

### 3.0 VISION, GOALS AND OBJECTIVES

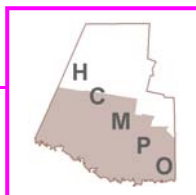
#### 3.1 THE HIDALGO COUNTY MPO VISION

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The vision for the development of the transportation system and its infrastructure is both the means and the end. The re-enforcement of economic and social goals will lead to increase accessibility and mobility for the pursuit of educational, employment, familial, social, and religious opportunities that are available within Hidalgo County and the surrounding counties in the Valley.

The Metropolitan Transportation Plan for the Metropolitan Area of Hidalgo County will continue to provide for the maximum amount of mobility for the residents and visitors within the urbanized portions of the county as well as recognize the importance of adequate connections to destinations outside of the area, especially international connections. The Plan and its subsequent implementation are and will remain sensitive to the impacts of natural and historic/built environment that can result from construction and operation of transportation facilities and systems. The Plan will support the goals of the United States Congress in showing fiscal constraint and the goals of safety, clean air, clean water, preservation of neighborhood and cultural integrity. The plan will anticipate, to the degree possible, future conditions and provide for the realistic and affordable development of a transportation system that will allow people to have adequate mobility to pursue a full, well rounded life.

The following points were set forth by the United States Government in the “Transportation Equity Act for the 21<sup>st</sup> Century” or TEA21 provided the framework for development of this Metropolitan Area Transportation Plan. The Transportation System for Hidalgo County should:

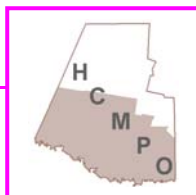


- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency.
- Increase the safety and security of transportation system for motorized and non-motorized users.
- Increase the accessibility and mobility options available to people and for freight.
- Protect and enhance the environment, promote energy conservation and improve quality of life.
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.
- Promote efficient system management and operation.
- Emphasize the preservation of existing transportation system

### **3.2 GOALS AND OBJECTIVES OF THIS PLAN**

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One of the strengths of the Hidalgo County MPO is the fact that the urbanized area is made of many individual cities with distinct goals. The major transportation corridors both connect and bisect these cities. With limited funding and virtually unlimited need, construction projects must be developed and implemented to address the flow and need of the entire corridor and in turn, the transportation network, while also addressing the individual need of the cities. Demands placed on the existing transportation facilities are exceeding the current capacity, and these demands are expected to increase in the future. Based on the need to develop an improved



transportation system to deal with limited capacity and increasing growth through the year 2030, the following goals were developed. These goals will determine the development and implementation of the Hidalgo County Transportation Plan, the following goals and objectives must be met.

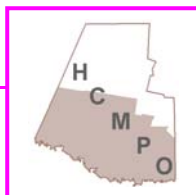
Keeping in mind the wish of the United States Congress to streamline ISTEA into TEA21 but keeping its spirit alive, the Hidalgo County MPO wishes to streamline its goals and objectives, but still keep the focus of the plan active in this update during its implementation. This update has two goals with eight objectives each, in its efforts to streamline the plan.

**GOAL NUMBER 1: REHABILITATE AND PRESERVE THE EXISTING NETWORK.**

A primary emphasis of the Intermodal Surface Transportation Efficiency Act of 1991(ISTEA) was and the Transportation Equity Act for the 21<sup>st</sup> Century of 1998(TEA21) is the preservation and maximum efficient usage of the existing transportation network. Maximum efficiency of the transportation system can only be attained through proper maintenance. The following objectives will allow achievement of this goal.

**Objective 1: Identify immediate problems and their solutions**

Use the existing management systems developed under ISTEA, identifies immediate problems. The Three Management systems still operational in the year 2000 are the Bridge Management System (B.M.S.), the Pavement Management System (PMS), and Congestion Management System (CMS). The regional transportation model in operational stage since 1999 will allow the MPO to prioritize solutions.



**Objective 2: Increase the safety of the network.**

Determine high crash locations in the urbanized area and coordinate with the Texas Department of Transportation and HCMPO member cities to reduce the number of incidents.

**Objective 3: Improve efficiency of the existing network.**

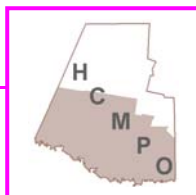
Using the existing Pavement Management System, and Bridge Management System, determine the rehabilitation cycles for the existing surface network and allocate MPO TMA funding towards resurfacing and rehabilitating the regional significant internal network of the cities. Based on the Congestion Management System, determine where transportation demand management tools such as access management and traffic signal timing synchronization can be utilized.

**Objective 4: Facilitate the efficient movement of freight**

Support the development of the existing and proposed international crossings in Hidalgo County, work with airports to provide sufficient land access to meet their freight movement needs, work with the railroad companies to maintain a presence in the urbanized area, and determine if existing truck routes are sufficient to address projected truck borne freight to and through Hidalgo County.

**Objective 5: Ensure Title VI\***

Increase solicitation of public involvement throughout the urbanized area by continuing to employ innovate and effective awareness techniques, work with the local planning and community development departments to incorporate transportation in the big picture, take an aggressive role in welfare to work goals and implementation, and coordinate with area housing



goals and strategies, environmental resource plans, and energy conservation goals and objectives.

**Objective 6: Serve existing and projected needs**

Maintain current or increased levels of service to the existing population and determine the projected growth and allocation and ensure that the MPO is eligible to study the transportation needs of that population.

**Objective 7: Incorporate fiscal constraint/innovate financing**

Fiscal constraint will be applied throughout the plan by investigating low cost alternatives to construction as a solution to the transportation problem. Research and implement innovative, non-traditional financing methodologies to fund the transportation network through the planning period.

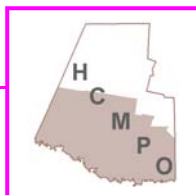
**Objective 8: Support and promote current economic levels**

Work closely with the business community, chambers of commerce, and economic development authorities to determine their existing transportation, needs and problems and work with them and the Texas Department of Transportation to determine solutions.

**\*Title VI addresses the social environment of a project, the neighborhood, community, and equity in voice and construction standards.**

**GOAL NUMBER 2: EMPLOY A CORRIDOR ANALYSIS APPROACH TO CONSTRUCTION.**

The linear development of the majority of the urbanized cities along US Expressway 83 (Figure 3.2.1 & 3.2.2) combined with the rapid growth of cities and the county as



a whole, exacerbates the need for the consistency of construction in corridor development.

**Objective 1: Create a functional relationship between transportation planning and area development.**

Educate community decision makers about the symbiotic relationship between land use and development and the transportation network. Employ transportation demand management techniques (for example: light synchronization, raised medians, van pooling and curb-cut reduction) and access management to mitigate flow and safety problems on corridors throughout the urbanized area.

**Objective 2: Ensure multi-modal capability**

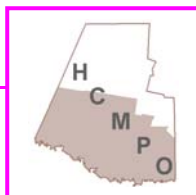
Study and incorporate where feasible and/or necessary all modes of transportation, including but not limited to transit, air, rail, pedestrian, and bike.

**Objective 3: Ensure Efficient Movement of Freight**

Support the development of the existing and proposed international crossings in Hidalgo County, work with airports to provide sufficient land access to meet their freight movement needs, especially NAFTA corridors, work with the railroad companies to maintain a presence in the urbanized areas and determine if existing truck routes are sufficient to address increased truck borne freight to and through Hidalgo County.

**Objective 4: Protect the environment**

Work closely with the Texas Natural Resources Conservation Commission and local conservation organizations to determine environmentally sensitive areas and incorporate their input into the construction process. Where



possible the MPO will plan the transportation corridor with the least environmental impact.

**Objective 5: Ensure/Promote Title VI (EJ)\***

Increase solicitation of public involvement throughout the urbanized area by continuing to employ innovative and effective awareness techniques, work with the local planning and community development departments to incorporate transportation in the big picture, take an aggressive role in welfare to work goals and implementation, and coordinate with area housing goals and strategies, environmental resource plans, and energy conservation goals and objectives.

**Objective 6: Serve existing and projected needs**

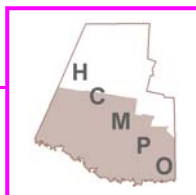
Maintain current or increased levels of service to the existing population and determine the projected growth and allocation and ensure that the MPO is to study the transportation needs of that population. The MPO also will assure that the highest priority corridors will serve greatest needs.

**Objective 7: Incorporate Fiscal constraint/ innovative financing**

Fiscal constraint will be applied throughout the Plan by investigating low-cost alternatives to construction as a solution to the transportation problem. Research and implement the Hidalgo County MPO's CMS to a corridor level Approach. We also look for innovative, non-traditional financing methodologies to fund the transportation network through the planning period.

**Objective 8: Promote Economic Development**

Work closely with the business community, chambers of commerce, and economic development authorities to determine their existing transportation



needs and problems and work with them and the Texas Department of Transportation to determine solutions. The MPO should continue its policy of connecting any new bridge with existing transportation network.

### 3.3 CRITERIA FOR PROJECT SELECTION

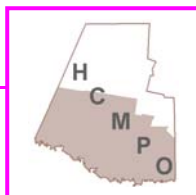
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Project selection is the result of two sequential processes: development of the Transportation Improvement Program (TIP) and development of the twenty-five-year Metropolitan Area Transportation Plan (MTP). ISTEA introduced new objectives and values into the decision-making process to open it up to input from citizens and special interest groups. In the preparation of this plan update, parties representing diverse points of view were given opportunities to be heard via a series of public outreach instruments described in section 2.6 and appendix A.

TEA21 gives no absolute authority to either the State or the MPO in selecting which projects will be funded. The law stresses cooperation, and assigns a leading role to either the State or the MPO depending on the situation. In addition, the State and MPOs are required to certify to FHWA that the joint planning process is “continuing, cooperative, and comprehensive.”

For areas with population of 200,000 and over such as the Hidalgo County MPO (HCMPO) the State (in cooperation with the MPO) has oversight over projects to be funded from TEA21's National Highway System (NHS), Bridge, Interstate, and Federal Lands Program. For projects funded by all other TEA21 programs (such as the Surface Transportation Program or the Congestion Mitigation and Air Quality program), the MPO has selection power in cooperation with the State.

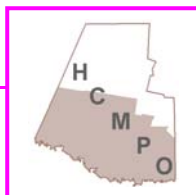
Just like in 1999, when it came time to update the Metropolitan Plan, the MPO Technical Committee had several issues to deal with. One important issue is that



while the Transportation Improvement Program (TIP) is the implementation tool of the MTP there are several valid reasons to have different criteria for 25 years worth of projects than 3 years of projects identified in the TIP. For example, the status of right of way (ROW) is very important when we build the projects in the TIP but until that time the need for a project should outweigh the ease of construction of projects. If we used the TIP criteria especially for selecting 25 years of projects some valuable but difficult projects would not get selected. If the criteria for the MTP and TIP are too radically different, then a conflict of priority can occur. To prevent confusion the Technical Committee developed Four (4) criteria for a maximum of One Hundred (100) points to prioritize groups of projects for the Metropolitan Transportation Plan (MTP).

Another goal of developing this plan update was to keep it simple so the public could understand the whole reasoning in project selection and the decision makers could use this plan effectively. In other words, the MPO Technical Committee was striving to make this complex transportation plan as user friendly as possible. Because we are required to update this plan in the year 2009, the Hidalgo County MPO decided to attempt a simple, easy to understand selection criteria for a twenty year plan and thinks it has a solid enough TIP selection process to compensate for the plan if the update does not work as intended.

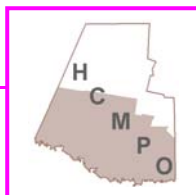
The Hidalgo County MPO will be evaluating this process throughout the five years between 2004 and 2009 and will make adjustments to the process in 2009 as needed. The current TIP (Figure 3.3.1) is through the year 2006 and the next TIP process will be selecting projects from this plan through the years 2006 to 2008. This plan update is a bold step in the spirit of TEA21 to bringing the transportation planning process out of the hands of the technocrats and placing it in the hands of the public. While the criteria look simple there is a lot of data that goes into each one and it has solid transportation planning theory behind it.



**Figure 3.3.1: Mobility Funds Selection Criteria HCMPO-as of 9/7/04**

Transportation Indicator	Point Distribution	Total Possible	% of Total
Spring FY 2004 CMS	No on network=0 Green=5 Yellow=15 Red=20	25	25
Cost Effectiveness from Forecast Year (cost/traffic)	0 5 15 20 25	20	25
LOS Base Year Model	F=25 E=20 D=15 C=10 B=5 A=0	25	25
LOS Forecast Year Model	See Figure 3.3.1	25	25

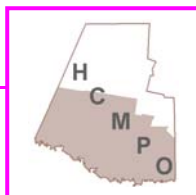
Projects that were identified in the MPOs Spring Congestion Management Study (CMS) were identified for the criteria selection and distributed points based upon the congestion levels identified in the CMS. Red, the most congested, was awarded 25 points, Yellow, which is stable, 15 points and Green, free flow, was awarded no points. The Criteria subcommittee also reviews the Level of Service (LOS) for the base year, 1999, and the transition of LOS from No Build scenario to forecast year 2030. Based upon information given on the LOS, points were awarded based upon the level of service identified for the base year and the transition of LOS from No Build scenario to forecast year. However, the scoring works differently for each year



based upon the LOS. In the base year point were distributed with the greatest amount of points given to the most congested corridors, as shown in figure 3.3.2, LOS F was given 25 points while LOS A was awarded 0 points.

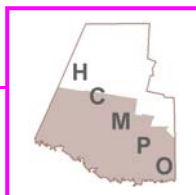
Points were distributed for forecast year 2030 based on the transition of LOS from No Build scenario to the forecast year 2030 model with the MTP projects incorporated in it. The point distribution in this case can be better understood in the Figure 3.3.2. For instance, if a project has a LOS “F” in the No Build scenario and the same project, after improvements in the forecast year 2030 has a LOS “A” it was awarded 25 points since it showed a great deal of improvement to LOS from the no build scenario.

Finally the Data Criteria sub-committee evaluated the need to identify those projects that were truly cost effective as well as addressing the level of service of a corridor. Those projects that were identified as the most cost effective were awarded a greater number of points than those that were not identified as cost effective. This process assured that those projects that were truly identified as needed and were the most cost effective received the greater amount of points and thus were ranked higher.



No Build Level of Service	Forecast Year 2030 Level of Service						
		A	B	C	D	E	F
	A	0	0	0	0	0	0
	B	5	0	0	0	0	0
	C	10	5	0	0	0	0
	D	15	10	5	0	0	0
	E	20	15	10	5	0	0
	F	25	20	15	10	5	0

**FIGURE 3.3.2: Score Distribution for Project Selection Based on LOS**



### **3.4 PLAN ALTERNATIVES**

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The relationship between land use and transportation system often has been described as the chicken and egg analogy. If you provide access to undeveloped land it will soon be developed into that particular urban form. Light rail or transit line encourages certain density patterns. Since land use decisions in Texas are made by the individual cities while the Hidalgo county MPO and TxDOT make the transportation decisions. Throughout the development of this Metropolitan Transportation Plan Update recognition of the debate on land use not being complete yet.

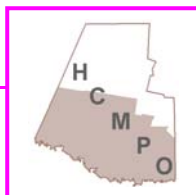
In an area as diverse as the Rio Grande Valley, people do not all share the same vision for the area's transportation system. They share a common vision for the educational system, medical system or any other systems important to the people of the area. While in a Democracy total agreement maybe impossible, but an open and fair planning process is essential before consensus of the expected quality of life for all residents of the Hidalgo County Metropolitan area can be reached.

Since one of the mandated 3C's in the 1962 Federal Highway Process is continuous still the maturing alternatives will be mentioned in this plan update for continuous discussion purposes. Since the four alternative scenarios still need further debate before consensus can be reached in this plan update a brief, description of the four alternatives will open the discussion on land use to be further refined in the 2004 plan.

#### **3.4A NO BUILD ALTERNATIVE**

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This alternative is really the continuation of the current trends. In this alternative we hold system capacity at current levels. The land use follows current zoning patterns and our population forecast is loaded on our current regional transportation



infrastructure. This scenario will show everybody involved what would happen if we do nothing. This scenario establishes future baseline conditions for Hidalgo County. By reaching a consensus that this scenario is unacceptable we have begun to establish a common reference for identifying the issues of mobility for the 2004 Plan. In the plan update we are using this scenario to establish future baseline conditions in order to select the projects that have the greatest impact for our top prioritization. In this scenario we expect to see massive congestion and a total breakdown of our transportation infrastructure. If this does not occur than we have already solved our transportation problems and can go into a maintenance mode. With our rapid growth this scenario is highly unlikely.

### **3.4B COMPLETE THOROUGHFARE PLAN (Classic Grid)**

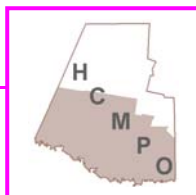
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The classic “American Dream” has been to own your own house on a half-acre patch of green land. This “American Dream” leads to low-density suburban type of development. To serve this level of development and preserve enough right-of-way for a four lane arterial system spaced 1 mile apart. This development pattern leads to a grid street pattern. This has been a classic development pattern for almost 100 years. In this era of fiscal constraint we can not afford to build this system of development with 100 % public fundings. The thoroughfare plan is shown in (Figure 3.4b.1). The Hidalgo County Thoroughfare Plan is an example of this type of development pattern. The grid pattern is the market driven alternative. It provides an equal access to all parcels of land and is fair.

### **3.4C COMPACT CITY**

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While Federal Legislation in the post interstate era both ISTEA and TEA-21 favor this form of development pattern. Developments in the U.S. Market still favors the ¼ or ½ acre lot and suburban development discussed in Section 3.4B. By increasing



the density and discouraging parking lots, the use of transit is encouraged. While this development may work in some areas of the country, the population of South Texas still believes in the “American Dream” as single family having owning your automobile to take you where you desire to go. Elements of this approach is however, starting to appear in the more urbanized neighborhoods of McAllen as evidence in their visioning charettes as the public is starting to ask for a more walk able community. Other major components of this compact city approach to land use are the development of the metropolitan bicycle plan described in more detail in section 4 and the increasing requests for sidewalks being heard in all our cities. But further questioning of residents reveals while residents would prefer certain elements of a compact city approach such as transit, sidewalks, and bike paths they really want to buy into their own patch of green.

#### **3.4D LOOPS (traditional radial and loop approach)**

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The traditional pattern for urban development in the United States over the last 200 years can best be described as loop and radial. In the older urban centers development followed the commuter rail lines radiating out from the urban core in the 1890's to 1940's. With the Eisenhower Interstate program starting in the 1950's. Circumferential Freeways or Beltways started to spring up around the large urban centers of the U.S. The City of Houston, Texas was approximately the same size in 1950 as Hidalgo County MPO population in 2000. Imagining what Houston would be like today without Loop 610 or Beltway 8 in a radial pattern along its arterials. If Houston and other freeways dependent areas are truly indicative of our 50 year future, we should start preserving right-of-way now or we will face even more gridlock than our 2030 model indicates. The model indicates that soon the level of service (Figure 2.7.2) for our current plan of four lane urban sections will not be enough to handle our future growth.

