DISTRICT 10

ROUTE CONCEPT REPORT SUMMARY - ROUTE 205

Route Concept (see Location Map for details)

Segment I: B-55 Level of Service (LOS)
Six-lane rural freeway.

Segment II: B-55 LOS
Six-lane small urban area freeway.

Segment III: B-55 LOS
Six-lane rural freeway.

Concept Rationale

Route 205 is an important link in the principal arterial interstate system and carries a large volume of interregional traffic. The route should be developed to adequately handle the high projected traffic volumes from the Bay Area, developments on Route 580, and the Central Valley. The concept LOS is set in accordance with the importance of the route and the need to provide for a continuity of service capability for the highway network. The route concept conforms to regional transportation plans.

Issues of Concern

Based upon the issues of concern criteria, the concern areas are:

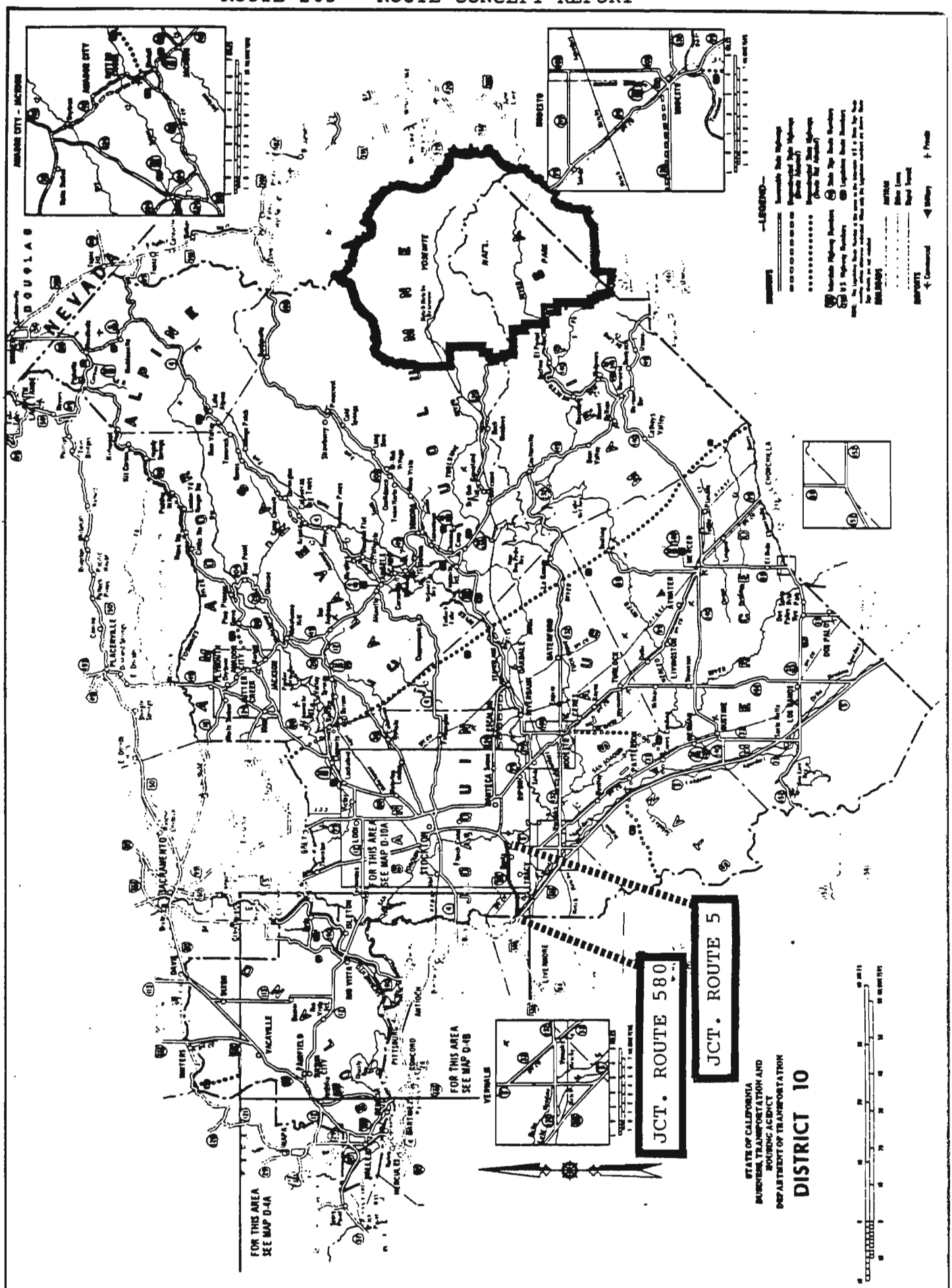
Segment I; PM 0.2 (Ala-205) - PM R6.9 (SJ-205): Operating speed of 54 mph (current), v/c ratio of 0.63-0.80 (current to year 2000), fatality + injury (F+I) rate of 0.3 (current), F+I/Mile/Year rate of 2.6 (current).

Segment III; PM R8.2-R12.7 (SJ-205): Operating speed of 55 mph (current), v/c ratio of 0.50-0.71 (current to year 2000), F+I rate of 0.3 (current), F+I/Mile/Year rate of 2.5 (current).

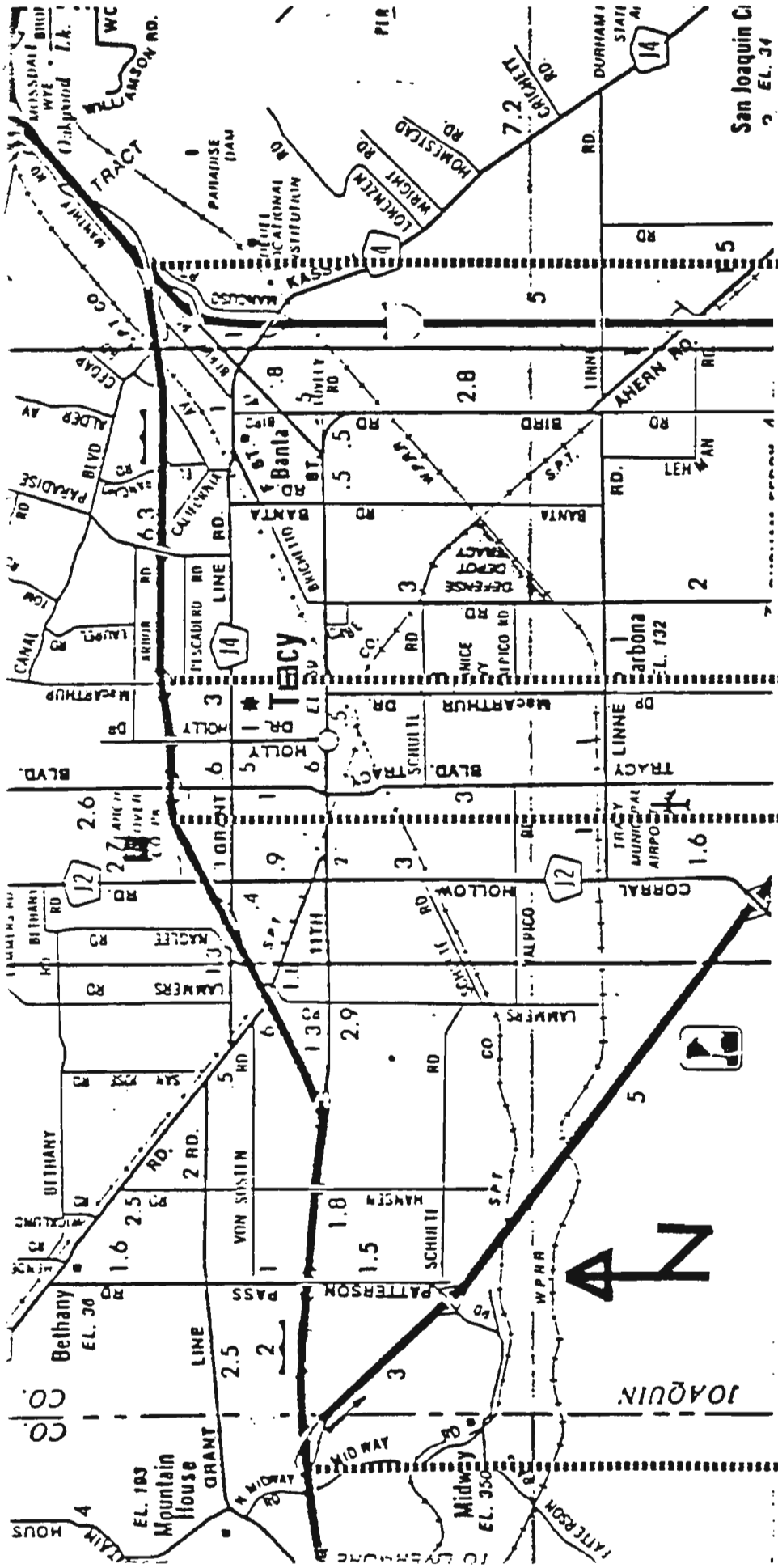
Segment II has similar operating conditions as the rest of the route, but higher issues of concern threshold levels. Based upon the importance of continuity of service for the entire route, Segment II is considered to experience the same type of concerns as Segments I and III.

Improvements

Add two lanes to make a six-lane freeway for the entire route (PM 0.2, Ala-205 to PM R12.7, SJ-205).


JCT. ROUTE 580
JCT. ROUTE 5
FOR THIS AREA SEE MAP D-4A
FOR THIS AREA SEE MAP D-10A
FOR THIS AREA SEE MAP D-1B
STATE OF CALIFORNIA
BUSINESS, TRANSPORTATION AND HOUSING AGENCY
DEPARTMENT OF TRANSPORTATION
DISTRICT 10
NEVADA
ALPINE
AMADOR
CALAVERAS
TUOLUMNE
MONO
MARIPOSA
MADERA
STANISLAUS
SAN JOAQUIN
SACRAMENTO
PLACER
EL DORADO
SIERRA
MONTEREY
SAN BENITO
FRESNO
KINGS
TULARE
INYO
SAN LUIS OBISPO
SAN BERNARDINO
KERN
SAN DIEGO
IMPERIAL
ALAMEDA
CONTRA COSTA
SOLANO
YOLO
SUTTER
YUBA
NEVADA
PLACER
SACRAMENTO
STOCKTON
MODESTO
FRESNO
BAKERSFIELD
SAN JOSE
SAN FRANCISCO
OAKLAND
SAN DIEGO
LOS ANGELES
SAN BERNARDINO
YOSEMITE NAT'L PARK
ROUTE 205
LEGEND

LOCATION MAP - ROUTE 205



PM R12.7
SJ 205

SEGMENT III
B-55 LOS
6 LN FRWY

PM R8.2
SJ 205

SEGMENT II
B-55LOS
6 LN FRWY

PM R6.9
SJ 205

SEGMENT I
B-55 LOS
6 LN FRWY

PM 0.2
ALA 205

DISTRICT 10

ROUTE 205 ROUTE CONCEPT REPORT

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 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.

DISTRICT 10

ROUTE CONCEPT REPORT (ROUTE 205)

I. ROUTE DESCRIPTION

Route 205 connects Route 580 in Caltrans District 4 (San Francisco) to Route 5 in Caltrans District 10 (Stockton) (PM 0.2 in Alameda County to PM R12.7 in San Joaquin County, respectively). This report will cover the entire 12.8 miles of the route, including the 0.2 mile portion in Alameda County in District 4.

The route is divided into three segments. Segment I is the rural portion of the route northwest of Tracy in Alameda and San Joaquin counties (PM 0.2-0.4 in Alameda County; PM L0.0-R6.9 in San Joaquin County). Segment II is the urban section of the route in the Tracy area, from PM R6.9 at Tracy Road to PM R8.2 at MacArthur Drive. Segment III is the rural section northeast of Tracy (PM R8.2-R12.7) in San Joaquin County. This division facilitates handling the differences in issues of concern criteria between urban and rural areas.

II. PURPOSE OF THE ROUTE

The route is a Principal Arterial Interstate Freeway, providing a branch connection between Interstate 5 northeast of Tracy and Interstate 580 west of Tracy. It bypasses the Tracy urban area, primarily serving interregional recreation and commuter traffic between the Bay Area and Stockton-Central Valley area. The secondary purpose is to serve local commute trips in the Tracy area.

It is in the SHELL Route System for handling extralegal loads. It is also an FHWA designated interim route for larger trucks.

Bicycles are prohibited from using the route.

III. EXISTING FACILITIES

Table 1 shows a listing of the existing facilities. The route is essentially a four-lane rural freeway, with a short, 1.1 mile portion passing through the Tracy urbanized area.

Table 2 lists the bridges and interchanges on the route. The bridges provide an adequate level of service for traffic on the route.

There are no projects shown in the current 1983 STIP.

IV. CURRENT AND FUTURE OPERATING CONDITIONS

Table 3 shows the current and future operating conditions on the route.

The route is currently providing a level of service (LOS) rated at B for the majority of the route. The LOS is lower, rated at C, near the junction with Route 580.

As traffic volumes increase in the future, the LOS will decrease. By 1992, the ADT is projected to range from 30,600 in the Tracy area to 35,700 near Route 580. By the year 2000, the LOS will drop to a C rating for the entire route.

The general accident rates on the route are medium and relatively uniform. When the accident figures are divided on a per mile per year basis, the urbanized Segment II shows higher rates. The three-year average accident rates are at or lower than the statewide averages.

The current TASAS Table C report (10/80-9/83) lists four high accident concentration locations on the route as follows: PM 0.2-0.4, PM R11.3-R11.5, PM R11.5-R11.7 and PM R12.4-R12.6. An investigation is required at PM R11.5-R11.7.

There is currently a limited amount of intercity and local bus transit on the route. There is also some ridesharing, with carpools and vanpools using the route to get to workplaces in the Bay Area and Livermore. The small amount of transit and ridesharing is not expected to significantly impact traffic volumes now or in the future.

V. ISSUES OF CONCERN CRITERIA

Caltrans Division of Transportation Planning (DOTP) has developed a standardized set of issues of concern criteria for use in preparation of Route Concept Reports (RCR). The criteria focus on operating speed, volume-to-capacity ratio (v/c ratio), accident rates, design standards and gap closures. The issues of concern criteria threshold levels reflect guidelines established by DOTP or levels established by the Highway Research Board as stated in the Highway Capacity Manual. The threshold level is a guideline which when exceeded indicates a concern. The threshold levels for accident rates do not distinguish between a safe or unsafe condition, but reflect a need to investigate the severity of concerns.

Table 4 shows the issues of concern thresholds as compared to the actual findings.

VI. CURRENT CONCERNS

Segments I and II currently have reached or exceed the concern threshold levels for minimum operating speed, peak hour volume-to-capacity ratio (v/c) and both of the fatality + injury (F+I) accident rates. These concerns or areas of investigation are expected to continue through the end of the current STIP period, because there are no STIP projects programmed to solve the concerns.

The v/c ratios by the end of the STIP period are expected to range from .56 in Segment III to .62-.68 in Segment I. These ratios indicate a LOS of B to C in these segments.

Segment II has a minimum operating speed, v/c ratio, and accident rates which are nearly equivalent to Segments I and III. Technically, these conditions are not considered to be concerns because the segment passes through a small urban area which has high concern identification threshold levels. Realistically, this segment has the same concerns as the other segments, considering the route as a whole.

VII. FUTURE CONCERNS (YEAR 2000)

There are no additional concerns forecast to exist by the year 2000. However, the severity of the previously discussed concerns is expected to remain the same or increase.

The LOS for the entire route is projected to be at a C rating, below the route concept LOS of B.

VIII. ROUTE CONCEPT

Route 205 is an important route which carries a large volume of interregional recreation and commuter traffic. In the future, the route will serve the increased traffic demands created by the projected high growth rates in the Bay Area and Central Valley.

Caltrans District 4 (San Francisco) has indicated its Route Concept Report (RCR) for Route 580 will recommend operational improvements and additional lanes from the junction with Route 205 west toward the Bay Area.

The District 10 RCR for Route 5 recommends two additional lanes be built by the year 2000 from the junction with Route 205 to the junction with Route 120.

The acceptable or concept LOS for the route is rated at B, with a minimum peak hour operating speed of 55 mph. This B-55 rating is the standard target LOS established for principal arterial freeways. The importance of providing for a continuity of service through rural and small urban areas dictates that the standard target LOS be adhered to as closely as practical.

The future concerns for the route may be magnified if the proposed Carnegie New Town project is built as planned. Carnegie is a proposed 8,500 acre urban development located on Route 580 south of Tracy. The project would generate a substantial amount of traffic going to Stockton and the Bay Area via Routes 580, 5 and 205.

It is unclear if the project will be approved and what the ultimate development will be. Therefore, the traffic impacts of Carnegie will not be included in the current route concept until more definite decisions have been made.

The 1980 San Joaquin County Regional Tranportation Plan discusses future state highway project needs as part of the long-range planning process. The plan indicates Route 205 should be expanded to a six-lane freeway as part of the 1995 Road and Street Plan.

Based upon the above concept rationale, the route should be developed as a six-lane freeway for the entire length of the route by the year 2000.

IX. ROUTE IMPROVEMENTS

Two additional lanes (one for each direction of travel) to be constructed within the existing right of way from Route 580 (PM 0.2 in Alameda County) to Route 5 (PM R12.7 in San Joaquin County), a net length of approximately 12.8 miles.

Cost estimates for the above project are not currently available. As a ballpark figure, similar projects on a similar facility estimates two additional lanes in the median would cost approximately $1 million per mile, or about $13 million for the entire project.

X. ALTERNATIVE ROUTE CONCEPTS

The route concept presented in this report conforms to the route concept of the regional transportation planning agency.

XI. OTHER ITEMS

Significant increases in projections of future growth on highways interconnecting with Route 205 may alter the route concept and expected needed improvements. Large traffic-generating developments in the San Francisco Bay Region, especially on Route 580, will definitely impact future levels of service on Route 205.

It is assumed that the City of Tracy small urban area will expand generally southward, based upon current growth plans and patterns. If the urbanization grows northward instead, it may cause local congestion and decrease the future level of service on the route.

The Route Concept Report should be updated as better information on projected growth patterns becomes available.

TABLE 1 - EXISTING FACILITIES DATA SHEET (1982)

ROUTE 205 DISTRICT 10

ROUTE DEFINITION	SEGMENT I	SEGMENT II	SEGMENT III
COUNTY	Alameda/San Joaquin	San Joaquin	San Joaquin
POST MILE LIMITS	0.2-0.4/L0.0-R6.9	R6.9-R8.2	R8.2-R12.7
NET LIMITS (MI)	7.1	1.1	4.5
URBAN/RURAL	Rural	Urban	Rural
PURPOSE OF ROUTE			
FEDERAL FUNCTIONAL CLASS	Principal Arterial	Principal Arterial	Principal Arterial
SHELL ROUTE	Yes	Yes	Yes
PRIMARY PURPOSE	Interregional	Interregional	Interregional
SECONDARY PURPOSE	Commute	Commute	Commute
EXISTING FACILITY			
TYPE	Freeway	Freeway	Freeway
# OF LANES	4	4	4
PASSING LANES	No	No	No
AUXILIARY LANES	Yes	No	Yes
HOV LANES	No	No	No
PAVEMENT WIDTH	68-74	78	78
SHOULDER WIDTH	10	10	10
R/W WIDTH	250	220	220
TERRAIN	Flat	Flat	Flat
RELATED FACILITIES	Rte. 580, Patterson Pass Rd., Old Rte 50, Grant Line Rd.	Tracy Rd.	Rte. 5

TABLE 2 - BRIDGE INVENTORY

ROUTE 205, DISTRICT 10

Bridge No.	PM	Location	Rdwy. Width	Year Const.	Permit. Cap.	Struct. Adeq.
29-299	0.01	Aqueduct Serv. Rd.	102	66	5PPPPP	
29-37	0.15	Delta Mendota Canal	102	53-65	5PPPPG	
29-131	0.30	Service Rd. UC	-	53	5PPPPP	
29-99	1.38	Patterson Pass Rd. OC	32	70 Co Rd	5PPGOO	
29-208	2.38	Hansen Rd. OC	32	70 Co Rd	5PPGOO	
29-203	3.37	Old US 50 OC	32	70	5PPPPP	
29-74	4.45	Janey OH	39	70	5PPPPP	
29-186	5.32	Grant Line Rd. UC	39	70	5PPPPP	
29-132	5.94	Corral Hollow Rd.	39	70	5PPPPP	
29-178	7.01	Tracy Rd. UC	39	70	5PPPPP	
29-182	7.52	Holly Dr.	32	70	5PPPPP	
29-183	L7.85	Sugar Spur OH	45	70	5PPPPP	
29-183	R "	" " "	39	70	5PPPPP	
29-184	8.12	McArthur Rd. UC	39	70	5PPPPP	
29-181	9.61	Paradise Rd. OC	32	70	5PPPPP	
29-214	10.48	Maple Ave.	39	70	5PPPPP	
29-179	11.60	East Banta OH	39	70	5PPPPP	
29-180	11.72	Tom Paine Slu	39	70	5PPPPP	
29-211	12.64	Route 205/5 Sep.	39	70	5PPPGO	

TABLE 3 - OPERATING CONDITIONS DATA SHEET (1982)

ROUTE 205 DISTRICT 10

CURRENT OPERATING CONDITIONS	SEGMENT I	SEGMENT II	SEGMENT III
URBAN/RURAL	Rural	Urban	Rural
ADT (1982)	24,600-27,000	24,900	26,400
PEAK HOUR VOLUME	2,066-2,352	1,743	1,848
PEAK V/C RATIO	.56 - .63	.47	.50
PEAK OPERATING SPEED	52-54	56	55
PEAK LOS	B-C	B	B
3-YEAR AVE. F+I RATE	.30	.30	.28
3-YEAR AVE. F+I/MI/YR	2.62	4.5	2.52
3-YEAR AVE. ACC RATE	.49	.51	.54
3-YEAR AVE. ACC/MI/YR	4.19	7.5	4.74
STATEWIDE AVE. ACC. RATE	.72	.83	.73
CA	79-90	107	101
TARGET LOS	B-55	B-55	B-55
CONCEPT LOS	B-55	B-55	B-55
YEAR 2000 OPER. CONDITIONS			
ADT	38,900-42,700	35,100	37,900
PEAK V/C RATIO	.73-.80	.66	.71
PEAK LOS	C	C	C
OTHER INFORMATION			
DIRECTIONAL SPLIT	70	70	70
% TRUCKS	18	18	18
TEN-YEAR ADT (1992)	32,500-35,700	30,600	32,800

TABLE 4 - ISSUES OF CONCERN (1982)

ROUTE 205 DISTRICT 10

ISSUES OF CONCERN CRITERIA	SEGMENT I		SEGMENT II		SEGMENT III		SEGMENT IV	
	ACT.	THRES.	ACT.	THRES.	ACT.	THRES.	ACT.	THRES.
URBAN/RURAL	Rural		Urban		Rural			
OPERATING SPEED MPH	52-54*	55	56	35	55*	55		
VOLUME/CAPACITY RATIO (V/C)	.56-63*	.50	.47	.95	.50*	.50		
END-OF-STIP V/C	.62-.68*	.50	.52	.95	.56*	.50		
YEAR 2000 V/C	.73-80*	.50	.66	.95	.71*	.50		
3-YR. AVE. FAT + INJ. RATE (F+I)	.3**	.3	.3	.5	.3**	.3		
3-YR. AVE F+I/ MI/YR	2.6**	2.0	4.5	20.0	2.5**	2.0		
3-YR. ACC RATE (AR)	.5	1.5	.5	1.0	.5	1.5		
3-YR AVE ACC/ MI/YR	4.2	4.9	7.5	34.9	4.7	4.9		

*Indicates a concern.
**Indicates an area of investigation.

DISTRICT 10

ROUTE 205 ROUTE DEVELOPMENT PLAN

INTRODUCTION

The Route Development Plan (RDP) identifies improvements that can be funded in the five years following the 1984 STIP for four alternative levels of funding. These improvements lead toward attainment of the route concept as identified in the Route Concept Report (RCR).

RELATIONSHIP TO STIP

RDP's consider the 20-year planning period, but address improvements only in the five years following the 1984 STIP (FY 1989/90 - FY 1993/94). The 1984 STIP is a given condition for the RDP's. Concerns resolved in the STIP are not addressed in the RDP. The RDP Fund Estimates represent those funds available for the five years following the 1984 STIP over and above the funds required to complete the STIP.

RDP FUND ESTIMATES

The RDP Fund Estimate is divided into two categories: 1) major capacity and operational improvements (HB42, HB44, and HE1) and 2) all other funding programs subject to the north/south split. The RDP Fund Estimate represents total anticipated highway allocations less noncapital outlay, local assistance, maintenance, and lump sum minor improvements.

The RDP's address four funding levels. Each alternative contains two scenarios. Scenario A excludes county minimums. Scenario B includes county minimums.

Note that all fund estimates and improvements are in 1984 dollars. Appendix I gives more information on each funding alternative.

ROUTE DESCRIPTION AND PURPOSE

See RCR, Section I: "Route Description" and Section II: "Route Purpose."

ROUTE IMPROVEMENT STRATEGY

See RCR, Section VIII: "Route Concept," Section IX: "Route Improvements" and Section X: "Alternative Route Concepts."

ISSUES OF CONCERN (1994)

See RCR, Section VI: "Current Concerns" for safety concerns.

The following are concerns which are projected to exist by the year 1994. Current safety concerns are projected to exist in the future (unless otherwise noted) and are not repeated in this section.

Segment	1994 LOS	Concept LOS
I	C-48	B-55
III	C-52	B-55

PROPOSED IMPROVEMENTS

None

RATIONALE

There are higher priority improvements needed elsewhere in District 10 and in San Joaquin County.

APPENDIX I

ROUTE DEVELOPMENT PLAN FUNDING ALTERNATIVES

1) ALTERNATIVE FUNDING LEVEL 1, SCENARIOS A & B

Is based on current revenue levels plus a small increase to match all federal revenue. The funds are separted by Interstate 4R and Non-Interstate. (After adjustments for inflation, HB42, HB44 and HE1 funds are reduced by about 65 percent from the 1984 STIP period.)

2) ALTERNATIVE FUNDING LEVEL 2, SCENARIOS A & B

Assumes an increase over current revenue levels to keep up with inflation. The funds are separated by Interstate 4R and Non-Interstate. (After adjustments for inflation, HB42, HB44 and HE1 funds are reduced by 25 percent.)

3) ALTERNATIVE FUNDING LEVEL 3, SCENARIOS A & B

Assumes a significant increase over Alternative Funding Level 2. The funds are separated by Interstate 4R and Non-Interstate. (After adjustments for inflation, HB42, HB44 and HE1 funds are increased by 50 percent.)

4) ALTERNATIVE FUNDING LEVEL 4, SCENARIOS A & B

Assumes a significant increase over Alternative Funding Level 3. The funds are separated by Interstate 4R and Non-Interstate. (After adjustments for inflation, HB42, HB44 and HE1 funds are doubled.)