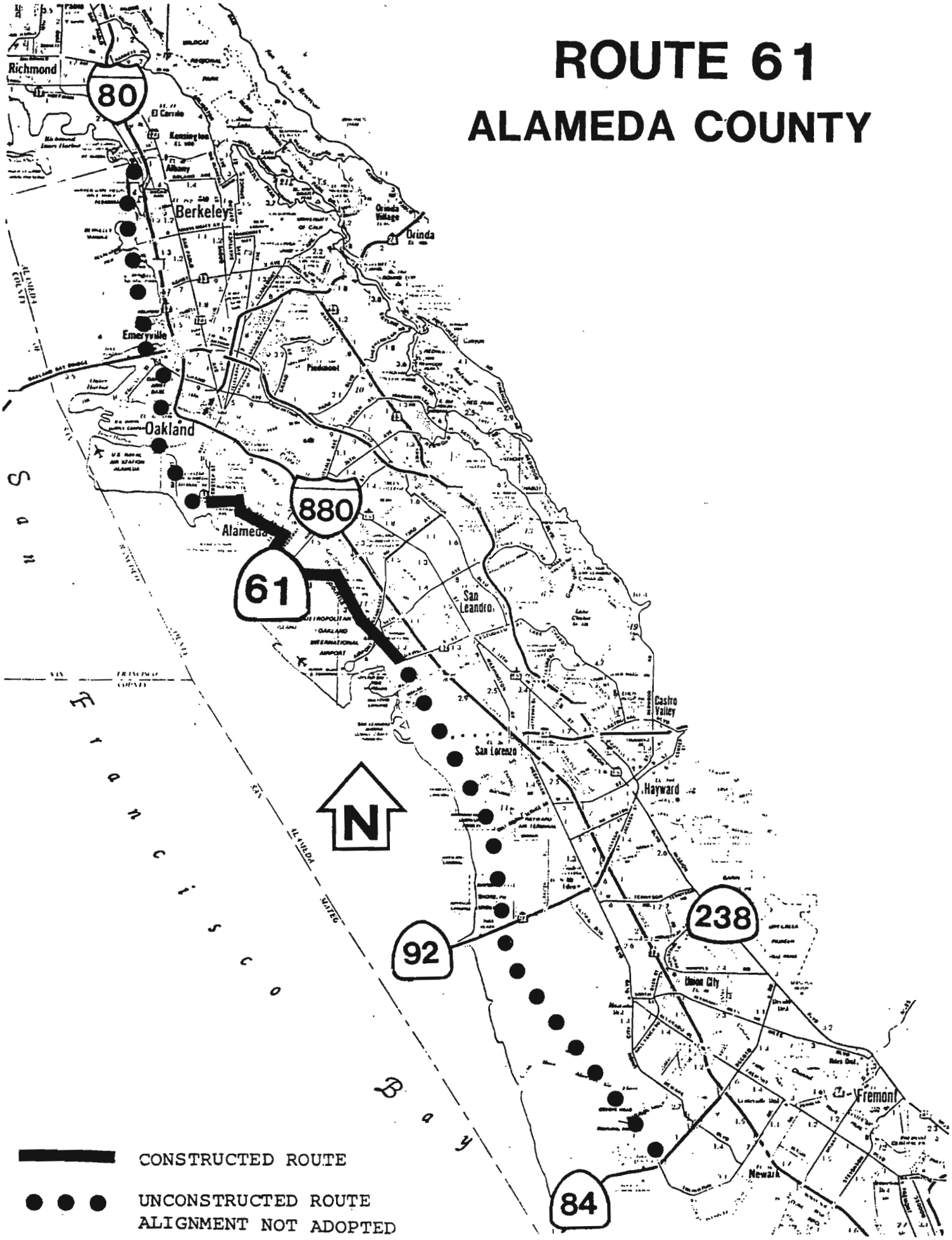
STATEMENT OF PLANNING INTENT

The Route Concept Report (RCR) is a planning document which expresses The Department's judgment on what the characteristics of the state highway should be to respond to the projected travel demand over the 20-year planning period. The RCR contains the Department's goal for the development of each route in terms of level of service and broadly identifies the nature and extent of improvements needed to reach those goals. The RCR then provides the basis for the preparation of Route Development Plans (RDP) and the system analysis which indicates the level of service provided on the system at a given level of funding.

Route concept reports are prepared in the districts and represent the combined expertise of district staff. Facility dimensions (e.g., roadway widths or number of lanes on a multi-laned facility) discussed in the RCR represent an initial planning approach to scoping candidate improvements and determining estimated costs.

All information in the RCR is subject to change as conditions change and new information is obtained. Consequently, the nature and size of identified improvements may change as they move through the project development stages, with final determinations made at the time of project planning and design. If the nature and size of improvements change from that included in this report during later project development stages, this will be cause to review the RCR for this route.

ROUTE 61
ALAMEDA COUNTY



CONSTRUCTED ROUTE

UNCONSTRUCTED ROUTE
ALIGNMENT NOT ADOPTED

ROUTE CONCEPT REPORT

ROUTE 61

ALA 0.000 - ALA 31.508

I ROUTE DESCRIPTION

Route 61 is approximately 31.5 miles in length and traverses the western portion of Alameda County. The route begins at Route 84 near the Newark/Fremont city limits and continues north to Route 580 in the city of Albany. Constructed Route 61 begins at Route 112 in San Leandro and continues north to Route 260 in the city of Alameda. Constructed Route 61 is a two to four lane conventional highway which traverses several local streets in the cities of San Leandro, Oakland and Alameda. This highway is characterized by many intersecting cross streets, signalized intersections, commercial and residential access, and on-street parking. Left turn pockets are in various locations. The segment south of the existing highway between Route 84 near the Newark/ Fremont city limits and Route 112 in the city of San Leandro, and the segment north of the constructed route between Route 260 in the city of Alameda and Route 580 in the city of Albany are unconstructed. Presently there are no maintained traversable routes along these segments. Through traffic must use Route 880. Streets near the Route 61 alignment are for local traffic only, and do not form a continuous north-south network along the unconstructed route.

The Entire route is in the California Freeway and Expressway System.

Constructed Route 61 (Segment B) between Route 112 (P.M. 14.80) and Route 260 (P.M.21.97) is in the Federal-Aid Urban System.

The State Legislative description of Route 61 is as follows:

> "Route 61 is from Route 84 near Newark to Route 580 near Albany via the vicinity of San Leandro and Oakland International Airport and via Alameda."
> "No portion of Route 61 shall be constructed as a freeway north of Hegenberger Road."

A proposed route could run along the eastern shoreline of the San Francisco Bay from the vicinity of the Newark/ Fremont city limits in Southern Alameda County, to the city of Albany. The terrain is low-lying flat lands. Much of the area along the southern and northern sections of the possible alignment is undeveloped open space, marshlands, and tidelands. The central segment is more developed with residential, commercial and industrial land use.

The State Department of Transportation at one time proposed developing a freeway facility which would connect the Dumbarton Bridge/Route 84, the San Mateo Bridge/ Route 92 and the proposed approach to the Southern Crossing. The Southern Crossing was a proposed bridge which would have spanned the San Francisco Bay, connecting the East Bay with San Francisco. Earlier plans for development of Route 61 were contingent on the proposed Southern Crossing. The adoption of the location of the Southern Crossing bridge approach (April 4, 1966) was an integral part of planned alternatives for Route 61. When the Southern Crossing project was voted down by the electorate in 1972, studies and planning for Route 61 were suspended. In the 1968 "Project Report for the Proposed Freeway Development in Alameda County of Route 61 between Route 84 near Newark and Route 112 in San Leandro", alternatives were set forth for the development of a freeway facility. An analysis of this study which is beyond the scope of this report should be conducted as the concept for route 61 is developed.

The cities of Alameda, Hayward, Oakland and San Leandro, the county of Alameda, and the Port of Oakland have formed a joint powers agency known as the Nimitz-Doolittle Transportation Corridor Study Agency (NIMDOTS Agency). Non-voting members of the agency are: the Metropolitan Transportation Commission (MTC), the Bay Area Rapid Transit District (BART), the Alameda-Contra Costa Transit District (AC Transit) and the California Department of Transportation -District 4 (Caltrans). This agency was established to identify and evaluate the transportation needs along the Nimitz Freeway-Doolittle Drive corridor, and adopt appropriate solutions to the transportation problems of the Nimitz-Doolittle corridor.

The NIMDOTS Agency Transportation Corridor Study limits are bounded by the San Francisco-Oakland Bay Bridge (Route 80) to the north, the San Francisco Bay to the west, Route 580 to the east, and the San Mateo-Hayward Bridge (Route 92) to the south.

The first of the NIMDOTS Agency Transportation Studies, titled: "The Nimitz-Doolittle Transportation Corridor Study Central Area Report", is scheduled for completion in March 1986. This is a comprehensive report defining transportation problems and evaluating alternative solutions for a transportation system in the Central Area of the NIMDOTS Corridor. The Central Area extends from Route 112 (Davis Street) in San Leandro to Island Drive in Alameda and from the Nimitz Freeway (Route 880) to the San Francisco Bay.

II PURPOSE OF ROUTE

Route 61 serves as a commercial, commuter and local collector route between Route 112 (Davis Street) and Route 260 (Webster Street). It serves the Doolittle industrial corridor in the cities of San Leandro and Oakland, and is an access route to the Oakland International Airport. Route 61 was to complete the highway network and serve as an access route to the approach to the proposed Southern Crossing. Plans for developing Route 61 were suspended when the Southern Crossing project was rejected. A new proposed route could serve as an alternate to Route 880, relieving the congestion in the Route 880 corridor and providing improved access to the Dumbarton and San Mateo-Hayward Bridges. The route would also relieve congestion along local streets, especially Doolittle Drive in the cities of Oakland and San Leandro.

III ROUTE SEGMENTS

A. Segment A:

04-ALA-61, PM 0.000 - 14.800
Route 84 - Route 112

Segment A of Route 61 begins at Route 84 near the Newark/ Fremont city limits and proceeds north to Route 112 in the city of San Leandro. The segment is unconstructed and the route alignment is not adopted. The route would pass through the cities of Fremont, Union City, Hayward, the unincorporated area of San Lorenzo and the city of San Leandro. The route alignment would lie between Route 880 and the San Francisco Bay, roughly paralleling Route 880. The land use is predominately open space and industrial, with marshlands located in the southern end of the segment, and residential neighborhoods in the northern end.

1. Existing Facilities

a) Highway Facility

Segment A is unconstructed. There is presently no adopted alignment for this segment of Route 61.

b) Current STIP (1985)

There are no projects planned for Segment A of Route 61 in the 1985 STIP.

c) Public Transit

Public transit is not available along this segment. There is no maintained traversable north-south route in the segment. AC Transit operates bus service on local streets and on Route 880.

d) Bicycle

There are no facilities for bicycles along this segment. Bicyclist must use local streets to the east of the segment.

e) Park and Ride

There are no Park and Ride facilities along this segment. There is a Park and Ride facility along Route 84 near Jarvis Avenue and Newark Blvd. Park and Ride facilities and Shared Use lots are located along Route 880.

f) Rail Transit

Rail transportation is not available in the immediate area of the route. BART provides service along the Route 880 corridor to the east, with service to Oakland, Berkeley and San Francisco. Several stations are located within five miles of the route.

2. Current Operating Conditions

Segment A is unconstructed.

3. Accident Rate

Segment A is unconstructed

4. Future Operating Conditions

The projected Annual Average Daily Traffic (AADT) for 1995 (2005), should this segment be constructed, ranges from 38,000 (45,000) at Route 84, to 71,000 (83,000) at Route 112. The AM Peak Hour traffic volumes are projected to range from 1,700 (1,800) northbound and 2,100 (2,700) southbound at Route 84 to 3,900 (4,700) northbound and 3,200 (3,600) southbound at Route 112.

If this segment were constructed, the 1995 Demand to Capacity ratio (D/C) would range from .53 (LOS of B-50) at Route 84 to .65 (Level of Service of C-45) at Route 112. The 2005 D/C would range from .68 (LOS of C-45) to .78 (LOS of C-45) at these respective locations.

These volumes are based on an assumed "shift" of approximately twenty-five percent from the Route 880 facility to the Route 61 freeway facility. The projected figures are also based on an assumed capacity of a four lane freeway south of unconstructed Route 238, and a six lane freeway north of unconstructed Route 238 to Hegenberger Road.

5. Route Concept

The concept for Segment A of the Route 61 corridor is an East Bay multi-modal transportation facility with a rail transit right-of-way and bicycle paths, as well as a freeway, all set in a regional park/green-belt. Route 61 would be a four lane freeway between Route 84 and unconstructed Route 238 and a six lane freeway between unconstructed Route 238 and Route 112. The conceptual LOS is D-40.
This freeway would help alleviate the congestion along the Route 880 corridor and provide for an alternate route to Route 880. The freeway would be depressed where possible, with an earthen sound barrier along the edge of the facility. Caltrans would construct the freeway and bicycle facility and provide for a rail transit right of way. Once completed, the bicycle paths and green-belt could be operated by the East Bay Regional Park District.

The freeway portion of the transportation facility could initially be a four to six lane freeway, with a wide median for transit use.

6. Improvements (Post 1985 STIP)

The following are the improvements necessary to achieve the proposed concept for segment A of Route 61:

The construction of a four lane freeway between Route 84 (PM 0.00) and unconstructed Route 238 (PM 12.70).
The construction of a six lane freeway between unconstructed Route 238 and Route 112 (PM 14.80).

7. Concept Concerns

The Route 61 alignment is not adopted along this segment. However, the entire route is already in the Freeway and Expressway System. If segment A of Route 61 is constructed, Route 238 should be extended from Route 880 to Route 61. This connection would provide access between Route 880, Route 580 and Route 61.

Much of the section of Route 61 south of unconstructed Route 238 is open space which is currently under consideration for development. Caltrans should confer, as soon as possible, with the Cities of Fremont, Newark, Union City, Hayward and San Leandro, to determine the right-of-way availability for the Route 61 facility.

The route alignment may possibly pass through the environmentally sensitive area of the San Francisco Bay eastern shoreline. The multi-modal transportation facility should blend into the surroundings as much as possible. The facility may traverse wetlands which are the habitat for the Salt Marsh Harvest Mouse, an endangered species. The alignment chosen should preserve the environmentally sensitive wetlands as much as possible.

A six lane freeway north of Route 238 is needed to meet the demand along existing Route 61, Route 880 and Doolittle Drive. This portion of Route 61 would serve as an access Route to the Route 580 corridor from the Doolittle Drive industrial corridor and the Oakland International Airport.

8. Local Concerns

The multi-modal transportation corridor could be extended south of Route 84 to Route 237 in Santa Clara County. The cities of Fremont and Newark, as well as Alameda County have expressed a position in favor of an extension of Route 61 south of Route 84. A corridor study, evaluating the feasibility of such an extension should be conducted as soon as possible.

Union City encourages the adoption of an alignment which supports local land use plans and transportation programs, and avoids habitat and wetland areas. The city has suggested the possibility of constructing Route 61 as an expressway rather than a freeway, using existing right-of-way within the city limits.

The disruption of the residential environment and of the established commercial and industrial areas is of concern, particularly in the city of San Leandro. The city of San Leandro is vitally concerned with the impact a major new facility would have on the areas through which it would pass. The city urges that future analyses emphasize alternatives which have a minimum impact on existing development.

The NIMDOTS Agency supports Caltrans' implementation of comprehensive technical studies of the Route 61 transportation corridor as a parallel transportation facility for the congested Route 880 in Alameda County. NIMDOTS has requested that Caltrans initiate a comprehensive Transportation Corridor Study of Route 61, including system analysis, environmental analysis, and project development.

It is important that the alternative decided upon by the Systems Analysis Study mentioned within the "Concept Rationale" of the Summary, preserve neighborhood character and protect community values, while providing for an adequate transportation network.

B. <u>Segment B:</u>

04-ALA-61, PM 14.800 - 21.967
Route 112 (Davis Street) - Route 260 (Webster Street)

Segment B of route 61 begins at Route 112 in the city of San Leandro and continues north through Oakland to the city of Alameda. Constructed Route 61 is a two to four lane conventional highway with a median at some locations. The route is a four lane conventional highway from Route 112 (Davis Street) to Airport Drive, a four lane divided conventional highway from Airport Drive to north of Hegenberger Road (Swan Drive). The route is a two lane conventional highway from Swan Drive to south of Island Drive, a four lane divided conventional highway from south of Island drive to High Street and a four lane conventional highway from High Street to Route 260 (Webster Street). Left turn pockets, and on-street parking are located in various areas along the route.
In the cities of San Leandro and Oakland, the route runs along Doolittle Drive. In the city of Alameda, the Route runs along Doolittle Drive, Otis Drive, Broadway, Encinal Avenue and Central Avenue. The southern part of the route serves the industrial area along Doolittle Drive, and is an access route to the Oakland International Airport; the land use is predominantly industrial and commercial. The northern part of the segment, on Alameda Island, is a tree lined residential street; the land use is residential and commercial.

For part of the segment the route runs adjacent to the San Leandro Bay Regional Shoreline, an area with both open space and industrial land use. A potential improvement is the extension of 66th Avenue across the bay to Route 61 in order to improve access between Route 880 and Route 61.

The posted speed limit along the route ranges from 35 to 50 MPH.

Routes 112 (Davis Street) and 260 (Webster Street) are both signed as 61. These routes run east-west, connecting Route 61 with Route 880. For information on those routes, refer to the Route 112 and Route 260 Route Concept Reports.

1. Existing Facilities

a) Highway Facility

The section of segment B from Route 112 (PM 14.80) to Airport Drive is a four lane conventional highway with a total traveled way width of 48 feet. The shoulders vary from 0 to 12 feet in width.
The section from Airport Drive to north of Hegenberger Road (PM 17.10) is a four lane divided conventional highway with a total traveled way width varying from 40 to 48 feet. The median width varies from 2 to 18 feet, and the shoulder widths vary from 2 to 12 feet.
The section from north of Hegenberger Road (Swan Drive) to south of Island Drive (PM 18.33) is a two lane conventional highway with a total traveled way width ranging from 24 to 36 feet. The shoulder widths vary from 8 to 11 feet.
The section of the segment from south of Island Drive to High Street (PM 18.93) is a four lane divided conventional highway with a total traveled way width varying from 48 to 52 feet. The median width varies from 2 to 6 feet, and the shoulder widths vary from 2 to 8 feet.
The section from High Street to Route 260 (PM 21.96) is a four lane conventional highway with a total traveled way width varying from 40 to 56 feet. The shoulder widths are 8 feet.

Left turn pockets are located in various locations throughout the segment, and on-street parking is allowed along the northern section of the segment. The terrain and grade are flat (0-3%).

b) Current STIP (1985)

The following is the project listed in the 1985 STIP for Segment B of Route 61:

FY 85/86 PM 16.5 - 18.6	.6 mile west of Hegenberger Road to Broadway Roadway Reconstruction.

c) Public Transit

AC Transit operates several bus lines along this segment of Route 61. The 57 bus line serves the Oakland International Airport, the Coliseum BART Station and downtown Oakland via MacArthur Blvd. The 57N line operates during commute hours, and serves the airport related businesses and industry located along Doolittle Drive. The 61 bus line operates between the San Leandro BART Station and downtown Oakland via the Oakland International Airport and the city of Alameda. The 63 and W1 bus lines serve Bay Farm Island and Alameda Island. The W bus line serves Bay Farm Island, Alameda Island, downtown Oakland and San Francisco during commute hours.

BART operates an express shuttle bus service between the Coliseum BART Station and the Oakland International Airport via Hegenberger Road.

d) Bicycle

Route 61, between Route 112 and High Street on Alameda Island is a suggested bicycle commute route. A designated bicycle lane is located along the shoulder of the highway between Route 112 and 98th Avenue and between Hegenberger Road and Swan Way. Bicyclists use the route especially in the residential neighborhoods of Alameda Island.

e) Park and Ride

There are no Park and Ride facilities along this segment.

f) Rail Transit

BART serves the Route 880 corridor, with several stations located within two miles of Route 61. BART has considered constructing a connector between the Coliseum BART Station and the Oakland International Airport. This could possibly be an elevated transit way for bus or rail transit. This connection could help alleviate traffic congestion along Hegenberger Road and Route 61 near the Airport.

2. Current Operating Conditions

The 1982 Annual Average Daily Traffic (AADT) ranges from a high of 23,000 at Island Drive at Bay Farm Island, to a low of 8,000 along Encinal Avenue on Alameda Island. The AADT at Route 112 is 17,000, and at Route 260 the AADT is 23,000. The AM Peak Hour traffic volumes are 1,100 northbound and 800 southbound at Route 112, 1,600 northbound and 900 southbound at Island Drive, 600 northbound and 300 southbound on Encinal Avenue, and 1,700 northbound and 900 southbound at Route 260.

The Volume to Capacity ratio (V/C) is .69 (Level of Service of C-30) at route 112, 1.00 (LOS of E-20) at Island Drive, .38 (LOS of A-35) along Encinal Avenue, and 1.00 (LOS of E-20) at Route 260. Truck traffic accounts for 9% of the total traffic south of Hegenberger Road, 6% of the total traffic from Hegenberger Road to Central Avenue, and 3% of the total traffic along Central Avenue.

3. Accident Rate (1/81 - 12/83)

There were 539 accidents with 281 injuries and five fatalities along this segment. The total accident rate was 5.18/MVM (Million Vehicle Miles), which was above the statewide average total accident rate of 5.11/MVM for similar facilities. The fatality rate was .048/MVM, which was above the statewide average fatality rate of .029/MVM.

4. Future Operating Conditions

The projected AADT for 1995 (2005) ranges from a high of 70,000 (79,000) at Route 112 to a low of 13,000 (14,000) at Broadway. The AADT is projected to be 36,000 (40,000) at Route 260. The AM Peak Hour traffic volumes are projected to be 4,000 (4,500) northbound and 2,700 (3,000) southbound at Route 112, 900 (900) northbound and 500 (500) southbound at Broadway, and 2,600 (2,800) northbound and 1,400 (1,500) southbound at Route 260.

The 1995 Demand to Capacity ratio (D/C) is projected to range from a high of 1.75 (LOS of F-05) between Island Drive and High Street to a low of .56 (LOS of B-35) at Broadway. The D/C is projected to be .67 (LOS of C-45) at Route 112 and 1.53 (LOS of F-05) at Route 260.
The 2005 D/C is projected to range from a high of 1.88 (LOS of F-05) between Island Drive and High Street to a low of .56 (LOS of B-35) at Broadway. The D/C is projected to be .75 (LOS of C-45) at Route 112 and 1.65 (LOS of F-05) at Route 260.

The 1995 and 2005 volumes include an assumed "shift" from Route 880. The projected volumes between Route 112 and Hegenberger Road are based on an assumed "shift" of twenty-five percent from the Route 880 facility to the Route 61 freeway facility, in addition to the projected demand along existing Route 61.

It is assumed that Route 61 will have been constructed as a four to six lane freeway between Route 84 and Hegenberger Road. It is also assumed that Route 238 will have been constructed as a freeway between Route 880 and Route 61, and that Hegenberger Road will have been widened to eight lanes between Route 61 and Route 880.

5. Route Concept

The concept for Segment B of Route 61 is a six lane freeway between Route 112 and Hegenberger Road, a six lane expressway between Hegenberger Road and Island Drive and a four lane conventional highway between Island Drive and Route 260. The freeway would be depressed where possible, with an earthen sound barrier along the edge of the facility. The conceptual LOS is D-40 for the freeway and expressway, and D-35 for the conventional highway.

The freeway and expressway sections of Segment B, between Davis Street (Route 112) and Island Drive, would serve as the northern extension of the East Bay multi-modal transportation facility, with a rail transit right of way and bicycle path. The San Leandro Regional Shoreline could serve as the northern extension of the regional park/green-belt.

6. Improvements (Post 1985 STIP)

The following are the improvements necessary to achieve the proposed concept for segment B of Route 61:

The reconstruction and realignment of Route 61 from a four lane conventional highway to a six lane freeway between Route 112 (PM 14.80) and Hegenberger Road (PM 16.07), including the construction of a grade separated interchange at Route 61 and Hegenberger Road (PM 16.07). The reconstruction of the two to four lane conventional highway to a six lane expressway between Hegenberger Road and Island Drive (PM 18.52).

7. Concept Concerns

The route cannot be improved to freeway or expressway status within the existing right of way. However, the majority of land immediately adjacent to Route 61 south of Island Drive is undeveloped or open space. Any widening of the facility east of the existing right of way along San Leandro Bay would require the approval of the San Francisco Bay Conservation Development Commission.

The Legislative Description states that Route 61 may not be built as a freeway north of Hegenberger Road. The concept of a six lane expressway between Hegenberger Road and Island Drive is in accordance with the Highway Statutes.

The existing residential and commercial development along Route 61 precludes widening of the route north of Island Drive. This section is already at the route concept of a four lane conventional highway. The conceptual "LOS D-35" is based upon the assumption that improvements in public transportation and the implementation of aggressive TSM measures will provide for the excess demand. If these assumptions are not realized, the concept will need to be reassessed.

To assure adequate access to Route 880, both Route 112 and Hegenberger Road should be improved to six to eight lane facilities between Routes 61 and Route 880.

A freeway connection should be constructed between Route 880 and Route 61 in the vicinity of 98th Avenue.

Further study is necessary to determine the possibility of Relocating Route 61 to the eastern shoreline of San Leandro Bay and extending the route as a conventional highway to Route 980 or possibly Route 80.

The ultimate type of improvements to Route 61 would depend upon the findings of the Systems Analysis Study mentioned in the "Concept Rationale".

8. Local Concerns

The city of San Leandro is vitally concerned with the impact a major new facility would have on the areas through which it would pass. The city urges that future analyses emphasize alternatives which have a minimum impact on existing development.

The city of Oakland supports the concept of a major roadway paralleling Route 880. However, the city has suggested that a less massive facility may be more appropriate, especially if the freeway facility is to terminate at Hegenberger Road. There is concern with the increased congestion along Route 880 north of Hegenberger Road attributed to Route 61.

The city of Oakland has suggested that Route 61 could be relocated along the Eastern Shoreline of San Leandro Bay. This roadway could diverge from Doolittle Drive at Swan Way, continue along the eastern shoreline of San Leandro Bay and the Inner Harbor, to Route 980 and possibly to Route 80 via West Grand Avenue. Existing Route 61 north of Swan Way could then be designated Route 260.

The city of Alameda is strongly opposed to any extension of Route 61 north of Webster Street (Route 260) in Alameda. The city has suggested that a roadway along the east side of San Leandro Bay, as suggested by the City of Oakland, be considered as a more viable routing of Route 61.

The Port of Oakland staff concurs with the concept for Segment B of Route 61.

C. <u>Segment C:</u>

04-ALA-61, PM 21.967 - 31.508
Route 260 - Route 580

Segment C begins at Route 260 in the city of Alameda and proceeds north, through the cities of Oakland, Emeryville, and Berkeley, to Route 580 in the city of Albany. The segment is unconstructed and the route alignment is not adopted. The Route alignment would lie between Route 880 and the San Francisco Bay, and pass through the U.S. Naval Supply Center on Alameda Island and in Oakland. North of the approach to the San Francisco Bay Bridge, the route alignment would lie along the mud flats of the bay. This is an environmentally sensitive area. The land use is predominantly residential on Alameda Island, residential and industrial in Oakland and open space in Emeryville, Berkeley and Albany.

1. <u>Existing Facilities</u>

Segment C is unconstructed. There is presently no adopted alignment for this segment of Route 61.

2. Current Operating Conditions

This segment is unconstructed.

3. Accident Rate

This segment is unconstructed.

4. Future Operating Conditions

Segment C is to remain unconstructed.

5. Route Concept

Segment C is to remain unconstructed. The purpose of the segment was to alleviate traffic congestion along the Route 880 corridor and serve as an access route to the approach to the once proposed Southern Crossing. With the demise of the Southern Crossing project, plans for the construction of Route 61 were suspended. Route 61 is still needed to alleviate traffic congestion along the Route 880/80 corridor, but the route cannot be built as a freeway north of Hegenberger Road in Oakland.

6. Improvements

Segment C of Route 61 is to remain unconstructed.

7. Concept Concerns

Route 61 could serve as an alternate route, alleviating congestion along the Route 880/80 corridor. The legislative restrictions placed on the route along this segment limits the solutions which may be used in solving the traffic congestion along the Route 880/80 corridor. Since an additional freeway cannot be built, improvements in public transportation and the implementation of aggressive TSM measures will be needed to meet the excess demand along the Route 880/80 corridor.

8. Local Concerns

The city of Oakland has suggested that Route 61 could be relocated along the Eastern Shoreline of San Leandro Bay and the Alameda Inner Harbor, and extended to Route 980, and possibly Route 80 via West Grand Avenue. The facility would be a conventional highway, and portions of the roadway could be composed of existing local streets.

The city of Alameda is strongly opposed to any extension of Route 61 north of Webster Street (Route 260) in Alameda. The city has suggested that a roadway along the east side of San Leandro Bay, as suggested by the city of Oakland, be considered as a more viable routing of Route 61.

The Port of Oakland has requested Caltrans to coordinate any future planning studies of Segment C of Route 61 with the Port of Oakland. The Port is concerned with the impact any facility would have on its marine terminal facilities and operation.

The city of Berkeley concurs with the concept for Segment C of Route 61. The city is strongly opposed to constructing Route 61 north of Route 80, and has requested that any reference to the section of Route 61 north of Route 80 be deleted entirely from future consideration.

EXHIBIT A

SEGMENT		A	B	C
		ALA 0.000	ALA 14.800	ALA 21.967
NO. OF LANES	PRESENT	—	2-4C	—
	1995	—	2-4C	—
	2005	—	2-4C	—
LEVEL OF SERVICE	PRESENT	—	E-30	—
	1995	—	F-05	—
	2005	—	F-05	—
TERRAIN		FLAT	FLAT	FLAT
GRADES		0-3%	0-3%	0-3%
ACTUAL	Accidents Per MVM	—	5.18	—
	Fatalities Per MVM	—	.048	—

EXHIBIT B

SEGMENT	A	B	C
	ALA 0.000	ALA 14.800	ALA 31.508 – ALA 21.967
A.A.D.T. (1000) 1982	—	8-23	—
A.A.D.T. (1000) 1995	—	13-44	—
A.A.D.T. (1000) 2005	—	14-50	—
P.H.V. (100) 1982	—	6-23	—
P.H.V. (100) 1995	—	5-28	—
P.H.V. (100) 2005	—	9-30	—
AVE. HWY SPEED	—	40	—
OPERATING SPEED	—	S	—
V/C 1982	—	.38-1.00	—
V/C 1995	—	.56-1.00	—
V/C 2005	—	.56-1.00	—
D/C 1995	—	1988	
D/C 2005	—		
YEAR CAPACITY WILL BE REACHED			

EXPLANATION TO EXHIBIT A

LEVEL OF SERVICE

The Level of Service (LOS) on a roadway is a measure of the speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort, convenience, and operating cost. A roadway designed for a certain level of service will actually operate at different levels throughout the day. The level of service on a roadway varies inversely as some function of the traffic volume. The level of service indicated in Exhibit A represents the level of service during the morning (AM) peak hour. The level of service in this report is followed by the minimum operating speed.

TERRAIN

Terrain describes the adjacent topography as to its effect on construction cost. (F-Flat, R-Rolling, M-Mountainous) Flat reflects minor grading; rolling reflects moderate grading; mountainous reflects heavy grading as economic considerations. (Note that terrain is a measure of construction cost while grade is a measure of operating cost as used in this report.)

GRADES

Grade line, a generalization of the grades along the center line of the highway. Four types of codes are used. They are:

F - Flat grade, 0-3 percent upgrades and downgrades.

R - Rolling, 3-6 percent upgrades and downgrades and sustained grades less than 1/4 mile.

M - Moderate, grades greater than 6 percent for one-half or less of the segment length and sustained grades 1/4 to 3/4 mile in length.

S- Steep, grades greater than 6 percent for more than one-half the segment length and sustained grades greater than 3/4 mile in length.

ACCIDENTS PER MVM

The number of accidents per million vehicle miles driven along the segment.

FATALITIES PER MVM

The number of fatalities per million vehicle miles driven along the segment.

EXPLANATION TO EXHIBIT B

AADT

Annual Average Daily Traffic (In Thousands) in both directions.

P.H.V.

Peak Hour Vehicles (In Hundreds). Number of vehicles in one direction during the morning (AM) Peak Hour.

AVE HWY SPEED

The Average Highway Speed is the weighted average of the design speeds within a highway section. (Design speed is a speed selected to establish specific minimum geometric design elements for a particular section of highway.) On non-engineered roads the average highway speed has been estimated.

OPERATING SPEED

A computed value based on the V/C ratio and the average highway speed. Basically, it represents the present operating speed during the present design hour volume of traffic on existing highway geometric. For segments of highway controlled by traffic signals, an "S" replaces the operating speed and generally represents speeds of 15 to 30 MPH.

V/C

Ratio of Volume to Capacity. Volume represents the number of vehicles per hour that want to travel the highway as represented by the present design hour volume. Capacity represents the maximum number of vehicles per hour the highway can carry as indicated in the Highway Capacity Manual.

D/C

Ratio of Demand to Capacity. Demand represents the projected number of vehicles per peak hour that will want to travel the highway. Capacity represents the maximum number of vehicles per hour the highway can carry.
(Projected Peak Hour Demand/Design Capacity).

ROUTE 61 EXISTING FACILITIES EXHIBIT C

ROUTE SEGMENT	COUNTY	FROM PM	TO PM	LENGTH	TOTAL TRAVELED WAY WIDTH (FEET)	NUMBER OF LANES	OUTSIDE SHOULDER WIDTH (FEET)	MEDIAN WIDTH (FEET)
A	ALA	0.000	14.800	14.800	-UNCONSTRUCTED-			
B	ALA	14.800	21.967	7.167	24-56	2C-4C	2-12	2-18
C	ALA	21.967	31.508	9.541	-UNCONSTRUCTED-			

EXHIBIT D

EXISTING FACILITIES (BRIDGES)
ROUTE 61

ROUTE SEGMENT	BRIDGE NUMBER	NAME OR DESCRIPTION	ROUTE	POST MILE	COUNTY	CITY	STRUCTURE TYPE OR PUC NUMBER	WID OR EXT TYPE	LENGTH (PROT)	WIDTH
B	33 86	SAN LEANDRO BAY	61	18.55	ALA	ALA	STDSS		963	58

ROUTE 61

ACCIDENT REPORT BETWEEN 1-81 AND 12-83

EXHIBIT E

LOCATION PM	SEGMENT	TOTAL	NO. OF ACCIDENTS FATAL	INJ	F+I	PERSONS KILLED	PERSONS INJURED	ACCIDENT RATE* FATAL	F+I	TOTAL	STATEWIDE RATE** FATAL	F+I	TOTAL
ALA 0.000 - 14.800	A						--UNCONSTRUCTED--						
ALA 14.800 - 21.967	B	539	5	196	201	5	281	.048	1.93	5.18	.029	1.84	5.11
ALA 21.967 - 31.508	C						--UNCONSTRUCTED--						

* RATES ARE PER MVM (MILLION VEHICLE MILES)

** STATEWIDE AVERAGES FOR THIS TYPE OF FACILITY

ROUTE 61 TRAFFIC TABLE EXHIBIT F

SEG	CO	POST MILE	TRUCK% AA DT	TRUCK% PK HR	1982 AA DT	1982 AM-PK AH	1982 AM-PK BK	1982 NO L	1982 V/C	1982 LOS	1982 LN	1982 CAP	1995 AA DT	1995 AM-PK AH	1995 AM-PK BK	1995 NO L	1995 D/C	1995 LOS	1995 LN	2005 AA DT	2005 AM-PK AH	2005 AM-PK BK	2005 NO L	2005 D/C	2005 LOS	2005 LN
A	ALA	0.0			JCT RTE 84																					
			9	6	--UNCONSTRUCTED--								38	17	21	2	0.53	B	2	45	18	27	2	0.68	C	2
A	ALA	1.3			PATTERSON RANCH ROAD																					
			9	6	--UNCONSTRUCTED--								38	17	21	2	0.53	B	2	46	18	28	2	0.70	C	2
A	ALA	3.0			DYER STREET																					
			9	6	--UNCONSTRUCTED--								38	17	21	2	0.53	B	2	47	19	28	2	0.70	C	2
A	ALA	4.7			SMITH STREET EXTENSION																					
			9	6	--UNCONSTRUCTED--								44	20	24	2	0.60	C	2	53	21	32	2	0.80	C	2
A	ALA	7.3			JCT RTE 92																					
			9	6	--UNCONSTRUCTED--								47	21	26	2	0.65	C	2	54	24	30	2	0.75	C	2
A	ALA	9.3			WEST WINTON AVENUE																					
			9	6	--UNCONSTRUCTED--								47	20	27	2	0.68	C	2	56	25	31	2	0.78	C	2
A	ALA	10.9			GRANT AVENUE																					
			9	6	--UNCONSTRUCTED--								44	20	24	2	0.60	C	2	51	23	28	2	0.70	C	2
A	ALA	12.7			JCT RTE 238																					
			9	6	--UNCONSTRUCTED--								* 71	39	32	3	0.65	C	3	* 83	47	36	3	0.78	C	3
A	ALA	13.8			MARINA BLVD																					
			9	6	--UNCONSTRUCTED--								* 71	39	32	3	0.65	C	3	* 83	47	36	3	0.78	C	3
A	ALA	14.8			JCT RTE 112																					

MILE POST 0.0 TO 14.8
ROUTE UNCONSTRUCTED IN 1982; ROUTING NOT DETERMINED.
ROUTING AND INTERCHANGES/INTERSECTIONS ARE ASSUMED.
MILE POSTS 1.3 TO 13.8 ARE APPROXIMATE.
PROJECTED TRAFFIC FIGURES ARE BASED ON AN ASSUMED "SHIFT" OF APPROXIMATELY TWENTY-FIVE PERCENT FROM THE ROUTE 880 FACILITY TO THE ROUTE 61 FREEWAY FACILITY BETWEEN ROUTE 84 AND 112.

NOTE: THE ROUTE CONCEPT DEMAND FORECASTS FOR ROUTE 880 DO NOT ACCOUNT FOR THESE SHIFTS TO THE ROUTE 61 FREEWAY FACILITY.

* PROJECTED TRAFFIC VOLUMES BETWEEN ROUTE 238 AND ROUTE 112 INCLUDE AN ASSUMED "SHIFT" FROM ROUTE 880 IN ADDITION TO THE PROJECTED DEMAND ALONG DOOLITTLE DRIVE. IT IS ASSUMED THE ROUTE 61 FACILITY WILL HAVE BEEN CONSTRUCTED AS A FREEWAY BETWEEN ROUTE 84 AND HEGENBERGER ROAD.

ROUTE 61 TRAFFIC TABLE EXHIBIT F

SEG	CO	POST MILE	TRUCK% AA DT	TRUCK% PK HR	1982 AA DT	1982 AM-PK AH	1982 AM-PK BK	1982 NO L	1982 V/C	1982 LOS	1982 LN	1982 CAP	1995 AA DT	1995 AM-PK AH	1995 AM-PK BK	1995 NO L	1995 D/C	1995 LOS	1995 LN	2005 AA DT	2005 AM-PK AH	2005 AM-PK BK	2005 NO L	2005 D/C	2005 LOS	2005 LN
B	ALA	14.80			JCT RTE 112																					
			9	6	17	11	8	2	0.69	C	2	800	* 70	40	27	3	0.67	C	3	* 79	45	30	3	0.75	C	3
B	ALA	14.92			DOOLITTLE/EDEN																					
			9	6	17	11	8	2	0.69	C	2	800	* 70	39	26	3	0.65	C	3	* 78	44	29	3	0.73	C	3
B	ALA				SEVERAL INTERSECTIONS																					
			9	6	14	9	6	2	0.56	B	2	800	* 67	38	26	3	0.63	C	3	* 72	42	28	3	0.70	C	3
B	ALA	15.94			HEGENBERGER/98TH																					
			6	4	19	13	8	2	0.81	D	2	800	32	22	14	2	1.38	F	4	35	23	16	2	1.44	F	4
B	ALA				SEVERAL INTERSECTIONS																					
			6	4	14	10	5	1	1.00	E	2	1000	23	16	9	1	1.60	F	2	25	18	10	1	1.80	F	2
B	ALA	18.52			ISLAND DRIVE																					
			6	4	23	16	9	2	1.00	E	3	800	38	28	15	2	1.75	F	4	41	30	16	2	1.88	F	5
B	ALA	18.55			SAN LEANDRO BRIDGE																					
			6	4	18	13	7	2	0.81	D	2	800	29	21	11	2	1.31	F	3	31	23	12	2	1.44	F	4
B	ALA	19.44			BROADWAY																					
			6	4	9	6	4	2	0.38	A	2	800	15	10	5	2	0.63	C	2	16	11	6	2	0.69	C	2
B	ALA				SEVERAL INTERSECTIONS																					
			6	4	15	10	6	2	0.63	C	2	800	23	16	9	2	1.00	E	3	25	18	9	2	1.13	F	3
B	ALA	19.84			BROADWAY/ENCINAL																					
			6	4	8	6	3	2	0.38	A	2	800	13	9	5	2	0.56	B	2	14	9	5	2	0.56	B	2
B	ALA				SEVERAL INTERSECTIONS																					
			6	4	10	7	4	2	0.44	B	2	800	15	11	6	2	0.69	C	2	16	12	6	2	0.75	C	2
B	ALA	21.27			CENTRAL/SHERMAN																					
			3	2	11	8	4	2	0.50	B	2	800	16	12	6	2	0.75	C	2	18	13	7	2	0.81	D	2
B	ALA				SEVERAL INTERSECTIONS																					
			3	2	23	17	9	2	1.00	E	3	850	36	26	14	2	1.53	F	4	40	28	15	2	1.65	F	4
B	ALA	21.97			JCT RTE 260																					

MILE POST 14.80 TO 15.94:
THE 1995 AND 2005 VOLUMES BETWEEN ROUTE 112 AND HEGENBERGER ROAD INCLUDE AN ASSUMED "SHIFT" OF APPROXIMATELY TWENTY-FIVE PERCENT FROM THE ROUTE 880 FACILITY.

MILE POST 15.94 TO 21.97
THE 1995 AND 2005 VOLUMES INCLUDE AN ASSUMED "SHIFT" FROM THE ROUTE 880 FACILITY.

* PROJECTED TRAFFIC VOLUMES BETWEEN ROUTE 112 AND HEGENBERGER ROAD INCLUDE AN ASSUMED "SHIFT" FROM ROUTE 880 IN ADDITION TO THE PROJECTED DEMAND ALONG EXISTING ROUTE 61 AND DOOLITTLE DRIVE. IT IS ASSUMED THE ROUTE 61 FACILITY WILL HAVE BEEN CONSTRUCTED AS A FREEWAY BETWEEN ROUTE 84 AND HEGENBERGER ROAD

ROUTE 61 TRAFFIC TABLE EXHIBIT F

SEG	CO	POST MILE	TRUCK% AA DT	TRUCK% PK HR	1982 AA DT	1982 AM-PK AH	1982 AM-PK BK	1982 NO L	1982 V/C	1982 LOS	1982 LN	1982 CAP	1995 AA DT	1995 AM-PK AH	1995 AM-PK BK	1995 NO L	1995 D/C	1995 LOS	1995 LN	2005 AA DT	2005 AM-PK AH	2005 AM-PK BK	2005 NO L	2005 D/C	2005 LOS	2005 LN
C	ALA	21.97			JCT RTE 260																					
			3	2	--UNCONSTRUCTED--								27	15	15	2	0.56	B	2	30	16	16	2	0.59	C	2
C	ALA	24.80			7TH STREET																					
			3	2	--UNCONSTRUCTED--								27	15	15	2	0.56	B	2	30	16	16	2	0.59	C	2
C	ALA	25.90			WEST GRAND AVENUE																					
			3	2	--UNCONSTRUCTED--								18	9	11	2	0.41	B	2	20	10	12	2	0.44	B	2
C	ALA	27.20			POWELL STREET EXTENSION																					
			3	2	--UNCONSTRUCTED--								17	8	11	2	0.41	B	2	28	9	12	2	0.44	B	2
C	ALA	27.90			ASHBY AVENUE EXTENSION																					
			3	2	--UNCONSTRUCTED--								15	7	10	2	0.37	A	2	26	8	11	2	0.41	B	2
C	ALA	29.40			UNIVERSITY AVENUE EXTENSION																					
			3	2	--UNCONSTRUCTED--								14	7	10	2	0.37	A	2	15	8	11	2	0.41	B	2
C	ALA	30.20			GILMAN STREET EXTENTION																					
			3	2	--UNCONSTRUCTED--								13	6	9	2	0.33	A	2	14	7	10	2	0.37	A	2
C	ALA	31.00			BUCHANAN STREET EXTENSION																					
			3	2	--UNCONSTRUCTED--								12	6	9	2	0.33	A	2	13	7	10	2	0.37	A	2
C	ALA	31.80			JCT RTE 880 AT CENTRAL AVE																					

MILE POST 21.97 TO 31.80
ROUTE UNCONSTRUCTED IN 1982; ROUTING NOT DETERMINED.
ROUTING AND INTERSECTIONS ARE ASSUMED; MILE POSTS ARE APPROXIMATE

THE 1995 AND 2005 VOLUMES ARE BASED ON THE FOLLOWING ASSUMPTIONS:
MILE POST 21.97 TO 24.80: VOLUMES ASSUMED TO BE 3/4 OF VOLUME BETWEEN MILE POST 21.27 AND 21.97.
MILE POST 24.80 TP 31.80: VOLUMES DECREASING IN THE NORTHERLY DIRECTION TO REFLECT THE ASSUMED GENERALLY LOCAL-SERVING CHARACTER OF THIS SEGMENT.

EXPLANATION TO TRAFFIC VOLUME TABLES

COLUMN	DESCRIPTION
SEG	Route Segment
CO	County Abbreviations
POST MILE	Post Mile in County
AADT	Annual Average Daily Traffic (Thousands)
AM-PK	Morning Peak Hour Traffic
AH	Volume - Ahead Direction (Hundreds)
BK	Volume - Back Direction (Hundreds)
NO L	Number of Lanes (Existing) - One Direction
V/C	Volume/Capacity: Ratio of Peak Hour Volume to Maximum Number of Vehicles per Hour for Peak Direction During Peak Hour (Peak Hour Volume/Capacity)
D/C	Demand/Capacity: Ratio of Volume of Projected Demand to Maximum Number of Vehicles per Hour (Projected Peak Hour Demand/Design Capacity)
LOS	Level of Service According to Functional Classification of the Route Relative to the Terrain and Facility
LN	Number of Lanes Needed to Meet the Conceptual LOS
CAP	Capacity of Facility (Capacity per Lane)

Facility	Vehicles per Hour per Lane
	Expected Pk Hr Capacity
Freeway	2000
Expressway or Divided/ One-Way Arterial	1500
Other Type of Arterial	1350
Rural Road	1200
City Street or Mountainous Road	800

% TRUCK AADT	Truck Percent of the Average Annual Daily Traffic Count
% TRUCK PK HR	Truck Percent at Peak Hour

ROUTE 61 FACILITY TABLE

EXHIBIT G

SEG	COUNTY	POST MILES BEGIN END / LOCATION	1985 -PRESENT- LOS	1985 -PRESENT- FACILITY	1995 -1984 STIP- LOS	1995 -1984 STIP- FACILITY	2005 -NO BUILD- LOS	2005 -NO BUILD- FACILITY	2005 -ROUTE CONCEPT- LOS	2005 -ROUTE CONCEPT- FACILITY	2005 TARGET -NEED- LOS	2005 TARGET -NEED- FACILITY
A	ALA	00.00 - 12.70 ROUTE 84 - UNCONSTRUCTED ROUTE 238	UNCONSTRUCTED		UNCONSTRUCTED		UNCONSTRUCTED		D-40	4F	D-40	4-6F
	ALA	12.70 - 14.80 UNCONSTRUCTED ROUTE 238 - ROUTE 112	UNCONSTRUCTED		UNCONSTRUCTED		UNCONSTRUCTED		D-40	6F	D-40	4-6F
B	ALA	14.80 - 16.07 ROUTE 112 - HEGENBERGER ROAD	C-30	4C	F-05	4C	F-05	4C	D-40	6F	D-40	4-6F
	ALA	16.07 - 18.52 HEGENBERGER ROAD - ISLAND DRIVE	E-30	2C-4C	F-05	2C-4C	F-05	2C-4C	D-40	6E	D-40	4-6F
	ALA	18.52 - 21.96 ISLAND DRIVE - ROUTE 260	C-25	4C	E-15	4C	F-05	4C	D-35	4C	D-40	4-6F
C	ALA	21.96 - 31.50 ROUTE 260 - ROUTE 580	UNCONSTRUCTED		UNCONSTRUCTED		UNCONSTRUCTED		TO REMAIN UNCONSTRUCTED		D-40	4-6F

ROADWAY LEVEL OF SERVICE

EXPLANATION

LEVEL OF SERVICE A — **VOLUME/CAPACITY RATIO = .00 - .40**

Free flow conditions
Low volumes
High operating speed
Uninterrupted flow
No restriction on maneuverability
Drivers maintain desired speeds
Little or no delays

LEVEL OF SERVICE B — **VOLUME/CAPACITY RATIO = .41 - .58**

Stable flow conditions
Operating speeds beginning to be restricted

LEVEL OF SERVICE C — **VOLUME/CAPACITY RATIO = .59 - .80**

Stable flow but speed and maneuverability
restricted by higher traffic volumes
Satisfactory operating speed for urban conditions
Delays at signals

LEVEL OF SERVICE D — **VOLUME/CAPACITY RATIO = .81 - .90**

Approaching unstable flow
Low speeds
Major delays at signals
Little freedom to maneuver

LEVEL OF SERVICE E — **VOLUME/CAPACITY RATIO = .91 - 1.00**

Lower operating speeds
Volumes at or near capacity
Unstable flow
Major delays and stoppages

LEVEL OF SERVICE F — **VOLUME/CAPACITY RATIO = 1.01 OR MORE**

Forced flow conditions
Low speeds
Volumes below capacity, may be zero
Stoppages for long periods because of
downstream congestion

RELATIONSHIP OF LEVEL OF SERVICE TO OPERATING SPEED

Level of Service	Facility Type	Minimum Operating Speed	Assigned Operating Level of Service
B	Freeways, Expressways, or Multi-Lane Divided Conventional Highways	55 MPH	B-55
B	Two-Lane Conventional Highways	50 MPH	B-50
C	Freeways or Expressways	50 MPH	C-50
C	Multi-Lane Conventional Highways	45 MPH	C-45
C	Two-Lane Conventional Highways	45 MPH	C-45
C	Two-Lane Conventional Highways	40 MPH	C-40
D	Freeways or Expressways	40 MPH	D-40
D	Conventional Highways	35 MPH	D-35
D	Conventional Highways with controlling traffic signals	15-30 MPH	D-35

The operating level of service on a roadway is a measure of the speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort, convenience, and operating cost. A roadway designed for a certain level of service will actually operate at different levels throughout the day. The level of service on a roadway varies inversely as some function of the traffic volume.

In the Route Concept Report, the level of service is followed by the minimum operating speed.

* Not all conditions are represented by this chart.

TRAVEL DEMAND PROJECTIONS METHODOLOGY (ABSTRACT)

1995 & 2005 Demand Person Trip Projections
34 x 34 ABAG/MTC Region Superdistricts Matrix
Computer-Assisted Four-Step Conventional Gravity Model
(Housing & Employment based on ABAG's "Projections 83")

December 1983

INTRODUCTION: This modeling procedure developed traffic volume expansion factors and applied them to "census" volumes ("1980 Traffic Volumes on California State Highways") of state Highway segments at ABAG/MTC superdistrict (SD) borders (screenlines).

These projected 1995 and 2005 volumes were the basis for projecting volumes on on all mainline segments for the 1983/84 "Route Concept Reports".

In essence, this methodology is consistent with the elements of the conventional "four-step" procedure for travel demand forecasting as summarized in the FHWA/UMTA outline for UTPS models and as described in the NCHRP guide for urban travel estimations ("Quick Response").

SUMMARY: Criteria and methods used in each one of the four "steps":

1. Trip Generation: Based on ABAG projections per 34 MTC "superdistrict." Productions per MTC-observed person trips produced and households; attractions per employment (and housing), adjusted to observed attractions.

2. Trip Distribution: Based on zonal trips produced and attracted, distribution factors based on travel times, and calibration factors derived from MTC-observed vs. simulated 1980 trip interchanges.

3. Assignment: Based on zonal trip interchanges, "fastest path" criteria and experience of travel patterns.

4. Modal Split: Implies; it was assumed that, on the segment evaluated, modal percentages and occupancy rates would remain essentially unchanged.

ASSUMPTIONS: The following parameters would remain essentially unchanged between 1980 and 2005:

1. Trip production rates, as functions of the number of households and their superdistrict of location.

2. Trip attraction rates and adjustment factors, as functions of jobs, housing units and superdistrict of location.

3. Speeds: Change in corridor speeds may be proportional to regionwide speed changes, or may differ without significantly affecting distribution or assignment.

4. Time vs. Distribution Factor Functions, and Calibration Factors. Increased socio-economic densities vs. higher fleet efficiencies and/or real earnings would have compensatory effects on trip lengths.

EXPLANATION TO EXISTING FACILITIES (BRIDGES) TABLE

ROUTE SEGMENT:

Segment of route in which bridge is located.

BRIDGE NUMBER: Suffix, when used, is coded as follows:

J - Outer Outer Left
K - Left Outer Highway Structure
L - Left Structure or Left Inner Structure
C - Center Structure
R - Right Structure or Right Inner Structure
S - Right Outer Highway Structure
T - Outer Outer Right
Y - Structure or Grade Xing on State-owned and Maintained Connections not on main Highway (May be Closed)
W - Drainage Pumping Station
M - Buried Hazard or Miscellaneous Structure
Z - Access to Private Property or Closed with no access
E - Connector Structure
F - Connector Structure
G - Connector Structure
H - Connector Structure

NAME OR DESCRIPTION:

May contain miscellaneous information. Additional miscellaneous information may be found on the same line under the heading "Structure Type or PUC number or Pump Data".

ROUTE:

State highway route.

POST MILE:

Prefixes of R, M, and N refer to realigned routes. The prefix C refers to commercial routing. The prefix L refers to section paralleling another route (Non-Add). Post miles are to 1/100 mile.

COUNTY:

County in which bridge is located (Caltrans "Alpha" Code).

CITY:

City in which bridge is located (Caltrans "Alpha" Code).

EXPLANATION TO EXISTING FACILITIES (BRIDGES) TABLE

STRUCTURE TYPE OR PUC NUMBER:

Structure type - Three types may be shown for multiple-type structures. Spacings are 3-Column, 3-Column, and 3-Column.

Coding 1st two columns of all three types:

LS - Log Stringer
TS - Timber Stringer
TT - Timber Truss
TA - Timber Arch
SP - Steel Pipe (Girder)
SS - Steel Stringer (Rolled Sections)
SG - Steel Plate Girder
TB - Timber Slab (Laminated)
SB - Steel Box Girder
ST - Steel Truss
SA - Steel Arch
CS - Concrete Slab
PS - Precast Concrete Slab
PB - Precast Concrete Box Girder
CA - Concrete Arch
CB - Concrete Box Girder
CC - Concrete Box Culvert
CG - Concrete Girder
CP - Concrete Pipe
CU - Concrete Arch Culvert
PG - Precast Concrete Girders

QB - Cast in Place Prestressed Box Girder
QG - Cast in Place Prestressed Girder (Not in Box)
QS - Cast in Place Prestressed Slab
QX - Precast Prestressed Box Girder
QI - Precast Prestressed "I" Girder
QJ - Precast Prestressed Double "T" Girder
QK - Precast Prestressed "T" Girder
QT - Precast Prestressed Inverted "T" Girder
QU - Precast Prestressed Inverted "U" Girder
QW - Precast Prestressed Inverted "W" Girder
QA - Precast Prestressed Slab

SU - Suspension
MP - CMP or Multi Plate
TU - Tunnel
MA - Masonry Arch
CT - Combination Truss (Steel and Timber)
TW - Timber Retaining Wall
CW - Concrete Retaining Wall
SW - Steel Retaining Wall
CD - Concrete Dam
ED - Earth Dam
SLS- Seal Slab
FER- Ferry Boat

Third Column is coded, where it applies, as follows:

A - Welded
B - Welded Continuous
T - Through
L - Through Continuous
D - Deck
H - Deck Continuous
P - Pony
O - Open Spandrel
F - Earth Fill
B - Box (Box Girder)

C - Continuous
E - Continuous with Std. Cantilevered Ends (No Abuts.)
W - Sidewalk
K - Pier or Tower Span
I - Continuous over Inclined Bents
Q - Prestressed (Use Other Coding if Possible)
S - Stayed
R - Orthotropic

PUC Number (For Railroad Grade Crossing).

EXPLANATION TO EXISTING FACILITIES (BRIDGES) TABLE

WID. OR EXT. TYPE:

Latest widening or extension.
See code explanation under STRUCTURE TYPE OR PUC NUMBER.

LENGTH (PROT):

Total bridge length (Feet) or grade crossing protection.
Main type of signal only coded as follows:

FLC - Flashing Lights on Cantilever Arms
FL - Flashing Light Signals
G - Manual Gates
H - Human Flagmen
K - Automatic Gates
M - Flashing Light Signals with Rotating Stop Banner
O - Standard Overhead Sign
T - Traffic Signals Synchronized
W - Standard Wigwag
WM - Magnetic Wigwag Flagmen or Other Type of Wigwag with Flashing Light Aspect
X - Standard Crossbuck
XR - Reflectorized Crossbuck

WIDTH:

Bridge width (in feet).