



**THE 2005 - 2030  
HARLINGEN-SAN BENITO  
METROPOLITAN  
TRANSPORTATION PLAN**

Prepared by:

The Harlingen - San Benito Metropolitan Planning Organization  
in cooperation with:

the Texas Department of Transportation  
The Federal Highway Administration, and  
The Federal Transit Administration

Adopted December 29, 2004

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## **Chapter 1: INTRODUCTION**

Transportation is the act of moving people and/or goods from one place to another. The transportation system takes people where they want to go, and it provides the means for the delivery of the goods they need or want. There are three kinds of transportation: land, water, and air. Land transportation depends mainly on wheeled vehicles, especially automobiles, trains, and trucks, and is overwhelmingly the most common type, or mode, of transportation. In many cases, it is the only suitable or available transportation method. Automobiles, buses, and trucks are the main road vehicles. In areas well served by roads, they can provide a variety of transportation services. Ships, boats, and barges are the chief water vehicles while air transportation depends primarily on airplanes.

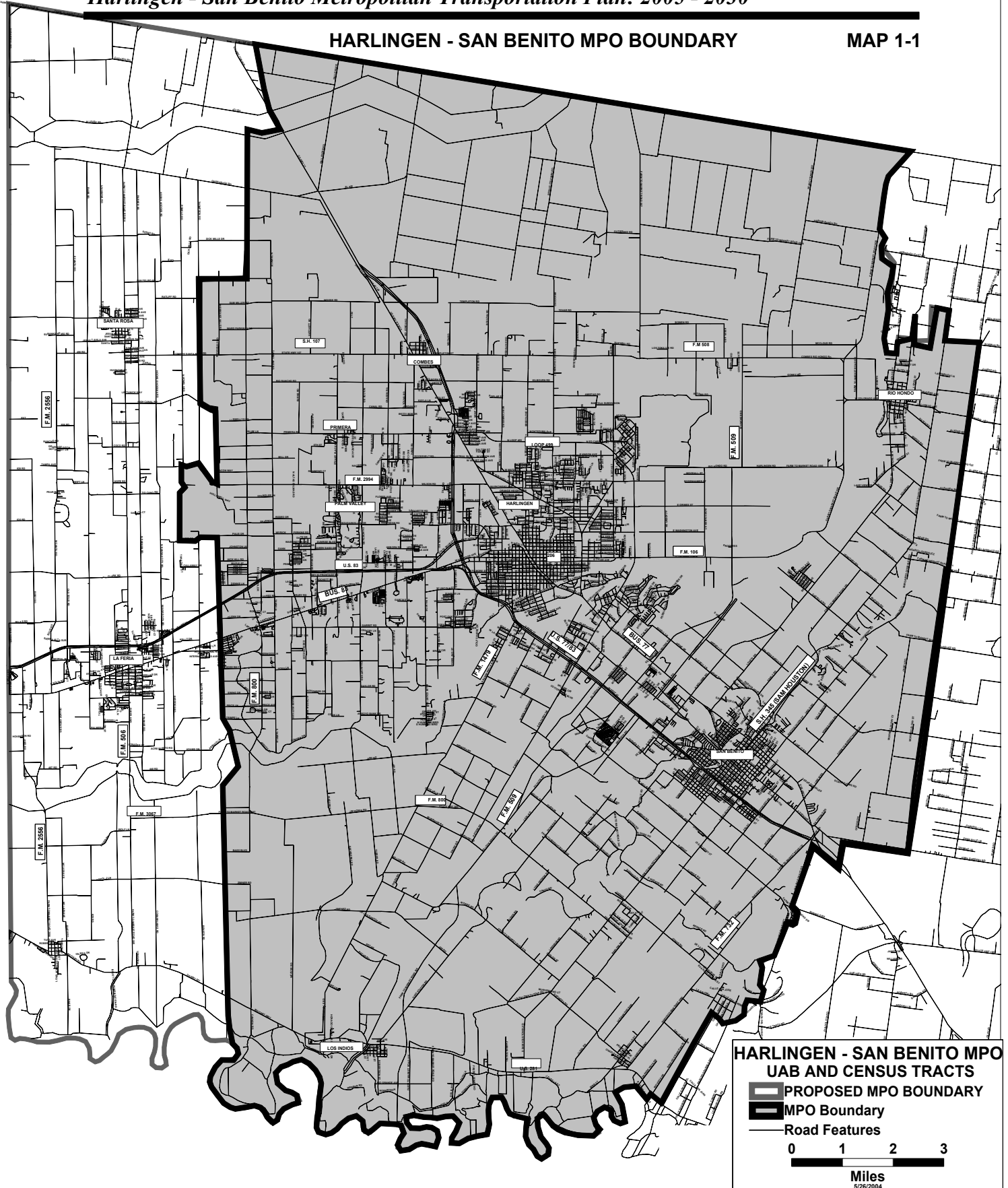
The transportation network costs money to expand and to maintain. This money comes from many sources, such as the federal, state and local governments as well as private enterprise. In urbanized areas with a population of 50,000 and over, federal transportation funds are coordinated through an organization known as the Metropolitan Planning Organization, or MPO. This organization, through its Policy and Technical Committee members, identifies existing and future transportation needs and coordinates federal and state funds to address those needs.

### **1.1 The Harlingen-San Benito Metropolitan Planning Organization**

All urbanized areas in the United States with a population of 50,000 or more are required to have an MPO. The Harlingen-San Benito MPO area consists of certain parts of western Cameron County and all of Combes, Harlingen, Los Indios, Palm Valley, Primera, Rio Hondo, and San Benito. In 2000, the MPO had a population of approximately 117,028 people. (Please see Map #1-1.) Located on the Texas border with Mexico, the Harlingen-San Benito Metropolitan Planning Organization (MPO) consists of two committees and a staff that oversees the planning and distribution of federal transportation dollars within a defined area. These committees are:

**A. Policy Committee** - This is the decision-making committee of the MPO. This committee is comprised of officials representing Cameron County, Combes, Harlingen, Palm Valley, Primera, San Benito, and the Texas Department of Transportation. The Policy Committee takes action based on recommendations from the Technical Committee (Please see Table 1-1.)

**B. Technical Committee** - This committee is comprised of professional planners and engineers who are representatives of the same agencies as the members of the Policy Committee. They provide technical support and recommendations to the Policy Committee.

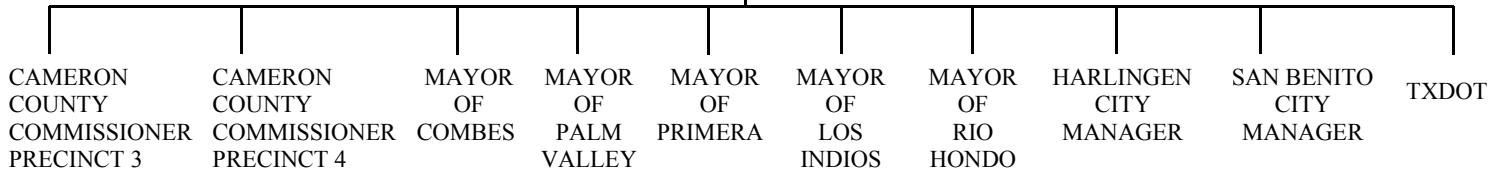


**TABLE 1-1  
HARLINGEN-SAN BENITO MPO**

**POLICY COMMITTEE**  
(DECISION MAKERS)

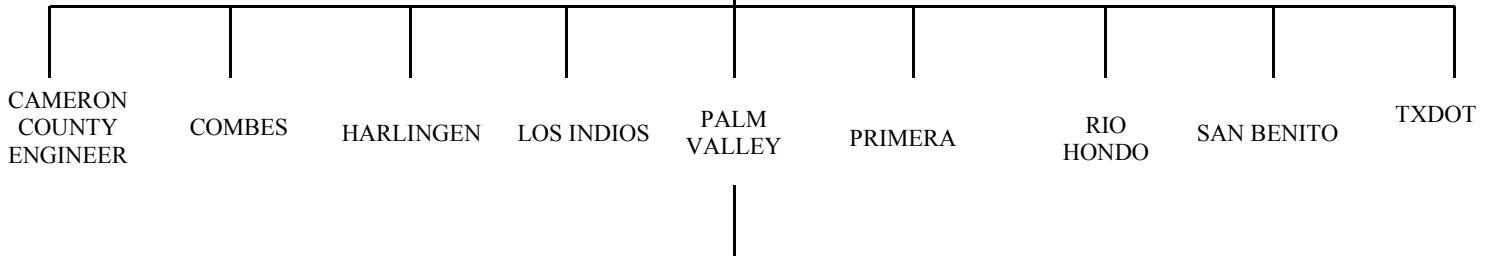
CHAIRMAN-MAYOR OF HARLINGEN\*

VICE-CHAIRMAN-MAYOR OF SAN BENITO\*



**TECHNICAL COMMITTEE**

CHAIRMAN-MPO DIRECTOR



**MPO STAFF**

DIRECTOR

PLANNER/GIS ANALYST

ADMINISTRATIVE ASSISTANT

\*Alternates every two years between Mayors of Harlingen and San Benito



The Harlingen-San Benito Metropolitan Planning area encompasses 258 square miles in western Cameron County. Incorporating seven cities and certain unincorporated parts of western Cameron County; the Harlingen-San Benito MPO is one of two MPOs in Cameron County, the other being the Brownsville MPO. The Harlingen-San Benito Metropolitan Planning Organization area is also experiencing rapid growth. Every city within the MPO study area experienced significant increases in population, and increased population and growth are projected to continue through the 25-year study period for the Harlingen-San Benito MPO and the Lower Rio Grande Valley as a whole.

## **1.2 The Three Primary MPO Documents**

The role of the Metropolitan Planning Organization is to ensure that the federally funded transportation improvements create an efficient intermodal transportation system for the area as well as for the intermodal transportation system of Texas and the United States. This is accomplished through transportation planning for the area, data collections, studies, the **Metropolitan Transportation Plan (MTP), the Transportation Improvement Program (TIP), and the Unified Planning Work Program (UPWP)**. The Policy Committee, through public involvement and the project selection process, works to ensure project coordination. This coordination results in the efficient use of funds through timely right-of-way acquisition, utility placements, and construction costs. Through planning and working with the public, the MPO is aware of transportation needs and can develop solutions in a timely fashion. The project selection process ensures that projects are developed in an efficient, needs-based manner.

### **A. The Metropolitan Transportation Plan**

Federal law, Federal Highway Administration, and Federal Transit Administration regulations require states, MPOs, and transit operators that receive federal capital or operating assistance to continuously, cooperatively, and comprehensively plan for urban transportation needs. Federal transportation legislation known as the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 mandated that the MTP be updated every five years. The current federal transportation legislation, the Transportation Equity Act for the 21<sup>st</sup> Century, TEA-21, continued the requirement of updating the Plan on a five-year schedule. The Harlingen-San Benito MPO adopted the first Metropolitan Transportation Plan in December 1994.

Federally funded transportation improvements within the urbanized area must be in the adopted MTP in order to receive federal funding. The MTP is the long range, 25-year document that describes the transportation goals and facilities necessary to accommodate existing and future transportation needs of the area. Federal funding is restricted to roads that are functionally classified by the MPO and Texas Department of Transportation as collector or above. Roadways are classified based on the volume of traffic and the purpose of the roadway. (Please

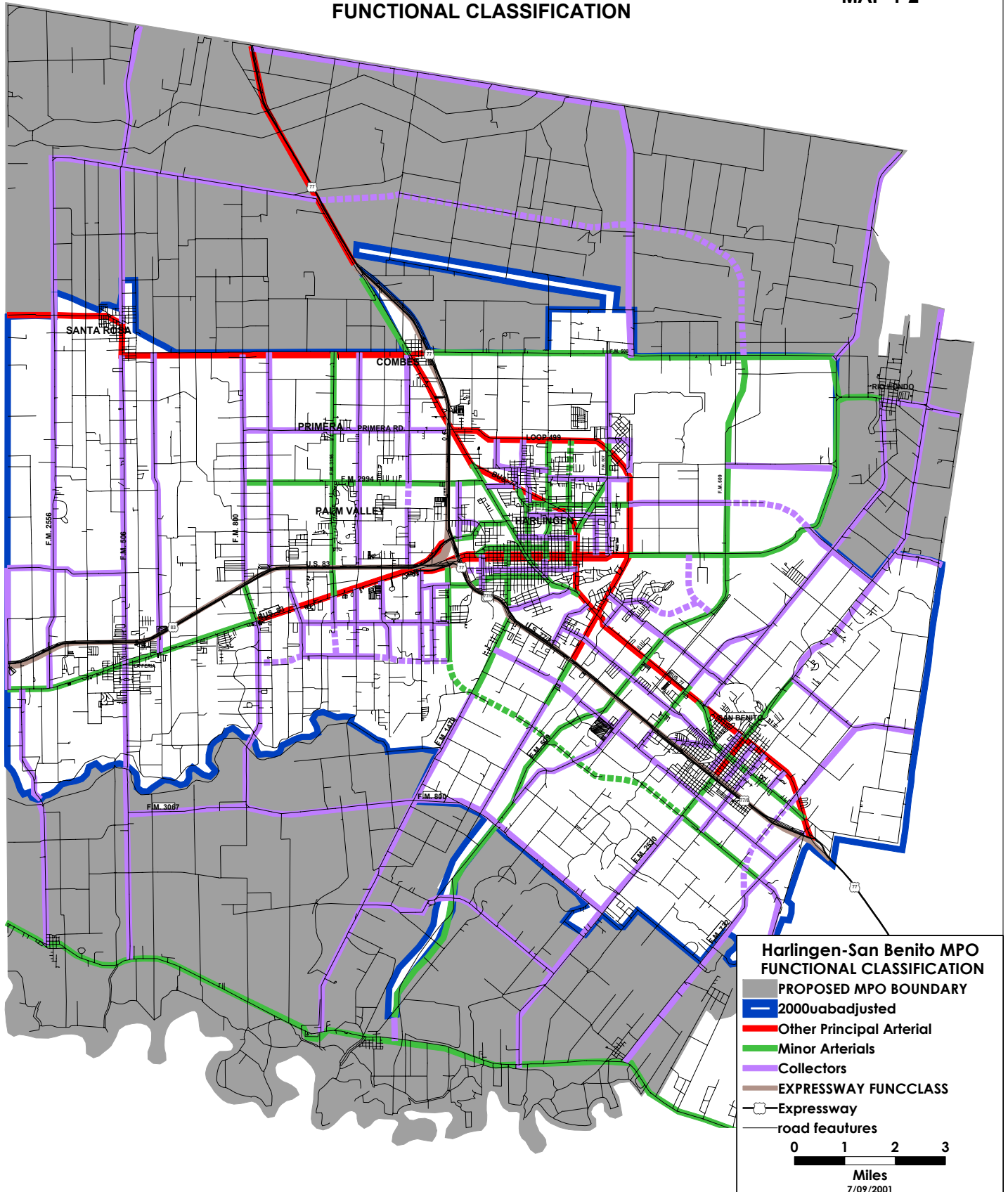
## ***Harlingen - San Benito Metropolitan Transportation Plan: 2005-2030***

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see Map # 1-2 and Table #1-2.) A transportation improvement is everything from building a new road or adding capacity (lanes) to rehabilitation of an existing road, funding transit systems and providing improved pedestrian or bicycle facilities.

The MTP must identify all transportation facilities, include a financial plan that demonstrates how the plan can be implemented, and assess capital investment and other measures necessary to preserve the existing transportation network and meet future demand. The MPO only provides for the planning of projects; the actual construction is conducted by the appropriate entity (or entities).

FUNCTIONAL CLASSIFICATION



## ***Harlingen - San Benito Metropolitan Transportation Plan: 2005-2030***

**Table 1- 2. Functional Classification Characteristics**

<b>Functional Classification</b>	<b>Level of Mobility</b>	<b>Level of Accessibility</b>	<b>System Relationships</b>
Interstate or Freeway	Connects urban and rural service, connects urban sub regions, connects urban areas.	There is no direct land access. Used for long trips at high speeds.	Other interstate or freeways, principal arterials.
Principal Arterial	Connects two or more sub regions, compliments freeways in high volume corridors.	There is no direct land access, except for major traffic generators. Used for medium to long distance trips at moderately high speeds. Carries highest traffic volumes within the urban area. Access is subordinate to traffic movement.	Freeways, other principal arterials, and high volume collectors.
Minor Arterial	Connects adjacent sub regions, connects activity centers within a sub region, provides intra-community continuity, ideally does not penetrate neighborhoods.	Restricted land access to major and minor traffic generators in industrial and commercial areas. Used for moderate to short length trips at moderate speeds.	Principal arterials, other minor arterials, facilities that place more emphasis on land access than higher classifications.
Collector	Connects neighborhoods, connects land uses with transportation facilities.	Unrestricted land access to residential neighborhoods, commercial, and industrial areas. Used for collection and distribution to arterial facilities at moderate to low speeds.	Arterials, other collectors, local streets, and private driveways providing direct land access.
Local	Connects facilities within neighborhoods, connects land uses within transportation facilities.	Unrestricted land access. Used for collection and distribution to collector facilities at low speeds.	Collectors, other local facilities, and private driveways providing direct land access.

Source: ITE, 1992, Layton, 1996, U.S. DOT, 1997

The *HSBMPO 2030 MTP* is a planning guide that contains transportation policy and projects for the next 25 years (to 2030). The Plan includes programs and policies for congestion management, transit, bicycles & pedestrians, roadways, freight and finances. The *HSBMPO 2030 MTP* must be revised at least every five years. The *HSBMPO 2030 MTP*'s primary use is as a

regional long-range plan for federally funded transportation projects, and it also serves as a comprehensive, coordinated transportation plan for all the governmental jurisdictions within the HSBMPO area. Different jurisdictions have different transportation implementation responsibilities under the plan. These include the Texas Department of Transportation, and cities and counties.

In addition to the Metropolitan Transportation Plan, all MPOs are responsible for two other documents. These are:

**B. The Transportation Improvement Program, or TIP** - This document is the 3-year construction program for the MPO. It lists what projects will be constructed in the MPO urbanized area and in what fiscal year they will be let. (Let means when the contract will be awarded.) The TIP is updated every two fiscal years (FY 1999, 2001, 2003, etc.). Quarterly revisions are also allowed.

**C. The Unified Planning Work Program, or UPWP** - The Unified Planning Work Program is the MPO's annual program of projects. It outlines the administrative and transportation planning activities the MPO will undertake in the current fiscal year. The document is divided into work tasks. Each task allocates how much planning money will be spent by the MPO on each activity during the fiscal year. The MPO operates on the fiscal year October 1 - September 30.

### **1.3 1999 Harlingen-San Benito Metropolitan Transportation Plan Goals**

The 1994 Harlingen-San Benito Metropolitan Transportation Plan was developed in accordance with the Intermodal Surface Transportation Efficiency Act of 1991. With the passage of TEA 21 in June of 1998, our original plan goals still remained valid and currently reflect our goals.

The Plan has ten goals:

**A. Provide for Safe Travel**

Objective: Reduce exposure to traffic accidents and provide for increased travel safety.

**B. Reduce Travel Time and Congestion**

Objective: Alleviate traffic congestion and reduce travel time between various geographical sectors of the Harlingen-San Benito Metropolitan Area, South Texas, Mexico, and other parts of the United States.

**C. Enhance Aesthetics of the Transportation Plan**

Objective: Develop a plan, which integrates the transportation system with the aesthetic qualities of the landscape and historic cities.

**D. Provide an Economical and Efficient Plan**

Objective: Provide an efficient plan, which can be developed from the available funds and satisfies all other objectives.

**E. Encourage International Trade**

Objective: Develop a transportation plan, which incorporates economic, and development considerations, and meets the needs of international trade in the South Texas Area.

**F. Coordinate with Land Development Needs**

Objective: Develop a transportation plan that will serve effectively and provide accessibility to existing and anticipated patterns of development throughout the Harlingen-San Benito Area while preserving resources.

**G. Develop a Functional Plan**

Objective: Develop a functional transportation plan that will provide for appropriate types and levels of service commensurate with the needs and activities of the Harlingen-San Benito Area.

**H. Incorporate Intermodalism**

Objective: Develop a plan which is capable of being integrated with the various modes of transportation, particularly roadway (private auto, trucking and public transit), railroad, bikeway, airports, pedestrian, and seaport.

**I. Comply with the CAA and ADA Requirements**

Objective: Select a transportation plan that meets the needs of the Harlingen-San Benito Area while addressing the requirements established by the Clean Air Act and the Americans with Disabilities Act.

**J. Develop a Public Transportation System**

Objective: Develop a public transportation system for the Harlingen-San Benito area that meets the needs of the public.

**1.4 Recommendations**

In addition to network projects, the 2004 Metropolitan Transportation Plan also recommends the following be conducted:

**A. Special Study:** The Plan recommends that a comprehensive traffic study be conducted in the metropolitan area to provide data that will allow a thorough analysis of the existing roadway network and its capacities.

**B. MPO Training:** The plan recommends that a handbook and administrative packet be developed and updated to explain the purpose and workings of the MPO for public and committee orientation and training. The administrative packet will be updated and the handbook is completed.

**C. Functional Classification Changes:** The Plan recommends that the existing functional classification of area roadways be re-evaluated by TxDOT and the MPO. This is an on-going function of the MPO.

**D. MPO Study Area Expansion:** The Plan recommends that the boundaries of the Harlingen-San Benito MPO study area be expanded to encompass developing area and transportation facilities. This has not been completed and the new study area is not reflected in the 2030 Metropolitan Transportation Plan. The forms and maps have been forwarded to TxDOT and the governor's office for approval.

**E. American with Disabilities Act:** The Plan recommends that all transportation facilities and services within the metropolitan area should comply with the ADA. This is a federal law, and as such, is followed throughout the MPO area.

**Chapter 2: SNAPSHOT OF THE VALLEY**

The Valley is important to state, national and international trade activity. U.S. trade with Mexico has increased 312 percent in the last decade. Some of the more important aspects of trade include a shift in the trade flow pattern to a north-south direction, an increasing maquiladora industry, and increased tourism.

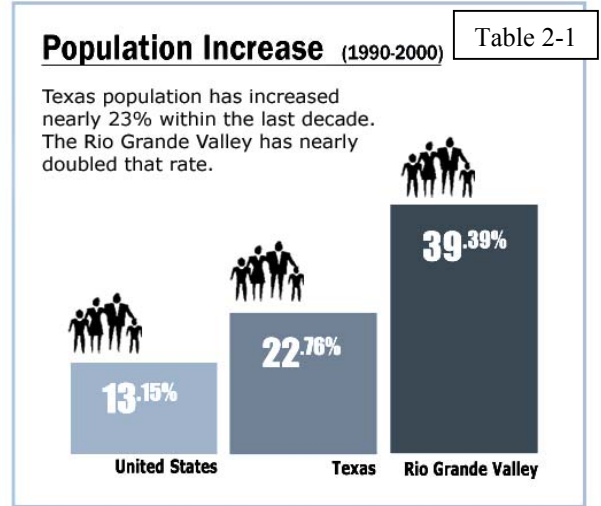
The Valley is one of the fastest growing, youngest, and poorest areas in state and the nation (see Table 2-1). The population has increased 40 percent in the last decade, and growth rates are projected to continue at the same pace. Nearly 70 percent of the population is under the age of 44. Thirty-five percent of the population is below the poverty level, and the poorest community in the nation is located in the Valley.

International trade agreements have changed traditional traffic patterns. The Valley is experiencing increases in all modes of traffic because of these new traffic patterns. The Valley’s transportation infrastructure is being pushed to the limit, and local funds alone cannot meet these needs.

Simply put, without continued investment in the transportation infrastructure along the border, businesses in Dallas, Houston, Chicago, and many other Texas and U.S. communities will suffer.

**2.1 Trade**

Two out of every three jobs created in Texas are directly or indirectly related to trade. Over the last 10 years, state and national trade with Mexico has significantly increased, as shown in Table 2-2.



Source: U.S. Census

**Two out of every three jobs created in Texas are directly or indirectly related to trade**

**Increases in Trade with Mexico (1990-2000)**

Table 2-2

	1990	2000	Percent Increase
<b>Texas-Mexico Trade</b>	\$28 Billion	\$47.7 Billion	70.5%
<b>US-Mexico Trade</b>	\$ 60 Billion	\$247 Billion	311.67%

Source: Texas Department of Economic Development, Business and Industry Data Center

Texas recently became the leading exporting state in the nation. In 2002, Texas exports totaled \$88 billion and accounted for more than 13 percent of total U.S. exports. Texas is the nation’s leading export state to Mexico, accounting for 44 percent of all U.S. shipments to Mexico in 2002

Source: RGV Mobility Plan

This section discusses changing trade patterns, the number of the maquiladoras on the Mexican side of the border across from the Valley, and the region’s tourism industry.

**2.2 Changing Trade Patterns**

Trade agreements like the General Agreement on Tariffs and Trade (GATT) and the North American Free Trade Agreement (NAFTA) have helped shift trade traffic from east-west to north-south patterns. The Valley has joined the ranks of Houston, Boston, Los Angeles and Seattle as critical junctures in U.S. overland trade. Table 2-3 points to the significant increases in trade flows across border points of entry in the Valley.

**Total North American Trade by All Land Modes** (1994 and 2001)

Table 2-3

Valley U.S. Ports and Customs Districts	Total North American Trade 1994	Total North American Trade 2001	Percent Increase
Brownsville	\$7,331,659,702	\$10,911,207,350	48%
Hidalgo	\$4,763,175,741	\$12,422,910,723	160%
Rio Grande City	\$155,855,195	\$228,345,009	46%
Roma	\$ 91,217,169	\$ 124,538,524	36%

Source: Bureau of Transportation Statistics – Transborder Surface Freight Data

Still, changing trade patterns are not the only factor that affect transportation infrastructure in the Valley.

**2.3 Maquiladoras**

While the Valley is the most productive agricultural region in Texas, in recent years the area has seen a shift away from an agricultural economy to an increasingly trade-oriented one. Part of this change is due to the growing maquiladora industry. Maquiladoras, or maquilas, are assembly plants in Mexico that employ Mexican workers to make products, generally for export to the United States. Often, raw materials or components are sent to Mexico from the United States for some level of processing with final assembly occurring in the United States. Products produced by maquiladoras receive favorable tariff and tax treatments with tariffs paid only on the value added in Mexico, not on the value of the entire product.

**There are over 300 Maquiladoras in the Valley border region.**

Maquiladora employment grew 47 percent in the five years prior to NAFTA and increased by 86 percent in the first five years after NAFTA. There were more than 1,700 plants in 1990. Ten years later, there were over 3,700 maquiladora operations.

There are approximately 348 maquiladoras in the state of Tamaulipas, Mexico. Ninety percent are located in the Texas-Mexico border region. The maquiladoras in Mexican border cities across from McAllen



and Brownsville represent the second largest share of the all the maquiladoras along the Texas-Mexico border.

The geographic location of Mexican border cities is attractive for companies doing business in North, Central and South America that are eager to reduce transportation, inventory and shipping costs. Totaling almost \$18 billion in 2000, maquiladoras are Mexico's top source of foreign exchange. In addition, a significant number of jobs have been created on both sides of the border in the service, retail, supply and other fields. As an example, several plastic and injection molding companies in Brownsville and McAllen are sub-sectors of the maquiladora industry.

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***Tourism is one of the Rio Grande Valley's most important aspects of the economy, bringing more than \$700 million each year to the region.***

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## **2.4 Tourism**

Another important factor in the Valley economy is the growing tourism industry. Tourism is estimated to bring more than \$700 million per year to the Valley. The region has nine of the state's 30 most visited cities for long-term visitors and 12 of the nation's 50 most visited attractions. Each year, thousands of students visit South Padre Island during Spring Break. Visitors come for vacation, to attend conventions and special events, to shop, for RV rallies or group tours to Mexico. As an example, McAllen draws a larger share of Mexican spending than any other city in the U.S. An increasing number of visitors come to seek information on business opportunities in the Valley and in the bordering cities of Mexico.

Winter Texans have the greatest impact on the area and its economy. Estimates of long-term visitors who stay from two to six months are 125,000 to 150,000 each year. Winter Texans pour about \$330 million into the Valley and, consequently, the Texas economy each year. And, the Valley's proximity to Mexico makes it a favorite destination site for Mexican nationals, particularly from Northern Mexico.

A growing segment of the tourism industry is eco-tourism. The Valley is among the top three birding destinations in the United States. Bird watchers from all over the world impact the local economy with annual spending of \$100 million. The World Birding Center, which recently opened in several locations across the Valley, is expected to greatly increase the area's eco-tourism visitors.

While trade patterns have a direct impact on the Valley's highway system, the population that uses this system also affects the infrastructure. The following section discusses regional demographics.

## **2.5 Demographics**

The Valley remains one of the fastest growing, youngest, poorest areas in the United States. It has some of the highest unemployment rates in the state and some of the lowest per capita incomes in the state. Because of

low salaries and high unemployment, sales tax activity is also below statewide averages.

**2.6 Population**

While Texas has grown substantially in the last decade, the growth rate of the Valley was almost double that of the state. Today approximately one million people live in the Valley. The Valley also experiences seasonal fluctuations due to Winter Texans, migrant farm workers and Spring Breakers. Table 2-4 reveals the Valley’s population growth over the last 30 years. The population of the Valley has increased 64 percent since 1970.

Table 2-4  
Table 3

**Population Comparison (1970-2000)**

	1970 Population	1980 Population	1990 Population	2000 Population	% Growth 1970-2000
<b>United States</b>	203,302,031	226,709,873	248,709,873	281,421,906	27.75%
<b>Texas</b>	11,196,730	14,229,191	16,986,335	20,851,820	46.30%
<b>RGV</b>	356,180	537,717	701,888	978,369	63.59%

Source: U.S. Census

As shown in the table 2-5 below, the McAllen-Edinburg-Mission Metropolitan Statistical Area (MSA) and the Brownsville-Harlingen-San Benito MSA ranked in the top five fastest growing MSAs in the state. In addition, the McAllen-Edinburg-Mission MSA ranked fourth in the nation.

**Valley population will nearly double by 2030.**

**Metropolitan Statistical Areas in Texas Ranked by Percent Change (1990-2000)**

Table 2-5

MSA	1990 Population	2000 Population	Percent Change
<i>McAllen-Edinburg-Mission</i>	383,545	569,463	48.5%
Austin-San Marcos	846,227	1,249,763	47.7%
Laredo	133,239	193,117	44.5%
Dallas	2,676,248	3,519,176	31.5%
<i>Brownsville-Harlingen-San Benito</i>	260,120	335,227	28.9%

Source: Texas State Data Center

Similar growth rates are expected to continue. An estimated 1.3 million people will live in the Valley by 2010, and the population is expected to nearly double by 2030. However, the population on the U.S. side of the border makes up only part of the Valley.

**The 3 million bi-national population of the region is greater than the population of Fort Worth, Arlington, San Antonio or Austin.**

**2.7 Bi-National Population**

The Texas Transportation Plan developed for working with the 108<sup>th</sup> Congress recommended that transit funding consider both Texas and Mexico populations along the border. This is an important point because many Mexican citizens come to the Valley to shop, work or conduct

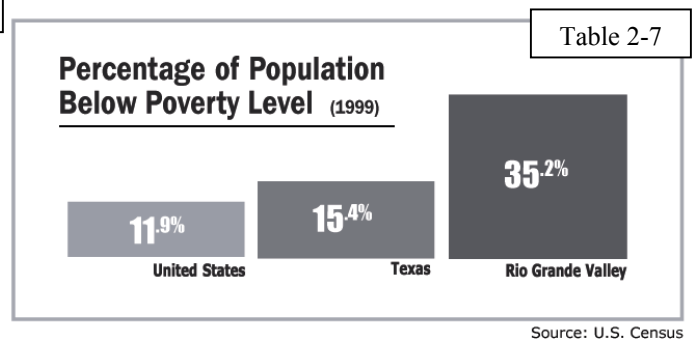
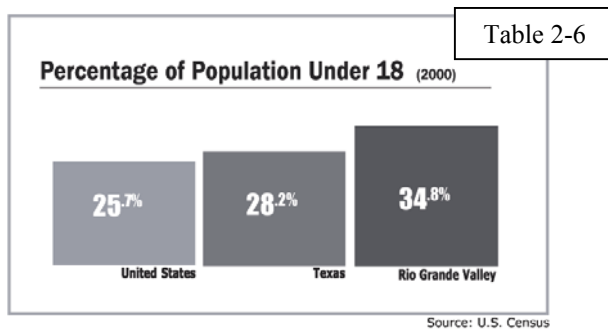
business. Thus, it is important to recognize this population when looking at mobility planning.

Approximately two million people live across the border from the Valley. The bi-national area has a population of almost three million people, which would make the Valley the third largest metropolitan area in Texas. Official Mexico census figures show a lower number but are widely recognized as not reflecting the total border population. On any given day, the effects of this bi-national population are evident in the number of Mexican vehicles utilizing the highways in the Valley.

The population growth along the Mexican border equals or outpaces growth on the U.S. side. Thus, it is likely that the bi-national population of the region will exceed six million people by 2030. The following section illustrates the characteristics of the valley population in more detail.

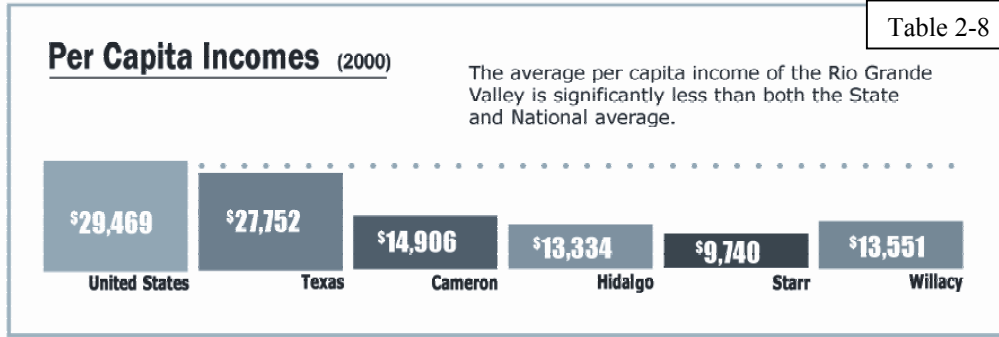
## 2.8 Age and Poverty

The population of the Valley is relatively young. In 2000, nearly 35 percent were between the ages of 18 and 44 (see Table 2-6.) In 1999, 15 percent of the state population lived below the poverty level (see Table 2-7.)



The counties of the Lower Rio Grande Valley had a rate more than twice that of the state. Of those under 18 living in the Valley, 44 percent lived below the national poverty level. The corresponding figure in the state was 24 percent. One direct consequence of this is that local governments are severely hampered in the ability to finance transportation infrastructure.

Table 2-8 shows the low per capita incomes of the Valley as compared to the state and the nation. The Valley has the nation's poorest Metropolitan Statistical Area (MSA), with an average per capita income of \$13,339 per year, 55 percent less than the national average, and the poorest community in America, with a colonia known as Cameron Park, near Brownsville, that has a median per capita income of just \$4,103.



Source: U.S. Census

Valley residents and officials are willing to use local funds to finance mobility needs, but local funding is limited. The low-income levels, low retail sales activity and low property values in the Valley make it impossible to fund mobility needs solely with local dollars. As a result, the fastest-growing and youngest region of Texas has the least ability to address critical mobility needs with local revenues.

## 2.9 Workforce and Unemployment

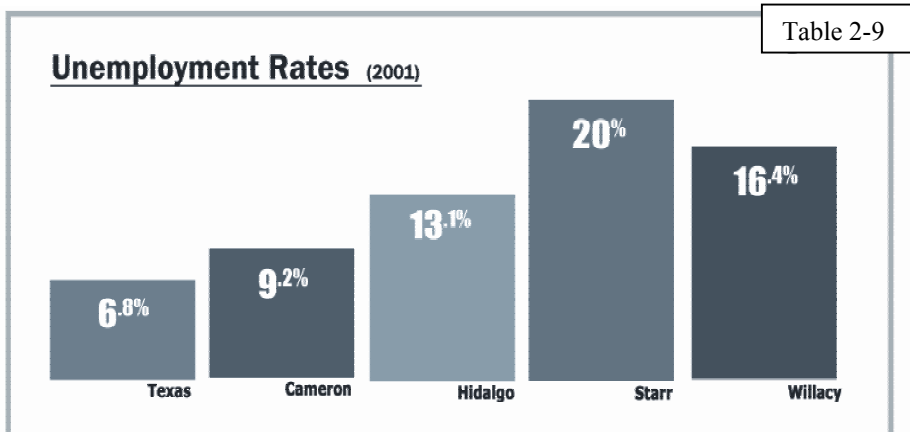
The region has recently seen an increase in employment opportunities. Job growth in the McAllen-Edinburg-Mission MSA was 3.3 percent between January and May 2003. During the same period, the Brownsville-Harlingen-San Benito MSA was 0.8 percent, the same rate as the state average. Although the number of jobs is expected to increase throughout the Valley, the number of people that make up the workforce is outpacing job growth.

The Valley is expected to continue experiencing employment gains in tourism and manufacturing, especially with the increased trade activity with Mexico and servicing maquiladoras in Mexican border cities. However, the Valley still has unemployment rates much higher than the state average, as shown in Table 2-9.

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**Three of the Valley counties rank in the top ten counties in the state with the highest unemployment rate.**

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Source: Texas Comptroller of Public Accounts

**2.10 Property Taxes**

Property taxes are a primary source of local revenue. Many Valley residents are unable to purchase their own home, and many homes are well below the median price of homes across Texas. The median price of a home in Texas in 2001 was \$111,900, compared to \$74,400 in Brownsville, \$80,000 in McAllen and \$81,100 in Harlingen. These factors coupled with low per capita incomes, as previously mentioned, contribute to relatively low property tax rolls. Table 2-10 compares per capita property values of the four counties in the Valley with the state.

**Property Values (2000)**

Table 2-10

	<b>Total</b>	<b>Per Capita</b>
<b>Texas</b>	\$1,178,023,280,437	\$56,495
<b>Cameron County</b>	\$8,314,725,408	\$24,803
<b>Hidalgo County</b>	\$14,066,062,847	\$24,701
<b>Starr County</b>	\$1,299,402,460	\$24,244
<b>Willacy County</b>	\$680,703,428	\$33,896

Source: Texas Comptroller of Public Accounts

**2.11 Sales Tax Activity**

As previously noted in this section, 35 percent of the population in the Valley is below the poverty level, which has a direct impact on sales tax activity. Table 2-11 shows how sales tax activity in the Valley lags behind many other regions in the state.

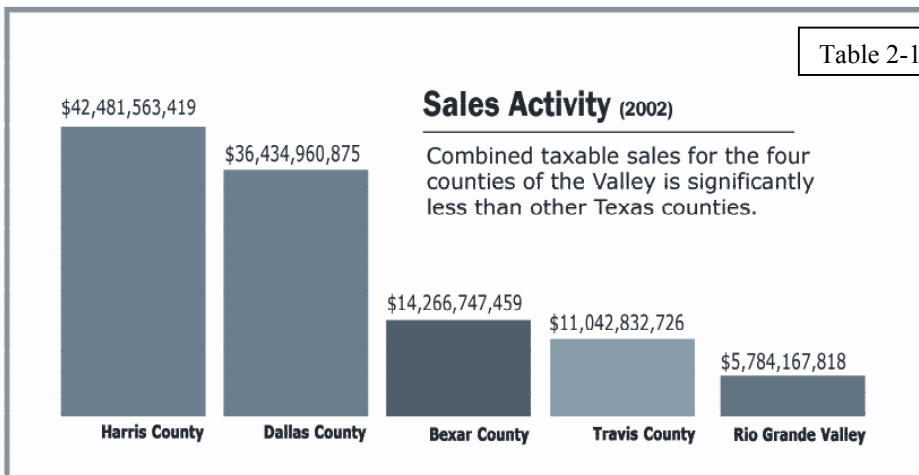


Table 2-11

Source: Texas Comptroller of Public Accounts

As shown in previous sections, trade patterns and regional demographics have a direct impact on the Valley’s highway system. Tax based revenue sources are minimal, population has increased dramatically, and we are very mobile society. We have no choice but to find new and innovative ways to fund our transportation infrastructure needs making sure we make the best choices with scarce funds.

## **Chapter 3: THE EXISTING TRANSPORTATION SYSTEM**

The Harlingen-San Benito Metropolitan Planning Organization covers 253 square miles and includes seven incorporated cities in western Cameron County. The metropolitan transportation system is a multifaceted and multimodal system consisting of facilities having regional and national significance. It includes a comprehensive network of expressways, highways, roads, air and sea facilities, rail, an international bridge, and non-motorized modes of travel (walking and biking). The purpose of the metropolitan transportation system is to distinguish the locally important transportation facilities from those that are strategically significant at the regional and national levels. Roadways are classified based on the volume of traffic and the purpose of the roadway. (Please see Table 3-2) The functional classification of roadways in the MPO area, as determined by TxDOT, is shown on Map 1-2.

### **3.1 Roadways**

There are approximately 25 miles of expressways in the Harlingen-San Benito metropolitan area. These expressways, U.S. 77 and U.S. 83, are an integral part of the transportation system, moving people and goods within the metropolitan area and throughout the Lower Rio Grande Valley and beyond. Additionally there are 175 miles of major thoroughfares throughout the area, which also provide access. The major thoroughfares serving the MPO area are listed in Table 3-1 and the National Highway System is shown on Map 3-1.

#### **A. Roadway Surface**

The type of surface, paved or unpaved, has significant influence on the traffic capacity and utilization of the facilities. Table 3-2 lists the total length of the roadways by functional classification. Most of the local streets in the Metropolitan Planning Organization cities are paved (i.e., concrete or asphalt surfaces), along with all of the State Highways and Farm to Market roads. The unpaved facilities are mainly unclassified rural roads that do not currently serve significant traffic volumes. Table 3-3 summarizes the length and type of paved and unpaved road miles of local streets in the individual city limits in the MPO area, in addition to the miles of sidewalks and bikeways.

### **3.2 Hurricane Evacuation Routes**

The hurricane evacuation routes passing through the MPO area are U.S. 77/83 from the south MPO limits to U.S. 77/83 interchange, U.S. 77 and U.S. 83. (Please see Map 3-2.)

### **3.3 Congestion**

The 1999 base year network indicates that the congested or heavily traveled roads are coded by color in the Harlingen and the San Benito area. The heavily congested roads have traffic volumes close to the capacity of the facility. (Please see Map 3-3, 1999 Level of Service.)

## *Harlingen - San Benito Metropolitan Transportation Plan: 2005-2030*

**Table 3-1: Length (miles) of Major Thoroughfares in the Harlingen-San Benito MPO**

<b>Road</b>	<b>Length (mile)</b>	<b>Divided / Undivided facility</b>
FM 507	8.7	Undivided
U.S. 77	11.4	Divided, 4 lane
U.S. 83	5.2	Divided, 4 lane
U.S. 77/83	8.8	Divided, 4 lane
FM 508 (Combes/Rio Hondo Rd)	9.5	Undivided
SH 107	4.2	Undivided
FM 1420	2.8	Undivided
FM 800 (Bass Road)	18.5	Undivided
Loop 499 (Ed Carey)	7.9	Undivided
FM 509 (Helen Moore, Paso Real)	17.4	Undivided
FM 1595	2.3	Undivided
FM 106	9.0	Undivided
FM 1846 (Oscar Williams)	8.5	Undivided
SH 345 (Sam Houston)	8.8	0.3 mi Divided @ Sam Houston Rd
FM 3462 (Line 17)	1.5	Undivided
FM 510	2.9	Undivided
FM 732	6.0	Undivided
FM 1577	0.7	Undivided
FM 2520 (Sam Houston)	7.0	Undivided
FM 675	4.1	Undivided
FM 1479 (Rangerville Road)	9.2	1.1 mi Divided
FM 801 (Nixon)	3.5	Undivided
BU 77	15.0	Undivided
BU 83	5.0	Undivided
U.S. 281	9.0	Undivided
Tyler Ave	3.1	3 lane, one way
Harrison Ave	3.4	3 lane, one way
FM 2629 (North County Line)	7.4	Undivided
<b>Total</b>	<b>200.8</b>	

**Table 3-2: Length (in miles) of Roadways by Functional Classification**

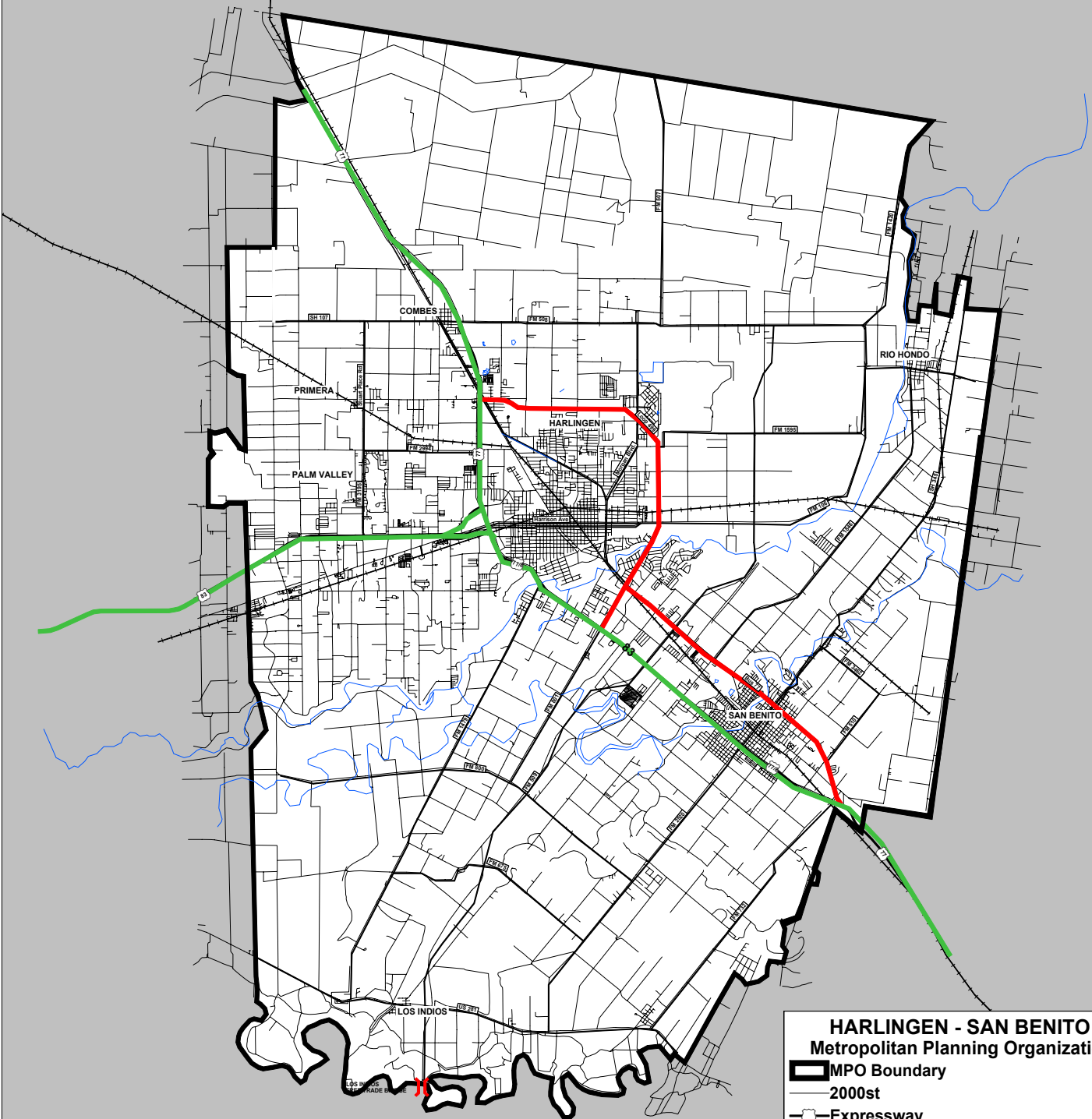
<b>Functional Classification</b>	<b>Length</b>
Expressways	16.05
Other Principal Arterials	30.00
Minor Arterials	44.42
Collector streets	41.66
Other Rural Principal Arterials	10.62
Rural Minor Arterials	17.03
Rural Major Collectors	70.48
Rural Minor Collectors	45.86
<b>Total:</b>	<b>276.12</b>

**Table 3-3: Length (in miles) of Roadway and Sidewalks in the Harlingen-San Benito MPO Area**

	<b><u>Paved Roads</u></b>	<b><u>Unpaved Roads</u></b>	<b><u>Sidewalks/Bikeways</u></b>
Harlingen	221.0	8.0	12.00
San Benito	74.0	6.0	12.00
Palm Valley	12.0	0.0	0.10
Primera	15.5	2.9	0.57
Combes	6.0	2.0	0.00
Rio Hondo	12.6	1.0	0.00
Los Indios	3.0	4.2	0.00
Cameron County	197.0	361.0	0.00



NATIONAL HIGHWAY SYSTEM

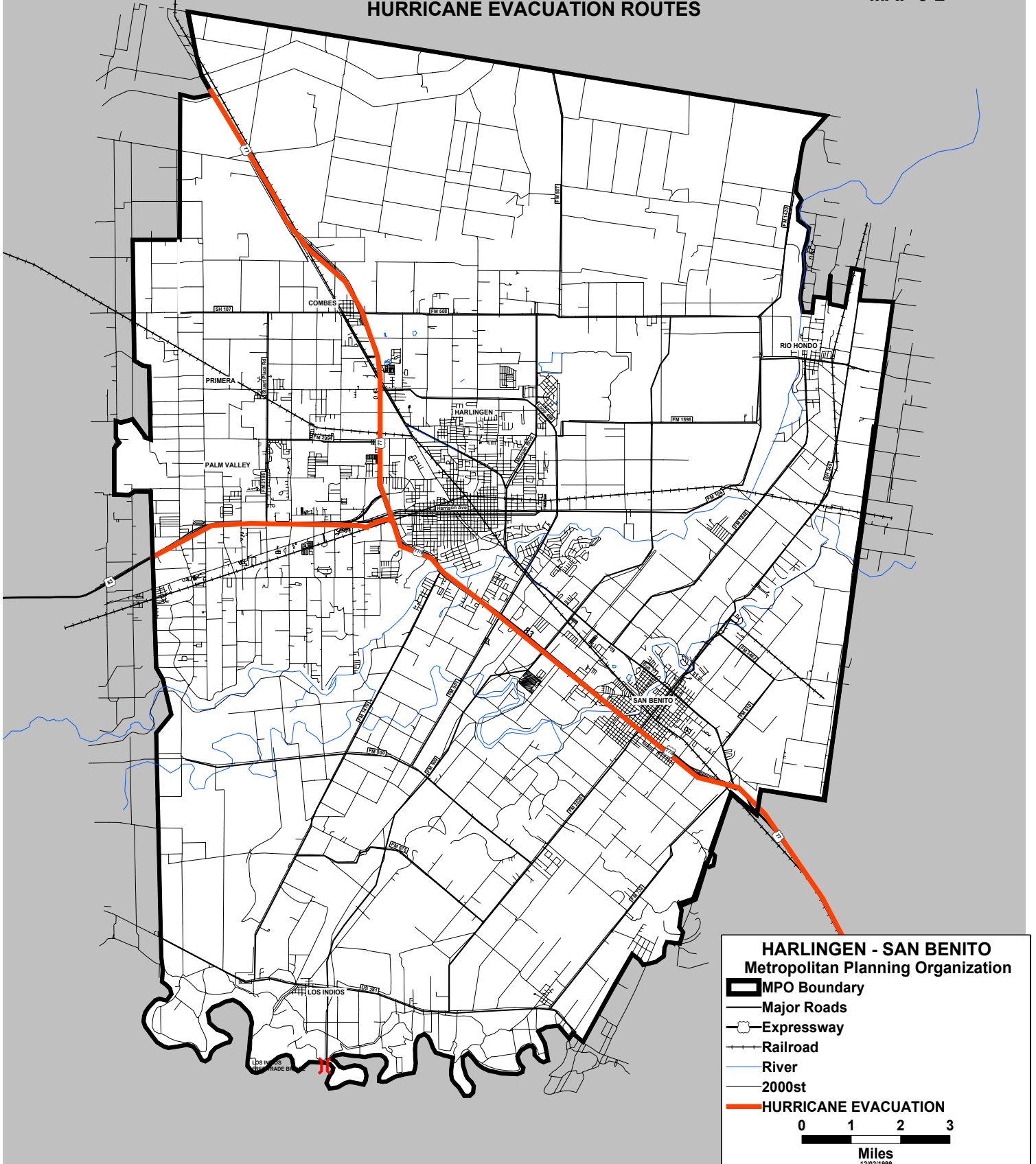


**HARLINGEN - SAN BENITO**  
Metropolitan Planning Organization

- MPO Boundary
- 2000st
- Expressway
- Railroad
- Congressional High Priority Rte
- STRAHNET Route

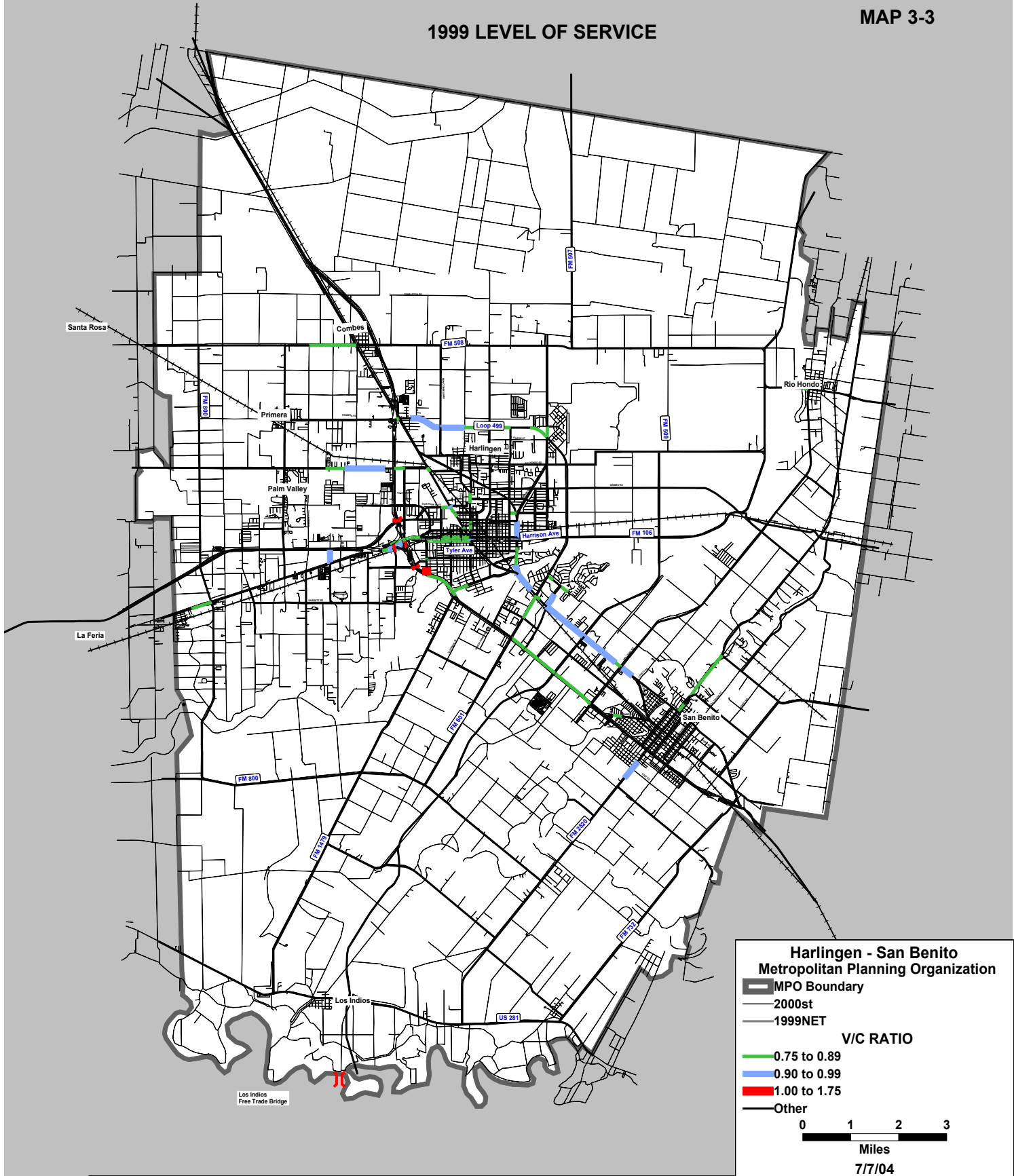
0 1 2 3  
Miles  
12/02/1999

HURRICANE EVACUATION ROUTES



1999 LEVEL OF SERVICE

MAP 3-3



### **3.4 Aviation**

The Valley International Airport serves the Harlingen-San Benito metropolitan area. The former San Benito Municipal Airport closed in 1996 due to lack of activity and high maintenance expenses, and the site is now utilized as a truck driving training facility. Approximately sixty percent (54%) of all air passenger traffic in the Lower Rio Grande Valley goes through the Valley International Airport, and it is considered to be the primary commercial service airport for the region. Located in Harlingen, the principal role of the Valley International Airport is to provide air travel and transportation services to the Lower Rio Grande Valley.



The Valley International Airport (VIA) is owned by the City of Harlingen and operated by the City of Harlingen Airport Board. It covers a total of 2,406 acres and includes three (3) runways and six (6) taxiways. The primary runways are an 8,200-foot runway and a 7,250-foot long runway designed to serve air carriers and military and general aviation aircraft. A third runway of 5,950 feet also serves general aviation aircraft. All three runways are 150 feet wide. Other airport facilities include aircraft parking, aprons, hangars, maintenance centers, manufacturing facilities, access roadways, a carrier terminal complex with 155,000 square feet of usable area, a 20,000 square foot Federal Inspection Services building that can accommodate personnel from 4 federal agencies, and the Harlingen Industrial Airpark complex which includes a Foreign Trade Zone and airport parking facilities.

*(Source: Valley International Airport Master Plan)*

FM 507, FM 508, Loop 499, Loop 509, U.S. 77, and U.S.83 provide ground access to the Valley International Airport. This roadway network connects the airport with the Harlingen-San Benito metropolitan area as well as the Lower Rio Grande Valley in a direct and efficient manner by providing excellent roadway facilities and direct routes. Rail access is also provided by the Union Pacific Railroad, which runs approximately 2 miles south of the airport property.

### **3.5 Air Freight**

Harlingen serves as a regional airfreight hub. The metropolitan area sustains a moderate per capita volume of airfreight, due largely to the regional business climate. The demand for airfreight movement is expected to continue to grow rapidly, and current demand nearly matches the freight handling capacity of the International Airport. The VIA, as of December 2004, will serve Menlo Forwarding, FedEx, UPS, DHL, and Pax Global exclusively as the regional air freight hub for the Rio Grande Valley. According to the Valley International Airport Master Plan, future aviation activity is forecast to increase significantly in air cargo, air carrier, and general aviation activities over the next 20 years. In order to accommodate the expected growth, the airport Master Plan indicates that the following facilities need to be expanded by the year 2011:

- Runway length and width
- Runway strength
- Terminal loading gates
- Passenger parking
- Terminal curb

- Air cargo ramp positions and cargo building area; and
- General aviation aprons, T-hangars and corporate/executive hangars

The development of the Valley International Airport is greatly enhanced by its proximity to the Port of Harlingen, creating the potential of developing a multi-modal transportation center by integrating air, maritime, and ground transportation.

### **3.6 International Crossings**

The flow of international goods and people has increased steadily over the past 10 years and it is safe to say the trend will continue. Approximately 45% of the state of Texas's international crossings are in the Lower Rio Grande Valley. This area is a major corridor for the flow of goods and people into the US. The HSBMPO transportation network and future plan should take into account these facts when making transportation infrastructure decisions. The facilities that connect to ports of entry are allotted points in our project selection process. In the near future it will be critical how we accommodate local and international transportation needs to ensure we remain a mobile, safe, and economically viable area in which to live.

**The decisions we make today affect tomorrow.**

The Los Indios International Free Trade Bridge (FTB) connects the United States and Mexico and is located on FM 509 in Los Indios, 10 miles from the cities of Harlingen and San Benito. The Free Trade Bridge opened on November 1, 1992 on a sixteen-hour (6:00 am to 10:00 p.m.) schedule of operation. The hours of operation were extended to 18 hours (6:00 am to 12:00 midnight) on August 1, 1997.

The Free Trade Bridge has the physical capacity to accommodate large volumes of truck traffic quickly and efficiently. The bridge is a four-lane international crossing with a full U.S. Customs inspection facility and it can accommodate up to 75 trucks simultaneously. Key technical aspects of the bridge are as follows:

- Laser Driven Automatic Vehicle Identification System; eliminates money exchange, tracks the vehicle crossing the bridge and debits a prepaid account
- Designed to accommodate heavy loads
- Designed to accommodate wide loads
- Seventy-five truck bays (expandable to 150)
- Hazardous material containment area
- Five span bridge carrying four lanes of traffic

The only Plant Inspection Station in the Lower Rio Grande Valley, which is one of two in the state of Texas, allowing for inspection of plant and plant material and endangered or threatened plant species.

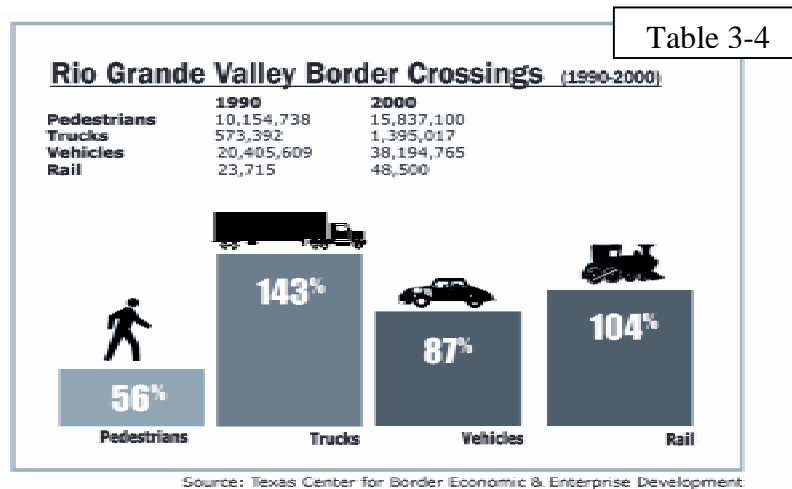
#### **A. Materials Crossing the Free Trade Bridge**

Sorghum and grain are the primary commodities crossing the Los Indios Bridge, however, the following hazardous commodities cross the Free Trade Bridge:

- Diesel Fuel
- Petroleum
- Flammable liquid NOS
- Primer CAP
- Methyl Chloride R-40 (refrigerant)
- Di-methyl Propylamine
- Penta-chlorophenol
- Alkalamines (flammable corrosive)
- Detonators
- Sodium Pentachlorophenate
- Hydro-fluoric Acid
- Methyl Chloride
- Battery with acid
- Dodecyli-benzene Sulfonic Acid
- Paint waste
- Isocyanate waste isopropanol
- Acetylene dissolved
- Empty Kerosene drums
- Tri-ethyl-amine
- Empty Cylinder Aragan
- Diethanolamine
- Aluminum Oxide Scrap
- Asphalt
- Empty tanker propane residue

### 3.7 Border Crossing Statistics

The Valley has nine international bridges. Forty-seven percent of all Texas-Mexico vehicle crossings in the state move across these bridges. Last year, more than 1.2 million trucks crossed the bridges in the Valley, which accounted for 30 percent of all Texas-Mexico truck traffic. In addition, Texas-Mexico truck traffic moving through the Valley has increased by 233 percent in the last 10 years. Many of these trucks do not all originate in the Valley. The border crossings in the region are a vital part to keeping traffic, and more importantly, trade moving.



Commercial trucks are only part of the equation for border crossings in the Valley. Table 3-4 shows the significant increases in international border crossings in the Valley in the last decade.

U.S. 83 is the only east-west corridor connecting the Valley’s bridges and serves as the major freeway for all other traffic in the Valley. Additional east-west corridors, such as U.S. 281 (Military Highway) from Hidalgo County to Brownsville, FM 1925 and the proposed I-69 crossover must be completed to avoid infrastructure bottlenecks that interrupt the flow of traffic.

The Valley is planning to build a number of new international bridges over the next few years –

Anzalduas, Donna, and several bridges in Cameron County. Other bridges are being expanded and modernized in Hidalgo and Starr Counties. With border crossings expected to continue increasing, the Valley will serve as a major factor for trade relations. The TxDOT Corridor 20 feasibility study estimated that between 1995 and 2015 border-crossing traffic would increase by 128 percent along the Texas-Mexico border between Del Rio and Brownsville. The projected increases in population for the region will add to the existing congestion problems. Moreover, the expected removal of restrictions on cross border trucking will further increase truck traffic.

The increasing number of commercial trucks on the highways is a natural part of trade activity. However, truck traffic does three times the amount of damage to roadways, and none of the roadways in the Valley receive interstate federal funding for highway maintenance. As a result, the state must fund the maintenance for highways in the Valley that serve national and international trade and benefit communities outside of the region. Access to federal interstate highway funds will relieve some of the pressure on state and local officials to pay for highway maintenance, and in turn, make local funds available for other local mobility projects.

**A. Daily Traffic Volumes**

Daily traffic has also increased in the Valley. In the last decade, the region has experienced a 60 to 70 percent increase in traffic along U.S. 83 and U.S. 281 and a 232 percent increase in traffic on U.S. 77. Still, lane miles have only increased four percent.

Two factors contributing to traffic are the increasing number of vehicles and the daily vehicle miles in the Valley. Table 3-5 lists the registered vehicles in the four-county area and the Pharr District.

**Registered Vehicles and Daily Vehicle Miles (1990-2000)**

Table 3-5

	Registered Vehicles(1990)	Registered Vehicles(2000)	% Increase Registered Vehicles	Daily Vehicle Miles(1990)	Daily Vehicle Miles(2000)
Cameron	153,287	188,711	23%	3,047,942	4,693,727
Hidalgo	228,339	322,929	41%	4,495,736	8,117,966
Starr	22,544	26,739	19%	519,332	888,749
Willacy	11,521	11,977	4%	311,608	427,465
Total Rio Grande Valley	415,691	550,356	32%	8,374,618	14,127,907
Total Pharr District	519,034	567,769	9%	2,020,436	15,587,745

Source: TxDOT District and County Statistics

An aggressive transportation improvement program that targeted border infrastructure needs through federal and state funded discretionary programs has helped but has not solved increasing congestion on the primary and secondary transportation network.

Primary roadways reach capacity and become congested almost as quickly as they are improved. Again, without continued investment in the transportation infrastructure

along the border, businesses in Dallas, Houston, Chicago and many other Texas and U.S. communities will suffer.

Because the Valley is considered a gateway for trade between the U.S. and Mexico, it is important to note the transportation developments that are occurring in Mexico as well.

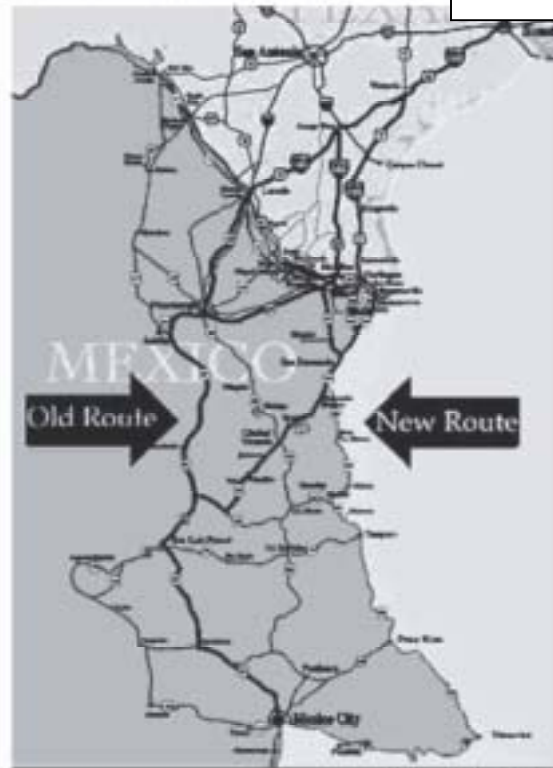
**B. New Transportation Patterns**

Historically, the highway that accessed major population and industrial areas in central Mexico was via Monterrey. This was the only really safe route through the mountains. This route had the obvious effect of funnelling traffic through Laredo, even though it required more travel time if trucks were headed to Houston or the eastern U.S.

The Mexican federal government and the States of Tamaulipas and San Luis Potosí built a new road to Mexico City. The new route, shown in Table 3-6, goes from the Valley through Ciudad Victoria and San Luis Potosí and onto to Mexico City. Part of this new route through the mountains replaces a roadway that had steep grades and many curves and was narrow and dangerous.

Old & New Routes to Mexico City

Table 3-6



This new road opened at the end of 2003, and it has had a major impact on truck traffic



in the Valley. More trucks move across bridges in the Valley and along U.S. 77 and U.S. 281. Traffic, particularly to and from the eastern and southern U.S., will save an estimated six to eight hours using this new route.

Several other major transportation improvement projects are in progress on the Mexican side of the border, including improved highways, rail systems, port expansions and international bridge projects. Close coordination with authorities in Mexico is very important for current and future mobility planning for the region.

### **C. Air Quality Status**

Air quality is an essential part of ecological protection and is a particularly important part of transportation development. More often than not, poor air quality is caused by traffic congestion, and in due course can lead to curtailed transportation development and land use in regionally important projects. This includes all state projects, other principal roadways, and transit systems.

The Harlingen office of the Texas Natural Resources Conservation Commission, TNRCC, provided the subsequent information about local air quality.

In 1999, the Lower Rio Grande Valley region had air quality monitors in Brownsville, Edinburg, Mission, and San Benito. In San Benito, there is a puff sampler located behind the existing City Hall building on the roof. This machine monitors total suspended particulates at the 1999 Environmental Protection Agency (EPA) levels. A twenty-four (24) hour sample is taken every six days.

This site has also been selected as one of five sites in Texas by the EPA to sample particulate matter at the proposed 2.5 microns level. This monitor was calibrated and went into effect in April 1999. Based on conversation with the Harlingen TNRCC office, the Harlingen-San Benito area has been in compliance since monitoring began with only one exception. This was during Summer 1998, due to fires in Mexico. The HSBMPO does not anticipate a non-attainment air quality finding anytime in the near future but we are making an effort to increase mobility to reduce vehicular emissions.

### **D. Freight Facilities**

The efficient movement of freight is especially significant for the HSBMPO metropolitan area, where freight transporters and passenger vehicles utilize many of the same transportation corridors. The Freight Movement Element addresses the federal requirements (TEA-21), and significant aspects of roadway freight, rail freight, and airfreight in the metropolitan area. A summary of the Commercial Vehicle Survey and the External Travel Survey (part of the 1998-1999 Travel Survey) are included as well as impacts of the North American Free Trade Agreement (NAFTA). Policies to enhance the movement of freight are contained in Ch. 6.

The freight movement element of this plan has been updated to reflect current thinking in terms of planning practices. It is also necessary to involve the freight carriers in our process along with all stakeholders in the transportation system and this is another goal. While the implementation of these ideas and practices may not currently be underway,

they will serve as milestones to be achieved in the planning horizon.

**1. TEA-21 Requirements**

The Transportation Equity Act for the 21st Century (TEA-21) of 1998 requires Metropolitan Planning Organizations (MPOs) to consider methods to enhance the efficient movement of freight. Therefore, HSBMPO staff recommends funding for a comprehensive regional intermodal Freight Movement Study to: 1) investigate the economic impact of traffic delays on businesses that provide or require freight transport and shipping services, and 2) outline objectives and strategies for improving the movement of goods throughout the region.

**2. Commercial Vehicle Survey**

HSBMPO needs to collect and summarize data related to current travel characteristics in the expanded HSBMPO metropolitan area (described more fully in Chapter 2). One of the surveys needed is a Commercial Vehicle Survey to address the need to develop more accurate and complete information on area trucking patterns.

The primary intention of the HSBMPO area commercial vehicle study is to collect data that will quantify specific aspects or characteristics of the local truck population. This will result in a commercial truck survey with multiple purposes, which is to:

- Collect a small sample survey for the purpose of estimating proportions of commercial vehicles operating in the study area by vehicle weight, fuel type, and more traditional vehicle classification data.
- Survey commercial vehicles and quantify the number of trips made on a daily basis as a means of developing local truck trip rates by vehicle classification.
- Estimate proportions of commercial truck trips occurring by time of day.
- Develop origin-destination data for creating a truck trip table and determining the likely routing of commercial vehicles on the roadway network.
- Determine type of cargo transported.

**3. Truck Traffic and Routes**

The need to identify corridors that trucks use in the HSBMPO is a priority and can be achieved by various means. Once the corridors or likely corridors are identified, it is in the interest of all end-users of the transportation system that the corridors be designated as freight corridors. The freight transporters will use these corridors to move through the area in a more efficient manner. These designated freight corridors will reduce deterioration of existing network, improve mobility for freight carriers and local transportation network users, improve air quality, and have the propensity to improve safety conditions for all transportation system end-users.

**4. Dedicated Truck Lanes**

The concept of separated roadways for commercial and passenger vehicles has attracted growing interest throughout the nation as a response to congestion, productivity and safety issues. Truck separation can occur by creating exclusive lanes (new or existing) along an existing roadway or by developing a separate exclusive roadway.

### **5. Hazardous Material Routes**

Along with identification of freight routes it is necessary to start to develop a network of corridors that function as Hazardous Material Routes to guide carriers through the area and minimize the threat of a spill or collision in our densely populated areas. This would increase transportation safety in the HSBMPO area. Population per TAZ, land-use classification, and percentage of trucks are some criteria that can be used to identify appropriate corridors for HAZMAT designation. This is another element of freight planning to be implemented in the HSBMPO area.

### **6. Roadway Freight**

In the HSBMPO metropolitan area the majority of freight is moved by truck (roadway freight). Roadway freight is addressed in this document as being either through (non-stop), or local through (non-stop) roadway freight. Through roadway freight pertains to trucks traveling through the HSBMPO metropolitan area, having no origin or destination there. Through roadway freight movement on US 77 & US 83 causes traffic congestion during both non-peak and peak hour periods, additional vehicle accidents, passenger injuries and fatalities, and hazardous material emergencies. Facilities in many major cities include bypasses around the Central Business District, and trucks hauling through freight on these Interstates can be diverted around urban traffic congestion. This is not the case for HSBMPO, where US 83 & US 77 pass through the Central Business District. Approximately 50% to 60% of the total truck traffic on US 83 and US 77 in the HSBMPO metropolitan area were through trips; according to TxDOT 1996 traffic count data. Through roadway freight traffic is expected to continue to increase steadily over the next five to ten years.



### **7. Local Roadway Freight.**

Local roadway freight pertains to any trucks having an origin or destination(s) inside the HSBMPO metropolitan area. HSBMPO has a higher volume of through roadway freight than local freight. This is explained by the unique location of HSBMPO. The HSBMPO metropolitan area is unique in that its proximity to the border produces a higher-than-average volume of through freight. Young households that are large consumers of electronic equipment, clothes, furniture, disposable paper products, building materials, automobiles, food and beverages characterize a large portion of the work force. This level of consumption generates a high volume of incoming freight trips in the area. There are currently no facilities in the HSBMPO service area for transferring freight between trucks and trains. An important objective of the Freight Movement Study (see Introduction) would be to determine the feasibility and

impact (social, economic, and environmental) of locating an intermodal freight operations facility in the HSBMPO metropolitan area for transferring freight between trains and trucks.

**E. Rail /Freight**

An extensive network of railroads, approximately 40 miles in length, exists in the Harlingen-San Benito metropolitan area. Both until 1960, and after 1960 passenger service was discontinued. Early freight trains provided service to Lower Rio Grande Valley farmers and ranchers to transport their agricultural products and cattle to predominantly U.S. markets, although Mexican markets were served on a limited basis. Until the early 1970's there was only one train per day serving the Harlingen-San Benito area. Train traffic began to increase in the 1970's due to additional trade with Mexico.

The movement of trailers or containers by rail has been one of the fastest growing segments of the U.S. freight industry over the past ten years. A single intermodal train can move as many as 280 trucks off the highway.

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*There are more than 500 at-grade rail crossings in the Valley and rail traffic is doubling.*

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The Valley is experiencing the direct impacts of the increasing use of rail to transport goods. What was an average of three trains a day in Harlingen in recent years has turned into six a day and could double again in the next 10 years. The Port of Brownsville has seen a 456% increase in rail traffic in the last five years.

Passage of the North American Free Trade Agreement (NAFTA) in 1992 resulted in increased freight traffic in the area. The merger of Union Pacific Railroad (UPRR) and Southern Pacific Railroad (SPRR) into UPRR in 1996 increased switching operations within the area. There are five rail lines (branches) in the Harlingen-San Benito MPO area. The Brownsville Subdivision track, the Brownsville branch and the Edinburg branch are served mainly by UPRR, while the McAllen Main Line is leased from UPRR and operated by Rio Valley Switching Company (RVSC). The Rio Hondo Main Line is also owned and operated by the RVSC and is not in operation due to low traffic and poor condition of the track. (Map 3-4 shows the railroad track locations in the MPO area.)

There are two switching yards in the study area. The UPRR switching yard, which is the major yard in the Rio Grande Valley south of Laredo, is located north and west of the Harlingen Central Business District, between Fair Park Boulevard and Wilson Road. The second switching yard, located north of Business 83 near Brazil Road, is operated by the RVSC. The RVSC also uses the Harlingen switching yard. The alignment of existing railways through the central core of the urban area of Harlingen and San Benito, and in particular the location of the rail yards within the urban area, results in conflicts between railway and roadway traffic. Traffic movement and traffic safety considerations are important concerns relating to existing railroad and roadway grade crossings. (Please see Map 3-4 on page 36 for location of the rail lines.)

**1. Rail Safety**

Increasing safety is key, not only for the region, but also for the entire state. In 2001, there were 11,866 public at-grade crossings and 6,084 private at-grade crossings in Texas, more than any other state in the nation. This fact undoubtedly contributed to Texas recording more highway-rail grade crossing collisions, deaths and injuries than any other state. Cameron County ranked number seven in the top 10 counties in Texas by number of collisions in 2001 and recorded the passenger and freight service was provided in the area highest number of vehicle-train collisions in the Valley between 1991 and 2000.

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*Railroads bisect many cities in the Rio Grande Valley, blocking traffic and causing delays.*

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Conflicts between rail and vehicle traffic is one of the major concerns throughout the Valley. As rail traffic increases, the potential for vehicle-train collisions increases, and emergency vehicles are delayed because railroad traffic blocks street crossings. With more than 500 at-grade rail crossings in the Valley, there is evidence that these conflicts are increasing throughout the region.

According to data compiled by the Railroad Commission of Texas, Cameron County ranked fourth in the number of collisions at public and private grade crossings in Texas in 1996. As train traffic continues to grow in the area in both the number of trains and the length of the trains, the potential for more collisions and congestion involving motor vehicles and trains will increase. Because of the safety and congestion issues, in April 1998, the Harlingen-San Benito MPO had conducted the Harlingen-San Benito Railroad Crossing Study.

The following recommendations are from that study. Recommended safety-related improvements at railroad grade crossings include:

- installation of signing and striping
- re-planking of crossings
- installation of signal preemption
- installation of gates or signals
- consolidation of crossings

The recommended safety improvements are prioritized according to short-range, mid-range, and long-range implementation. It is recommended that the cities of Harlingen and San Benito each develop a Crossing Consolidation Plan and solicit public support for consolidating certain crossings.

The alternatives that were developed to mitigate vehicular congestion at railroad grade crossings include:

- construction of railroad grade separations;
- installation of an Intelligent Transportation Systems (ITS); and
- railroad facility improvements.

A grade separation at Tyler/Harrison Avenues would have the greatest benefit due to the central location, as these two streets are the principal east-west arterials in Harlingen, but would be least practical due to the proximity of the central business district. An overpass is also feasible at FM 509 and would serve both Harlingen and San Benito. Three alternatives were identified with respect to railroad facility improvements as a means to alleviate vehicular congestion at railroad grade crossings.

These are:

- relocation of the UP RR switching yard to the north of Harlingen;
- rehabilitate/upgrade the UP RR track east of Harlingen; or
- relocate the UP RR north-south track from north of Harlingen to the intersection of the north-south portion of UP RR track east of Harlingen.

Railroads bisect many cities in the Valley, including Harlingen, Mission and Raymondville, and extend across urban thoroughfares in other areas. Cities like Brownsville and Harlingen are working to relocate rail lines out of the densely populated areas for safety and to improve mobility. Hidalgo County is conducting a study to address the complex rail issue there. Officials are working on alternative uses for the existing rail right of way such as intra- and inter-city connections and loops.

## **2. Commodity Flow by Rail in the Harlingen-San Benito MPO**

Major commodities coming into MPO via rail in Harlingen are lumber, newspaper (print) rolls, cottonseed oil, flour, cement, and cinder (fine rock powder used to build blocks, bricks) are received by San Benito. Russeltown receives beer, asphalt, limestone, and crushed rock; and the Port of Harlingen receives poison, chlorine, fertilizer, and grain.

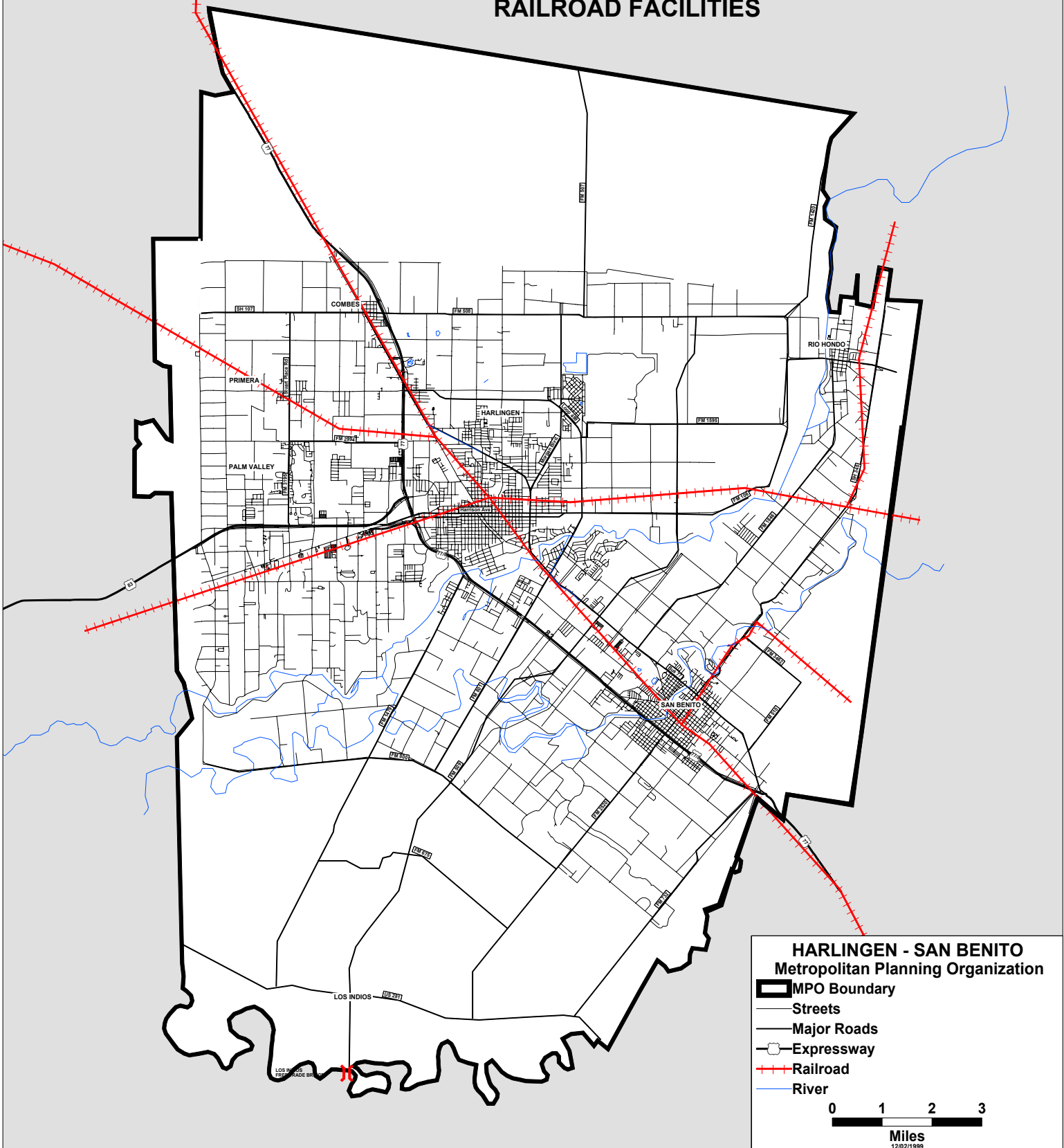
Commodities going out of the MPO area to the McAllen-Mission-Edinburg area are grain, industrial sand, and paper roll, corn, lumber, and fertilizer products, steel. Commodities going to Brownsville are tin plates (steel form), petroleum oil, polyurethane (a plastic used to make bottles and other products), paper products, grain, scrap paper, and flour spar (to make hydrochloric acid and other chemicals). Hydrochloric acid, corrosive material (type of acid), and flammable liquids travel north from the MPO area.

Commodities passing through the MPO area are petroleum, paper goods, paraffin, scrap paper, flour spar (to acid plants in Mexico), petroleum coke (used for furnaces in industries in Mexico), industrial sand, tin plates, sulfur (mountain sulfur), lubricating oil, polyurethane, corn, wheat, chlorine, poison, cotton oil, auto racks, gravel, limestone etc. Hazardous materials moving on the railroads in the Harlingen-San Benito MPO area are chlorine, flammable liquids, corrosive material, poison, and acids hauled on the Brownsville Subdivision track; while poison and chlorine are hauled on the Brownsville Branch track.

**3. Railroad Relocation Projects**

The Brownsville/Harlingen Railroad Relocation Projects are designed to reduce the congestion at the switching yard in Harlingen. Initially discussed in the early 1970's, it involves the relocation of the Brownsville switching activities, as well as most of the switching in Harlingen, to a new switching yard north of Brownsville (Olmito). That yard has been completed. The future plans of shifting switching activities in Harlingen to the Olmito switching yard will significantly reduce the switching activities and reduce congestion in the Harlingen central business district. The Rio Grande Valley Switching Company has future plans to use the facility in Harlingen for switching activities; however, the switching operations will be minimal. The Environmental Assessment Studies (EAS) for the Harlingen Railroad Relocation Project will begin shortly and will be used to analyze possible routes for the Railroad. Preliminary routes have been discussed, but with the data collected by the EAS the most ecologically sound routes will be identified. The EAS will run from the north Harlingen are through Los Fresnos, and over to Olmito.

RAILROAD FACILITIES





**F. Maritime**

The Port of Harlingen handled approximately 850,000 tons of cargo in 1999.

Primary imported commodities include petroleum (from Corpus Christi and comprising 70% of the cargo total), steel, sand, (from Victoria and distributed valley wide), gravel, cement (barged from Houston and distributed valley wide), agricultural chemicals, and fertilizers. Primary exports are raw sugar (trucked to the port and sent to New Orleans), grain, cotton, and other bulk products.

The Port of Harlingen is located about 20 miles north of the Los Indios Free Trade Bridge and is part of the Foreign Trade Zone #62. It is also located near the Valley International Airport and Harlingen Industrial Parks II and III.

Existing port facilities include:



- Over 150 acres of on- and off- channel industrial sites
- 650-foot concrete general cargo wharf
- 100-foot dry bulk wharf
- Five smaller docks
- Turning Basin
- Railroad access
- Harlingen Channel maintained to 125-foot width and 12-foot depth

The HSBMPO considers the port a priority especially as it develops in the future. It will serve as a regional economic engine and the MPO should anticipate the infrastructure necessary to develop this local resource to its fullest potential.

**G. Bicycle & Pedestrian System**

The Bicycle-Pedestrian Element describes the federal requirements, current level of bicycling and walking and actions to increase the levels, and the bicycle and pedestrian systems. HSBMPO's policies to encourage bicycling and walking are included in Chapter 6.

**1. Federal Requirements**

TEA 21 requires that MPOs provide for the long-term development and encouragement of bicycle and pedestrian facilities as viable transportation alternatives. According to TEA 21: MPOs must "consider bicycle and pedestrian projects, where appropriate, in conjunction with all new construction and reconstruction of transportation facilities, except where bicycle and pedestrian use is not permitted."

The 1994 Harlingen-San Benito Metropolitan Transportation Plan evaluated the existing bicycle and pedestrian facilities within the MPO and determined that many neighborhood areas were in need of pedestrian sidewalk and bicycle riding also needed improvement, and as a result, the 1994 Plan developed a conceptual Master Plan for a Bicycle and Pedestrian System. This Plan indicated roadways selected as on- road bikeways as well as routes for off-road bikeways. The Plan also showed the recommended off-road bike and jog trails.

The City of Harlingen applied for and received Transportation Enhancement Program funds for development of Phase I of the off road bike and jog trail which opened to the public in early Spring, 2000. In summer, 1999, the Harlingen applied for funds to develop Phase II of the project. As a result of the 1994 Metropolitan Transportation Plan recommendations, the Harlingen-San Benito MPO conducted a bicycle and pedestrian study for the MPO area in FY 2000. The recommendations from this study are being incorporated into the network.

## **2. Current Level of Bicycling and Walking**

Bicycling and walking, the two primary non-motorized transportation choices, contribute a small fraction of their potential. Between 1% and 3% of area residents commute to work or school on foot; less than 2% commute by bike. Some factors that might influence a change in these numbers are below.

### **Factors That Influence Walking**

#### ***Factors Specific to Walking***

- Distance and travel time
- Climate and topography
- Presence of sidewalks
- Traffic signals and pedestrian crossings
- Availability of services (for errands, shopping)
- Street lighting
- Attractive places to walk

*Source: The National Bicycling and Walking Study, FHWA, 1994*

Pedestrians, like bicyclists, vary widely in their abilities. It's important that the pedestrian system meet not only the needs of the average pedestrian, but also the needs of the elderly, the young, the poor and the people with disabilities.

## **3. Promoting walking as a viable transportation choice**

HSBMPO encourages its member jurisdictions to:

- Design safe sidewalks and comfortable pedestrian environments, and
- Require new developments to provide sidewalks with direct connections to residential, commercial and recreational areas, and to transit stops.

It is clearly the intent of TEA-21 that all new and improved transportation facilities be planned, designed and constructed to safely accommodate pedestrians. All roadways not legally prohibiting pedestrians should be designed with sidewalks in order to achieve a balanced multi-modal transportation system.

Finally, we must encourage people to walk instead of drive, where feasible. Walking must be made as convenient as possible in order to substitute for driving. That means

pedestrian-friendly amenities must be fully incorporated into all aspects of urban design in the short run. In the long run, it means emphasizing compact land use and development.

Another tool that is used in developing the 2025 network is the transportation enhancement activity. This is a competitive funding category under TEA-21, which develops transportation related projects that are above and beyond the scope of traditional transportation projects. An example in the Harlingen-San Benito MPO area is the Arroyo Colorado Hike and Bike Trail. This 2.5-mile project facilitates travel between major recreational areas such as Victor Park and the World Birding Center and high-density housing areas. Transportation modes of walking and biking will be used on this route.

The Harlingen-San Benito Metropolitan Planning Organization has not implemented the recommendations of the conceptual bicycle and pedestrian plan from the 1994 Metropolitan Transportation Plan. However, the City of Harlingen has an adopted bicycle plan. The FY 2000 Unified Planning Work Program allocated planning funds to develop an MPO bicycle/pedestrian study that determined the needs and deficiencies while incorporating the recommendations of the 1994 Plan.

#### **4. General Considerations**

A pedestrian is any person afoot, and involvement of pedestrians in traffic is a major consideration in highway planning and design. Pedestrians are a part of every roadway environment, and attention must be paid to their presence in rural as well as urban areas. The urban pedestrian, being far more prevalent, more often influences roadway design features than the rural pedestrian does. Because of the demands of vehicular traffic in congested urban areas, it is often extremely difficult to make adequate provisions for pedestrians. Yet this must be done, because pedestrians are the lifeblood of our urban areas, especially in the downtown and other retail areas. In general, the most successful shopping sections are those that provide the most comfort and pleasure for pedestrians. Pedestrian facilities include sidewalks, crosswalks, traffic control features, special walkways found on some portions of freeway right-of-way, and curb cuts (depressions) and ramps for the older walkers and persons with mobility impairments. They are also parts of bus stops or other loading areas, grade separations, and the stairs or escalators related to these facilities.

#### **5. Sidewalks**

Sidewalks are integral parts of city streets, but few are provided in rural areas. Yet a need exists in many rural areas because the higher speed and general absence of lighting increase the accident potential to those walking on or adjacent to the traveled way. The limited data available suggests that sidewalks in rural areas do reduce pedestrian accidents.

Sidewalks in rural and suburban areas are most justified at points of community development such as at schools, local businesses, and industrial plants that result in pedestrian concentrations near or along the highways. When suburban residential areas

are developed, initial facilities for vehicles are necessary if the development is to function at all, but the construction of sidewalks are sometimes deferred. However, if pedestrian activity is anticipated, sidewalks should be an included part of the construction. Shoulders might obviate the need for sidewalks if they are of a type to encourage pedestrian use in all weather. If sidewalks are utilized, they should be separated from the shoulder. If the sidewalk is raised above the level of the shoulder, the cross section approaches that of an urban highway. In suburban and urban locations, a border area generally separates the roadway from the homes and businesses of the community. The main function of the border is to provide space for sidewalks. Other functions of the border are to provide space for streetlights, fire hydrants, street hardware, and aesthetic vegetation and to serve as a buffer strip.

Justification for the construction of sidewalks depends upon the vehicle-pedestrian conflict, which is governed chiefly by the volumes of pedestrian and vehicular traffic, their relative timing, and the speed of vehicular traffic. Traffic volume-pedestrian warrants for sidewalks along highways are not established. In general, wherever the roadside and land development conditions are such that pedestrians regularly move along a main or high-speed highway, they should be furnished a sidewalk or path area, suitable to the conditions.

As a general practice, sidewalks should be constructed along any street or highway not provided with shoulders, even though pedestrian traffic may be light. Where sidewalks are built along a rural highway, they should be well removed from the traveled way.

To insure their intended use, sidewalks should have all-weather surfaces. Without them, pedestrians often choose to use the traffic lanes.

Pedestrian crosswalks regularly are marked in urban areas but seldom so on rural highways. However, where there are pedestrian concentrations, appropriate traffic control devices should be used, together with necessary walkways constructed within the right-of-way.

If two urban communities are not far apart, consideration should be given to connecting the two communities with sidewalks, even though pedestrian traffic may be light. Driver-pedestrian conflict on these sections of a through route thus may be avoided.

Pedestrian facilities such as sidewalks must be designed to accommodate persons with disabilities. See the section "Pedestrian Crossings" in the Bike Plan for further discussion on this point.

In general, the guidelines set forth in this section for the accommodation of pedestrians are applicable on bridges. However, because of the high cost of bridges and some operational features that may be unique to bridge sites, pedestrian way details on a bridge will often differ from those on its approaches. For example, where a planted strip between a sidewalk and the way approaches a bridge, continuation of the sidewalk offset affected by the planted strip will seldom be justified.

In rural areas or other sites where flush shoulders approach a bridge and light pedestrian traffic is anticipated on the shoulders, the shoulder width should be continued across the bridge and possibly even increased to account for the restriction to pedestrian escape imposed by the bridge rail. A raised walkway or a bridge should never interrupt a flush roadway shoulder. Where such installations already exist, and removal is not economically justified, the ends of the walkway should be shielded with a traffic barrier or ramped into the shoulder at a rate of approximately 1:20 with the grade of the shoulder. On long bridges, if accommodation of pedestrian traffic is considered essential, a single walkway may be provided. However, care must be taken to ensure that approach walkways provide safe and relatively direct access to the bridge walkway. This may require the erection of fences to channel the pedestrians and prevent or control pedestrian conflicts with vehicular traffic.

## **6. Curbs and Shoulders**

Shoulders are desirable on any highway, and urban arterials are no exception. They contribute to safety by affording maneuver room and providing space for immobilized vehicles. They offer a measure of safety to the occasional pedestrian in sparsely developed areas where sidewalks are not appropriate, and provide space for bicyclists. They serve as speed-change lanes for vehicles turning into driveways.

Despite the many advantages of shoulders on arterial streets, their use is generally limited by restricted right-of-way and the necessity of using the available right-of-way for traffic lanes. Where the abutting property is used for commercial purposes or consists of high-density residential development, a shoulder, if provided, is subject to such heavy use in serving local traffic that the pavement strength must be about the same as that for the travel lanes. In addition, a raised curb at the outer edge of the shoulder is usually necessary in heavily developed areas as a means of controlling access and preventing deterioration of the shoulder. These requirements usually result in a cross section having a uniform pavement design with barrier-type curbs.

When shoulders are curbed with barrier curbs, the shoulder width should be adequate to accommodate a disabled vehicle and be at least 1.8 m or \_\_\_ ft. wide. If permanent on-street parking is required, the effect on adjacent traffic lanes must be considered.

In newly developing areas, where rights-of-way can be acquired at reasonable costs, and in the extension or improvement of arterials through suburban areas, it is often feasible to include shoulders as a part of the ultimate cross section or possibly for interim use until the space is needed for additional traffic lanes. In these situations, where it is feasible to provide shoulders, curbs should preferably be omitted unless necessary to control drainage.

## **7. Pedestrian Facilities**

Arterial streets may accommodate both vehicles and pedestrians, and the design should include sidewalks, crosswalks, and sometimes grade separations for pedestrians. Pedestrian facilities and control measures will vary, depending largely on the volume

of pedestrian traffic, the volume of vehicular traffic to be crossed, the number of lanes to be crossed, and the number of vehicles turning at intersections.

On many sections of arterial streets that traverse relatively undeveloped areas, the number of pedestrians will be so small that sidewalks are not needed immediately. Because these areas will usually be developed in the future, the design should allow for the ultimate installation of sidewalks. However, as a general practice, sidewalks should be constructed initially along all arterial streets that are not provided with shoulders, even though pedestrian traffic may be light.

The major pedestrian-vehicular conflict usually occurs at intersections. On the lower classes of arterials, especially at intersections with minor cross streets where turning movements are light, pedestrian facilities are usually limited to crosswalk markings. Features that help the pedestrian include fixed-source lighting, refuge islands, barriers, and signals.

On the more important arterials, i.e., six or eight lanes wide with heavy traffic volumes, the interference between pedestrians and vehicles at at-grade intersections sometimes presents serious problems. The problem is especially acute where the arterial traverses a business district and there are intersections with important cross streets. In extreme cases, grade separations for pedestrians provide the only satisfactory solution. Although separations for pedestrians are justified in some instances, at-grade crosswalks will remain the predominant form of crossing. Conflict with pedestrians and vehicle traffic can be reduced if the crosswalks are properly placed, designed, maintained, and operated.

The number of pedestrian crossings on heavily traveled arterials should be kept to a minimum, but in and near business districts it is usually necessary to provide crosswalks at every intersecting street. Enforcement of a ban on pedestrian crossings at an intersection is very difficult. A crossing should not be closed to pedestrians unless the benefits in improved safety and traffic operation are sufficient to offset the inconvenience to pedestrians.

Indiscriminate closing of pedestrian crossings will lead to illegal crossing maneuvers. Therefore, proper and reasonable design for pedestrians is important.

The pedestrian walk signal is especially desirable on wide arterials having frontage roads because of the great distances to be covered. On exceptionally wide arterial streets pedestrian signals may be mounted in the median as well as on the far side of the intersection and, if necessary, in the outer separations. Refer to the current Manual of Uniform Traffic Control Devices (MUTCD) for additional information regarding installation of signals.

## **H. Rehabilitation**

While mobility on the network is important, so too is maintenance (upkeep) of the existing network. Without proper maintenance of the system (maintaining good pavement condition,

minimum cracks, cleanliness, etc.), mobility can become decreased. Transportation users will use alternate facilities, some of which are not designed for the increased volume. The overall transportation system will deteriorate prior to schedule, thereby necessitating expensive repairs and putting an unanticipated strain on limited financial resources.

The pavement condition of the Harlingen-San Benito MPO's functionally classified roads were classified by the following categories:

- New: The road has been resurfaced within the past two years;
- Good: The surface is smooth with no cracks or potholes;
- Fair: The surface has some cracks and potholes; needs re-milling and resurfacing;
- Poor: The surface has many cracks and potholes; needs reconstruction, not repair.

Of the seven cities within the MPO, only Harlingen has an on-going resurfacing/rehabilitation program. City streets are surveyed and prioritized on a yearly basis for the approximately \$500,000 program. San Benito resurfaced or rehabilitated approximately 20 miles of streets from 1994-1998, but does not have plans to continue road rehabilitation until alternative funding becomes available (Certificates of Obligation or Community Development Block Grants). The smaller cities of Primera, Combes, Los Indios and Rio Hondo do not have the funds for resurfacing and rehabilitation projects. Work is performed as needed for pothole repair. Palm Valley spent \$384,000 in 1996/1997 to resurface the eight miles of local roads within the city limits. Bonds were the source of funds for this project. Cameron County spends approximately \$500,000 per year on resurfacing and rehabilitation throughout the county. The Texas Department of Transportation Pharr District spends approximately \$900,000 per year in routine maintenance and approximately \$146,000 in contracts, such as litter pickup, in the Harlingen-San Benito MPO area. (*Source: Texas Department of Transportation, Pharr District*).

The HSBMPO in the future will start to collect more types of roadway data including pavement condition. It might also be possible through a special study to collect other valuable data from our transportation network to make more informed transportation resource decisions. These data collection efforts will lead to improvements in access management, operational improvements, system preservation, and our project selection process.

Preservation of the existing transportation system by supporting an on-going pavement management program and promoting the importance of maintenance is one of the seven planning factors of TEA-21. In the Harlingen-San Benito metropolitan area, maintenance of the transportation system is especially important with the increasing number of NAFTA related freight movement in and through the area. In addition to the cost to the improvement, the maintenance of the network must be factored into the fiscal constraint of the Metropolitan Transportation Plan.

## **I. Transit**

### **1. Transit-Oriented Development**

HSBMPO places major emphasis on public transportation to meet our future mobility needs. Many arterial roadways and highways in the region will become congested because the single occupant vehicle (SOV) is our predominant travel mode. HSBMPO

advocates reducing our dependence on SOV travel through transportation alternatives and programs. But transportation policy alone cannot change transportation trends; changes in land use trends must also be made. Transit-oriented development concentrates new and infill development in transit corridors communities that do not require a car for personal mobility. Transit-oriented design has been proven to be an economic boon, revitalizing downtowns and main streets and significantly reducing auto dependency.

Transit stations and transit stops can have abundant land uses, including jobs, housing, retail, restaurants, daycare centers, services, athletic facilities, pedestrian plazas and parks, and bicycle parking and lockers. Multiple activities encourage transit stations to become more than just a place to park the car. Transit stops and stations can be integrated into neighborhoods so that they provide a sense of place and incorporate the street into the neighborhood. Transit-oriented development offers a new model for managing growth.

**Transit-oriented design can:**

- Promote economic development by attracting consumers, businesses and services to the area surrounding the transit station;
- Increase housing options by encouraging mixed-use development, which combines commercial and residential structures; and
- Improve air quality and reduce greenhouse gas emissions by reducing the number of vehicle trips.

In addition to supporting more efficient land-use patterns, transit is cost-effective. Because of its greater carrying capacity, transit improvements can generate cost savings by reducing the need for roadway construction and the need for parking facilities. To the degree that transit can support compact growth patterns, transit improvements can reduce infrastructure requirements. And, finally, transit provides essential mobility. There are many people throughout the region who must rely on transit. Commuters, the disabled, the elderly, lower income citizens, choice riders, and rural residents—all of these groups have a stake in the quality and availability of transit service. Serving the mobility needs of these constituents over the next 25 years is an essential responsibility of the public transportation system.

**2. Current Urban System**

As an urban area, the Harlingen-San Benito MPO receives approximately \$35,000 per year in Federal Transit Administration Section 5307 funds, for a total of \$875,000 for the 25-year planning period. The MPO is also allocated approximately \$875,000 per year in Section 5310 funds. To date, the Section 5310 funds have been re-distributed throughout the State because the Harlingen-San Benito metropolitan area has no publicly sponsored urban transit services for the general public. This changed in January 2000 as a result of the Assessment of Public Transportation Needs and Transit Plan, 1996. This Plan had four goals:



- Determine transit needs in the Harlingen-San Benito metropolitan area
- Identify transit alternatives that meet the transit needs of the area
- Establish communication with the Harlingen-San Benito metropolitan area community
- Recommend the selected transit alternative

Based on this study, the need for public transit services in the Harlingen-San Benito area is limited. A need for fixed route transit services was not demonstrated; however, there was determined to be growing evidence of need for transit services to serve seniors, persons with disabilities, and low-income persons without access to transportation. The study determined that the people who need transportation need it for essential shopping, social activities, or medical appointments as opposed to going to work or school. Many potential users include the frail elderly or others who must be assisted and cannot ride transit independently.

### **3. Public Transportation in Harlingen**

The city Harlingen began a demand response system, the Harlingen Express, in January 2000. The system consists of two ADA compliant fifteen-passenger vans, which are being provided through the Lower Rio Grande Valley Development Council (LRGVDC). The system will operate Monday through Friday from 8:00 a.m. to 5:00 p.m. and 8:00 a.m. to 2:00 p.m. on Saturdays within the corporate city limits of Harlingen. The fare structure is \$3.00 for a one-way trip. The city entered into an interlocal agreement with the LRGVDC to operate the service, maintain the capital investment, and provide data to the cities and the MPO on rider ship, fares, etc. The service will be reviewed on a yearly basis to determine the feasibility for capital expansion, to include additional vans, or, if warranted, small buses and potential for a fixed route system. The projected Section 5307 funds for capital improvements and operations during the 25year planning period is \$15,625,000. Operating costs for the first year of the system are \$106,873. Seventy-one percent (71%), or \$76,361, is state funds and twenty-nine percent (29%), or \$30,512, is local share. Beginning in FY 2001, Section 5307 funds will be requested from FTA to operate the system.

### **4. Operations of the Rio Transit System**

Rio Transit, a rural transportation demand response van system, serves the remaining cities within the MPO boundary -Combes, Los Indios, Palm Valley, Primera, and Rio Hondo -. The Rio Transit system operates in a manner very similar to the Harlingen Express system. The LRGVDC is responsible for the oversight and monitoring of the system, but the day-to-day operations are sub-contracted to local providers. The system operates separate runs, or routes, on specific days, and the client must call 24 hours in advance for a scheduled pick-up. The rural system can take people from rural-to-rural locations or rural-to-urban-to-rural trips. The cost is \$1.00 per trip, with discounts for adults, elderly, people with disabilities, Medicare, and students. Children under age seven ride for free and transfers are also free. Due to population characteristics, all transit brochures are printed in English and Spanish.

**5. Future Operational and Service Delivery Plans**

It is the hope of the Metropolitan Planning Organization that the urban system will become fully utilized and expands into a fixed route bus system in the future as demand dictates. This will provide a low-cost mode of transportation to a large low income and elderly population and also provide a transportation alternative to the single occupant vehicle, which contributes to congestion and potential air quality issues.

Since both the rural and transit systems are demand response, the van routes reflect population attractors and generators. This information will be used in the design of fixed routes when they are necessary. The future operational and service delivery plans for the Rio Transit and Rio Express systems are to continue providing cost-effective services to as many people as possible. While the continuation of the Harlingen Express system depends on rider ship; all entities involved have endorsed and support the system.

**6. Other Public Transportation Services**

In addition to the Harlingen Express and Rio Transit, the Harlingen-San Benito metropolitan area is served by Valley Transit Bus Company, which provides inter-city public transportation, “Airport Shuttle” a shuttle service that serves the Valley International Airport, and privately owned taxi service. Other public transportation service in the area is of limited access and oriented towards specific users such as local independent school districts, taxicab operators, medical transportation, Amigos del Valle, and various religious organizations.

**7. Section 5310 Programs**

Based on information provided by the Texas Department of Transportation, there are four Section 5310 - Elderly and Disabled Transportation Program - providers that offer transportation services in Cameron County.

These are:

- 1) Amigos del Valle, Inc., which provides transportation to and from community/senior centers in Cameron, Hidalgo and Willacy counties
- 2) the Rio Grande State Center, which is a home type facility
- 3) the Southwest Key Program, which provides child care to adjudicate juveniles
- 4) the Lower Rio Grande Valley Development Council.

**8. Client Service Transportation**

In addition to the above stated transportation, the following is a list of adult day care centers in the Harlingen-San Benito MPO area:

- Casa del Sol;
- El Arroyo;
- Emanuel;
- Glory Days;
- La Paloma;
- Paradise;

- Sunglo II;
- Sunglo X;
- Valley View;
- TLC;
- Resaca Palm; and
- San Benito Adult Day Care.

**9. Current Transit Services**

The implementation of the two-van demand transit route in the Harlingen-San Benito MPO will provide data on the existing transit need.

Future transit need will be evaluated based on the following indicators from the Harlingen-San Benito Assessment of Public Transportation Needs and Transit Plan:

- increased patronage of existing services
- increase in the potential demand for transit
- total population in neighborhoods of high transit need
- demographics of the Harlingen-San Benito area
- population growth in areas that are distant from the center cities
- location of commercial development
- congestion at the industrial complexes, medical center and TSTC campus
- increased awareness and interest in transit as a recruitment tool;
- regional growth.

## **Chapter 4: 2030 HARLINGEN-SAN BENITO METROPOLITAN TRANSPORTATION PLAN**

As previously stated, the Metropolitan Transportation Plan is the 25 year, fiscally constrained multi-modal transportation document for the Harlingen-San Benito metropolitan area. Through a transportation planning model known as Travel Demand Model, which is maintained by the Texas Department of Transportation, the Model addresses the current and future needs of the network: is there enough existing capacity for today's traffic, is there enough capacity for future transportation needs, where is growth going to occur and how will the future transportation needs be met.

Data such as the location and number of single and multi-family residences, commercial, industrial, and retail developments, and special generators (schools or large commercial or employment centers), in addition to growth rate projections, are maintained by the MPO. This information is grouped into 275 similar geographic areas known as traffic analysis zones, or TAZs. The transportation model analyzes the development within the traffic analysis zones and determines the number of trips, or cars, that will be using the network. This allocation of trips was performed in the base year (1999) and for the projected date of 2030. Data from this program determines the level of service (LOS), or level of congestion, on the roadway. Road segments where the road's capacity was exceeded by trips (or cars) was designated as having a high level of service and determined to be a high priority improvement. Based on these determined demands, projects are prioritized, and in turn, funded based on their ability to meet the anticipated need.

Transit alternatives were not included in the planning model due to the lack of an existing urban system. The Harlingen-San Benito Metropolitan Transportation Plan was developed under the guidelines of the Transportation Equity Act for the 21<sup>st</sup> Century and is required to be fiscally constrained, i.e., there must be a reasonable funding source for every project. This allows entities to prioritize projects, plan ahead in purchasing right-of-way, and maintain orderly, and thereby, less expensive growth.

Also in accordance with TEA-21, the development of plans and programs shall provide for consideration of all modes of transportation and be continuing, cooperative, and comprehensive.

The Harlingen-San Benito MPO planning process provides for consideration of projects and strategies that will:

- Support the economic vitality of the United States, the States, and metropolitan areas, especially by enabling global competitiveness, productivity, and efficiency by aggressively seeking funding for I-69, designating and developing trade/freight routes and reducing congestion by maintaining and improving the existing multi-modal network;
- Increase the safety and security of the transportation system for motorized and non-motorized users by maintaining the road surfaces and delineating bike lanes as proposed in the Harlingen-San Benito Bicycle and Pedestrian Mobility Study;
- Increase the accessibility and mobility options available to people and freight through

continued support of I-69, construction of the corridors and developing the Transportation Coordinating Committee as recommended in the Harlingen-San Benito Assessment of Public Transportation Needs and Transit Plan;

- Protect the environment, promote energy conservation, and improve quality of life through coordination of the individual cities comprehensive plan and development and implementation of enhancement projects, and adopt a Level of Service C for on-system roads.
- Enhance the integration and connectivity of the transportation system, across and between modes throughout the State, for people and freight by supporting improvements to US 77/83, development of I-69 and inclusion of connectivity, NAFTA/freight routes and corridors in the project selection criteria;
- Promote efficient system management and operation by incorporating progressive operations alternatives such as Intelligent Transportation Systems (ITS), Transportation System Management (TSM), and Transportation Demand Management (TDM);
- Emphasize the preservation of the existing transportation system by supporting an on-going pavement management program and promoting the importance of maintenance.

#### **4.1 Goals**

The 2030 Harlingen-San Benito Metropolitan Transportation Plan will meet the TEA-21 factors through the following goals:

**Goal 1: Provide for Safe Travel**

Objective: Reduce potential for traffic accidents and provide for increased travel safety.

**Goal 2: Reduce Travel Time and Congestion**

Objective: Reduce traffic congestion and travel time in and around the Harlingen-San Benito MPO area.

**Goal 3: Enhance Aesthetics of the Transportation System**

Objective: Integrate the transportation system with the aesthetic qualities of the landscape and historic sites.

**Goal 4: Encourage International Trade**

Objective: Incorporate economic and development considerations to increase accessibility and mobility of people, freight, and international trade.

**Goal 5: Coordinate with Land Development Needs**

Objective: Provide accessibility to existing and anticipated patterns of development throughout the Harlingen-San Benito MPO area while preserving resources.

**Goal 6: Incorporate Intermodalism**

Objective: Integrate the various modes of transportation, particularly roadways (private auto, trucking, and public transit), railroad, bikeway, airports, pedestrian and seaport.

**Goal 7: Develop a Transit Transportation System**

Objective: Continue to monitor the Assessment of Public Transportation Needs and Transit Plan and the newly developed Harlingen-San Benito Express system for future expansion.

**Goal 8: Emphasize the Preservation of the Existing Transportation System**

Objective: Use applicable monitoring systems to monitor and evaluate the conditions of the transportation system.

**Goal 9: Implement a policy requiring a minimum acquisition of 75% of the necessary right-of-way before a project can be included in the Transportation Improvement Program**

Objective: Ensure the feasibility of project implementation and distribution of allocated construction funds in an efficient manner.

**4.2 The Public Involvement Process**

Public involvement is very important in all aspects of planning, especially transportation planning. The public uses the transportation network every day, using the roadways to go back and forth to work, shop, visit, travel, or conduct business. The transportation network also provides facilities for walking, riding a bicycle, or taking the existing Rio Transit system from the rural areas into the urban areas. Freight movement within the area uses the Los Indios International Bridge, the Port of Harlingen and the Valley International Airport. Everyone uses and is dependent upon a safe, efficient, multi-modal transportation network.

In order to comply with federal legislation, the Harlingen-San Benito MPO adopted a Public Involvement Plan, which details the minimum advertising and comment periods necessary to allow for public comments. All Policy Committee meetings are advertised in both local newspapers, the Valley Morning Star and the San Benito News, with a list of the action items. A newsletter is published on a quarterly basis and distributed to public buildings throughout the MPO area and mailed to a growing list of residents.

The FY 2004-2006 TIP was published in the newsletter. The MPO is always striving to improve upon the existing methods and increase public participation in transportation issues. In addition to utilizing the Policy Committee meetings, the local newspapers, and the newsletter, the MPO held the following meetings to increase public awareness and solicit input in the Harlingen-San Benito Metropolitan Transportation Planning Process and MTP UPDATE:

Primera	Nov.10, 2003	City Commission meeting
Rio Hondo	Jan. 30,2004	City Commission meeting
Palm Valley	Oct. 20, 2003	City Commission meeting
Harlingen	April 8, 2004	City Commission meeting
Combes	Nov.24, 2003	City Commission meeting
San Benito	Feb.20, 2004	City Commission meeting
Los Indios	March 1, 2004	City Commission meeting
Harlingen Chamber of Commerce	March 15, 2004	City Commission meeting

After comments were received and the Metropolitan Transportation Plan was developed, the MPO made available a draft copy of the 2030 Metropolitan Transportation Plan and a map of the network to every city within the MPO area. The final MTP public involvement meetings were held the first week of November. They were listed in the Fall, 2004 issue of the Harlingen-San Benito MPO newsletter, the Valley Morning Star & San Benito News, and the MPO website for notification of the public.

A public hearing was held at the December Policy Committee meeting to solicit any final comments. Both the public hearing announcements and the Policy Committee advertisements referenced the 2030 Metropolitan Transportation Plan. All comments and input received on the Metropolitan Transportation Plan are listed in Appendix 1.



### **4.3 Determination of Future Need**

As stated in Chapter 1, the Lower Rio Grande Valley and the Harlingen-San Benito metropolitan area experienced very high growth in the 1990's, and this economic and population growth is expected to continue, with 1 million people projected to live in the Lower Rio Grande Valley in 2000. Map 4.1 shows the location of the projected population for the Harlingen-San Benito metropolitan area in 2030 and Map 4.2 shows the segments of roads that will be significantly congested in 2030 if steps are not taken now to address the projected demand. This information analyzed and forecasted by the 1999-2030 Travel Demand Model formed the basis for determining future transportation need.

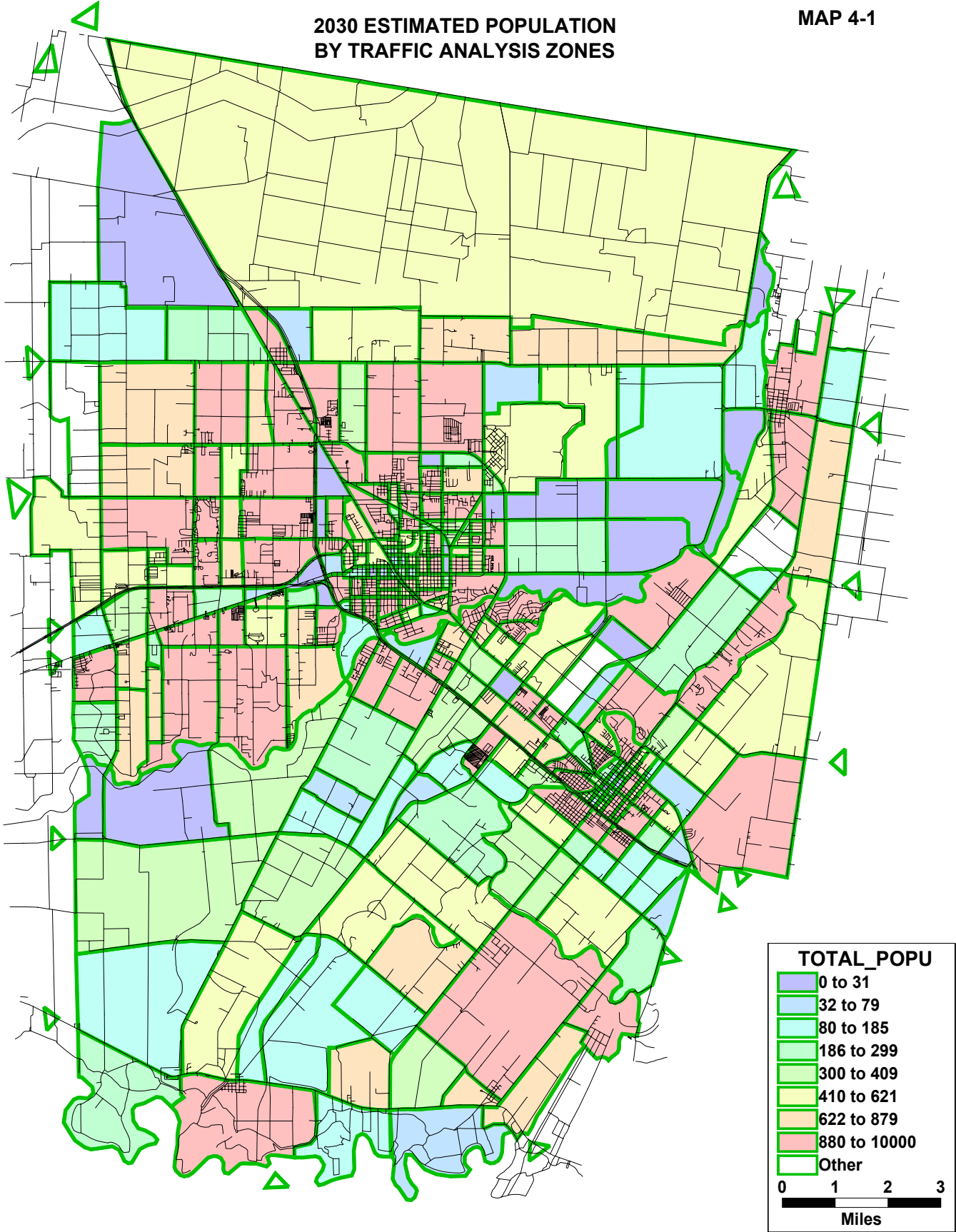
#### **A. Future Roadway Forecasts**

Employing the results of the future forecast model, the future travel demand for the year 2030 has been estimated in order to develop a recommended transportation system for those years. Refer to the 2030 Recommended Project List (Appendix 3) and the 2030 Recommended Project Map (Appendix 3) at the end of this report. Roadway recommendations are shown for 2030 assuming a fiscal constraint.

Additional factors considered while developing the recommended roadway system include the impact of freight, traffic impacts to neighborhoods, environmental impacts, fiscal constraints, and increasing levels of congestion. Potential funding sources include federal, state, tolls, sales tax and other local funds.

2030 ESTIMATED POPULATION  
BY TRAFFIC ANALYSIS ZONES

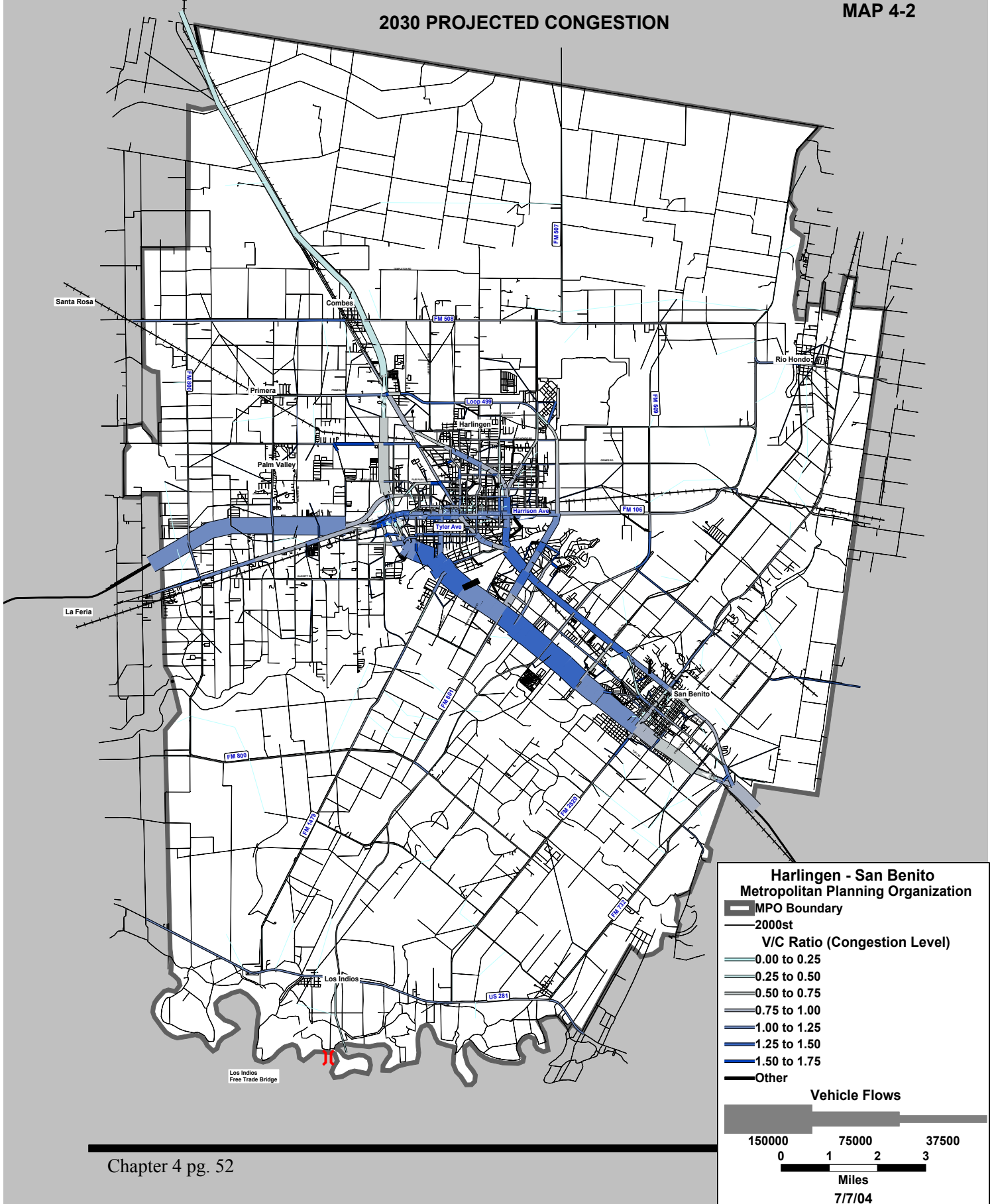
MAP 4-1





2030 PROJECTED CONGESTION

MAP 4-2



#### **4.4 Transportation Infrastructure**

As previously noted in Chapter 2, the Valley is the single most populous area in the U.S. not served by interstate highway service. With increasing national and international trade and new north-south trade traffic patterns, the international bridges, highways, railroads and other transportation modes in the Valley are critical.

The HSBMPO recognizes that the state cannot fund even one-half of the statewide needed transportation projects. However, while the Valley has seen an increase in construction dollars allocated to the region, the effects of historic under-funding for the area's transportation needs have not been completely addressed. Major needs vital to the continued safety and efficiency of the transportation system are identified in this plan.

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***47% of all Texas-Mexico vehicle crossings in the state and 1.2 million trucks cross-Valley bridges.***

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This section discusses the transportation infrastructure in the Valley and the federal and state expenditures allocated to the region.

#### **4.5 Transportation Project Selection Process**

Projects necessary to meet the projected 2030 transportation demand were submitted through community input, the Texas Department of Transportation's 1999 Travel Demand Model, which forecasts levels of service on the 2030 network and the Technical and Policy Committees. Projects were primarily congestion relief, rehabilitation, or operations but also include safety and new locations. The projects from these four areas created the Harlingen-San Benito MPO needs list. The Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) mandated that the Metropolitan Transportation Plan be fiscally constrained, i.e., there must be a feasible funding source for each project. Because there are always more projects than funds, the projects were ranked based on Policy Committee approved selection criteria. (Please see Table 4.1.)

The project selection process (evaluating the projects) is used on roadway projects: new construction, re-construction, or operations (such as ITS projects). Transit projects are not selected or evaluated in this process.

The Harlingen-San Benito project selection process permits the Policy Committee to score proposed improvements based on adopted criteria for prioritization in the Metropolitan Transportation Plan. The following are the project selection criteria used to rank the projects:

Tier 1:

- Cost effectiveness - Base Year (20 points);
- Cost effectiveness - Forecast Year (20 points);
- Congestion - Base Year (25 points);
- Congestion - Forecast Year (25 points);
- Connectivity (10 points);

Tier 2:

- Corridor (Yes/No) Yes = 1pt, for a possible total of 8pts;

Table 4.1

**Project Selection Criteria.**

PROJECT SELECTION		TIER 1			
Category	Explanation	Formula	Criteria	Points	Total Points
Cost Effectiveness - Base Year	Reflects a Cost - Benefit analysis based on existing base year volumes. Base year volumes are being used since they do reflect reality and since financial constraint prohibits addressing forecast year volumes.	Cost Per Vehicle (Base) Mile	>750		20
			600-750	4	
			451-600	8	
			301-450	12	
			151-300	16	
			0-150	20	
Cost Effectiveness Forecast Year	Reflects a Cost - Benefit analysis based on forecast year volumes. Base year volumes are being used since they do reflect reality and since financial constraint prohibits addressing forecast year volumes.	Cost Per Vehicle (Base) Mile	>750		20
			600-750	4	
			451-600	8	
			301-450	12	
			151-300	16	
			0-150	20	
Congestion Base Year	Reflects existing congestion. Extra points are given to address existing congestion already occurring.	LOS - Base	D	5	25
			E	15	
			F	25	
Congestion Forecast Year	Reflects forecasted congestion	LOS - Forecast	D	5	25
			E	15	
			F	25	
Connectivity	Local = City/County MPO = Intercity, etc Regional - Major External Rdwys		Local	3	10
			MPO	7	
			Regional	10	

<b>Total</b>					
<b>Project</b>	<b>TIER 2</b>				
Corridors	Higher Values would be given to entire corridors that are slated for improvement over individual piecemeal projects. NHS, Loops, PAU, MA+R, Regional Connectors	Yes/No	Yes	1	
Freight Corridors	Point will be given to a project included on high freight and NAFTA routes.	Yes/No	Yes	1	
Safety	Point will be given to a project included as a safety improvement.	Yes/No	Yes	1	
Multimodal	Point will be given to a project included on multimodal routes.	Yes/No	Yes	1	
Transit Corridor	Point will be given to a project included on Transit routes.	Yes/No	Yes	1	
Pedestrian Corridor	Point will be given to a project included on pedestrian routes.	Yes/No	Yes	1	
Bicycle Corridors	Point will be given to a project included on pedestrian routes	Yes/No	Yes	1	
Rehabilitation Corridors	Point will be given to a project included on substandard PCI routes.	Yes/No	Yes	1	
<b>Total</b>				<b>8</b>	

In addition to being ranked in priority for funding, the projects are also listed based on when they can be implemented, i.e. short range (1 - 7 years) medium range (8 - 15 years) or long range (16 years or more). The determining factors are the availability of right-of-way and local match.

**4.6 Project Funding: Introduction**

An important part of planning is identifying the resources needed to implement the solutions identified through the planning process. Solutions that cannot be implemented for lack of funds are no solutions at all, so a comparison between needed resources to projected resources is critical. Determining funding shortfalls gives way to the creative process of determining innovative and non-traditional methods of securing revenue. The result is an achievable plan giving local elected officials and TxDOT a realistic, and therefore effective, foundation from which decisions related to or affected by transportation can be made.

This process of financial constraint and resource identification was made a required part of the planning process and included in federal planning regulations. 23 CRF Part 450.322 states, "the plan shall include a financial plan that demonstrates the consistency

*of proposed transportation investments with already available and projected sources of revenue...All cost and revenue projections shall be based on the data reflecting the existing situation and historical trends."*

This section/chapter of the MTP documents the methodology, consistent with federal requirements and good planning practice, used to determine projected revenue sources that can reasonably be expected to be available to the Pharr District and the Harlingen-San Benito metropolitan area. See Table 4.2 that depicts expected revenue sources for the MTP prioritized transportation needs.

#### **4.7 Background and Methodology: Highways**

Unless otherwise stated, district-wide financial constraint was based upon historical availability of funding in each specific category dating from FY 1991 through FY 2003 (Current Priority 1 commitments are made only through FY 2003.) Funding levels for financial constraint for the three metropolitan areas and the rural portion of the Pharr District have been generally apportioned to each area by population. This follows the federal model of determining urbanized boundary areas and of apportioning funding based on urbanized area population.

According to the FHWA Interim Guidance, sub-allocation of available funding for short range planning (for the Transportation Improvement Program, the TIP) is not allowed. Instead, needs should drive short-range planning. However, for longer time frames, estimating reasonable funding availability by sub-allocating a district's apportionment to the various areas is appropriate.

Funding projections are based on historical trends for the Pharr District since the passage of ISTEA in 1991 and emphasis on funding of NAFTA related projects, both of which significantly raised funding levels available to the Pharr District. Once draft-funding levels were determined, final funding levels were slightly revised to reflect more realistic projections where population distribution was not a reliable indicator of future funding.

Such exceptions include:

- \* funding categories for specific corridors, which have been mostly completed;
- \* funding categories where an unreasonable skew in funding apportionment would result from strict distribution by population;
- \* funding categories where distribution by population resulted in an unrealistically low projection;
- \* slight rounding off to include whole project estimates or whole corridors;
- \* categories such as STP-Transportation Enhancements, are not reliably predictable. In these categories, TxDOT and the MPO concurrently reviewed all projects, assessed reasonable constraints and mutually determined the appropriate financial constraint. Lump Sum allocations were made where it was impossible to predict future needs. Such categories include Bridge Replacement and Rehabilitation, all rehabilitation and preventive maintenance categories. Items of noteworthy significance to the availability of funding for the Pharr District include NAFTA traffic and the Transportation Commission's commitment of financial resources to border areas, the recent designation of US 77 and US 281 as future interstate highways by the United

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States Congress, TXDOT’s Economically Disadvantaged County Program (EDCP) and the history of federal demonstration funding to this area.

Table 4-2

**FINANCIAL CONSTRAINT FOR BMPO**

New Category	Annual Average	FINANCIAL CONSTRAINT		
		SHORT Range 10 Years	LONG Range 15 Years	FUNDING TOTALS
1-Prev. Maint./Rehab	\$ 3,350,000	\$ 33,500,000	\$ 50,250,000	\$ 83,750,000
2-Metro Corridors	\$ -	\$ -	\$ -	\$ -
3-Urban Corridors	\$ 6,000,000	\$ 60,000,000	\$ 90,000,000	\$ 150,000,000
4-Connectivity Corridors	\$ -	\$ -	\$ -	\$ -
5-CMAQ	\$ -	\$ -	\$ -	\$ -
6-Bridge	\$ 750,000	\$ 7,500,000	\$ 11,250,000	\$ 18,750,000
7-Metro Mobility/Rehab	\$ -	\$ -	\$ -	\$ -
8-Safety	\$ 250,000	\$ 2,500,000	\$ 3,750,000	\$ 6,250,000
9-Enhancements	\$ 1,200,000	\$ 12,000,000	\$ 18,000,000	\$ 30,000,000
10-Misc.	\$ 150,000	\$ 1,500,000	\$ 2,250,000	\$ 3,750,000
11-District Discretionary	\$ 3,000,000	\$ 30,000,000	\$ 45,000,000	\$ 75,000,000
12-Strategic Priority	\$ 1,000,000	\$ 10,000,000	\$ 15,000,000	\$ 25,000,000
Local Funds	\$ -	\$ -	\$ -	\$ -
TOTALS		\$ 157,000,000	\$ 235,500,000	\$ 392,500,000

TOTAL for Mobility Categories Only (3 & 11)	\$ 90,000,000	\$ 135,000,000	\$ 225,000,000
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**LEGEND**

Gray Font = Categories do not apply to this TMA

## **4.8 NAFTA**

The Pharr District is a border district and contains 45% of Texas' existing international border crossings with new crossings being actively pursued.

In 1995, the commission established a NAFTA Discretionary category in the Unified Transportation Program (UTP). This is a state funded category for the border districts to use for NAFTA related projects on the state highway system. This category was funded at \$8 million per year for FY 96 and FY 97. In FY 98 and FY 99, the category was funded at \$20 million per year. For FY 2000 through FY 2002, the funding increases to \$50 million per year, and for FY 2003, it drops to \$25 million.

Altogether, this extraordinary commitment by the Commission represents unprecedented opportunities for the Pharr District and the Harlingen-San Benito Metropolitan areas.

### **A. Borders and Corridors Program**

The Coordinated Border Infrastructure Program and the National Corridor Planning and Development Program are intended to provide funding for planning, project development, construction and operation of projects that serve border regions near Mexico and Canada. High priority corridors throughout the U.S. border states and MPOs are eligible for discretionary grants for transportation and safety infrastructure improvements, operation and regulatory improvements and coordination and safety inspection improvements in a border region.

In the first three cycles, only 39 percent of the funding allocated to border communities was directed to Texas, even though approximately 80 percent of all land-freight traffic in the U.S. passes through Texas.

### **B. Border Category**

The Pharr District received \$660 million in funds from 1997 to 2001 and benefited from a TxDOT funding category that specifically addressed border infrastructure needs. However, the new funding categories created by the state reduced the number from 36 to 12 and omitted the border infrastructure needs category.

## **4.9 UTP Categories Streamlining**

The Transportation Planning and Programming (TP&P) Division of the Texas Department of Transportation (TxDOT) is responsible for administering the Project Selection and Funds Distribution Process. The process, which has evolved over the years, is largely driven by federal requirements. Although the Department has made recent efforts to simplify the process and to provide greater flexibility, there are currently 12 funding categories in what is still a complex process.

In late 2000, the TP&P Division identified a need to better understand the perception of TxDOT District personnel and staff at Metropolitan Planning Organizations (MPOs) in the state on the Project Selection and Funds Distribution Process.

Through an Interagency Agreement, the Texas Transportation Institute (TTI), a part of the Texas A&M University System conducted surveys of TxDOT District Engineers, District Transportation Planning and Development (TP&D) Directors, and MPO chiefs of staff to help identify current perceptions relating to the Project Selection and Funds Distribution Process, possible training and outreach efforts, and potential enhancements to the process.

TxDOT and the Texas Transportation Commission use the Unified Transportation Plan (UTP) as a ten-year plan for project development and construction.

The Commission administers the UTP, it establishes the funds distribution procedures, and determines a project selection process. The Commission concurred to an action plan to implement proposed changes.

Highlights of the action plan include:

- Reassign all un-let projects into the new categories;
- Develop allocation formulas for the new categories; and
- Define the corridors and establish a corridor development priority process.

### **A. Reduced Number of Categories in Statewide Mobility**

To reduce the number of overall existing categories of work from 34 to a proposed 12, (see table 4-3) the Commission approved reshuffling 12 existing statewide mobility categories into three. The 12 existing categories are:

- Category 1 – High Priority Interstate Corridors
- Category 3A – National Highway System (NHS) Mobility
- Category 3B – Texas Trunk System
- Category 3D – NHS Traffic Management Systems
- Category 8B – Farm Road and Ranch Road System Expansion (New Locations)
- Category 13A – State Funded Mobility
- Category 13B – Hurricane Evacuation Routes
- Category 13C – Border Trade Transportation Projects (NAFTA Discretionary)
- Category 13D – Urban Street Program
- Category 15 – Congressional High Priority Projects
- Category 17 – State Principal Arterial Street System (PASS)
- Category 18 – Candidate Turnpike Projects (Toll)

### **The three new categories are:**

- Category 2 – Metropolitan Area Corridor Projects  
Corridors located within TMA MPO boundaries that have both local and statewide interest.
- Category 3 – Urban Area Corridor Projects  
Corridors located within non-TMA MPO boundaries that have both local and statewide interest.
- Category 4 – Statewide Connectivity Corridor Projects



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Corridors located outside of MPO boundaries that have statewide significance.

**Table 4-3** New Category Listing

<b>NEW UTP CATEGORY</b>					<i>Old Categories</i>		
<b>Number</b>	<b>Description</b>	<b>Source</b>	<b>Type</b>	<b>Selection Authority</b>	<i>Description</i>	<i>Number</i>	<i>Source</i>
1	<b>Preventive Maintenance &amp; Rehabilitation</b>	Federal & State	Rehabilitation & Preventive Maintenance	District	<i>Interstate Maintenance</i>	<i>I2</i>	<i>Federal</i>
					<i>Rehabilitation</i>	<i>NHS3C</i>	<i>Federal</i>
					<i>Rehabilitation</i>	<i>STP4F</i>	<i>Federal</i>
					<i>Preventive Maintenance</i>	<i>PM7</i>	<i>State</i>
					<i>Rehabilitation</i>	<i>FM8A</i>	<i>State</i>
					<i>Signs, Signals Pavement Markings</i>	<i>10A</i>	<i>State</i>
					<i>Signal Systems</i>	<i>10B</i>	<i>State</i>
					<i>Rehabilitation</i>	<i>SFR14</i>	<i>State</i>
2	<b>Metro Corridors</b>	Federal or State	Mobility	Statewide Committees recommend with Final Approval by Texas Transportation Commission	<i>Interstate Construction</i>	<i>I1</i>	<i>Federal</i>
					<i>Mobility</i>	<i>NHS3A</i>	<i>Federal</i>
3	<b>Urban Corridors</b>	Federal or State	Mobility	Statewide Committees recommend with Final Approval by Texas Transportation Commission	<i>Texas Trunk System</i>	<i>NHS3B</i>	<i>Federal</i>
					<i>ITS-Traffic Management</i>	<i>NHS3D</i>	<i>Federal</i>
					<i>System Expansion</i>	<i>FM8B</i>	<i>State</i>
4	<b>Rural Corridors</b>	Federal or State	Mobility	Statewide Committees recommend with Final Approval by Texas Transportation Commission	<i>Mobility</i>	<i>13A</i>	<i>State</i>
					<i>Hurricane Evacuation</i>	<i>13B</i>	<i>State</i>
					<i>NAFTA</i>	<i>13C</i>	<i>State</i>
					<i>Federal Demonstration</i>	<i>Demo15</i>	<i>Federal</i>
					<i>Coordinated Border Infrastructure</i>	<i>CBI</i>	<i>Federal</i>
					<i>National Corridor Planning &amp; Development</i>	<i>NCPD</i>	<i>Federal</i>
					<i>PASS</i>	<i>Pass 17</i>	<i>State</i>

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					<i>Turnpike/Toll</i>	<i>TT 18</i>	<i>State</i>
<b>5</b>	<b>Congestion Mitigation &amp; Air Quality</b>	Federal	Various	MPO	<b><i>Congestion Mitigation &amp; Air Quality</i></b>	<i>CMAQ 5</i>	<i>Federal</i>
<b>6</b>	<b>Consolidated Structures Rehabilitation</b>	Federal	Rehabilitation	Statewide	<b><i>RR Grade Separation</i></b>	<i>STP4G</i>	<i>Federal</i>
					<b><i>On-System</i></b>	<i>BR6A</i>	<i>Federal</i>
					<b><i>Off-System</i></b>	<i>BR6B</i>	<i>Federal</i>
<b>7</b>	<b>Metro Mobility/Rehab</b>	Federal	Mobility & Rehabilitation	MPO w/ District	<b><i>Metro Mobility/Rehab</i></b>	<i>STP4C</i>	<i>Federal</i>
<b>8</b>	<b>Safety</b>	Federal	Safety	Statewide	<b><i>Safety</i></b>	<i>STP4A</i>	<i>Federal</i>
<b>9</b>	<b>Enhancements</b>	Federal	Enhancements	Commission	<b><i>Enhancements</i></b>	<i>STP4B</i>	<i>Federal</i>
<b>10</b>	<b>Miscellaneous</b>	State & Federal	Misc	Various	<i>Park Roads</i>	<i>PR9</i>	<i>State</i>
					<i>Miscellaneous</i>	<i>Misc 16</i>	<i>S/F</i>
<b>11</b>	<b>District Discretionary</b>	Federal & State	Mobility & Various	District	<b><i>Miscellaneous</i></b>	<i>NHS3E</i>	<i>Federal</i>
					<b><i>Urban Mobility/Rehab</i></b>	<i>STP4D</i>	<i>Federal</i>
					<b><i>Rural Mobility/Rehab</i></b>	<i>STP4E</i>	<i>Federal</i>
					<i>District Discretionary</i>	<i>DD11</i>	<i>State</i>
<b>12</b>	<b>Strategic Priority</b>	State or Federal	Mobility	Commission	<i>Commission Strategic Priority</i>	<i>SP12</i>	<i>State</i>

### **4.10 Future Interstate Highway 69 (I-69)**

A portion of the federal legislation authorizing the National Highway System also contained a provision for the inclusion of US 77 and US 77/83 to Brownsville and US 281 to the border to be designated as future interstate highways. To date, no interstate funding has specifically been allocated by the US Congress for the upgrading of these highways to interstate standards; however, the Texas Transportation Commission has funded sections of these roadways through the state funded NAFTA program. Either by the US Congress with interstate funding or otherwise, funding of the remaining projects to complete the interstate is presumed to occur during the twenty-five year planning period.

**A. Interstate Highway Maintenance Funds**

The state of Texas receives federal transportation funds for several specific highway programs. Texas was appropriated \$5.6 billion in federal funds for highway planning and construction activities from 1998 to 2000 and approximately \$6.3 billion for 2001 to 2003. Of all the programs included for this funding, more than half are apportioned for interstate highway maintenance, national highway systems and surface transportation programs.

There is a potential to utilize federal interstate maintenance funds for U.S. 77 and U.S. 281, pending completion of I-69.

**B. Economically Disadvantaged Counties Program (EDCP)**

Senate Bill 370 of the 75th Texas Legislature established the EDCP. The Texas Transportation Commission amended the Texas Administrative Code on November 20, 1997 allowing the program to become effective on January 1, 1998.

The bill requires the Commission to evaluate proposals for highway improvement projects located within economically disadvantaged counties. An economically disadvantaged county has below average per capita taxable property value, below average per capita income, and above average unemployment in comparison to other counties within the state.

Generally, federal funds are provided at a participation ratio of 80% federal to 20% local of the total cost of the projects. A notable exception is federal safety funds requiring only a 10% local match. TxDOT provides the matching funds for roadways on the state highway system (Farm-to-Market, State Highways, US Highways and Interstate Highways) and the local jurisdictions provide the local match for off system roadways.

The EDC program provides an opportunity for political subdivisions to adjust their local match requirements. The Harlingen-San Benito metropolitan area is included within an economically disadvantaged county. Since political subdivisions within the EDCs can also participate in the program, the local match burden to these local entities can be substantially reduced, allowing for more projects requiring scarce local funding. Projects identified in the 2005-2030 Harlingen-San Benito Metropolitan Transportation Plan can be evaluated as candidate projects for the EDC program.

**C. Federal Demonstration Funds - Historical Trend**

The community leaders in the Pharr District have been consistently fortunate in securing federal demonstration funding over the past few years. Among others, projects receiving federal demonstration funding include the Railroad Relocation Project, 6th & 7th Street, and East Loop in Brownsville and the US 77/83 Interchange in Harlingen. Every effort will be made in the future to continue to request federal demonstration funding for other identified special needs.

#### **4.11 Background and Methodology – Transit**

Transit projections for the Harlingen-San Benito MPO Urban Systems Section 5307 program are based on funding history for the respective transit systems. Section 5310 funds for elderly and disabled persons are projected based on funding history also. These transportation services are provided by non-profit organizations throughout the Pharr District. These funds have been awarded on a competitive basis. Beginning in FY 2001 a consensus building method will be initiated to award the funds.

##### **A. Section 5307-Urbanized Transit Systems:**

The small-urbanized transit systems receive their federal funding from the Governor's Apportionment. Although the annual Federal Registers show an allocation for each city, this is not the basis on which the cities receive their funds. The current practice is for the agency to submit an estimate of need to Public Transportation Division (PTN); then through a negotiated process with all the cities, individual grant amounts are determined.

Federal funding projects were based on the following approach:

1. From the agency's 1998 operating and planning budget:

\*For the life of Tea-21 (FY 1998-2003), assume an overall increase of, conservatively, a 49.9 percent increase in funding, or optimistically, a 55.7 percent increase in funding;

\* For the remaining life of the plan (FY 2004-2025), assume an annual increase of 1.5 percent.

2. For Capital costs:

\*Average capital costs for the last 10 years or the life span of the transit agency as a Section 5307 recipient. Then the above figures were applied.

\*Projections for the Hidalgo County TMA are based on funding history. The average yearly federal allocation is \$1.1 million.

##### **B. Section 5310-Elderly & Disabled:**

The methodology suggested by PTN for projecting federal funds is:

1. For the life of TEA-21 (FY 1998-2003), an overall funding increase of 49.38 percent.
2. For the remaining life of the FY 2004-2025 plan an annual increase of 1.0 percent was the actual funding increase realized during the life of ISTEA.

The Harlingen San Benito MPO participates on the TXDOT Transit Advisory Panel, which makes recommendations on transit issues and also develops a regional transit plan. It is through this participation that the MPO stays current on transit development

and issues.

#### **4.12 Funding Finance**

Historically, in Texas we have financed highway projects on a "pay as you go" basis, using motor fuel taxes and other revenue deposited in the state highway fund. However, from 20.9 million in 2000 to 29.6 million by 2025, this "pay as you go" method of financing is not able to keep pace with the growing transportation demand. From 1990 to 2000 vehicle miles traveled increased by forty-one percent, while only about three percent more lane miles were added to the state highway system. In addition, continued congestion in Texas metropolitan areas is costing the state billions of dollars of wasted time and fuel.

The HSBMPO will evaluate developing projects as toll viable projects, which can help bridge the gap between transportation needs and resources. Construction of turnpike projects can improve mobility and safety and address transportation problems sooner by stretching limited state financial resources to fund more projects. The development of turnpike projects allows the leveraging of limited state funds with the proceeds of turnpike revenue bonds.

The HSBMPO recognizes that innovative financing methods, including tolls, are an effective means of maximizing the use of limited available resources without compromising the quality of Texas' transportation system. To improve the current structure and give Texans a transportation system that provides reliable mobility, improved safety, system preservation, streamlined project delivery, and economic vitality, guidelines need to be established to evaluate mobility projects on the state highway system for development as toll roads.

HSBMPO will establish and implement guidelines for evaluating mobility projects on HSBMPO system for development as toll roads.

#### **These guidelines include the following:**

- Controlled-access mobility projects in any phase of development or construction must be evaluated for tolling. This includes new location facilities and increased capacity projects such as adding additional main lanes or constructing new main lanes.
- The review and evaluation of projects for tolling shall be performed in accordance with applicable statutes and rules, including evaluating the conversion of a non-toll highway in accordance with toll conversion rules.
- Revenue generated by tolling projects that is not needed for debt service, operation, or maintenance of the toll road should remain in the local area in which the project is located so other transportation facilities may be constructed.

#### **A. Priority Projects**

Based on the preliminary results of the 2002 planning effort, over 3.5 billion is needed

for highway maintenance and transportation system improvements over the next 10 years.

The priority projects include:

1. Complete Interstate 69 (I-69)
2. Widen east-west connectors: U.S. 281 (Military Highway) and Farm to Market (FM) 1925
3. Complete improvements to U.S. 83
4. Complete bridge connectors and build new bridges
5. Construct additional rail and complete rail re-alignments
6. Construct intercity and intra-city loops
7. Expand Intelligent Transportation Systems (ITS) Valley wide

**B. Interstate 69 (I-69)**

In addition to projects that facilitate travel within the MPO area, the Metropolitan Transportation Plan also addresses projects, which facilitate through travel (travel outside the MPO). Of major importance is the development of Interstate 69, which will create a seamless freight corridor from Canada to Mexico. Completion of this interstate will provide a unified freight corridor that will enhance trade with the NAFTA partners, Canada, the United States and Mexico. Interstate 69, which already exists from the Canadian border at Port Huron, Michigan, to Indianapolis, has been recommended for extension to the Lower Rio Grande Valley.

In a 1995 study conducted by Shiner Moseley and Associates and Carter & Burgess, the proposed U.S. 77 element of the proposed interstate goes from Victoria to the Lower Rio Grande Valley along the coast via Corpus Christi.

According to the study, planned improvements are needed only as far south as the Willacy/Cameron County line because in Cameron County, U.S. 77 is currently a divided highway and, in most cases, also meets interstate standards. Improvements for the other counties between Victoria and Cameron County along U.S. 77 include some additional right of way, new grade separation crossings, relief routes, roadways, access roads, and drainage. No new frontage roads are planned in Kennedy County because the highway traverses only a few large ranches and there are very few on and off points.

This corridor will be of great importance to the area in the future and will likely be an upgrade to an existing facility, US 77, which is already on our transportation network.

## **Chapter 5: ROADWAY SYSTEM CONSIDERATIONS**

As population growth and increased travel demand continues to place a higher burden on area roadways, it is imperative that many single-occupant vehicle trips be shifted to other modes such as transit, ridesharing, bicycling, and walking, especially during the peak travel periods. As the cost of constructing and maintaining roadway facilities increases, it will become more difficult for government agencies to provide sufficient funds to satisfy travelers' demands for added capacity and new roadways.

Given these constraints, the roadway element of the *HSBMPO 2030 MTP* is designed to provide a reasonable level-of-service for all vehicular travel in and through the HSBMPO metropolitan area, and provide a safe and efficient driving environment. In developing this system, many local and regional influences were considered. Existing and future land use and transportation facilities are critical factors in forecasting future travel demand.

### **5.1 Environmental & Community Impacts**

While transportation is crucial to our economy and our personal lives, the environmental and community impacts of transportation are equally significant and wide-ranging. Impacts from Transportation can affect the natural, social, and economic environment. During development of the long-range transportation plan, environmental impacts are analyzed on a regional scale. The HSBMPO environmental and community programs are described below.

#### **A. Impacts to Neighborhoods**

The HSBMPO has stated its intent to not damage neighborhoods by widening roadways. Therefore the proposed roadway system attempts to minimize the expansion of arterials within existing urbanized areas, especially residential areas. A *HSBMPO 2030 Transportation Plan* goal is to increase person carrying capacity rather than motor vehicle capacity.

#### **B. Environmental Justice**

The increasing concern over environmental impacts of federally funded programs and projects on minority and low-income populations builds upon Title VI of the Civil Rights Act of 1964. Title VI requires nondiscrimination in federally assisted programs by emphasizing the need to identify and address disproportionate effects of federal programs, policies, and activities. For this reason, a formal federal policy on environmental justice was established in February 1994, with Executive Order 12898 (EO 12898), requiring all federal agencies to establish internal policies to ensure that the order was reflected in the full range of their activities, including public involvement.

In April 1995, the US Department of Transportation (DOT) issued its Order to Address Environmental Justice in Minority Populations and Low-Income Populations to fulfill the environmental justice policy objectives laid out in Executive Order 12898. The central objective of the order was to ensure that all federally funded transportation-related programs, policies, or activities having the potential to adversely or negatively affect human health or the environment

involve a planning and programming process that explicitly considers the effects on minority populations and low-income populations. DOT regulations specifically state that "In determining the site or location of facilities, a recipient or applicant may not make selections with the purpose or effect of excluding persons from, denying them the benefits of, or subjecting them to discrimination under any program to which this regulation applies on the grounds of race color, or national origin...(49CFR21.5(b)(3)). The increasing concern over environmental impacts of federally funded programs and projects on minority and low-income populations builds upon Title VI of the Civil Rights Act of 1964. Title VI requires nondiscrimination in federally assisted programs by emphasizing the need to identify and address disproportionate effects of federal programs, policies, and activities. For this reason, a formal federal policy on environmental justice was established in February 1994, with Executive Order 12898 (EO 12898), requiring all federal agencies to establish internal policies to ensure that the order was reflected in the full range of their activities, including public involvement.



Upon discovery of the presence of large populations of minority and/or low-income persons further analysis should be performed during the project development process to ensure compliance with Title VI. During project development, HSBMPO staff will work with the entity responsible for implementation of the project to assure that potential issues are adequately addressed and mitigated according to federal law.

### **C. Natural Environment**

In order to meet the demands of the current and future population, urbanization of undeveloped lands will continue and these new urban areas must be served by a transportation infrastructure. The federal government, through the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21), and the Texas Department of Transportation, through the Environmental Review process, are working together to minimize the impact of transportation projects on the environment.

This is done by protecting environmentally sensitive areas, such as wildlife management areas, refuges, protected flora and fauna, and historic sites. Although there are environmentally sensitive areas in Cameron County, according to the U.S. Fish and Wildlife office, there are no areas of special protection within the Harlingen-San Benito MPO area. According to the U.S. Fish and Wildlife Service, there are federally listed species in Cameron County.

They are:

- Ocelot (*Felis pardalis*) - Endangered
- Jaguarundi (*Felis Yagouarundi*) - Endangered
- North aplomado falcon (*Falco femoralis septentrionalis*) - Endangered
- America peregrine falcon (*Falco peregrinus anatum*) - Endangered
- Brown pelican (*Pelecanus occidentalis*) - Endangered
- Piping plover (*Charadrius melodus*) - Threatened



- South Texas ambrosia (*Ambrosia cheiranthifolia*) - Endangered
- Texas ayenia (*Ayenia limitaris*) - Endangered
- Mountain plover (*Charadrius montanus*) - Candidate
- Cactus ferruginous pygmy owl (*Glaucidium brasilianum cactorum*)- Candidate

Ocelot and jaguarundi inhabit dense native brushland, generally occurring near watercourses, throughout South Texas. Population declines in both species of felids are primarily due to habitat loss associated with clearing of brush. Many bird species protected under the Migratory Bird Treaty Act may nest in an area containing trees or other suitable habitat. The U.S. Fish and Wildlife Service recommends that vegetation disturbances potentially associated with roadway projects avoid the general nesting period of March through August or that areas proposed for disturbance be surveyed first for nesting birds to avoid the inadvertent destruction of nests, eggs, etc. With regard to wetland resources, the U.S. Army Corps of Engineers should be contacted for permitting responsibilities under Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act if it appears that proposed construction plans could impact wetlands.

The HSBMPO, through the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) administered by the federal government, and the Texas Department of Transportation, through the Environmental Review process, are working together to minimize the impact of transportation projects on the environment in our area.

## **5.2 Transportation and Conformity Air Quality Program**

The Clean Air Act Amendments (CAAA) of 1990 set the mandate for better coordination of air quality and transportation planning. The CAAA requires transportation plans and investments in areas that do not attain federal clean air standards to conform to a state's clean air plan. Conformity to a state air quality plan means that transportation activities will not produce new air quality violations, worsen existing violations, or delay timely attainment of the national ambient air quality standards (NAAQS).

The federal Clean Air Act establishes NAAQS for certain "criteria" pollutants. These pollutants include carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter and sulfur dioxide. The nation's metropolitan areas are categorized as being in attainment or non-attainment with the NAAQS. Regionally significant projects include all state and other arterial roadways and transit systems.

During project development, HSBMPO staff will work with the entity responsible for Implementation of the project to assure that potential air quality issues are adequately addressed and mitigated according to federal law.

Air quality is another important part of environmental protection and is a very important aspect of transportation planning. Congestion is a major contributor to poor air quality, and it can ultimately lead to curtailed transportation expansion and land use development in regionally significant projects including all state, other arterial roadways, and transit systems.

In June 1999, the Texas Natural Resources Conservation Commission, TNRCC, Harlingen office, provided the following information about local air quality. In 1999, the Lower Rio Grande Valley region had air quality monitors in Brownsville, Edinburg, Mission, and San Benito. In San Benito, there is a puff sampler located behind the existing City Hall building on the roof. This machine monitors total suspended particulates at the 1999 Environmental Protection Agency (EPA) levels.

Every six days, a twenty- four (24) hour sample is taken. This site has also been selected as one of five sites in Texas by the EPA to sample particulate matter at the proposed 2.5 microns level. This monitor was calibrated and went into effect in April, 1999. Based on conversation with the Harlingen TNRCC office, the Harlingen-San Benito area has been in compliance since monitoring began with only one exception. This was during summer of 1998, due to fires in Mexico. The HSBMPO does not anticipate a non-attainment air quality finding anytime in the near future but we are making an effort to proactively maintain air quality through these vital strategies:

- A strategic look at how best to balance locally defined long-range traditional transportation with broader concerns (e.g., congestion relief, mobility, accessibility, economic development, reduced air pollution, or Green House Gases (GHG) emissions).
- Linkages to climate change goals, environmental, smart growth, and “livability” goals
- Linkages to other planning processes such as air transportation planning.
- Policies including improving accessibility, reducing congestion and energy use, and encouraging smart growth.
- Transportation planning has major impacts on transportation decisions, which in turn influence travel patterns, land use, energy consumption, and, ultimately, GHG emissions.
- Continued evolution to move from indirect supportive actions to explicit planning.
- Smart growth and energy conservation planning can provide the foundation for climate change planning.

Transportation is a major contributor to greenhouse gas (GHG) emissions. State and local transportation planning directly affects transportation decisions, which in turn can influence travel patterns, land use, energy consumption, and, ultimately, GHG emissions. These strategies will improve understanding of how HSBMPO might reduce GHG emissions.

### **5.3 Access to Jobs**

The transportation system should provide service to former welfare recipients who will be-joining the workforce. TEA-21 authorized funds for the Access to Jobs transportation initiative and Reverse Commute grants. These funds allow local governments and private non-profit organizations to be eligible for discretionary grants for operating and capital expenses for Jobs Access transportation service. The funds also can be used to promote employer-provided transportation, non-traditional transit and transit voucher programs. HSBMPO is responsible for recommending Access to Jobs/Reverse Commute related projects to the state and the Federal Transit Administration, and for selecting the

applicants to be considered for these grants.

To meet these goals, HSBMPO will coordinate with the Welfare-To-Work Coalition. Representatives from various social service agencies and other service providers throughout South Texas comprise the coalition.

The Coalition is looking at how to streamline the process for moving recipients from receiving welfare to finding permanent employment.

Each December 31, HSBMPO must collect, endorse and forward Access to Jobs/Reverse Commute projects to the Federal Highway Administration for funding consideration.

These funds have only been available since 1998 and staff will continue working with the Coalition to identify better ways to reach those in need of special transportation service.

#### **5.4 Transportation and Land Use**

The relationship between transportation and land use is circular: transportation systems influence land use patterns that in turn influence transportation systems. Proactive land use planning, with an eye to reducing the demand for auto travel, is a key element in a successful long-term approach.

Urban design that encourages compact growth can reduce our dependence on the automobile and enhance the role of transit. Higher residential densities, mixed land uses, and grid-like circulation patterns in neighborhoods shorten trips, encourage walking and allow more people to use transit instead of cars. The challenge is to have more viable mobility choices that provide direct, safe, and convenient connections with places people want to go.

Since transportation system planning takes place at the regional level and land use planning at the local level, coordinating transportation and land use can be difficult. In the HSBMPO study area, planning and regulating land use are the responsibility of individual jurisdictions. Many of the same elected officials who sit on the Policy Advisory Committee (PAC) have responsibility within their local jurisdictions for land use decisions. Thus, there is a link through which plans and policies developed at the regional level can be adopted by the local jurisdictions participating in the HSBMPO planning process.

The HSBMPO is concerned about maintaining a strong and healthy central core and will initiate a Smart Growth Initiative to help manage future growth. The HSBMPO's Smart Growth Initiative will be an effort to reshape urban and suburban growth to enhance communities, strengthen the economy, and protect the environment. Smart Growth seeks to decrease suburban sprawl and invest in existing developed areas.

The major principles of the HSBMPO's initiative focus on revitalizing the urban core, protecting the character of existing neighborhoods, protecting environmental quality, encouraging efficient development patterns, and rewarding developers for projects that meet Smart Growth goals.

Two principles of particular importance to HSBMPO are:

- Creating development that is pedestrian and transit friendly. This means permitting a mix of land uses and increased density where appropriate.

- Decreasing automobile congestion by providing alternative modes of transportation such as bus, bicycle and improved pedestrian facilities.  
Each city should address smart growth concepts in their Land Use and Inter-modal Thoroughfare Plan.

**A. Policy recommendations include:**

Using performance incentives to motivate the developer or landowner in the Downtown Overlay District. An example would be parking concessions might be offered to a developer in exchange for the inclusion of amenity features/areas being added to the project including outdoor sitting areas, fountains, landscaping, etc. Another policy addresses the concentration of major public facilities being located downtown or in the central core in order to preserve the vitality and character of the downtown as a city center.

A City's Comprehensive Plan could be developed to act as a mechanism from which decisions can be made that will shape a city 10, 20, 30 years or more into the future. The Mission Statement in the Plan identifies three specific goals related to smart growth concepts:

1. Build a community where residents can do more than just live in their houses, where they can interact socially, economically and politically;
2. Develop a viable transportation network and thoroughfare plan that fosters multi-modal mobility, connectivity and accessibility throughout a city;
3. Establish a comprehensive land use and zoning strategy that provides a greater diversity of use classifications for convenience and accessibility while preserving neighborhoods through compatibility design standards.

**B. Transit-Oriented Development**

HSBMPO places major emphasis on public transportation to meet our future mobility needs. Many arterial roadways and highways in the region will become congested because the single occupant vehicle (SOV) is our predominant travel mode. HSBMPO advocates reducing our dependence on SOV travel through transportation alternatives and programs. But transportation policy alone cannot change transportation trends; changes in land use trends must also be made.

Transit-oriented development concentrates new and infill development in transit corridors and around transit stations. It encourages transit use by creating mixed land use, walk-able communities that do not require a car for personal mobility. Transit-oriented design has been proven to be an economic boon, revitalizing downtowns and main streets and significantly reducing auto dependency. Transit stations and transit stops can have abundant land uses, including jobs, housing, retail, restaurants, daycare centers, services, athletic facilities, pedestrian plazas and parks, and bicycle parking and lockers. Multiple activities encourage transit stations to become more than just a place to park the car. Transit stops and stations can be integrated into neighborhoods so that they provide a sense of place and incorporate the street into the neighborhood.

Transit-oriented development offers a new model for managing growth. Transit-Oriented Design can:

1. Promote economic development by attracting consumers, businesses and services to the area surrounding the transit station;
2. Increase housing options by encouraging mixed-use development, which combines commercial and residential structures; and
3. Improve air quality and reduce greenhouse gas emissions by reducing the number of vehicle trips.

In addition to supporting more efficient land-use patterns, transit is cost-effective. Because of its greater carrying capacity, transit improvements can generate cost savings by reducing the need for roadway construction and the need for parking facilities. To the degree that transit can support compact growth patterns, transit improvements can reduce infrastructure requirements. And, finally, transit provides essential mobility. There are many people throughout the region who must rely on transit. Commuters, the disabled, the elderly, lower income citizens, choice riders, and rural residents—all of these groups have a stake in the quality and availability of transit service. Serving the mobility needs of these constituents over the next 25 years is an essential responsibility of the public transportation system.

## **5.5 Access Management**

Access management preserves roadway efficiency and enhances traffic safety, thus reducing the need for expensive improvements. Access management is the systematic control of the location, spacing, design and operation of driveways, median openings, interchanges and street connections to a roadway, as well as auxiliary lane treatments and traffic signal spacing. The purpose of access management is to provide vehicular access to land development in a manner that preserves the safety and efficiency of the transportation system.

Access management can also significantly reduce traffic accidents, personal injury and property damage as well as promote the orderly layout and sustainability of a community.

The benefits of a special study to be done in FY2005 will be the collection of a wealth of data that will serve as a precursor in the development of a Thoroughfare Plan, Congestion Management Program, or Access Management Plan.

## **5.6 Management and Operational Improvements**

There are areas where adding capacity is not an option due to environmental restrictions, right-of-way limitations, etc. On these corridors, alternatives such as Transportation System Management and Transportation Demand Management are options.

Transportation System Management is making the system, or roadway, more efficient by improving the flow of traffic. An example is restriction of curb cuts which cause stop and start traffic. Transportation Demand Management addresses the demand, or number of users on the system by influencing traveler behavior. Examples are car-pooling, compressed workweeks, and land use strategies.

## **5.7 Intelligent Transportation Systems (ITS)**

ITS encompass a broad range of communications-based information, control and electronics technologies. ITS can help monitor and manage traffic flow, reduce congestion, provide alternate routes to travelers and enhance productivity. ITS provide the tools to collect, analyze and archive data about the performance of the system. Having this data enhances traffic operators' ability to respond to incidents, adverse weather or other capacity constricting events.

ITS can deliver data directly to travelers, allowing them to make better choices about alternate routes or modes of transportation. It can also monitor traffic, optimize signal timings on major arterials and control traffic flow.

Expansion of Intelligent Transportation Systems (ITS) Valley wide will utilize the mobility, safety and security opportunities this technology provides. From systems that provide direction to motorists to ones that monitor the weight and contents of trucks, the Valley has many opportunities to utilize ITS. ITS will not only improve inspection and enforcement but will be a valuable tool in traffic management, facilitating intermodalism and expediting trade. With a heightened awareness of homeland security, a complex border crossing system will likely become even more complicated as redundant security measures are initiated. ITS provides the technology to streamline and integrate many of these measures.

The Federal Highway Administration (FHWA) issued a final rule to implement Section 5206 (e) of the Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21) in January of 2001. This final rule requires that Intelligent Transportation System (ITS) projects funded through the Highway Trust Fund conform to the National ITS Architecture and applicable standards. FHWA has further established a deadline of April 2005 for regions to have an ITS architecture in place.

HSBMPO adopted our Regional ITS Architecture and Deployment Plan on February 12, 2004

## **5.8 Homeland Security**

Homeland security issues are having the unintended effect of further complicating the mobility needs of the region. Increasing trade relations already produce infrastructure bottlenecks in the Valley. Transportation planning will require filtering the illicit cross-border activity from the legitimate exchange of goods and people, yet allowing for the safe and uninterrupted flow of traffic and goods.

## **5.9 Financially Constrained Plan**

ISTEA and TEA 21 require that the adopted transportation system be constrained by "reasonably" available financial resources over the life of the Plan. The roadway improvements on the 2030 MTP Project Listing and 2030 MTP Project Map (Appendix 3) illustrate the financially constrained system.

## **5.10 Corridor Preservation**

Corridor (right-of-way) preservation is a key component to a strong transportation plan, and the construction of future roadways or increasing capacity on existing roadways

depends on the provision of sufficient right-of-way. The Right of Way Table (Table 5-1) should be used as a guide to preserve right-of-way throughout the HSBMPO metropolitan area.

Table 5-1

**Right of Way Widths**

Facility Classification	Minimum ROW	Max ROW
Principal Arterial	120 FT.	150 FT.
Secondary Arterial	100 FT.	120 FT.
Collector/ Sub	80 FT.	90 FT.
Local/ Minor	60 FT.	80 FT.

**5.11 Roadway Plan**

Roadways that are regionally significant from the standpoint of moving traffic within and through the urban area are classified according to the relative importance of the movement and access-to-property functions they perform. As the importance of the movement function increases, the access function decreases and vice versa. For example, freeways perform the function of moving large traffic volumes at high speeds with no access to adjoining property, while residential local streets provide access to homes at low speeds and low traffic volumes.

The roadways identified in the *HSBMPO 2030 Plan* consist of:

- Freeway (FWY) - Fully access controlled roadways with grade separation at interchanges. Ramp movements on and off the facility are accomplished by ramps connecting to frontage roads. Access points are limited to major facility crossings.
- Parkway (PKY) - Through travel lanes are similar in characteristics to Freeways, but continuous frontage roads are not normally provided. Access is provided by grade-separated interchanges and ramps at major crossings. Whenever possible, landscape treatments and scenic easements are provided.
- Expressway (EXPY) - High volume, high capacity roadways with widely spaced at-grade signalized intersections. Little or no direct access from frontage development or local roads along the facility with right turns in and out when access is available. Major street crossings are grade separated.
- Toll Road (TOLL) – Toll roads are freeways or parkways on which the user pays to drive on the Facility. Tolling roads is one option to build major roadway projects sooner than with tax funds. The user fees are collected and used to pay the bonds issued for the construction of the roadway. Automated toll collection has greatly reduced the inconvenience for the roadway user.
- Major Divided Arterial (MAD) - High volume surface roadways with high priority at intersections with all lower level facilities. Typically, signalization is provided at significant crossings. Flush, depressed or raised center median with left turn storage.
- Major Undivided Arterial (MAU) - Similar to Major Divided Arterials, but with no

center median, and normally due to right-of-way limitations. Limited left turn channelization at key crossing is provided wherever possible.

- Minor Arterial (MNR) - Secondary facility to meet local access and circulation requirements in addition to providing through movement. Typically, full movement access (left and right turns) is permitted along the route. Low priority is given at significant intersections.
- High-Occupancy Vehicle/High-Occupancy Toll Lane (HOV/HOT) - An alternative to widening major freeway facilities for general-purpose travel, high-occupancy vehicle and high-occupancy toll (HOV/HOT) facilities are recommended for many of these routes to encourage higher vehicle occupancies and increase the person-carrying capacity of such corridors. Consideration of HOV lanes on these roadways should be given priority to encourage ridesharing and transit ridership, rather than encouraging additional single occupancy vehicle (SOV) travel.

### **5.12 Development and Modeling of Alternative Roadway Networks**

The review process is to apply a quantitative method to identify the future transportation improvement projects to be included for travel demand modeling in the twenty-five planning horizon years and to recommend transportation projects for the draft *HSBMPO 2030 Transportation Plan*. The modeling process began with the existing network. The network includes the existing roadways with forecast travel demand for the year 2030. The staff evaluated the performance of the network in terms of traffic volumes and congestion, continuity and connectivity of roadways for addressing the future travel demand.

### **5.13 Priority Projects**

Based on the impact of projected economic, population, and traffic increases, specific projects have been identified and prioritized to form the specific recommendations of the HSBMPO MTP. The following section summarizes the major priority projects identified to avoid major congestion and restriction of the flow of international commerce.

#### **A. Complete Interstate 69 (I-69)**

The increasing trade traffic as result of NAFTA and the need for a secure and safe surface transportation system point to the necessity of interstate highway service in the Valley. I-69 is important to the Valley and the rest of the state but also has extreme national significance. I-69 will directly connect the Valley to the other trade centers in the nation and is expected to be an economic spur to the communities it touches. I-69 is estimated to spawn more than 40,000 new jobs across the nation by 2025, resulting in \$12.8 billion in additional wages and \$24 billion in added value.

Route designation signs signaling the future corridors of I-69 have been installed on U.S. 77 and U.S. 281, but detailed planning to determine the actual route and needed environmental studies have not begun. Several sections of I-69 are located in the Valley and include U.S. 77, U.S. 281, FM 511 and a new crossover between U.S. 77 and U.S. 281. The exact location of the I-69 route and the



crossover has not yet been determined. The Valley needs interstate level highway service, beginning with interim improvements to U.S. 77, U.S. 281 and FM 511. For example, the critical segment of U.S. 281 from Trenton to SH 107 in Hidalgo County, which is an important interim improvement, has been delayed. It was scheduled to be let for bid in July 2003, but has been moved forward to FY 2007. A section on U.S. 77/U.S. 83 has also been delayed.

**Widen East-West Connectors:** U.S. 281 and FM 1925 East-west connectors like U.S. 281 (Military Highway) and FM 1925 should be designated, as corridors and planning should begin to ensure that these are widened to at least four-lane, controlled access roadways. U.S. 83, the primary east-west corridor in the Valley, is not complete and is already at a poor level of service in most sections. Further expansion of U.S. 83 may be impossible because additional right of way is not available.

Similar development can be expected along Military Highway and FM 1925. By working with resource agencies, the environmental assessments may be completed quickly and acquisition of right of way can begin while it is still affordable and available. Expansion of Military Highway and FM 1925 will provide alternate east-west routes across the Valley. The Military Highway expansion will allow for connections to international bridges and relieve some of the traffic on U.S. 83.

**B. Complete Improvements to U.S. 83**

Some segments of U.S. 83 still need to be completed. The cities of Roma, Rio Grande City and La Joya need relief routes.

**C. Complete Bridge Connectors and Build New Bridges**

Existing bridges cannot handle the current volumes of traffic. Once the new highway from the Valley to Mexico City is opened, additional traffic will move across Valley bridges. Bridge connectors must be completed and new bridges constructed to serve increasing international trade. For example, the planned connection from San Juan to the Pharr Bridge will help move truck traffic safely through the area.

**D. Construct Additional Rail and Complete Rail Realignment**

There is an opportunity to improve safety and mobility throughout the region by constructing additional rail and completing rail realignments outside of congested urban areas. As mentioned rail relocation planning and construction are underway in Brownsville, Harlingen and Hidalgo County.

**E. Construct Intercity Loops**

Intercity loops, like the ones proposed in conjunction with rail realignments in Brownsville, Harlingen and Hidalgo County, need to be constructed. These projects are important for mobility planning because they offer an additional corridor for vehicular traffic.

#### **5.14 Future Freeway Traffic Management and Operations Team**

Future Freeway Traffic Management and Operations Teams will oversee the development of the TxDOT Freeway Traffic Management System, which will be used to improve traffic conditions along US 83, US 77, SH 107, Loop 499, and future freeways in the HSBMPO metropolitan area. The system will improve freeway corridor monitoring capabilities and provide system infrastructure for inter-agency coordination, traveler information, advanced traffic control, and incident management. The system makes use of Intelligent Transportation System (ITS) technology to increase safety and reduce traffic congestion through enhanced communication capabilities. The Team includes engineers, planners, administrators, and public safety personnel from TxDOT, Cameron County, the local cities, and other organizations. Team members develop strategies and projects to improve safety and traffic congestion conditions within travel corridors that include freeway main-lanes and frontage roads. Several members of the Team participate in the development of the Combined Emergency and Traffic Management Center facility, which will be designed in the future, and the application of Intelligent Transportation Systems (ITS).

#### **5.15 Future Mobility and Arterial Congestion Team**

The future Mobility and Arterial Congestion Team will develop strategies and projects for managing traffic congestion in urban areas and on major arterial roadways in the HSBMPO metropolitan area. The Team includes representatives from the local cities, HSBMPO, TxDOT, the LRGVDC Transportation Center, and downtown business organizations. They address two types of traffic congestion: 1) recurring congestion such as rush-hour traffic, and 2) non-recurring congestion caused by special events, construction work, and other roadway incidents. The following transportation improvement strategies are considered:

- Monitor and synchronize traffic signals
- Upgrade the HSBMPO computerized traffic signal system and install loop detectors
- Modify bus transit routes, increase bus service, and improve bus arrival information
- Create bus priority and/or dedicated bus/vanpool lanes
- Install signal preemption systems and/or queue jumper lanes for buses & emergency vehicles
- Develop Park and Ride and other intermodal facilities
- Install parking management systems and implement access management techniques
- Adjust one-way and two-way street operations
- Install reversible travel lanes on roadways with high disparities in directional volumes
- Implement Transportation System Management techniques especially at intersections
- Enforce restrictions on commercial vehicle operations
- Encourage major employers to allow workers to use flex-time and to telecommute
- Promote alternative transportation modes (ridesharing, transit, bicycling, walking, etc.)
- Install temporary and permanent lane control signs
- Improve inter-agency and inter-departmental project planning and communications
- Provide traveler information about special events, lane closures, and detour routes.

**5.16 Goals to Meet Transportation Movement Demands from 2005 to 2030**

- Develop north-south and east-west corridors throughout the MPO area to facilitate the movement of goods and people to and through the MPO.
- Designate I-69 as the primary north-south (trade) corridor and support all efforts to expeditiously develop this corridor.
- Maintain, through rehabilitation, congestion management, intelligent transportation systems and other available tools, the existing network to ensure that it provides acceptable levels of service to all users.
- Support the inter-modal transportation improvements of the Valley International Airport, the Port of Harlingen and the Los Indios Free Trade Bridge and ensure that these improvements are coordinated with the Harlingen-San Benito MPO.
- Support public policies, programs, legislation, ordinances, and growth strategies that enable and support live-able communities, a clean environment, environmental justice and facilitate access to work.
- Continue monitoring the public transportation needs of the Harlingen-San Benito MPO area, to include access-to-work and general population needs and develop a transit system.
- Increase public awareness in and involvement with the Harlingen-San Benito MPO and the Texas Department of Transportation.
- Develop an MPO- wide Enhancement Project Plan.
- Include a representative from the Port of Harlingen, school districts, Los Indios Bridge, and VIA in the Technical Committee.
- Review and begin implementation of the Harlingen-San Benito Railroad Crossing Study.
- Review and begin implementation of new funding mechanisms established by HB 3588 in conjunction with TXDOT's vision for future transportation planning goals.

## **Chapter 6: TRANSPORTATION PLAN POLICIES**

### **6.1 Plan Integration, Implementation and Intermodalism**

#### **A. Integration and Implementation**

**Policy A-1:** HSBMPO will work with member jurisdictions to achieve compatibility of the *HSBMPO 2030 Metropolitan Transportation Plan (HSBMPO 2030 Plan)* with local plans and TxDOT's functional classification system. Adoption of *HSBMPO 2030 Plan* by member jurisdictions is a necessary condition to be eligible for HSBMPO approval of federal funds to that jurisdiction.

**Policy A-2:** HSBMPO will prepare and revise population and employment forecasts, which are consistent with member jurisdiction growth policies and a growth-monitoring program.

**Policy A-3:** HSBMPO will coordinate transportation planning activities with land use and other infrastructure planning activities in cooperation with affected agencies and jurisdictions.

**Policy A-4:** HSBMPO will monitor changes in the transportation system, transportation behavior, and land use development in the metropolitan area.

**Policy A-5:** HSBMPO will monitor project implementation schedules and agency responsibility for major transportation projects.

**Policy A-6:** HSBMPO will work to build public support for the completion of an integrated regional transit system.

**Policy A-7:** HSBMPO encourages member jurisdictions and agencies to create Park/Bike and Ride facilities to provide better access for transit and carpools.

**Policy A-8:** HSBMPO supports the reduction in travel and the high proportion of drive alone travel and an increase in ridesharing, bicycling, and walking trips, especially during peak hours.

#### **B. Environmental and Community Impacts on Air Quality, Water Quality, Noise**

**Policy B-1:** HSBMPO is committed to a transportation system that strongly promotes air and water quality and noise control and meets all federal, state and local standards.

***\*Environmental Justice, Equity Distribution, Access to Jobs***

**Policy B-2:** HSBMPO encourages minority and low-income populations to participate in transportation planning and project development to assure that any project planned in their neighborhoods will not be detrimental to their health or well being.

**Policy B-3:** HSBMPO promotes the equitable distribution of transportation improvements and services throughout the metropolitan area.

**Policy B-4:** HSBMPO promotes transportation planning and funding for Access to Jobs programs to ensure that the transportation system serves the entire workforce.

***Land Use***

**Policy B-5:** HSBMPO will continue to coordinate with member jurisdictions to encourage development that is pedestrian and transit friendly and to lessen the dependence on the automobile.

**C. Public Transportation System  
Integrated Transit System**

***\*Accessible Public Transportation***

**Policy C-1:** HSBMPO supports public transportation systems that serve all segments of the region.

- Support the continuation of special transit services for persons with disabilities who are not able to use mainline transit services.
- Support the continuation of public transportation services for rural citizens.
- Encourage all jurisdictions in the HSBMPO area to provide public transit services.

**D. Congestion Management System**

HSBMPO, TxDOT, the City of Harlingen & San Benito, and other member jurisdictions will develop a HSBMPO Congestion Management System as a guide to develop and implement congestion management projects for the HSBMPO area.

**Policy D-1:** HSBMPO encourages its member jurisdictions to adhere to the "HSBMPO Congestion Management System (CMS) Process Guidelines" which monitor and evaluate the performance of the multimodal transportation system, identify the causes of congestion, identify and evaluate alternative actions, provide information supporting the implementation of actions, and evaluate the efficiency and effectiveness of implemented actions.

**Policy D-2:** HSBMPO supports the use of the CMS as a guide to develop and implement Travel Demand Management (TDM) and Transportation System Management (TSM) projects to relieve traffic congestion in the metropolitan area.

**Policy D-3:** HSBMPO will coordinate the CMS process and make funds available to help develop and implement congestion management projects.

***\*HSBMPO supports the implementation of Travel Demand Management (TDM) strategies.***

**Policy D-4:** HSBMPO supports the development and implementation of a regional public education program to encourage motorists to use alternative modes of transportation other than the single occupant vehicle.

***\*HSBMPO supports Incident Management and Transportation System Management (TSM)***

**Policy D-5:** HSBMPO supports the establishment of an effective integrated metropolitan incident management program that provides unified guidance to police, fire, rescue, and transportation officials and personnel for effectively assisting motorists in disabled vehicles, cleaning up spills and debris, rescuing accident victims, and removing wreckage quickly.

**Policy D-6:** HSBMPO encourages TXDOT to provide member jurisdictions a safe and efficiently managed and operated transportation network by improving incident management activities, installing intelligent transportation systems (ITS), synchronizing traffic signals, effectively using changeable lane assignment signs, improving exit and entrance ramp operations, installing reversible travel lanes where appropriate, removing roadway bottlenecks, improving transit operations, and making effective use of other (TSM) techniques.

**Policy D-7:** Where feasible, HSBMPO encourages all member jurisdictions to:

- 1) locate utilities such as water, wastewater, and telephone lines outside the pavement area of major and minor arterial roadways to minimize the impact of future utility work on traffic flow, and
- 2) locate utility lines to minimize the need to relocate or reinstall sidewalks, signs, and traffic signal poles/equipment as a result of future utility work.

**Policy D-8:** HSBMPO will work with local jurisdictions to develop a coordinated, comprehensive and multi-modal program for transportation construction projects in priority order based on need and greatest benefit and to minimize overall congestion.

**E. Bicycle & Pedestrian System**

***\*HSBMPO supports a balanced, continuous and interconnected system of bicycle and pedestrian facilities.***

**Policy E-1:** Provide a coordinated and contiguous system of regional bicycle and pedestrian facilities that offer a viable alternative to automobile travel.

**Policy E-2:** Provide bicycle and pedestrian accommodations, where appropriate, in conjunction with all new construction and reconstruction of transportation facilities, except where bicycle and pedestrian use is not permitted.

**Policy E-3:** Remove barriers to continuous bicycle and pedestrian travel to encourage bicycling and walking as modes of transportation.

***\*HSBMPO encourages a comprehensive approach to planning bicycle and pedestrian facilities.***

**Policy E-4** Create an interconnected, bikeway system to accommodate all bicyclists in the HSBMPO planning area.

**Policy E-5:** Integrate bicycling, walking and public transit to increase the efficiency of the transportation system.

**Policy E-6** Support continued development of a pedestrian-friendly transportation network.

- Create a network of sidewalks that allow pedestrians to reach important destinations easily.

**Policy E-7:** Support continued development of a regional off-road trails system that connects trails to activity centers such as schools, workplaces, shopping centers and parks. Integrate the network of off-road facilities with the on-street system.

***\*HSBMPO supports the creation and preservation of a safe, convenient and attractive bicycling and walking environment.***

**Policy E-8:** Encourage member jurisdictions to adopt AASHTO/ADA design standards to create safe and convenient facilities that encourage bicycling and walking.

**Policy E-9:** Encourage member jurisdictions to use uniform signing and marking of bikeways and walkways.

**Policy E-10:** Encourage member jurisdictions to adopt maintenance practices to preserve bikeways and walkways in a smooth, clean and safe condition.

**F. Roadway System**

***\*Regionally Significant Roadways***

**Policy F-1:** Establish a system of regionally significant arterials and freeways for the HSBMPO study area.

**Policy F-2:** HSBMPO supports the consideration of added capacity and the new location projects as toll roads, as well as other appropriate roads to be identified.

**Policy F-3:** Where appropriate, establish access management strategies for major regional arterials and thoroughfares to improve safety and facilitate traffic flow. Such management should include limiting the number of curb cuts, installing raised medians where appropriate, ramp metering and many other accepted transportation engineering practices.

**Policy F-4:** Balancing the need for roadway maintenance with the need for new roads shall be carefully considered when allocating funds.

**Policy F-5:** The design and construction of new regional transportation facilities shall minimize disruption and negative impacts to neighborhoods.

**Policy F-6:** The existing and future regionally significant arterials shall provide a sufficient level of mobility in order to minimize neighborhood infiltration (cut through traffic).

**Policy F-7:** Implement the entire arterial network by HSBMPO and member agencies so that the region's motorists have alternate routes to travel in order to avoid congestion incidents.

**Policy F-8:** Establish a system for capital projects that coordinates advance planning processes and right-of-way acquisition to more efficiently manage the implementation of the projects.

***\*Overall Roadway Network***

**Policy F-9:** Establish a classification of collector streets and larger according to the character of the service they provide to through traffic and local access based upon the federal Functional Street Classification System.

**Policy F-10:** Development of the roadway system should be compatible with the needs of other modes such as pedestrian, transit and bicycle transport.

**Policy F-11:** Work with member jurisdictions to encourage that the new roadways in undeveloped areas are funded by and constructed by private developers.



**Policy F-12:** HSBMPO encourages the member jurisdictions to preserve future major street alignments by preventing development within corridors designated as right-of-way for future roads. There should be coordination between government entities and land developers in order to preserve this right-of-way.

**Policy F-13:** When allowing new land development, local governments should ensure that the connecting and adjacent street system is able to handle the type, intensity and traffic generation characteristics of the new development.

## **G. Freight System**

### ***\*Roadway and Rail Expansion Policies***

**Policy G-1:** Support the development of networks as an express freight routes.

**Policy G-2:** Support the relocation of the UPRR to the east for through-rail freight movement in conjunction with the development of alternate routes, if feasible.

**Policy G-3:** Support the development of alternative roadway freight routes in order to bypass traffic congestion and construction activities.

**Policy G-4:** Improve roadways in high freight-volume activity areas by smoothing horizontal curves, relocating telephone poles, strengthening pavement for supporting heavy trucks, modifying medians, and improving intersections to enable easier truck movements.

### ***\*Operational Regulations Policies***

**Policy G-5:** Support the establishment of an adequate supply of designated delivery parking spaces for commercial vehicles, especially in central business districts.

**Policy G-6:** Support the development and designation of hazardous materials routes for trucks.

**Policy G-7:** Support the use of discount rates and commercial credit accounts as an incentive for trucks to use toll road facilities with electronic tolling systems during non peak-hour periods.

### ***\*Land Use***

**Policy G-8:** Encourage freight transportation companies to:

- 1) locate near the Airports and future intermodal freight operations facilities, and
- 2) relocate their existing facilities away from residential and high-traffic volume areas.

## **H. Financial Plan**

### ***\*Member Agency and Jurisdiction Financial Planning Policies***

**Policy H-1:** HSBMPO supports the use of Disadvantaged Business Enterprises (DBE) and Historically Underutilized Businesses (HUB) when possible in the procurement process.

**Policy H-2:** HSBMPO, TxDOT, and other member jurisdictions will cooperatively prioritize transportation system projects to maximize eligibility for federal transportation funding.

**Policy H-3:** HSBMPO, TxDOT, and other member jurisdictions will coordinate and cooperate in the passage of local Capital Improvement Program bond issues to fund local segments of the HSBMPO 2030 Plan.

**Policy H-4:** The HSBMPO Policy Advisory Committee strongly supports the Transportation Enhancement Program and will approve federal funds in the Transportation Improvement Program to implement selected enhancement projects.

**Policy H-5:** HSBMPO encourages all member jurisdictions to proactively support and cooperate with TxDOT Pharr District in the implementation of regional Interstate, National Highway System, U.S. Highway, State Highway, and Farm-to-Market projects as identified in the *HSBMPO 2030 Plan* and the Transportation Improvement Program.

### ***\*Non-Traditional Sources of Revenue Policies***

**Policy H-6:** HSBMPO encourages and supports the evaluation and application, where appropriate and viable, various mechanisms to finance transportation system improvements.

**Policy H-7:** HSBMPO encourages and supports the evaluation and application, where appropriate and viable; of value capture techniques such as Special Districts, Tax Increment Financing, Development Impact Fees, and Sale of Development Rights to finance transportation system improvements.

**Policy H-8:** HSBMPO encourages and supports the evaluation and application, where appropriate and viable, of dedicated revenue source funds such as a Dedicated Sales Tax, Local Option Gas Tax, and Auto/Bicycle Licensing fees for transportation system improvements.

**Policy H-9:** HSBMPO encourages and supports the evaluation and application, where appropriate and viable, of additional governmental or institutional mechanisms such as Revolving Loan Funds, Subordinated Debt Financing, and Sale/Leaseback Agreements to provide capital for transportation system improvements:

**Policy H-10:** HSBMPO strongly encourages and supports the evaluation and development, where appropriate and financially feasible, of private sector funding sources such as Taxable Bonds, Public/Private Partnerships, and Concessions Agreements.

## **6.2 Conclusion**

Preparation of the Harlingen-San Benito Metropolitan Transportation Plan is part of the continuing transportation planning process performed by the Harlingen-San Benito Metropolitan Planning Organization. The MPO Policy and Technical Advisory Committees, MPO staff, and the Texas Department of Transportation provided assistance and evaluation of the transportation plan elements throughout the preparation of the Metropolitan Transportation Plan.

The Metropolitan Transportation Plan provides a framework for the rational development of an efficient transportation system as the Harlingen-San Benito metropolitan area continues to develop and expand in future years. Implementation of the recommended improvements will require the continued cooperation and coordination of local, state, and federal officials in making judicious decisions concerning the availability and use of roadway improvement funds.

The Metropolitan Transportation Plan is not a rigid or one-time document. It is a continuing process that requires periodic review and updating to maintain consistency with changing conditions, needs, and resources. Realization of the objectives of the transportation planning process will require continual monitoring of the basic urban growth parameters, which generate travel demands. The Metropolitan Transportation Plan is an essential element in fulfilling future mobility needs in the Harlingen-San Benito metropolitan area.

## **Transportation Glossary & Acronym List**

***Access management:*** A process that provides or manages access for roadway users entering or exiting adjacent developed land without significantly impacting safety conditions, traffic capacity, and vehicle speeds for other roadway users. Access management strategies, including design and control of driveways, curb cuts, turn lanes, parking lot circulation, public street connections, and intersections, are most often applied to highways or major urban and suburban arterial streets.

***American Association of State Highway & Transportation Officials (AASHTO):*** A non-profit, non-partisan association that represents the member highway and transportation departments in the 50 states, the District of Columbia and Puerto Rico and whose primary goal is to foster the development, operation and maintenance of an integrated national transportation system.

***Americans with Disabilities Act (ADA):*** Federal law, which requires that public facilities and transportation services accommodate the disabled.

***Bike Lane:*** A portion of a roadway that has been designated by striping, signing and pavement markings for the preferential or exclusive use of bicycles.

***Bike Path:*** A bikeway physically separated from motorized vehicle traffic by an open space or barrier within the highway right-of-way or within an independent right-of-way.

***Bike Route:*** A segment of a system of bikeways designated by the jurisdiction having authority with appropriate directional and informational markers, with or without specific bicycle route number.

***Bikeway:*** Any road, path, or way, which in some manner is specifically designated as being open to bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.

***Bus-Only Lane:*** A traffic lane on a street that is reserved for transit vehicles and designated by special signage and striping.

***Capital Improvement Program (CIP):*** A local government program that has the objective of completing numerous public infrastructure and facility projects within a specified time frame.

***Metropolitan Transportation Authority (MTA):*** An agency established to operate transportation programs for the metropolitan service area's residents, including public transit systems, special transportation for the disabled and information dissemination on alternative transportation modes.

***Central Business District (CBD):*** The downtown retail trade and commercial area of a city or an area having high land values, traffic flow and concentration of retail business offices, entertainment, lodging and services.

***Center for Transportation Research (CTR):*** A nationally recognized research center at the University of Texas which undertakes relevant transportation research, provides significant educational opportunities for University of Texas students, and provides a public service by

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conducting research that responds to the transportation needs of Texas and other U.S. travelers. In partnership with the Texas Department of Transportation and other sponsors, CTR undertakes investigations that seek practical solutions to various state mobility problems.

***Census Transportation Planning Package (CTPP)***: Travel related data collected during the 1990 Census.

***Changeable lane assignment signs***: Signs that automatically adjust for time-of day variations in turning movement volumes (e.g., change from "straight only" to "straight and left-turn").

***Circulator Service***: Local-stop, high-frequency transit service for high-density, pedestrian oriented districts. The service may include a shuttle or park-and-ride function from some periphery parking area to the high-density activity area.

***Clean Air Act (CAA)***: Federal legislation that requires each state with areas that have not met federal air quality standards to prepare a State Implementation Plan, or SIP.

***Commercial Vehicle Only lanes (CVO)***: A traffic lane that can be used only by commercial vehicles such as trucks and vans transporting products, mail, building materials or other forms of freight for business purposes.

***Commuter Rail (CR)***: Railroad local and regional passenger train operations between a central city, its suburbs and/or another central city. It may be either locomotive-hauled or self-propelled, and is characterized by multi-trip tickets, specific station-to-station fares, railroad employment practices and usually only one or two stations in the central business district. Also known as "suburban rail".

***Concession agreement***: By using techniques such as "Build-Own-Transfer" and "Build-Own-Operate" agreements, governments can partner with the private sector to develop or expand facilities. Without public liability, the government can award a concession in a particular corridor for a fixed period of time to private firms, who build or expand the facility using funds from investors and lenders.

***Congestion Management System (CMS)***: A systematic process that provides information on transportation system performance and alternative strategies to alleviate congestion and enhance the mobility of persons and goods. A CMS includes methods to monitor and evaluate performance; identify alternative action; access and implement cost-effective action; and evaluate the effectiveness of implemented actions.

***Congestion Management Team (CMT)***: A team of representatives from public agencies that plan, develop, implement, monitor, and evaluate projects and programs for managing traffic congestion. CMTs play an important role in the HSBMPO Congestion Management System.

***Congestion Mitigation and Air Quality Improvement Program (CMAQ)***: A funding program that helps implement projects designed to reduce emissions in non-attainment areas.

***Congestion Pricing***: Charging fees to users of transportation facilities. Fees can vary depending on time day to enable increased level of control over traffic volumes.

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***Congestion Reduction Program (CRP):*** An important element of the HSBMPO Congestion Management System (CMS). The program provides STP 4C funds for implementing low -cost, near-term congestion reduction projects and initiatives such as the HSBMPO Commute Solutions/Ozone Action Day Program, traffic signal synchronization projects, freeway operations studies, and traffic count stations.

***Corridor Mobility Plan:*** HSBMPO Congestion Management System document showing proposed projects and programs specifically aimed at reducing traffic congestion.

***Council of Governments (COG):*** Voluntary associations of local governments formed under Texas law that deal with problems and planning needs that cross the boundaries of individual local governments or that require regional attention.

***Dedicated sales tax:*** An increasingly popular financing method that allows local governments to use tax revenue income to match or leverage federal transportation funds for implementing transportation improvements. In high-growth areas, earmarked sales taxes can produce a secure revenue stream with which to support bond financing for certain kinds of projects, for example, highway and transit infrastructure projects that may not generate sufficient operating income to cover construction costs. Dedication of sales tax for transportation purposes requires voter approval.

***Department of Transportation (USDOT):*** Federal cabinet-level agency headed by the Secretary of Transportation with responsibility for highways, mass transit, aviation and ports. The DOT includes the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA).

***Developer impact fees:*** Occurs after a highway has been built and is applied to the value (income potential) of adjacent land that becomes developable as a result of the improvements. These fees can be fixed on the value of the land or the completed development. Useful for development of transit centers near planned office buildings or highway interchanges constructed in the vicinity of land which is zoned for malls or shopping centers.

***Disadvantaged Business Enterprise (DBE):*** A business with gross receipts of less than \$15,370,000 over the previous three years and is at least 51% owned by one or more persons who are minorities or women.

***Electronic tolling system:*** Allows vehicle operators to pay a toll without bringing the vehicle to a complete stop. This requires attaching a special device to the vehicle that can be scanned by an electronic reader at the toll collection facility. Vehicle operators are billed later via the postal system.

***Environmental Assessment (EA):*** A document that assesses an action that is not a categorical exclusion and does not clearly require the preparation of an environmental impact statement.

***Environmental Impact Statement (EIS):*** A document required by the National Environment Policy Act that addresses any adverse economic, social and/or environmental effects of a proposed transportation project for which federal funding is being sought.

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***Environmental Protection Agency (EPA):*** A federal agency charged with protecting the natural resources of the nation.

***Express Service:*** Non-stop service between two distant points, usually from a suburb or fringe area, coupled with park-and-ride lots, to the central core. Express service may also operate between suburban activity centers. Operating speeds should be, at a minimum, 2 to 3 times that of local service.

***Expressway (EXPY):*** A divided highway usually having two or more traffic lanes in each direction. Traffic can enter or exit an expressway only at ramped interchanges or at signalized intersections with major streets. Few private access points are allowed.

***Extraterritorial Jurisdiction (ETJ):*** The area in which a city enforces its subdivision and water quality ordinances, but not its planning, zoning, and health/safety ordinances. The ETJ extends from the city limits to a certain distance (for larger cities, 5 miles) and its residents do not pay city taxes and may vote only in certain city elections dealing with issues that affect them.

***Farm to Market (FM):*** An identifier for a roadway designated by the Texas Transportation Commission to be part of the statewide highway system. Normally associated as a 2-lane roadway in rural areas, but are located in urban areas and can be a 4 or 6 lane divided roadway. The FM roadway designation is typically given to roads that are located east of IH-35.

***Federal Highway Administration (FHWA):*** The component of USDOT that administers, plans, funds and regulates the federal highway system.

***Federal Transit Administration (FTA):*** The component of USDOT that operates under the authority of the Federal Transit Act and provides financial and technical assistance to local transit systems.

***Fixed Guide way:*** Bus ways or light rail transit service that can accommodate up to 4,000 passengers/hour in the peak hour direction with 7.5-minute headways along a corridor. Although local service may exist, the primary function of the corridor is that of line haul. It operates as a limited-express to express type service. Given the nature of continually evolving guide way technology, the specific type of service is generic to allow flexibility. As a corridor develops, higher capacity transit service can be gradually introduced.

***Freeway (FWY):*** A divided highway usually having two or more traffic lanes in each direction. Traffic can enter or exit a freeway only at ramped interchanges so that “through” traffic is not interrupted. Freeways often include frontage roads that allow access to and from the freeway and permit drivers to safely make turns onto cross streets or into driveways. Frontage roads are usually separated from the freeway’s main lanes by wide medians.

***Freight Rail:*** A railway dedicated to transporting cargo as opposed to passengers.

***Geographic Information System (GIS):*** A computer system for storing, analyzing and mapping geographic data.

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***Grade separated intersection:*** An intersection that is designed to vertically separate two or more potentially conflicting traffic streams by providing a bridge structure(s) that allows traffic flowing on different roadways to flow concurrently, and reduces or eliminates the need for traffic signals.

***Growth management:*** The partial control of land use, transportation, and other public infrastructure planning decisions by state or local governments in order to restrict or redirect the growth of population and employment to specific areas or to predetermined levels.

***HSBMPO:*** The official Metropolitan Planning Organization (MPO) for the metropolitan area whose purpose is to coordinate regional transportation planning with the State of Texas, Cameron county, nine cities, and the Metropolitan Transportation Authority, and other transportation providers and to approve the use of federal transportation funds within the HSBMPO area.

***HSBMPO Metropolitan Area Transportation Plan (2030 Plan):*** The Harlingen-San Benito Metropolitan Planning Organization (HSBMPO) 2030 Long-Range Transportation Plan, adopted in 1994, that identifies existing and future transportation deficiencies and needs, as well as network improvements needed to meet mobility requirements over at least a twenty-year time period.

***HSBMPO Metropolitan Trails & Greenways (HSBTG):*** A coalition of public, private and nonprofit organizations, local advocacy groups, neighborhood associations and individuals working on developing a comprehensive system of greenways and trails in the greater HSBMPO area.

***High Occupancy Toll (HOT):*** A fee that allows solo drivers to use HOV lanes.

***High Occupancy Vehicle (HOV):*** Vehicles having two or more occupants.

***Highway Capacity Manual (HCM):*** A guide to the design and operational analysis of highway facilities.

***Historically Underutilized Business (HUB):*** A business certified by the General Services Commission as a sole proprietorship, partnership or joint venture corporation and is at least 51% owned by one or more persons who are minorities or women.

***Incident Management:*** An incident is a non-recurrent event that causes reduction of roadway capacity or abnormal increase in demand. Incident management involves six major tasks: detection, verification, response, removal/restoration of capacity, traffic management, and information to motorists. An incident such as a serious freeway traffic accident will generally require a coordinated effort by many different organizations involving police, fire, emergency, and transportation personnel.

***Infrastructure Development Trust Fund:*** Leverages the off-balance sheet financing potential of public and non-public revenue sources. The Fund would issue revenue and project finance bonds to support public/private transportation projects in the Capital area and could be supported by



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taxes and grants on the public side and fees and assessments from private sources. A public agency issuer would manage the Fund, but without the credit of state or local governments.

***Intelligent Transportation System (ITS)***: A system that enables people and goods to move more safely and efficiently through a state-of-the-art, intermodal transportation system that includes information processing, communications, control, and electronics. Automatic vehicle location systems, advanced signal timing, and other new and emerging advanced technology can be used with public transportation systems.

***Intermodal freight operations facility***: A facility where freight is transferred from one mode of transportation to another, such as from a train to a truck.

***Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)***: A bill providing authorizations for highways, highway safety, and mass transportation for Fiscal Years 1992-1997. The purpose of the Act is to develop a National Intermodal Transportation System that is economically efficient, environmentally sound, provides the foundation for the Nation to compete in the global economy and will move people and goods in an energy efficient manner. Metropolitan Planning Organizations, in cooperation with the State and key transportation providers, must develop transportation plans and programs for metropolitan areas.

***Level of Service (LOS)***: A description of the quality of service that can be expected by users of transportation facilities. For highways “A” means traffic is flowing freely and “E” or “F” means the highway is very congested. Highway LOS can be determined based on “Density”(average number of passenger cars located in a single lane within a one mile section), “Speed” (the average attainable speed in miles per hour), or “Maximum Service Flow”(average number of passenger cars that pass by every hour in one lane).

***Light Rail***: An electric railway with a “light volume” of traffic capacity compared to heavy rail. Light rail may use shared or exclusive rights-of-way, high or low platform loading and multi-car trains or single cars. Also known as “streetcar”, “trolley car” and “tramway”.

***Local option fuel tax***: With State Legislature approval, municipalities can tax fuel purchases along with the State and Federal governments. Fuel taxes are a natural revenue source for transportation improvements but the trucking industry, the American Automobile Association, and educators in Texas, whose portion of the state’s gasoline levy could be affected by a reduction in fuel usage, typically oppose them.

***Local Service***: Transit service, usually by bus, that accommodates boarding and alighting roughly every 300 to 1,000 feet, depending on density levels. The average operating speed is usually between 10 and 25 miles per hour.

***Long-Range Plan (LRP)***: A plan referring to transportation planning for a time span of more than twenty years.

***Major Arterial Divided (MAD)***: High volume surface roadways with high priority at intersections with all lower level facilities. Typically, signalization is provided at significant crossings.

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***Major Arterial Undivided (MAU):*** Similar to Major Divided Arterial, but with no center median, normally due to right-of-way limitations.

***Major Investment Study (MIS):*** A study, required under ISTEA, done on major transportation improvement projects such as fixed guide way transit projects and controlled access highways that would involve the use of federal funds. The study includes factors that would justify a proposed project, such as its cost effectiveness and overall effectiveness, and evaluates various modes of travel to solve a transportation problem.

***Major Transfer Center:*** A multimodal transportation node that connects two or more transit routes with pedestrian, bicycle or automobile modes of travel. The transfer distance between different modes of transport should be no more than 300 feet wherever possible, with an absolute maximum of 600 feet.

***Metropolitan Planning Organization (MPO):*** The organizational entity established by law to provide a forum for cooperative transportation decision making for the metropolitan area containing a population of 50,000 people or more. Major responsibilities include the development of transportation plans and programs and authorization of the use of federal transportation dollars.

***Metropolitan Transportation Plan (MTP):*** Another name for the Long-Range Plan in metropolitan areas.

***Minor Arterial (MNR):*** A secondary facility to meet local access and circulation requirements. Low priority is given at significant intersections.

***Minority-owned Business Enterprise (MBE):*** A business whose ownership is comprised of at least 51% minorities.

***Municipal Utility District (MUD):*** Political entities created by the State of Texas having the authority to construct and maintain improvements, incur debt and tax the land within its boundaries to pay operating expenses and repay debts. A board of directors elected by MUD property owners governs MUDs.

***National Highway System (NHS):*** A system developed by the Department of Transportation in cooperation with the states, local officials and metropolitan planning organizations (MPOs) that identifies major intermodal highways that connect to major intermodal facilities (ports, airports, rail transit, etc.) and are important to the Nation's economy, defense and mobility.

***Nitrogen Oxides (NOx):*** A pollutant produced during fossil fuel combustion that contributes to ground-level ozone.

***North American Free Trade Agreement (NAFTA):*** An agreement between the United States, Canada and Mexico, which promotes means for improved and increased free trade between these three countries.

***Ozone (O<sub>3</sub>):*** Ozone is a secondary air pollutant and a photochemical oxidant. The production of ozone, which occurs when sunlight triggers chemical reactions involving nitrous oxides (NO<sub>x</sub>)

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and atmospheric oxygen, is highly dependent on the ratio of hydrocarbons to NO<sub>x</sub> in the atmosphere. Therefore, hydrocarbon emissions caused by the operation of trucks, automobiles, lawn mowers, and other gasoline-powered equipment, can contribute to the production of ozone. Ozone can travel long distances or can accumulate over an area for long periods of time depending on wind circulation patterns and topographic conditions.

***Park-and-Ride Lot:*** Any designated parking lot that is serviced with express or limited express transit service.

***Parking management:*** Most often implemented by a parking management system, which routes travelers directly to facilities with available parking. Parking management systems reduce the amount of travel by motorists searching for available parking spaces, make parking more convenient for the traveler, reduce fuel consumption and emissions, and reduce the potential for accidents. These systems also improve the marketing and exposure of parking facilities and the businesses served by them. They can also be designed to encourage ridesharing and transit use, primarily through pricing incentives.

***Parkway (PKWY):*** Through travel lanes similar in characteristics to freeways but typically without parallel frontage roads.

***Policy Advisory Committee (PAC):*** The governing body of HSBMPO consisting of locally elected officials and representatives from the Texas Department of Transportation and HSBMPO.

***Private Sector Infrastructure Development Fund:*** A revolving subordinated debt facility for privately funded projects. Local governments would capitalize the Fund with federal grants or tax-exempt bond proceeds. Borrowers with revenue-producing projects would be eligible for the subordinated debt Fund at taxable rates in order to attract commitments for senior debt from commercial lenders or the capital markets. Timely debt service payments would replenish the Fund for other borrowers.

***Public Involvement Program (PIP):*** Established guidelines developed to disseminate information to all metropolitan area citizens, groups, agencies, and transportation providers to assure their input in the decision making process of transportation programs, projects, etc. for the HSBMPO area.

***Railhead:*** The end of a rail spur where trains are serviced, stored, or loaded and unloaded.

***Ranch to Market (RM):*** Identifier for a roadway designated by the Texas Transportation Commission to be part of the statewide highway system. Normally associated as a 2-lane roadway in rural areas, but are located in urban areas and can be a 4 or 6 lane divided roadway. The RM roadway designation is typically given to roads that are located west of IH-35.

***Reversible travel lane:*** A traffic lane which is used to carry traffic in one direction during a specific period of the day, and carries traffic in the opposite direction, or is restricted to turning movements, during another period of the day. Changeable electronic signs are used to inform motorists of how the lane can be used.

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***Reformulated Gasoline (RFG):*** Unleaded gasoline with a special additive designed to lower emissions upon combustion by providing more oxygen to the fuel during combustion.

***Reid Vapor Pressure (RVP):*** An indicator of the volatility of gasoline and is measured in pounds per square inch (psi).

***Revolving loan fund:*** Financing tool that recycles funds by providing loans, receiving loan repayments, and then providing further loans. Austin could capitalize its own revolving fund with grants or bond proceeds secured by independent revenue sources.

***Right of Way (ROW):*** Public land reserved for locating infrastructure such as a roadway or a utility line.

***Sale/leaseback agreement:*** Used by public agencies as a cash flow management technique. Government owned facilities, such as bus maintenance facilities, can be sold to private investors, who will expand or rehabilitate the facility and then lease it back to the public agency over a fixed period of time.

***Sale of development rights:*** Used by the public sector to capture the potential value of real estate at highway interchanges and along arterials, without giving up ownership of the land.

***Shared Roadway:*** A roadway, which is open to both bicycle and motor vehicle travel. This may be an existing roadway, street with wide curb lanes, or road with paved shoulders.

***Single Occupant Vehicle (SOV):*** Any vehicle that contains just one person, the driver.

***Special districts:*** Special Assessment Districts, Benefit Assessment Districts, and Road Utility Districts are used to help recover the capital costs of street or roads or to capture part of the potential value of these improvements for adjoining landowners or commercial businesses. As public entities, these districts can issue bonds secured only by fee income. This affects or benefits specific constituents and can be politically sensitive. Revenues derived from special districts are potentially a good source of funds for maintenance reserve accounts.

***Special Infrastructure Development Unit:*** A working group of planning, engineering and financial specialists which oversees a limited number of major transportation projects that are financed with public and private sector funds. Through a Joint Powers Resolution the Unit's governance could be shared among local agencies such as the TxDOT Austin District and a city and/or county transportation department, and the Unit would manage a single pipeline of public/private sector projects for the region. Project implementation would remain with the relevant state and local agencies. The Unit would finance its operations through fees payable at a financial closing.

***Special Transit Service (STS):*** A program operated by Capital Metro to serve citizens with disabilities by providing them with door-to-door, shared ride, or accessible public transportation.

***Standard Metropolitan Statistical Area (SMSA):*** A Census Bureau delineation for major metropolitan areas in the U.S.

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***State Data Center (SDC):*** The official repository of census data and demographic data for the State of Texas.

***State Highway (SH):*** Roads, streets and highways maintained by the State.

***State Implementation Plan (SIP):*** A plan required by the 1977 Clean Air Act Amendments which describes how the State of Texas will meet air quality standards.

***State Transportation Improvement Program (STIP):*** A staged, multi-year statewide, intermodal program of transportation projects, which is consistent with the Statewide Transportation Plan and planning processes and metropolitan plans, TIPs and processes.

***Statewide Transportation Plan (STP):*** The official statewide, intermodal transportation plan that is developed through the statewide transportation planning process.

***Subordinated debt financing:*** Longer term financing, which is subordinated to the primary debt in a project, can improve the credit quality of a project and its chances for financial closure. Subordinated lenders can be investors looking for higher returns, or government agencies with an interest in a project financed primarily by commercial lenders or the capital markets. If a Private Sector Infrastructure Development Fund is capitalized with grants, or from independent revenue sources, a city or a county may be able to participate as an indirect lender for eligible projects. Authorization may be needed from the State Legislature.

***Surface Transportation Program (STP) (part of ISTEA and TEA 21):*** A federal program designed to create flexible funding for transit and highway construction.

***Surface Transportation Program Category 4B for Transportation Enhancement (STP4B):*** A funding category used to address projects that are above and beyond what could normally be expected in the way of enhancements to the transportation system.

***Surface Transportation Program Category 4C for “Metropolitan Mobility/Rehabilitation” (STP4C):*** A funding category used to address transportation needs within the metropolitan area boundaries of MPOs having urbanized areas with populations of 200,000 or greater.

***Tax-exempt revenue bonds:*** Widely used by state and local governments to finance revenue-producing facilities such as airports, toll roads, sports complexes, hospitals, and wastewater plants. It is generally secured only by project revenues, without a back-up pledge, and is regarded as off balance sheet financing for the public agency issuing the bonds. Under appropriate arrangements, revenue bonds can also be used for street rehabilitation and maintenance.

***Tax increment financing:*** Utilized where property values and ad-valorem assessments may increase as the result of transportation improvements. The local government agrees to apply the tax proceeds of any increased assessment to support the financing for a specified period of time, thereafter claiming the tax revenues for itself. Useful in urban areas for rail transit development, but limited potential for highways.

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***Teleride:*** Demand response service, usually provided with cabs, in an area where density levels do not warrant fixed route service. The three existing teleride zones are planned to be replaced with fixed route service during the coming years. New teleride zones may be established in other sparsely developed areas.

***Texas Department of Transportation (TxDOT):*** The State agency responsible for construction and maintenance of all interstate, U.S, state highways, ranch-to-market (RM) and farm-to-market (FM) roads within the state.

***Texas Natural Resource Conservation Commission (TNRCC):*** A state agency charged with protecting water and air resources, including regulation of hazardous material sites.

***Texas Transportation Institute (TTI):*** A state agency that is a member of the Texas A&M University system and engages in research pertaining to all forms of transportation, including all phases of activities concerned with the movement of people, goods, and services, and identifies and helps to solve major state and national transportation problems.

***Toll Road:*** A road in which one must pay a toll or a fee to use.

***Traffic Serial Zone (TSZ):*** The smallest geographically designated area used for analysis of transportation activity such as data collection and travel movements within, into, and out of the urban area.

***Transit-Oriented Development (TOD):*** Types of development that enhance or support public transit use.

***Transportation Control Measure (TCM) (for air quality):*** Any measure designed to reduce traffic congestion, pollution emissions and other traffic problems.

***Transportation Demand Management (TDM):*** An effort to reduce the number of people traveling by single-occupant vehicles (SOV) by promoting non-SOV modes of transportation (e.g., carpools, vanpools, transit). TDM efforts may also discourage the use of SOVs by imposing tolls or taxes.

***Transportation Enhancement Program (TEP):*** A federal program that provides funds for non-traditional improvements adjacent to or within the right of way of a transportation facility. Some examples of improvements are preserving an historic structure, installing bicycle and pedestrian facilities, landscaping, and incorporating environmental protection systems.

***Transportation Equity Act for the 21st Century (TEA 21):*** A law authorizing highway, highway safety, transit and other surface transportation programs for FY1998 – 2003. This new law combines the continuation and improvement of current ISTEA programs with new initiatives to meet the challenges of improving safety as traffic continues to increase at record levels, protecting and enhancing communities and the natural environment and advancing America's economic growth and competitiveness domestically and internationally through efficient and flexible transportation.

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***Transportation Improvement Program (TIP)***: A document prepared by an MPO that identifies funding for specific transportation projects and studies to be implemented in an area over a three-year period.

***Transportation Management Area (TMA)***: Term for all urbanized areas with a population of over 200,000.

***Transportation Systems Management (TSM)***: A program to reduce congestion and improve traffic flow through traffic signal synchronization, freeway operations improvements (e.g., changeable message signs and ramp metering), incident management, (clearing accidents and breakdowns quickly). Other methods can include bus pullouts, intersection improvements and queue jumper lanes where appropriate.

***Unified Planning Work Program (UPWP)***: An annual work plan prepared by the MPOs describing transportation planning activities and funding sources that will occur within their specific jurisdiction.

***Unified Transportation Program (UTP)***: A ten-year planning document that guides and controls project development for TxDOT in a feasible and economical manner.

***Union Pacific Railroad (UPRR)***

***Volatile Organic Compounds (VOC)***: Toxic residual chemicals from fossil fuel combustion, solvents, paints, glues and some dry cleaning processes which contribute to ozone formation.

***Woman-owned Business Enterprise (WBE)***: A business whose ownership is comprised of at least 51% women.

## **Appendix 1:**

### **Public Comments**

The following comments on the 2030 Metropolitan Transportation Plan were received by the HSBMPO. Staff attended city commission meetings in fall of 2003 and spring of 2004 to solicit input in the development of the Plan. In November of 2004 drafts of the narrative, maps, and draft projects were presented for public comment/review.

#### **City of Palm Valley - Commission meeting 10/20/03 12:30 p.m.**

Public Comments:

- F.M. 2994, Widen to 4 Lane, from Stuart Place Rd. to F.M. 800
- Stuart Place Rd., Widen, at Stuart Place and Business 83.
- Stuart Place Rd., Widen, From U.S. Highway 83 to S.H. 107.
- Dilworth Rd., Widen from U.S. Highway 83 to F.M. 2994.

#### **City of Primera - Commission meeting 11/10/03 6:30 p.m.**

Public Comments:

- Primera Rd., Widen to 4 Lane, U.S Highway 77 to Stuart Place Rd. maybe F.M. 800.
- Stuart Place Rd., Widen to four Lane, from F.M. 2994 to S.H. 107.
- Wilcox Rd., Widen

#### **City of Combes - Commission meeting 11/24/03 6:30 p.m.**

Public Comments:

- 509 Loop Extension, it should tie in south of white Orphanage Rd.
- New R.R. relocation project will still cause problems.

#### **City of Rio Hondo - Commission meeting 1/27/04 6:30 p.m.**

Public Comments:

- Comments were that no projects were perceived to be completed in this area by the public.



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### **City of San Benito - Commission meeting 2/17/04 6:30 p.m.**

#### Public Comments:

- Side walks along trail.

### **City of Harlingen - Commission meeting 4/8/04 6:30 p.m.**

#### Public Comments:

- Public was interested in rail relocation as well as other transportation projects in the area.
- Public wanted the MTP to be congruent with Economic Development Plan for area.

### **City of Harlingen - Meeting 11/8/04 5:30 p.m.**

- No public comment.

### **City of San Benito - Meeting 11/9/04 5:30 p.m.**

- Proposed improvements for San Jose Road.

### **City of Rio Hondo - Commission meeting 11/10/04 5:30 p.m.**

- No public comment

## **Appendix 2:**

### **MPO Self-Certification for Attainment Areas**

In accordance with 23 CFR 450.334, the Texas Department of Transportation and the Harlingen-San Benito Metropolitan Planning Organization for the Harlingen-San Benito urbanized area hereby certify that the transportation planning process is addressing the major issues in the metropolitan planning area and is being conducted in accordance with all applicable requirements of:

- (1) U.S.C. 23 Sections 134 and 135, 49 U.S.C. Section 5323(l), 23 CFR Part 450.220 and 49 CFR Part 613 (Federal Register, Oct. 28, 1993);

As a non-TMA metropolitan planning organization, the Harlingen-San Benito MPO planning process operates under the review of the Texas Department of Transportation and through their administrative monitoring meets all applicable transportation planning requirements. The process is continuous, with updates to the Metropolitan Transportation Plan, the Transportation Improvement Program, the Unified Planning Work Program and the Public Involvement Procedures performed based on public comment or on an as needed basis (new data, etc.). Each of these documents has a minimum 30-day review period and except for the Unified Planning Work Program, is featured in the quarterly newsletter.

The planning process is cooperative in that the Harlingen-San Benito MPO follows all Federal Highway Administration, Federal Transit Administration and Texas Department of Transportation guidelines and recommendations. The Metropolitan Transportation Plan and the Transportation Improvement Program are developed in accordance with the MPO, the Texas Department of Transportation and the affected city officials. The area wide plans (Metropolitan Transportation Plan and the Transportation Improvement Program) and the Public Involvement Procedures are developed and updated with an emphasis on public involvement. Both the Metropolitan Transportation Plan and the Transportation Improvement Program documents, which include both traditional roadway improvement projects and transit projects, are on the MPO's website and are updated as changes occur. Improvements at the Valley International Airport and the Port of Harlingen are not specified in either document based on their funding types. The Technical Committee members, their city staff, and the Policy Committee members develop the Transportation Improvement Program over a six to seven month process with extensive review. In accordance with federal and state requirements, the Transportation Improvement Program is fiscally constrained and

## ***Harlingen - San Benito Metropolitan Transportation Plan: 2005-2030***

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includes financial plans showing designated funding and any funds from public and/or private sources.

The planning process is comprehensive in that both traditional roadway projects and transit projects are addressed in the Metropolitan Transportation Plan and Transportation Improvement Program. The public involvement for the Metropolitan Transportation Program involved going to a city commission meeting(s) in every city within the MPO to solicit input. These two documents are on the Harlingen-San Benito MPO's website and the web page states that all information about the MPO can be translated into Spanish.

- (2) Title VI of the Civil Rights Act of 1964 and the Title VI assurance executed by each State under 23 U.S.C. 324 and 29 U.S.C. 794;

Located along the U.S. Mexico border, the Harlingen-San Benito MPO has taken special steps to ensure that all populations are served to the limits of the funding programs. Within the MPO, urban transit service is available via a two-vehicle demand response system. Administered through the local council of governments, the Lower Rio Grande Valley Development Council, (LRGVDC), the system is advertised in English and Spanish. Posters were developed by the MPO and the LRGVDC in FY 2001, in English and Spanish, and distributed both languages to each city (for the rural services, also operated by the LRGVDC) and to all medical facilities, social services and government offices, major and/or ethnic shopping areas, religious centers, day care centers, facilities that cater to the elderly, and any other facilities that might have a high transit need user population.

The MPO has determined where existing colonia are located and determined the impact of the 2000 Metropolitan Transportation Plan and the FY 2004-2006 on these traditionally underserved populations. While many of the traditionally low-income areas, and especially the colonia, are not on functionally classified roads, the MPO has worked to determine if the functionally classified network is to the same standard throughout the Harlingen-San Benito MPO's study area. The Texas Department of Transportation District office and the area office are upgrading older facilities, which no longer meet current standards (widening lanes, adding shoulders, improving the surface, etc.) and the Metropolitan Transportation Plan determined future need, which will improve traffic movement for everyone within the MPO. As stated above, for those citizens who do not read or speak English, the MPO web page states, at the beginning of the page and in Spanish that the MPO staff will translate if notified by telephone, mail, or e-mail.

The MPO is also working with the Community Development Block Grant (CDBG) departments in the member cities to determine if these traditionally low income areas are being addressed in the planning and transportation service delivery process. The City of Harlingen's Arroyo Hike and Bike Trail, funded through the Transportation Enhancement program, serves as a safe and attractive method of providing access to two recreational facilities. Expansion of this facility was requested in the FY 2002 Transportation Enhancement program call. The City is also seeking to address improvements to pedestrian facilities in an area with a traditionally low-income population and high vehicle and pedestrian traffic. The requested funding is the Transportation Enhancement program, which sometimes has a greater flexibility to address the needs of traditionally underserved populations.

(3) Section 1101(b) of the Transportation Equity Act for the 21<sup>st</sup> Century (Pub. L. 105-178) regarding the involvement of Disadvantaged Business Enterprises in FHWA and FTA funded planning projects (Sec. 105(f), Pub. L. 97-424, 96 Stat. 2100; 49 CFR, Subtitle A, Part 26);

As an MPO, the Harlingen-San Benito MPO does not enter into construction contracts. The MPO maintains a list of consultants, both local and national, which are part of the newsletter mailing list and also receive notification of any RFPs. The MPO works closely with the Texas Department of Transportation to ensure that all criteria of this program are met before any contracts are signed.

(4) The provisions of the Americans with Disabilities Act of 1990 (Pub. L. 101-336, 104 Stat. 327, as amended) and U. S. DOT regulations "Transportation for Individuals with Disabilities" (49 CFR Parts 27, 37 and 38);

The Harlingen-San Benito holds all meetings, from the Policy Committee, the Technical Committee, and any public meetings, in handicapped accessible buildings. The MPO has also hired the services of a certified sign language interpreter on an as needed basis.

(5) The provision of 49 CFR Part 20 regarding restrictions on influencing certain activities.

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Appendix D, Lobbying Certification for Contracts, Grants, Loans, and Cooperative Agreements has been signed and affirmed by the Harlingen-San Benito MPO Policy Committee chairman.

TEXAS DEPARTMENT  
OF TRANSPORTATION  
PHARR DISTRICT

HARLINGEN-SAN BENITO  
METROPOLITAN PLANNING  
ORGANIZATION  
POLICY BOARD CHAIRPERSON

\_\_\_\_\_  
District Engineer

\_\_\_\_\_  
Chairperson

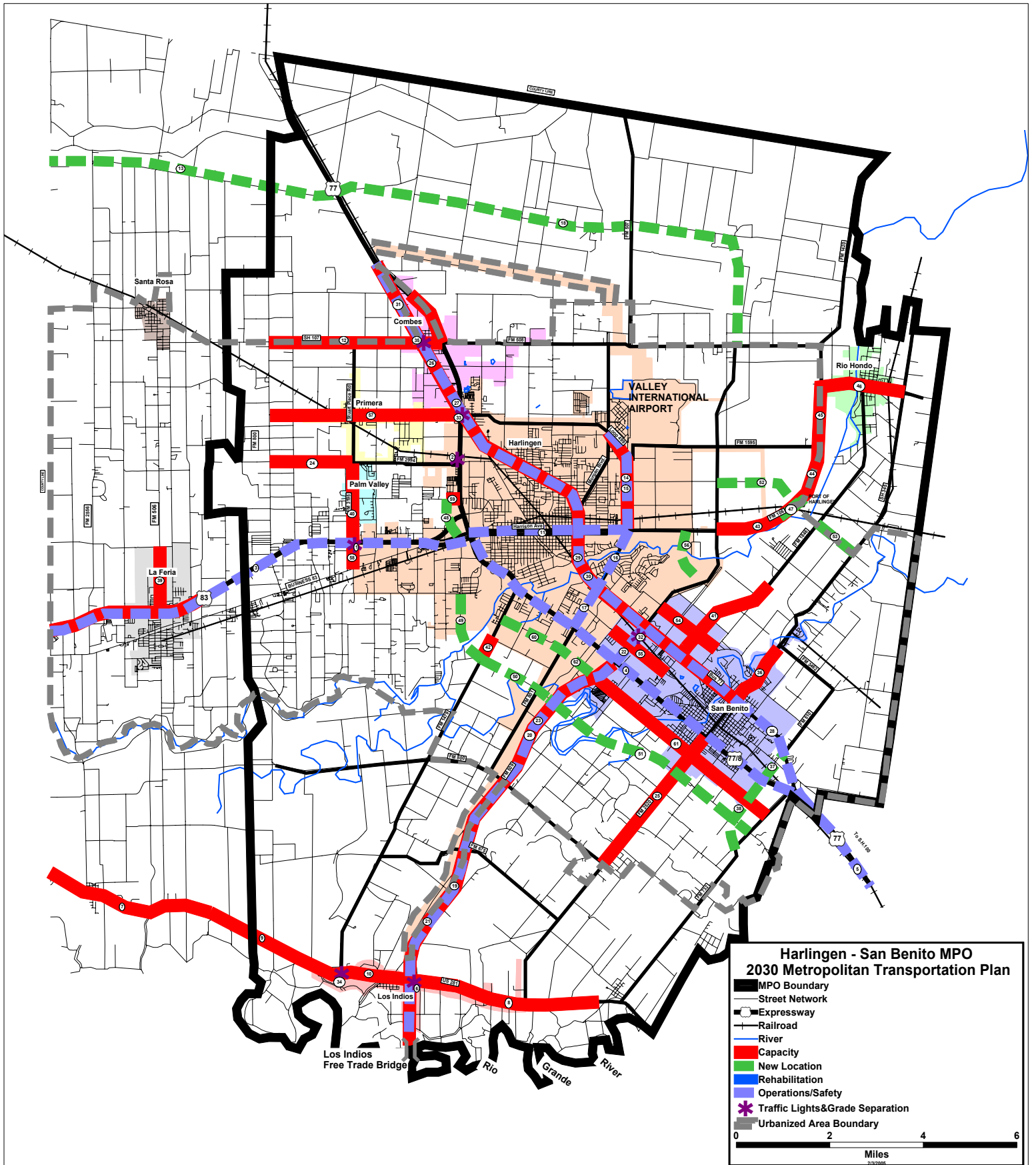
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Date

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Date

## **Appendix 3:**

### **MTP Recommended Project Listing by Funding Category**

### **MTP Recommended Project Map**



**HARLINGEN - SAN BENITO**  
Metropolitan Planning  
Organization  
FOR PLANNING PURPOSES ONLY

**2030 Harlingen - San Benito Metropolitan Transportation Plan  
Recommended Transportation Improvements**

**HARLINGEN-SAN BENITO MPO 2030 METROPOLITAN TRANSPORTATION PLAN RECOMMENDED PROJECTS BY FUNDING CATEGORY**

Line Number	Corridor Data					Existing Roadway Data				Forecast Roadway Data			Proposed Project Data	
	Corridor	Project Limits From To	MTP Project Number	Length in Miles	Area	Number of Lanes	Right of Way Width	Functional Classification	Base Year LOS	2030 LOS	Proposed ROW Width	Range	Type of Project	Cost in Dollars
<b>PREVENTATIVE MAINTENANCE &amp; REHABILITATION - 1</b>														
	Misc	Various	PHR-HSB-092									All	Miscellaneous Rehabilitation/Reconstruction/Operational Improvement - On System	\$ 25,100,000
	Misc	Various	PHR-HSB-95									All	On System Preventive Maintenance	\$ 17,500,000
1	US 83	At Stuart Place Rd	PHR-HSB-001	0.1	TH	2	120	C	B,C	F	120	S	Traffic Light Improvements	\$ 85,000
2	US 77	At Wilson Rd	PHR-HSB-002	0.1	TH	2	120	C	B,C,D	D,E,F	120	S	Traffic Light Improvements	\$ 85,000
<b>METRO CORRIDORS - 2</b>														
	Non-Eligible												Non-Eligible	
<b>URBAN CORRIDORS - 3</b>														
3	US83	CL to US 77/83	PHR-HSB-003	9.7	TH	4	300	FWY	C	F	300	L	ITS / Operational Improvements <a href="#">CSJ 0039-19</a>	\$ 2,000,000
4	US77/83	Interchange to Bus 77,S	PHR-HSB-004	8.8	TH	4	300	FWY	B,D	F	300	L	ITS / Operational Improvements	\$ 2,000,000
5	US 77/83	Bus 77 S to SH 100	PHR-HSB-005	2.4	TH	4	300	FWY	B	E	300	L	ITS / Operational Improvements	\$ 500,000
6	US 281	@ FM 509	PHR-HSB-011e	1.0	TCO	2	120	PA	B,C	F	120	L	Construct Overpass	\$ 5,000,000
7	US 281	Hidalgo CL to 1 Mile E of FM 506	PHR-HSB-011a	3.7	TCO	2	120	PA	A,B	C,D	120	I	Widen to 4 Lane Divided <a href="#">0220-03-900</a>	\$ 7,000,000
8	US 281	1 Mile E of FM 509 to .5 Miles W of FM 732	PHR-HSB-011d	2.9	TCO	2	120	PA	B	D,F	120	L	Widen to 4 Lane Divided	\$ 8,000,000
9	US 281	1 mile E of FM 506 to 1 Mile W of FM 1479	PHR-HSB-011b	2.2	TCO	2	120	PA	B	F	120	L	Widen to 4 Lane Divided	\$ 4,000,000
10	US 281	1 Mile W of FM 1479 to 1 Mile E of FM 509	PHR-HSB-011c	3.7	TCO	2	120	PA	C	F	120	L	Widen to 4 Lane Divided	\$ 7,000,000
11	SP 206 "Tyler-Harrison"	US 77/83 to LP 499	PHR-HSB-013	3.4	TH	6	80	PA	C,D	F	80	S	ITS / Operational Improvements/Access Management	\$ 1,500,000
12	SH 107	FM 800 to US 77	PHR-HSB-017	3.3	TCO	2, Sh	100	MA	C	D	120'	L	Widen to 4 Lane Divided	\$ 6,000,000
13	North Arterial	Hidalgo CL to US 77	PHR-HSB-014	8.0	TCO	4	0	NC	A	A,B	0	L	Construct 4 lane Managed Access Arterial	\$ 14,000,000
14	LP 499	FM 507 S to FM 106	PHR-HSB-015	2.2	TH	4	120	PA	B	D	120	I	Widen to 6 Lane Arterial	\$ 4,500,000
15	LP 499	FM 507 S to FM 106	PHR-HSB-016	2.2	TH	4	120	PA	B	D	120	S	ITS / Operational Improvements/Access Management	\$ 1,500,000
16	LP 499	FM 106 S to Bus 77	PHR-HSB-022	1.4	TH	4	100'	OPA	C	D	100	I	ITS / Operational Improvements/Access Management	\$ 1,000,000
17	LP 499	Bus 77 S to US 77/83	PHR-HSB-023	1.0	TH	4	100	PA	C	D	100	I	ITS / Operational Improvements/Access Management	\$ 1,000,000
18	FM 509 Ext	US 77 @ Orphanage Rd E & S to FM 508	PHR-HSB-024	10.0	TCO	NA	0	MA	A	NA	150'	L	Construct New Loop Ext. (2 Lane Rural)	\$ 5,000,000
19	FM 509	FM 675 S to Free Trade Intednational Bridge	PHR-HSB-026a	3.9	TCO	2	120	PA	B	B,C	120	L	Widen to 4 Lanes divided	\$ 3,500,000
20	FM 509	US 77/83 to FM 675	PHR-HSB-026b	5.5	TCO	2	120	PA	B	B,C,D	120	L	Widen to 4 Lane Divided	\$ 4,500,000
21	FM 509	FM 675 S to Free Trade Intednational Bridge	PHR-HSB-031a	3.9	TCO	2	120	PA	B	B,C	120	S	ITS / Operational Improvements/Access Management	\$ 800,000
22	FM 509	Bus 77 to US 77/83	PHR-HSB-025	1.0	TCO	2	120	MA	B	D,E	120	L	ITS / Operational Improvements/Access Management	\$ 500,000
23	FM 509	US 77/83 to FM 675	PHR-HSB-031b	5.5	TCO	2	120	PA	B	B,C,D	120	S	ITS / Operational Improvements/Access Management	\$ 800,000
24	FM 2994 (Wilson Rd)	FM 800 to FM 3195	PHR-HSB-042	1.8	TCO	2	80	RMJC	AB	AB	100-120	I	Widen to 4 Lane Divided	\$ 3,000,000
25	FM 2520	FM 800 to 77/83	PHR-HSB-060	3.5	TCO	2, Sh	80/90	C	C	C	80-90	L	Widen to 4 lanes <a href="#">CSJ 2356-01-014</a>	\$ 6,500,000
26	Bus 77 S	US 77 S to .65 Miles N of LP 499	PHR-HSB-006a	8.2	TH	2, Sh	80	PA	A	C	80	S	ITS / Operational Improvements/Access Management	\$ 1,000,000
27	Bus 77 S	.65 Miles N of LP499 to LP 499	PHR-HSB-006b	0.7	TH	2,4	80	PA	C	D,E	80	S	ITS / Operational Improvements/Access Management	\$ 300,000
28	Bus 77 S	SH 345 to US 77/83	PHR-HSB-006d	2.3	TH	4	120	PA	A,B	D,E,F	120	S	ITS / Operational Improvements/Access Management	\$ 500,000
29	Bus 77 S	LP 499 to SH 345	PHR-HSB-006c	3.8	TH	4	100,120	PA	A,B,C,D	B,C,D,F	100,120	S	ITS / Operational Improvements/Access Management	\$ 1,000,000



**HARLINGEN-SAN BENITO MPO 2030 METROPOLITAN TRANSPORTATION PLAN RECOMMENDED PROJECTS BY FUNDING CATEGORY**

Line Number	Corridor Data					Existing Roadway Data				Forecast Roadway Data			Proposed Project Data	
	Corridor	Project Limits From To	MTP Project Number	Length in Miles	Area	Number of Lanes	Right of Way Width	Functional Classification	Base Year LOS	2030 LOS	Proposed ROW Width	Range	Type of Project	Cost in Dollars
30	Bus 77 S	LP 499 to SH 345	PHR-HSB-007	3.8	TH	4	100,120	PA	A,B,C,D	B,C,D,F	100,120	L	Widen to 6 Lanes	\$ 8,000,000
31	Bus 77	SH 107 to US 77	PHR-HSB-012	1.6	TH	2, Sh	80	OPA	A	C	80	L	Widen to 4 Lanes	\$ 3,000,000
	Misc	Various	PHR-HSB-098									All	Miscellaneous Federal Demonstration Projects	\$ 15,000,000
<b>RURAL CORRIDORS - 4</b>														
	None												None	
<b>CONGESTION, MITIGATION &amp; AIR QUALITY - 5</b>														
	Non-Eligible												Non-Eligible	
<b>CONSOLIDATED STRUCTURES REHABILITATION - 6</b>														
32	FM 509	@UPRR E of Bus 77	PHR-HSB-037	0.5	TCO	2	120	MA	A	B	120	L	Grade Sepr. CSJ: 1065-01-010	\$ 4,500,000
33	LP 499	@UPRR W of US 77/83	PHR-HSB-027	0.5	TH	6	100	OPA	C	D	100	L	Grade Separation CSJ: 1137-01-018	\$ 3,125,000
	Misc	Various	PHR-HSB-093									All	On and Off System Bridge Rehabilitation/Replacement	\$ 11,125,000
<b>METRO MOBILITY / REHAB - 7</b>														
	Non-Eligible												Non-Eligible	
<b>SAFETY - 8</b>														
34	FM 1479	@ US 281	PHR-HSB-057	0.2	L	2	100	RMJ/C	AB	AB	100	S	Intersection Improvements	\$ 100,000
35	SH 107	@BUS 77 & RR intersection	PHR-HSB-018	0.1	CO	2	70'-80'	MRA	AB	C	70'-80'	L	Intersection and RR crossing improvements	\$ 100,000
	Misc	Various	PHR-HSB-090									All	Miscellaneous Safety Improvement	\$ 6,050,000
<b>ENHANCEMENTS - 9</b>														
	Misc	Various	PHR-HSB-091									All	Transportation Enhancements	\$ 30,000,000
<b>MISCELLANEOUS - 10</b>														
	Misc	Various	PHR-HSB-096									All	Park Roads (Selected by Texas Parks & Wildlife)	\$ 300,000
	Railroad Relocation	North of Harlingen to South of harlingen	PHR-HSB-097									All	Related work for Railroad Relocation Project in Cameron County	\$ 993,980
	Misc	Various										All	Misc Coordinated Border Infrastructure Federal Funds	\$ 1,000,000
	Misc	Various	PHR-HSB-100									All	Misc - Landscape, RR Grade Crossing Improvements, etc.	\$ 1,456,020
<b>DISTRICT DISCRETIONARY - 11</b>														
36	SH 345	Bus 77 to FM 3462	PHR-HSB-019	1.5	TS	2	90	MA	C	E	90	S	Widen to 4 lane divided CSJ: 0630-01-042	\$ 3,000,000
37	FM 732, Realignment	US 77/83 to Bus 77	PHR-HSB-043b	0.6	TCO	None	0	NC	A	NA	120'	S	FM 732 Realignment-New Location, Construct 4 Lane CSJ: 1057-02-023	\$ 924,576
38	FM 732, Realignment	0.10 Mi. N. Long Ln. to US 77/83	PHR-HSB-043a	2.0	TCO	None	0	NC	A	NA	120'	S	FM 732 Realignment-New Location, Construct 2 Lane CSJ: 1057-02-021	\$ 1,500,000
39	FM 506	US 83 N. to Clark Rd.	PHR-HSB-042a	1.3	TCO	2	120	RC	AB	BC	120	I	Widen to 4 Lanes divided	\$ 2,000,000
40	FM 3195	FM 2994 S to US 83	PHR-HSB-064	1.7	TPV	2	120	MA	A/B	A/B/C	120	L	Widen to 4 Lane Divided	\$ 2,890,000
41	FM 1846	Bus 77 N. 2.5 Miles	PHR-HSB-059	2.5	TS	2, Sh	100	RMC	AB	B	100	L	Widen to 4 lane	\$ 4,687,500
42	FM 1479	1.06 miles South of US 77/83 to Thieme Rd.	PHR-HSB-055	3.2	TCO	4	100	C	C	D	100	L	Widen to 4 Lane Divided	\$ 1,312,500
43	FM 106	FM 509 to Grimes Ext	PHR-HSB-029	2.2	TH	2, Sh	150	RMJC	A	A	150	L	Widen to 4 Lane Divided	\$ 2,750,000
44	FM 106	Grimes Ext to FM 1595	PHR-HSB-030a	1.4	R	2	150	C//RMC	ABC	D	150	L	Widen to 4 Lane Divided	\$ 1,750,000
45	FM 106	FM 1595 to FM 508	PHR-HSB-030b	1.4	R	2	150	C//RMC	ABC	D	150	L	Widen to 4 Lane Divided	\$ 1,750,000

**HARLINGEN-SAN BENITO MPO 2030 METROPOLITAN TRANSPORTATION PLAN RECOMMENDED PROJECTS BY FUNDING CATEGORY**

Line Number	Corridor Data					Existing Roadway Data				Forecast Roadway Data			Proposed Project Data	
	Corridor	Project Limits From To	MTP Project Number	Length in Miles	Area	Number of Lanes	Right of Way Width	Functional Classification	Base Year LOS	2030 LOS	Proposed ROW Width	Range	Type of Project	Cost in Dollars
46	FM 106	FM 508 to FM 345	PHR-HSB-030c	1.7	R	2	150	C/RMC	ABC	D	150	L	Widen to 4 Lane Divided	\$ 2,125,000
47	FM 106	Realign @ Port Curves	PHR-HSB-028	1.5	TH	2	150	RMJC	B	ABCF	150	S	Realignment rdwy @ curves CSJ.1425-03-042	\$ 1,300,000
48	Dixieland Extension North	US 83 to Brazil Rd on to Teege St	PHR-HSB-039	0.9	TH	2,4	80	MA	NA	A,B	80	S	New loc., 4 ln div.	\$ 1,530,000
49	Dixieland	Garrett to FM 1479	PHR-HSB-069	1.7	H	2	40	U	A/B	A	60	S	Widen to 4 lane divided	\$ 5,250,000
50	Dixieland-Thieme-Nixon-Pennsylvania	FM 1479 to FM 509	PHR-HSB-081	1.5	CO	0	120	U	A	AB	120	L	New Location 2 Ln. w/shld. & park	\$ 1,500,000
51	Dixieland-Thieme-Nixon-Pennsylvania	FM 509 to FM 732		5.0	CO	0					120	L	New Location 2 Ln. w/shld. & park	\$ 5,000,000
52	Grimes Extension, Phase I	FM 509 to Cemetery	PHR-HSB-072	1.4	H	2-3	40-150	C/U	A/B	AB	120' 60-150	I	Proposed 2 Lane Extension	\$ 1,900,000
53	Cemetery Rd (Grimes Extension Phase II)	SH 345 to FM 1846	PHR-HSB-067	1.0	CO	0	0	RMC	AB	BD	120	S	New Location - 4 Lane	\$ 1,300,000
54	Haine Drive/Russel	FM 509 to Lovett Rd.	PHR-HSB-074	1.1	H	2	60	U	A/B	A/B	80' 110'	S	Widen to 4 Lanes	\$ 1,870,000
55	Shafer Rd.	Whalen Rd. to Williams Rd.	PHR-HSB-077	1.5	TSB	2	80	MJC	C	F	100	L	Widen to 4 lane	\$ 2,500,000
56	Pinehurst Ext	Lazy Lake Drive to FM 106	PHR-HSB-054	0.6	H	0	80	L	A,B	A,B	80	S	4 Lane Median Divided	\$ 1,300,000
57	Primera Rd	Bus 77 to FM 800	PHR-HSB-079	4.3	P	2	60-70	C	D	D	60-70	S	Widen to 4 Lane 0921-06-187	\$ 5,000,000
58	Stuart Place Rd	US 83 to Bus 83	PHR-HSB-075	0.5	TH	2	120	C	B	F	120	L	Widen to 4 Lane Undivided	\$ 675,000
59	Teege St Ext	Brazil Rd to US 77	PHR-HSB-080	0.2	TH	2	80	C	C	C	80	S	4 Lane Divided CLTL	\$ 350,000
60	Turner/Yost Rd	FM 1479 (Rangerville Rd) to FM 801	PHR-HSB-085	2.5	H	0	0	U	C	C	80	L	New Location - Construct 4 Lane	\$ 3,400,000
61	Turner/Yost Rd	FM 509 to FM 732	PHR-HSB-086	4.5	S	3	100	C/U	C	ABD	80	I	Widen to 4 Lanes	\$ 6,000,000
62	Turner/Yost/East West Connector	FM 801 to FM 509	PHR-HSB-087	1	TH	4	80	U	NA	A,B	80	S	New Location - Construct 4 Lane	\$ 1,700,000
<b>LOCAL FUNDS</b>														
Misc	Various Local Roads		PHR-HSB-101									All	Misc Local Streets/Roads & Local Match for NHS, STP projects	\$ 6,500,000
<b>TRANSIT - FTA 5307</b>													<b>\$ 291,684,576</b>	
	Transit - Harlingen - San Benito Express FY 2005 - FY 2030	Operations	PHR-HSB-102										Transit Program - Operations	\$ 7,430,000
	Transit - Harlingen - San Benito Express FY 2005 - FY 2030	Capital	PHR-HSB-103										Transit Program -Capital	\$ 1,380,000
	Transit - Harlingen - San Benito Express FY 2005 - FY 2030	Maintenance	PHR-HSB-105										Transit Program - Operations	\$ 921,000
S - Short Range (1-7 Years) I - Intermediate Range (8-15 Years) L - Long Range (16+ Years)													T = TxDOT H = Harlingen S = San Benito CO = Cameron County R = Rio Hondo PV = Palm Valley L = Los Indios P = Primera <b>\$ 301,415,576</b>	



# THE HARLINGEN - SAN BENITO METROPOLITAN PLANNING ORGANIZATION

## Policy Committee Voting Members

## RESOLUTION # 2005-2

Cameron County  
Commissioner, Pct. 3

### RESOLUTION TO ADOPT THE 2005-2030 HARLINGEN-SAN BENITO METROPOLITAN TRANSPORTATION PLAN

Cameron County  
Commissioner, Pct. 4

**WHEREAS**, the Harlingen – San Benito Metropolitan Planning Organization is the designated agency for the transportation planning in the metropolitan area; and

Mayor,  
City of Combes

**WHEREAS**, the Harlingen – San Benito Policy Committee reviews the status of the transportation planning area; and

Mayor,  
City of Harlingen

**WHEREAS**, the Harlingen – San Benito Metropolitan Planning Organization presented the 2005-2030 Harlingen – San Benito Metropolitan Transportation Plan to the Technical Committee and Policy Committee; and

Mayor,  
City of Los Indios

Mayor,  
City of Palm Valley

Mayor,  
City of Primera

**WHEREAS**, the Harlingen – San Benito Technical Committee unanimously approved the 2005-2030 Harlingen – San Benito Metropolitan Transportation Plan; and

Mayor,  
City of Rio Hondo

**WHEREAS**, the Harlingen – San Benito Policy Committee discussed the 2005-2030 Harlingen – San Benito Metropolitan Transportation Plan; and

Mayor,  
City of San Benito

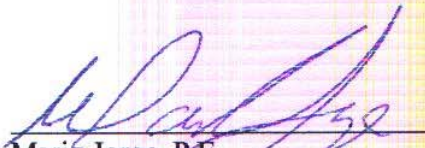
City of Harlingen,  
City Manager

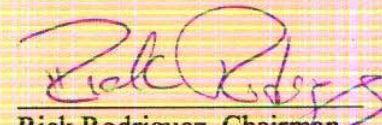
**NOW, THEREFORE, BE IT RESOLVED** that the Harlingen – San Benito Urban Transportation Policy Committee as the designated MPO for this area, agreed by unanimous vote to approve the 2005-2030 Harlingen – San Benito Metropolitan Transportation Plan;

City of San Benito,  
City Manager

Texas Dept. of  
Transportation  
District Engineer

Passed and approved December 9, 2004.

  
Mario Jorge, P.E.  
TxDOT District Engineer

  
Rick Rodriguez, Chairman  
Harlingen – San Benito  
Metropolitan Planning  
Organization

*Working Together for Better Mobility*

502 E. Tyler • P.O. Box 2207 • Harlingen, Texas 78551 • Telephone (956) 430-6606 • Fax: (956) 430-6640



# THE HARLINGEN - SAN BENITO METROPOLITAN PLANNING ORGANIZATION

## Policy Committee Voting Members

## PUBLIC INVOLVEMENT PROCESS (PIP) CERTIFICATION

Cameron County  
Commissioner, Pct. 3

Cameron County  
Commissioner, Pct. 4

Mayor,  
City of Combes

Mayor,  
City of Harlingen

Mayor,  
City of Los Indios

Mayor,  
City of Palm Valley

Mayor,  
City of Primera

Mayor,  
City of Rio Hondo


Mayor,  
City of San Benito

City of Harlingen,  
City Manager

City of San Benito,  
City Manager

Texas Dept. of  
Transportation  
District Engineer

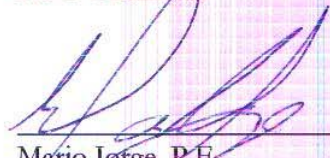
The Harlingen-San Benito Metropolitan Planning Organization certifies that the Public Involvement Process adopted by the Policy Committee was followed as part of the adoption of the Metropolitan Transportation Plan.

  
Juan Sanchez  
Interim MPO Director

12-27-04  
Date

  
Richard Rodriguez  
MPO Chairman

1-03-05  
Date

  
Mario Jorge, P.E.  
District Engineer  
TxDOT Pharr District

1-13-05  
Date

*Working Together for Better Mobility*

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