

1.0 PURPOSE OF AND NEED FOR PROJECT

1.1 PROPOSED ACTION

The proposed action would construct Route 905 from 0.8 kilometer (0.5 mile) east of Interstate 805 (I-805) to Airway Road. The original project limits extended from I-805 to the POE, a distance of approximately 10-kilometers (6.2 miles). However, the project limits from Airway Road to the POE encompass the Siembra Viva Road interchange project, which was approved for construction under a separate environmental review. The general purpose of the project would be to:

- reduce congestion,
- provide for the effective transportation of people, goods and services,
- improve the mobility of local, regional, interregional, and international traffic.

Extending existing Route 905 would provide congestion relief to Otay Mesa Road (OMR), the only major East-West road currently servicing Otay Mesa, and would allow direct access to the existing I-805 and I-5 freeways. The six build alternatives proposed are: Freeway - North, Central and South Alignment Alternatives and Tollway – North, Central and South Alignment Alternatives.

An interim construction staging option, the Expressway Staging Option, is also under consideration. This option was originally studied as a full alternative in the environmental studies. However, the transportation technical report and traffic forecasts have shown that this staging option would only serve as an interim improvement – an initial phase of the ultimate facility. Since this option would not meet project Purpose and Need for the year 2020 it was removed as a build alternative, and the information on this option presented through-out this document is for informational purposes only. Chapter 2, [Section 2.6.2](#) Expressway Staging Option provides additional discussion on the rationale for the Expressway Staging Option.

The No Project Alternative is also being considered.

[Figure 1-1](#) shows the Project Location. [Figure 1-2](#) shows the Project Vicinity.

1.2 NEED FOR ACTION / EXPECTED BENEFITS

There are several existing transportation needs in the Otay Mesa area of San Diego County. These needs have led to inadequate transportation service and the needs will continue to grow into the future if the proposed project is not constructed. OMR has been widened from a four-lane city street to a six-lane conventional highway to increase traffic capacity. However, a new facility is needed to:

- improve traffic capacity for growth beyond the year 2005,
- serve the POE,
- serve the extensive development on the Mesa (both existing, and approved planned development),

- complete the regional highway system to cope with the increasing regional and international trips,
- provide traffic congestion relief for OMR, and an alternative commercial traffic access to the POE.

The POE is the only commercial truck crossing between Mexico and San Diego. The project would bypass the developments and airport along OMR, allowing Route 905 to function better. Route 905 is expected to reduce the accident rate in the Otay Mesa Area by 50%.

Improving Traffic Capacity

Capacity is the volume of traffic at which a highway can provide an acceptable Level of Service (LOS). The extension of Route 905 would improve capacity by providing the following:

- The addition of alternate uninterrupted flow lanes through the corridor.
- Maximum grades would be reduced from 5.7% to 4%.
- The number of signalized intersections in the existing corridor (OMR) is eleven; the Expressway Staging Option, on an interim basis, would have four, and the Freeway and Tollway Alignment Alternatives would have zero.
- Average operating speeds during the peak traffic hour would increase in the corridor, as shown in Table 1-1 in kilometers per hour (kph) and miles per hour (mph):

**Table 1-1
OPERATING SPEEDS**

ROUTE 905 Alignment Alternatives	Route 905: kph (mph)		Otay Mesa Road: kph (mph)	
	Opening year	2020	Opening Year	2020
Six Lane Freeway	90 (55)	82 (50)	31 (20)	24 (15)
Six Lane Tollway	90 (55)	82 (50)	31 (20)	24 (15)
No Project	-	-	23 (15)	13 (8)

Although OMR has been widened from a four-lane city street to a six-lane conventional highway, it will reach its capacity by the year 2005. Capacity of the current highway (the new six-lane OMR/ Route 905/ Interim Route 905) is affected by the following factors:

- High truck volumes. The San Ysidro commercial POE station closed in December of 1994. All commercial truck traffic was re-routed to the Otay Mesa POE, causing the truck traffic on OMR to increase to 15% of the total traffic volume.
- Grades. Steep and sustained grades (up to 5.7%) affect truck speed and overall capacity.
- Spacing and timing of traffic signals. Signals play a major role in the capacity of OMR by limiting the portion of time that is available for movement along the facility through intersections. There are eleven signalized intersections between Heritage Road and the POE, and five more are forecast for development by the year 2020.

- Operating speed. Posted speed limits range from 70 km/h (45 mph) to 80 km/h (50 mph). Traffic congestion, however, limits the operating speed during the peak traffic hours. Projected operating speed for OMR in 2020 is forecast to be 13 km/h (8 mph), assuming no new facility is built.
- Traffic Volumes. The 1999 Average Daily Traffic (ADT) volumes for the segments of OMR are presented on Table 1-4. According to the City of San Diego thresholds, OMR is currently operating at an unacceptable LOS (LOS E and F) from I-805 to Britannia Boulevard. Table 1-6, which presents the year 2020 local street segment comparison, shows that traffic along OMR under the No Project column would mostly operate at LOS F, which is unacceptable. The proposed Freeway and Tollway Alignment Alternatives would improve the projected LOS along OMR. Please refer to [Section 1.6](#), which describes LOS.

Safety

The transfer of trips from a city street to a regional highway is expected to reduce accidents on the city streets. Between October 19, 1997 and November 17, 2000 a total of 92 accidents were recorded along OMR, summarized as follows:

- Of the 92 accidents, 59 occurred in intersection areas. Of the intersection accidents rear-end accidents accounted for 54%, right-angle accidents accounted for 22%, and sideswipe accidents for 10%.
- There were 67 accidents with injuries.

Intersection locations have a higher potential for traffic conflict compared to other highway sections. At an intersection, continuity of traffic is interrupted, traffic patterns cross, and turning movements occur. The types of accidents noted above are typical of intersection accidents. The proposed project would allow through traffic to avoid the intersections on OMR, and include grade separations in order to reduce traffic conflicts, increase capacity and improve safety.

Table 1-2 depicts existing accident rates per million vehicle miles. The table contrasts accident rates, for the different sections of the existing corridor, versus the average rate for similar facilities throughout the state. The existing facility has a fatal- and injury-accident rate approximately the same as the statewide average for this type of facility. The fatal accident rate on the current facility is more than twice the statewide average.

Table 1-2
UNCONSTRUCTED ROUTE 905
COMPOSITE ACCIDENT RATES
ACCIDENT RATES (JANUARY 1998- DECEMBER 2000)

Section	Length	MVM	Rates (/MVM)			Rates (/MVM)		
			Actual			Similar Facilities		
			Fatal Accidents	Fatal + Injury Accidents	Total	Fatal Accidents	Fatal + Injury Accidents	Total
I-805 to OMR	0.950	43.10	0.000	0.162	0.371	0.014	0.620	1.570
OMR to Heritage Rd	1.290	85.396	0.000	0.457	0.550	0.015	1.000	2.200
Heritage Rd to La Media Rd	2.010	103.870	0.010	0.943	1.126	0.015	1.000	2.200
La Media Rd to SR-125	0.745	32.334	0.000	0.866	1.144	0.015	1.000	2.200
SR-125 to Border	1.304	38.160	0.026	0.419	0.524	0.017	0.600	1.650
Overall Rates/Totals	6.299	302.860	0.008	0.608	0.772	0.015	0.860	1.991

MVM.....Million Vehicle Miles

Fatal Accidents.....Fatal Accidents/MVM

Fatal + Injury Accidents.....Fatal Accidents + Injury Accidents/MVM

Total.....Total Rate

1.3 PROJECT HISTORY AND BACKGROUND

Route 905 is legally defined in the 1996 State Statutes to be part of the Statewide System of Freeways and Expressways from Route 5 near the south end of San Diego Bay to the international boundary southerly of Brown Field. Under the State Highway System criteria, Route 905 is defined from the international boundary near Border Field northeasterly to Route 5, and from Route 5 near the south end of San Diego Bay to the international boundary southerly of Brown Field.

Route 905 is part of the National Highway System (NHS). The purpose of the NHS is: to provide an integrated national highway system that serves both urban and rural areas; to connect major population centers, international border crossings, ports, airports, public transportation facilities, and other major destinations; and to meet national defense requirements.

The portion of Route 905 from the international boundary near Border Field Park to west of I-5 is not adopted nor constructed, but is recommended for further study. From west of I-5 to I-805, a four-lane freeway plus auxiliary lanes with interchanges at I-5 and I-805 has been constructed. The four-lane access-controlled freeway with auxiliary lanes continues easterly from I-805 to the junction with OMR. Traffic continues on OMR as an east-west city street.

The California Highway Commission adopted a freeway route in 1965, then known as Route 75. The adopted route extended from I-5 to approximately 1.3 kilometers (0.8 miles) east of La Media Road on Otay Mesa, in the City of San Diego (City). [Figure 1-3](#) shows the Route Adoption maps. Between 1969 and 1972, three freeway agreements were executed with the County of San Diego (County) and City covering most of the adopted route, as follows:

- Heritage Road to future Route 125, January 2, 1969,
- Beyer Blvd. to 1.2 miles east of I-805, March 27, 1969,
- 1.2 miles east of I-805 to Caliente Blvd, May 23, 1972.

In 1973, Route 75 was re-designated Route 117. A four-lane freeway segment from I-5 to I-805 was constructed within the adopted route, and opened in 1976. In 1987, the route was changed to State Route 905.

A four-lane highway segment connects OMR at KP 16.8 (PM 10.4), east of La Media Road to the POE (KP 19.2 / PM 12.0). This segment of conventional highway was originally adopted as Route 125 in March 1983. It was constructed under a Memorandum of Agreement (MOA) between Caltrans, the County, and the City, and was adopted into the State Highway System upon completion in 1985. The City maintained this segment of highway, now designated as Interim Route 905, until August 1, 1990, when ownership of the facility was vested in the State per the MOA.

In October of 1991, a Caltrans Project Study Report (PSR) for Route 905 was prepared. That study addressed the adopted portion of the route from I-805 to the POE. The PSR presented a single design variation for Route 905 and a freeway to freeway interchange with Route 125. This document included coordination with the local and regional planning documents, confirming this major circulation element in the land use planning for Otay Mesa. The PSR concept for Route 905 was an initial six-lane freeway with a wide median for an ultimate freeway with ten lanes. Since 1993, on-going meetings have taken place with various agencies and local community organizations. Details are provided in Chapter 6.0, Coordination and Consultation.

1.4 TRANSPORTATION PLANS

State Plans

The 1996 Caltrans District 11 System Management Plan (SMP) was developed to plan the implementation of the region's transportation system which could best accommodate the region's growth in population and travel. The strategy developed includes the Inner Loop Element and the Outer Loop Element. Route 905 is part of the Outer Loop with Routes 52, 54, 56 and 125, as shown on [Figure 1-4](#). The Outer Loop will allow traffic to bypass the metropolitan area and serve as an alternate for interregional traffic on existing Route 67, I-8, I-15, and I-805, which are functioning at or near capacity. The proposed project is a connecting link in the Outer Loop (there is no State highway linking the Route 905 junction with OMR west of Brown field, and the Route 905 junction with OMR east of Brown Field). Route 905 (and OMR in the gap between the two

junctions mentioned above) forms the principal east-west route serving traffic between the rapidly developing Otay Mesa/ POE area, and destinations to the north via I-5 and I-805.

The Caltrans Route 905 Transportation Concept Report (September, 1994 TCR) presents the State highway facilities needed to serve traffic for the year 2015. The TCR is composed of two parts; (1) a minimum Level of Service (LOS) for peak hours, and (2) a description of physical facility necessary to accommodate that LOS. Additional components of the 2015 Transportation Concept include implementation of intermodal approach, using Transportation Systems Management, Transportation Demand Management, Transportation Control Measures and Air Quality improvement tactics. The 2015 Route 905 Transportation Concept provides the number of lanes needed, based on a minimum LOS of “E”.

Regional Plans

SANDAG, designated as the Regional Transportation Planning Agency, prepares and updates the following regional transportation planning documents.

The Regional Transportation Plan (2020 RTP), published in April 2000 by the San Diego Association of Governments (SANDAG), describes SR 905 as a proposed six lane freeway under the Revenue-Constrained Plan (RCP). The RCP includes those projects that could be implemented based on funding reasonably expected to be available during the 20-year plan period without requiring any future legislative actions or voter approvals to raise the gas and sales taxes, or to provide any additional revenues. Three revenue-constrained plans are defined in the 2020 RTP: Fiscal Year (FY) 1999-2004 RCP, FY 2005-2010 RCP and FY 2011-2020 RCP. SR 905 is included in the FY 1999-2004 with \$179.1 million, and in the FY 2005-2010 with \$75 million. The total project cost identified in the RTP for SR 905 is \$254.1 million. According to the 2020 RTP, the actual scheduling of the projects is done biennially through the Regional Transportation Improvement Program (RTIP) development process.

The 2020 RTP does not include the Tollway Alignment Alternatives. The current Route 905 schedule shows ROW acquisition beginning in the 2001/2002 FY, with construction starting in FY 2003/2004. Preliminary construction cost estimates is provided in Chapter 2, [Section 2.6.2](#).

The Regional Transportation Improvement Program (2000 RTIP), published in July 2000 by the San Diego Association of Governments (SANDAG), is a four year program of regional transportation improvements for major state highway, local street and road, transit, and non-motorized projects. The 2000 RTIP covers the fiscal years 2001 - 2004. This document allocates a total of \$188,458,000 for the Route 905 project. The proposed project is included as a six-lane freeway.

1.5 SOCIAL DEMANDS / ECONOMIC DEVELOPMENT

SANDAG is the agency responsible for regional planning in the area. SANDAG Series 8 Regional Population and Employment Forecast anticipates an increase in population in the San Diego Region from 2.5 million people in 1990 to 3.63 million people in 2015. This represents a 45% increase, which will create a demand for additional housing, employment, and public facilities. Complementary land use and transportation improvements will be required. According to the SANDAG Series 8 Regional Growth Forecast, the Otay Mesa population will experience a

remarkable increase, expanding at an average annual rate of 19% between 1990 and 2015. The City of Tijuana has had a population growth rate twice that of the San Diego region, with a current population over one million. Tijuana's population is projected to increase to 3.2 million people by the year 2015, which will have an effect on the transportation needs within the South Bay and San Diego region. Thousands of residents of Tijuana travel daily to the United States to work or shop, resulting in extensive cross-border movement of people to and from the San Diego region. Rapid development in the area is also partly due to the establishment of a five-site Foreign Trade Zone in Otay Mesa and the proximity to the Maquiladora manufacturing/ assembly industry just across the border in Mexico.

The Otay Mesa community and Tijuana have all experienced rapid growth since 1980. This growth has been stimulated by the change of land use from thousands of acres of farmland to the current land use designation of industrial/commercial and residential. Otay Mesa has been designated by the City of San Diego to be a primary industrial and commercial center for the County of San Diego. Development plans for Otay Mesa include approved subdivision maps for 900 hectares (2,200 acres), with approved building permits for over 280,000 square meters (three million square feet). There are nine residential precise plans that comprise 730 hectares (1,800 acres) and propose more than 10,000 dwelling units. A list of approved development plans and proposals is provided in Appendix C.

The North American Free Trade Agreement (NAFTA) was ratified by Canada, Mexico, and the United States in 1993 and was effective January 1, 1994. NAFTA eliminates all tariffs on goods traded among the three countries, either immediately or over five, ten, or in some limited instances fifteen, years. The California Office of Planning and Research projects that the total trade between California and Mexico will expand to \$25 billion in 2000 and \$116 billion in 2015. NAFTA increases Otay Mesa's development possibilities and opportunities, making the area attractive locally, nationally, and internationally. Route 905 would provide direct access to Otay Mesa's existing and future planned and approved major employment centers as a regional transportation link for its industries.

The enactment of NAFTA, the passing of Tijuana's \$171 million infrastructure improvement ballot initiative, the opening of the U.S. Commercial Inspection Facility on Otay Mesa, and the lifting of a building moratorium in the Otay Mesa area by the City of San Diego have accelerated the need to extend the Route 905 facility. OMR currently serves up to 47,600 vehicles per day (including 15 percent commercial trucks) on the segment west of Heritage Road.

Modal Interrelationships

The relationships between Route 905 and other modes of transportation (such as rail, air and bicycle facilities) would be maintained. A new northbound commercial vehicle enforcement facility has been constructed at the POE. The Freeway and Tollway Alignment Alternatives would provide a designated truck route from the POE to Route 905.

Brown Field, a commercial airport providing private aircraft services, is located to the north of the Route 905 corridor, and is accessible by OMR. It is the third-busiest general aviation airport in San Diego County, with annual operations of 204,018 flights (1992). Brown Field-based aircraft number 163 (1996). Forecasted annual operations for 2005 are estimated at 322,000 with the number of aircraft based there expected to increase to 474 (TCR, 1994). The proposed project would improve the accessibility of this general aviation airport. General aviation operations at

Brown Field have followed national trends by recording decreased activity for the past several years. Airport records show decreasing activity from a level of 204,018 operations in 1992 to 87,000 in 1997, of which 57,800 were “touch and go” operations, popular in training exercises.

Alternative transportation improvements are planned for future development in the Otay Mesa Area. Local plans address these alternative transportation modes. Bicycle storage lockers would continue to be provided at trolley stations through the SANDAG Ride Link Program. The Otay Mesa Community Plan proposes that bikeways be incorporated into future developments. An existing Class II bikeway, a striped lane for one-way bike travel, extends along OMR and along Temporary Route 905, and provides bicycle access through the corridor. All of the proposed alignment alternatives eliminate this existing bikeway from Airway Road to the POE. However, the bikeway would be re-routed to city streets; it would be extended along OMR to Sanyo Avenue, then south to Heinrich Hertz Drive and Paseo De Las Americas to Siempre Viva Road. These local streets are shown on [Figure 4-5](#) and [Figure 4-6](#).

Transit Operations

Existing

Transit bus Route 932 connects the San Ysidro POE to downtown San Diego. Bus Routes 933 and 934 run east and west along Palm Avenue, and along Coronado Avenue, west of I-805. Bus Route 905 connects the Iris Avenue trolley station to the POE. This route runs from Iris Avenue along OMR, south along Britannia Boulevard, east along Airway Road, south on La Media Road, east on Siempre Viva Road to Route 905, east on Airway Road, and south on Paseo de las Americas to the POE. The San Diego Trolley has stops at Iris Avenue, Beyer Boulevard, and the San Ysidro POE. Trolley stations provide bicycle storage facilities in conjunction with the SANDAG Ride Link Program.

Future

Two plans are described in the 2020 RTP:

- a) *The Revenue Constrained Plan* is limited to existing funding sources and funding levels. The plan includes one new express bus corridor to connect Otay Ranch (immediately north of the project study area) and the Otay Mesa POE.
- b) *The Preferred Plan* provides greater mobility within the region but requires new, substantial financial resources. Within the project limits, two projects are proposed: 1. a Light Rail Transit (LRT) corridor from the POE along OMR and also along the Route 125 corridor, and, 2. an Express Bus route along the Route 905 corridor.

The Metropolitan Transit Development Board (MTDB) has planned a conceptual local bus loop route to link the light rail/ regional bus transfer facility to the planned industrial land uses on Otay Mesa. Regional bus stops are planned to be located near the ramp terminals of planned freeways. In the long term, light rail transit is planned to serve Otay Mesa from existing service in Chula Vista and San Ysidro. This planned north-south line would operate along the Route 125 alignment to the POE, and the planned east-west light rail line from Iris Avenue to the POE would operate adjacent to OMR (East Otay Mesa Specific Plan, July 1994).

No funding sources have been identified or committed for the planned regional bus, light rail lines, or the local bus loop service at this time (East Otay Mesa Specific Plan, July 1994). The Route 905 extension would not constrain development of these or other modes of transportation.

The 2020 RTP addresses both short- and long-range transit services and facility improvements, including a new South Bay LRT line serving the Otay Ranch area and connecting to the POE, and a transit-way along the Route 905 corridor for the year 2020 transit plan. A transit-way is a high level regional bus service.

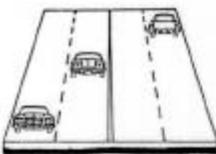
1.6 TRAFFIC / LEVEL OF SERVICE (LOS)

This section discusses traffic circulation issues associated with the proposed project. Included in this section are summaries of parts of the detailed Transportation Analysis Technical Report for Route 905, which analyzes conditions for street segments, peak hour intersection, and freeway segments, using forecast data for the year 2000, and the year 2020. The year 2020 has been determined as the design year for this project.

Level of Service (LOS) is determined for each type of facility based on the number of lanes and the volume of traffic on that facility. Six levels of service are defined for each type of facility for which analysis procedures are available. They are given letter designations, from A to F, with LOS A representing the best operating conditions, LOS F the worst. Each LOS represents a range of operating conditions.

LOS is illustrated in Table 1-3; further definitions are provided in Appendix H. A detailed discussion of the planned HOV lanes is provided in Chapter 2, [Section 2.2.5](#).

Table 1-3
LEVEL OF SERVICE

 <p style="text-align: center;">A</p>	 <p style="text-align: center;">B</p>	 <p style="text-align: center;">C</p>	 <p style="text-align: center;">F</p>
<p>A Highest quality of service. Free traffic flow, low volumes and densities. Little or no restrictions on maneuverability or speed. 55+ mph. No delay.</p>			
<p>B Stable traffic flow, speed becoming slightly restricted. Low restriction on maneuverability. 50 mph. No delay.</p>			
<p>C Stable traffic flow, but less freedom to select speed, change lanes, or pass. Density increasing. 45 mph. Minimal delay.</p>			
<p>D Speeds tolerable but subject to sudden and considerable variation. 40 mph. Minimal delay.</p>			
<p>E Unstable traffic flow with rapidly fluctuating speeds and flow rates. Short headways, low maneuverability, and low driver comfort. 35 mph. Significant delay.</p>			
<p>F Forced traffic flow. Speed and flow may drop to zero with high densities. Less than 25 mph. Considerable delay.</p>			

Design capacity is the maximum volume of traffic for which a projected highway can provide a selected level of service. Design capacity varies with a number of factors, including: LOS selected, width of lanes, number of lanes, presence or absence of shoulders, grades, horizontal alignment, operating speed, lateral clearance, side friction generated by parking, driveways, intersections and interchanges, and volumes of trucks/ buses/ recreational vehicles/ bicycles/ pedestrians.

Current Traffic Volumes and LOS

Weekly traffic volume counts were obtained for the 1999 year. Table 1-4 shows the counts in terms of existing Average Daily Traffic (ADT) volumes and LOS. ADT is the average number of vehicles using a roadway in one day. Table 1-4 reflects the six-lane OMR facility, with traffic in both directions.

Table 1-4
EXISTING AVERAGE DAILY TRAFFIC VOLUMES
(1999)

LOCATION	ADT	LOS
I 805 to Old OMR	48,200	C
Old OMR to Heritage Rd	60,400	F*
Heritage Rd to Britannia Blvd	54,700	E*
Britannia Blvd to La Media Rd	39,600	C
La Media Rd to Future Route 125	39,600	E*
Future Route 125 to Airway Rd	27,000**	C

* City of San Diego thresholds are used for city streets

** Annual Average Daily Traffic

The City of San Diego thresholds were applied to all street segments on OMR. As can be observed OMR is operating at LOS “F” between Old OMR and Heritage Road, and at LOS “E” between Heritage Road and Britannia Blvd and La Media Road and Future Route 125. All other road segments are presently operating at a LOS “C” or better.

In addition to the average daily volumes for street segments, both A.M. and P.M. peak hour intersection traffic data was collected. SANDAG’s Congestion Management Program (CMP) technical guidelines were used to establish the LOS goal (LOS “D”). The operational analysis method was used for intersection peak hour analysis. Operational analysis determines the LOS based on vehicle delay expressed in seconds. Computer analysis was used. The intersection of OMR and Heritage Road in the P.M. peak does not conform to the CMP goal; it is LOS “F”, below the LOS “D” goal. All other intersections are currently operating at a LOS “D” or better.

Based on the above information, the capacity of the present facility is inadequate for the present traffic. Currently, OMR has been widened to provide a conventional six-lane highway to meet traffic demands until approximately 2005.

Forecast Traffic Volumes (Year 2020)

The design year for the proposed project is 2020. The traffic model provides forecasts of traffic volumes for the Year 2020. The selected facility would be designed to meet these volumes. [Figure 1-5](#), [Figure 1-6](#), [Figure 1-7](#), [Figure 1-8](#), and [Figure 1-9](#) show the traffic circulation network for the area, with traffic volumes (all alignment alternatives, and the no build alternative).

Table 1-5 shows forecast traffic for project alignment alternatives for the year 2020. The analysis was based on the SANDAG Series 8 traffic forecasting methodology and land use information.

Table 1-5
FORECAST TRAFFIC VOLUMES: 2020 FREEWAY AND TOLLWAY
ALIGNMENT ALTERNATIVES, EXPRESSWAY STAGING OPTION

Segment	2020 (DESIGN YEAR)								
	Freeway Alignment Alternatives			Expressway Staging Option			Tollway Alignment Alternatives		
	Lanes	ADT	LOS	Lanes	ADT	LOS	Lanes	ADT	LOS
I-805/Caliente Blvd.	6	133,300	E	6	120,300	D	6	112,500	D
Caliente Blvd/ Heritage Rd	6	133,300	E	4	114,700	F ₃	6	107,700	D
Heritage Rd/Britannia Blvd	6	123,500	D	4	96,700	F ₃	6	88,200	C
Britannia Blvd/La Media Rd	6	112,800	D	4	67,700	F ₀	6	86,100	C
La Media Rd/Route 125	6	81,300	C	4	58,100	F ₀	6	67,900	B
Route 125/Airway Rd.	8*	80,000	A	4	83,900	F ₃	8*	79,500	A
Airway/Port of Entry	8*	80,000	A	4	56,400	B	8*	79,500	A

Lanes = Total number of lanes in both directions.

ADT = Average Daily Traffic

LOS = Level of Service

6P = 6-Lane Major Street

8* = 6-Lane + 2-Auxiliary lanes between Siempre Viva Road and Route 125

F₀ = heavy congestion

F₃ = gridlock

Year 2020 Freeway Alignment Alternative

This scenario provides for Route 905 as a six-lane facility with possible future HOV lanes. Traffic volumes are predicted to increase substantially over the existing conditions. All freeway segments on Table 1-5, are projected to operate at a LOS “E” or better for the year 2020. Design guidelines recommend that Freeways in urban areas should be designed to accommodate the design year traffic (2020), and to operate between LOS C-E.

Year 2020 Tollway Alignment Alternative

This scenario provides for Route 905 as a six-lane facility with possible future HOV lanes. Due to toll collection, traffic volumes are predicted to be less than the 2020 Freeway scenario. All Tollway segments, on Table 1-5, are projected to operate at a LOS “D” or better for the year 2020.

Year 2020 Expressway Staging Option [Presented for informational purposes only]

This scenario provides, on an interim basis, for Route 905 as a six-lane facility between I-805 and Caliente Boulevard, and a four-lane facility between Caliente Boulevard and the POE. As with the Freeway, traffic volumes are predicted to increase substantially over the existing conditions. Of the seven segments, five segments are forecast to operate at LOS “F₀” or worse. Three segments are forecasted to operate at LOS “F₃”, which is described as an extremely severe traffic congestion with significant delay.

Local Streets

Table 1-6 shows local street segment traffic forecasts, for all alignment alternatives, for the year 2020. Table 1-6, includes Average Daily Traffic (ADT) volumes as well as Level of Service (LOS). Forecasted traffic volumes will substantially increase along the Otay Mesa corridor. Border crossing between San Diego County and Mexico will increase as development and international trade increases. The project would provide additional vehicle capacity for these demands.

Table 1-6
YEAR 2020 STREET SEGMENT COMPARISON-EAST/WEST STREETS
FREEWAY AND TOLLWAY ALIGNMENT ALTERNATIVES,
EXPRESSWAY STAGING OPTION

Street	Segment	2020 (DESIGN YEAR)							
		Freeway Alignment Alternatives		Tollway Alignment Alternatives		Expressway Staging Option*		No Project	
		ADT	LOS	ADT	LOS	ADT	LOS	ADT	LOS
Otay Mesa Road	Old OMR/ Caliente Blvd.	6,100	A	7,100	A	7,100	A	54,600	D
	Caliente Blvd./ Heritage Rd.	19,300	A	22,700	A	24,000	A	62,900	F
	Heritage Rd./ Britannia Blvd.	25,700	B	33,100	B	36,400	C	62,000	F
	Britannia Blvd./ La Media Rd.	23,400	A	29,200	B	37,200	C	57,500	E
	La Media Rd./ Route 125	33,700	C	32,200	C	41,300	C	54,900	F
	Route 125/ Enrico Fermi Dr.	29,600	C	36,700	C	49,900	E	55,000	F
Airway Road	Heritage Rd./ Britannia Blvd.	9,000	A	12,400	A	13,000	B	27,500	C
	Britannia Blvd./ La Media Rd.	18,200	B	13,900	B	27,900	C	35,400	D
	La Media Rd./ Route 905	16,800	B	15,800	B	25,800	D	31,800	D
	Route 905/ Enrico Fermi Dr.	16,300	B	16,900	B	50,200	F	24,600	C
Siempre Viva Road	I-805/ Caliente Blvd.	25,800	C	30,300	D	30,700	D	42,600	F
	Caliente Blvd./ Heritage Rd.	30,200	C	34,500	C	37,000	C	62,900	F
	Heritage Rd./ Britannia Blvd.	28,800	B	35,200	C	36,400	C	59,100	E
	Britannia Blvd./ La Media Rd.	26,200	B	29,600	B	36,900	C	49,500	C
	La Media Rd./ Route 905	26,000	B	28,000	B	32,500	B	40,800	C
	Route 905/ Enrico Fermi Dr.	64,000	F	66,000	F	49,200	D	63,000	F

*Presented for Informational Purposes Only

Year 2020 Freeway Alignment Alternatives: this scenario would handle more traffic on all segments of the new facility than any other scenario. As a direct result of the projected high freeway usage, all segments of the local street network (as shown on Table 1-6) between Caliente Boulevard and Route 125 will have excellent LOS (LOS A to LOS C) with minimal traffic congestion and delay.

Year 2020 Tollway Alignment Alternatives: although this scenario incorporates the same design features as the Freeway scenario, toll collections would encourage the use of the local street system. There would be increased traffic, compared to the Freeway Alignment Alternatives, on the parallel segments of the local street system, as indicated in Table 1-6.

Year 2020 Expressway Staging Option [Presented for informational purposes only]: this scenario would substantially increase the traffic on local streets compared with the ultimate Freeway scenario. At-grade intersections proposed on the Expressway Staging Option would limit the capacity of the new facility. As can be seen on Table 1-6, LOS under this scenario ranges from LOS A and LOS D between Caliente Boulevard and Route 125.

Year 2020 No Project: The No Project Alternative assumes that Route 905 would not be constructed. Future traffic would utilize local streets to access the project area. Nine out of sixteen segments on local streets (as shown on Table 1-6) are projected to operate between LOS E and LOS F, with substantial congestion and considerable delay.

Local Access and Local Street Improvements.

The proposed project would need to fit into the local street system, and some work on local roads would be necessary to improve traffic flow. The local access road to Enrico Fermi Drive, as described in Chapter 2, is a critical element of the proposed Route 905/Route 125 interchange. It would facilitate access for trucks traveling north from the Commercial Vehicle Enforcement Facility at the border. It would provide an additional direct access for the East Otoy Mesa area, thereby reducing congestion on the system of local roads and local interchanges (such as OMR, Siempre Viva Road and La Media Road) due to international border traffic traveling through the Otoy Mesa Community. Between Route 125 and Enrico Fermi Drive, the No Project Alternative shows higher traffic volumes along local streets such as OMR and Airway Road (see Table 1-6). Higher traffic volumes on local streets would increase congestion and decrease the quality of service. The local access road is included in the Freeway and Tollway Alignment Alternatives, and would have the effect of reducing congestion on OMR and Airway Road; the No Project Alternative would not provide this benefit.

Local street widening is proposed as a necessary part of the project to improve local access to Route 905, thereby reducing congestion and facilitating traffic flow on the Mesa. The project proposes the following:

- widen OMR from two to six lanes between Route 125 and Sanyo Avenue, and
- widen Sanyo Avenue from two to four lanes between OMR and Airway road.

These proposed improvements to local streets would allow the local street system to function better, and also would compensate for the deletion of Harvest Road between OMR and Airway Road.

Future State Route 11

State Route 11 has been identified as a proposed transportation facility necessary to provide access to a future border crossing east of the Otay Mesa Port of Entry, and to connect to the future SR 125 South/ Route 905 facilities. No funding for SR-11 has been identified within the STIP, the project is not yet programmed, and no decision has been made regarding a specific alignment. SR-11 was added to the State Highway System in 1994. The RTP for the year 2020 includes SR-11, stating that it is planned as a four-lane freeway from the planned Route 905/ 125 interchange to a proposed new border crossing about 3.2 kilometers (two miles) east of the existing Otay Mesa POE.

The need for a third border crossing has been identified by the Federal Government of Mexico and the State of Baja California, as well as, state and local agencies, in order to alleviate existing traffic congestion and to accommodate traffic forecasts anticipated by population and trade growth. In addition, this proposed future border crossing would require a presidential permit application submittal to the Binational Committee on Bridges and Border Crossings, in conjunction with Mexican transportation agencies, to obtain approval for a new border crossing. This future border crossing and the necessary presidential permit would both be contingent upon the processing and approval of a NEPA document. Currently, no funding has been identified for the third border crossing.

1.7 PROJECT FUNDING

Estimated total costs for the project alignment alternatives are as follows (in millions of dollars):

Freeway - North Alignment Alternative	\$262
Freeway - Central Alignment Alternative	\$267
Freeway - South Alignment Alternative	\$277
Tollway - North Alignment Alternative	\$288
Tollway - Central Alignment Alternative	\$292
Tollway - South Alignment	\$302

Funding is from the following Programs:

- 1996 and 1998 State Transportation Improvement Program (STIP)
- 1998 Regional Improvement Program (RIP)
- 1998 Interregional Transportation Improvement Program (ITIP)
- Transportation Equity Act for the 21st Century (TEA-21) High Priority Projects Program
- 1999 TEA-21 National Corridor Planning and Development Program (NCPD)
- 1999 TEA-21 Coordinated Border Infrastructure Program (CBI)
- Local Funds
- TCRP Governor's Transportation Initiative
- 2000 TEA-21 NCPD/ CBI
- 2001 TEA-21 NCPD/ CBI

Since the adoption of the 1996 RTP, the Route 905 project has attracted much attention from local, state, and federal legislators, which resulted in a significant increase in the funds programmed for the project. Specific legislation in the federal TEA-21 earmarked \$54.5 million for the construction of Route 905, and the federal Border and Corridor Infrastructure Program recently provided an additional \$7.4 million for the project. These additional federal funds, along

with recent allocations from State and local sources, resulted in the programming of 93% of the needed funds for the six-lane freeway project.

To date the proposed project has not identified and secured full funding. The District will continue efforts to secure additional funding from regional, state, and federal resources. The potential for a funding shortfall is the reason a Tollway design variation is being considered with the alignment alternatives.