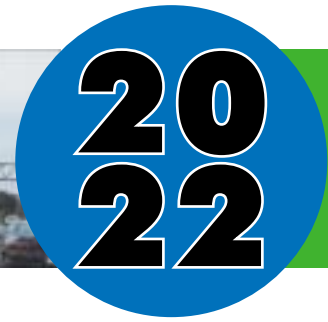


2022 METROPOLITAN TRANSPORTATION PLAN



MTP

Houston—Galveston Transportation Management Area



The 2022 MTP is the long range transportation plan designed to meet the region's transportation needs through the year 2022. The Houston—Galveston Transportation Management Area (TMA) consists of eight counties: Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery and Waller.

Adopted February 25, 2000

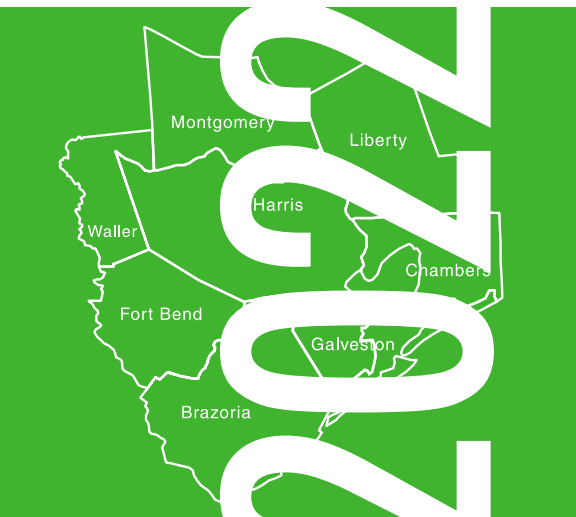


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RELATED DOCUMENTS (available under separate cover by request)

- Conformity Determination for the 2022 MTP and the 2002 TIP for the Houston-Galveston Transportation Management Area (Summary plus CD ROM)
- Public Comment on the 2022 MTP/2002 TIP/Conformity Determination and Responses
- Transportation Public Involvement Plan
- FAST (Financial Analysis Tool)

INTRODUCTION

1.1 WHAT IS THE *2022 MTP*?

The *2022 MTP* is the Houston-Galveston region's Metropolitan Transportation Plan (MTP), replacing its predecessor, the *Vision 2020*. The MTP is a strategic planning document designed to identify and address the transportation needs of the region through the year 2022. As such, the MTP forms the basis for transportation planning activities within the region and determines the nature of the future transportation system.

The purpose of the *2022 MTP* is to define the goals, identify the needs, and recommend the strategies for improving the regional transportation system. The transportation needs addressed in the MTP include traditional transportation topics, such as improving mobility, preserving existing infrastructure, and enhancing safety, as well as related strategic needs, such as supporting goods movement and improving regional air quality.

As the foundation of regional transportation activities, the *2022 MTP* reaffirms the tradition of a continuing, comprehensive, and cooperative (3C) planning process. First, the development of the MTP is a *continuing* process; the assessment of needs and strategies is dynamic and ongoing. The MTP is updated at least every three years in order to meet transportation needs as they change over time. Furthermore, the projects and programs of the MTP are implemented on a continuing basis.

Secondly, the *2022 MTP* is a *comprehensive* planning document that addresses many transportation issues throughout the region. It is a multimodal plan that tackles the needed improvements for various transportation modes: single-occupancy vehicles; high-occupancy vehicles; buses; bicycles; and even walking. Furthermore, the plan is comprehensive because of its physical scope; it examines issues at a regional scale. While transportation needs may vary depending on the individual and the jurisdiction, the Houston-Galveston area is an interdependent system. Therefore, the decisions of one entity have impacts beyond its jurisdictional limits.

Finally, the *2022 MTP* is a *cooperative* venture. The *2022 MTP* began with a public vision, progressed with public identification of needs, and concluded with public review and comment. The document is the result of interagency review and consultation by federal, state, and local transportation agencies, as well as users of the transportation system.

1.2 STUDY AREA

The region covered by the *2022 MTP* includes eight counties of Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller. This region is called the Houston-Galveston-Brazoria Consolidated Metropolitan Statistical Area (CMSA), as designated by the Census Bureau. For transportation planning purposes, this same eight-county area is called the Houston-Galveston Transportation Management Area (TMA). A TMA is a metropolitan area of more than 200,000 people that has been designated by the state governor for transportation planning purposes.

The agency responsible for transportation planning within a TMA is called the Metropolitan Planning Organization (MPO). The Houston-Galveston Area Council (H-GAC) Transportation Department is the state appointed MPO, providing technical analyses and planning for the region. All regional transportation plans, projects, and programs, however, must be approved by the Transportation Policy Council (TPC), the policy board for the TMA. The 21 members of the TPC represent cities, counties, and transportation agencies serving the eight-county region. The TPC is supported by a Technical Advisory Committee (TAC) whose expanded membership includes persons representing ports, freight/shipping interests, neighborhoods, bicycling interests, and environmental agencies and advocacy groups. The TPC relies on its TAC for analysis and recommendations regarding transportation policy and programming options.

Figure 1.1: Houston-Galveston Transportation Management Area



In accordance with the Clean Air Act Amendments (CAAA) of 1990, the Environmental Protection Agency (EPA) has designated the TMA as an ozone nonattainment area; a result of the region exceeding the national standards for ozone. With this designation, the region's planned transportation system must conform to the state plan for improving local air quality. Thus, in addition to meeting the region's mobility needs, transportation projects must also meet the region's air quality needs. Furthermore, included projects must also be shown to have a reasonable expectation for funding.

1.2.1 Overview of the Local Transportation System

The Houston-Galveston TMA already has an extensive multimodal system in place. Much of the region's economic success can be attributed to its transportation system, which includes roadways, transit facilities, airports, and water port facilities. The region's future will be determined to a large degree by the effectiveness of this system to respond to the region's changing needs. Therefore, each component of this system must not only be effective alone, but must adequately link with the other components to form a comprehensive intermodal network.

The development of the regional roadway and transit network has been and continues to be an intrinsic element of regional land use and population distribution. At the core of this network is the Interstate Highway System (IHS). Two interstate highways, IH-45 and IH-10, intersect at the center of the region, providing highway access to the north, south, east, and west. US 59, a major northeast to southwest highway, is being evaluated for possible inclusion in the interstate system as IH-69. In addition, IH-610 is a loop circumnavigating the Houston central business district (CBD). Other major highways include US 290, SH 225, SH 288, and Beltway 8. All state and federal roadways are constructed and maintained by the Texas Department of Transportation (TxDOT). There are two toll roads, the Hardy Toll Road and the Sam Houston Toll Road; both operated by the Harris County Toll Road Authority.

Five public transit agencies serve the region. The primary transit provider is the Metropolitan Transit Authority of Harris County (METRO). It is the ninth largest transit authority in the nation, with more than 300,000 daily passenger boardings. METRO provides fixed route bus service, express bus service, and commuter bus service to 15 cities, including the City of Houston. The success of METRO's commuter service is due in part to its extensive network of park and rides, transit centers, and high occupancy vehicle (HOV) lanes. METRO's HOV lanes radiate from the Houston CBD to most major freeways, providing dedicated lanes to buses, vanpools, and carpools.

Figure 1.2: Regional Transportation Network



Brazos Transit Systems (BTS) operates public transit services in Montgomery, Liberty, and Chambers Counties. It utilizes the HOV lane system for its commuter service from The Woodlands (240,000 annual boardings) and the City of Conroe (20,000 annual boardings) in Montgomery County to employment centers within

Harris County – primary destinations being Houston Central Business District, Texas Medical Center and Greenway Plaza.

Many operators throughout the region provide specialized transit services, such as demand-responsive service. The largest such provider is the Gulf Coast Center (GCC), which operates a transportation program known as “Connect Transportation”. Transportation services are offered to residents in the rural and urban areas of Galveston and Brazoria Counties.

Island Transit, operated by the City of Galveston, provides fixed route service in the City of Galveston and offers Dial-A-Ride service to individuals who qualify for services under the American’s with Disabilities Act, and cannot access the fixed route buses. The Galveston Island Trolley provides service from the Historic Downtown Strand district to the Seawall.

Both transit and highways benefit from intelligent transportation systems (ITS). ITS uses computers and technology to improve the efficiency of the existing transportation network. When fully operational, the system will include a series of monitoring devices (such as video cameras, and automatic vehicle identification systems), communication devices (such as changeable message signs), ramp metering devices, and other computerized transportation management systems. At the heart of the region’s ITS is the Houston TranStar Traffic Management Center, a centralized state of the art facility that pools the resources of several agencies to develop and implement transportation control strategies.

Goods movement is one of the primary purposes of ground transportation. Truck and rail freight operations are a significant factor in the regional economy. The region boasts over 600 motor freight lines and numerous major railroad operations. There are three major truck/pipeline intermodal facilities, and five major truck/rail intermodal facilities. The primary railroads are the Burlington Northern-Santa Fe and Union Pacific, along with two principal switching lines.

The success of the local goods movement industry is intrinsically related to local port facilities. The Houston Ship Channel is a 52-mile inland waterway that connects Houston to Galveston Bay. It ranks eighth in the world in terms of tonnage and includes over 100 wharves and 60 operational steamship lines. The Port of Galveston (the first operational port in the region), the Port of Texas City, and the Brazosport Turning Basin in Freeport, complement the regional port system.

Three commercial airports comprise the core of the air transportation service: George Bush Intercontinental Airport, Houston Hobby, and Ellington Field. Combined, these airports have regularly scheduled flights for approximately ten

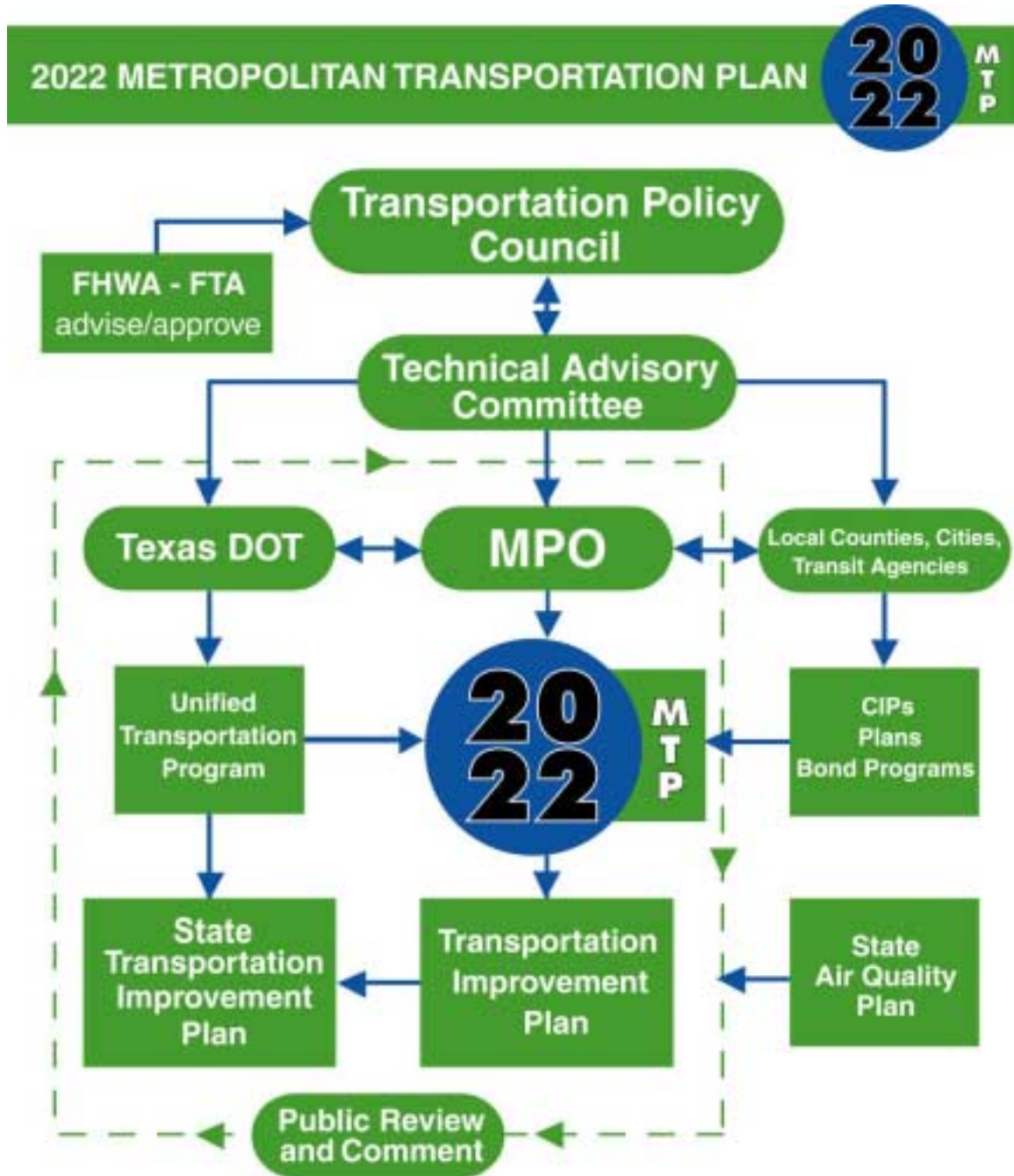
domestic airlines, and over ten international carriers and cargo lines. The general aviation community has access to more than 30 public airports with active Fixed Base Operators present on a majority of the fields.

1.3 PLAN DEVELOPMENT PROCESS

To ensure the optimal investment in transportation, projects and funding must be carefully planned in advance. FHWA and FTA have jointly required that each urbanized area, as a condition for the receipt of federal capital and operating assistance, have a process that results in a transportation plan consistent with the needs of the area. The legislation that mandates this process is called the Transportation Equity Act for the 21st Century (TEA-21), which amended the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991. As the designated MPO, H-GAC, guided by its TPC, coordinates an extensive transportation planning process that balances federal requirements with local needs.

There are three primary products produced by this process: the Unified Planning Work Program (UPWP); the 2022 MTP, the current Metropolitan Transportation Plan (MTP); and the Transportation Improvement Program (TIP). These three documents are interrelated, with each of the resulting products being a critical component of the other two products. The MTP provides a 20-year plan for the region's transportation needs, the TIP is a three-year implementation plan of the projects and programs of the MTP, and the UPWP outlines the tasks necessary for the development of the MTP and the TIP. The development of all three products is conducted in accordance with the adopted Public Involvement Plan and the Transportation Policy Council (TPC) approves each.

Figure 1.3: 2022 MTP Development Process



1.3.1 Unified Planning Work Program

The UPWP outlines the proposed tasks and the estimated costs associated with conducting the region's transportation planning and research for the year. This document is prepared annually by H-GAC, with the coordination of TxDOT and METRO. H-GAC, TxDOT, and METRO implement the UPWP.

The UPWP reflects the annual work program related to the other two primary documents, the MTP and the TIP. It delineates the specific tasks and subtasks necessary for developing these documents and by providing an outline for their design. The UPWP also affects the MTP and the TIP developments by identifying other research, planning, and administrative activities. The results from these efforts have impacts--either individually or collectively--on the design and conclusions of the MTP and the TIP.

1.3.2 Metropolitan Transportation Plan

The MTP is a long-range transportation planning document that provides a 20-year framework for addressing the region's transportation needs. It affords an overview of the existing system, identifies existing needs, forecasts future needs, and defines strategies to help the region meet those needs. In addition, the MTP ensures that the transportation system does not contribute to worsening the region's air quality. Furthermore, the system must meet established financial constraints; the cost of implementing the solutions has to be realistic and cannot exceed expected financial resources. The MTP influences both the TIP and the UPWP. It includes the projects and programs that will be programmed and implemented by future TIPs, and identifies activities that will become tasks in upcoming UPWPs.

1.3.3 Transportation Improvement Program

The TIP is a short-range programming document. It is a subset of and is included in the MTP, which allocates funding for all transportation and air quality projects and activities within the TMA. The TIP must include all roadway and transit projects that receive federal funds. Locally funded projects of regional significance must also be included for the air quality conformity analysis required by the CAAA of 1990. The TIP defines the implementation schedule for the first three years of the MTP. It is updated at least every two years and is included in the State TIP.

1.4 PUBLIC INVOLVEMENT

One of the objectives of the MTP development process is to increase public participation in the early stages of the transportation plan development and to provide opportunities for continued participation throughout the plan development process. In May 1994, H-GAC adopted the *Transportation Public Involvement Plan* (TPIP) which provides consistent, comprehensive, and identifiable ways for the MPO to seek public participation and input. The document provides the framework for the public involvement process that guided development of the *2022 MTP*.

1.4.1 *2022 MTP* Public Involvement Process

The *2022 MTP* is the product of a three-phased public involvement process that included public outreach meetings in the early, intermediate, and final stages of the development plan. The process reflects the education, outreach, and participation goals outlined in the TPIP. H-GAC relied on a variety of mechanisms to involve the public in the development of the MTP, including the distribution of the *VISION* newsletter, articles, and advertisements involving diverse media.

Public Meetings

In October and November 1998, H-GAC hosted a number of public meetings to obtain comments on an update to the *VISION 2020 MTP*. H-GAC held the meetings in Houston, Galveston, Baytown, Angleton, Conroe, and Sugar Land. The Fall 1998 and Winter 1999 *Vision* newsletters presented the results from the meetings. H-GAC held additional meetings on June 9, 1999, and February 8, 2000. To further public involvement, H-GAC conducted two public opinion surveys in early 1999. Revised goals for the MTP were developed based upon these public meetings and from public opinion surveys.

1.4.2 Public Involvement in Transit Planning

To solicit input and feedback on transit concepts that were to be studied in the development of its 2020 Plan, METRO convened a series of community forums and focus groups. METRO held community forums at each quadrant of its service areas. The general public and area community groups were encouraged to participate.

METRO also organized five focus groups to provide input on specific METRO services. While one focus group focussed on input from park-and-ride patrons, two other focus group sessions solicited input from non-transit users to determine what facilities or services could be provided that might make transit more appealing to them.

1.5 ORGANIZATION OF THE PLAN

The *2022 MTP* is organized in a manner that parallels the steps of the transportation planning process. The MTP starts with an examination of regional transportation issues. The issues lead directly to the vision and goals that resulted from public input. The next step is a determination of where the transportation system operationally falls short of the desired goals. This “needs analysis” identifies where resources should be concentrated and leads directly to the identification strategies for improvement.

“Strategies” is a generic term applied to all techniques used to compensate for a transportation deficiency. It includes projects, programs, and policies needed to enhance the existing transportation system. Unfortunately, limited resources restrict the number of solutions that can be realized. The financial plan forms the basis for balancing revenues with expenditures.

Regional trends, issues, needs, and strategies are detailed in the following chapters:

Chapter 2: Regional Trends. This section provides an overview of the socioeconomic trends that face the region. It includes population, employment, and household growth projections through the year 2022. The implications of current development patterns are also discussed in this chapter.

Chapter 3: The *2022 MTP* Framework. The vision of the future transportation system sets the framework for the MTP. The vision is the region’s overarching statement of purpose for the 2022 transportation system. The vision is supported by a series of goals developed in cooperation with transportation providers and users of the system.

Chapter 4: Regional Transportation Issues. The regional transportation system refers to all modes of travel and issues intricately linked to their usage. This chapter examines a number of factors that influenced the development of MTP strategies for the future system.

Chapter 5: System Management. One of the objectives of the *2022 MTP* is to promote the implementation of systems and strategies that contribute to the cost-effective and efficient operation of the transportation system. This chapter identifies some of those programs.

Chapter 6: Financial Analysis. As with any comprehensive plan, the *2022 MTP* includes a Financial Plan. The MTP's financial plan shows the future revenues for the region, and the anticipated expenditures and strategies for bridging the gap between the two.

Chapter 7: Strategies and Performance. The recommendations for the transportation system improvements through 2022 are based upon analysis of regional needs and priorities. All recommendations are in accordance with the goals and financial constraints.

Appendices. The appendices include a glossary and a list of acronyms, an account of how the plan meets the 7 planning areas established by TEA-21, and a listing of recommended programs and projects for the MTP.

As stated at the very beginning of this chapter, the *2022 MTP* is a continuing, comprehensive, and cooperative plan for the future transportation system. It should not be viewed simply as a document, but rather, an evolving process of goal setting, deficiency analysis, and solutions identification. It began and concluded with public comments, and it depends on the community for the eventual programming and implementation of the projects.

The future system will change over the years as regional priorities evolve, demographics shift, and new technologies develop. The *2022 MTP* can only provide a glimpse of the future from today's perspective. The MTP will evolve along with our transportation system; a fact that will be reflected in future updates.

REGIONAL TRENDS

2.1 The Role of Demographic and Economic Forecasts

The regional transportation system is an interconnected network of roads, ports, bicycle and pedestrian paths, and transit routes. It is both responsible for and responsive to our social and economic well being. Consequently, while the area benefits from an efficient transportation system, the characteristics of the area also affect the nature of the system itself.

The task of developing the future transportation system began by analyzing present and potential demographic and economic characteristics that affect local transportation. Trends are an indicators used to examine current as well as benchmark forecasts of future conditions. Key demographic factors include the location, size and income characteristics of households. Economic characteristics determinants of travel demand include jobs by industry and location. These factors affect the amount, trip purpose, trip origin, trip destination, and choice of travel mode. Thus, demographic trends are essential to the identification of future transportation needs.

2.2 Population and Employment

Estimates of current population, households, and employment were recently updated for 1995 and 1999 conditions in the eight-county TMA area. A national econometric model (REMI) was used to test future development scenarios for the H-GAC region, including the sensitivity of regional growth to levels of transportation infrastructure development.

The location of future demographic and economic growth in the eight-county area was also updated, as the distribution of population and employment determines travel patterns by establishing where many trips will originate and terminate. The location of persons and jobs also determine the preferred mode of travel. Areas with concentrated population may depend on mass transit, walking, or bicycling, while low-density population areas may depend more on automobiles or commuter transit more frequently.

A more detailed description of the methodology that was used for the economic and demographic forecasts employed in the *2022 MTP* is provided in [Appendix D. Regional Demographic and Economic Forecasts.](#)

2.2.1 The Process

The current forecasts are based on more robust historical trend information that included more of the recent growth in some of the faster growing parts of the region such as Fort Bend and Montgomery counties and the mid- town area in Houston. The REMI model provided the opportunity to develop alternative

scenarios assuming various changes in fundamental growth stimuli such as increased oil prices and increased revenues for roadway construction. The revised forecasts show approximately 6.1 million people in the region by 2022 and 3.05 million jobs. These estimates reflect approximately 500,000 more people and 50,000 fewer jobs than the previous forecasts.

2.2.2 Demographic Outlook

Household population is expected to grow at an average annual rate of 1.62 percent. By 2022, the region's population will reach 6.1 million. Harris County will lead the eight-county area in total population growth, capturing 54 percent of the regional population growth. However, counties adjacent to Harris County will experience much greater percentage increases with Fort Bend, Montgomery and Waller more than doubling in population over the next two decades.

The forecasted increases in employment tells a similar story. Region-wide employment will grow at an average annual rate of 1.38 percent, reaching approximately 3 million workers by 2022. While Harris County will remain the predominant location for jobs, capturing 31,700 (or 72 percent) of the anticipated 43,900 jobs added annually, its share of the regional job market will decline. Conversely, all of the adjacent counties except Galveston County will have greater percentage increases in employment than Harris County. Fort Bend and Montgomery will lead the area in fastest rates of growth with over 180 percent through 2022.

Table 2.1: Regional Population, 1995 and 2022

County	1995	2022	Change	
Brazoria	194,966	293,014	98,048	50%
Chambers	22,256	33,930	11,674	52%
Fort Bend	276,051	612,067	336,016	122%
Galveston	235,696	352,264	116,568	49%
Harris	3,049,197	4,141,499	1,092,302	36%
Liberty	60,977	106,099	45,122	74%
Montgomery	230,917	537,237	306,320	133%
Waller	24,927	50,269	25,342	102%
Total	4,094,987	6,126,379	2,031,392	50%

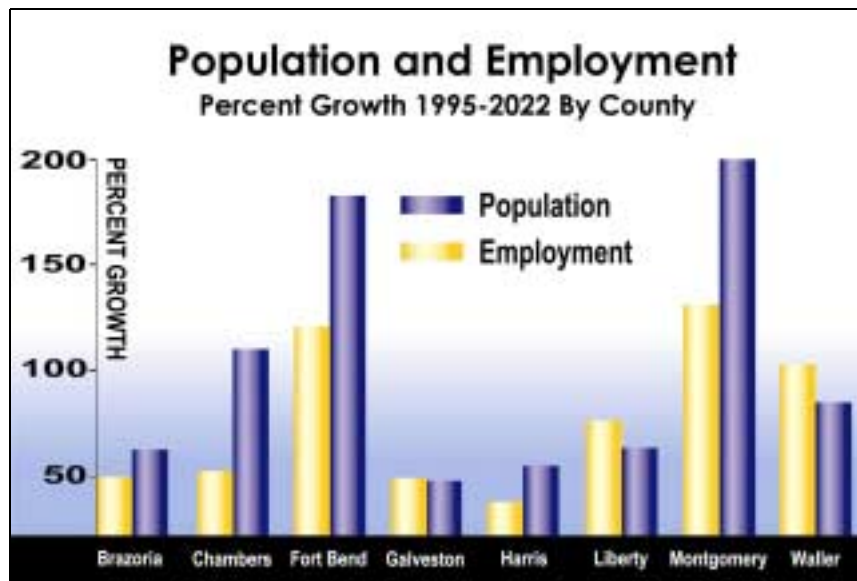
Source: H-GAC Data Services Department.

Table 2.2: Regional Employment, 1995 and 2022

County	1995*	2022*	Change	
Brazoria	70,127	112,777	42,649	61%
Chambers	7,120	14,889	7,769	109%
Fort Bend	64,997	181,780	116,783	180%
Galveston	77,028	113,897	36,869	48%
Harris	1,564,816	2,420,639	855,823	55%
Liberty	14,543	23,087	8,544	59%
Montgomery	55,759	166,309	110,550	198%
Waller	7,545	13,746	6,201	82%
Total	1,861,934	3,047,123	1,185,189	64%

*Total wage and salary jobs, excluding private households. *Source: H-GAC Data Services Department.*

Figure 2.1



2.2.3 Target Demographics

One notable exception to the suburban growth trend is evidenced by a resurgence of employment in the inner urban area (inside IH 610) of Harris County. This area will attract more than 217,000 new jobs by 2022. Growth within the Central Business District will exceed 1,600 additional jobs per year.

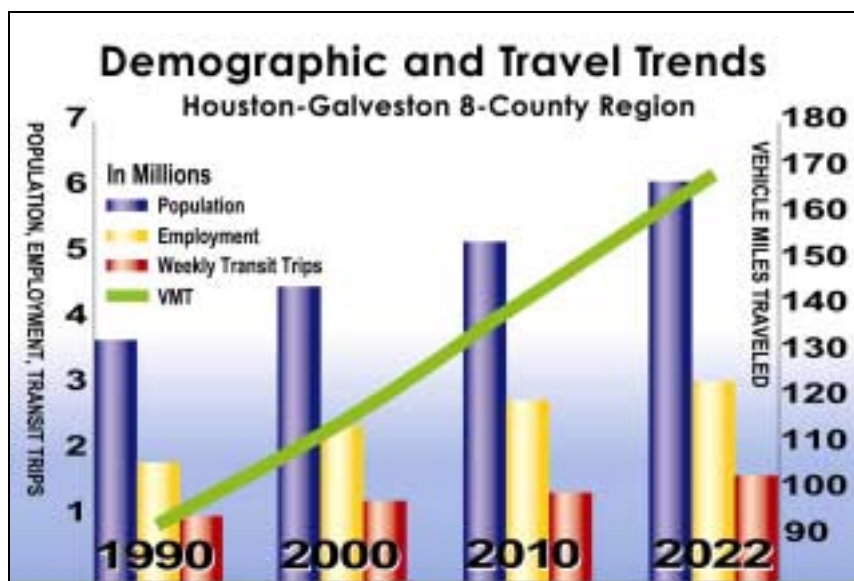
In order to reflect the expected outcomes of public investments and policies that continue to encourage growth and redevelopment within IH 610 the MPO, in conjunction with the City of Houston and METRO, developed 'target demographics' to use for transportation planning purposes. This effort is

supported by the 2022 MTP goals (see Chapter 3), one of which is for the coordination of land use and transportation development. The TPC representatives from across the region agree that a strong regional core is a necessity for the regional economic vitality. The target demographics do not affect the forecasted totals, only the distribution of those totals within Harris County. Harris County is the only county affected by this redistribution.

2.3 GROWTH IN VMT

By 2022, vehicle miles traveled (VMT) is expected to reach 168 million miles on typical weekdays, an increase of 82 percent since 1990. The growth in VMT can be attributed to several factors including population, job, and income growth, access to motor vehicles, and residential and job location changes. Employment and income growth in particular have significant impacts on travel. Nationwide, the civilian labor force increased more than twice as fast as the population between 1970 and 1994. Much of the employment growth is attributable to women entering the labor force in large numbers during that period. Women now constitute 46 percent of the U.S. workforce, up from 38 percent in 1970. The inclusion of women in the workforce has implications for household income and household size. Both of these factors are related to an increase in the number of trips per household for recreational, business, and other household activities.¹

Figure 2.2



¹ "Transportation Statistics Annual Report 1996," [Bureau of Transportation Statistics](#), United States Department of Transportation, Washington, 1996.

By 2020 more people will be utilizing the region's roadways more often than ever before. By necessity, the future transportation system will be more multimodal and diverse in order to accommodate the projected increase in demand.

2.4 DEVELOPMENT PATTERNS

The Houston-Galveston region has a developmental pattern similar to many metropolitan areas in America, a pattern especially apparent in those cities that witnessed their primary growth after World War II. This pattern began with a strong central employment center surrounded by residential and retail development. Peripheral development was spawned by advances in automotive technology and by increased investment in roadways, specifically the Interstate Highway System. The peripheral development was not only created by the increased roadway investment, but it also increased demand for further investment in roadways.

At the turn of the century, Houston and Galveston both had inner-city trolley systems to provide transit services for the centrally populated cities. Gradually these systems disappeared as the cities and their highway networks grew. (Houston street car operations ended in 1940 after serving the city for 49-years, while Galveston restarted its trolley service in 1988.) The expansion of both cities, and of the region as a whole, coincided and depended on the expansion of the highways, and development was designed to be served by the automotive mode of travel.

Decades after flight to the suburbs began, the concentration of suburban residential and retail land uses reached a point such that they began to generate a significant employment base of their own. Major employment centers and other significant activity centers began to develop on the periphery of the central business district (CBD), especially to the north and west of Houston. After having its residential and retail base stripped from it, the Houston CBD began having its employment drawn away as well. Today the CBD is still the greatest single employment center in the planning region, but it is less dominant than it once was.

Developmental patterns are dynamic by nature, and while the suburbs are still being developed at a fairly quick pace, there is also a movement of people back into the city. This group of people is primarily composed of upper middle class families and single professionals. These development trends have significant implications for the transportation system. Population and employment dispersion from the central business district has the propensity to increase demand for arterials and other roadways, driving growth in vehicle miles traveled

and increasing public and private costs for regional transportation. Continued decentralization of housing and employment coupled with low-density patterns of development, results in increasing difficulty in meeting travel demand, especially in suburban and rural portions of the region.

2022 MTP FRAMEWORK

3.1 INTRODUCTION

The regional trends discussed in the previous chapter are indicative of the factors that forged the *2022 MTP*: a combination of technical analyses, regional priorities, and legislative requirements. These issues are the foundation of the framework for the *2022 MTP*. The framework itself is organized in a hierarchy composed of one vision and eight goals. The following changes were proposed to and endorsed by the Technical Advisory Committee of H-GAC at the May 18, 1999 meeting:

3.2 Vision Statement

A “vision” is a statement of the preferred future or outcome for a group. It defines the ultimate end that a group would like to attain and, as such, it serves to guide the actions of the group. In the most difficult times, the vision should serve as the touchstone that allows the group to work together for that common purpose.

The Houston-Galveston Regional Metropolitan Transportation Plan will enhance mobility by providing an efficient, affordable, safe, and environmentally responsible transportation system for both people and goods.

3.3 Goals

The next step in establishing a framework involved the development of goals. The goals provide the means for attaining the vision. While the vision is intrinsically general in nature, the goals must be more specific to serve as milestones towards the ultimate objective.

Taking components of the vision and incorporating the additional issues discussed in the previous chapter formed the goals. This resulted in a list of eight goals to serve as milestones towards the completion of the vision. The goals describe a preferred condition and are stated as nouns. The eight goals are listed below in no particular order.

3.3.1 Increase the number of travel choices for people & freight movement.

- Evaluate transit options, including urban rail, in all travel corridors where major transportation improvements are being considered.
- Where feasible, provide transit options to those that cannot or chose not to drive a car.
- Improve the ongoing public education programs on alternatives to driving alone.
- Develop a variety of transportation solutions that meet the unique needs of each community in the region.
- Develop a system of connected bicycle and pedestrian facilities within each community and throughout the region.
- Evaluate adding new bicycle and pedestrian facilities in all new roadway construction or major maintenance projects.

3.3.2 Adequately maintain current roads & transit services.

- Give priority to maintaining, operating, and managing existing roadways and transit services over expanding these facilities and services.

3.3.3 Promote coordinated land use & transportation development.

- Transportation projects should support regional and local land use policies and plans.
- Transportation projects should promote community and neighborhood cohesion.
- "Smart growth" and compact land use development should be encouraged with appropriate transportation investments.

3.3.4 Improve access to & connections within the transportation system.

- Provide convenient transfers between connecting methods of travel necessary to complete a trip.

- Design future HOV facilities to provide easy access onto and off the facilities.
- Improve local streets necessary for shorter distance trips.

3.3.5 Efficient movement of people and goods.

- Consider the needs of freight movement in all aspects of transportation development.
- Encourage the active involvement of freight shippers in transportation development.
- Improve street & sidewalk access to transit services and encourages land uses that promote transit ridership.
- Use new, proven technologies to increase the efficiency of our transportation system.

3.3.6 An environmentally responsible system.

- Minimize the negative impacts of transportation projects on the physical and social environment of communities.
- Include in transportation project budgets sufficient funding to mitigate a project's environmental impacts to an acceptable level.
- Give priority to programs that reduce vehicle emissions.
- Provide incentives to encourage the use of alternatives to driving a car alone.

3.3.7 A cost effective and affordable transportation system.

- Foster governmental cooperation to avoid duplication and minimize costs.
- Encourage the joint development and operation of transportation facilities to reduce costs and maximize benefits.
- Consider life cycle costs and cost/benefit analyses in transportation project selection.

3.3.8 Safe and secure movement of people and commodities

- Identify and improve roads for evacuation during emergencies and natural disasters and support emergency management programs.
- Identify and maintain roads and railroads for the transfer of hazardous materials.
- Design and operate transportation facilities and services to be safe and secure for the public.
- Where feasible, provide grade separations on major rail corridors.
- Identify and eliminate safety hazards.

3.4 INCORPORATING THE GOALS INTO THE MTP

The goals described above provided the reference point for the identification of regional needs and priorities. Whenever possible, performance measures were developed to assess the potential of projects and programs to further the goals of the *2022 MTP*. During the project review phase of the MTP development, special characteristics of projects were identified such as a project's relationship to intermodal facilities, whether or not it advanced the goal of multimodalism, or filled "gaps" in the existing system to create more seamless connections. All projects were reviewed for their cost effectiveness in terms of their potential to reduce travel times or emissions.

Financial considerations and public participation were two key elements in the development of the *2022 MTP*. Public comment was encouraged throughout the process. Indeed, public comment was the driving force behind the development of MTP goals. The project and programs proposed by the public and regional transportation providers were constrained by the financial realities of revenues versus expenditures.

REGIONAL TRANSPORTATION ISSUES

4.1 INTRODUCTION

The goal-based framework discussed in the previous chapter is fundamentally about improving the transportation system to make it safer, more effective, and more environmentally sound. These goals will not be easily achieved, but they provide a direction for the planning effort; this effort begins with an analysis of the issues involved in development of the future transportation system.

4.2 MAINTENANCE AND PRESERVATION

The regional transportation system consists of interconnecting, interdependent modes and services. For example, the roadway network serves as the foundation upon which trucking and bus transit services are provided. Moreover, the roadway network connects our ports, airports, and rail terminals, to businesses and residents in the region. Therefore, the condition and scope of the roadway network directly affect the efficient operation of the entire system.

Effective maintenance and preservation of the transportation system has numerous benefits to users of the system including travel time reductions and enhanced safety. Investment in maintenance and preservation extends the life of existing facilities and is ultimately one of the most cost-effective strategies for assuring adequate capacity for the regional transportation system.

Maintenance of streets and highways

To obtain a better understanding of the region's future roadway rehabilitation needs, a pavement performance analysis was undertaken utilizing computer models developed by TxDOT and METRO. Two investment scenarios were investigated:

- A projection of future pavement conditions with no increase in real annual average pavement expenditures (based on annual average expenditures for the period 1990-1996); and,
- A projection of pavement maintenance budgets necessary to keep roadway pavement conditions at current service levels over time.

State maintained roadways

Pavement conditions for current investment levels and two higher investment levels are summarized in Figure 4.1. The three scenarios shown correspond to

preservation expenditures of \$52 (historic pavement maintenance expenditure exclusive of reconstruction), \$108, and \$167 million per year over a period of ten years for TxDOT's Houston District.² Results indicate that current annual expenditures of \$52 million would be insufficient to maintain the 1996 condition score of about 90.5 (100 representing perfect pavement condition). Over time approximately \$108 million will be required annually. Taking into account the rehabilitation of pavements that effectively occurs during roadway widening and replacement, the average annual pavement-related expenditures in the region during the 1990s has been approximately \$90 million, in 1995 dollar terms.

Therefore, this analysis implies that an increase in pavement preservation expenditures of over 20 percent would be needed to prevent state maintained roadways from deteriorating significantly. Scenario 3 suggests that additional expenditures in excess of a 20 percent increase (i.e., beyond the \$108 million scenario depicted) provide only marginal returns over time.

Locally maintained roadways

Although employing a somewhat different ratings system, pavement analysis models developed by METRO for locally maintained roadways in Harris County also indicate that the current pavement-related expenditures on locally maintained roadways will be insufficient to prevent the system from deteriorating further over time.³ Given the assumptions of the pavement model and the age of its data, the results also appear to indicate that a 20 to 25 percent increase per year in local pavement preservation budgets will be required to maintain local streets at service levels observed in 1994. This would represent an increase of approximately seven to ten million dollars per year or a total of \$45-48 million per year.

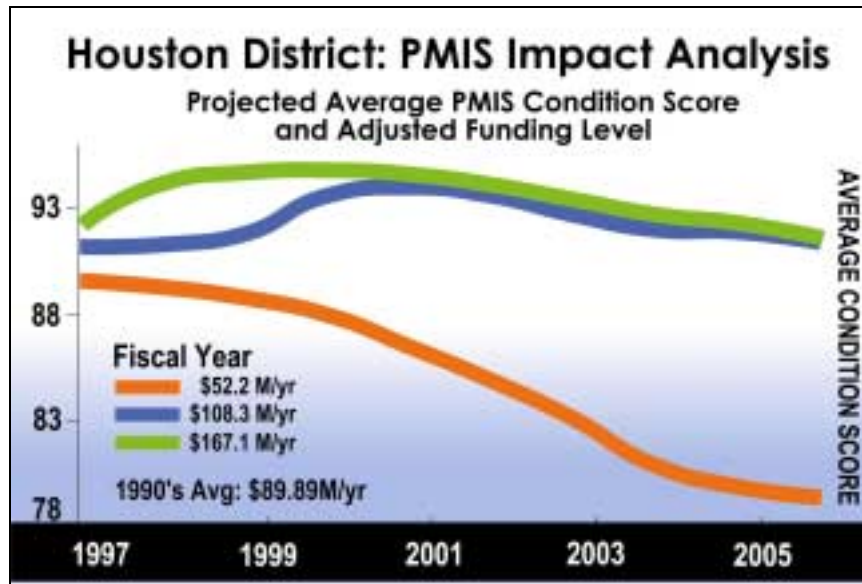
Maintenance of the public transportation systems

Maintenance of the region's public transportation systems receives priority use of mass transportation funds received through federal apportionment (section 5307). Transit maintenance for vehicles, shelters, transit centers, park-and-ride lots, and maintenance and operating facilities is expected to exceed \$3.7 billion (approximately \$162 million per year) over the life of the *2022 MTP*.

² The funding levels shown have been converted from PMIS funding levels of \$25, \$50 and \$75 million. Because the TxDOT Houston district pavement rehabilitation unit costs are generally higher than those used in the PMIS program, factors were applied to the model results in order to provide the proper context for the analysis. In addition, because the scope of the analysis covered only 70 percent of the district's lane miles, expenditures were adjusted upwards by about 43 percent to obtain appropriate district totals.

³ A score of "100" represents perfect roadway condition, as in the PMIS case. However, because METRO and TxDOT pavement systems use different evaluation tools (i.e., different definitions of deterioration, treatment costs, etc.), the condition scores as evaluated by the models bear no relation to one another.

Figure 4.1: Maintenance Needs



4.3 GOODS MOVEMENT

Trucks, trains, ships, and airplanes involved in cargo operations are vital components of the national and regional transportation system. In 1993, the nation's freight transportation system carried 12.4 billion tons of goods worth more than \$6.3 trillion, for a total distance greater than 3.7 trillion ton-miles. Nearly three-quarters of the value of items transported moved by truck. Rail, water, pipeline, and air transport followed in order of magnitude. In 1990, 31.6 percent of the total revenue ton-miles of freight were transported on highways compared to 17.9 percent in 1980.⁴

The movement of goods within the Houston-Galveston eight-county area is made possible by an extensive intermodal network that connects the region's intermodal facilities to distribution routes. By definition, an intermodal facility accommodates and links two or more modes of transportation for intrastate, interstate, and international movement of passengers and/or freight. There are 72 'Regionally Significant' intermodal terminals in the Houston-Galveston TMA including: 1) commercial airports; 2) ports, 3) freight rail terminals; 4) pipeline terminals; 5) an Amtrak station; 6) an intercity bus terminal; 7) truck terminals; and 8) ferries, as shown on the map contained in Figure 4.2.

In terms of the regional transportation system, mobility and access improvements provide the greatest opportunity to enhance the efficient movement of goods throughout the region. The National Highway System forms the cornerstone of the intermodal network that distributes goods throughout the region by truck. Access to

⁴“Annual Report”, United States Department of Transportation, June 1992.

the NHS from the intermodal facilities is the most critical performance measure of the efficient operation of the intermodal network. Access characteristics include direct routing to the NHS, routing to the NHS via connector, route restrictions, vehicle queuing, and signage from the NHS to the facility. Because intermodal facilities vary significantly according to function (passenger or freight), transportation mode, and ownership (public or private), it is difficult to develop standards or performance measures to evaluate the efficiency of the region's intermodal facilities and the routes that connect these facilities to the NHS.

Mobility integrates intermodal and congestion management systems and includes factors such as congestion, traffic signalization, and at-grade railroad crossings. Physical attributes are the actual characteristics of the roads that serve the region's intermodal facilities. These characteristics include: road width; number of lanes; turn radii; pavement condition; and height and weight restrictions. The physical attributes of the roads that serve the region's intermodal facilities may impede the efficient flow of passengers and freight. Identifying these attributes will help to rectify intermodal system deficiencies.

In addition to access problems, the intermodal network is subject to passenger and commuter competition. Most highways, railways, airports, and seaports carry both passengers and freight, a source of both efficiency and inefficiency. Joint use of the system allows for fuller utilization of the infrastructure. Trucks and cars share virtually all major roads. This overlap between passengers and freight means competition for network space, scheduling conflicts, and possible safety, noise, congestion and environmental problems. Efficiency at ports is further threatened by increasing passenger car congestion on truck routes. Landside access to ports creates conflicts between passenger and freight transportation. Congestion is made worse at many ports by rail lines that intersect local streets. Moreover, ports in many areas cannot expand or be reconfigured because of competition with other land uses.

The region has four deep-draft ports in Houston, Galveston, Texas City, and Freeport, and a shallow-draft port in Sweeney. Barge traffic moves between the ports and the U.S. inland river system via the Gulf Intracoastal Waterway.

In 1999, almost 9,200 ships used the deep-draft ports; 6,500 of which went to Houston. The Port of Houston is a 25-mile (40-kilometer) complex of diversified public and private facilities just a few hours sailing time from the Gulf of Mexico. It is the world's seventh largest port, handling 169 million short tons of cargo. In containerized cargo, the Port handled over 1 million TEUs (20-foot equivalent units), the largest volume of all the Gulf ports. The total value of foreign trade through the Port in 1999 was \$34.1 billion. Leading trade partners by value were Mexico, Germany, Venezuela, Brazil and the United Kingdom. The top five commodities traded were: petroleum and petroleum products; organic chemicals; machinery; iron and steel; and vehicles, all accounted for 64.5 percent of the total.

Two major railroads, Burlington Northern Santa Fe and Union Pacific, along with the Port Terminal Railroad Association (which services the Houston Ship Channel area) operate on over 1,300 miles of track connecting the region to the continental United States, Canada, and Mexico. Houston ranks as one of the nation's busiest rail centers, with 2.5 million rail cars passing through each year. Typical commodities shipped via rail through the region include chemicals, plastics, grain, forest products, consumer goods, potash, cotton, and steel. The rail system is integrated with the local trucking industry via five major intermodal terminals.

Motor freight moves freely in Houston with service provided by 150 local trucking lines and 619 non-local truck lines, including special-commodity and irregular route carriers (e.g. oilfield equipment, tank trucks). United Parcel Service serves the region with three major distribution centers.

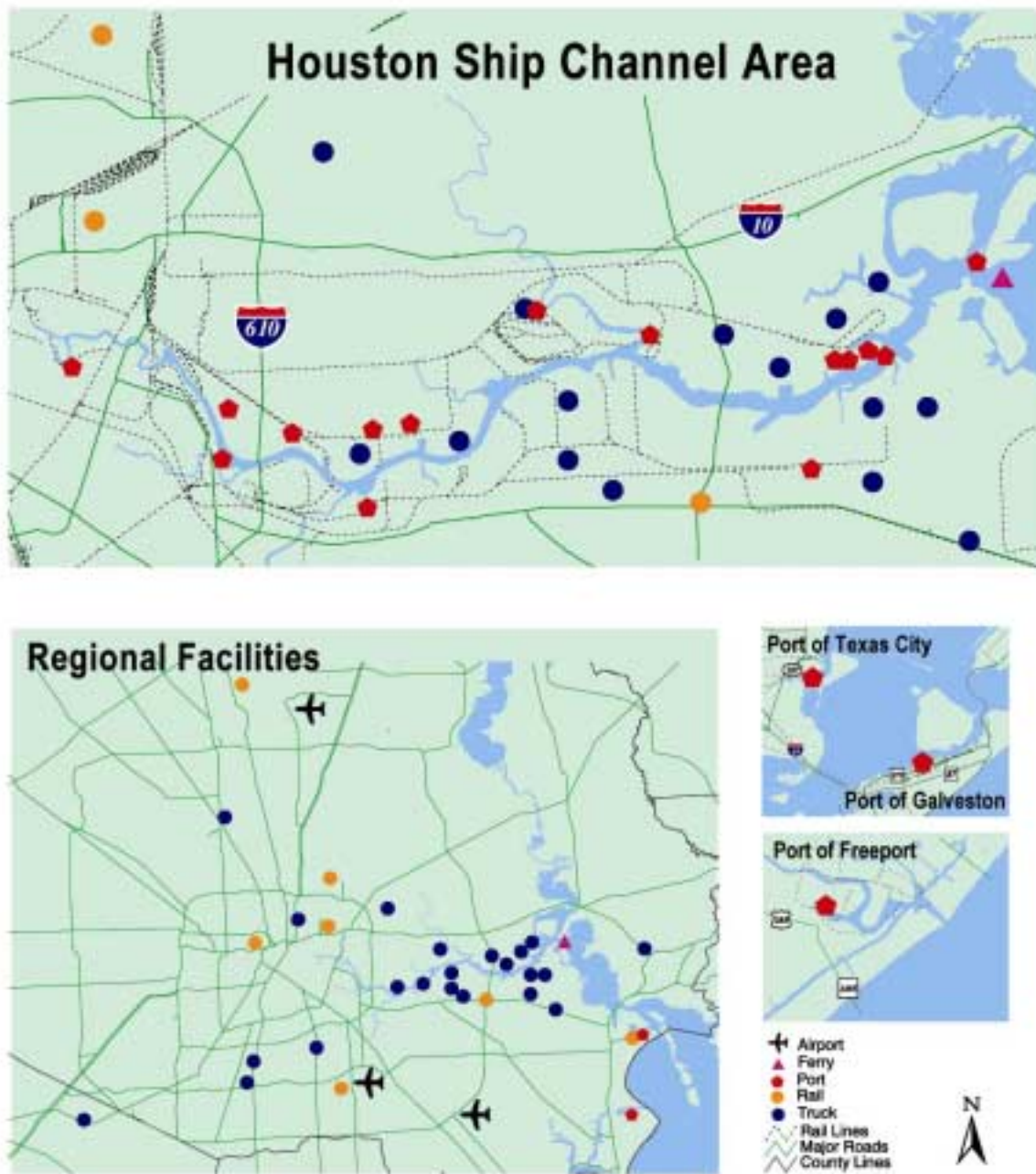
The bulk of the region's airfreight goes through three major airports-- George Bush Intercontinental, William P. Hobby Airport and Ellington Field-- that constitute the Houston Airport System. It is the fourth largest multi-airport system in the nation and the sixth largest in the world. In 1998, the system moved almost 734,000,000 pounds (367,000 short tons) of high-value freight to destinations around the world.

The majority of the volume, 600,000,000 pounds, was handled by Intercontinental Airport's twelve cargo airlines. The system's overall cargo traffic has grown at about 10 percent annually while Intercontinental's growth has been over 20 percent per year. To facilitate this level of projected growth, the City of Houston is investing \$1.7 billion in the current five-year construction and development program. The program includes an \$86 million, 550,000 square ft, air cargo distribution center, a new runway and expanded taxiways.

4.4 TRANSPORTATION SYSTEM SAFETY

Safety is one of the most fundamental requirements of any successful transportation system. During the MTP "visioning" meetings, much of the public expressed concern over safety issues. This section examines safety issues related to the regional roadway network and transit services.

Figure 4.2: Regional Freight Facilities



4.4.1 Roadway Safety

Statewide, TxDOT and the Texas Department of Public Safety (DPS) are the agencies primarily responsible for addressing roadway safety. The former addresses safety from a facility design and operations standpoint while the latter is responsible for monitoring and enforcing operational safety. TxDOT is developing a Safety Management System (SMS) in cooperation with Texas DPS as well as regional transportation agencies, local transit agencies, and local jurisdictions. The purpose of the SMS is to establish a systematic process for improving roadway safety by reducing the number and severity of traffic accidents, identifying and improving evacuation routes in coastal areas, and implementing safety measures at railroad crossings.

Traffic Accidents

The core component of the SMS is the identification of locations that have historically witnessed a high number of accidents or crashes. Automotive accidents are the most prevalent safety issue associated with the transportation system. Thus, the first step is identifying the sites that have a history of a high number of accidents and examining those locations to determine their causes. Table 4.1 lists the top 10 high accident locations on state roadways. Where design flaws, poor maintenance, or other roadway defects are identified, measures can be taken to rectify the problem. Human factors that lead to accidents, however, cannot be impacted as easily.

Railroad Crossings

Accidents that occur at rail crossings are rare, but those that do occur are often calamitous. For this reason it is imperative that at-grade rail crossings are made as safe as possible. TxDOT has developed a railroad safety program to address unsafe railroad crossings. Projects include updating railroad signals and protection device, installation of railroad signals, replacement of planking panels, construction of grade separated crossing, and the placement of concrete traffic barriers and metal-beam guard fences. Over \$43 million was programmed in TxDOT's 2000 Unified Transportation Program for railroad grade separations in the Houston District for the years 2000-2003.

Table 4.1: Top 10 High Accident Locations on State Roadways
(Combined over a three year period: 1993, 1994, and 1995)

Rank	Total Accidents	Control Section No.	Mile- point	Location
1	349	110-06	37.0	IH 45 (N) at BW 8
2	309	271-07	15.1	IH 10 (W) at BW 8
3	288	500-03	1.7	IH 45 (South) at NASA Road 1
4	271	271-17	34.4	IH 610 (West Loop) at US 59 & Richmond Entrance & Exit
5	251	27-13	9.6	US 59 (S) at Hillcroft
6	233	3256-01	5.4	BW 8 at Bissonnet
7	231	271-16	8.0	IH 610 (South Loop) at Kirby
8	227	27-13	10.8	US 59 (S) at Bellaire
9	225	27-13	8.0	US 59 (S) at Chimney Rock
10	218	3256-01	7.5	BW 8 at Bellaire

Source: Texas Department of Transportation. 1996.

Emergency Evacuation Planning

Four of the eight counties in the H-GAC transportation management area include hurricane evacuation planning zones: Brazoria, Chambers, Galveston, and Harris. These planning zones are composed of both evacuation zones and contingency zones. Evacuation zones are areas that can be penetrated by storm surge and/or threatened by dangerous winds from hurricanes with sustained winds of 130 mph or less. Contingency zones are areas that can be penetrated by storm surge and/or threatened by dangerous winds from hurricanes with sustained winds over 130 mph. Brazoria County includes five evacuation zones and two contingency zones. Chambers includes three evacuation zones and one contingency zone. Galveston County includes six evacuation zones and one contingency zone. Harris County includes five evacuation zones and three contingency zones. The primary and secondary evacuation routes for these four counties are displayed in Table 4.2.

Houston TranStar serves as the regional emergency management center where state and local government agencies respond to emergencies.

Table 4.2: Key Evacuation Routes

Primary Evacuation Routes		Secondary Evacuation Routes	
Brazoria County			
SH 6	SH 288	<i>SH 332</i>	FM-2611
SH 35	BS 288B	FM 523	FM-2917
SH 36	FM 521	FM 1301	<i>FM-2918</i>
		<i>FM-1495</i>	<i>FM-3005</i>
		FM-2004	
Chambers County			
IH-10	FM-1409	<i>SH-124</i>	
SH-61	FM-1406	<i>FM-562</i>	
SH-146		<i>FM-563</i>	
Galveston County			
<i>IH-45</i>		<i>SH-3</i>	FM-2004
<i>SH-6</i>		<i>SH-87</i>	<i>FM-3005</i>
<i>SH-146</i>		<i>SH-124</i>	
Harris County			
IH-10	SH-225	<i>Red Bluff Road</i>	<i>SH-3</i>
<i>IH-45</i>	SH-330	<i>NASA Road 1</i>	<i>SH-201</i>
I-610E	BW 8	Fairmont Pkwy	SH-134
US-90	<i>FM-2100</i>	<i>Spencer Hwy</i>	
<i>SH-146</i>			

Note: Italics denote routes subject to flooding. Source: Hurricane Contingency Planning Guide. Division of Emergency Management. April 1994.

4.4.2 Transit Safety

Safety, or the perception of safety, is one of the primary determinants that influence an individual's decision to use any mode of transportation. For this reason, the safety and security of transit riders and transit employees is a fundamental concern for the region's transit providers. Each transit operator decides what security measures are appropriate for its service and establishes its own policies and programs to ensure the safety of transit users. All of the transit agencies in the region have programs in place to address safety issues for their employees and patrons. Transit drivers are trained in safe driving practices; they are especially aware of the presence of pedestrians, bicyclists and motorists sharing local roadways. They are also trained to respond appropriately in emergency situations. METRO and BTS buses are equipped with radios used by drivers in emergency situations. When a security problem occurs, the driver contacts the operational center for assistance. If a problem cannot be resolved over the radio, local law enforcement agencies are contacted for support.

METRO police oversee the safety of HOV lanes, all streets that have bus routes, transit facilities, and ride stores. The METRO bicycle police patrol downtown areas to ensure security for pedestrians and transit patrons. Park and ride lots are patrolled by contracted security guards during primary hours of operation, usually 6

a.m. to 9 p.m., depending on the specific facility. METRO police provide regular patrols throughout the day and night. Ample lighting is provided at park and rides. Access is controlled by limitations on the number of open gates. METRO police patrol transit centers as well. Some of the transit centers include a full-time street supervisor for traffic management. The street supervisor maintains radio contact with the operations center and reports any security problems to METRO police. METRO police continuously patrol HOV lanes during regular hours of operation. All gates are secured along the HOV lanes after hours. METRO is investigating the potential of ITS traffic surveillance cameras for use in securing the HOV lanes.

In addition to adhering to fundamental principles of transit safety, METRO has initiated a number of innovative safety programs including Crime Prevention Through Environmental Design (CPTED). The premise of CPTED is that the placement and design of facilities and routes should incorporate an awareness of the area in which the facility or route will be located. Certain designs are more inherently safe in some areas than others. Factors that may affect security are taken into consideration in the design of everything from bus routes to bathroom facility placement.

4.5. ENVIRONMENTAL CONSIDERATIONS

Environmental factors can have a major impact on regional development patterns and the resulting transportation system. Environmental considerations affect the location, type and design of new facilities, and the redevelopment of old ones. This section outlines the key environmental issues in the Houston-Galveston TMA that have the potential to affect transportation planning. Because individual projects are subject to environmental assessments or impact statements as required by the NEPA process, the elements considered in the MTP are presented at a regional level.

4.5.1 Wildlife and Vegetation

The eight counties of the TMA contain portions of eight ecological zones. These ecological zones encompass upland forest, both post oak woodlands in the north and Big Thicket pine hardwoods in the east. Extending to the southeast are the hardwood bottomland forests of the Trinity, Brazos, and San Bernard River valleys. Toward the Gulf, coastal prairies and marshes constitute two more distinct habitat areas. The Gulf is formed by an extensive zone and bay-estuary system. The ecological zones provide habitat for many different species throughout the TMA.

Endangered and Threatened Species

Several endangered and threatened species have been identified in specific locations in the TMA. The U.S. Fish and Wildlife Service (FWS) Clear Lake Field Office provides federal agencies in the region with a complete inventory of species officially listed as threatened and endangered and of candidate species which are currently under consideration for listing. Any project with federal involvement will have to include a study to identify if any endangered species in the project area.

Migratory Birds

Ducks and geese have long used areas within the TMA as major wintering and feeding areas. The largest wintering area begins in Harris County around Addicks and Barker Reservoirs, out along IH-10 west to an area past Brookshire to the west and running north to south from Waller proceeding to US 90A near the Richmond-Rosenberg area. Other significant areas where ducks and geese winter include:

- virtually all of Chambers and southern Liberty counties;
- Galveston County from the coastline to Hitchcock;
- Brazoria County from the coastline up Chocolate and Austin Bayous to near the Fort Bend county line and from Freeport to the southern county line; and,
- Fort Bend County around Lake George.

Recent growth and development in the western portion of Harris County and eastern Fort Bend County has eliminated a portion of the migratory bird wintering and feeding areas. The Texas Parks and Wildlife Department (TPWD) reports that the birds have been moving westward along the IH-10 corridor to Austin, Wharton, and Colorado counties, where more rice farms are located. Development plans in the area will continue to threaten their habitat.

4.5.2 Water Resources

Water resource issues in the TMA have always impacted the transportation system. Surface streams and water bodies, such as lakes, ponds, bayous, bays, and wetlands, must be traversed or worked around. Drainage patterns also have to be considered to protect adjacent land uses. Groundwater recharge zones must be protected to maintain water quality. Actual groundwater usage will affect transportation projects as well. Large amounts of groundwater withdrawal lead to subsidence, shifts in drainage patterns, and shifts in the bearing capacity of soils. However, the most important facets of hydrology affecting new transportation projects are floodplains and flooding, water quality, and wetlands.

Floodplains

The coastal area in which the TMA is located has a high natural potential for flooding. The Houston-Galveston area is characterized by relatively flat terrain, poorly drained easily eroded soils, and numerous slow moving streams, creeks, and bayous. Moreover, this part of the coast is subject to intense periods of rainfall from thunderstorms, occluded fronts, tropical storms, and hurricanes. Urbanization increases the magnitude of stream discharge and consequently increases the frequency and extent of flooding. Impermeable surfaces and structures resulting from development in flood plains have constricted many of the floodways, causing a backup of water. This results in the flooding of previously safe areas. As such, the effects of urbanization on the hydrology of streams must be continually assessed with regard to floodplain delineation for the TMA.

Wetlands

Wetlands represent less than 5 percent of the total land area in Texas, but they are critical to the state's environmental quality and biodiversity. Along the Texas Gulf Coast, wetlands provide many economic and recreational benefits to the region's residents including, protection of shorelines from erosion, improvement of water quality through filtration of pollutants, and the propagation of fish and wildlife. The increased level of human activity in sensitive areas affects wetlands and the natural coastal environment. These impacts heighten as land less suitable for development is drawn into use at the fringe of expanding urban areas.

4.5.3 Environmental Considerations in Project Planning and Development

The environmental impacts of specific projects recommended in the MTP are assessed during project development. All federal aid projects must complete an environmental assessment. Projects that involve construction on new locations generally need an environmental impact statement (EIS) that looks at all of the factors listed above as well as a few others. Projects may not proceed to implementation prior to completing all necessary environmental review.

Transportation plans must consider the environmental impacts of projects early in the planning process. Significant opposition to certain projects on the grounds of environmental degradation can be expected. For example, plans for the construction of portions of SH 99, the Grand Parkway, have faced considerable opposition from a number of interested groups. The roadway would encroach upon the habitat of thousands of migratory birds that reside in an area known as the "Katy Prairie" in western Harris County and southern Waller County. Until this issue is resolved, the further development of the project is in question.

SYSTEM MANAGEMENT

5.1 INTRODUCTION

The *2022 MTP* emphasizes the need to improve mobility by reducing congestion both today and in the future. Rather than simply relying on adding roadway lane miles as a means to reducing congestion, the MTP focuses on a variety of modal alternatives including transit service expansion and new bicycle routes. Another key congestion reduction strategy is better management of the existing and future transportation system. This chapter focuses on transportation strategies that contribute to improving regional mobility, safety, and air quality, by enhancing capacity without adding roadway lane miles.

5.2 CONGESTION MANAGEMENT SYSTEM

One objective of the *2022 MTP* is to create strategies that reduce existing traffic congestion and prevent its occurrence in areas that are currently not congested. Implementation of a congestion management system (CMS) is one means of achieving this objective. A CMS is an ongoing process that is designed to systematically evaluate, select, and implement cost-effective strategies to manage new and existing transportation facilities. The CMS identifies appropriate Transportation Control Measures (TCMs) for implementation in various congested areas, today and in the future.

It is the stated policy of this plan to apply cost-effective demand and system management measures as the first component of all congestion reduction strategies. Regionally significant added capacity roadway projects are justified only if cost-effective demand management and system management strategies fail to reduce vehicular congestion to acceptable levels.

Where demand or system management projects are feasible and cost-effective, project sponsors, or relevant implementing agencies, and the MPO must commit to their implementation or incorporation into a proposed added-capacity project as a pre-condition to both federal and state funding assistance. Project design, concept, and scope must also be consistent with any selected management strategies.

Setting mobility standards for the CMS provides a quantitative tool to benchmark system performance and congestion, and to analyze the impacts of any change. If actual performance falls below the standard, actions may be warranted to restore or improve the level of mobility. H-GAC has chosen to use the Level-of-Mobility (LOM) performance measure as its initial congestion mitigation standard.

LOM, which is a ratio of roadway capacity and traffic volume, is based upon directional 24-hour per lane volumes for existing and committed roadways. Three levels of capacity were developed, based on geographic location, to better reflect travel patterns and roadway design characteristics. These capacities were further differentiated to reflect State standards for four facility types as shown in the table below. These “*evaluation*” capacities include facility adjustments for signal greentimes, percent trucks, percent left turns, directional factors, etc.

Table 5.1: Evaluation Capacity

	Location		
Facility Type	Urban	Suburban	Rural
Freeways	23,500	23,500	16,500
Tollways	18,000	18,000	-----
Expressways	11,000	11,000	-----
Arterials	7,500	6,250	5,000

Four levels of mobility (LOM) used to define congestion were developed by the H-GAC Travel Modeling Committee in 1997 and approved by the Technical Advisory Committee (TAC), they are shown as follows:

Table 5.2: Levels of Mobility

LOM	V/C
Tolerable	< 0.85
Moderate	>= 0.85 < 1.00
Serious	>= 1.00 < 1.25
Severe	>= 1.25

The levels of mobility can be compared to a more common measurement of congestion known as the Level of Service (LOS) referenced in the Highway Capacity Manual (Special Report 209). In the LOS measurement service of the roadway is also measured as a relationship between volume and capacity. The LOS categories range from A (Best) to F (Worst). The following photos attempt to represent to the reader what congestion characteristics are present under LOS and LOM ratings of roadways.

Table 5.3: Levels of Service

Level of Service A



Level of Service B



Level of Service C



Level of Service D

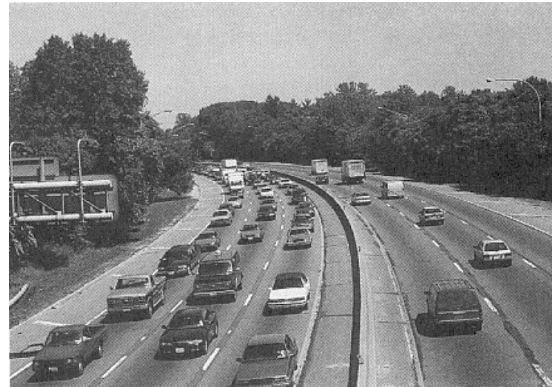


LOS A, B, C, and D reflect conditions that H-GAC has defined as a Tolerable Level-of-Mobility. The volume to capacity is rated at less than 0.85.

Level of Service E



Level of Service F



Moderate Level-of-Mobility is reflected best by Level of Service E. In LOS E Volume to capacity ratios between 0.86 and 1.00. Serious and Severe Levels-of-Mobility are best described or related to Level of Service F. The above photo represents a facility operating at greater than 1.00 of capacity. The Serious Level-of-Mobility exists when the V/C ration is between 1.00 and 1.25 and the Severe Level-of-Mobility when 1.25 is exceeded.

5.3 TRAVEL DEMAND MANAGEMENT (TDM)

One of the simplest ways to reduce congestion is to reduce the number of vehicles competing for space on the region's roadways. Travel demand strategies are designed to do just that. In addition to the public transit system, the region is fortunate to have a number of TDM programs already in place. H-GAC's Regional Commute Alternative Program (RCAP), operated in junction with METRO, provides vanpooling and ridematching services for the region. Under the auspices of the RCAP program funding is also provided for the operation of Transportation Management Organizations (TMOs).

The Regional Vanpool Program is one component of RCAP. The purpose of the program is to establish a voluntary commute alternative vanpool system within the region. Currently, the vanpool program operates a total of 233 vans carrying over 2877 riders daily. The goal of the program is to add 15 vanpools each year through 2020 thereby achieving a projected ridership of 7200 riders daily.

Transportation Management Organizations began to emerge as public private partnerships designed to address traffic congestion and air quality problems throughout the United States during the 1990s. The geographic scope of a TMO varies with each organization.

In this region, TMOs are vital components that link the vanpool program to the employees within the more densely populated employment centers of the region. There are four TMOs in the H-GAC area: North Houston Association, Bay Area Transportation Partnership, TREK (Uptown Houston, Galleria and Greenway Plaza), and the Central Houston. New pilot transit services will be implemented in April 2000 and are being sponsored by Bay Area Transportation Partnership, Colorado Valley Transit, North Houston Association, and TREK.

Other travel demand management options that are being studied are telecommuting and peak spreading. Home-based telecommuting eliminates or reduces daily work trips by allowing employees to perform their work duties at home. Telecommuting can be a full- or part-time arrangement for employees, and in many cases can be implemented without the purchase of extra office equipment. In some instances, however, telecommuters may need access to a microcomputer, fax machine, modem, etc., at home to carry out their work duties. Telecommuting works best for employees who do not require face-to-face interactions with others. In October 1999, H-GAC developed a two-year Telework Pilot Program for 15 employers in the Houston-Galveston Transportation Management Area.

Commute Solutions is being implemented to reduce vehicle trips throughout the eight-county region. Commute Solutions is a partnership H-GAC's RCAP, METRO, and the region's TMOs. The purpose of the Commute Solutions partnership is to provide a one-stop alternative transportation resource in the Houston-Galveston

area for both commuters and employers. Commute Solutions supports the use of five fundamental transportation strategies.

- Move more people in fewer vehicles
- Use modes that do not contribute to congestion or pollution
- Reduce the number of people commuting during rush hours
- Reduce single occupant vehicles
- Eliminate the need to commute altogether

These strategies can be accomplished through the promotion of vanpooling, carpooling, transit, telecommuting, and other transportation related options and services.

Peak spreading is a travel demand strategy that is relatively inexpensive to implement but requires a great deal of cooperation from employers and commuters. One of the reasons that commuters experience congestion when using the transportation system is that everyone wants to use it at the same time. Weekday morning and evening congestion levels on the region's freeways and arterials are the highest of any period. One option for relieving "rush hour" congestion is to spread out demand over a longer time period. Minor changes in work hours could relieve morning and evening congestion by as much as 25 percent.

5.4 TRANSPORTATION SYSTEM MANAGEMENT

While TDMs reduce travel demand, Transportation System Management (TSM) strategies are designed to enhance the capacity of the transportation systems by improving traffic flow and reducing traffic delays. The overall objective of TSMs is to improve the efficiency and effectiveness of the existing transportation system. TSMs include a variety of Intelligent Transportation Systems (ITS) options such as:

- Incident Detection & Response Programs
- Courtesy Patrol, Motorist Assistant Program
- Changeable Message Sign (CMS)
- Traffic Operation Centers
- Motorist Information Center
- Traffic Signal Timing & Coordination Improvements
- Automated Traffic Management System
- Computerized Traffic Management System

ITS are advanced transportation technologies designed to make the movement of goods and people along the transportation system safer, more effective, and more efficient. The Houston-Galveston TMA is one of four regions in the U.S. designated by Congress as an ITS Priority Corridor. Some relatively new programs are being

implemented as demonstration projects to determine their feasibility and effectiveness. The ITS Strategic Plan, adopted by the Transportation Policy Council in August 1997, documents “high-tech” projects under study in this region over the next 10 years.

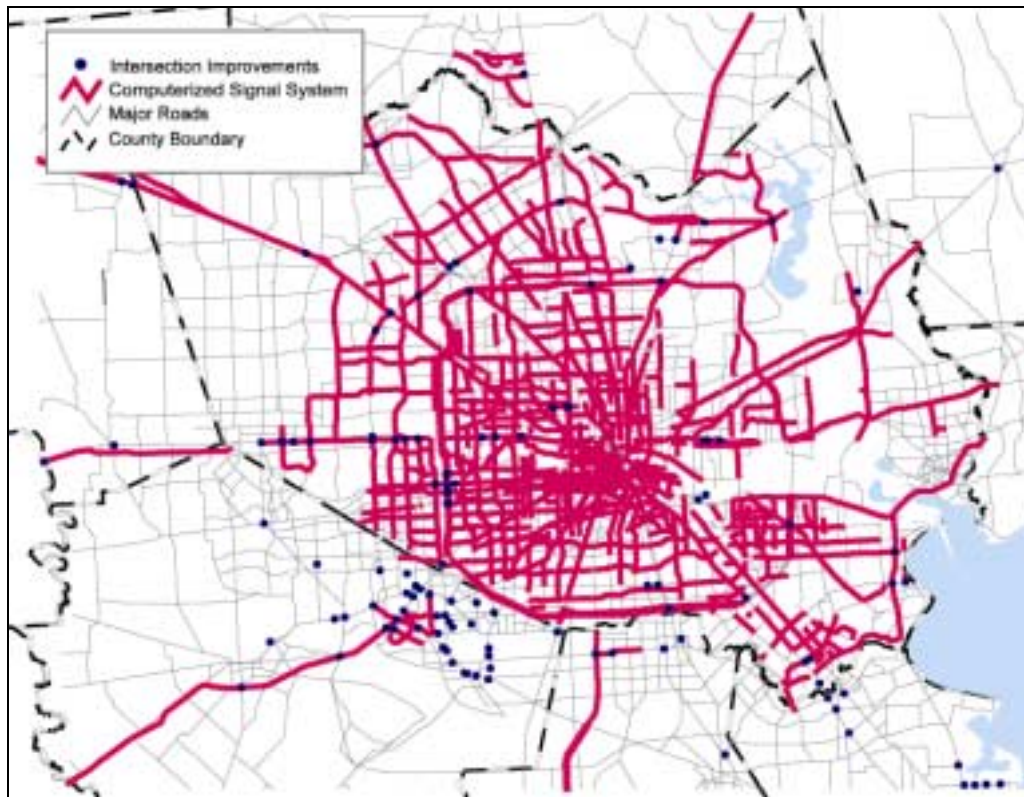
H-GAC, METRO, and TxDOT commissioned the development of this Regional Intelligent Transportation System Strategic Plan (RITS Plan) for ITS deployment in the Houston-Galveston TMA. The RITS Plan defines the long term goals and objectives of ITS development in the region. Harris County already has significant ITS infrastructure in place and plans for projects that reach out to the other areas of the TMA, but a regional ITS deployment requires the participation of the other seven counties.⁵

The cornerstone of ITS deployment is the new regional transportation management center, known as Houston TranStar, designed to coordinate the collection, processing, and dissemination of traffic, transit, and transportation information. In addition, there are nine components of ITS deployment outlined below that form the basis for the proposed RITS Plan.

Advanced traffic signal control systems are being developed under the Regional Computerized Traffic Signal System (RCTSS) program to integrate and manage the control of more than 3,000 signals from Houston TranStar. METRO, the City of Houston, Harris County, and TxDOT are cooperatively developing the RCTSS. At a cost of approximately \$465 million, the RCTSS is planned for implementation over the lifetime of the MTP, with the majority of the system planned for implementation in the first ten years. Other jurisdictions, such as the cities of Bellaire and Pasadena, with traffic signal systems that adjoin those in the RCTSS, will continue to operate their systems from locations they specify, but communication linkages with TranStar will be provided to exchange information. Figure 5.1 graphically displays the transportation control measures.

⁵ “Developing a Regional Intelligent Transportation System Strategic Plan for the Houston-Galveston Transportation Management Area,” Texas Transportation Institute, 1997.

Figure 5.1 – MTP TCM/RCTSS Projects



Freeway and toll-way management systems are being developed under the Computerized Transportation Management System (CTMS) Program to be monitored and operated from Houston TranStar. CTMS systems include closed circuit television, vehicle sensors, flow signals, variable message signs and signals, and automatic vehicle identification and location systems.

Traveler information systems are developed from the information collected from the TranStar systems. Traveler information is disseminated in a variety of methods by both public and private organizations, such as Metro Traffic and Shadow Traffic, which provide reports on local radio and television stations. TranStar also operates 90 roadside variable message signs to provide traveler information for route guidance, incidents, travel conditions, and HOV network status advisories. Traffic conditions are posted on the Internet, and plans are being developed to display travel conditions on public computer displays, kiosks, and the Houston Municipal Television Channel.

Advanced public transportation systems, being developed by METRO, include such services as METROLift, Charter/Special Event Services, and a Rideshare Matching Program. METRO and TxDOT have constructed an extensive system of 100 miles of reversible HOV lanes, which is operated from TranStar by the freeway and transit management systems of CTMS. METRO's *Smart Bus* and *Smart*

Commuter projects are testing and implementing numerous on-vehicle systems that provide information on current bus system data for more efficient operations.

An incident management program is one of the most important functions of Houston TranStar. The CTMS and RCTSS installations detect and verify incidents, and TranStar operators dispatch the appropriate resources, which includes the Motorist Assistance Program, jointly sponsored by METRO, TxDOT, Harris County, Houston Cellular Inc., and the Houston Automobile Dealers Association. METRO has developed a Regional Traffic Incident Management Plan and a manual of operations for TranStar staff. The plan includes a rapid removal policy to change the current reactionary mode to a coordinated responsive mode.

METRO has an electronic fare payment system which accepts weekly, monthly, annual, and transfer magnetic-strip cards. The system is being converted to devaluating cards. In the *Smart Bus* Project, an electronic fare payment system is being developed in conjunction with automatic passenger counters and vehicle locators to relate METRO's ridership in geographical terms.

Electronic toll collection systems are operated by Harris County Toll Road Authority on three toll facilities in the Houston area. The main lane toll plazas are being reconfigured to allow high-speed passage for vehicles with EZ Tags to increase capacity and to reduce travel delays. The EZ Tags and AVI technology used for electronic toll collection on these facilities also provide support for the freeway vehicle probe system that measures travel times and average speeds.

Railroad grade crossing controls are monitored using AVI readers to determine position and identification of trains and to measure travel times of trains, and automated highway-railroad intersection enforcement systems. Advanced warning/information systems will be deployed on approaches to selected intersections.

Emergency management services are provided in Harris County through the staff and facilities of the Harris County and City of Houston Offices of Emergency Management in TranStar. Other regional OEMs are coordinated through the Houston TranStar.

Another TSM that has not been widely implemented in the region that could provide significant traffic congestion mitigation benefits is access control. Access control would restrict left turning movements along major arterials into commercial establishments. Results from the implementation of this strategy in Denver suggest that travel speeds along major arterials could increase by 5 to 10 percent. There are also safety benefits associated with this strategy.

5.5 MAJOR INVESTMENT STUDIES (MIS)

Major investment studies (MIS) are highway or transit improvements of substantial cost that are expected to have a significant effect on capacity, traffic flow, level of service, or mode share in a transportation corridor. As an integral part of the metropolitan transportation planning process, the MIS is used to define mobility solutions in the region's most congested transportation corridors.

The purpose of the MIS is to produce information for decision making. This information results from an evaluation of various conceptual alternatives to determine the degree to which those alternatives meet the goals found in the MTP and local mobility plans, as well as the degree to which those alternatives help to attain the emissions requirements for the region. The recommendations of Major Investment Studies must be approved by the Transportation Policy Council, which may do so when it adopts the MTP or by subsequent amendment of the MTP.

The preferred alternative must fall within the air quality conformity requirements and financial constraints of the MTP. Once the alternative is included as a project or group of projects in the MTP, it awaits the completion of the necessary "readiness" measures (FHWA/FTA environmental clearance, ROW acquisition, preliminary engineering, etc.). Following this, the alternative is ready to be included in the Transportation Improvement Program for implementation.

The following MISs were completed between the adoption of the *VISION 2020* and the development of the *2022 MTP*:

- Downtown to Astrodome Corridor MIS (METRO)
- IH 10 (W): Katy Freeway Corridor (TxDOT)
- US 59 (S): SH 6 to Wharton County Line (TxDOT)
- IH 45 (S): Beltway 8 (S) to 61st Street in Galveston, including SH 3 Corridor (TxDOT)

The recommended alternatives from these studies are included as part of the MTP's transit and highway strategies.

The METRO Board adopted the Light Rail Alternative in September 1999, at the end of the Downtown to Astrodome Corridor MIS. The preferred alternative provides a 7.5-mile low-floor type, Light Rail Service between the CBD and the Astrodome complex, with 17 stations along the corridor.



After the Preliminary Engineering (PE) and Environmental Assessment (EA) is completed in 2000, the final Schematic Design of the preferred Light Rail Alternative will begin in 2001, and the project is expected to be operational by 2004. The total implementation cost for the preferred alternative is estimated to be \$300 Million (in 1999 dollars).

For the three TxDOT MISs, the final alternatives has been approved by TPC and adopted into the *2022 MTP* and *2000-2002 TIP*. All three projects are presently going through varying phases of PE, EA, Schematic Design, and Cost Estimates. The preferred alternatives on these MISs calls for substantive change to the existing project descriptions along these corridors. The salient features of the preferred alternative on these MISs include (for different segments within the project limits):

- Provide 6-8-and-10 general-purpose lanes and auxiliary lanes,
- Provide 2-and-3 lanes frontage roads in each direction,
- Provide barrier-and-non-barrier single-and-both-directions HOV lanes,
- Provide 4-and-6 lanes urban boulevards on major parallel arterial facilities,
- Improving all the interchanges, grade separations, direct connectors, bicycle facilities, traffic signals and transit services.

The following MISs began in 1999 and are presently ongoing in their development:

- IH 45 (S): IH 10 (E) to US 59 (S) [CBD] And US 59 (SW): Spur 527 to IH 45 (S)
- US 290: IH 610 to Badtke Road
- I-69 Route Study
- The Grand Parkway Segments C-1 And C-2
- The Grand Parkway Segments E, F-1, F-2 and G

5.6 Transportation Control Measures (TCMs)

A TCM is a transportation management strategy or group of strategies that consists of both Transportation System Management (TSM) and Transportation Demand Management (TDM) measures. Most TCM strategies are considered relatively low cost solutions to congestion mitigation problems, when compared to adding roadway lane miles. Some of the TCMs that have been implemented in the Houston-Galveston region include TDM and TSM activities.

FINANCIAL ANALYSIS

6.1 INTRODUCTION

In order to evaluate the financial feasibility of the *2022 MTP* transportation needs, an analysis was undertaken of the region's projected transportation finances. In the analysis, the potential future costs of operation and preservation of the existing system, expansion costs, and other planned local expansion expenditures were reviewed. Costs were then compared to projected regional transportation revenue that will be available to fund them.

The financial estimates for the 1999-2022 planning period include:

- the cost of operating, maintaining, and preserving the region's existing surface transportation system, by mode;⁶
- the cost of expanding the existing system, by mode, including the cost of new facilities and the increase in operating and maintenance costs associated with a larger system, as well as,
- funding levels that can reasonably be expected over the 23-year period; and, potential funding shortfalls, based on cost and funding estimates.

These forecasts were developed separately for each major transportation provider in the region. For most providers, forecasts were based on historical (1990-1998) data and assumptions developed in direct coordination with the provider. Where specific provider forecasts of costs and funding were already available, these were incorporated directly into the analysis.⁷

Forecasted expenditures are categorized by the effect of the expenditure: operations and maintenance of the existing system (O/M); capital preservation of the existing system; and expansion of the system. These costs are then compared to the revenue forecast to be available to the region over the planning period. System O/M and preservation must be funded before system expansion, and this is reflected in the allocation of the shortfall amount.

⁶All costs have been categorized according to their effect on the region's transportation system (operation/preservation versus system expansion), not by type of cost (O&M versus capital). Some capital costs are therefore included in the operation/preservation figures (*e.g.*, bus replacement, road resurfacing, etc.).

⁷ These estimates were prepared based on data provided by H-GAC, the Texas Department of Transportation (for the Houston District and part of the Beaumont District), the Counties of Brazoria, Fort Bend, Galveston, Harris, and Montgomery, the Cities of Houston, Conroe, La Porte, and Texas City, the Harris County Toll Road Authority, the Metropolitan Transit Authority of Harris County, the Brazos Transit System, the Gulf Coast Center, and Colorado Valley Transit Incorporated.

The following data summarizes many of the principal findings of the analysis (all figures in 1998 dollars):

- The region's expected average annual expenditures on transportation are an estimated \$1,883 million for the 1999-2022 period, based on projected needs. Of this \$1,883 million per year, \$756 million is required to operate and maintain the system, \$255 million is required for capital preservation, and \$872 million is required to complete planned system expansions.
- The average annual revenue available for transportation from Federal, State, and local sources is an estimated \$1,843 million over the 1999-2022 period.⁸
- Based on the estimated expenditures and revenues, the region faces an average potential funding shortfall of \$40 million per year during the 1999-2022 period.

Figure 6.1 illustrates the breakdown of projected expenditures by mode. The total annual cost of the proposed transportation system (including operating and maintenance, capital preservation, and capital expansion cost) is almost \$1.9 billion:

- Roadway/bridge expenditures are approximately two-thirds of total projected expenditures of the transportation system (\$1.2 billion);
- Transit/HOV expenditures are approximately one-third of total projected expenditures (\$635 million);
- Pedestrian/bicycle annual expenditures are approximately 1 percent of total projected expenditures (\$7 million).

Over the 1999-2022 time period, the total projected cost of the region's transportation system is about \$43 billion.

⁸ The Harris County Toll Road Authority (HCTRA) generates an annual operating surplus of approximately \$33 million per year. However, this surplus is not available to fund the transportation needs of other providers in the region due to bond covenants that currently prohibit HCTRA funds from being used for non-HCTRA needs. Therefore, the surplus has been excluded from the total annual revenue available to the region presented in Figure 6.1 and all other tables and graphs in this report.

Figure 6.1

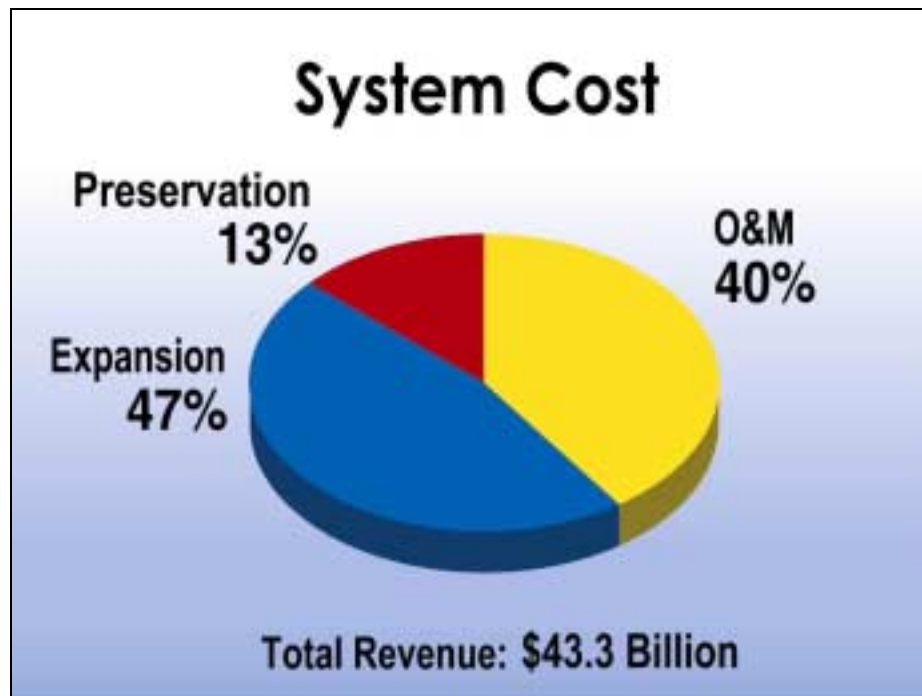


6.2 REGIONAL TRANSPORTATION COSTS

The region's transportation costs may be separated into two major types: those costs required to operate and preserve the existing system (operations and maintenance [O/M] and capital preservation costs) and those costs which add new capacity to the system (capital expansion costs). System operations and preservation activities include running transit systems, maintaining signals, keeping regional pavements in acceptable condition, and many other ongoing functions. The estimated cost of operating and preserving the region's transportation system is estimated at approximately \$1 billion annually (in 1998 dollars), for a 23-year total of \$23 billion.

New capacity activities include the construction of new roads, roadway widening, the acquisition of additional buses, and construction of transit centers, among others. For the *2022 MTP*, the total projected cost of expansion projects over the planning period is approximately \$20 billion. It should be noted that costs for the reconstruction/rehabilitation of existing facilities are often a substantial portion of the cost estimates for some expansion projects. System preservation funding shown in Figure 6.2 do not include reconstruction of existing facilities when those costs are part of system expansion projects.

Figure 6.2



6.3 REGIONAL TRANSPORTATION REVENUES

Regional revenue includes federal, state, and local government funds, as well as user fees in the form of fares and tolls. Transportation providers in the H-GAC region receive funding from a wide range of sources. For purposes of this analysis, funding sources were divided into six types:

- Local funds of a general nature include money raised by the region's local transportation providers for transportation. Local sources dedicated to transportation (*e.g.*, METRO sales tax revenue) as well as general fund allocations (*e.g.*, from County general funds) are included in this category.
- Local toll revenues collected by the Harris County Toll Road Authority.
- Local fare revenues including user fees and contract revenues collected by the region's transit agencies.
- Local private contributions by developers and others.
- State funds allocated for expenditures on transportation in the Houston-Galveston region.

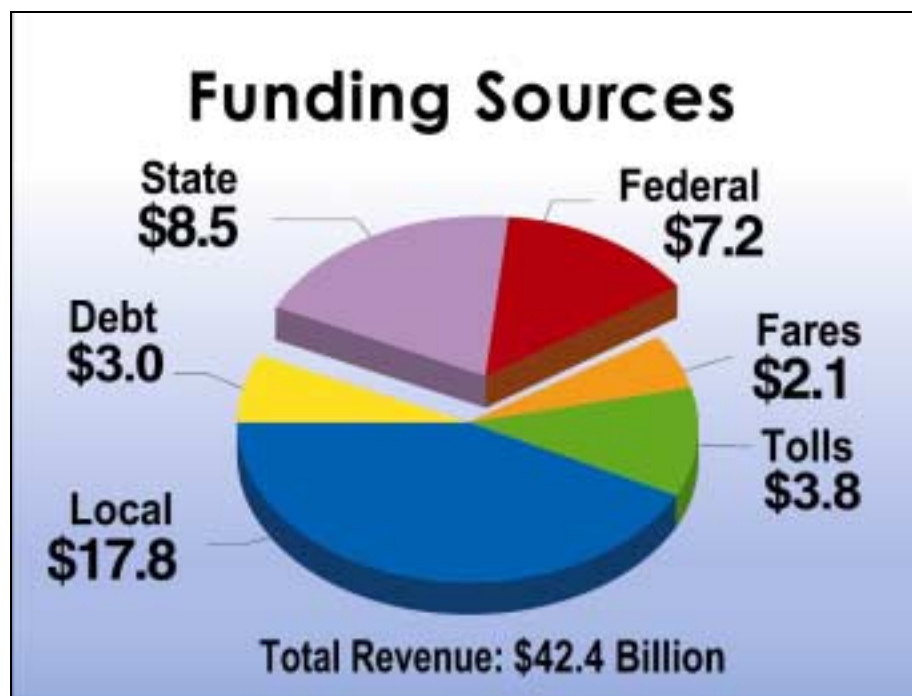
- Federal funds allocated for expenditures on transportation in the Houston-Galveston region.

Figure 6.3 displays the distribution of anticipated regional revenues among the sources described above. The revenue sources were allocated to modes based on historical data obtained from each provider and on data in the MTP.

Local funds from property taxes, sales taxes, fees and other general fund revenues compose over 45 percent of total projected transportation funding in the region. Harris County, the City of Houston, and METRO raise the majority of local funding. State and Federal funds constitute approximately 40 percent of projected future funding for the region. The remaining funding for the region's transportation needs is derived from tolls, fares, and private contributions.

Revenue raised from all sources total approximately \$1.843 billion per year or \$42.4 billion over the 1999-2022 period. Excluding the non-fungible HCTRA surplus of \$33.4 million per year, revenue raised from all sources total approximately \$1.85 billion per year or almost \$43 billion over the 1999-2022 period.

Figure 6.3



6.4 COST AND REVENUE SUMMARY

Table 6.1 summarizes the region's projected transportation expenditures and revenues for the 1999 to 2022 time period. Results are presented as annual cost and revenue totals for the entire region, in millions of 1998 dollars.⁹ The region's projected annual funding shortfall is the difference between the region's planned transportation expenditures and available revenues.¹⁰ As per approved financial planning methodology, system preservation costs (operations and maintenance and capital preservation) are funded before expansion costs.

Table 6.1: Costs & Revenues by Effect 1999-2022
(Millions of Annualized 1995 Dollars)

	Operations & Maintenance	Capital Preservation	Capital Expansion	Total
Total Annual Cost	756	255	872	1,883
Total Annual Revenue	756	255	832	1,843
Annual Surplus/ (Shortfall)	0	0	(40)	(40)

6.5 POLICIES TO ADDRESS THE POTENTIAL FUNDING SHORTFALL

Based on transportation needs over the next several decades, the region faces an estimated average annual funding shortfall of \$40 million, or about \$925 million for the 23-year period (see Figure 6.6). A substantial surplus (\$33.4 million/year) generated by HCTRA that will not be available to fund non-HCTRA projects is netted out of the region's available revenues. Over the 1999-2022 period, the annual shortfall represents approximately 1 percent of projected total expenditures, and over 23 percent of planned expansion expenditures. Several strategies are available to address the estimated shortfall including, but not limited to the following policies:

⁹These annual totals are average expenditures and revenues for the 1999 to 2022 period, *not* cash flow estimates. Projections were annualized by taking total figures in current dollars, deflating them to 1998 dollars, and dividing by the number of years in the planning period.

¹⁰For reasons stated in footnote 1 on page 1 of this report, the region's actual total transportation revenues, expenditures, and funding shortfall will deviate from the annual average estimates presented in this report. In addition, the totals presented in Table 6.3 are annualized averages, rather than cash flow estimates, and are not intended to represent actual costs, revenues, or funding shortfalls for any particular year in the planning period.

- Toll Financing Policy for New Freeway Projects- \$26 million on an average annual basis.
- Reduction of Diversion of State Transportation Funds- \$40 million annually.
- Increase in Share of State Funds- \$ 62 million annually.
- Increased Share of Federal Funds- \$73.5 million annually.
- Increased Local Funding through Tax Increment Re-investment Zones.

The present financial planning approach assumes that system preservation expenditures will be funded before system expansion. For the Houston region as whole, projected annual revenue is greater than projected annual preservation costs. However, for particular providers, even with population growth over time, there will be insufficient funds to cover the minimum pavement maintenance needs addressed by the baseline financial analysis. In some cases, it may be necessary to take steps at the jurisdiction level to ensure that adequate funds are made available to accommodate both growth and the maintenance of existing roadway assets.

The challenge facing the region will be felt most acutely in the counties outside Harris where there have been little or no large-scale capital infrastructure programs. To address expected growth, developing suburban areas will be unlikely to continue to rely on existing funding streams or on TxDOT, which itself faces an imposing deficit.

Figure 6.4



STRATEGIES AND PERFORMANCE

7.1 INTRODUCTION

The MTP is comprised of complementary components that provide the framework for future investments in the regional transportation system. Each component is one piece of an overall structure that operates in tandem to achieve system performance objectives.

One of the first steps in the metropolitan transportation planning process is the evaluation of congestion levels in various geographic areas and along specific transportation routes. While roadway congestion is one of the most obvious indicators of system performance, lack of access to employment, shopping and recreational centers, few travel mode alternatives, and facilities in need of repair are also indicators of how the transportation system is performing. This chapter examines the modal elements of the transportation system in terms of existing conditions and future needs. The analysis begins with a look at the transit system.

7.2 REGIONAL TRANSIT SYSTEM

Five public transit agencies serve the Houston-Galveston TMA: the Harris County Metropolitan Transit Authority (METRO), Brazos Transit System (BTS), Island Transit, Colorado Valley Transit, and Connect Transportation. METRO and Island Transit are public transit agencies providing fixed route and ADA paratransit services in the City of Houston, Harris County, and the City of Galveston, respectively. Connect Transportation and BTS provide demand-responsive transit service in predominantly rural areas.

7.2.1 BRAZOS TRANSIT SYSTEM

BTS provides service for Montgomery and Liberty Counties. Its commuter service, using the HOV lane on IH-45 North, connects Montgomery County to three major activity centers in Houston: the CBD, the Texas Medical Center, and Greenway Plaza. The service is operated from two existing park & ride lots located in The Woodlands (240,000 annual boardings) and one facility in Conroe with 1,300 parking spaces (20,000 annual boardings).

Commuters from the Woodlands may reach other destinations by vanpool or carpool. A parking facility with 200 car spaces across from The Woodlands park and ride lot serves as the staging and parking area for carpools and vanpools from Montgomery County. Vanpool rider subsidies of \$35 per person are available for

authorized vanpools operating within or from the eight county TMA area through the Commute Solutions/MetroVan program.

7.2.2 ISLAND TRANSIT

Island Transit is a public transit agency providing fixed route service in the City of Galveston. It also operates a demand response service for the disabled and elderly. Island Transit also operates a fixed rail trolley serving the historic central business district with 20-minute headways. The Galveston Island Trolley provides service from the Historic Downtown Strand district to the seawall.

7.2.3 CONNECT TRANSPORTATION (GULF COAST CENTER)

The Gulf Coast Center operates a transportation program known as "Connect Transportation." Connect Transportation Provides demand-response service to residents of Galveston and Brazoria Counties. In Brazoria County under the rural transit program and the Texas City-La Marque urbanized area of Galveston County. Most trips provide for medical and social service needs for the elderly and disabled.

Two park-and-ride lots are due for completion before the year 2007. These locations are in Pearland in Brazoria County and at I-45 S @ FM 1764 in Galveston County.

7.2.4 COLORADO VALLEY TRANSIT

Colorado Valley Transit (CVT) is predominately a rural provider of curb-to-curb and door-to-door demand response service. Service is provided for medical, shopping, nutritional, social and cultural activities in Austin, Colorado, Wharton (outside the TMA), and Waller Counties (inside the TMA).

In 1996 CVT completed a study to develop an integrated multimodal transportation system to serve commuters of rural communities. CVT is in the process of implementing a series of fixed-route transit services. These services will focus on the four cities of Brookshire, Hempstead, Prairie View and Waller, all in Waller County. The services will link each of the four cities and also provide a link to Houston METRO at the Kingsland Park-and-Ride. Major destinations also include Prairie View A&M University, Houston Community College, and other social services available at the Fry Road Gulf Coast Career Center.

7.2.5 METRO

METRO is the largest public transit agency in the region, covering a 1,281 square mile service area comprising most of Harris County and small portions of Fort Bend and Montgomery Counties. There are 15 cities in METRO's service boundaries, the largest being the City of Houston. METRO provides the most comprehensive transit service in the region, serving about forty-percent of its service area with fixed routes and complementary paratransit service.

METRO has made substantial investment in infrastructure and services since its formation in 1979. From 1991 to 1996, ridership declined slightly due to a decline in fixed route transit use. The ridership data for 1997-1998 show a reversal of this trend with a healthy increase. In FY 1998, METRO carried 96.3 million passenger boardings on its buses, 9 percent more than in 1997. In FY 1997 and 1998 METRO's bus ridership increased 18.3 percent and continues to increase in FY 1999. The use of high occupancy vehicle (HOV) lanes continues to grow since METRO has invested quite heavily in the construction of HOV lanes on many of the freeways that serve the region. METRO is also seeing an increase in demand for special services such as METROLift and special event shuttles.

The existing transit system includes 86.4 miles of HOV lanes operating in five freeway corridors. Another 27.3 miles are under construction and design. Approximately 24 park-and-ride centers serve the HOV lane system, with 5 more planned for near term construction.

While the HOV lane system has been and should continue to be a successful transit strategy, changes in transit service will be required to address changing demographics in the region. Much of the increase in population will take place in suburban areas surrounding the City of Houston, particularly in the unincorporated areas of Harris, Fort Bend and Montgomery Counties. By 2022, the labor force is expected to reach 3 million in the Houston metropolitan area. While Harris County will be the predominant location for employment, an increasingly large percentage of jobs will be located in the seven adjacent counties. While employment projections suggest that the inner city activity centers will continue to grow through the year 2022, substantial growth will continue in the suburban employment centers creating multi-directional traffic flows from home to work, between many destinations.¹¹

With the increase in suburban residential development and the shift of employment to various locations throughout the region, more cross-town and non-CBD service will be needed. Also, more transit centers may be required to provide connectivity between suburban communities. Service adjustments that may be warranted by changing demographics include the following:

¹¹ Westchase, Greenspoint, Bay Area, and the Energy Corridor

- Service expansion and greater regional coverage to more locations throughout the region;
- Service capacity increases and bi-directional service in key corridors;
- Suburb-to-suburb service expansions;
- Greater circulator service to provide access within activity centers;
- Non-traditional service expansions.¹²

7.2.1 Recommended Transit System

METRO Service Enhancements

During much of 1995 and 1996, METRO developed a “recommended” concept for future service improvements through 2020¹³. A new long-range plan for METRO through the year 2025 is expected to be adopted during the year 2000. The *2022 MTP* addresses known needs included in the METRO plan through the year 2020. While capital, operating, and maintenance costs were taken into consideration in the development of the recommended concept, projects were included based upon their potential to accommodate future travel patterns, improve regional mobility, and provide faster travel times. The recommended concept is also designed to address future travel patterns by improving existing service with shorter headways, extending service hours and offering more off-peak service. Highlights of the recommended concept for METRO service improvements through the 2020 are detailed below.

Service will be expanded to high growth areas such as the Northwest, Bay Area, and FM 1960 areas. New park-and-ride service will be provided to non-CBD activity centers including direct service to Westchase and the Energy Corridor from each travel corridor. Direct service from the Bay Area to Texas Medical Center will be added. The recommended concept includes new cross-town service along SH 6 and West Airport Boulevard. Activity center circulator routes are also proposed for Westchase, Greenspoint, Uptown and Bay Area. In the Katy and Southwest corridors, two-directional HOV lanes are proposed to accommodate the demand for nonpeak direction travel.

The recommended concept is designed to improve regional mobility by implementing pulsed service. Pulsed service will provide additional Transit Center Flyer service to link the transit centers, using the regional transit centers for connection to activity centers, such as from the Hillcroft Transit Center to Greenway Plaza and from Hobby Transit Center to NASA. The recommended concept also proposes to provide faster travel times with the augmentation of limited-stop service inside Loop 610 and along high-density corridors on a number of existing routes.

¹² “Evaluation Results Report for METRO Regional Transit Plan (Horizon 2020)”, prepared by ICF Kaiser/georgia wilson, inc., April 1997.

¹³ Ibid.

METRO is aggressively implementing high technology transportation improvements that will benefit transit as well as auto traffic. Programs such as the Regional Computerized Traffic Signal System (RCTSS), Intelligent Transportation System (ITS), Automatic Vehicle Locator and Passenger Counter Systems, and Congestion Pricing are programs aimed at managing congestion and improving travel times, particularly for transit patrons.

Capital projects in the recommended concept include the construction of new HOV lanes on portions of the West Loop and South Loop, and the extension and expansion of existing HOV lanes. Along the CBD to Dome Corridor high capacity transit service is proposed. A high capacity guided busway is recommended for the SH 249/Burlington Northern Corridor.

In general, the recommended concept reflects a balance of improved local and express service, enhanced connectivity to activity centers, moderate expansion of the HOV network, high speed bi-directional HOV facilities in three heavily congested corridors and high capacity transit in another two congested corridors. In October 1996 METRO's board of directors officially adopted the recommended concept as the METRO Regional Transit Plan (Horizon 2020). The transit network system statistics for this plan are summarized in Table 7.1.

Table 7.1 Regional Transit Plan (Horizon 2020)
Transit Network System Statistics

REGIONAL TRANSIT PLAN (HORIZON 2020) TRANSIT NETWORK SYSTEM STATISTICS	
NUMBER OF ROUTES	278
Local *	176
Express	12
Commuter	90
ANNUAL PASSENGER MILES	701,663,034
Local *	407,025,638
Express	39,475,968
Commuter	165,918,428
Special Bus Services	89,243,000
PEAK HOUR VEHICLES	3,076
Standard Buses	1,994
Mini Buses	120
Articulated Buses	262
Special Bus Services	700
ANNUAL RIDERSHIP (TOTAL DAILY BOARDINGS)	225,632,013
Local *	99,732,805
Express	6,072,320
Commuter	18,305,280
Special Bus Services	6,253,000
Carpools (daily passengers)	95,268,608
PARK & RIDE FACILITIES	39
TRANSIT CENTERS	25
HOV LANE MILES	240
BUS OPERATING FACILITIES	8

*Local includes Cross-town, Circulator, and Shuttle routes.

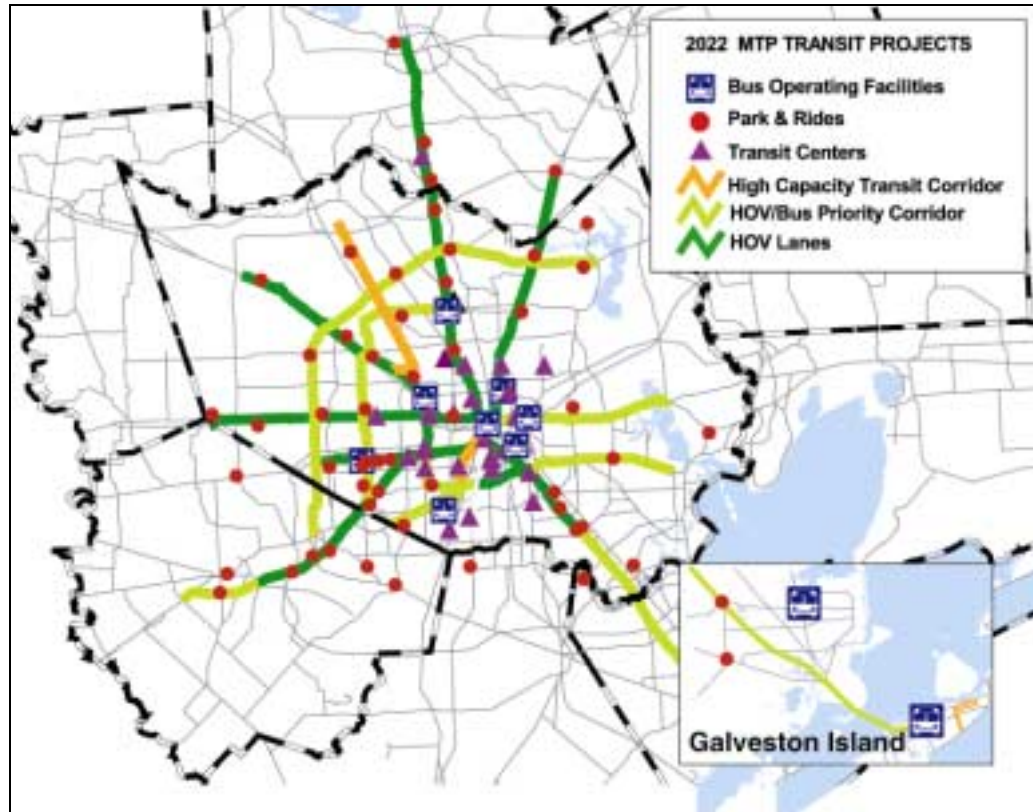
NOTE: Local passenger miles and ridership figures have been annualized to reflect weekday and weekend service, while Express and Commuter reflect weekday service only.

Other Transit Service Enhancements

METRO's service area extends into most of Harris County, the most densely populated county in the region. The adjacent counties have much more limited transit service. As noted earlier, BTS and Gulf Coast Center provide demand response transit service in less urbanized areas of the region. As these areas continue to grow and the need for public transportation increases, fixed route service will become a viable transit option. Demand response service will in turn become an option for counties that need transit service but cannot support fixed route transit at this time. Transportation providers in these areas will focus on alternatives such as general use Dial-a-Ride programs, vanpooling and carpooling. Transit improvements outside METRO's service area (contained in the *2022 MTP*), rely on enhancements to existing services, several new park and ride lots to

support planned HOV lane extensions, and expansion of regional vanpooling services. Figure 7.1 illustrates the recommended future transit system for the region.

Figure 7.1 Recommended Transit System Improvements



7.3 REGIONAL ROADWAY SYSTEM

Traffic management and transit system improvements alleviate a significant amount of congestion and go a long way toward improving mobility throughout the region. Even with the implementation of these improvements, however, the need for new roads and added capacity on existing roads still exists. According to recent statistics, if current trends continue the number of motor vehicles registered in the eight-county TMA will increase from 3.3 million in 1996 to 10.6 million in 2020.¹⁴ That means that for every 1,000 cars registered today, there will be 3,200 cars in 2020 competing for road space and looking for a place to park. Travel delays resulting from the increase in vehicles, people, employment centers, shopping centers and recreational facilities will affect all modes of transportation and the services they provide.

¹⁴ Assuming an average annual increase of 9%.

Costs incurred due to congestion will be substantial in terms of dollars, air quality and overall quality of life in the region. According to a study conducted by the Texas Transportation Institute, the annual cost due to congestion in the Houston urban area was estimated at \$1.75 million in 1991.¹⁵ That was \$780 per registered vehicle or \$570 for each of the region's residents. These statistics do not measure the reduction in quality of life due to longer commute times for work and leisure, or, the potential health impacts of increases in vehicular emissions.

Given these impacts, the development of the *2022 MTP* began with an assessment of the level of mobility (LOM) on the region's roadways today.¹⁶ LOM refers to the ratio of traffic volume and traffic capacity of a roadway, with a higher ratio indicating increased levels of congestion. Volume to capacity (V/C) ratios are partitioned into four levels of mobility based on 24-hour weekday per lane volumes: tolerable, moderate, serious, and severe. By this definition, severe levels of congestion occur when the volume to capacity on a roadway is greater than 1.25 percent.

In order to simplify the analysis of roadway congestion, a set of evaluation capacities was developed for urban, suburban and rural roadways. Roadway capacity is based on the number of vehicles per lane per weekday and varies for each type of roadway. The LOM for a roadway is its V/C ratio based on modeled traffic volumes and evaluation capacity.

The roadway congestion analysis looks at congestion levels in the near-term (year 2000) and long-term (year 2022). The year 2000 roadway network includes the existing roadway system plus roadway improvements that are scheduled for completion by the end of year 2000. The congestion analysis for both years is based on the forecasted growth in population and employment for the region as described in Chapter 2 of this document.

As indicated in Chapter 2, much of the growth in population and employment will occur in what are now suburban and rural areas of the region. Because the existing transportation system will be unable to accommodate future travel demand, new major thoroughfares will be needed in those areas. Many of the existing two lane collector roads will need to be widened and upgraded as well to accommodate increased traffic volumes. Since the Harris County major thoroughfare system is essentially in place, most of the improvements inside Beltway 8 are roadway widening projects and projects to complete "missing" sections of existing roadways. Several new thoroughfares, however, have been identified for construction outside Beltway 8 to accommodate growth primarily in the north and western sections of the county.

¹⁵ Trends in Urban Roadway Congestion 1982 to 1991, Volume 1: Annual Report, Texas Transportation Institute Research Report, College Station, September 1994, pp. 1131-6.

¹⁶ Level of mobility standards and evaluation capacities were designed by H-GAC travel modeling staff.

The roadway element of the *2022 MTP* identifies roadway widening and new roadway projects that will be needed as the region's population grows and today's undeveloped areas become residential, business, and commercial centers. The roadway system in the urban core of the region will also need to be upgraded as redevelopment takes place. Growth in lane miles and centerline miles by roadway type that would result from implementation of the recommended roadway projects is shown in Table 7.2. From 2000 to 2022, freeway lane miles will increase by 1,269 miles but centerline miles will increase by only 122 miles or 5.54 miles annually. The relatively small growth in centerline miles is indicative of freeway widening rather than the construction of new freeways. The vast majority of roadway improvements will be to the arterial street system. Arterial lane miles will increase 24 percent from 2000 to 2022, an increase of approximately 3309 lane miles or 423 centerline miles.

Table 7.2 Roadway Centerline/Lane Miles

	Miles	Freeway/ Tollway	Principal Arterial	Other Arterial	Collector	HOV Lanes ^A
2000	Centerline	603	1,149	3,018	1,502	89
	Lane	3,616	4,485	8,903	3,227	90
2007	Centerline	659	1,213	3,082	1,499	160
	Lane	4,209	4,968	9,473	3,248	250
2015	Centerline	702	1,325	3,190	1,516	175
	Lane	4,755	5,551	10,441	3,371	292
2022	Centerline	725	1,371	3,219	1,577	187
	Lane	4,885	5,873	10,824	3,791	316

Source: H-GAC, 2000 ^A Excluding ramp structures

Figure 7.2 2022 New or Widened Roadway Projects



7.4 SYSTEM PERFORMANCE

The MTP is designed to guide investment in the transportation system to mitigate congestion on the existing system and prevent congestion from occurring in the future. Population and employment growth in Fort Bend, Montgomery, and Galveston Counties will strain the capacity of the existing system. Travel times for motorists and transit riders will increase significantly. Much of the region will be congested in the year 2020 making it increasingly difficult for businesses to function efficiently. The quality of life of the region's residents will also be impacted as travel times for work, shopping and other personal business increase.

Due to increases in vehicle travel, serious and severe levels of future congestion will be substantially greater despite the *2022 MTP's* recommendations for increased

public transportation and traffic management. However, these recommendations in combination with the roadway recommendations included in the *2022 MTP* will prevent congestion from getting a lot worse and will significantly reduce congestion levels from those that would be experienced in the absence of any improvements to the existing system. Figure 7.3 illustrates this point.

Figure 7.3 Levels of Congestion



Another performance measure is the comparison of areas of serious and severe congestion. Figure 7.4 shows areas of serious or severe congestion in the year 2000. Figure 7.5 shows areas throughout the region that will experience serious or severe congestion in the year 2022 if no improvements are made to the existing system, the no-build condition. Figure 7.6 shows areas of serious or severe congestion with the recommended roadway system in place, the build condition, in 2022. Serious congestion will afflict approximately one-third of the TMA, with many areas experiencing severe congestion levels. If no transportation projects are completed beyond 2000 and population and employment increase at projected rates, most of the region will be seriously or severely congested by 2022. Travel demand will far exceed the capacity of the system to cope with it. The overburdened transportation network will deteriorate far more rapidly due to overuse, further contributing to travel delays.

Throughout the region, the *2022 MTP* will prevent increases in serious and severe levels of congestion by 2020. However it will not eliminate congestion completely. The northern and western areas the region and parts of Galveston and Brazoria Counties will continue to experience travel delays along many major thoroughfares. The financial reality is that substantial additional investment will be needed to achieve tolerable to moderate levels of congestion throughout the region. Even if revenues were sufficient to solve the most serious congestion problems, the

environmental and land use implications would still be prohibitive. This analysis points to the need to invest in alternative modes of travel, travel demand management strategies, and traffic management strategies as well as rethinking traditional concepts of travel, work and recreation.

7.5. BICYCLE AND PEDESTRIAN IMPROVEMENTS

Bicycling and walking have numerous benefits: they afford an opportunity for exercise, help reduce congestion on roadways, and provide quiet, pollution-free transportation. Local citizens have shown an increased interest in bicycling, and their efforts have culminated in the development of several local bicycle plans, most notably the City of Houston's *Comprehensive Bikeway Plan* adopted September 1993 and H-GAC's *Regional Bicycle and Pedestrian Plan*, adopted April 1996.

The *Regional Bicycle and Pedestrian Plan* includes: an overview of bicycle and pedestrian modes of travel; maps of existing and planned facilities; recommended design standards; and a guide for local jurisdictions interested in developing a bicycle and/or pedestrian plan. The focus of the *Regional Bicycle and Pedestrian Plan* is to build on the funded projects with the construction of new bikeways. The plan began with a survey of the bicycle and pedestrian plans of the counties, municipalities, and master planned communities in the region. The bicycle plan serves as the primary source of information for this section of the *2022 MTP*.

Bicyclist and pedestrian commuting rates have historically been quite low; but such travel is far from nonexistent. As reported by the US Census, approximately 5,000 trips are made by bicyclists while pedestrians make 40,500 trips daily within the Houston-Galveston region. Combined bicyclists and pedestrians account for approximately 2.6% of the total work trips. The national figures are only slightly higher, with 4.0% of the daily work trips being by pedestrians and 0.4 percent being by bicyclists. Almost half of all trips and fifteen percent of all vehicle miles traveled are less than five and a half miles in length, well within the range of a comfortable bicycle ride. Almost three-quarters of all trips and 35 percent of the vehicle miles traveled are within 10.5 miles, still a reasonable distance for more ambitious bicyclists.

Bicycle and pedestrian travel could increase quite significantly with adequate infrastructure. Currently there are approximately 160 miles of bicycle and pedestrian facilities, most of which are in 'master planned communities' in the unincorporated areas of the region. These are a fragmented series of paths primarily suited for recreational users. The Houston-Galveston TMA's current plans call for construction of approximately 391 miles of on- and off-road facilities at a cost of approximately \$86 million. Once completed, this should result in over 500 miles of bicycle and pedestrian facilities (not including sidewalks) that would be interlinked in a comprehensive, cohesive network. The completion of these

programmed projects is the first necessary step in the establishment of a usable system.

The *2022 MTP* recognizes that a balanced approach to transportation provides people with choices that are desirable, practical, and safe. Bicycling and walking should be viable alternatives for many local trips and for combining non-motorized trips with transit services. The TPC has endorsed a policy of phased investment in bicycle and pedestrian improvements contained in the Regional Bicycle and Pedestrian Plan. These projects would build on the 500 miles of existing and committed bikeways. As project development and planning proceeds, additional projects will be moved from the bicycle plan to the MTP. Bicycle-friendly amenities, such as bike racks and lockers at park & rides and transit centers, are also planned to improve the travel range for bicyclists and make bicycling a more attractive mode of travel. For greater detail regarding proposed improvements refer to the *Regional Bicycle and Pedestrian Plan*.

7.6 OTHER IMPACTS

The transportation system has significant positive economic impacts. It is used to transport billions of dollars of goods and provides services to millions of consumers each year. There is no question about its value to users; however, it may have negative social and environmental impacts as well. This section addresses the potential impacts to human health and well being of implementing transportation system recommendations described earlier in this chapter.

7.6.1 Socioeconomic Implications

There is a history in many metropolitan areas of roadway and transit planning and construction that has paid little attention to neighborhood and social impacts. Transportation planners and providers have been criticized for a perceived indifference to the sometimes deleterious impacts of transportation systems on communities. Another criticism is that the transportation dollars are not equitably distributed among different geographic areas and income groups.

The "Metropolitan Transportation Plan Socioeconomic Analysis", prepared by H-GAC, focuses on the latter issue. Specifically, the analysis focused on the question of whether transportation projects proposed in the MTP represent a reasonable distribution of transportation benefits among the TMA's geographic areas and income groups. Two measures of project benefit were employed in the analysis: project mileage and project expenditures. To assess the distribution among low-income groups, the measures were used to assess benefits to federally designated Community Development Target Areas (CDTAs) in Brazoria, Fort Bend, Galveston,

and Harris Counties. The target areas were chosen because they contain a majority of low to moderate-income households.

Interestingly the geographic analysis revealed an equivalent distribution of transportation resources among geographic areas when compared to population distribution. Within the broad scope of the analysis, the study also indicated an equitable distribution of resources in low-income to moderate-income areas. Overall, the study found that the proposed program of projects was meeting the MTP goals.¹⁷

7.6.2 Land Use and Energy Implications

Transportation systems undoubtedly impact how land is developed and used. By making access between places easier, faster, and cheaper, transportation improvements can change travel behavior and influence residential, industrial and commercial growth. Over time, changes in land use may generate new travel demands and potentially new areas of congestion, which in turn encourage additional transportation capacity. It is a pattern that has been demonstrated across the nation and certainly in the Houston-Galveston region.

The *2022 MTP* attempts to balance the demands of growth in the region with the need to minimize the negative impacts of urban sprawl to society and the environment. In the financial analysis for the MTP, funding emphasis is placed on maintaining and preserving the existing system rather than capital expansion. As the region's transportation network ages, maintenance and preservation should continue to be of the utmost importance. The transportation management systems described in Chapter 5 will serve to manage the system more efficiently and thereby reduce the need for expansion. The recommended system of traffic signalization and synchronization and freeway surveillance system discussed earlier in this chapter will further the objective of reducing congestion. Overall, the transportation system should operate more smoothly and efficiently as improvements recommended in the MTP become operational. Greater efficiency should ultimately result in relatively lower energy consumption in the future.

One of the other important steps taken in the development of the *2022 MTP* the recognition that redevelopment of the urban core is vital to the continued growth and prosperity of the region as a whole. The target demographics discussed in Chapter 2 reflect a commitment to redevelopment goals established initially by the City of Houston.

¹⁷ For further information, refer to the "Metropolitan Transportation Plan Socioeconomic Analysis for the Houston-Galveston Transportation Management Area" prepared by H-GAC, Spring 1997.

7.6.3 Air Quality

One of the most studied and regulated environmental impacts of transportation is air pollution. Emissions from vehicle engines have significant impacts on air quality, particularly in urban areas. Vehicle emissions include a variety of pollutants such as carbon monoxide (CO), volatile organic compounds (VOCs), and particulate matter. Nationwide mobile sources accounted for nearly thirty-seven percent of all VOC emissions in 1994.¹⁸ Internal combustion engines also oxidize nitrogen, the principal constituent of air, thereby producing various oxides of nitrogen (NO_x). Ground-level ozone, the major constituent of smog, is formed when VOCs and NO_x react to sunlight. The TMA is designated as a severe non-attainment area because pollutants contained in the region's air, specifically VOCs and NO_x, exceed safe limits as defined by the National Ambient Air Quality Standards (NAAQS).

Air quality is monitored continuously to track changes in ozone levels throughout the region. According to data provided by TNRCC there are several air monitoring sites in the Houston-Galveston area that have historically exceeded the National Ambient Air Quality Standards (NAAQS) for ozone.¹⁹ While the majority of those sites, as expected, are located near the heavily monitored industrial areas close to the Houston Ship Channel and Texas City, there are also other high incidence sites in non-industrial parts of the region in far southwest and northwest Houston. This pattern seems to indicate that the ozone exceedance areas are not necessarily associated with industrial sites, but may be related to other factors such as traffic congestion as well.

Transportation Conformity

Transportation conformity is an analytical process that establishes the major connection between transportation planning and emission reductions from transportation sources.²⁰ TEA-21 links compliance with the conformity requirements of the CAAAs of 1990 to continued FHWA and FTA funding of transportation plans, programs, and projects. Under TEA-21's metropolitan planning requirements, projects cannot be approved, funded, advanced through the planning process, or implemented unless those projects are in a fiscally constrained and conforming transportation plan and transportation improvement program. States and MPOs must demonstrate, through the conformity process, that the transportation investments, strategies, and programs contained in the MTP have air quality impacts consistent with those contained in State Implementation Plans (SIPs) for achieving the NAAQS. Emissions may not exceed SIP targets for emissions from mobile sources. In short, the transportation system must do its part to attain

¹⁸ "Transportation Statistics Annual Report 1996", Bureau of Transportation Statistics, United States Department of Transportation.

¹⁹ Data is from the Texas Criteria Pollutant Summary, Percentage of NAAQS 1993-1995, based on design values for 1993-1995, TNRCC, 12/6/96.

²⁰ Excerpted from "Transportation Conformity: A Basic Guide for State & Local Officials" U.S. Department of Transportation, Publication No. FHWA-PD-97-035

national air quality goals by reducing vehicle emissions. The conformity analysis demonstrates the MTP's compliance with state air quality control strategies.

The demonstration of conformity includes several categories of tests, all of which must be passed for all milestone years through the plan horizon year 2022. The milestone years are 2007, 2015, and 2022.

In addition, the region must demonstrate that transportation control measures (TCMs) commitments are being met.

Figure 7.7 shows that the conformity analysis conducted for the *2022 MTP* transportation improvements will result in vehicle emissions reductions below that required in the state air quality implementation plan (SIP). The conformity analysis also demonstrates that the MTP supports timely implementation of transportation control measures (TCMs) designed to reduce traffic congestion and vehicle emissions. Therefore, the *2022 MTP* will not increase the number or severity of ozone exceedances in the eight-county region.²¹

The *2022 MTP* meets the current budget requirement, a maximum of 132.68 tons of VOC per day and a maximum of 283.01 tons of NOx per day, for each milestone year examined. The estimated vehicle emissions incorporate the expected impact of an aggressive commitment to implementation of TCMs and other emission reduction measures found in the *2022 MTP*. By 2022, these measures are expected to reduce VOC emissions by approximately 2.8 tons per day and NOx emissions by 1.1 tons per day.

²¹For details of the conformity analysis refer to "Conformity Determinations for *2022 MTP*, Metropolitan Transportation Plan and the 2000-2002 Transportation Improvement Program," H-GAC.

Figure 7.4 VOC Conformity Analysis

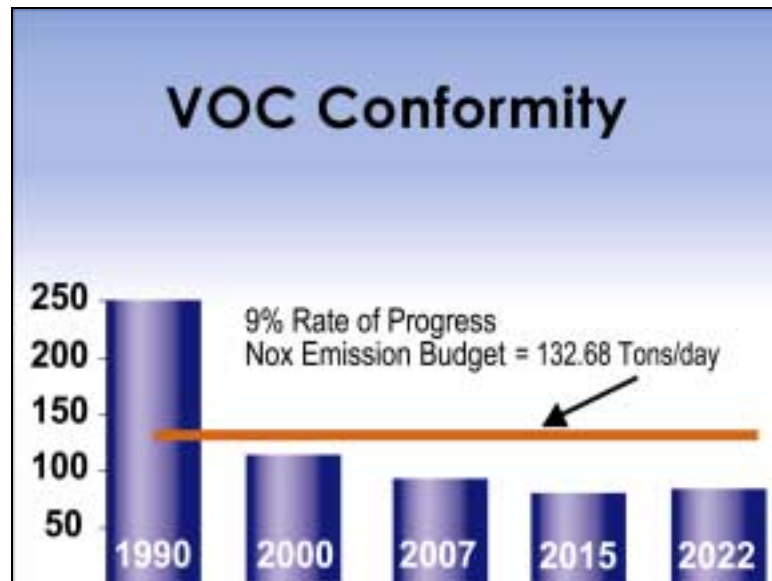
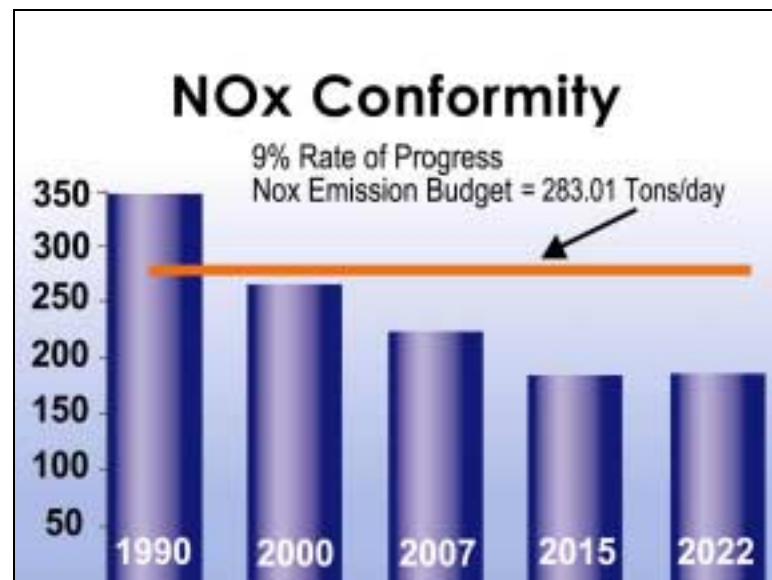


Figure 7.5 NOx Conformity Analysis



7.7 CONCLUSION

During the last decade significant gains were made in the prolonged battle against congestion. Travel delays on many of the region's freeways and principal arterials decreased due to the completion of a number of regional roadway improvements such as the reconstruction and widening of the Southwest Freeway and construction of the Sam Houston Tollway. However, roadway congestion remains one of the most vexing problems of the transportation system.

Many of the region's roadways are reaching or exceeding their design capacities due to increases in population and vehicle miles traveled. Continued suburban development in previously undeveloped areas perpetuates the need for new roads. At the same time, increases in travel demand lead to increasing maintenance and rehabilitation needs on existing roads. Each of these events places a greater demand upon the transportation system. Limited revenues to both expand and maintain the transportation system further exacerbate the problem. The recommendations of the *2022 MTP* seek to alleviate the strains that these and other patterns will place on the transportation system.

In order to continue a positive trend in congestion reduction, regional transportation providers must focus on capital improvements that incorporate a number of alternative strategies to reduce congestion. Further expansion and enhancement of transit alternatives including demand response and light rail systems, increased usage of carpooling and van pooling, telecommuting and flexible work schedules that reduce peak hour congestion, and implementation of intelligent traffic management systems are the keys to a balanced transportation system.

The *2022 MTP* was developed through a combination of public involvement and intergovernmental cooperation. It provides a practical and responsible set of recommendations for improvements to the regional transportation system through 2022. It is a multimodal plan that emphasizes the efficient movement of people and goods. The recommendations it provides maintain and enhance the existing infrastructure in a cost-effective manner, and encompass many modes of transportation. The recommendations of the *2022 MTP* also help in the continuous effort toward cleaner air with the implementation of transportation control measures. The *2022 MTP* is a framework that we can follow as we expand our regional transportation system to meet the needs of our ever-changing community.

APPENDIX A: Seven Planning Factors and Glossary



TRANSPORTATION EQUITY ACT FOR THE 21st CENTURY (TEA-21) 7 PLANNING AREAS

The growing importance of operating and managing the transportation system is recognized as a focal point for transportation planning. TEA-21 consolidates the sixteen planning factors previously established under ISTEA into seven broad “areas” to be considered in the planning process, which include:

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

TRANSPORTATION AND AIR QUALITY PLANNING ACRONYMS REVISED JANUARY 2000

3-C	Continuing, Comprehensive, & Coordinated - 3-C planning process as required by TxDOT
AADT	Annual Average Daily Traffic
AASHTO	American Association of State Highway and Transportation Officials
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
AE	Annual Element
AERCO	Area Emissions Reduction Credit Organization
APO	Average Passenger Occupancy
APTA	American Public Transportation Association
AQC	Air Quality Compliance
AQCRs	Air Quality Control Regions
AQMA	Air Quality Maintenance Area - Areas noted by the EPA that have a potential for, or that presently exceed, the National Ambient Air Quality Standards
ATOM 2	A modified version of the Atomistic Model--Disaggregate Trip Distribution Model of the TTDP
AVL	Authorized Vehicle Lane
AVO	Average Vehicle Occupancy
BMS	Bridge Management System
BRINSAP	Bridge Inventory, Inspection, and Appraisal Program
CAA	Clean Air Act (and its related amendments)
CAGR	Compound Annual Growth Rate
CBD	Central Business District
CDP	Census Designated Places
CEI	Cost Effectiveness Index
CFR	Code of Federal Regulations
CMAQ	Congestion Mitigation Air Quality
CMA	Congestion Mitigation Analysis (formerly known as SOV Analysis)
CMS	Congestion Management System

CMSA	Consolidated Metropolitan Statistical Area - The Houston-Galveston-Brazoria CMSA consists of the Houston PMSA (Fort Bend, Harris, Liberty, Montgomery, and Waller Counties), the Galveston-Texas City PMSA (Galveston County), and the Brazoria PMSA (Brazoria County)
CNG	Compressed Natural Gas
CIP	Capital Improvement Program
CO	Carbon Monoxide
COG	Council of Government
CRP	Consolidated Road Program
CT	Census Tract
CTR	Center for Transportation Research, University of Texas at Austin
D-2	Division of Aviation, TxDOT
D-10	Division of Transportation Planning, TxDOT
D-11	Division of Public Transportation, TxDOT
DEIS	Draft Environmental Impact Statement
DEMO	Demonstration grant - funding of an experimental program
DIME	Dual Independent Map Encoding - A technique of creating a geographic base file (replaced by TIGER files)
DOT	Department of Transportation
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FAI	Federal Air Interstate System
FAP	Federal Aid Primary System
FAPG	Federal Aid Policy Guide (Replaces FHPM)
FAS	Federal Aid Secondary System
FAU	Federal Aid Urban System
FCFF	Federal Clean Fuel Fleet
FAHPM	Federal Aid Highway Program Manual (replaced by FAPG)

FHWA	Federal Highway Administration
FMA	Federal Maritime Administration
FMVCP	Federal Motor Vehicle Control Program
FONSI	Finding of No Significant Impact
FRA	Federal Railroad Administration
FTA	Federal Transit Administration (formerly UMTA)
GCSPR	Gulf Coast State Planning Region
GIS	Geographic Information Systems
GSU	Geographic Statistical Unit
HAOS	Houston Area Oxidant Study
HC	Hydrocarbons
H-GAC	Houston-Galveston Area Council
H-GRTS	Houston-Galveston Regional Transportation Study - Part of TxDOT, Houston District
HOV	High Occupancy Vehicle
HPMS	Highway Performance Monitoring System
HPR	Highway Planning and Research
HRT	Heavy Rail Transit
HUD	U.S. Department of Housing and Urban Development
IH	Interstate Highway
I/M	Inspection/Maintenance Program (of vehicular emission controls)
IMS	Intermodal Management System
IPG	Intermodal Planning Group
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
ITS	Intelligent Transportation System
IVHS	Intelligent Vehicle Highway System
LEV	Low Emission Vehicle
LMRT	Local Match for Rural Transit
LMT	Local Match for Transit

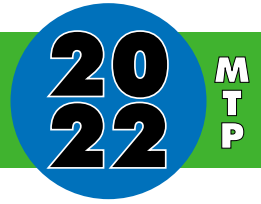
LNG	Liquid Natural Gas
LOS	Level of Service
LPG	Liquefied Petroleum Gas
LRP	Long Range Transportation Plan
LRT	Light Rail Transit
METRO	Metropolitan Transit Authority of Harris County
MIS	Major Investment Study
MOBIL5a	EPA's Mobile Emissions Factor Model
MPO	Metropolitan Planning Organization
MTP	Metropolitan Transportation Plan (formerly Long Range Transportation Plan)
NAAQS	National Ambient Air Quality Standards
NARC	National Association of Regional Councils
NASP	National Airport System Plan
NEPA	National Environmental Protection Act
NHS	National Highway System
NOx	Nitrogen Oxide
NPRM	Notice of Proposed Rule Making
O₃	Ozone
O&D	Origin and Destination
OPD	Overall Program Design - A budgetary document of H-GAC
P&P	Park and Pool
P&R	Park and Ride
PASS	Principal Arterial Street System (TxDOT)
PDP	Project Development Plan
PIP	Public Involvement Plan
PL	FHWA Planning Funds
PM	Particulate Matter (suspended solids)

PMS	Pavement Management System
PMSA	Primary Metropolitan Statistical Area
PMT	Personal Miles Traveled (daily or annually)
PPM	Parts Per Million
PRT	Personal Rapid Transit
PTF	Public Transportation Fund (State of Texas)
PTMS	Public Transportation Facilities and Equipment Management System
RAP	Reliever Airport Plan
RAQPC	Regional Air Quality Planning Committee
RASP	Regional Airport System Plan
RCAP	Regional Commute Alternatives Program
RFP	Request for Proposal
RFQ	Request for Qualification
RMP	Regional Mobility Plan
R-O-W	Right-of-Way
SIP	State Implementation Plan - Required of TNRCC by the EPA through the CAAs of 1972 and 1977. Plan to meet NAAQS by 2007 (for ozone) through controls on all emission sources (includes TCPs)
SMS	Safety Management System
SO₂	Sulfur Dioxide
SOV	Single Occupancy Vehicle
STFI	Summary Tape File 1
STIP	State Transportation Improvement Program
STP	Surface Transportation Program
STOL	Short Takeoff and Landing Aircraft
STRAHNET	Strategic Highway Network
TAC	Technical Advisory Committee to the Transportation Policy Council
TACB	Texas Air Control Board (Replaced by the Texas Natural Resource Conservation Commission)

TAFF	Texas Alternative Fuel Fleet Program
TASP	Texas Airport System Plan
TCAA	Texas Clean Air Act
TCMs	Transportation Control Measures
TCP	Transportation Control Plan - As envisioned by the EPA to reduce mobile source emissions enough by 1982 or 1987 to meet NAAQS
TDM	Travel Demand Modeling; also Transportation Demand Management
TDP	Transit Development Program
TEA-21	Transportation Equity Act for the 21 st Century (Enacted June 9, 1998)
THTS	Texas Highway Trunk System
TIGER	Topologically Integrated Geographic Encoding and Referencing
TIP	Transportation Improvement Program
TMA's	Transportation Management Areas
TMO's	Transportation Management Organizations
TMS/H	Traffic Management System for Highways
TNRCC	Texas Natural Resource Conservation Commission
TRACS	Texas Review and Comment System
TSM	Transportation Systems Management
TOPICS	Traffic Operations to Increase Capacity and Safety
TPC	Transportation Policy Council for the Gulf Coast State Planning Region
TRC	Texas Railroad Commission
TTC	Texas Transportation Commission
TTDP	Texas Travel Demand Package
TTI	Texas Transportation Institute - A division of Texas A&M University
TxDOT	Texas Department of Transportation
UA/UZA	Urbanized Area
UPWP	Unified Planning Work Program
USDOT	United States Department of Transportation

UTP	Unified Transportation Plan
UTPS	Urban Transportation Planning System - Computer programs for transportation planning
VMT	Vehicle Miles Traveled (daily or annually)
VOC	Volatile Organic Compound

APPENDIX B: Project Development and Project Lists



APPENDIX B: Project Development and Project Lists



APPENDIX B

PROJECT DEVELOPMENT AND PROJECT LISTS

B. 1 MTP DEVELOPMENT

The MTP is a strategic planning document designed to identify and address the transportation needs of the Houston-Galveston region through the year 2022. As such, the MTP forms the basis for transportation planning activities within the region and determines the region's future transportation system. The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 makes the MTP a federal requirement for all urbanized areas and federally funded transportation projects must be included in the MTP. ISTEA requires the MTP to be updated at least every three years.

In 1998, work began on development of a long-range planning document called 2022 MTP that addresses federal requirements and planning needs throughout the eight-county Transportation Management Area (TMA)¹. 2022 MTP is the Houston-Galveston region's MTP, replacing its predecessor, Vision 2020. The first step in the development process was identification of regional transportation needs. A series of public meetings were held to discuss the needs of local transportation providers and users. At the same time, demographic forecasts for the year 2022 were developed which indicated the expected growth in population, households, and employment throughout the region. Data collection was also initiated to develop revenue forecasts for the region. A preliminary estimate of revenues and expenditures through the year 2022 was completed in October 1999. To aid in identifying future transportation needs, several sets of transit and highway scenarios were developed to assess the impact of each on future travel demand. This process resulted in a listing of project needs for the region. The "needs" list was further evaluated and prioritized based upon the expected benefits of each project.

The result of the project evaluation and prioritization process is a listing of short-range and long-range transportation strategies. The short-range listing identifies projects that address needs and are likely to be implemented within the first seven years of the MTP. The long-range element of the MTP includes transportation recommendations for the period 2008 through 2022.

¹ The TMA consists of Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller counties.

The MTP also identifies needs that cannot be met due to financial and/or air quality constraints. The prioritization and evaluation of projects in 2022 MTP is based upon the same analyses performed for the development of Vision 2020.

The following five-part project evaluation and prioritization process for 2022 MTP was developed under guidance from the Technical Advisory Committee (TAC) to the Transportation Policy Council (TPC) over a period of many months.

B.2, "2022 MTP Project Evaluation and Prioritization Process", describes the overall evaluation process that includes all types of MTP projects and programs.

B.3, "Decision Rules for Evaluating Roadway Projects", is the specific guidance employed to determine which roadway projects would be considered short-range candidates and which would be long-range candidates.

B.4, "Benefit/Cost Analysis of Candidate Roadway Projects" describes the methodology used to analyze short-range candidate roadway projects, both widenings and new construction projects.

B.5, "Target Funding Levels for Congestion Mitigation and Air Quality Improvement Program Projects", refers to a proposal for establishing "target" funding levels for categories of projects that would be eligible for CMAQ funding.

B.6, "Project Readiness Criteria", refers to the criteria developed specifically to assess the likelihood that a candidate project could be implemented within the timeframe of the Transportation Improvement Program if selected for funding.

B.2 PROJECT EVALUATION AND PRIORITIZATION

A. Sort projects into categories

1. Operations and Maintenance:
 - Transit
 - Roadway
2. Rehabilitation and Preservation:
 - Transit
 - Roadway
3. Air Quality/ Energy:
 - Projects whose primary objective is to directly reduce vehicle emissions (i.e., alternative fuels program, air quality public outreach programs, etc.)
4. Bicycle/Pedestrian
5. Intermodal:
 - Projects whose primary function is to improve ingress and egress to seaport, airport, trucking, and rail facilities or otherwise directly impact the distribution of goods throughout the region
6. Roadway Expansion
 - Widenings
 - New location
7. Transit:
 - New Transit Services or transit service expansion
 - Fixed Guideway and HOV lanes
8. Transportation Demand Management (TDM)
 - Projects such as congestion pricing, employer trip reduction programs, regional rideshare program, vanpooling, etc.
9. Transportation System Management (TSM) / Traffic Operations:
 - Intersection improvements
 - Synchronized signalization
 - Grade separations

B. Assume funding levels for operations, maintenance and rehabilitation in accordance with forecasted needs

C. Assess short-range and long-range needs for roadway expansion

With the exception of new roadway construction, projects in the roadway expansion category were evaluated for congestion and other benefits. The maximum score that any project could receive is 200 points (100 for congestion and 100 for other benefits). Projects scoring 50 points or more

are considered candidate short-range strategies. The short-range candidate projects then undergo a benefit/cost analysis to determine their relative priorities. New roadway construction projects skipped the first step in this process and went directly to the benefit/cost analysis to determine the feasibility of each project.

1. Congestion
Max. 100 pts.

Year/ Congestion Level	Moderate Area	Moderate Facility	Serious/ Severe Area	Serious/ Severe Facility
2000	10	10	25	25
2010	5	5	15	15
2020	0	0	10	10
TOTAL	15	15	50	50

2. Other Benefits
Max 100 pts.

- **25 pts.** Project relieves an existing bottleneck or fills a gap in the existing roadway system resulting in improved traffic flow
- **25 pts.** Project is located on a hurricane evacuation route
- **25 pts.** Project contributes to the MTP goal of a multimodal system with seamless connections by improving passenger and commuter choices
- **25 pts.** Project is located on a National Highway System connector or serves as a primary route for transporting goods directly to and from an intermodal terminal

D. Evaluate CMAQ/Transit projects and short-range roadway expansion

Air quality/energy, bicycle, intermodal, TDM, TSM, and transit projects are generally eligible for funding under the Congestion Mitigation and Air Quality Improvement (CMAQ) program. It is assumed that these projects could be implemented within the first ten years of the Plan given adequate levels of funding.

The evaluation for short-range roadway expansion projects and CMAQ/transit projects is based upon the following performance measures:

Group	Analysis	Performance Measure
Roadway expansion: New location and widenings	Benefit/Cost	Travel Time Savings
CMAQ/Transit	Benefit/Cost	Emission reductions, VMT reduction, travel delay savings

E. Financially constrain the Plan for the Short-range period and then for the Long-range

This process may require a reassessment of priorities. Some short-range projects may be moved to the long-range project listing due to funding constraints.

F. Evaluate projects in the Short-range period for inclusion in the TIP based upon:

1. Eligibility for funding categories
2. Project readiness
 - Right-of-way acquisition
 - Local match
 - Design/preliminary engineering/environmental

G. Ensure that the MTP is financially constrained and meets all air quality conformity requirements

B.3 DECISION RULES FOR EVALUATING ROADWAY PROJECTS

1. Congestion

Two different levels of congestion are evaluated for projects, the level of congestion on the roadway and in the area in which the project will be located. For both the roadway level analysis and the area level analysis, congestion is based upon 24 hour per lane volume to capacity ratios (V/C) for existing and committed roadways. The levels of mobility (LOM) used to define congestion are as follows:

LOM	V/C
Tolerable	< 0.85
Moderate	>0.85, < 1.00
Serious	>1.00, < 1.25
Severe	> 1.25

evaluation capacity is based on the number of vehicles per lane per day and varies for urban/suburban and rural roadways as follows:

Facility	Urban	Suburban	Rural
Freeways	23,500	23,500	16,500
Tollways	18,000	18,000	-----
Expressways	11,000	11,000	-----
Arterials	7,500	6,250	5,000

For analysis purposes the serious and severe levels of mobility are combined to form a serious or severe LOM where the volume to capacity ratio is greater than 1.00. Projects are analyzed for the time period in which serious/severe or moderate levels of congestion first appear. The three time periods are 2000, 2010, and 2020. The same analysis is undertaken to determine the time period and level of congestion for the area in which the project is located. The width of the congested area is defined as one and one half a mile on either side of a moderately or seriously/severely congested roadway in urban areas and three miles on either side in rural areas. The length of the area depended on the length of the congested portion of the arterial. Since project limits do not always correspond to congested area or roadway lengths, if 50% or more of the project is located in a congested area or on a congested roadway, it is considered congested. New construction projects are not evaluated for roadway-level congestion.

2. Other Benefits

- **25 pts.** Project relieves an existing bottleneck or fills a gap in the existing roadway system resulting in improved traffic flow

Projects that would construct missing segments of existing roadways are identified as gap fillers. They are generally located on arterials approximately 3 miles or less in length in developed areas and 6 miles or less in less developed areas. These projects, if completed, would serve as alternative routes to parallel roadways and improve access in developing areas.

Bottlenecks are widening projects on existing roadways where reductions or fluctuations in the number of lanes contribute to congestion. The entire project may be identified as a bottleneck even though in some cases the project extends beyond the point of the bottleneck. For example, project number 20 on SH 6 would widen the roadway from 2 to 6 lanes from Senior Road to FM 521. Although SH 6 changes from 6 lanes to 2 lanes at Senior Road the entire project is identified as a bottleneck because it would relieve the congestion that is attributable to the lane at Senior Road.

- **25 pts.** Project is located on an evacuation route

The Hurricane Contingency Planning Guide produced by the Texas Department of Public Safety (DPS), updated April 1994, identifies hurricane evacuation routes in Brazoria, Chambers, Galveston and Harris Counties. Some evacuation routes extend into southern Fort Bend County as well. Candidate MTP projects are compared to the hurricane evacuation routes identified in the DPS plan to determine their status as evacuation routes. New construction projects that appear to be alternative routes to designated evacuation routes are identified as evacuation routes. For example, new SH 35 proposed for Brazoria County was identified as a primary evacuation route because it would serve as an alternative route to the existing SH 35 that is designated as an evacuation route in the DPS guide.

- **25 pts.** Project contributes to the MTP goal of a multimodal system with seamless connections

In general, those projects that involve improvements to facilities that serve at least two different modes of travel are defined as enhancing the multimodal system or improving connections between modes. This criterion emphasizes the movement of people. For example, High Occupancy Vehicle (HOV) lane projects are considered multimodal projects because they provide an alternative to single-occupancy vehicle travel for travelers. Projects that directly improve connections between two or more modes of travel are also considered to be multimodal projects. Park & Ride facilities are seen as multimodal improvements because they improve transfers between automobile and transit modes.

- **25 pts.** Project is located on a National Highway System connector or serves as a primary route for transporting goods directly to and from an intermodal terminal

Following the passage of the National Highway System Designation Act of 1995, 66 intermodal terminals were identified for the Houston-Galveston region. In a joint effort, H-GAC and the Texas Department of Transportation identified a number of intermodal connectors, roads that connect intermodal terminals directly to the National Highway System (NHS). Projects proposed for intermodal connectors are given points for this criterion. New roadway construction projects that directly serve intermodal terminals may also be considered intermodal connectors. This would include the construction of mainlanes on existing right-of-way as long as the mainlanes would directly connect to an intermodal facility. The emphasis for this criterion is on the improvement of goods movement within the region.

B. 4 BENEFIT/COST ANALYSIS OF CANDIDATE ROADWAY PROJECTS

This part of the project evaluation process outlines the methodology by which short-range roadway projects are evaluated and ranked based on cost effectiveness. The procedure relies on estimated improvements in travel time of users of the proposed project and on the estimated cost of the project. Travel time, or vehicle hours of travel, is calculated on a link by link basis and totaled over the length of the project. Travel time savings are calculated as the difference between the travel times on the facility with and without the improvement, using modeled traffic volumes for years 2000 and 2020 on the existing plus committed (E+C) roadway network. Assuming a stream of benefits starting in 2000 and ending 2020, the net present value (NPV) of the benefits is obtained. The cost effectiveness, or the benefit/cost index, is then calculated as the product of the ratio of the annual average of the NPV to the annualized cost of the project and an indexing factor.

Roadway Widening Project Methodology:

$$\text{B/C Index} = \left[\frac{\text{(Avg. Annual Net Present Value of Travel Time Benefit)}}{\text{(Annualized Cost)}} \right] \times 100$$

Supporting Calculations

Average Annual Net Present Value of Travel Time Benefit

Travel Time Benefit for years 2000 and 2020:

$$\text{Travel Time Benefit} = (\text{Travel Time Savings}) \times (\text{AVO}) \times (\# \text{ Days per Year}) \times (\text{Dollar Value of Time})$$

Where,

Travel Time Benefit = Travel time savings to all users of the facility, in \$/year.

Travel Time Savings = Travel Time Before Improvement – Travel Time After Improvement (in Vehicle Hours of Travel)

Travel Time Before Improvement = [Project Length ÷ Speed (w/o)] x Traffic Volume]

Travel Time After Improvement = [Project Length ÷ Speed (w/)] x Traffic Volume]

AVO = Average Vehicle Occupancy (a constant)

Dollar Value of Time = Average dollar value of an equivalent work hour, per person.

(The average dollar value of truck travel is factored in based on the estimated percentage of truck traffic along that facility type.)

For all other years:

$$\text{Travel Time Benefit}_I = (\text{Travel Time Benefit}_{00}) \times [1 + \text{Growth Factor}]^{(I - 2000)}$$

Where,

Travel Time Benefit_I = Savings in travel time to facility users in year I

I = year of analysis

Travel Time Benefit₀₀ = Savings in travel time to facility users in year 2000

$$\text{Growth Factor} = (\text{Travel Time Benefit}_{20} / \text{Travel Time Benefit}_{00})^{(1/20)} - 1$$

Travel Time Benefit₂₀ = Savings in travel time to facility users in year 2020

Average Annual Net Present Value:

$$\overline{NPV} = \left[\sum_{i=0}^n \frac{\text{Travel Time Benefits}_i}{(1 + \text{rate})^i} \right] / n$$

Where,

NPV = Average annual net present value of travel time benefits for n years

i = the year of calculation

n = the total number of years, 21 (FY 2000 through FY 2020, inclusive)

Travel Time Benefits_i = the benefits for the year of calculation

rate = 7% (annual discount rate)

Annualized Cost

In most cases, project costs (exclusive of right-of-way) are estimated by project sponsors in the analysis. In some cases, however, no cost has been submitted or the cost is significantly lower than independent cost estimates developed by H-GAC's project cost consultant using typical Texas Department of Transportation (TxDOT) unit cost information.

Annualized Cost = (Project Cost, Excluding ROW) x (Capital Recovery Factor)

Capital Recovery Factor = $\text{rate} (1 + \text{rate})^n / (1 + \text{rate})^n - 1$

New Location Roadway Project Methodology:

New location roadway projects are evaluated using a methodology that is virtually the same as for widening projects. However, since there are no traffic volumes or speeds on facilities prior to their existence, staff uses a proxy approach to obtaining the necessary data. As with the widening methodology, staff assumes that the volumes in the year of analysis would be the same both the "before" and "after" scenarios. Hypothetical speeds for facilities "before" improvements are obtained from a matrix of typical speeds for certain congestion levels and area types (see table given under the Assumptions below).

B/C INDEX = $[(\text{AVG. ANNUAL NET Present Value of Travel Time Benefit}) \div (\text{Annualized Cost})] \times 100$

Assumptions:

Constant	Value	Source
Value of Time (Cost of Congestion/Person Hour)	\$ 11.71 per hour	TTI, 1997
Value of Truck Time	\$ 45.00 per hour	TTI, 1997
Percentage Truck Travel	13.29% Urban Fwy 11.96% Urban Non-Fwy 13.69% Rural Fwy 9.65% Rural Non-Fwy	Coastal Oxidant Assessment for Southeast Texas (COAST), 1993
Average Vehicle Occupancy	1.25	TTI, 1997
Number of Days/Year	313	Project Evaluation Procedures, 1995 TIP
Is (economic lifespan)	40 years for bridges and overpasses 30 years for urban freeways 20 years for all other roadways	TxDOT - District 12, 1997 Recommendations are based on the Houston District design standards.
Rate (discount rate)	7.0%	Federal Guidelines, 1996

Speed Matrix for New Location Projects:

Congestion Level	Area Type			
	Urban	Urban Fringe	Suburban	Rural
Tolerable	25	27	32	50
Moderate	20	22	28	45
Serious & Severe	18	20	25	40

Numbers indicate speed in miles per hour (MPH)

Source: Houston-Galveston Regional Travel Demand Models, 1997.

B.5 TARGET FUNDING LEVELS

The Congestion Mitigation and Air Quality Improvement Program (CMAQ) is an innovative funding category established by the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) to help States implement projects that contribute to attainment of national air quality standards. CMAQ funding is focused on investment in air quality improvements and provides funds for

projects that expand or initiate transportation services with air quality benefits. The ISTEA created flexible guidelines that allow the CMAQ program to cut across traditional boundaries and encompass projects and programs dealing with highways, transit, and non-traditional areas, such as vehicle emission inspection and maintenance, pedestrian and bicycle programs, and demand management strategies to name a few².

The primary purpose of the CMAQ program is to fund projects and programs that reduce vehicle emissions and congestion. With these objectives in mind, previous analysis of candidate CMAQ projects for the 1995-1997 TIP was performed in two principal stages. Each eligible project's annualized cost (net of local contributions) was compared to its expected air quality benefits (total annual pounds reduction of Volatile Organic Compounds (VOC) plus Nitrogen Oxides (NOx)). This ratio determined each project's relative "cost effectiveness". In the second stage, projects were reviewed for "readiness" or the project's ability to be implemented within the 3 year TIP time frame.

In December 1996, TAC members met to discuss the evaluation and prioritization of candidate transportation and air quality projects that may be eligible for funding under the Congestion Mitigation and Air Quality Improvement Program. After reviewing the 1995 TIP evaluation process, the TAC indicated that the methodology should be revised to give weight both to the potential air quality and mobility benefits of proposed CMAQ projects. The task force also discussed the desirability of allocating some portion of CMAQ funding to "groupings" of candidate projects to ensure regional goals identified in the MTP were not lost in the process of project evaluation, comparison and selection.

Six primary categories of projects were identified as eligible for CMAQ funding:

1. Bicycle/Pedestrian
2. Air Quality/Environmental
3. Travel Demand Management (TDM): Rideshare/Vanpool
4. Transit
 - New Service/P&R
 - Fixed Guideway/High Occupancy Vehicle (HOV) lanes
5. Intermodal
6. Transportation System Management (TSM) /Traffic Operations
 - Intersection improvements
 - Grade separations, ramp improvements
 - Signal coordination

² A Guide to the Congestion Mitigation and Air Quality Improvement Program, U.S. Department of Transportation, 1993.

Subsequent to the work completed by the TAC, the Transportation Policy Council endorsed a methodology for allocating future funding among the six different categories of candidate CMAQ projects. The funding allocation establishes “target” funding levels for each category of projects. The actual allocation may vary as projects are selected for implementation in the Transportation Improvement Program depending upon project development, regional priorities, and available funding each year. A project-level analysis will also be necessary prior to implementation in the TIP to determine the emission benefits of each project.

CMAQ Project Category	Funding Distribution
Bicycle & Pedestrian	7%
Air Quality/Environmental	7%
TDM: Rideshare/Vanpool	9%
Transit:	
New Service/P&R	11%
Fixed Guideway/HOV	15%
Intermodal	6%
TSM:	
Intersection Improvements	4%
G/Seps, Ramps	10%
Signal Coordination	30%
	100 %

B.6 PROJECT READINESS FOR THE TIP

The TIP is the implementation device for the MTP. It details an implementation schedule for the first three years worth of projects in the MTP. One of the important criteria for selection as a TIP project is “readiness”. “Readiness” refers to the ability of a project to be ready for contract letting in the year in which it is programmed in the TIP. This is an important criterion for the TIP because projects that are not let in their programmed year must be re-programmed into a later fiscal year. TxDOT districts may not exceed their obligation authority for a given fiscal year. Therefore, re-programming a project into a later fiscal year impacts the ability to let other projects proceed to contract in that year.

As the ISTEA of 1991 has matured, procedures have evolved as requirements of the Act have been interpreted. The TIP selection process is an example of an evolving procedure. Since the inception of ISTEA, TIP selection procedures have changed as the state and metropolitan planning organizations have developed a better understanding of the regulations and processes inherent in ISTEA. It has

been the experience in this region that many projects selected for previous TIPs have not be ready to let to construction within the TIP timeframe. As a result, the readiness criteria are being more carefully reviewed for the 2000 - 2002 TIP.

Previous information mailed to project sponsors regarding TIP readiness criteria stated that "...four key factors are examined to determine project readiness: the basis for cost estimates, the completeness of environmental analyses, availability of right-of-way (ROW), and local government financial commitment." It further states that projects "...not significantly developed in each of these areas are considered to be beyond the timeframe of the TIP." Additional detail regarding each of these issues is provided below.

Cost Estimates

Cost estimates are important in determining readiness because they indicate the development status of projects. For example, if preliminary engineering is included in the cost estimate because it has not completed, the project is not likely to be ready for implementation in the TIP timeframe. In general, projects that do not have well-developed cost estimates are not far enough along in the development process to be considered ready for implementation.

Environmental Analyses

All federal-aid projects must complete the National Environmental Protection Act (NEPA) process. A finding of no significant impacts (FONSI), a record of decision (ROD) or a categorical exclusion (CE) is necessary before federal funds can be expended on a project. One of the first steps in the NEPA process is completion of an environmental assessment (EA). The EA basically "flags" potential environmental problems should any exist. It indicates if any additional permits or analyses are required for a proposed project. If the EA results in a FONSI, then the project may move forward. If the EA indicates the potential for significant environmental impacts, then generally an environmental impact statement (EIS) will be required.

Projects proposed for construction on new locations requiring land acquisition are especially vulnerable to the possibility of needing an EIS. In addition to new roadways, construction of park and ride lots, high occupancy vehicle lanes, and transit stations on new locations are likely to need an EIS. It may take several years to complete the required environmental analyses for these types of projects. Other types of projects, such as roadway widenings or grades separations within existing right-of-way are less likely to have significant environmental impacts. Consequently, completion of the environmental process prior to selection as TIP project is not expected to result in delays in implementation.

Right-of-Way

Because right-of-way acquisition is potentially litigious and time consuming, a significant amount of right-of-way should have already been acquired for projects that will require additional right-of-way. Significant is defined to mean that at least fifty percent of the necessary right-of-way has been acquired. If a project sponsor has agreements with landowners that would expedite the acquisition process, that information should be documented and submitted for consideration in the readiness determination.

Local Commitment

Project sponsors must submit documentation to provide the local matching funds required for federal-aid projects. Generally, a minimum of twenty percent of the remaining eligible costs associated with a project is required. Project sponsors may choose to commit to a greater percentage of the project cost. Previous project expenditures by project sponsors are not reimbursable. However, commitment of local funds in the form of previous expenditures effectively lowers the cost of the project and increases its cost-effectiveness.

Other Factors Affecting Readiness

In addition to the factors listed above, certain administrative requirements must be met before a project can be let to contract for construction. Project sponsors must develop a contract with the Texas Department of Transportation, a process that may take a year to complete. The length of the contract development period effectively reduces the amount of time available to project sponsors to address the readiness criteria.

The Clean Air Act Amendments (CAAA) of 1990 states that no additional single occupancy vehicle (SOV) capacity may be built in a TMA within a nonattainment area unless the project complies with a congestion management system (CMS). Since a CMS has not yet been implemented in the Houston-Galveston TMA, a SOV analysis must be completed for projects that will result in significant increase in capacity for SOVs (i.e., adding general purpose lanes to an existing highway or constructing a new highway). The analysis must include an assessment of all reasonable travel demand reduction and operational management strategies for the corridor in which an added capacity project is proposed. The SOV analysis should be part of the environmental assessment for a proposed project. If it is not, then a separate SOV justification must be completed prior to programming the project. The requirement for a SOV justification has significant implications for project readiness.

B. 7 PROJECT LISTING

Funding Summary:

Category	TIP (2000- 2002)	Short-Range (2003- 2007)	Long-Range (2008-2022)
CMAQ	\$376,650,529	\$378,614,134	\$865,296,861
Transit	\$2,285,518,500	\$1,016,154,727	\$1,493,558,493
Roadway (TIP yrs include majority of locally funded projects)	\$1,451,255,451	\$4,752,284,418	\$4,352,278,249
Other	\$386,143,283	\$278,468,341	\$48,857,375

* Includes Metro's Regional Bus Plan and carryover grants

The projects lists are divided into 4 sections: TIP, short/long-range, locally funded and transit. The TIP projects are shown first, followed by short and long-range projects, locally funded projects and then the transit projects. All projects, with the exception of the transit projects, are shown in alphabetical order.

2022 MTP: 2000 - 2002 TIP Roadway Projects

List Includes: Roadway, CMAQ, Rehabilitation, Safety, Enhancement and Miscellaneous Projects
(Sorted by street, county)

PROJ ID	PROJ NUMBER	CSJ NUMBER	CO	STREET	FROM LOCATION	TO LOCATION	PROJECT DESCRIPTION	TOTAL COST	PROJ STATUS	FUNDING SOURCE
47	1993-0179-00	8041-12-009	HAR	AIRPORT	1500' E OF MYKAWA	TELEPHONE RD	WIDEN TO 4 LN DIV (RS MEDN) URB ST FCTY	\$3,259,000	T	4C
9789	1994-0826-B-XX	8041-12-008	HAR	AIRPORT	FM 521	SH 288	CONDUCT PE & CONST 4 LN DIV (RS MEDN) URB ST FCTY	\$3,106,285	T	17
48	1993-0180-00	8041-12-010	HAR	AIRPORT BLVD	TELEPHONE RD	IH 45	WIDEN TO 6 LN DIV (RS MEDN) URB ST FCTY	\$5,121,000	T	4C
7025	1999-0103-K-00	0912-71-654	HAR	ALDINE MAIL RD	0.5 MI W OF JFK BLVD	US 59	INSTALL SIDEWALKS	\$591,900	T	4A
2927	HOU.BO.332	0912-31-086	BRA	ALVIN MUSTANG TRL	N ALVIN CITY LIMIT	S ALVIN CITY LIMIT	CONST ALVIN MUSTANG TRL SYS OF BRA CO	\$998,400	T	4B
1122	1996-0105-00	0912-34-916	FOR	AUSTIN PKWY	LEXINGTON	SH 6	INSTALL ATMS	\$780,000	T	5
2445	1996-0432-00	0912-71-917	HAR	BARBOURS CUT UNK QUEUE LNS			CONSTRUCT QUE LANES ALTVATER/TRAFFC CROSSEOVERS-BARBOURS CUT;CONSTRUCT ADDT'L RAIL	\$3,903,000	T	5
5022	1995-0047-00	0912-71-628	HAR	BRAYS BAYOU TRAIL	DAIRY ASHFORD	BEECHNUT	CONST BIKE/HIKE TRAIL	\$2,696,000	T	5
57	HR0077A-00	0912-71-635	HAR	BRITTMORE RD	HAMMERLY	CLAY RD	WIDEN TO 4 LN DIV	\$2,900,000	T	4C
58	HR0077B-00	0912-71-634	HAR	BRITTMORE RD	IH 10(W)	HAMMERLY	WIDEN TO 4 LN DIV	\$5,700,000	T	4C
1519	1994-0006-00	0912-71-427	HAR	BROWN-HUFFSMITH	W HUFSMITH/BAKE R DR	SH 249 & BROWN RD INTR	CONST NEW 2 LN & OUTFALLS	\$2,279,000	T	4D
30	1999-0151-00	0111-07-042	BRA	BS 288B	BASTROP BAYOU	CEMETERY ROAD	JOINT AND CRACK SEALING	\$143,000	T	7

T=TIP (yrs. 00-02) S=Short-Range (yrs. 03-07) L=Long-Range (yrs. 08-22) TLOC=Locally funded proj (cip, bond prog)

2022 MTP: 2000 - 2002 TIP Roadway Projects

List Includes: Roadway, CMAQ, Rehabilitation, Safety, Enhancement and Miscellaneous Projects
(Sorted by street, county)

PROJ ID	PROJ NUMBER	CSJ NUMBER	CO	STREET	FROM LOCATION	TO LOCATION	PROJECT DESCRIPTION	TOTAL COST	PROJ STATUS	FUNDING SOURCE
40	1999-0152- - 00	0111-08-110	BRA	BS 288B	SH332	BASTROP BAYOU	JOINT AND CRACK SEALING	\$188,000	T	7
1488	1993-0622- - 00	0111-08-101	BRA	BS 288B	@ OYSTER CREEK		REHAB BRIDGE	\$1,080,000	T	6A
293	1999-0179- - 00	0111-07-041	BRA	BS 288B	AT DITCH 7 DRAINAGE SYSTEM IN ANGLETON		OUTFALL CHANNEL IMPROVEMENT PROFESSIONAL SERVICES CONTRACT	\$50,000	T	11
6090	1998-0185-A- 00	0111-08-106	BRA	BS 288B	AT UNION PACIFIC RR IN CLUTE		PH 1: CONDUCT PE TO CONSTR RR GSEP	\$650,000	T	4G
7022	1999-0103-H- 00	0111-07-043	HAR	BS 288B	CEMETARY RD	CR 220	INSTALL CONTINUOUS TRN LN	\$495,800	T	4A
27	1999-0148- - 00	0028-01-083	HAR	BU 90 U	E OF BW 8	W OF SAN JACINTO RIVER	SPOT BASE REPAIR AND CRACK SEAL	\$328,000	T	7
1144	1996-0255- - 00	UNK	HAR	BU 90-U	IH 610 E	BW 8 E	ADD CLT LN W/ C&G	\$2,500,000	T	5
3064	1995-0045- - 00	0912-71-503	HAR	BUFFALO BAYOU TRAIL	SHEPHERD DR	SABINE	BIKE TRL ON BUFFALO BAYOU PARALLEL TO MEMORIAL DR & ALLEN PKWY(TCM SIP COMMITMENT)	\$1,609,000	T	5
5063	1996-0732- - 00	3256-02-060	HAR	BW 8	@ HARDY TOLL RD		CONSTRUCT EBOUND TO NBOUND HARDY TOLL RD CONNECTOR	\$12,000,000	T	5
5070	1996-0739-B- 00	3256-04-061	HAR	BW 8	@ MYKAWA RD/AT&SF RR		PH 2 - CONST FRTG RD GSEPS & SHORT SECTION OF CONCRT FRTG RDS	\$5,479,000	T	12
2993	1996-0485- - 00	3256-01-073	HAR	BW 8	AT WESTHEIMER RD & RICHMOND AVE		ADD RIGHT TRN LNS AT INTERSECTIONS NBOUND	\$500,000	T	5
2971	1996-0258- - XX	3256-03-902	HAR	BW 8 E	PASADENA BLVD	RED BLUFF RD	IMPROVE INTERSECTION PROFILE - TURNING RADIUS & LEFT TURN LNS	\$1,000,000	T	5

T=TIP (yrs. 00-02) S=Short-Range (yrs. 03-07) L=Long-Range (yrs. 08-22) TLOC=Locally funded proj (cip, bond prog)

2022 MTP: 2000 - 2002 TIP Roadway Projects

List Includes: Roadway, CMAQ, Rehabilitation, Safety, Enhancement and Miscellaneous Projects
(Sorted by street, county)

PROJ ID	PROJ NUMBER	CSJ NUMBER	CO	STREET	FROM LOCATION	TO LOCATION	PROJECT DESCRIPTION	TOTAL COST	PROJ STATUS	FUNDING SOURCE
9989	HO.HR.0181C	0912-71-645	HAR	CBD ACCESS ON-STREET BIKEWAYS	SOUTH SEGMENT - PH 2		CBD ACCESS ON-STREET BIKEWAY NETWORK (TCM SIP COMMITMENT)	\$156,600	T	4B
5032	1996-0785- - 00	0912-71-941	HAR	CENTRAL AVE	OVER MANCHESTER	TRAIN YARD	CONST RR GSEPS OVER PTR A AND SP RAILROAD	\$15,000,000	T	15
2930	HOU.HR.306- 00	0912-71-544	HAR	COLUMBIA TAP RAIL TO TRAIL	DIXIE	POLK ST	CONST COLUMBIA TAP RAIL TO TRAIL BIKE PATH	\$1,777,080	T	4B
9478	1996-0924- - 00	0912-31-090	BRA	CR	CR 424 @ DRAINAGE DITCH	IN BRAZORIA COUNTY	BRIDGE REPLACEMENT	\$240,000	T	6B
539	1999-0215- - 00	0912-71-934	HAR	CR	ON BOUDREAUX RD FROM .76 KM W OF SH 249	1.07 KM E OF SH 249 (IN SECTIONS)	REALIGNMENT OF EXISTING BOUDREAUX RD TO MATCH PROP SH 249 OP	\$813,000	T	16C
9931	1999-0096- - 00	0912-71-626	HAR	CR	MICHIGAN-CANNIFF AT HCFCD DITCH		REPLACE BRIDGE	\$280,000	T	6B
9479	1996-0925- - 00	0912-71-562	HAR	CR	SHERWELL @ JORDON GUL	IN CITY OF HOUSTON	PH 1 - CONDUCT P.E. FOR BRIDGE REPLACEMENT	\$250,000	T	6B
9448	1996-0930- - 00	0920-02-903	LIB	CR	CR 203 @ WILLIS MARSH CREEK		REPL BRIDGE AND APPROACHES	\$33,750	T	6B
9450	1996-0928- - 00	0920-02-901	LIB	CR	HATCHERVILLE RD @ DRAIN DITCH		REPLACE BRIDGE AND APPROACHES	\$32,500	T	6B
9449	1996-0929- - 00	0920-02-902	LIB	CR	KNIGHTS FOREST RD @ BRANCH		REPLACE BRIDGE AND APPROACHES	\$37,500	T	6B
9502	1996-0618- - 00	0912-31-081	BRA	CS	VELASCO BLVD SB @ OLD BRAZOS RIVER	IN FREEPORT	BRIDGE REPLACEMENT	\$1,198,000	T	6B
9505	1996-0619- - 00	0912-31-082	BRA	CS	VELASCO BLVD NB @ OLD BRAZOS RIVER	IN FREEPORT	BRIDGE REPLACEMENT	\$1,226,648	T	6B

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9985	1999-0135-00	0912-73-908	GAL	CS	EXTENSION OF BAY AREA BOULEVARD		COMPLETE EXTENSION OF BAY AREA BOULEVARD	\$938,000	T	15
9606	1996-0926-A-00	0912-71-604	HAR	CS	WOODWAY DR WB @ MEMORIAL DR EB	IN CITY OF HOUSTON	PH 1 - CONDUCT P.E. BRIDGE REPLACEMENT	\$400,000	T	6B
3079	1996-0508-00	0912-71-511	HAR	CS	OLD WESTHEIMER RD AT BRAYS BAYOU	IN CITY OF HOUSTON	REPLACE BRIDGE	\$1,100,000	T	6B
9793	1996-0906-00	0912-71-559	HAR	CS	AT WASHBURN TUNNEL		ITS: TRAFFIC MANAGEMENT & INFO SYS (PRIORITY CORRIDOR PROJ WORK ORDER # 14)	\$950,000	T	15
9513	1996-0622-00	0912-71-536	HAR	CS	WOODWAY WB @ BUFFALO BAYOU (HOU)		BRIDGE REPLACEMENT	\$1,465,000	T	6B
9514	1996-0633-00	0912-71-537	HAR	CS	GESSNER @ BUFFALO BAYOU (IN COH)		BRIDGE REPLACEMENT	\$2,200,000	T	6B
1669	1994-0678-00	0912-71-407	HAR	CS	SOUTHMORE ST AT VINCE BAYOU IN PASADENA	IN PASADENA	REPLACE BRIDGE	\$850,000	T	6B
3095	1996-0699-00	0912-71-622	HAR	DEER PRK/PASADENA JUNCTION RAIL EXT	DEER PARK JUNCTION	PASADENA JUNCTION	CONSTRUCT ADD'L TRACK TO PASADENA JUNCTION	\$5,750,000	T	5
2923	1995-0053-A-00	0912-31-108	BRA	DIXIE FARM ROAD	BEAMER	SH 35	WIDEN TO 4 LNS	\$16,775,000	T	4C
3072	HO.HR.0187	0912-71-433	HAR	EAST BRAYS BAYOU TRAIL - WEST	DIXIE BRIDGE NEAR HERMAN PARK	MASON PARK AT TIPPS ST	UPGRADE EXISTING HIKE AND BIKE; IMPROVE CONNECTIONS TO PROPOSED ON-STREET BIKEWAYS; ADD BRIDGE(TCM SIP COMMITMENT)	\$4,889,000	T	4B
9891	1998-0841-00	0912-71-641	HAR	EDGEBROOK ST IH 45		SH 3	RECONSTRUCT ROADWAY	\$6,378,000	T	4C
9402	T96015B-00	0912-34-914	FOR	FLANIGAN P&R	AT FLANIGAN RD		PH 2 - CONSTRUCT PARK & RIDE (250 SPACES)	\$496,360	T	5

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3041	T96015A-00	0912-34-086	FOR	FLANIGAN RD	AT FLANIGAN RD	@ AUSTIN PARKWAY	PH 1 - CONSTRUCT PARK & RIDE (250 SPACES)	\$756,000	T	5
6096	1998-0184-A-00	1257-01-034	FOR	FM 1092	AT SPRR AND US 90A IN STAFFORD		PH 1: CONDUCT PE FOR RR GSEP STRUCTURE	\$400,000	T	4G
140	1999-0167- -00	0527-09-009	FOR	FM 1236	SH 36	FM 442	BASE REPAIR WIDEN SUBGRADE PAVE SHOULDERS AND ACP OVERLAY	\$2,000,000	T	8A
7037	1999-0281-D-00	1986-01-039	LIB	FM 1314	SH 105	OLD HOUSTON RD	CRACK SEAL, ACP OVERLAY AND STRIPING	\$1,200,000	T	4F
479	1994-0334- -00	1986-01-015	MON	FM 1314	2.6 MI NW OF LP 494	LP 494	WIDEN TO 4 LN DIV RUR	\$5,756,000	T	4E
7038	1999-0281-E-00	1986-01-040	MON	FM 1314	OLD HOUSTON RD	LP 494	CRACK SEAL, ACP OVERLAY AND STRIPING	\$1,300,000	T	4F
89	1999-0158- -00	1414-04-014	BRA	FM 1462	BRAZOS RIVER	FM 521	ONE COURSE SURFACE TREATMENT WITH SPOT LEVELUP	\$344,000	T	7
7029	MG0009A-00	1062-03-017	MON	FM 1485	US 59	LP 494	TSM IMPROVEMENTS: ADD TRN & STORAGE LNS	\$500,000	T	5
91	1999-0159- -00	0523-10-022	MON	FM 1488	FM 1774	IH 45	BASE REPAIR CRACK SEAL ACP OVERLAY AND PAVEMENT MARKS	\$2,990,000	T	4F
7048	1999-0281-F-00	0720-02-064	MON	FM 149	SH 105	FM 1488	BS REP, CRACK SEAL AND PVT MARKS	\$215,000	T	4F
9669	1996-0829- -00	0587-01-049	BRA	FM 1495	INTRACOASTAL WATERWAY		REPLACE CONTROL BLDG, LEVELING MECHANISM AND APPROACH	\$7,800,000	T	11
457	1999-0203- -00	1687-01-013	WAL	FM 1736	US 290	SH 6	BASE REPAIR WIDEN SUBGRADE PAVE SHOULDER AND ACP OVERLAY	\$1,393,000	T	8A

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509	1994-0330-B-00	1607-02-016	GAL	FM 1764	SH 6	FM 646	WIDEN TO 4 LN DIV	\$3,751,000	T	15
96	1999-0161- -00	1400-04-022	MON	FM 1774	WALLER C/L	FM 1488	BASE REPAIR CRACK SEALING ACP OVERLAY AND PAVEMENT MARKS	\$516,500	T	4F
95	1999-0160- -00	1400-03-007	WAL	FM 1774	FM 1488	GRIMES C/L	BASE REPAIR CRACK SEAL ACP OVERLAY AND PAVEMENT MARKS	\$283,500	T	4F
7015	1999-0103-A-00	1844-01-023	HAR	FM 1959	AT IH 45 RAMPS		REALIGN INTERSECTION, INSTALL TRAFFIC SIGNAL & ADD LEFT TRN LN	\$428,000	T	4A
97	1999-0162- -00	1685-01-081	HAR	FM 1960	US 290	SH 249	CRACK SEALING	\$500,000	T	7
441	1999-0197- -00	1685-01-079	HAR	FM 1960	AT KUYKENDAHL RD	AT STUEBNER AIRLINE RD	ITS: INSTALLATION OF CHANGEABLE LANE ASSIGNMENT SYSTEM	\$75,000	T	14
212	1994-0569- -00	1685-02-035	HAR	FM 1960	0.14 KM E OF HUMBLE- WESTFIELD RD	0.20 KM E OF LEE RD	WIDEN TO 8 LN DIV W/C&G & TMS	\$34,880,000	T	3A
297	1999-0181- -00	1062-04-049	HAR	FM 2100	AT FM 1960 AND UPRR		ADD LEFT TURN LANE	\$300,000	T	11
294	1999-0180- -00	1062-04-046	HAR	FM 2100	AT FIRST ST IN CROSBY		CONSTRUCT 4 LANE CONCRETE CURB AND GUTTER REALIGNMENT	\$395,000	T	11
6095	1999-0128-A-00	1062-04-047	HAR	FM 2100	AT THE SPRR IN CROSBY		PH 1: CONDUCT PE TO CONSTRUCT RAILROAD GRADE SEPARATION STRUCTURE & APPROACHES	\$125,000	T	4G
442	1999-0198- -00	1062-02-018	HAR	FM 2100	WOLF ROAD	FM 1960	BASE REPAIR MILLING ACP OVERLAY AND PAVEMENT MARKS	\$581,000	T	14
7019	1999-0103-E-00	1062-04-050	HAR	FM 2100	AT FIRST ST IN CROSBY		REALIGN INTERSECTION & IMPROVE HORIZONTAL ALIGNMENT	\$434,500	T	4A

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481	1999-0206-00	1062-04-048	HAR	FM 2100	S OF FM 1960	US 90	BASE REPAIR MILLING ACP OVERLAY AND PAVEMENT MARKS	\$2,717,000	T	14
9910	1999-0125-00	2093-01-900	FOR	FM 2218	S OF FM 1640 (AT SEARS HARDWARE KEY MAP 605L)		CONSTRUCT LEFT TURN LNS	\$145,000	T	5
15	1994-0324-00	2105-01-020	FOR	FM 2234	FM 3345	FM 521	WIDEN TO 4 LN DIV RUR SECT	\$13,500,000	T	4C
5052	1999-0012-00	0912-37-900	MON	FM 2854	IH 45 @ FM 2854	W LOOP 336 @ IH 45	CONST BIKE LNS & ON-STREET BIKE LNS // ADD STRIPPING FOR ON STREET BIKE LANE	\$366,231	T	5
440	1999-0196-00	2938-02-019	BRA	FM 2917	SH 35	NEW BAYOU	ACP OVRLAY	\$469,000	T	14
99	1999-0164-00	2939-01-005	BRA	FM 2918	FM2611	RIVERS END	ONE COURSE SURFACE OVERLAY	\$208,100	T	7
482	1999-0207-00	2941-02-038	HAR	FM 2920	SH 249	HOWARD ST	MILL ACP OVERLAY AND PAVEMENT MARKS	\$415,000	T	14
373	1996-0019-00	3158-01-017	MON	FM 3083 EXT	IH 45	SH 105 W	CONST 2 LN RUR ASPHALT RD	\$2,678,310	T	4E
9655	1996-0815-00	0523-02-024	WAL	FM 362	3.5 MI S OF FM 529	FM 529	PAVE SHOULDER AND ACP OVERLAY	\$950,000	T	4F
511	GL0004B-00	0978-02-045	GAL	FM 517	OWENS	FM 3436	WIDEN TO 4 LN DIV WITH C&G	\$4,882,000	T	15
88	1999-0157-00	0111-03-043	FOR	FM 521	BRAZORIA COUNTY LINE	TRAMMEL FRESNO ROAD	BASE REPAIR CRACK SEAL AND ACP OVERLAY	\$2,337,000	T	4F
9824	1996-0863-B-00	0111-03-039	FOR	FM 521	TRAMMEL FRESNO RD	FM 2234	PH 2-RAISE ROADWAY ELEVATION	\$1,800,000	T	13B

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7032	1999-0083-00	0110-03-044	FOR	FM 521	HAR C/L	IRRIGATION	ADD LEFT TRN LNS	\$1,000,000	T	5
76	1999-0156-00	0111-01-081	HAR	FM 521	HOLMES RD	IH 610	BASE REPAIR AND ACP OVERLAY	\$450,000	T	7
456	1999-0202-00	0977-01-012	BRA	FM 522	SH 36	FM 1459	SUBGRADE WIDENING AND ACP OVERLAY	\$696,000	T	8A
1510	1993-2014-00	1024-01-052	CHA	FM 565	@ COTTON BAYOU & @ HACKBERRY GULLEY		REHAB BRIDGE	\$70,000	T	6A
9909	1999-0082-00	0188-09-900	FOR	FM 723	AT FM 359 & FM 1093		CONSTRUCT LEFT TURN LNS	\$490,000	T	5
2049	1995-0481-00	0188-09-027	FOR	FM 723	@ BN&SF RR IN ROSENBERG		CONST RR GSEP & APPROACHES	\$2,200,001	T	4G
104	1999-0166-00	0188-09-034	FOR	FM 723	FM 1093	FM 359	WIDEN SUBGRADE AND ACP OVERLAY	\$1,419,000	T	8A
9442	1998-0063-00	0188-09-030	FOR	FM 723	@ BRAZOS RIVER		REPLACE BRIDGE AND APPROACHES	\$2,461,000	T	6A
5053	1996-0722-00	0912-71-903	HAR	GOOSE CREEK TRAIL	W TEXAS AVE	GARTH RD	CONST HIKE/BIKE TRAIL ALONG GOOSE CREEK (PHASE 3)	\$1,361,919	T	5
3069	HO.HR.0154B	0912-71-429	HAR	GOOSE CREEK TRL	ARIZONA ST	DECKER DRIVE	CONST HIKE & BIKE TRAIL (PHASE 1)	\$1,156,500	T	4B
449	1996-0371-00	0912-71-586	HAR	GOSLING RD	KUYKENDAHL	FM 2920	CONST 2 LN ASPHALT RD W/ TRN LNS	\$1,530,000	T	4E
1525	1994-0034-A-00	0912-37-075	MON	GOSLING RD	SPRING CREEK	FLINTRIDGE RD	CONST 2 LN ON NEW LOC	\$3,374,999	T	4D

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1526	1994-0034-B-00	0912-71-481	MON	GOSLING RD	0.25 MI S OF SPRING CRK	SPRING CRK IN THE WOODLANDS	CONST 2 LN ON NEW LOC	\$3,000,000	T	16C
374	1996-0020-00	0912-37-909	MON	GOSLING RD/SOUTHWEST BLVD	LP 336 S	FM 2854	CONST 2 LN RD	\$3,404,000	T	4D
7006	HO.HR.0192B	0912-71-651	HAR	HARRISBURG/SUNSET RAILS TO TRAILS			HARRISBURG/SUNSET RAILS TO TRAILS-PH 2 (TCM SIP COMMITMENT)	\$952,000	T	4B
83	1993-0187-B-00	8170-12-001	HAR	HEMPSTEAD HWY & WASHINGTON AVE	0.059 MI WEST OF 12TH ST	IH 10	WIDEN TO 6 LN DIV (RS MEDN) URBAN ST FACILITY	\$17,575,000	T	12
9841	1995-0049-A-00	0912-71-591	HAR	HERMAN BROWN PARK TRL - PH 2	W/I HERMAN BROWN PARK	EAST TO FM 526 & SOUTH TO IH 10	BIKE & HIKE TRL THROUGH HERMAN BROWN PRK (TCM SIP COMMITMENT)	\$932,000	T	5
3066	1995-0050-00	0912-71-505	HAR	HOU HRTGE COR PROJ: PH IA - BAYOU BKWAYS	HOU AVE ON W	LOCKWOOD DR ON E	BIKE BAYOU BIKEWAY - PHASE IA (PORT TO PORT: HOUSTON HERITAGE PROJECT) (TCM SIP COMMITMENT)	\$6,686,800	T	5
1008	1994-0266-A-00	0508-01-258	HAR	IH 10	MEADOW ST	SP 330	INSTALL CTMS	\$6,177,062	T	5
7049	1999-0281-G-00	0508-01-292	HAR	IH 10	E END SAN JACINTO RIVER BRIDGE	E OF SP 330	WIDEN SUBGRADE, MILL & ACP OVERLAY	\$2,007,000	T	4F
9527	1994-0266-A-00	0508-01-283	HAR	IH 10 E	SAN JACINTO ST	MEADOW ST	INSTALL CTMS	\$600,000	T	5
9444	1998-0064-00	0508-01-277	HAR	IH 10 E	@ SAN JACINTO RIVER		REHAB BRIDGE	\$3,258,750	T	6A
6002	1996-0918-00	0508-01-276	HAR	IH 10 E	@ ELYSIAN ST UNDERPASS		PH 1 - CONDUCT P.E. TO REPLACE BRIDGE & APPROACHES	\$15,645,000	T	6A
296	HR0064-00	0508-01-166	HAR	IH 10 E	N WAYSIDE DR	MERCURY DR	WIDEN TO 8 MLN & COMPLETE US 90 I/C	\$33,000,000	T	3A

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1059	1995-0200-00	0271-07-224	HAR	IH 10 W	WASHINGTON	SH 6	CONST ACCIDENT INVESTIGATION SITES	\$773,128	T	5
1007	1993-0523-B-00	0271-07-223	HAR	IH 10 W	STUDEMONT	SAN JACINTO	INSTALL CTMS	\$1,255,000	T	5
9963	1999-0114-00	0508-01-290	HAR	IH 10 W	EB AT IH 610 (EB)		REPLACE BRIDGE	\$540,000	T	6A
237	1999-0176-00	0271-06-093	HAR	IH 10 W	SH 99 (PEEK ROAD)	WEST OF SH 6	PUBLIC INFORMATION CAMPAIGN	\$25,000	T	11
1014	1995-0170-00	0110-05-094	HAR	IH 45 N	RANKIN RD	CYPRESSWOOD	INSTALL CTMS	\$3,596,000	T	5
1825	1995-0170-A-00	0110-05-100	HAR	IH 45 N	CYPRESSWOOD	MON C/L	INSTALL CTMS	\$2,409,000	T	5
358	MG0018-A-00	0110-04-122	MON	IH 45 N	0.110 MI N OF FM 1488	0.280 MI N OF RIVER PLANTATION DR	WIDEN TO 8 MLNS W/FRTG & TMS & PROVISION FOR FUTURE HOV	\$24,346,888	T	4C
364	MG0025-00	0675-08-063	MON	IH 45 N	LP 336 (N)	WILSON RD	CONST 4 LN NB FRTG RD	\$300,000	T	3E
93	1994-0312-00	0110-04-152	MON	IH 45 N	N OF FM 1488	S OF RIVER PLANTATION	CONSTRUCT HOV LN	\$7,371,150	T	5
9757	MG0023A-00	0675-08-054	MON	IH 45 N	0.094 KM S OF SH 105	0.480 KM S OF FM 2854	CONSTRUCT 3 LN SB FRONTAGE RD W/ GSEP	\$4,194,000	T	3E
9908	MG0018-B-XX	0110-04-164	MON	IH 45 N	.304KM N OF RIVER PLANTATION DR	.140 KM S OF LP 336	WIDEN TO 8 MLNS W/FRTG, TMS & PROVISION FOR FUTURE HOV	\$34,144,601	T	3A
9536	1995-0175-A-00	0110-04-166	MON	IH 45 N	TAMINA RD	0.966 KM N OF CRIGHTON RD	INSTALL CTMS	\$3,956,000	T	5

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6093	MG0017-A-00		MON	IH 45 N	0.043 MI S OF LP 336 (S)	0.15 MI S OF SH 105	PH 1: CONDUCT PE TO WIDEN TO 6 MLNS W/FRTG & PROV FOR FUT HOV	\$3,116,100	T	3A
1013	1995-0165- - 00	0675-08-071	MON	IH 45 N	N OF CRIGHTON RD	LP 336 N	INSTALL CTMS	\$2,610,000	T	5
1015	1995-0175- - 00	0110-04-156	MON	IH 45 N	HAR C/L	TAMINA RD	INSTALL CTMS	\$2,889,000	T	5
7058	MG0018-C-00	0110-04-170	MON	IH 45 N	AT STA 926+28 & THE SAN JACINTO RIVER		CONSTRUCT DETENTION PONDS	\$575,925	T	4C
9792	1996-0919-A- 00	0500-01-122	GAL	IH 45 S	AT GALVESTON ISLAND CAUSEWAY		PH 1 - CONDUCT P.E. TO REPLACE BRIDGES	\$684,000	T	15
9390	T96003B-00	0500-04-900	GAL	IH 45 S	@ FM 1764		PH 2 - FINAL DESIGN & CONST OF GAL CO PARK & RIDE	\$2,483,000	T	5
1011	1994-0692- - 00	0500-01-123	GAL	IH 45 S	W OF 59TH ST	61ST ST	INSTALL ATMS	\$65,000	T	5
2914	T96003A-00	0500-04-100	GAL	IH 45 S	@ FM 1764		PH 1-CONDUCT PE FOR GAL CO PARK & RIDE INCLUDING FEASIBILITY ANALYSIS & SITE SELECTION (FY 99)	\$55,000	T	5
9834	1996-0919-B- 00	0500-01-117	GAL	IH 45 S	AT GALVESTON ISLAND CAUSEWAY		PH 2 - REPLACE BRIDGES	\$70,000,000	T	6A
207	1994-0554- - 00	0500-03-475	HAR	IH 45 S	W OF MEDICAL CENTER	.7 MI S OF NASA 1	CONST 2 LEVEL I/C (@ NASA 1 BYPASS)	\$9,200,000	T	3A
9930	1999-0095- - 00	0500-03-493	HAR	IH 45 S	NASA 1 (EB) UNDERPASS		REPLACE BRIDGE	\$592,500	T	6A
448	1999-0200- - 00	0500-03-495	HAR	IH 45 S	BROADWAY STREET INTERSECTION	BW 8 INTERCHANGE	LANDSCAPE DEVELOPMENT	\$850,000	T	16B

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1060	1995-0199-00	0500-03-481	HAR	IH 45 S	HOUSTON CBD	FM 518 IN GAL CO	INSTALL ACCIDENT INVESTIGATION SITE	\$1,000,518	T	5
9443	1998-0065-00	0500-03-477	HAR	IH 45 S	@ FM 1959 U/P		REHAB AND WID BRIDGE	\$1,000,000	T	6A
5068	1996-0737-00	0271-17-125	HAR	IH 610	S OF RICHMOND	WESTPARK	EXTEND FRTG RDS UNDER US 59	\$29,919,952	T	12
9875	1996-0818-D-00	0271-17-124	HAR	IH 610	S OF BELLAIRE	S OF WESTPARK	TSM, RECONSTRUCT 8 LN FRWY	\$22,011,948	T	12
9445	1998-0170-00	0271-16-110	HAR	IH 610	@ HOLMES RD & G.H. & S.A.R.R.		WIDEN BRIDGE AND APPROACHES	\$1,361,250	T	6A
9964	1999-0115-00	0271-17-126	HAR	IH 610	N OF RICHMOND	S OF POST OAK	TSM, RECONSTRUCT 8 LN FRWY, TMS & PROVISION FOR FUTURE HOV	\$33,764,249	T	12
9436	1996-0922-00	0271-17-118	HAR	IH 610	@ BELLAIRE BLVD O/PS		REHAB BRIDGE DECK AND RETROFIT RAIL	\$460,000	T	6A
7013	1999-0281-B-00	0271-16-112	HAR	IH 610	STELLA LINK	IH 45 S	FULL DEPTH CONCRETE REPAIR OF FRTG RDS & INTERSECTIONS	\$2,440,000	T	7
9935	1999-0105-00	0271-17-128	HAR	IH 610	AT IH 10 W		WIDEN IH 610 NB BRIDGE OVER IN 10 W	\$2,930,443	T	2
302	HR0073-00	0271-17-127	HAR	IH 610	IH 10 (W)	POST OAK BLVD	RECONST 8 LN FRWY, TMS & PROVISION FOR FUT HOV	\$31,749,498	T	12
9351	1996-0786-00	0912-71-631	HAR	KEEGANS BAYOU TRL	BRAYS BAYOU TRL-GESSNER	CITY LIMITS NEAR SYNOT	CONST HIKE & BIKE	\$4,375,000	T	5
371	MG0290A-00	0912-37-106	MON	LAKE WOODLANDS	SIX PINES	W PANTHER CREEK	CONST 4 LN DIV & PANTHER CREEK BRIDGE	\$5,600,000	T	4D

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1121	1996-0104-00	0912-34-915	FOR	LEXINGTON BLVD	DULLES AVE	SH 6	INSTALL ATMS: SIGNLZTN, SYNCHRNZTN, & INTRCNNTN	\$360,000	T	5
1811	1995-0091-00	0912-71-532	HAR	LEY	W OF KIRKPATRICK	W OF WAYSIDE	CONST 4 LN GSEP OVER HB&T RR	\$5,400,000	T	4C
4098	HR3530A-00	0912-71-637	HAR	LITTLE YORK	AIRLINE	HARDY	WIDEN TO 6 LN DIV	\$5,200,000	T	4C
517	GL0014-00	0389-11-032	GAL	LP 197	SH 146 (N)	19TH AVE (N)	WIDEN TO 4 LN DIV C&G W/ TRN LNS	\$10,859,000	T	4D
7023	1999-0103-I-00	0177-14-021	MON	LP 494	AT FORD RD		ADD LEFT TRN LNS	\$167,000	T	4A
2969	1996-0455-00	0912-31-096	BRA	MAGNOLIA DR	@ BNSF RR		CONSTRUCT GSEP @ RR TRACK	\$1,500,000	T	5
987	1996-0427-00	0912-71-639	HAR	MAIN ST	CLINTON DR	END OF MAIN ST	WIDEN TO 4 LN & CONST TRUCK QUEUING AREA	\$3,600,000	T	4C
9787	1996-0058-B-00	0912-71-914	HAR	MCHARD RD	HARRIS C/L	SH 35	CONDUCT PE/EA TO CONSTRUCT 4 LN DIV RUR ON NEW LOCATION	\$250,000	T	15
6078	1999-0271-00	0912-34-908	FOR	MISSOURI CITY BIKE PROJECTS	VA	VA	MISSOURI CITY BIKE/PEDESTRIAN PROJECTS (LUMP SUM)	\$7,285,000	T	5
5002	HR3890A-00	0912-71-638	HAR	MONROE	ALMEDA GENOA	FUQUA	WIDEN TO 4 LN DIV	\$3,800,000	T	4C
9892	1996-0058-C-00	0912-31-105	BRA	MYKAWA RD	HAR C/L	0.2 MI SOUTH OF MCHARD RD	WIDEN TO 4 LN UNDIV RD W/ LFT TRN LN	\$4,015,487	T	4C
9901	1996-0058-E-98	0912-31-106	BRA	MYKAWA RD	AT HICKORY SLOUGH		REPLACE BRIDGE	\$700,000	T	4C

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9893	1996-0058-D-00	0912-71-619	HAR	MYKAWA RD	BW 8	BRAZORIA C/L	WIDEN TO 4 LN UNDIV RD W/ LFT TRN LN	\$600,000	T	4C
121	1993-0191-XX	8144-12-006	HAR	MYKAWA RD	S WAYSIDE	AIRPORT BLVD	WIDEN TO 4 LN DIV (RS MED) URB ST FCTY	\$9,771,411	T	17
7007	1995-0042-B-00	0912-71-658	HAR	N HOUSTON ON-ST BKWY NTRWK - PH 2			CONSTRUCT ON-ST BIKEWAY NTRWK (TCM SIP COMMITMENT)	\$313,000	T	5
153	1999-0168-00	0981-01-089	HAR	NASA 1	IH 45	SH 3	INSTALL ARTERIAL TRAFFIC MANAGEMENT SYSTEM	\$150,000	T	10A
387	1999-0183-00	0981-01-087	HAR	NASA 1	IH 45	SH 3	RECONSTRUCT AND WIDEN FOR TURN BAYS AND ESPLANADE	\$400,000	T	14
231	1995-0493-00	0981-01-086	HAR	NASA 1 BYPASS	IH 45	0.6 MI E OF FM 270	CONST 4 LN DIV ACC CONTROL FAC W/ O/Ps @ SH 3, NASA RD 1, & FM 270	\$22,500,000	T	12
2934	HOU.HR.317	0912-71-548	HAR	NORTH CHANNEL HIKE & BIKE TRL	WOODFOREST BLVD (SOUTH)	WALLISVILLE RD (NORTH)	CONST HIKE & BIKE TRL	\$787,415	T	4B
9358	1996-0793-00	0912-71-621	HAR	OLD GALVESTON RD BIKEWAY	ALLENDALE	BAY AREA BLVD	CONST HIKE & BIKE	\$237,500	T	5
3033	1996-0515-00	0912-31-903	BRA	OYSTER CREEK TRAIL	BRAZOSPORT J.C.	BRAZOS MALL	CONST HIKE & BIKE TRAIL	\$708,960	T	5
3090	1996-0856-00	0912-37-110	MON	RESEARCH FOREST	IH 45	KUYKENDAHL	SIGNAL SYNCHRONIZATION	\$167,000	T	5
2933	HOU.HR.313	0912-71-547	HAR	RUMMEL CRK ENHANCEMENT	.5 KM S OF MEMORIAL DR	.5 KM N OF RUMMEL CRK & BUFFALO BAYOU	IH 10 WATER QUALITY ENHANCEMENT PROJ	\$219,968	T	4B
2935	HOU.HR.319	0912-71-549	HAR	SAN JACINTO MONUMENT RESTORATION - PH 2	3800 PARK RD 1836		RESTORE MONUMENT	\$1,534,511	T	4B

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3057	1996-0809-00	0912-37-910	MON	SAWDUST	GROGAN'S MILL	IH 45	WIDEN TO 6 LN DIV	\$2,464,523	T	4D
3062	1995-0043-00	0912-71-504	HAR	SE HOUSTON ON-ST BKWY NTRWK	BTWN GRIGGS & EDGEBROOK	BTWN S WAYSIDE & ALLEN GENOA	BIKE SE HOUSTON ON-ST BIKEWAY NTRWK (INSIDE LP 610) (TCM SIP COMMITMENT)	\$2,235,000	T	5
2928	HOU.FB.303-00	0912-34-076	FOR	SEG 2: MISSOURI CITY BIKE TRL	COURT RD	CARTWRIGHT RD	CONST HIKE & BIKE TRL	\$173,956	T	4B
407	1999-0189-00	0338-03-081	MON	SH 105	LP 336 W	WILSON ROAD	ADD CURB AND GUTTER WITH STORM SEWER	\$1,060,000	T	14
9918	1999-0088-00	0338-04-062	MON	SH 105	LP 336	LIBERTY C/L	BASE REPAIR, CRACK SEAL AND STRIPPING	\$520,000	T	4F
9541	1998-0802-00	0338-02-031	MON	SH 105	AT INTERSECTION OF FM 149		TURN RADIUS MODIFICATION	\$150,000	T	11
260	FB0007-00	3585-02-001	FOR	SH 122	HAR C/L	SH 6	CONST TWO 2 LN FRTG RDS	\$17,119,000	T	3A
338	HR0494-00	3585-01-001	HAR	SH 122	0.11 MI N OF BW 8 FORT BEND C/L		CONST TWO 3 LN FRTG RDS	\$613,000	T	3A
460	1999-0204-00	0389-06-086	GAL	SH 146	AT KEMAH CHANNEL (CLEAR CREEK)		INSTALL MARINE FENDER SYSTEM	\$642,000	T	11
44	GL0016-00	0389-06-056	GAL	SH 146	0.395 MI S OF FM 517	0.976 MI S OF DICKINSON BAYOU	CONST 2 LN FRTG RD BRIDGE ON WEST SIDE	\$4,850,001	T	15
9783	1996-0913-00	0389-06-085	GAL	SH 146	AT AVE T		INSTALL INTERSECTION FLASHING BEACON	\$66,800	T	4A
7024	1999-0103-J-00	0389-06-087	GAL	SH 146	AT LP 197		GRADE SEPARATION	\$3,453,500	T	4A

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467	1993-0313-00	0389-07-025	GAL	SH 146	0.3 MI S OF FM 519	0.2 MI S OF TCT RR	CONST RR O/P & WIDEN TO 6 LN	\$6,400,000	T	4D
1103	1996-0650-00	0389-05-083	HAR	SH 146	MCCABE RD	TYLER ST	INSTALL CTMS - INCL SURVEILLANCE SYS, COMMUNICATN SYS, SATELLITE COMPUTER FAC, & MONITORING CONTRL	\$1,204,650	T	5
9919	1999-0089-00	0389-05-903	HAR	SH 146	AT KEMAH SEABROOK BRIDGE		CONSTRUCT BRIDGE FENDERS	\$642,000	T	3C
7020	1999-0103-F-00	0389-05-084	HAR	SH 146	AT BS 146D		ADD LEFT TRN LN	\$79,100	T	14
7021	1999-0103-G-00	0389-05-085	HAR	SH 146	ON KEMAH BRIDGE IN HAR & GAL CO		SAFETY LIGHTING	\$172,500	T	4A
7044	1999-0103-L-00	0389-05-089	HAR	SH 146	AT BS 146D		ADD RIGHT TRN LN	\$60,000	T	14
28	1999-0149-00	0409-02-025	WAL	SH 159	US 290	BRAZOS RIVER	ACP OVERLAY AND PAVEMENT MARKS	\$373,000	T	4F
6082	1999-0271-00	0502-01-178	HAR	SH 225	SIMS BAYOU	CHANNEL CITY ROAD	IMPROVE GUARD RAIL TO DESIGN STANDARDS	\$143,200	T	4A
3010	1996-0471-00	0502-01-174	HAR	SH 225	SH 134	STRANG RD	INSTALL CTMS	\$2,270,000	T	5
7050	1999-0281-H-00	0502-01-179	HAR	SH 225	IH 610	E OF SCARBOROUGH	PLANE & ACP OVERLAY	\$1,575,000	T	4F
29	1999-0150-00	3538-01-021	MON	SH 242	IH 45	US 59	CRACK SEAL AND PAVEMENT MARKS	\$563,000	T	4F
6094	HR0098-A-00	0720-03-084	HAR	SH 249	WILLOW CREEK	BROWN RD (PHASE 1)	PH 1: CONDUCT PE TO CONSTRUCT TWO 3 LANE FRONTAGE ROADS WITH GRADE SEPARATIONS AT FM 2920 AND TSM	\$1,500,000	T	3A

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415	1999-0190-00	0720-03-106	HAR	SH 249	FM 2920	4.0 MILES SOUTH	MILL ACP OVERLAY AND PAVEMENT MARKS	\$1,754,000	T	4F
9984	1999-0134-00	0720-03-110	HAR	SH 249	AT BW 8		CONSTRUCT EB NB AND WB NB DIRECT CONNECTORS \$5.0 MIL BY HCTRA CAT 12 FUNDS TO BE SELECTED BY COMMISSION	\$20,000,000	T	12
9537	1995-0179-A-00	0720-03-098	HAR	SH 249	HUFFSMITH KHORVILLE RD	WESTLOCK	INSTALL CTMS	\$1,293,000	T	5
9907	1994-0771-A-00	0720-03-083	HAR	SH 249	WESTLOCK DR	WILLOW CREEK	CONST TWO 3 LN FRTG RDS	\$9,950,400	T	4E
1019	1995-0179-00	0720-03-095	HAR	SH 249	BW 8	HUFFSMITH-KOHRVILLE RD	INSTALL CTMS	\$4,540,000	T	5
67	1999-0153-00	0111-08-111	BRA	SH 288	SH 36	FM 1495	ACP OVERLAY	\$119,000	T	7
7016	1999-0103-B-00	0598-03-017	BRA	SH 288	AT CR 44		INSTALL ADVANCED WARNING SIGNALS/SIGNS	\$44,100	T	4A
7017	1999-0103-C-00	0598-04-018	BRA	SH 288	AT CR 220		INSTALL ADVANCED WARNING SIGNALS/SIGNS	\$44,100	T	4A
9883	1996-0639-B-00	0051-02-070	HAR	SH 3	GALVESTON C/L	IH 45 (IN SECTIONS)	DRAINAGE IMPROVEMENTS	\$1,785,000	T	4F
525	1999-0214-00	1524-01-047	BRA	SH 332	1.4 KM E OF FM 521	SH 288	RECONSTRUCT & WIDEN	\$882,382	T	13B
428	1999-0191-00	0586-01-062	BRA	SH 332	FM 523	0.5 MI N OF INTRACOASTAL CANAL	ACP OVERLAY	\$288,000	T	14
1417	1992-0611-00	0847-03-029	BRA	SH 332	@ BRAZOS RIVER		REPLACE BRIDGE	\$3,000,000	T	6A

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9439	1995-0382-C-00	0179-01-042	BRA	SH 35	@ JAMISON SLOUGH		WIDEN BRIDGE	\$720,000	T	15
1953	1995-0383- -00	0179-02-063	BRA	SH 35	W END PROP FM 521 O/P W OF ANGLETON	0.9 MI E OF BRAZOS RIVER	WID TO 4 LN DIV RUR	\$9,645,060	T	15
1954	1995-0384- -00	0179-02-068	BRA	SH 35	0.9 MI E OF BRAZOS RIV	S END SAN BERNARD RIV BR	WID TO 4 LN DIV RUR W/SECT UNDIV	\$31,184,940	T	15
1955	1995-0385- -98	0179-03-024	BRA	SH 35	S END SAN BERNARD RIV BR	MATAGORDA C/L	WID TO 4 LN DIV RUR	\$18,000,000	T	15
1952	1995-0382-A-00	0179-01-028	BRA	SH 35	0.351 MI W OF SH 288 W OF ANGLETON	W END OF PROP FM 521 O/P	WID TO 4 LN DIV RUR	\$13,965,200	T	15
1020	1994-0271- -00	0179-02-076	BRA	SH 35	14TH ST	SH 36	INSTALL ATMS	\$178,000	T	5
9441	1995-0382-B-00	0179-01-041	BRA	SH 35	@ OYSTER CREEK		WIDEN BRIDGE	\$630,800	T	15
390	1999-0184- -00	0178-03-126	BRA	SH 35	DOWNING STREET	BS 288B	SURFACE REHABILITATION AND ACP OVERLAY	\$171,000	T	14
521	BR0015A-00	0178-02-055	BRA	SH 35	HAR C/L	FM 518 (IN PEARLAND)	WIDEN TO 6 LN DIV W/ C&G	\$8,529,251	T	3A
391	1999-0185- -00	0179-02-080	BRA	SH 35	FM 1301	SH 36	SURFACE REHABILITATION AND ACP OVERLAY	\$129,000	T	14
9917	1999-0087- -00	0178-02-991	BRA	SH 35	SH 35	AT HASTINGS SITE	REMOVAL OF CONTAMINATED MATERIAL	\$200,000	T	3C
7026	BR0015B-00	0178-01-026	HAR	SH 35	0.240 KM N OF BRA C/L AT BW 8	BRA C/L	WIDEN TO 6 LN DIV W/ C&G	\$574,640	T	3A

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252	1996-0676-00	0188-04-025	BRA	SH 36	FM 522	1.13 MI N OF SH 332	WIDEN 4 LN DIV RUR	\$5,449,000	T	3B
256	BR0023-00	0188-04-035	BRA	SH 36	SH 35	FM 522	WIDEN TO 4 LN DIV RUR	\$2,500,000	T	3B
253	BR0020-00	0188-03-019	BRA	SH 36	FOR C/L	SH 35	PH 2 - WIDEN TO 4 LN DIV RUR	\$15,700,000	T	3B
403	1999-0186-00	0188-01-029	FOR	SH 36	US 90A	AVE M	BASE REPAIR ACP OVERLAY AND PAVEMENT MARKS	\$58,000	T	14
262	FB0009-00	0188-02-029	FOR	SH 36	FM 2218	BRA C/L	WIDEN TO 4 LN DIV RUR	\$15,800,000	T	3B
9430	1998-0186-00	0187-05-045	FOR	SH 36	AT GH&SA RR IN ROSENBERG		REPLACE RR U/P	\$3,000,000	T	4G
9664	1996-0727-A-00	0188-01-900	FOR	SH 36	AT US 59	SEABOURNE CREEK PARK	CONST 5' SIDEWALK TO PROVIDE A CONNECTION FR US 59 TO US 90A	\$294,000	T	5
5058	1996-0727-00	0188-01-030	FOR	SH 36	US 59	US 90A	CONST PED SIDEWALK ALONG SH 36	\$150,000	T	5
3039	T96013A-00	0188-01-031	FOR	SH 36 - FAIRGROUNDS P&R	@ US 59		PH 1-CONDUCT PE FOR FAIRGROUNDS PARK & RIDE (250 SPACES)	\$62,500	T	5
9756	T96013B-00	0188-01-902	FOR	SH 36 - FAIRGROUNDS P&R	@ US 59		PH 2-CONSTRUCT FAIRGROUNDS PARK & RIDE (250 SPACES)	\$430,860	T	5
19	1994-0297-A-00	0192-01-063	FOR	SH 6	1.189 MI W OF FM 521	BRA C/L	WIDEN TO 6 LN DIV RUR	\$18,099,610	T	15
213	1994-0570-00	0192-01-050	FOR	SH 6	.22 MI SOUTHEAST SPRR	SP 58	WIDEN TO 6 LN DIV C&G	\$3,040,000	T	3A

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463	1996-0238-B-00	1685-06-023	FOR	SH 6	@ SP RR NEAR US 90A		PH 2 - CONST RR-HWY GSEP	\$10,068,000	T	4G
9639	1996-0678- -00	0192-01-070	FOR	SH 6	0.3 MI S OF US 90A-SPTRR	MCKEEVER RD	NOISE ABATEMENT WALLS	\$2,674,000	T	3E
1023	1994-0386- -00	0192-04-083	GAL	SH 6	FM 2004	FM 519	INSTALL ATMS	\$183,000	T	5
7018	1999-0103-D-00	0192-04-084	GAL	SH 6	BRA C/L	TEXAS CITY TERMINAL RR	IMPROVE GUARDRAIL TO DESIGN STANDARDS	\$244,800	T	4A
10	1999-0137- -00	1685-05-076	HAR	SH 6	IH 10	SCHILLER RD	SPOT BASE REPAIR AND CRACK SEALING	\$250,000	T	7
24	1999-0144- -00	0110-03-045	MON	SH 75	FM 3083	LP 336 (S)	CRACK SEALING AND PAVEMENT MARKERS	\$216,000	T	4F
7031	MG0031B-00	0110-03-035	MON	SH 75	AT FM 1097 & FM 2432		ADD CONTINUOUS LEFT TRN LNS	\$500,000	T	5
9799	1993-0644-A-00	0367-06-902	GAL	SH 87	AT GALVESTON-BOLIVAR FERRY LANDING		UPGRADE TRAFFIC STAGING AREAS, BARRICADES ETC.	\$3,500,000	T	16F
25	1999-0145- -00	0051-04-052	GAL	SH 87	59TH STREET	SEAWALL BLVD	BASE REPAIR AND CRACK SEAL	\$314,000	T	7
1694	1994-0810- -00	0367-04-901	GAL	SH 87	@ BOLIVAR FERRY LANDING		LENGTHEN 2 EXISTING ROCK BREAKWATERS	\$500,000	T	16F
5056	1996-0725- -00	0976-07-900	GAL	SH 96	IH 45	FM 1266	CONST HIKE/BIKE TRAIL ALONG SH 96	\$757,500	T	5
230	1995-0489- -00	3510-10-002	CHA	SH 99	IH 10 E	0.378 MI S OF FM 565 (SEG I-2)	CONST 4 LN DIV RUR HWY W/ I/C IH 10E & FM 565	\$17,240,000	T	12

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5005	HR5130-00	0912-71-909	HAR	SHAVER	GULF FRWY	SH 3	WIDEN TO 4 LN DIV W/ C&G	\$6,200,000	T	4C
2931	HOU.HR.305-00	0912-71-543	HAR	SIMS BAYOU	TRLOSENHAVEN ST @ SCOTTCREST PARK	IH 45	CONST SIMS BAYOU TRL	\$1,296,000	T	4B
9932	1999-0097-00	0187-05-046	FOR	SP 10	ROSENBERG BYPASS AT US 59(S)		CONSTRUCT GRADE SEPARATION	\$8,500,000	T	15
1026	1994-0267-00	0508-07-027	HAR	SP 330	IH 10	LP 201 (SH 146)	INSTALL CTMS	\$3,483,000	T	5
317	HR0112A-00	0508-07-019	HAR	SP 330	2.0 MI N OF SH 146	SH 146	CONST INTERIM 4 M/L	\$6,000,000	T	4C
430	1999-0192-00	0089-09-063	FOR	SP 529	US 59	US 90A	BASE REPAIR WIDEN SUBGRADE AND ACP OVERLAY	\$427,000	T	14
9890	1998-0840-00	0912-71-640	HAR	STUDEWOOD	STWHITE OAK BAYOU	N MAIN	RECONSTRUCT & REHAB 3 LANE ROADWAY	\$7,036,000	T	4C
1123	1996-0106-00	0912-34-917	FOR	SWEETWATER BLVD	LEXINGTON BLVD	AUSTIN PKWY	INSTALL ATMS: SIGNLZTN, SYNCHRNZTN, & INTRCNNTN	\$410,000	T	5
5007	HR5350A-00	0912-71-906	HAR	TANNER	GESSNER	CAMPBELL	WIDEN TO 4 LN DIV	\$5,100,000	T	4C
7005	HO.HR.0182D	0912-71-650	HAR	TMC/GREENWAY PLAZA/GALLERIA ON-ST BIKE			TMC/GREENWAY PLAZA/GALLERIA ACCESS ON-STREET BIKEWAY NETWORK-PH 2 (TCM SIP COMMITMENT)	\$1,661,900	T	4B
2982	1996-0433-A-00	0912-71-918	HAR	TRANSFER STA @ INDSTR	UNK		CONSTRUCT 8900 FT OF RAILROAD TRACK (PH 1)	\$4,625,000	T	5
2932	HOU.HR.308-00	0912-71-546	HAR	UNION STATION - TEXAS LIMITED	UNION STATION & TRAIN YARD	TRACK WORK TO MILBY STREET	REFURBISH UNION STATION	\$2,000,000	T	4B

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264	FB0011-B-00	0912-34-913	FOR	UNIVERSITY BLVD	END OF COMMONWEALTH BLVD	US 59	PH 1: CONSTRUCT 1/2 OF ULTIMATE 4 LN DIV RDWAY	\$10,000,000	T	4C
9904	FB0011-A-00	0912-34-080	FOR	UNIVERSITY BLVD	DITCH 'H'	US 59	PE REVIEW BY TXDOT TO CONST 2 LN BLVD TO CONNECT W/ US 59	\$40,000	T	16C
2915	T96004A-00	0912-31-107	BRA	UNK	UNK		PH 1 - CONDUCT PE FOR BRAZORIA CO. TRANSIT OP/MAINTNCE FAC & PARK & RIDE	\$62,500	T	5
4057	T96024A-98	0912-73-068	GAL	UNK	UNK		GALVESTON: CONST OF ALT FUELING STATION TO SUPPORT ALT FUELED FLEET (FY 01)	\$500,000	T	5
5090	1996-0760-00	0912-71-922	HAR	UNK	UNK		INSTALL CHILLED WATER COOLING SYSTEM @ 6 BUS OPERATING FACILITIES	\$2,800,000	T	5
9377	1996-0805-00	0912-00-167	VA	UNK	UNK		CONDUCT RIDESHARING DEMAND RESPONSE STUDY	\$125,000	T	5
9418	1996-0109-B-00	0912-00-171	VA	UNK	UNK		REGIONAL COMMUTE ALTERNATIVES PROG - FY 00	\$1,708,750	T	5
9548	1998-0804-00	0050-09-056	HAR	US 290	0.125 MI E OF FM 529	IH 610	ITS: INTEGRATED CORRIDOR TRANSP MANAGEMENT & TRAVELER INFO SYS AT TRANSTAR (PRIORITY CORRIDOR PROJ WORK ORDER # 13)	\$1,236,250	T	15
9939	1999-0104-00	0050-06-058	HAR	US 290	MUESCHKE ROAD		CONSTRUCT INTERIM GRADE SEPATATION	\$6,000,000	T	4C
7030	1999-0283-00	0050-09-900	HAR	US 290	AT 34TH ST		TMS IMPROVEMENTS - U-TURN LNS ETC.	\$634,000	T	5
461	1999-0205-00	0050-06-060	HAR	US 290	.4 MI S OF MUESCHKE RD	.1 MI S OF MUESCHKE RD	CONNECT MAINLANES	\$2,000,000	T	11
9549	1998-0805-00	0050-08-079	HAR	US 290	HUFFMEISTER RD	0.125 MI E OF FM 529	ITS: INTEGRATED CORRIDOR TRANSP MANAGEMENT & TRAVELER INFO SYS AT TRANSTAR (PRIORITY CORRIDOR PROJ WORK ORDER #13)	\$626,250	T	15

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9899	1995-0178-C-00	0177-07-104	HAR	US 59 NE	0.136 MI S OF BF 1960A	GREENS BAYOU	HOV INTELLIGENT TRANSPORTATION SYSTEM	\$1,417,346	T	5
9898	1995-0178-B-00	0177-07-103	HAR	US 59 NE	GREENS BAYOU	0.28 MI N OF SAUNDERS RD	HOV INTELLIGENT TRANSPORTATION SYSTEM	\$172,269	T	5
1029	1995-0169- -00	0177-06-064	HAR	US 59 NE	FM 1960	MON C/L	INSTALL CTMS	\$1,783,000	T	5
9900	1995-0164-B-00	0177-11-134	HAR	US 59 NE	0.28 MI N OF SAUNDERS RD	IH 610	HOV INTELLIGENT TRANSPORTATION SYSTEM	\$1,417,346	T	5
9966	1999-0117-A-00	0177-05-088	MON	US 59 NE	.0518 KM S OF E RIVER DR	1.158 KM N OF E RIVER DR	PH 1: CONDUCT PE TO CONSTRUCT INTERIM INTERCHANGE AT EAST RIVER DRIVE	\$500,000	T	3A
9914	1999-0084-A-00	0177-05-089	MON	US 59 NE	1.219 KM S OF FORTORIA RD	0.655 KM N OF FOSTORIA RD	PH 1: CONDUCT PE TO CONSTRUCT INTERIM INTERCHANGE AT FOSTORIA ROAD	\$250,000	T	3A
9911	1996-0743-A-00	0027-12-900	FOR	US 59 SW	SH 6	FM 2759	CONSTRUCT 1 NON-BARRIER SEPARATED HOV LN IN EACH DIRECTION	\$4,752,500	T	5
1031	1995-0176- -00	0027-12-086	FOR	US 59 SW	0.4235 MI W OF S KIRKWOOD DR	SH 6	INSTALL CTMS	\$2,800,000	T	5
9912	1996-0743-B-00	0027-12-904	FOR	US 59 SW	FM 2759	FM 762	CONSTRUCT 1 NON-BARRIER SEPARATED HOV LN IN EACH DIRECTION	\$4,752,500	T	5
267	FB0014A-00	0027-12-062	FOR	US 59 SW	W OF SH 6	W OF FM 2759	WIDEN TO 8 MLNS WITH TWO 3 LN FRTG RDS, GSEPS, 2-WAY DIAMOND HOV, ITS, TMS, & UPGRADE TO URBAN FWY	\$20,000,000	T	12
9447	1998-0067- -00	0027-13-168	HAR	US 59 SW	US 59 WB	IH 610 SB (CONNECTOR "D")	REHAB BRIDGE DECK AND RETROFIT RAIL	\$2,427,000	T	6A
9435	1996-0921- -00	0027-13-167	HAR	US 59 SW	@ WESLAYAN BLVD O/P		REPAIR BEAMS & EXPANSION JOINTS	\$450,000	T	6A

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1073	1995-0201- - 00	0027-13-170	HAR	US 59 SW	GREENBRIAR	W BELLFORT	INSTALL ACCIDENT INVESTIGATION SITES	\$404,250	T	5
9518	1993-0093-B- 00	0027-13-171	HAR	US 59 SW	E OF MANDELL	SMITH ST	WIDEN TO 12 MLNS & RECONST TO EXTEND HOV & REPLACE MONTROSE O/P W/ BRIDGES @ GRAUSTARK & MONTROSE	\$58,043,001	T	3A
1030	1995-0171- - 00	0027-13-162	HAR	US 59 SW	BELL ST	S SHEPHERD	INSTALL CTMS	\$2,162,000	T	5
1027	1994-0264- - 00	0027-13-161	HAR	US 59 SW	W BELLFORT	FOR C/L	INSTALL CTMS	\$318,000	T	5
9533	1995-0164-A- 00	0177-11-131	HAR	US 59 SW	IH 610	0.019 MI N OF BELL ST	INSTALL CTMS	\$2,780,000	T	5
6089	HR0119-A-00	0028-02-055	HAR	US 90	IH 10 (OATS ROAD)	MERCURY DR	PH 1: CONDUCT PE TO CONSTRUCT 4 LANE FREEWAY WITH GRADE SEPARATION AT MERCURY	\$919,300	T	3A
60	1994-0596- - 00	0028-01-067	HAR	US 90	IH 610 E	E OF MESA RD (OLD FM 527)	PH 2 - WIDEN TO 6 LN DIV URBAN	\$3,061,000	T	3A
405	1999-0188- - 00	0028-02-069	HAR	US 90	RUNNEBERG ROAD		INSTALL BOX CULVERT IN DITCH	\$1,250,000	T	14
9840	1996-0254-B- 00	0028-02-073	HAR	US 90	@ KRENEK ROAD		CONST GRADE SEPARATION	\$2,973,800	T	4E
238	1999-0177- - 00	0028-02-075	HAR	US 90	BW 8	EST OF FM2100	PAVEMENT MARKINGS	\$415,000	T	11
9839	1996-0254-A- 00	0028-02-072	HAR	US 90	@ RUNNEBURG		CONST GRADE SEPARATION	\$2,973,800	T	4E
1034	1996-0697- - 00	0271-09-014	WAL	US 90	FM 359 W	FM 359 E	INSTALL ATMS	\$73,000	T	5

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9392	FB0021A	0027-08-108	FOR	US 90A	E OF US 59	W OF FM 1092	WIDEN TO 8 LN DIV RUR SECTION	\$14,707,000	T	4C
6088	1998-0016-A-00	0027-06-046	FOR	US 90A	AT & SF RR IN ROSENBERG		PH 1: CONDUCT PE TO CONST EXPANDED RR U/P	\$650,000	T	4G
9637	1996-0640- -00	0027-07-032	FOR	US 90A	W.C.L. OF RICHMOND	G.C. & S.F.R.R.	REPLACE RR UNDERPASS	\$6,591,000	T	4G
271	FB0019A-00	0027-08-103	FOR	US 90A	0.1 MI W OF PRESENT ST	HARRIS C/L	WIDEN TO 8 MAIN LNS W/ 2 LEVEL INTERCHANGE AT FM 2234	\$17,700,000	T	4C
9393	FB0021B-00	0027-08-145	FOR	US 90A	W OF FM 1092	0.1 MI W OF PRESENT ST	WIDEN TO 8 LN DIV WITH FM 1092 M/LN DEPRESSED AT US 90A, FRTG RDS AT GRADE	\$13,508,288	T	4C
9970	1999-0126- -00	0027-08-144	FOR	US 90A	0.24 MI W OF FM 1092	0.31 MI W OF KIRKWOOD/DULLES	WIDEN TO 8 LANE DIVIDED WITH DIAMOND INTERCHANGE AT DULLES	\$10,395,923	T	4C
404	1999-0187- -00	0027-06-049	FOR	US 90A	BRAZOS RIVER	SPUR 529	BASE REPAIR CRACK SEAL AND PAVEMENT MARKS	\$553,000	T	14
1816	1995-0145- -00	0027-09-066	HAR	US 90A	0.5 MI E OF BW 8	0.4 MI W OF HIRAM CLARKE RD	WIDEN TO 8 LN DIV C&G W/GSEP & ACCESS RDS	\$45,745,771	T	12
9446	1998-0068- -00	0028-01-078	HAR	US 90A	@ GREENS BAYOU		REPLACE BRIDGE AND APPROACHES	\$1,160,500	T	6A
4090	T96047-00	0912-00-917	BRA	VA	VARIOUS LIMITS		PH 2-PARK & RIDE SERVICES (FY 99) *FUNDING CONTINGUENT UPON RESULTS OF PH 1	\$400,000	T	5
9401	T96004B-00	0912-31-904	BRA	VA	VARIOUS		PH 2-CONST BRA CO OP/MAINTENANCE FACILITY WITH PARK & RIDE * CONTINGUENT UPON RESULTS OF PH 1	\$2,200,000	T	5
9929	1999-0121- -00	0912-73-900	GAL	VA	VARIOUS		FY 2000 ELECTRIC BUS DEMO OPERATING ASSISTANCE FOR 2 BUSES	\$187,500	T	5

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9983	1999-0123- - 00	0912-73-905	GAL	VA		VARIOUS	FY 2002 ELECTRIC BUS DEMO OPERATING ASSISTANCE FOR 2 BUSES	\$187,500	T	5
4058	1996-0706-A- 00	0912-73-069	GAL	VA		VARIOUS	ATMS: PH 1 - CONDUCT P.E. TO INSTALL COMPUTERIZED TRAFFIC CONTROL SYSTEM IN CBD	\$125,000	T	5
9962	1999-0122- - 00	0912-73-904	GAL	VA		VARIOUS	FY 2001 ELECTRIC BUS DEMO OPERATING ASSISTANCE FOR 2 BUSES.	\$187,500	T	5
9928	1999-0139- - 00	0912-00-957	HAR	VA		VARIOUS	FY 2000 CLEAN AIR COALITION (CAC) PUBLIC OUTREACH PROGRAM	\$200,000	T	5
9927	1999-0131- - 00	0912-00-925	HAR	VA		VARIOUS	FY 2000 REGIONAL COMMUTE ALTERNATIVES PROGRAM IMPLEMENTATION	\$3,439,040	T	5
9925	1996-0491-C- 00	0912-00-906	HAR	VA		VARIOUS	FY 2000 CLEAN AIR ACTION TRANSIT PROGRAM	\$3,250,000	T	5
9960	1996-0752-C- 00	0912-71-XXX	HAR	VA		VARIOUS	FY 2001 2002 METRO RCTSS PROJECTS OUTSIDE BW 8 ON BUS ROUTES	\$6,250,000	T	5
9860	1998-0828- - 00	0912-71-592	HAR	VA		UNK	ITS: EN-ROUTE TRANSIT INFORMATION SYS (PRIORITY CORRIDOR PRJ #19)	\$1,046,165	T	15
9926	1999-0130- - 00	0912-00-920	HAR	VA		VARIOUS	FY 2000 REGIONAL COMMUTE ALTERNATIVES PROGRAM MARKETING	\$437,500	T	5
9941	1999-0108- - 00	0912-00-946	HAR	VA		VARIOUS	PE EA SET ASIDE	\$6,767,000	T	4C
9886	1998-0837- - 00	0912-00-955	HAR	VA		VARIOUS LOCATIONS	FUTURE FY 2001 STP REHABILITATION PROJECTS	\$4,329,750	T	4F
9865	1998-0833- - 00	0912-71-573	HAR	VA		AT TRANSSTAR	ITS: CONDITION RESPONSIVE UPTOWN TRAVELER INFORMATION SYS (PRIORITY CORRIDOR PRJ #24)	\$1,250,890	T	15

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9862	1998-0830-00	0912-71-570	HAR	VA	AT TRANSSTAR		ITS: AUTOMATIC TRAFFIC MANAGEMENT IN FLOOD PRONE AREAS (PRIORITY CORRIDOR PRJ #21)	\$1,400,000	T	15
9965	1999-0116-00	0912-00-951	HAR	VA	VARIOUS LIMITS		FUTURE FY 2002 INTERSTATE MAINTENANCE PROJECTS	\$32,321,000	T	2
9968	1999-0119-00	0912-00-963	HAR	VA	VARIOUS		FUTURE FY 2002 NHS REHAB PROJECTS	\$6,062,000	T	3C
9825	1998-0810-00	0912-00-978	HAR	VA	VARIOUS		FY 00 FUTURE MISC. PROJECTS	\$1,082,000	T	16
9803	1996-0752-B-00	0912-71-630	HAR	VA	UNK		EXPANSION OF RCTSS PROGRAM - OUTSIDE BELTWAY 8 ON BUS RTS PRIORITY 1 (FY 02)	\$3,125,000	T	5
9795	1996-0907-00	0912-71-558	HAR	VA	VARIOUS LOCATIONS		ITS: CHANGEABLE LN ASSIGNMENT SYS AT ARTERIAL INTERSECTIONS (PRIORITY CORRIDOR PROJ WORK ORDER #12)	\$600,000	T	15
9864	1998-0832-00	0912-71-572	HAR	VA	AT TRANSTAR		ITS: COORDINATED RAMP METERING & INTERSECTION TRAFFIC SIGNAL CONTROL (PRIORITY CORRIDOR PRJ #23)	\$762,500	T	15
9948	1999-0110-00	0912-00-974	HAR	VA	VARIOUS		FY 2001-2002 FUTURE CMAQ NEEDS	\$7,613,864	T	5
9957	T96062A-00	0912-71-924	HAR	VA	VARIOUS		FY 2001 FUNDING FOR OPERATING ASSIST OF 11 NEW SERVICE ROUTE	\$3,590,803	T	5
9956	T99064-00	0912-71-920	HAR	VA	VARIOUS		FY 2001 TROLLEY ACTIVITY CENTER SHUTTLES	\$2,122,125	T	5
9955	1999-0138-00	0912-71-916	HAR	VA	VARIOUS		INTERMODAL CONGESTION QUICK RESPONSE TEAM	\$500,000	T	5
9954	HO.HR.0154C	0912-71-915	HAR	VA	GOOSE CREEK TRAIL FROM S OF W TEXAS AVE	W TEXAS AVE (PHASE 2)	CONSTRUCT HIKE/BIKE TRAIL SUPPLEMENTAL FUNDING TO ENHANCEMENT PROJECT	\$806,250	T	5

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9953	1996-0709-C-00	0912-71-908	HAR	VA	VARIOUS LOCATIONS IN HARRIS COUNTY PRECNCT 3		PCT 3 - HARRIS COUNTY RCTSS PROGRAM	\$1,562,500	T	5
7041	1999-0110-C-00	0912-71-902	HAR	VA	VARIOUS LIMITS		PCT 4 - HARRIS CO RCTSS PROGRAM (SUPPLEMENTAL)	\$2,287,500	T	5
7040	1999-0110-B-00	0912-71-937	HAR	VA	VARIOUS LIMITS		PCT 3 - HARRIS CO RCTSS PROGRAM (SUPPLEMENTAL)	\$1,710,000	T	5
9952	1996-0709-B-00	0912-71-907	HAR	VA	VARIOUS LOCATIONS IN HARRIS COUNTY- PRECINCT 2		PCT 2 - HARRIS COUNTY RCTSS PROGRAM	\$625,000	T	5
9951	1998-0193-C-00	0912-00-995	HAR	VA	VARIOUS		FY 2001-2002 TXDOT TRANSTAR PROJECTS	\$13,125,000	T	5
7039	1999-0110-A-00	0912-71-901	HAR	VA	VARIOUS LIMITS		PCT 1 - HARRIS CO RCTSS PROGRAM (SUPPLEMENTAL)	\$690,000	T	5
9937	1999-0102- - 00	0912-00-961	HAR	VA	VARIOUS LOCATIONS		FUTURE FY 2001 NHS REHAB PROJECTS	\$5,017,000	T	3C
9949	1998-0193-A-00	0912-00-993	HAR	VA	VARIOUS		FY 2001-2002 TXDOT ATMS PROJECTS	\$16,100,000	T	5
9959	1999-0280- - 00	0912-71-931	HAR	VA	VARIOUS		FY 2001 2002 HARRIS COUNTY RCTSS RPOJECTS	\$15,000,000	T	5
9947	1999-0142- - 00	0912-00-967	HAR	VA	VARIOUS		FY 2001 ALTERNATIVE FUEL PROGRAM	\$2,187,500	T	5
9946	1999-0140- - 00	0912-00-964	HAR	VA	VARIOUS		FY 2001 CLEAN AIR COALITION (CAC) OUTREACH PROGRAM	\$812,500	T	5
9945	1999-0133-A-00	0912-00-944	HAR	VA	VARIOUS		FY 2001 REGIONAL COMMUTE ALTERNATIVES PROGRAM IMPLEMENTATION	\$5,049,090	T	5

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9944	1999-0132- - 00	0912-00-930	HAR	VA	VARIOUS		FY 2001 REGIONAL COMMUTE ALTERNATIVES PROGRAM MARKETING	\$2,481,562	T	5
9943	1996-0491-D- 00	0912-00-913	HAR	VA	HARRIS, GALVESTON, MONTGOMERY & LIBERTY COUNTIES	COUNTIES	FY 2001 CLEAN AIR ACTION TRANSIT PROGRAM	\$3,250,000	T	5
9942	1999-0109- - 00	0912-00-959	HAR	VA	VARIOUS		FY 2001 AND FY 2002 VANPOOL PROGRAM	\$3,500,000	T	4C
9940	1999-0107- - 00	0912-00-904	HAR	VA	VARIOUS		FY 2001 AND FY 2002 CORRIDOR ANALYSIS	\$1,250,000	T	4C
6058	T96063-00	0912-71-923	HAR	VA	VARIOUS LIMITS		FY 2002: ADDITION OF 8 NEW SERVICE RTS (OP ASSISTANCE - YR1)	\$3,957,532	T	5
9938	1999-0103- - 00	0912-00-911	HAR	VA	VARIOUS LOCATIONS		FY 2001 FUTURE STP SAFETY PROJECTS	\$694,700	T	4A
9936	1999-0106- - 00	0912-00-950	HAR	VA	VARIOUS LOCATIONS		FUTURE FY 2001 INTERSTATE MAINTENANCE PROJECTS	\$5,432,931	T	2
9934	1999-0099- - 00	0912-71-620	HAR	VA	HIKE AND BIKE TRAILS IN HOUSTON		IMPLEMENT HIKE AND BIKE TRAIL PROGRAM	\$7,500,000	T	15
9950	1998-0193-B- 00	0912-00-994	HAR	VA	VARIOUS		FY 2001-2002 TXDOT CTMS PROJECTS	\$20,775,000	T	5
9981	T99065-A-00	0912-71-921	HAR	VA	VARIOUS		FY 2002 TROLLEY ACTIVITY CENTER SHUTTLES	\$1,486,812	T	5
9643	1996-0683- - 98	0912-00-915	HAR	VA	VARIOUS LIMITS	VARIOUS LIMITS	FUTURE FY 2000 STP REHABILITATION PROJECTS	\$3,955,000	T	4F
9618	1993-0630- - 00	0912-00-945	HAR	VA	VARIOUS LIMITS	VARIOUS LIMITS	FUTURE FY 2000 TRAFFIC MGMT SYS REHAB PROJ	\$1,950,000	T	10B

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9977	1999-0143-00	0912-00-970	HAR	VA	VARIOUS		FY 2002 ALTERNATIVE FUEL PROGRAM	\$2,187,500	T	5
235	1999-0174-00	0912-71-582	HAR	VA	AT HOUSTON TRANSTAR		ITS: PROVIDE LEVEL IV INTEGRATION OF EXISTING DYNMIC MESSAGE	\$210,000	T	10B
513	1999-0211-00	0912-71-590	HAR	VA	VARIOUS LOCATIONS IN HOUSTON		CTMS: TIME PHASING ADAPTION FOR COMPUTERIZED TRAFFIC MANAGEMENT	\$108,000	T	10B
2589	HO.HR.0481	0912-71-459	HAR	VA	IN FREEDMANS TOWN	IN HOUSTON	RECONST STREET	\$805,000	T	4B
491	1999-0210-00	0912-71-589	HAR	VA	AT HOUSTON DISTRICT AND TRANSTAR		ADMINISTRATION TO OPERATIONS BRIDGE	\$20,000	T	10B
9979	1996-0709-D-00	0912-71-666	HAR	VA	VARIOUS LOCATIONS IN HARRIS COUNTY PRECINCT 4		PCT 4 - HARRIS COUNTY RCTSS PROGRAM	\$3,437,500	T	5
490	1999-0209-00	0912-71-585	HAR	VA	AT VARIOUS LOCATIONS IN HOUSTON		ITS: INVENTORY OF EXISTING COMMUNICATIONS CABLE	\$75,000	T	10B
9651	1996-0746-00	0912-00-939	HAR	VA	VARIOUS LIMITS	VARIOUS LIMITS	FUTURE FY 2000 TRAFFIC CONTROL DEVICES PROJS	\$1,971,000	T	10A
9980	1999-0129-00	0912-71-919	HAR	VA	CBD TO DOME PROJECT		HIGH CAPACITY TRANSITWAY PROJECT	\$12,500,000	T	5
516	1999-0212-00	0912-71-599	HAR	VA	AT TRANSTAR		UPGRADES AND MAINTENANCE TO COMPUTERS	\$360,000	T	10B
9982	T96062B-00	0912-71-925	HAR	VA	VARIOUS		FY 2002 2ND YR FUNDING FOR OP ASSIST OF THE II SERVICE RTS	\$551,516	T	5
9405	1996-5452-00	0912-71-633	HAR	VA	VARIOUS		NEW SHUTTLE SVCE PROVIDING EMPLOYEES/VISITORS TRANSP FROM OUTER EDGE PARKING LOTS TO CBD (FY 00)	\$4,290,375	T	5

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List Includes: Roadway, CMAQ, Rehabilitation, Safety, Enhancement and Miscellaneous Projects
(Sorted by street, county)

PROJ ID	PROJ NUMBER	CSJ NUMBER	CO	STREET	FROM LOCATION	TO LOCATION	PROJECT DESCRIPTION	TOTAL COST	PROJ STATUS	FUNDING SOURCE
2970	1996-0456-00	0912-71-632	HAR	VA	UNK		CONDUCT TRAFFIC ENGINEERING STUDY TO UPDATE EXISTING SIGNALS AT 8 INTERSECTIONS	\$56,250	T	5
100	1999-0165-00	0912-00-172	HAR	VA	FRONTAGE ROADS ALONG IH 10 IN FORT BEND	HARRIS AND WALLER COUNTIES	ACP OVERLAY	\$1,125,000	T	7
3021	1996-0609-00	0912-00-123	HAR	VA	@ HOU TRANSTAR CTR		ITS: ENHANCE & EXPANSION OF COMPUTER SYS BUILD INTEGRATION & NEW PROJ INTERFACING - PH 3	\$2,400,000	T	5
227	1999-0173-00	0912-71-581	HAR	VA	AT CTMS SATELLITE BUIDINGS IN HOUSTON	FOR TRANSTAR	UPGRADE SATELLITE BUILDING SECURITY WITH TIE IN TO DISTRICT	\$30,000	T	10B
9958	1999-0113-00	0912-71-926	HAR	VA	VARIOUS		FUTURE GRADE SEPARATIONS	\$17,623,612	T	5
308	1999-0182-00	0912-71-616	HAR	VA	VARIOUS LOCATIONS	IN THE CITY OF PASADENA	NATIONAL POLLUTION DISCHARGE ELIMINATION STUDY PERMIT WITH	\$177,000	T	11
3099	1996-0703-00	0912-00-914	HAR	VA	HOUSTON BIKEWAY PROGRAM		A) ADD 100 INVERTED U SHAPED BIKE RACKS & COVERED BIKE PARKING SYSTEMS B) EDUCATIONAL CAMPAIGN	\$80,000	T	5
489	1999-0208-00	0912-71-576	HAR	VA	AT HOUSTON TRANSTAR		IMPROVE TRANSTAR TO SATELLITE COMMUNICATIONS CONNECTIVITY	\$352,520	T	10
9974	1999-0133-B-00	0912-00-960	HAR	VA	VARIOUS		FY 2002 REGIONAL COMMUTE ALTERNATIVES PGM MARKETING (100%)	\$2,419,062	T	5
1042	1993-0646-00	0912-71-514	HAR	VA	VARIOUS LIMITS		ITS: IVHS CORRIDOR DEMONSTRATION, INCLUDING AVI PROJECTS, CLOSED	\$2,380,000	T	15
9971	1999-0127-00	0912-00-969	HAR	VA	VARIOUS		FUTURE FY 2002 STP REHABILITATION PROJECTS	\$3,378,127	T	4F
1074	1993-0554-00	0912-00-051	HAR	VA	VARIOUS		INSTALL HIGHWAY ADVISORY RADIO	\$250,000	T	5

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9973	1996-0491-E-00	0912-00-956	HAR	VA	HARRIS, GALVESTON, MONTGOMERY & LIBERTY COUNTIES		FY 2002 CLEAN AIR ACTION TRANSIT PROGRAM	\$3,250,000	T	5
9763	1995-0069-F-00	0912-00-168	HAR	VA	VARIOUS LIMITS		HGAC: ACQUISITION OF ALT FUELED VEHICLES (FY 00)	\$2,252,775	T	5
9762	1995-0069-E-00	0912-00-165	HAR	VA	VARIOUS LIMITS		HGAC: ACQUISITION OF ALT FUELED VEHICLES (FY 99)	\$1,630,350	T	5
9976	1999-0147- -00	0912-00-965	HAR	VA	VARIOUS		FY 2002 CLEAN AIR COALITION (CAC) PUBLIC OUTREACH PROGRAM	\$812,500	T	5
9713	1996-0700- -00	0912-71-627	HAR	VA	UNK		RCTSS PROGRAM - IMPROVE TRAFFIC CONTROL DEVICES ON MAJOR THOROUGHFARES (FY 98-00)	\$6,250,000	T	5
9711	1996-0709-A-00	0912-71-629	HAR	VA	VARIOUS LOCATIONS IN HARRIS COUNTY- PRECINCT 1		RCTSS: TRAFFIC SYNCHRONIZATION/CONGESTION & INCIDENT MGMNT (FY 98-00)	\$625,000	T	5
9681	1996-0868- -00	0912-00-949	HAR	VA	VARIOUS LIMITS	VARIOUS LIMITS	FUTURE FY 2000 STATE REHAB PROJS	\$4,603,000	T	14
6085	1995-0044-B-00	0912-71-655	HAR	VA	W HOUSTON ON-ST BIKEWAY	PHASE 2	BIKE W HOUSTON ON-ST BIKEWAY - PH 2 (TCM SIP COMMITMENT)	\$601,000	T	5
9680	1996-0867- -00	0912-00-941	HAR	VA	VARIOUS LIMITS	VARIOUS LIMITS	FUTURE FY 2000 URBAN ST PROG PROJS	\$4,888,000	T	13D
9678	1996-0841- -00	0912-00-947	HAR	VA	VARIOUS LIMITS	VARIOUS LIMITS	FUTURE FY 2000 FM REHAB PROJS	\$1,797,000	T	8A
9975	1999-0136- -00	0912-00-962	HAR	VA	VARIOUS		FY 2002 REGIONAL COMMUTE ALTERNATIVES PGM IMPLEMENTATION (80%)	\$4,177,187	T	5
7045	T99065-B-00		HAR	VA	VARIOUS		FY 2000 TROLLEY ACTIVITY CENTER SHUTTLES (ADVANCED)	\$1,363,188	T	5

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7047	T96062-C-00		HAR	VA	VARIOUS		FY 2000 2ND YR FUNDING FOR OP ASSIST OF THE 11 SERVICE RTS (ADVANCED)	\$3,039,288	T	5
9978	1999-0007-00	0912-37-913	MON	VA	WOODLANDS TOWN CENTER FROM IH 45	GORGAN'S MILL	PURCHASE 6 SMALL ALT FUELED VEHICLES	\$1,800,000	T	5
9388	1996-0808-00	0912-00-164	VA	VA	VARIOUS LIMITS		SUPPORT OF SH 35, SH 249, AND IH 45 NORTH MAJOR INVESTMENT STUDIES	\$431,250	T	5
9417	1996-0520-B-00	0912-00-170	VA	VA	UNK		REGIONAL VANPOOL PROGRAM - FY 00	\$1,387,500	T	5
9415	1996-0492-C-00	0912-00-169	VA	VA	8-COUNTY NON-ATTAINMEN		CLEAN AIR ACTION PUBLIC OUTREACH PROG - FY 00 (\$440K YR)	\$550,000	T	5
7036	1999-0285-00	0912-71-948	VA	VA	VA	VA	FUTURE FY 2000 NHS REHABILITATION PROJECTS	\$1,046,969	T	3C
9969	1999-0120-00	0912-00-912	HAR	VAR	VARIOUS		FY 2002 FUTURE STP SAFETY PROJECTS	\$6,850,000	T	4A
7028	1999-0282-00		VA	VARIOUS			CORRIDOR ANALYSIS (FY 01-02)	\$1,250,000	T	5
7011	1999-0281-00	0912-00-988	VA	VARIOUS LOCATIONS			FUTURE FY 2000 STP REHABILITATION PROJS	\$4,653,500	T	4F
2929	HOU.HR.307	0912-71-545	HAR	W WHITE OAK BAYOU TRL EXT	S OF PINEMONT ALONG WHITE OAK BAYOU	TO W LITTLE YORK, DEPRIEST, RINGOLD	CONST EXTENSION OF BIKE TRL	\$2,252,904	T	4B
9870	HO.HR.0188A	0912-71-647	HAR	WEST BRAYS BAYOU TRL- EAST SEGMENT	1500' W OF I 610(WEST LOOP)	MIDWAY IN HERMANN PARK	CONST BIKE TRAIL (TCM SIP COMMITMENT)	\$3,773,152	T	4B
9902	HO.HR.0188B	0912-71-432	HAR	WEST BRAYS BAYOU TRL- WEST SEG A	550' N OF BISSENET	1500' W OF IH 610 (WEST LOOP)	CONST WEST BRAYS BAYOU BIKE TRAIL (TCM SIP COMMITMENT)	\$1,925,050	T	4B

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9903	HO.HR.0188C	0912-71-643	HAR	WEST BRAYS BAYOU TRL- WEST SEG B	BEECHNUT	550' N OF BISSONNET	CONST WEST BRAYS BAYOU BIKE TRAIL (TCM SIP COMMITMENT)	\$459,775	T	4B
1117	1996-0100- - 00	0912-34-078	FOR	WILLIAMS TRACE BLVD	US 59	SH 6	SIGNALIZATION, SYNCHRONIZATION, & INTERCONNECTION	\$265,000	T	5
1118	1996-0101- - 00	0912-34-079	FOR	WILLIAMS TRACE BLVD	SH 6	AUSTIN PKWY	SIGNALIZATION, SYNCHRONIZATION, & INTERCONNECTION	\$215,000	T	5
3092	1996-0855- - 00	0912-37-109	MON	WOODLANDS PKWY	IH 45	COCHRANS CROSSING	SIGNAL SYNCHRONIZATION	\$215,400	T	5
194	MG0058A-00	0912-37-105	MON	WOODLANDS PKWY	GOSLING	KUYKENDAHL	WIDEN TO 4 LN DIV	\$1,300,000	T	4D

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355	MG0001	UNK	MON	1ST STREET (CONROE)	SOUTH	CREIGHTON	CONST NEW 4 LN UNDIV	\$3,090,000	L	4E
174	MG0003	UNK	MON	1ST STREET (CONROE)	SH 105	FOSTER DRIVE	WIDEN TO 4 LN UNDIV	\$3,780,000	S	4D
386	1996-0294-XX	UNK	GAL	2ND ST	SH 6	SCHIRO RD	CONST 4 LN UNDIV	\$2,880,000	L	4D
388	1996-0389-XX	UNK	GAL	2ND ST	SCHIRO RD	FM 2004	CONST NEW 4 LN UNDIV	\$5,670,000	L	4E
356	MG0004	UNK	MON	7TH STREET (CONROE)	FOSTER	CRIGHTON	CONST NEW 4 LN UNDIV	\$3,090,000	L	4E
9403	1996-0708-B-XX	UNK	GAL	61ST ST	EXISTING LIMIT	HARBORSIDE DR	PH 2 - CONST 4 LN EXTENSION	\$16,400,000	L	4D
4060	1996-0708-A-XX	UNK	GAL	61ST ST	EXISTING LIMIT	HARBORSIDE DR	PH 1 - CONDUCT P.E. FOR CONST 4 LN EXTENSION	\$500,000	S	4D
532	1995-0375-XX	0912-71-385	HAR	AIRPORT	CHIMNEY ROCK	HIRAM CLARKE	CONST 4 LN DIV URB ON NEW LOC	\$18,700,000	S	17
529	1994-0829-XX	0912-71-386	HAR	AIRPORT	HIRAM CLARKE	FM 521	CONST 4 LN DIV URB ON NEW LOC	\$18,700,000	S	4C
49	HR0013	UNK	HAR	AIRTEX BLVD	IMPERIAL VALLEY	ALDINE WESTFIELD	CONST 4 LN ROAD	\$7,910,000	L	4C
469	HR0015	UNK	HAR	ALDINE MAIL RT	US 59(N)	LEE RD	CONST 2 LN UNDIV	\$680,000	S	4C
5004	HR0017B	UNK	HAR	ALDINE WESTFIELD	TIDWELL	LITTLE YORK	WIDEN TO 4 LN DIV	\$4,500,000	L	4C

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50	HR0017A	UNK	HAR	ALDINE WESTFIELD RD	LITTLE YORK	BW 8	WIDEN TO 4 LN UNDIV	\$12,790,000	S	4C
51	HR0017C	UNK	HAR	ALDINE WESTFIELD RD	JENSEN	TIDWELL	WIDEN TO 4 LN UNDIV	\$1,330,000	L	4C
2361	1996-0290-XX	UNK	HAR	ALGOA-FRIENDSWOOD RD	SH 6	FM 518	REHAB PVMT & MINOR IMPRVMT OF CURVES	\$6,000,000	S	TBD
447	1996-0012-XX	UNK	GAL	ALGOA/FRIENDS WOOD RD	SH 6	FM 517	WIDEN TO 4 LN DIV AS CNNTG LINK	\$9,200,000	L	4E
52	HR0010	UNK	HAR	ALMEDA GENOA	SH 288	TELEPHONE RD	WIDEN TO 4 LN CONCRT BLVD	\$8,920,000	L	4C
2597	HR0012	UNK	HAR	BAMMEL N HOUSTON	VETERANS MEMORIAL PKWY	FM 1960	WIDEN TO 4 LN CONCRETE BLVD C&G & STORM SEWER	\$4,282,000	L	4C
232	99SOV	UNK	HAR	BARKER CLODINE	KINGSLAND BLVD	FT BEND C/L	CONST NEW 4 LN ASPHALT RD ON EMBANKMENT W/ CULVERTS	\$9,840,000	L	4C
2614	HR0032	UNK	HAR	BARKER CYPRESS	US 290	CYPRESSWOOD DR	RECONST ROADWAY	\$2,200,000	S	TBD
2223	1996-0134-XX	UNK	GAL	BAY AREA BLVD	BRITTANY BAY	S END OF CLEAR CRK	CONST HIKE & BIKE	\$192,000	S	5
476	1996-0129-XX	UNK	GAL	BAY AREA BLVD	CANDLEWOOD	FM 517	CONST 4 LN DIV	\$7,470,000	L	4E
4000	HR0034B	UNK	HAR	BAY AREA BLVD	SPENCER HWY (SENS RD) - PH 2	SH 225	WIDEN TO 4 LN RD W/ CLT & GSEP AT SH 225	\$8,000,000	L	4C
606	HR0034A	UNK	HAR	BAY AREA BLVD - PH 1	FAIRMONT PKWY	SPENCER HWY	CONST 4 LN RD W/ CLT	\$6,320,000	L	4C

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2366	1996-0296-XX	UNK	FOR	BEASLEY	SNAKE CRK		REPLC BRIDGE, 41 FT	\$164,000	S	TBD
972	1998-0070-XX	UNK	FOR	BEECHNUT	HAR C/L	ADDICKS CLODINE	WIDEN TO 6 LN DIV	\$4,690,000	S	4C
5	1996-0297-XX	UNK	FOR	BEECHNUT	LOBERA	SH 99	WIDEN AND CONSTRUCT (IN SEC) TO 4 LN, 32000 FT	\$10,528,000	L	4C
7	1996-0298-XX	UNK	FOR	BELLAIRE	SAN PABLO	SH 99	CONST 4 LN BLVD SECTION	\$30,770,000	L	4E
6	99SOV	UNK	FOR	BELLAIRE	ADDICKS CLODINE	FM 1464	CONST NEW 4 LN ROAD	\$3,450,000	L	4C
2977	1996-0453-XX	UNK	HAR	BELLAIRE	FONDREN	BW 8	WIDEN TO 8 LNS	\$7,521,948	S	4C
8	1996-0349-XX	UNK	FOR	BELLFORT W	US 59	SH 99	CONSTRUCT (IN SECTIONS) & WIDEN TO 4 LN DIV	\$10,837,500	L	4C
977	1998-0071-XX	UNK	FOR	BELLFORT W	FM 1876	HAR C/L	WIDEN TO 6 LN DIV	\$5,850,000	L	4C
53	1994-0325-XX	1685-07-005	HAR	BF 1960A	FM 1960 E OF LEE	US 59	WIDEN TO 4 LN UNDIV RUR	\$2,590,000	S	4C
54	1994-0326-XX	1685-07-006	HAR	BF 1960A	US 59	FM 1960 E OF HUMBLE	WIDEN TO 4 LN URB DIV	\$2,795,000	S	4C
55	HR0061	UNK	HAR	BINZ	SH 288	S MAIN	RECONSTRUCT TO 4 LN UNDIV	\$2,990,000	S	4C
56	HR0072	UNK	HAR	BLODGETT	MAIN	SCOTT	WIDEN TO 4 LN UNDIV	\$4,500,000	L	4C

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464	1996-0299-XX	UNK	FOR	BOIS D'ARC	SH 36	COUNTY LINE	EXTENSION OF 2 LN RD	\$10,876,800	L	4E
162	1996-0064-XX	UNK	HAR	BOONE RD	ALIEF CLODINE	WESTPARK	CONST 2 LN RD	\$500,000	L	4C
2370	1996-0300-XX	UNK	FOR	BRISCOE	FLEWELLEN CRK		REPLACE BRIDGE, 44 FT	\$72,600	S	TBD
2221	1996-0132-XX	UNK	GAL	BRITTANY BAY BLVD	IH 45	BAY AREA BLVD	CONST HIKE & BIKE	\$324,000	S	5
2222	1996-0133-XX	UNK	GAL	BRITTANY BAY BLVD	BAY AREA BLVD	FM 528	CONST HIKE & BIKE	\$600,000	S	5
397	1996-0125-XX	UNK	GAL	BRITTANY BAY BLVD	HOBBS RD	BAY AREA BLVD	CONST 4 LN DIV	\$5,478,000	S	4D
398	1996-0126-XX	UNK	GAL	BRITTANY BAY BLVD	BAY AREA BLVD	FM 528	CONST 4 LN DIV	\$5,478,000	S	4D
384	1996-0017-XX	UNK	GAL	BRITTANY BAY BLVD	FM 528	FM 2351	CONST 4 LN BLVD W/ C&G	\$4,472,000	S	4C
385	1996-0018-XX	UNK	GAL	BRITTANY BAY BLVD	ALGOA/FRIENDS WOOD RD	FM 528	CONST 4 LN BLVD	\$470,000	S	4C
431	1996-0087-XX	UNK	FOR	BROOKS ST B/P	CAMELLIA	US 90A	CONST 4 LN RDWY	\$3,800,000	L	4C
907	1998-0072-XX	UNK	HAR	BS 146	SH 146 (S - LP 201)	SP 55	WIDEN & UPGRADE TO 6 LN FWY	\$13,280,000	L	4C
527	1994-0337-XX	0389-15-006	HAR	BS 146D (LP 410)	FAIRMONT PKWY	SH 146	WIDEN TO 4 LN DIV	\$8,200,000	L	4C

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2333	1996-0260-XX	UNK	HAR	BS 146D/LP 501	FAIRMONT	SHORE ACRES BLVD	IMPRV PVMNT, SHLDRS & DRNG	\$1,500,000	S	TBD
9700	BR0002C	0111-07-028	BRA	BS 288B	NORTH END OF BASTROP BAYOU	0.8 MI S OF SH 35	WIDEN TO 6 LN DIV (ON OLD SH 288)	\$15,849,000	S	4D
9427	1998-0185-B-XX	0111-08-106	BRA	BS 288B	AT UNION PACIFIC RR IN CLUTE		PH 2: CONSTR RR GSEP	\$6,500,000	S	4G
243	BR0002A	0111-08-108	BRA	BS 288B	NORTH END OF BASTROP BAYOU	SH 332	WIDEN TO 6 LN DIV (ON OLD SH 288)	\$5,250,000	S	4E
1487	1993-0622-XX	0111-07-038	BRA	BS 288B	@ RAGSDALE & ROSEN CRK & BASTROP BAYOU		REHAB BRIDGE	\$1,450,000	S	6A
909	1998-0073-XX	UNK	HAR	BU 90-U	MESA RD	BW 8 E	WIDEN TO 6 LN DIV URBAN	\$19,830,000	L	3A
991	1994-0392-XX	0028-01-901	HAR	BU 90-U	HOUSTON C/L	1.3 MI W OF SHELDON	INSTALL ATMS	\$13,800,000	L	5
626	1998-0074-XX	UNK	HAR	BUFFALO SPEEDWAY	HOLMES	OREM	CONST 4 LN DIV	\$4,190,000	S	4C
61	HR0079B	UNK	HAR	BUFFALO SPEEDWAY	FUQUA	BW 8 (S)	CONST NEW 4 LN DIV	\$9,400,000	L	4C
5019	1998-0002-XX	UNK	HAR	BUFFALO SPEEDWAY	WEST BELLFORT	HOLMES	CONST 4 LN DIV W/ CURBS, SIDEWALKS, LIGHTING, NECESSARY UNDRGRND UTILITIES	\$3,575,000	S	4C
9	1996-0085-XX	UNK	FOR	BURNEY RD	W AIRPORT BLVD	VOSS RD	RECONST & WIDEN TO 4 LN RD	\$600,000	L	4C
475	1996-0086-XX	UNK	FOR	BURNEY RD B/P	JESS PIRTLE BLVD	US 90A	CONST 4 LN RDWY	\$7,000,000	L	4C

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5069	1996-0738- - XX	UNK	HAR	BW 8	BOHEME	DEERWOOD DR	CONSTRUCT SBOUND FRONTAGE RD OVER BUFFALO BAYOU & CONNECT TO EXISTING FRTG RDS	\$4,593,000	L	5
1098	1996-0275- - XX	UNK	HAR	BW 8	W OF IH 45	US 90A	INSTALL CTMS - INCL SURVEILLANCE SYS, COMMUNICATN SYS, SATELLITE COMPUTER FAC, & MONITORING CONTRL	\$11,040,000	L	5
3028	1996-0686- - XX	3256-01-900	HAR	BW 8	US 90A	US 59	INSTALL CTMS	\$1,900,000	L	5
285	HR0018	3256-03-048	HAR	BW 8	0.2 MI S OF WOODFOREST DR	0.8 MI S OF NEW US 90	COMPLETE ULTIMATE 6-8 MLN FRWY	\$7,679,000	L	3A
286	HR0019	3256-02-048	HAR	BW 8	0.3 MI E OF OLD HUMBLE RD	0.6 MI W OF MP RR	CONST 6 FRWY MLNS	\$26,860,000	S	3A
287	HR0022	3256-03-043	HAR	BW 8	0.6 MI W OF MP RR	UVALDE RD	CONST 6 FRWY MLNS	\$65,412,000	S	3A
288	HR0023	3256-03-047	HAR	BW 8	0.78 MI S OF NEW US 90	UVALDE RD	CONST 3-LEVEL I/C	\$15,569,000	L	3A
289	HR0024B	3256-02-040	HAR	BW 8	0.8 MI W OF US 59 (N)	0.3 MI E OF OLD HUMBLE RD	WIDEN TO 6 FWY MLNS - PH 2	\$27,120,000	S	3A
2148	1996-0068- - XX	UNK	HAR	BW 8	US 59 (S)	BW 8 N	STDY-ALLOW ACCESS TO & FR MLNS BY HOV TRFC & FUND IMPRVMTS	\$250,000	S	TBD
1097	1996-0274- - XX	UNK	HAR	BW 8	US 59	W OF UPRR	INSTALL CTMS - INCL SURVEILLANCE SYS, COMMUNICATN SYS, SATELLITE COMPUTER FAC, & MONITORING CONTRL	\$3,000,000	L	5
3029	1996-0687- - XX	3256-01-901	HAR	BW 8	US 59 (S)	SH 249	INSTALL SIGNAL COORDINATION SYSTEM	\$1,900,000	L	5
4093	1996-0716- - XX	UNK	HAR	BW 8	@ WESTHEIMER		CONSTRUCT 3 LEVEL I/C	\$12,000,000	L	5

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1094	1996-0271-XX	UNK	HAR	BW 8	US 90A	E OF SH 249	INSTALL CTMS - INCL SURVEILLANCE SYS, COMMUNICATN SYS, SATELLITE COMPUTER FAC, & MONITORING CONTRL	\$14,580,000	L	5
1095	1996-0272-XX	3257-02-913	HAR	BW 8	SH 249	IH 45	INSTALL SIGNAL COORDINATION SYSTEM	\$1,900,000	L	5
1096	1996-0273-XX	UNK	HAR	BW 8	W OF UPRR	W OF IH 45	INSTALL CTMS - INCL SURVEILLANCE SYS, COMMUNICATN SYS, SATELLITE COMPUTER FAC, & MONITORING CONTRL	\$8,820,000	L	5
2425	1996-0385-XX	UNK	HAR	BW 8 HOV CNN	IH 10 W	BW 8 S	STDY-ALLOW ACCESS TO & FR MLNS BY HOV TRFC & FUND IMPRVMTS	\$250,000	S	TBD
5072	N-0665	UNK	HAR	CHIMNEY ROCK	BW 8	FUQUA	CONST 4 LN DIV	\$2,160,000	S	4C
63	HR0094	UNK	HAR	CHIMNEY ROCK	S MAIN	BW 8 (S)	CONST NEW 4 LN DIV	\$21,110,000	S	4C
64	HR0029	UNK	HAR	COOK	BISSONNET	BELLAIRE	WIDEN TO 4 LN UNDIV	\$4,400,000	S	4C
2371	1996-0301-XX	UNK	FOR	COTTONWOOD CHURCH	COON CRK		REPLACE BRIDGE, 23 FT	\$240,000	S	TBD
2372	1996-0302-XX	UNK	FOR	COTTONWOOD SCHOOL	COON CRK		REPLACE BRIDGE, 65 FT	\$260,000	S	TBD
9477	1998-0017-XX	0912-31-915	BRA	CR	CR 143 @ DRAINAGE DITCH	IN BRAZORIA COUNTY	BRIDGE REPLACEMENT	\$120,000	S	6B
9483	1998-0018-XX	0912-31-919	BRA	CR	CR 49 @ DRAINAGE DITCH	IN BRAZORIA COUNTY	BRIDGE REPLACEMENT	\$90,000	S	6B
9484	1998-0019-XX	0912-31-917	BRA	CR	CR 160 @ GULF COAST WATER CANAL	IN BRAZORIA COUNTY	BRIDGE REPLACEMENT	\$160,000	S	6B

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9485	1998-0020-XX	0912-31-916	BRA	CR	CR 143 @ DRAINAGE DITCH	IN BRAZORIA COUNTY	BRIDGE REPLACEMENT	\$105,000	S	6B
9486	1998-0021-XX	0912-31-910	BRA	CR	CR 829 @ DRAINAGE DITCH	IN BRAZORIA COUNTY	BRIDGE REPLACEMENT	\$75,000	S	6B
1968	1995-0399-XX	0912-31-968	BRA	CR	DULICK RD W OF MANVEL		UPDATE RR SIG @ PROTECTIVE DEVICES	\$100,000	S	4A
1709	1994-0845-XX	0912-31-057	BRA	CR	CR E OF LIVERPOOL (MP)		UPDATE RR SIGNAL DEVICES AT SCHOOL BUS RR CROSSINGS	\$85,000	S	4A
1712	1994-0848-XX	0912-31-056	BRA	CR	CR SOUTH OF ALVIN (MP)		UPDATE RR SIGNAL PROTECT DEVICES @ RR XINGS	\$85,000	S	4A
1967	1995-0398-XX	0912-31-903	BRA	CR	CR 370 S OF ALVIN (MP)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
9455	1998-0023-XX	0920-39-900	CHA	CR	COTTON LAKE RD @ HACKBERRY GULLY		REPLACE BRIDGE AND APPROACHES	\$46,250	S	6B
9454	1998-0022-XX	0920-39-901	CHA	CR	CR 151 @ OGDEN DITCH		REPLACE BRIDGE AND APPROACHES	\$38,750	S	6B
9490	1998-0024-XX	0912-34-084	FOR	CR	HUNTINGTON ROAD @ RABINOWITZ DITCH	IN FORT BEND COUNTY	BRIDGE REPLACEMENT	\$100,000	S	6B
1969	1995-0400-XX	0912-34-984	FOR	CR	BOWSER STREET W OF FULSHEAR (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
1985	1995-0416-XX	0912-73-969	GAL	CR	MUSTANG RD IN GALVESTON (UP)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
1978	1995-0409-XX	0912-71-932	HAR	CR	FISHER RD IN S JERSEY VILLAGE		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A

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1979	1995-0410-XX	0912-71-949	HAR	CR	BAYPORT BLVD IN PASADENA (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
1981	1995-0412-XX	0912-71-973	HAR	CR	HARDY RD W OF HUMBLE (UP)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
1982	1995-0413-XX	0912-71-974	HAR	CR	PENN CITY W OF CHANNELVIEW (UP)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
1984	1995-0415-XX	0912-71-987	HAR	CR	BAYOU DR N OF CHANNELVIEW (MP)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
9605	1998-0025-XX	0912-71-943	HAR	CR	PORT DR @ TAYLOR BAYOU	IN HARRIS COUNTY	BRIDGE REPLACEMENT	\$1,250,000	S	6B
9610	1998-0027-XX	0912-71-945	HAR	CR	CARDINAL DR AT SPRING CREEK	IN HARRIS COUNTY	BRIDGE REPLACEMENT	\$120,000	S	6B
9609	1998-0026-XX	0912-71-608	HAR	CR	S KIRKWOOD @ DITCH	IN CITY OF HOUSTON	BRIDGE REPLACEMENT	\$106,000	S	6B
1983	1995-0414-XX	0912-71-986	HAR	CR	BRENWOOD STREET IN CLOVERLEAF (MP)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
9760	1998-0028-XX	0912-71-971	HAR	CR	SHERWELL @ JORDON GUL	IN CITY OF HOUSTON	PH 2 - BRIDGE REPLACEMENT	\$165,000	S	6B
1710	1994-0846-XX	0912-31-058	HAR	CR	COUNTY RD S OF ALVIN (MP)		UPDATE PROTECTIVE DEVICES AT RAILROAD SCHOOL BUS CROSSING	\$85,000	S	4A
1514	1993-2015-XX	0920-02-043	LIB	CR	CR #390 @ DRAIN		REPLACE BRIDGE	\$120,000	S	6B
9463	1998-0039-XX	0920-02-907	LIB	CR	GRIFFIN RD @ BRANCH		REPLACE BRIDGE AND APPROACHES	\$57,500	S	6B

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9462	1998-0038- - XX	0920-02-908	LIB	CR	BENNY RUSK RD @ DEVERS CANAL		REPLACE BRIDGE AND APPROACHES	\$171,000	S	6B
9461	1998-0037- - XX	0920-02-909	LIB	CR	DEW BRANCH RD @ DEVERS CANAL		REPLACE BRIDGE AND APPROACHES	\$180,000	S	6B
9460	1998-0036- - XX	0920-02-911	LIB	CR	JC DAVIS RD @ BEEF HEAD CREEK		REPLACE BRIDGE AND APPROACHES	\$27,500	S	6B
9459	1998-0035- - XX	0920-02-912	LIB	CR	TEXACO RD @ DRAIN DITCH		REPLACE BRIDGE AND APPROACHES	\$80,000	S	6B
9458	1998-0034- - XX	0920-02-913	LIB	CR	GULF RD AT BRANCH		REPLACE BRIDGE AND APPROACHES	\$38,750	S	6B
9457	1998-0033- - XX	0920-02-914	LIB	CR	DR. GIBSON RD @ LONG ISLAND CREEK		REPLACE BRIDGE AND APPROACHES	\$25,000	S	6B
9453	1998-0031- - XX	0920-02-910	LIB	CR	CR 186 @ IRRIGATION CANAL		REPLACE BRIDGE AND APPROACHES	\$150,000	S	6B
9452	1998-0030- - XX	0920-02-904	LIB	CR	CR 393 AT DRAIN DITCH		REPLACE BRIDGE AND APPROACHES	\$110,000	S	6B
9451	1998-0029- - XX	0920-02-905	LIB	CR	COX RD @ DRAIN DITCH		REPLACE BRIDGE AND APPROACHES	\$175,000	S	6B
1515	1993-2015- - XX	0920-02-040	LIB	CR	CR #390 AT DRAIN		REPLACE BRIDGE	\$85,000	S	6B
9464	1998-0040- - XX	0920-02-906	LIB	CR	DAVIS-ODOM RD @ GREEN'S BAYOU		REPLACE BRIDGE AND APPROACHES	\$193,750	S	6B
9456	1998-0032- - XX	0920-02-915	LIB	CR	SAWMILL RD @ DRAIN DITCH		REHAB BRIDGE AND APPROACHES	\$120,000	S	6B

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1971	1995-0402- - XX	0912-37-953	MON	CR	LEE LOTT ROAD W OF MAGNOLIA (MP)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
1977	1995-0408- - XX	0912-37-969	MON	CR	CENTER BLVD S OF CONROE (UP)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
1976	1995-0407- - XX	0912-37-958	MON	CR	FAULKNER ROAD E OF CONROE (AT&SF)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
1975	1995-0406- - XX	0912-37-957	MON	CR	JONES ROAD E OF CONROE (AT&SF)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
1974	1995-0405- - XX	0912-37-956	MON	CR	JOHNSON ROAD W OF CONROE (AT&SF)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
1973	1995-0404- - XX	0912-37-955	MON	CR	DEER LAKE ROAD W OF CONROE (AT&SF)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
1972	1995-0403- - XX	0912-37-954	MON	CR	PVT W OF CONROE		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
1970	1995-0401- - XX	0912-37-951	MON	CR	BOBVILLE ROAD W OF MONTGOMERY (AT&SF)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
1926	1995-0348- - XX	0912-37-952	MON	CR	CR SE OF MAGNOLIA (MP)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
1717	1994-0853- - XX	0912-37-071	MON	CR	COLLINS RD SE OF CUT & SHOOT (AT&SF)		UPDATE RR SIGNAL DEVICES @ XING	\$85,000	S	4A
1714	1994-0850- - XX	0912-37-068	MON	CR	CR WEST OF CONROE (AT&SF)		RR SIGNAL INSTALLATION	\$85,000	S	4A
668	1996-0417- - XX	UNK	BRA	CR 100/101	SH 288	SH 35	CONST 3.5 MI OF 2 LN RDWY, REHAB 4.7 MI OF EXIST RDWY	\$5,901,200	L	4E

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669	1996-0418- - XX	UNK	BRA	CR 129	GAL CO LINE (FM 2351)	SH 35	ADD SHLDRS AND REPL 1 BRIDGE	\$1,763,712	S	TBD
2440	1996-0423- - XX	UNK	BRA	CR 171	CR 428	FM 2917	REHAB-ADD SHOULDERS, REPL 5 BRIDGES	\$5,314,105	S	TBD
672	1996-0421- - XX	UNK	BRA	CR 220	FM 523	FM 521	EXTEND CR 220 EAST TO FM 523 & WEST TO FM 521 (2 LN)	\$14,070,000	L	4E
673	1996-0422- - XX	UNK	BRA	CR 25	SH 35	FM 762 IN FT BEND CO	EXTEND CR 25: FM 1462 TO FM 762 IN FT BEND CO, REHAB EXIST RDWY IN BRA CO (2 LN)	\$21,900,000	L	4E
625	1996-0810- - XX	UNK	BRA	CR 257 (BLUEWATER HWY)	SH 332	FM 1495	CONST 4 LN RUR HWY	\$25,730,000	L	4E
2436	1996-0419- - XX	UNK	BRA	CR 257 (BLUEWATER HWY)	SH 332	FM 3005	REHAB CROSS-SECTION, WIDEN EXIST LNS, ADD SHOULDERS & SEMI-CONT LFT TRN LN	\$11,824,421	S	TBD
671	1996-0420- - XX	UNK	BRA	CR 403	SH 288	FM 865	WIDEN CR 403 FM 2 LNS TO 4 LNS, ADD MEDIAN AND SHLDRS, ADD PED WLKWY AND ELEVATED CROSSWLK	\$6,680,000	L	4C
675	1996-0424- - XX	UNK	BRA	CR 51	SH 35	SH 288	CONST 2 LN RDWY, REHAB EXIST. RD, CONST NEW BRDG, RPLC EXST BRDG	\$17,430,000	L	4E
409	1996-0150- - XX	UNK	FOR	CRAVENS RD	US 90A	FM 2234	CONST 4 LN ASPHALT W/ STRM, ESPLANADES, C&G, ST LIGHTS & LNDSCPNG	\$4,650,000	L	4C
382	1996-0028- - XX	UNK	MON	CREIGHTON RD	IH 45	GOSLING RD	CONST NEW 4 LN UNDIV	\$5,130,000	L	4E
477	MG0005	UNK	MON	CRIGHTON RD	IH 45	FM 3083	CONST NEW 4 LN ROAD	\$12,000,000	L	4E
410	1996-0151- - XX	UNK	FOR	CROSSLAKES BLVD (A)	RIM ROCK	MURPHY	CONST 4 LN CONCRT DIV W/ STRM, ESPLANADES, C&G, ST LIGHTS & LNDSCPNG	\$9,180,000	S	4C

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411	1996-0152- - XX	UNK	FOR	CROSSLAKES BLVD (B)	MURPHY RD	LAKE OLYMPIA PKWY	CONST 4 LN CONCRT DIV W/ STRM, ESPLANADES, C&G, ST LIGHTS & LNDSCPNG	\$3,600,000	L	4C
416	1996-0157- - XX	UNK	FOR	CROSSLAKES BLVD (C)	LAKE OLYMPIA PKWY	SH 6 B/P	CONST 4 LN CONCRT DIV W/ STRM, ESPLANADES, C&G, ST LIGHTS & LNDSCPNG	\$4,290,000	L	4C
417	1996-0158- - XX	UNK	FOR	CROSSLAKES BLVD (D)	SH 6 B/P	TRAMMEL FRESNO RD	CONST 4 LN CONCRT DIV W/ STRM, ESPLANADES, C&G, ST LIGHTS & LNDSCPNG	\$4,580,000	L	4C
418	1996-0159- - XX	UNK	FOR	CROSSLAKES BLVD (E)	TRAMMEL FRESNO RD	SH 122	CONST 4 LN CONCRT DIV W/ STRM, ESPLANADES, C&G, ST LIGHTS & LNDSCPNG	\$6,570,000	L	4C
419	1996-0160- - XX	UNK	FOR	CROSSLAKES BLVD (F)	SH 122	SIENNA PKWY	CONST 4 LN CONCRT DIV W/ STRM, ESPLANADES, C&G, ST LIGHTS & LNDSCPNG	\$11,760,000	L	4C
420	1996-0161- - XX	UNK	FOR	CROSSLAKES BLVD (G)	SIENNA PKWY	HILLCROFT	CONST 4 LN CONCRT DIV W/ STRM, ESPLANADES, C&G, ST LIGHTS & LNDSCPNG	\$2,520,000	L	4E
1986	1995-0417- - XX	0912-31-060	BRA	CS	MYRTLE ST IN ANGLETON (UP)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
9481	1998-0041- - XX	0912-31-922	BRA	CS	OLD ALVIN ROAD AT MARYS CREEK	IN PEARLAND	BRIDGE REPLACEMENT	\$150,000	S	6B
9482	1998-0042- - XX		BRA	CS	MCLEAN ROAD AT MARYS CREEK	IN PEARLAND	BRIDGE REPLACEMENT	\$160,000	S	6B
9487	1998-0043- - XX	0912-31-907	BRA	CS	BERRY DRIVE (CR 879C) @ DRAIN DITCH	IN BRAZORIA COUNTY	BRIDGE REPLACEMENT	\$100,000	S	6B
1518	1993-2015- - XX	0920-39-009	CHA	CS	AA143 BAILEY RD @ WHITES BAYOU		REHAB BRIDGE	\$195,000	S	6B
1517	1993-2015- - XX	0920-39-010	CHA	CS	STREET #8220 N @ IRRIGATION CANAL		REPLACE BRIDGE	\$195,000	S	6B

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1713	1994-0849-XX	0912-34-056	FOR	CS	5TH STREET IN RICHMOND (SPT)		UPDATE RR SIGNAL PROTECT DEVICES @ RR XINGS	\$90,000	S	4A
9488	1998-0044-XX	0912-34-902	FOR	CS	WERNEKE ROAD @ SNAKE CREEK	IN FORT BEND COUNTY	BRIDGE REPLACEMENT	\$70,000	S	6B
9489	1998-0045-00	0912-34-083	FOR	CS	GLEN LAKES ROAD @ STAFFORD RUN	IN MISSOURI CITY	BRIDGE REPLACEMENT	\$324,000	S	6B
1987	1995-0418-XX	0912-34-900	FOR	CS	ROSENBERG ST IN ROSENBERG (AT&SF)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
1734	1994-0870-XX	0389-11-043	GAL	CS	LOOP 197 (6TH) ST IN TEXAS CITY (TCT)		UPDATE RAILROAD SIGNAL PROTECT. DEVICES AT RR CROSSING	\$85,000	S	4A
1733	1994-0869-XX	0912-73-041	GAL	CS	HOLLOWAY RD IN SANTA FE (AT&SF)		RR SIGNAL	\$85,000	S	4A
2036	1995-0467-XX	0912-73-901	GAL	CS	11TH AND OLIVE STREET IN LEAGUE CITY	(GH&H)	UPDATE RR SIG & PROTECT DEV	\$210,000	S	4A
2037	1995-0468-XX	0912-73-970	GAL	CS	37TH ST IN GALVESTON (AT&SF)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
1997	1995-0428-XX	0912-71-942	HAR	CS	NAVIGATION BLVD IN HOUSTON (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
1998	1995-0429-XX	0912-71-943	HAR	CS	SUMMER ST IN HOUSTON (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
1999	1995-0430-XX	0912-71-944	HAR	CS	HARRINGTON ST IN HOUSTON (HBT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
2002	1995-0433-XX	0912-71-947	HAR	CS	HUGHES STREET IN HOUSTON (HBT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A

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2003	1995-0434- - XX	0912-71-948	HAR	CS	KELLOGG STREET IN HOUSTON (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
2005	1995-0436- - XX	0912-71-951	HAR	CS	LEE STREET IN HOUSTON (HBT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
2006	1995-0437- - XX	0912-71-952	HAR	CS	DELMAR ST IN HOUSTON (MP)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
2000	1995-0431- - XX	0912-71-945	HAR	CS	SUMMER ST IN HOUSTON (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
1996	1995-0427- - XX	0912-71-941	HAR	CS	66TH STREET IN HOUSTON (UP)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
1993	1995-0424- - XX	0912-71-938	HAR	CS	SP RR @ HICKS STREET IN HOUSTON		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
1994	1995-0425- - XX	0912-71-939	HAR	CS	HOLMES RD IN HOUSTON (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
2007	1995-0438- - XX	0912-71-953	HAR	CS	NAYLOR STREET IN HOUSTON (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
2019	1995-0450- - XX	0912-71-970	HAR	CS	ENDOR ST IN HOUSTON (PTR)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
1992	1995-0423- - XX	0912-71-937	HAR	CS	TODD STREET IN HOUSTON (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
1991	1995-0422- - XX	0912-71-936	HAR	CS	SAWYER STREET IN HOUSTON (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
1990	1995-0421- - XX	0912-71-935	HAR	CS	KANSAS STREET IN HOUSTON (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A

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9608	1998-0053- - XX	0912-71-612	HAR	CS	SAN FELIPE RD WB @ BERING DR	IN CITY OF HOUSTON	BRIDGE REPLACEMENT	\$300,000	S	6B
9492	1998-0047- - XX	0912-71-928	HAR	CS	NORTH RICHEY ST @ VINCE BAYOU	IN CITY OF PASADENA	BRIDGE REPLACEMENT	\$400,000	S	6B
9612	1998-0055- - XX	0912-71-605	HAR	CS	ROLLINGBROOK DR EBE @ FORK GOOSE CRK	IN CITY OF BAYTOWN	BRIDGE REPLACEMENT	\$290,000	S	6B
1995	1995-0426- - XX	0912-71-442	HAR	CS	MISSISSIPPI ST IN HOUSTON (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
2021	1995-0452- - XX	0912-71-980	HAR	CS	SYDNOR ST IN HOUSTON		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
2035	1995-0466- - XX	0912-71-997	HAR	CS	PRESTON ST IN HOUSTON (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
2034	1995-0465- - XX	0912-71-996	HAR	CS	DELANO ST IN HOUSTON (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
2033	1995-0464- - XX	0912-71-995	HAR	CS	JENSON DR IN HOUSTON (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
2032	1995-0463- - XX	0912-71-994	HAR	CS	MCKEE ST IN HOUSTON (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
2031	1995-0462- - XX	0912-71-993	HAR	CS	LAMAR ST IN HOUSTON (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
2030	1995-0461- - XX	0912-71-992	HAR	CS	PRESTON ST IN HOUSTON		UPDATE RR SIG @ PROTECT DEV	\$100,000	S	4A
2029	1995-0460- - XX	0912-71-991	HAR	CS	LEELAND ST IN HOUSTON (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A

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2028	1995-0459-XX	0912-71-989	HAR	CS	MEDINA ST IN HOUSTON (PTR)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
2027	1995-0458-XX	0912-71-988	HAR	CS	LYONS ST IN HOUSTON (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
2026	1995-0457-XX	0912-71-985	HAR	CS	HARVARD STREET IN HOUSTON (MKT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
2024	1995-0455-XX	0912-71-983	HAR	CS	PAIGE ST IN HOUSTON (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
2017	1995-0448-XX	0912-71-966	HAR	CS	NANCE ST IN HOUSTON (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
2022	1995-0453-XX	0912-71-981	HAR	CS	GREENBRIAR IN HOUSTON (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
2008	1995-0439-XX	0912-71-954	HAR	CS	SHEPHERD ST IN HOUSTON (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
9611	1998-0054-XX	0912-71-600	HAR	CS	WASHINGTON ST @ DITCH	IN CITY OF PASADENA	BRIDGE REPLACEMENT	\$120,000	S	6B
2018	1995-0449-XX	0912-71-967	HAR	CS	MCKINNEY ST IN HOUSTON (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
9613	1998-0056-XX	0912-71-615	HAR	CS	GALVESTON RD @ PLUM CREEK	IN CITY OF HOUSTON	BRIDGE REPLACEMENT	\$120,000	S	6B
2016	1995-0447-XX	0912-71-965	HAR	CS	ECTOR ST IN HOUSTON (HBT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
2015	1995-0446-XX	0912-71-961	HAR	CS	CARR ST IN HOUSTON (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A

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2014	1995-0445-XX	0912-71-960	HAR	CS	HARRISBURG IN HOUSTON (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
2013	1995-0444-XX	0912-71-959	HAR	CS	TIDWELL IN HOUSTON (HB&T)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
2012	1995-0443-XX	0912-71-958	HAR	CS	WACO STREET IN HOUSTON		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
2011	1995-0442-XX	0912-71-957	HAR	CS	HARRINGTON ST IN HOUSTON (HBT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
2010	1995-0441-XX	0912-71-956	HAR	CS	75TH STREET IN HOUSTON		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
2009	1995-0440-XX	0912-71-955	HAR	CS	BURNETT ST IN HOUSTON (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
2023	1995-0454-XX	0912-71-982	HAR	CS	CEDAR DR IN HOUSTON (GHH)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
1722	1994-0858-XX	0912-71-411	HAR	CS	CHESTON ST IN JACINTO CITY (MP)		UPDATE RR SIGNAL DEVICES @ RR XING	\$85,000	S	4A
1912	1995-0302-B-XX	0912-71-443	HAR	CS	MARGUERITE LN @ LITTLE VINCE BAY	IN PASADENA	REPLACE BRIDGE	\$158,000	S	6B
1916	1995-0302-F-XX	0912-71-447	HAR	CS	LEE RD @ DRAINAGE DITCH IN HOUSTON		REPLACE BRIDGE	\$183,000	S	6B
1917	1995-0302-G-XX	0912-71-448	HAR	CS	LEE RD @ REINHARDT BAYOU IN HOUSTON		REPLACE BRIDGE	\$170,000	S	6B
9495	1998-0050-XX	0912-71-610	HAR	CS	GALVESTON ROAD @ SIMS BAYOU	IN CITY OF HOUSTON	BRIDGE REPLACEMENT	\$1,130,000	S	6B

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9761	1996-0926-B-98	0912-71-932	HAR	CS	WOODWAY DR WB @ MEMORIAL DR EB	IN CITY OF HOUSTON	PH 2 - BRIDGE REPLACEMENT	\$400,000	S	6B
1731	1994-0867-XX	0912-71-414	HAR	CS	BROCKMAN ST IN PASADENA (PTRA)		UPDATE RR PROTECT DEVICES @ RR XING	\$110,000	S	4A
1729	1994-0865-XX	0912-71-420	HAR	CS	HOUSTON ST N OF LA PORTE (SPT)		UPDATE RR PROTECT DEVICES @ RR XING	\$90,000	S	4A
1728	1994-0864-XX	0912-71-419	HAR	CS	CLINTON DR IN HOUSTON (SPT)		UPDATE RR PROTECT DEVICES @ RR XING	\$100,000	S	4A
1727	1994-0863-XX	0912-71-418	HAR	CS	SABINE ST IN HOUSTON (SPT)		UPDATE RR PROTECT DEVICES @ RR XING	\$85,000	S	4A
1726	1994-0862-XX	0912-71-417	HAR	CS	DORY LEE RD N OF HOUSTON (SPT)		UPDATE RR PROTECT DEVICES @ RR XING	\$85,000	S	4A
1725	1994-0861-XX	0912-71-416	HAR	CS	SHAW ST IN PASADENA (SPT)		UPDATE RR PROTECT DEVICES @ RR XING	\$90,000	S	4A
1732	1994-0868-XX	0389-12-071	HAR	CS	SH 146 FRTG RD IN LA PORT (SPT)		UPDATE RR SIGNAL PROTECT DEVICES @ RR XING	\$85,000	S	4A
1723	1994-0859-XX	0912-71-412	HAR	CS	BRENTWOOD ST IN CHANNELVIEW (MP)		UPDATE RR PROTECT SIGNAL DEVICES @ RR XING	\$85,000	S	4A
9493	1998-0048-XX	0912-71-927	HAR	CS	WEST SHAW AVENUE @ VINCE BAYOU	IN CITY OF PASADENA	BRIDGE REPLACEMENT	\$330,000	S	6B
1721	1994-0857-XX	0912-71-410	HAR	CS	FERROL ST IN HIGHLANDS (MP)		UPDATE RR PROTECTIVE DEVICES @ RR XING	\$85,000	S	4A
1720	1994-0856-XX	0912-71-409	HAR	CS	TAYLOR ST IN HOUSTON (MP)		UPDATE RR SIGNAL DEVICES @ RR XING	\$90,000	S	4A

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1719	1994-0855- - XX	0912-71-408	HAR	CS	LYONS ST IN HOUSTON (HB&T)		UPDATE RAILROAD SIGNAL AT RAILROAD CROSSING	\$100,000	S	4A
9494	1998-0049- - XX	0912-71-614	HAR	CS	RED BLUFF ROAD NB @ BIG ISLAND SLOUGH	IN CITY OF PASADENA	BRIDGE REPLACEMENT	\$528,000	S	6B
9607	1998-0052- - XX	0912-71-611	HAR	CS	ROLLINGBROOK DR WBE @ FORK GOOSE CREEK	IN CITY OF BAYTOWN	BRIDGE REPLACEMENT	\$290,000	S	6B
1668	1994-0677- - XX	0912-71-406	HAR	CS	TURNEY RD AT HALLS BAYOU IN HOUSTON		REPLACE BRIDGE	\$189,000	S	6B
9689	1998-0057- - XX	0912-71-982	HAR	CS	RED BLUFF RD SB @ BIG ISLAND SLOUGH	IN CITY OF PASADENA	BR REPLACEMENT	\$528,000	S	6B
9616	1998-0051- - XX	0912-71-602	HAR	CS	MARKET ST EB @ HUNTING BAYOU	IN CITY OF JACINTO CITY	BRIDGE REPLACEMENT	\$300,000	S	6B
9491	1998-0046- - XX	0912-71-613	HAR	CS	GREENBRIAR @ BRAYS BAYOU	IN CITY OF HOUSTON	BRIDGE REPLACEMENT	\$666,000	S	6B
1724	1994-0860- - XX	0912-71-415	HAR	CS	WEYGAND ST IN WALLER (SPT)		UPDATE RR PROTECT DEVICES @ RR XING	\$85,000	S	4A
1716	1994-0852- - XX	0912-37-070	MON	CS	CUT & SHOOT RD IN CUT & SHOOT (AT&SF)		UPDATE SIGNALS @ RR XING	\$100,000	S	4A
1715	1994-0851- - XX	0912-37-069	MON	CS	1ST IN CONROE (AT&SF)		UPDATE SIG AT RR XING	\$125,000	S	4A
9480	1998-0058- - XX	0912-37-910	MON	CS	FIRETOWER ROAD @ CANEY CREEK	IN MONTGOMERY COUNTY	BRIDGE REPLACEMENT	\$1,180,000	S	6B
9497	1998-0060- - XX	0912-37-112	MON	CS	HARDIN STORE ROAD @ DECKER BRANCH	IN MONTGOMERY COUNTY	BRIDGE REPLACEMENT	\$350,000	S	6B

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9496	1998-0059- - XX	0912-37-111	MON	CS	MCSHAN ROAD @ PEACH CREEK	IN MONTGOMERY COUNTY	BRIDGE REPLACEMENT	\$500,000	S	6B
9498	1998-0061- - XX	0912-56-027	WAL	CS	QUALLS ROAD @ WALNUT CREEK	IN WALLER COUNTY	BRIDGE REPLACEMENT	\$110,000	S	6B
1988	1995-0419- - XX	0912-56-900	WAL	CS	BLASINGAME IN HEMPTREAD (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
9614	1998-0062- - XX	0912-56-028	WAL	CS	GARRETT RD @ IRONS CREEK	IN WALLER COUNTY	BRIDGE REPLACEMENT	\$500,000	S	6B
1718	1994-0854- - XX	0912-56-022	WAL	CS	WILKINS ST IN HEAMPSTEAD (SPT)		UPDATE RR PROTECT SIGNALS @ RR XING	\$100,000	S	4A
942	HR0108	UNK	HAR	CYPRESS-N HOUSTON	JONES RD	SH 249	CONST 4 LN RD	\$16,070,000	S	4C
943	HR5512	UNK	HAR	CYPRESS-ROSEHILL	CYPRESSWOOD DR	US 290	WIDEN TO 4 LN UNDIV	\$1,000,000	L	4E
318	HR0115	UNK	HAR	CYPRESSWOOD DR	CYPRESS-ROSEHILL	ELDRIDGE	CONST NEW 4 LN ROADWAY	\$4,470,000	S	4E
973	1998-0075- - XX	UNK	FOR	DAIRY ASHFORD	W AIRPORT	HAR C/L	WIDEN TO 6 LN DIV	\$2,890,000	L	4C
2978	1996-0454- - XX	UNK	HAR	DAIRY ASHFORD	MEMORIAL	BRIAR FOREST	WIDEN TO 6 LNS	\$2,590,000	L	4C
478	MG0006	UNK	MON	DAW COLLINS	SH 105	FM 2090	NEW 2 LN UNDIV	\$5,760,000	L	4E
627	1998-0076- - XX	UNK	HAR	DELL DALE	WALLISVILLE RD	WOODFOREST	CONST 4 LN RD	\$12,110,000	L	4C

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974	1998-0077-XX	UNK	FOR	DULLES	CARTWRIGHT RD	SH 6	WIDEN TO 6 LN DIV	\$960,000	S	4C
2979	1996-0522-XX	UNK	FOR	DULLES AVE	US 90A	THE AMERICAN CANAL	RECONST TO 4 LN DIV CONCRT BLVD	\$6,200,000	S	TBD
2373	1996-0305-XX	UNK	FOR	EDGEWOOD	DRNG DITCH		REPLACE BRIDGE	\$180,000	S	TBD
5036	NI-003	UNK	HAR	EL DORADO BLVD	HORSEPEN BAYOU	FM 2351	WIDEN TO 4 LN DIV	\$9,231,632	L	4C
629	1998-0079-XX	UNK	HAR	ELLA	CYPRESSWOOD	FM 1960	CONST 4 LN ROAD	\$7,710,000	S	4C
630	1998-0080-XX	UNK	HAR	ELLA	SPRING CYPRESS	LOUETTA	CONST 4 LN ROAD	\$6,270,000	S	4C
4099	1998-0004-XX	UNK	HAR	ELLA (WHEATLEY)	LITTLE YORK	W GULF BANK	WIDEN TO 4 LN DIV	\$5,030,000	S	4C
5044	HR0144	UNK	HAR	ELLA (WHEATLEY)	PINEMONT	LITTLE YORK	WIDEN TO 4 LN DIV	\$7,800,000	S	4C
66	1993-0400-XX	8075-12-900	HAR	ELYSIAN MAURY @ BROOKS ST EXPWY	S TO US 59/IH 10 I/C		CONST 2 DIR CON	\$32,920,000	S	17
2374	1996-0306-XX	UNK	FOR	ENGLE	TURKEY CRK		REPLACE BRIDGE	\$67,650	S	TBD
2375	1996-0307-XX	UNK	FOR	EVERGREEN	BRAZOS RIVER CANAL		REPLACE BRIDGE	\$200,000	S	TBD
2973	1996-0440-XX	UNK	HAR	FAIRMONT PKWY	SH 146	BW 8	WIDEN TO 8 LNS & RECONST AS HWY	\$56,443,601	L	4C

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6070	1999-0263-XX	0912-71-933	HAR	FAIRMONT PKWY	AT SP RR		CONSTRUCT GSEP	\$5,000,000	S	5
31	1996-0293-XX	UNK	GAL	FAIRWOOD RD	SH 6	IH 45	IMPRV RD TO 4 LN W/ TRN LN	\$3,490,000	L	4D
945	HR0151	UNK	HAR	FALLBROOK	ELDRIDGE	HUFFMEISTER	CONST NEW 4 LN ROAD	\$5,300,000	L	4C
633	1998-0081-XX	UNK	HAR	FALLBROOK	SH 249	IH 45	CONST 4 LN ROAD	\$19,990,000	L	4C
9429	1998-0184-B-00	1257-01-034	FOR	FM 1092	AT SPRR AND US 90A IN STAFFORD		PH 2: CONSTRUCT RR GSEP STRUCTURE	\$8,000,000	S	4G
2269	1996-0190-XX	UNK	FOR	FM 1092	UNK		RESTRIPPING BIKE LN & SIDEWALK	\$207,833	S	5
979	1998-0082-XX	UNK	FOR	FM 1093	FM 359	AUSTIN C/L	WIDEN TO 4 LN UNDIV	\$17,970,000	L	4E
493	FB0002	1258-03-027	FOR	FM 1093	SH 99	FM 1464	WIDEN TO 4 LN URBAN DIV	\$16,500,000	S	4CS
487	1996-0237-XX	1258-03-902	FOR	FM 1093	SH 99	FM 723	WIDEN TO 4 LNS UNDIV	\$7,000,000	S	4E
323	HR0161	UNK	HAR	FM 1093	@ HILLCROFT		CONST OVERPASS	\$6,000,000	L	5
950	1998-0085-XX	UNK	MON	FM 1097	US 75	SH 150 IN WALKER CO	WIDEN TO 4 LN UNDIV	\$15,080,000	L	4E
949	1998-0084-XX	UNK	MON	FM 1097	FM 149	IH 45	WIDEN TO 4 LN DIV W/ BRIDGE @ LAKE CONROE	\$70,030,000	L	4E

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800	1998-0083- - XX	UNK	MON	FM 1097	IH 45	SH 75	WIDEN TO 4 LN DIV	\$4,110,000	L	4E
508	WL0001	0523-01-015	WAL	FM 1098	OLD US 290	NEW US 290	WIDEN TO 4 LN DIV URB	\$1,493,000	L	4E
5088	1996-0758- - XX	UNK	BRA	FM 1128	SH 6	FM 2004	CONST 2 LN UNDIV EXTENSION	\$52,032,702	L	4E
496	MG0008	1986-01-023	MON	FM 1314	SH 105	2.6 MI W OF LP 494	WIDEN TO 4 LN DIV RUR	\$44,106,000	L	4E
1928	1995-0355- - XX	1986-01-900	MON	FM 1314	AT ATSF RR FM 1314	IN CONROE	REMOVE AND REPLACE PLANKING PANELS	\$18,400	S	16
1507	1993-2014- - XX	0762-02-031	LIB	FM 1409	@ OLD RIVER DRNG		REHAB BR	\$83,000	S	6A
1683	1994-0719- - XX	0527-02-011	WAL	FM 1458	BRAZOS RIV BR (STR #17)		PAINT STRUCTURES	\$40,000	S	7
11	1996-0309- - XX	UNK	FOR	FM 1463	FM 1093	HAR C/L	WIDEN TO 4 LN	\$11,650,000	L	4E
12	1996-0236- - XX		FOR	FM 1464	US 90A (@ SH 99)	FM 1093	WIDEN TO 4 LNS DIV RUR	\$14,500,000	L	4E
951	1998-0086- - XX	UNK	MON	FM 1484	SH 105	WILLIS WAUKEEGAN	WIDEN TO 4 LN UNDIV	\$8,200,000	L	4E
923	1998-0087- - XX	UNK	MON	FM 1485	US 59	FM 3083	WIDEN TO 4 LN DIV	\$23,450,000	L	4E
924	1998-0088- - XX	UNK	MON	FM 1485	LP 494	HAR C/L	WIDEN TO 4 LN DIV	\$16,290,000	L	4E

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497	MG0009	1062-03-017	MON	FM 1485	LP 494	US 59	WIDEN TO 4 LN DIV	\$500,000	L	4E
1929	1995-0356- - XX	1416-03-900	MON	FM 1486	AT ATSF RR FM 1489	IN DODDIN	REMOVE AND REPLACE PLANKING PANELS	\$1,200	S	16
498	MG0010	0523-10-016	MON	FM 1488	FM 149 @ MOSTYN	FM 2978	WIDEN TO 4 LNS DIV RUR	\$14,646,000	L	4E
500	MG0012	0523-10-015	MON	FM 1488	FM 2978	IH 45	WIDEN TO 4 LNS DIV RUR	\$16,030,000	L	4E
499	MG0011	0523-09-009	MON	FM 1488	FM 1774 IN MAGNOLIA	SH 249 @ MOSTYN	WIDEN TO 4 LNS DIV RUR	\$9,269,000	L	4E
501	MG0013	0523-08-007	MON	FM 1488	WAL C/L	FM 1774	WIDEN TO 4 LNS DIV RUR	\$7,969,000	L	4E
6075	1999-0268- - XX	1418-01-900	WAL	FM 1489	S OF IH 10	N OF IH 10	RECONSTRUCT & WIDEN BRIDGE OVER IH 10	\$2,035,000	S	4D
1931	1995-0358- - XX	0720-02-900	MON	FM 149	AT BN RR FM 149	IN E. MAGNOLIA	REMOVE AND REPLACE PLANKING PANELS	\$18,400	S	16
953	1998-0090- - XX	UNK	MON	FM 149	FM 1488	FM 1774	WIDEN TO 4 LN UNDIV	\$4,830,000	L	4E
952	1998-0089- - XX	UNK	MON	FM 149	FM 1097	FM 1488	WIDEN TO 4 LN DIV	\$22,430,000	L	4E
1933	1995-0360- - XX	0720-02-902	MON	FM 149	AT BN RR SP 149	IN E. MAGNOLIA	REMOVE AND REPLACE PLANKING PANELS	\$22,400	S	16
443	1996-0311- - XX	UNK	FOR	FM 1640 EXT	FM 2218	SH 99	CONST NEW 4 LN DIV	\$19,890,000	L	4E

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2996	1996-0457- - XX	1607-01-040	GAL	FM 1764	@ AMBURN		CONSTRUCT RIGHT TRN LANES	\$121,719	S	5
994	1994-0384- - XX	1607-01-901	GAL	FM 1764	IH 45	SH 146	INSTALL FRWY TRAFFIC MNGM'T SIGNAL COORD. SYS	\$3,410,000	L	5
6074	1999-0267- - XX	1607-01-029	WAL	FM 1764	0.25 MI W OF PROPOSED WILLOW ST EXT	0.25 MI E	CONSTRUCT DIAMOND INTERCHANGE	\$3,892,000	S	4D
502	MG0014	1400-04-011	MON	FM 1774	FM 1488	FM 149	WIDEN TO 4 LN UNDIV RUR	\$12,100,000	S	4E
1664	1994-0655- - XX	1745-01-013	WAL	FM 1887	@ CLEAR CREEK		REPLACE BRIDGE	\$440,000	S	6A
1509	1993-2014- - XX	1580-02-017	CHA	FM 1941	@ ELM BAYOU & DRAW		STRENGTHEN BRIDGES	\$34,000	S	6A
1935	1995-0362- - XX	0527-08-900	FOR	FM 1952	AT SP RR FM 1952 IN E. BERNARD		REMOVE AND REPLACE PLANKING PANELS	\$14,400	S	16
68	HR0166	UNK	HAR	FM 1959	IH 45 (S)	SH 3	WIDEN TO 4 LN UNDIV W/ CLT	\$3,000,000	S	4C
330	HR0434	1685-03-040	HAR	FM 1960	FM 2100	LIBERTY C/L	WIDEN TO 4 LN DIV	\$6,500,000	L	4E
204	1994-0336- - XX	1685-03-058	HAR	FM 1960	0.1 MI E OF HUMBLE	0.3 MI W OF SAN JAC BR	WIDEN TO 6 LN DIV W/ C&G, TMS	\$27,861,000	S	4C
7002	1999-0278- - XX	1685-01-082	HAR	FM 1960	AT KUYKENDAHL		CONSTRUCT INTERIM GSEP	\$10,000,000	S	4CS
5083	1996-0751- - XX	1685-01-900	HAR	FM 1960	0.40 KM W OF JONES RD	0.40 KM E OF JONES RD	CONSTRUCT GSEP	\$6,975,000	S	5

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904	1998-0092- - XX	UNK	BRA	FM 2004	GAL C/L	BS 288B	WIDEN TO 4 LN DIV	\$74,210,000	L	4E
903	1998-0091- - XX	UNK	BRA	FM 2004	SH 332	SH 36	WIDEN TO 4 LN DIV	\$14,690,000	L	4E
1684	1994-0720- - XX	2523-02-034	BRA	FM 2004	CHOCOLATE BAYOU BRIDGE (STR #11)		PAINT STRUCTURES	\$40,000	S	7
921	1996-0938- - 98	2523-02	BRA	FM 2004	SH 288	SH 332	WIDEN TO 4 LN DIV	\$3,450,000	S	4D
1	BR0001	2523-02-030	BRA	FM 2004	BS 288	SH 288	WIDEN TO 4 LN DIV RUR	\$3,656,000	S	4D
33	1996-0291- - XX	2523-01	GAL	FM 2004	IH 45 S	GAL C/L @ BRA CO	WIDEN TO 4 LNS	\$9,530,000	S	4D
902	1998-0093- - XX	UNK	GAL	FM 2004	SH 6	BRA C/L	WIDEN TO 4 LN DIV	\$19,000,000	L	4E
954	1998-0094- - XX	UNK	MON	FM 2090	FM 3083	LIB C/L	WIDEN TO 4 LN UNDIV	\$21,200,000	L	4E
538	HR0175B	1062-04-022	HAR	FM 2100	FM 1960	HARE RD	WIDEN TO 4 LN DIV	\$7,300,000	S	4E
537	HR0175A	1062-02-009	HAR	FM 2100	WOLF RD	FM 1960	WIDEN TO 4 LN DIV	\$4,280,000	L	4E
290	HR0036	1062-02-011	HAR	FM 2100	JCT W/FM 1485 ALONG HUFFM-CLEVLD RD	2.1 MI N OF WOLF RD	EXT OF FM 2100 AS 2 LN RUR	\$3,927,000	S	4E
972	1999-0128-B- XX	1062-04-047	HAR	FM 2100	AT THE SPRR IN CROSBY		PH 2: CONSTRUCT RAILROAD GRADE SEPARATION STRUCTURE & APPROACHES	\$2,500,000	S	4G

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13	FB0001	2093-01-010	FOR	FM 2218	US 59	SH 36	WIDEN TO 4 LNS DIV C&G	\$8,270,000	S	4E
14	FB0003	2093-01-009	FOR	FM 2218	FM 1640	US 59	WIDEN TO 4 LNS DIV C&G	\$4,000,000	S	4D
933	1998-0095- - XX	UNK	BRA	FM 2234	FM 521	SH 288	WIDEN TO 4 LN DIV RDWAY	\$4,920,000	S	4C
980	1998-0096- - XX	UNK	FOR	FM 2234	US 90A	INDEPENDENCE	WIDEN TO 6 LN DIV	\$8,400,000	L	4C
2270	1996-0191- - XX	UNK	FOR	FM 2234	UNK		RESTRIPPING BIKE LN & SIDEWALK	\$248,814	S	5
1936	1995-0363- - XX	2325-01-900	MON	FM 2432	AT MP RR FM 2432	IN WILLIS	REMOVE AND REPLACE PLANKING PANELS	\$18,400	S	16
36	1996-0128- - XX	UNK	GAL	FM 270	FM 518	FM 646	WIDEN TO 4 LN DIV	\$5,320,000	S	4D
955	1998-0097- - XX	UNK	MON	FM 2854	KEENAN	LP 336 W	WIDEN TO 4 LN UNDIV	\$13,540,000	L	4E
503	MG0016	2744-01-011	MON	FM 2854	LP 336	IH 45	WIDEN TO 4 LN DIV RUR SECT	\$6,113,000	L	13
71	HR0038	3050-03-005	HAR	FM 2978	MON C/L	FM 2920	WIDEN TO 4 LN DIV RUR	\$5,014,000	S	4E
378	1996-0024- - XX	UNK	MON	FM 2978	FM 1488	SH 105	CONST 2 LN ASPHALT ROADWAY	\$12,880,000	L	4E
906	1998-0098- - XX	UNK	MON	FM 2978	HAR C/L	FM 1488	WIDEN TO 4 LN DIV RUR	\$19,280,000	L	4E

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37	GL0003	0051-09-018	GAL	FM 3005	END OF SEAWALL	W OF EIGHT MILE RD	WIDEN TO 6 LN DIV	\$6,100,000	L	3A
908	1998-0099- - XX	UNK	GAL	FM 3005	W OF EIGHT MILE RD	STATE PARK RD	WIDEN TO 6 LN DIV	\$7,900,000	L	4D
958	1998-0100- - XX	UNK	MON	FM 3083	SH 105	OLD HOUSTON	WIDEN TO 4 LN UNDIV	\$14,100,000	L	4E
233	99SOV	UNK	WAL	FM 3346	FM 362	COCHRAN	CONST NEW 2 LN UNDIV	\$3,600,000	L	4E
3025	CH0003	UNK	CHA	FM 3360	HATCHERVILLE ROAD	SH 146	CONST NEW 4 LN UNDIV	\$6,500,000	L	8B
6073	1999-0266- - XX	0543-01-900	FOR	FM 359	0.3 MI S OF IH 10	0.3 MI N OF IH 10	WIDEN & RECONSTRUCT INTERSECTION TO INCLUDE REPLACEMENT & WIDEN	\$7,640,000	S	4E
488	1996-0317- - XX	UNK	FOR	FM 359	W OF JONES CREEK BR	FM 1093	WIDEN TO 4 LN UNDIV	\$8,600,000	L	4E
494	FB0005	0543-02-040	FOR	FM 359	W OF JONES CREEK BR	US 90A	WIDEN TO 4 LN UNDIV RUR	\$4,968,000	L	4E
940	1998-0101- - XX	UNK	BRA	FM 517	GAL C/L	SH 35	WIDEN TO 4 LN DIV	\$3,110,000	L	4E
1939	1995-0366- - XX	1002-02-900	GAL	FM 517	@ GH & H FM 517 & HILL AVE	IN DICKINSON	REMOVE AND REPLACE PLANKING PANELS	\$19,200	S	16
39	1996-0011- - XX	UNK	GAL	FM 517	FM 3436	SH 146	WIDEN TO 4 LN DIV	\$4,650,000	L	4D
38	1996-0010- - XX	UNK	GAL	FM 517	FM 646	BRA C/L	WIDEN TO 4 LN DIV	\$20,120,000	L	4E

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2542	BRABIKE	UNK	BRA	FM 518	LIBERTY	WOODCREEK	SIDEWALK/BIKE PATH	\$236,413	L	5
5051	1996-0720-XX	UNK	BRA	FM 518	WESTMINISTER	RIVERSIDE DR	CONST SIDEWALK/BIKE PATH	\$321,727	S	5
5057	1996-0726-XX	UNK	GAL	FM 518	PERKINS	ILLINOIS	CONST PED SIDEWALK ALONG FM 518	\$425,000	S	5
42	GL0007	0976-03-049	GAL	FM 518	FM 2094	FM 1266	WIDEN TO 4 LN DIV C&G	\$5,800,000	S	3A
41	GL0006	0976-05-014	GAL	FM 518	FM 1266	SH 146	WIDEN TO 4 LN DIV C&G	\$3,650,000	S	3A
392	1996-0115-XX	UNK	GAL	FM 518 B/P	FM 518	FM 270	CONST 4 LN DIV	\$6,020,000	S	4D
632	1998-0102-XX	UNK	BRA	FM 518 EXT (COUNTY RD)	ALMEDA SCHOOL RD	FM 521	CONST 4 LN ROAD	\$3,060,000	L	4E
43	1996-0009-XX	UNK	GAL	FM 519	IH 45	SH 6	WIDEN TO 4 LN DIV	\$6,700,000	L	4D
495	FB0006	0111-03-031	FOR	FM 521	HAR C/L	IRRIGATION CANAL	WIDEN TO 4 LN DIV RUR	\$3,682,000	L	4E
802	1998-0103-XX	UNK	FOR	FM 521	IRRIGATION CANAL	SH 6	WIDEN TO 4 LN	\$4,520,000	L	4E
9822	1996-0862-B-XX	0111-01-078	HAR	FM 521	@ SIMS BAYOU		PH 2 - RAISE ROADWAY ELEVATION	\$1,710,000	S	13B
534	HR0039	0111-01-067	HAR	FM 521	TYLER DR	FORT BEND C/L	WIDEN TO 4 LN DIV RUR	\$1,000,000	S	4C

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1960	1995-0390- - XX	0111-01-072	HAR	FM 521	@ SIMS BAYOU		DRILL SHAFTS VERTICAL HEADWALL	\$444,000	S	3C
2332	1996-0259- - XX	UNK	HAR	FM 521	IH 610	CLEAR CREEK	IMPROVE DRAINAGE	\$5,000,000	S	TBD
512	BR0003	1003-01-061	BRA	FM 523	SH 332	0.2 MI S OF FM 1495	WIDEN TO 4 LN DIV RUR	\$5,310,000	S	4D
9648	1996-0852- - 98	1004-01-040	BRA	FM 524	S SIDE OF PHILLIPS REFINERY	SH 35	CONST REFINERY BYPASS	\$2,150,000	L	11
72	HR0088	UNK	HAR	FM 526 (C E KING PKWY)	BW 8 (E)	US 90	WIDEN TO 4 LN UNDIV	\$11,700,000	L	4C
937	1998-0104- - XX	1006-01-900	HAR	FM 529	BARKER CYPRESS RD	SH 99	WIDEN TO 4 LN DIV	\$15,800,000	L	4C
9888	1998-0839- - 98	1024-01-042	CHA	FM 565	FM 2354	FM 1405	RECONSTRUCT BASE & RESURFACE ROADWAY	\$2,200,000	S	14
4052	GL0008	0978-02-034	GAL	FM 646	1.0 MI E OF SH 146 (N)	SH 146 (N)	WIDEN TO 4 LN DIV	\$3,062,000	L	4D
515	GL0010	0978-01-024	GAL	FM 646	FM 517	SH 6	WIDEN TO 4 LN DIV	\$14,000,000	S	4D
9708	GL0009B	0349-01-013	GAL	FM 646	FM 517	IH 45	WIDEN TO 4 LN DIV	\$7,997,000	S	4D
514	GL0009A	UNK	GAL	FM 646	IH 45	FM 1266	WIDEN TO 4 LN DIV	\$4,000,000	S	4D
981	1998-0105- - XX	0188-09-901	FOR	FM 723	BRAZOS RIVER	FM 1093	WIDEN TO 4 LN DIV RUR	\$33,250,000	S	4E

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982	1998-0107-XX	UNK	FOR	FM 762	FM 1640	US 90A	WIDEN TO 6 LN DIV	\$4,100,000	L	4D
803	1998-0106-XX	UNK	FOR	FM 762	US 59	FM 2759 / SH 99	WIDEN TO 4 LN	\$4,750,000	L	4E
983	1998-0108-XX	UNK	FOR	FM 762	FM 1994	SH 99	WIDEN TO 4 LN DIV	\$11,350,000	L	4E
959	1998-0109-XX	UNK	MON	FM 830 (WILLIS S LP)	US 75	FM 2432	CONST 2 LN EXTENSION	\$2,710,000	L	4E
1511	1993-2014-XX	1146-01-020	LIB	FM 834	AT N FORK OF LONG ISLAND BAYOU AND	N FORK OF WILLOW MARSH	REHAB BR	\$176,000	S	6A
1749	1994-2032-XX	1146-01-017	LIB	FM 834	@ N FK LONG ISLAND BAYOU		REPLACE TIMBER SUBSTRUCTURE	\$100,000	S	6A
804	1998-0110-XX	UNK	BRA	FM 865	HAR C/L	FM 518	WIDEN TO 4 LN DIV	\$4,000,000	L	4C
535	HR0040	0976-01-019	HAR	FM 865	ALMEDA GENOA RD	BRA C/L	WIDEN TO 4 LN DIV W/ C&G	\$6,300,000	L	4C
634	1998-0111-XX	UNK	FOR	FONDREN	HILLCROFT	LEXINGTON	CONST 4 LN ROAD	\$1,430,000	L	4C
5024	N-0633	UNK	HAR	FONDREN	WOODWAY	HOUSTON CITY LIMITS	WIDEN TO 4 LN DIV	\$8,010,292	L	4C
74	HR0192	UNK	HAR	FONDREN/PINEYMEMORIAL DR POINT		WESTHEIMER	WIDEN TO 4 LN UNDIV	\$1,950,000	L	4C
3054	1998-0014-XX	UNK	MON	FORD	US 59	W LAKE HOUSTON PKWY	RECONST NEW 2 LN UNDIV	\$69,575	L	TBD

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960	1998-0112- - XX	UNK	MON	FOSTER	US 75	FM 1314	WIDEN TO 4 LN UNDIV	\$3,320,000	L	4D
465	99SOV	UNK	WAL	FRANZ RD	HAR-WALLER C/L	1.6 MI WEST	CONST NEW 2 LN UNDIV	\$3,220,000	L	4E
383	1996-0015- - XX	UNK	GAL	FRIENDSWOOD LINK RD/WHISPERING PINES	FM 518	FRIENDSWOOD C/L	WIDEN TO 4 LN BLVD W/ C&G, STRM SEWER	\$1,850,000	S	4C
919	1998-0137- - XX	UNK	FOR	FT BEND TOLLWAY (OLD SH 122)	SH 6	SH 99	WIDEN TO 6 LN TOLL RD	\$22,130,000	L	TOLL
920	1998-0138- - XX	UNK	FOR	FT BEND TOLLWAY (OLD SH 122)	BW 8	SH 6	CONST 6 TOLL RD	\$77,500,000	S	TOLL
5000	N-0542	UNK	HAR	FULTON	E CROSSTIMBERS	PARKER	WIDEN TO 4 LN DIV	\$12,038,757	L	4C
4097	HR0045	UNK	HAR	FUQUA	SH 288	MYKAWA	CONST 4 LN DIV	\$16,000,000	L	4C
5034	N-0530B	UNK	HAR	FUQUA	@ MYKAWA		CONST GSEP OVER SANTA FE RR AND MYKAWA ST	\$3,500,000	L	4C
324	HR0215	UNK	HAR	GARRETT	HOMESTEAD	N WAYSIDE	CONST 2 LN UNDIV	\$1,350,000	L	4C
234	99SOV	UNK	FOR	GASTON-KATY RD	GREEN-BUSH RD	FM 1093	CONST NEW 4 LN UNDIV	\$7,560,000	L	4E
5020	N-0623	UNK	HAR	GELLHORN	WOODFOREST	MCCARTY	CONST 4 LN DIV	\$19,789,154	S	4C
636	1998-0113- - XX	UNK	HAR	GESSNER	WEST	BREEN	CONST 4 LN DIV ROAD	\$3,700,000	S	4C

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77	1996-0059- - XX	UNK	HAR	GESSNER	N OF BRIAR FOREST	RICHMOND	WIDEN TO 6 LNS	\$1,395,000	S	4C
381	1996-0027- - XX	UNK	MON	GLADSTELL	IH 45	LP 336 W	WIDEN & EXTEND ROADWAY TO 4 LNS	\$4,500,000	L	4D
380	1996-0026- - XX	UNK	MON	GLADSTELL	FM 1314	LP 336 E	CONST NEW 4 LN UNDIV	\$3,500,000	L	4E
360	MG0020	UNK	MON	GOSLING RD	SH 242	FM 1488	CONST NEW 4 LN DIV RD	\$8,640,000	L	4E
379	1996-0025- - XX	UNK	MON	GOSLING RD	FM 1488	LP 336 S	CONST NEW 4 LN RD	\$12,520,000	L	4E
3055	1996-0800- - XX	UNK	MON	GREENBRIDGE	RESEARCH FOREST	SH 242	WIDEN TO 4 LN DIV	\$1,410,000	L	4D
5030	1998-0003- - XX	UNK	HAR	GREENS	JFK	LEE	WIDEN TO 4 LN DIV	\$9,350,000	S	4C
639	1998-0115- - XX	UNK	HAR	GREENS RD	SH 249	JONES RD	CONST 4 LN ROAD	\$25,640,000	S	4C
78	HR0230	UNK	HAR	GREENS RD	SH 249	BAMMEL N HOUSTON	CONST 4 LN DIV	\$19,270,000	S	4C
325	HR0234	UNK	HAR	GREENS RD	US 59(N)	WILSON RD	CONST 4 LN UNDIV	\$5,000,000	L	4C
79	HR0243	UNK	HAR	GROESCHKE	SH 6	BARKER CYPRESS	WIDEN TO 4 LN DIV	\$3,700,000	L	4C
2381	1996-0322- - XX	UNK	FOR	GUBBELS	WATER LAKE BAYOU		REPLACE BRIDGE	\$372,000	S	TBD

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229	1995-0376-XX	8003-12-007	HAR	GULF BANK	0.3 MI W OF HARDY RD	US 59	CONST 4 LN DIV (RS MEDN) URB ST FCTY	\$10,723,000	L	17
526	1993-0181-XX	8003-12-004	HAR	GULF BANK	US 290	BW 8	CONST 6 LN DIV (FLSH MED) URB ST FCTY	\$10,880,000	S	18
222	1994-0831-XX	8003-12-006	HAR	GULF BANK	IH 45	0.3 MI W OF HARDY ST	CONST 4 LN DIV (RS MEDN) URB ST FCTY	\$6,884,000	L	17
531	1994-0833-XX	8003-12-009	HAR	GULF BANK	ALABONSON	IH 45 (IN SECT)	CONST 4 LN DIV (RS MEDN) URB ST FCTY	\$22,240,000	L	18
530	1994-0830-XX	8003-12-005	HAR	GULF BANK	BW 8	ALABONSON (IN SECT)	CONST 4 LN DIV (RS MEDN) URB ST FCTY	\$21,830,000	L	18
291	HR0051	UNK	HAR	HALL	TELEPHONE RD	KINGSPPOINT	CONST 2 LN ASPHALT UNDIV	\$2,310,000	S	4C
2795	HRBR01	UNK	HAR	HALLS BAYOU TRAIL	UNK		PAVE	\$3,880,000	S	5
331	HR0443	UNK	HAR	HAMMERLY EXTENSION	BRITTMORE	ELDRIDGE	CONST 4 LN DIV	\$51,730,000	L	4C
80	1996-0379-XX	UNK	HAR	HARDY TOLL RD	BW 8	IH 45	WIDEN TO 6 LNS; HCTRA TOLL PRJ	\$36,330,000	S	TOLL
17	1996-0323-XX	UNK	FOR	HARLEM	US 90A	FM 1093	WIDEN TO 4 LN	\$15,250,000	L	4E
81	HR0248	UNK	HAR	HARRIS RD	SHAVER	RED BLUFF	WIDEN TO 4 LN UNDIV	\$6,130,000	S	4C
5033	N-0677	UNK	HAR	HEMPSTEAD HWY	DACOMA	BRITTMORE	WIDEN TO 6 LN DIV	\$27,202,502	L	4C

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640	1998-0116- - XX	UNK	FOR	HILLCROFT	LEXINGTON	METCALF	CONST 4 LN DIV	\$2,130,000	L	4C
84	HR0256	UNK	HAR	HILLCROFT	BW 8 (S)	BELLAIRE BLVD	WIDEN TO 6 LN DIV	\$23,660,000	S	4C
911	1998-0117- - XX	UNK	HAR	HILLCROFT	BW 8	FOR C/L	WIDEN TO 6 LN DIV	\$2,440,000	L	4C
421	1996-0162- - XX	UNK	FOR	HILLCROFT (A)	TRUESDALE	LAKE OLYMPIA PKWY	CONST 4 LN CONCRT DIV W/ STRM, ESPLANADES, C&G, ST LIGHTS & LNDSCPG	\$10,389,600	L	4C
422	1996-0163- - XX	UNK	FOR	HILLCROFT (B)	SH 6	SH 122	CONST 4 LN CONCRT DIV W/ STRM, ESPLANADES, C&G, ST LIGHTS & LNDSCPG	\$6,885,000	L	4C
423	1996-0164- - XX	UNK	FOR	HILLCROFT (C)	SH 122	CROSSLAKES BLVD	CONST 4 LN CONCRT DIV W/ STRM, ESPLANADES, C&G, ST LIGHTS & LNDSCPG	\$15,376,500	L	4C
326	HR0257	UNK	FOR	HIRAM CLARKE	FT BEND C/L	FM 2234	CONST 4 LN RD IN SEC	\$7,340,000	L	4C
5016	HR0260	UNK	HAR	HIRSCH	KELLEY	CROSSTIMBERS	WIDEN TO 4 LN DIV	\$6,000,000	L	4C
946	HR0053	UNK	HAR	HOLLISTER	BREEN RD	WEST RD	4 LN CONC BLVD W/C&G & TWIN BRDGS	\$1,690,000	S	4C
86	HR0261B	UNK	HAR	HOLLISTER	HAMMERLY	CLAY	WIDEN TO 4 LN DIV	\$7,720,000	L	4C
327	HR0262	UNK	HAR	HOLLISTER	BW 8	FM 1960	CONST 4 LN BLVD W/ SEWERS, SIGNALS TRN LNS	\$8,230,000	S	4C
85	HR0261A	UNK	HAR	HOLLISTER	HAMMERLY	LONG POINT	WIDEN TO 4 LNS	\$2,990,000	L	4C

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5037	NI-004	UNK	HAR	HOLLISTER RD	LITTLE YORK	W GULF BANK	CONST 4 LN DIV	\$2,500,000	L	4C
5008	HR0265	UNK	HAR	HOLMES	MAIN	KIRBY	WIDEN TO 4 LN DIV W/ CURBS, SIDEWALKS, LIGHTING & NECESSARY UNDRGRND UTILITIES	\$9,100,000	S	4C
87	HR0273	UNK	HAR	HUFFMAN-CLEVELAND	SH 99	WOLFE RD	WIDEN TO 4 LN UNDIV	\$12,530,000	L	4E
9362	1996-0797- - XX	UNK	HAR	HUNTING BAYOU TRL	EASTEX FWY & IH 610 N	HERMAN PARK @ MARKET ST	CONST HIKE & BIKE	\$7,870,000	L	4B
225	1994-2008- - XX	0508-02-077	CHA	IH 10 E	HAR C/L	0.2 MI E OF SH 146	WIDEN TO 6 LN RUR FRWY	\$8,800,000	S	3A
200	1994-0212- - XX	0508-02-091	CHA	IH 10 E	W OF FM 565	E OF SH 146	WIDEN TO 6 LNS	\$11,500,000	S	3A
1743	1994-2015- - XX	0508-02-085	CHA	IH 10 E	@ TRINITY RIVER BRIDGE		REPLACE EXISTING 4 LN BR W/ NEW 6	\$20,000,000	L	3A
9431	1996-0927- - 98	0508-02-098	CHA	IH 10 E	WB MLNS @ SH 61 O/P		REHAB BR & APPROACHES	\$235,000	S	6A
224	1994-2006- - XX	0508-02-086	CHA	IH 10 E	SH 61	W TO NEAR TRINITY RIVER BR	WIDEN TO 6 LN	\$25,000,000	S	3A
3	1993-2014- - XX	0508-02-093	CHA	IH 10 E	@ COTTON BAYOU & HACKBERRY GULLEY		WIDEN BRIDGES	\$135,000	S	6A
201	1994-0213- - XX	0739-01-900	CHA	IH 10 E	SH 73	JEFF C/L	WIDEN TO 6 LN	\$10,000,000	L	3A
92	1996-0253- - XX	UNK	HAR	IH 10 E	SJOLANDER	W OF THOMPSON	RAISE BRDG, ADDING LNS, RELOC RAMPS, & IMPRVMT TO FRTG	\$15,000,000	S	TBD

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1099	1996-0276-XX	UNK	HAR	IH 10 E	SP 330	SH 146	INSTALL CTMS - INCL SURVEILLANCE SYS, COMMUNICATN SYS, SATELLITE COMPUTER FAC, & MONITORING CONTRL	\$6,600,000	L	5
295	HR0063	0000-00-000	HAR	IH 10 E	N WAYSIDE	MCCARTY	EXTENSION OF FRTG RDS	\$950,000	L	3A
292	HR0058	0508-01-233	HAR	IH 10 E	@ WADE RD & MP RR		CONST FRTG RDS	\$680,000	L	3A
1673	1994-0709-XX	0508-01-244	HAR	IH 10 E	@ SAN JACINTO RIV		BRIDGE PAINTING (REHAB)	\$810,000	S	7
9693	1998-0198-XX	UNK	HAR	IH 10 E	US 59	WAYSIDE	WIDEN TO 10 LNS W/ HOV	\$29,900,000	L	3A
3003	1996-0464-XX	0271-05-023	FOR	IH 10 W	WAL C/L	HAR C/L	INSTALL CTMS	\$1,334,000	L	5
5073	1996-0741-XX	UNK	HAR	IH 10 W	@ MASON RD		REPLACE EXISTING 4 LN STRUCTURE TO ALLOW FOR 6 LN RD	\$3,300,000	S	5Z
90	1994-0644-XX	0271-07-221	HAR	IH 10 W	@ LANGHAM CREEK		WIDEN @ REHAB FRTG RD BRIDGES (EB & WB)	\$431,094	S	6A
6040	1998-0118-A-XX	0271-07-244	HAR	IH 10 W	0.3 MI W OF IH 610	0.3 MI E OF IH 610	RECONSTRUCT INTERCHANGE RAMPS	\$58,852,000	S	12
9631	1996-0628-98	0271-06-903	HAR	IH 10 W	KATY FT BEND COUNTY RD	FRY RD	THIN BOND OVERLAY	\$19,836,000	L	2
6035	1998-0118-E-XX	0271-07-248	HAR	IH 10 W	0.5 MI E OF BW 8	0.5 MI W OF BW 8	RECONSTRUCT INTERCHANGE RAMPS & MODIFY DIRECT CONNECTORS (PH 5)	\$30,000,000	S	3A
1672	1994-0708-XX	0271-07-198	HAR	IH 10 W	@ STRS #150, 318, 355, 392, 358, 411		PAINT STRUCTURES	\$320,000	S	7

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5064	1996-0733-XX	UNK	HAR	IH 10 W	IH 45 NBOUND ENTRANCE	IH 45 SBOUND ENTRANCE	RECONSTRUCT SHOULDERS	\$300,000	L	5
5071	1996-0740-XX	UNK	HAR	IH 10 W	@ FRY RD		REPLACE EXISTING 4 LN STRUCTURE TO ALLOW FOR 6 LN RD	\$2,860,000	S	5Z
5074	1996-0742-XX	UNK	HAR	IH 10 W	@ W GREENS RD		CONSTRUCT NEW GSEP OVER IH 10	\$2,200,000	S	5Z
6055	1999-0250-XX	0271-07-243	HAR	IH 10 W	IH 610	HOUSTON CBD	RECONSTRUCT M/LNS, AUXILIARY LNS & 2 LN HOV	\$5,000,000	S	5
6054	1999-0249-XX	0271-07-242	HAR	IH 10 W	WASHINGTON AVE	TAYLOR ST	EXTEND & WIDEN FRTG RDS TO 3 LNS (PH 12)	\$40,000,000	S	4C
6032	1998-0118-B-XX	0271-07-245	HAR	IH 10 W	IH 610	BINGLE RD	RECONSTRUCT & WIDEN TO 8 M/L W/ 4 LN SUL & 3 LN FRTG RDS (PH 2)	\$114,000,000	S	3A
6033	1998-0118-C-XX	0271-07-246	HAR	IH 10 W	BINGLE RD	BUNKER HILL	RECONSTRUCT & WIDEN TO 8 M/L WITH 4 LN SUL & 3 LN FRTG RDS (PH 3)	\$67,000,000	S	3A
6034	1998-0118-D-XX	0271-07-247	HAR	IH 10 W	BUNKER HILL	0.5 MIE OF BW 8	RECONSTRUCT & WIDEN TO 8 M/L WITH 4 LN SUL & 3 LN FRTG RDS (PH 4)	\$43,000,000	S	3A
6036	1998-0118-F-XX	0271-07-250	HAR	IH 10 W	0.5M W OF BW 8	DAIRY ASHFORD	RECONSTRUCT & WIDEN TO 8 M/L WITH 4 LN SUL & 3 LN FRTG RDS (PH 6)	\$72,000,000	S	3A
6037	1998-0118-G-XX	0271-07-249	HAR	IH 10 W	DAIRY ASHFORD	SH 6	RECONSTRUCT & WIDEN TO 8 M/L WITH 4 LN SUL & 3 LN FRTG RDS (PH 7)	\$44,000,000	S	3A
6038	1998-0118-H-XX	0271-06-088	HAR	IH 10 W	SH 6	BARKER CYPRESS	RECONSTRUCT & WIDEN TO 8 M/L WITH 2 LN HOV & 3 LN FRTG RDS (PH 8)	\$74,000,000	S	4CS
6039	1998-0118-I-XX	0271-06-089	HAR	IH 10 W	BARKER CYPRESS	W OF MASON RD	RECONSTRUCT & WIDEN TO 8 M/L WITH 2 LN SULS & 3 LN FRTG RDS (PH 9)	\$75,000,000	S	4CS

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6041	1998-0118-J-XX	0271-06-090	HAR	IH 10 W	MASON RD	FT BEND C/L	RECONSTRUCT & WIDEN TO 8 M/L WITH 2 LN HOV & 3 LN FRTG RDS (PH 10)	\$92,000,000	S	3A
3002	1996-0463-XX	0271-04-067	WAL	IH 10 W	AUSTIN C/L	FOR C/L	INSTALL CTMS	\$5,550,000	L	5
6057	1999-0252-XX	0271-04-072	WAL	IH 10 W	WALLER-FT BEND C/L	FM 359	RECONSTRUCT 6 M/LNS WITH AUXILIARY LNS	\$65,000,000	S	3A
6056	1999-0251-XX	0271-04-070	WAL	IH 10 W	FM 359	KATY-FT BEND RD	CONSTRUCT & EXTEND TO TWO 3 LN FRTG RDS (PH 14)	\$15,000,000	S	3A
916	1998-0119-XX	0271-04-071	WAL	IH 10 W	FM 359	BRAZOS RIVER	WIDEN TO 6 LN RUR FWY & FRTG RD BRIDGES AT BRAZOS RIVER (PH 11)	\$52,000,000	L	3A
301	HR0071	0500-03-445	HAR	IH 45 N	IH 10	SMITH	RECONST INTERCHANGE & REVISE RAMPS	\$7,361,000	S	3A
101	1996-0252-XX	UNK	HAR	IH 45 N	SH 249	IH 10	WIDEN FR 3 & 5 LNS TO 5 & 7 LNS & ADD SHLDRS IN EACH DIRECTION	\$70,000,000	S	3A
103	1996-0391-XX	UNK	HAR	IH 45 N	IH 10	US 59	RECONST I/C & WID FR 3 TO 5 LNS IN EACH DIRECTION	\$105,000,000	L	4C
357	MG0017-B-XX	0675-08-052	MON	IH 45 N	0.043 MI S OF LP 336 (S)	0.15 MI S OF SH 105	PH 2: WIDEN TO 6 MLNS W/FRTG & PROV FOR FUT HOV	\$33,219,000	S	3A
9698	1998-0179-XX	UNK	MON	IH 45 N	FM 1097	WALKER C/L	CONST 4 LN FRTG RD	\$6,250,000	L	4E
3086	1998-0178-XX	UNK	MON	IH 45 N	@ GLADSTELL		PROVIDE ACCESS RAMP	\$522,300	S	TBD
3087	1998-0013-XX	UNK	MON	IH 45 N	HAR C/L	LEAGUE LINE RD	OVERHEAD ILLUMINATION	\$7,188,600	S	TBD

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180	1994-0317-XX	0675-08-900	MON	IH 45 N	SH 105	LP 336 (N)	CONSTRUCT HOV LN	\$1,981,000	S	5
184	1996-0230-XX	UNK	MON	IH 45 N	LEAGUE LINE RD	FM 1097	CONST 6 LN FRTG	\$4,000,000	S	4E
365	MG0026	0675-08-061	MON	IH 45 N	LP 336 (N)	FM 830	WIDEN TO 6 MLNS & CONST 2 LN FRTG	\$19,535,000	S	3A
359	MG0019	0675-08-055	MON	IH 45 N	0.15 MI S OF SH 105	0.15 MI N OF SH 105	CONST 6 LN O/P W/PROV FOR FUT HOV	\$7,600,000	S	4CS
181	1996-0227-XX	UNK	MON	IH 45 N	@ LONG ST AND CALVARY RD		RECONST I/C	\$10,000,000	S	TBD
3005	1996-0466-XX	0675-08-079	MON	IH 45 N	S OF LONGSTREET RD		CONSTRUCT ENTRANCE & EXIT RAMPS	\$750,000	S	5
917	1996-0939-98	0675-08-084	MON	IH 45 N	FM 830	WALKER C/L	WIDEN 4 TO 6 MLNS & 2 LN FRTG; REPLACE EXISTING OVERPASS	\$46,340,000	S	3A
182	1996-0228-XX	UNK	MON	IH 45 N	@ FM 830		RECONST I/C	\$5,000,000	S	TBD
1088	1996-0225-XX	UNK	MON	IH 45 N	LP 336 N	WALKER C/L	INSTALL CTMS - INCL SURVEILLNCE SYS, COMMUNICATN SYS, SATELLITE COMPUTER FAC, PROV MONITORING & CONTRL	\$7,200,000	L	5
178	1994-0315-XX	0675-08-903	MON	IH 45 N	N OF LP 336 (S)	SH 105	CONSTRUCT HOV LN	\$4,532,000	S	5
179	1994-0316-XX	0675-08-902	MON	IH 45 N	@ SH 105		CONSTRUCT HOV LN	\$320,000	S	5
362	MG0022	0675-08-051	MON	IH 45 N	0.51 MI N OF SH 105	0.60 MI N OF LP 336 (N)	WIDEN TO 6 LN FWY W/FR RDS & FUT HOV & TMS	\$16,813,000	S	4CS

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282	GL0013	0500-01-000	GAL	IH 45 S	0.1 MI S OF CAUSEWAY	61ST ST	WIDEN TO 8 LN W/ TWO 2 LN FRTG RDS & DIRECT CONNECTOR TO 61ST ST TO HARBORSIDE	\$75,000,000	S	3A
6047	1999-0091-XX	0500-04-907	GAL	IH 45 S	TEXAS CITY WYE INTERCHANGE(T CWI)		RECONSTRUCT IH 45/SH 146/SH 3/SH 6 INTERCHANGE	\$70,000,000	S	3A
281	GL0012	0500-01-108	GAL	IH 45 S	0.1 MI N OF CAUSEWAY	0.1 MI S OF CAUSEWAY	WIDEN TO 8 MLNS	\$70,000,000	S	3A
280	GL0011	0500-01-107	GAL	IH 45 S	S OF TCWI	0.1 MI N OF CAUSEWAY	WIDEN TO 8 MLNS W/ 2 LN FRTG RDS	\$24,340,000	S	3A
6043	1998-0120-A-XX	UNK	GAL	IH 45 S	CLEAR CREEK	FM 517	WIDEN TO 8 MLNS WITH TWO 3 LN FRTG RDS	\$43,160,000	S	3A
6044	1999-0120-B-XX	UNK	GAL	IH 45 S	FM 517	FM 1764	WIDEN TO 8 MLNS WITH TWO 2 LN FRTG RDS	\$44,870,000	S	3A
6045	1999-0120-C-XX	0500-04-904	GAL	IH 45 S	FM 1764	FM 519	WIDEN TO 8 MLNS WITH TWO 2 LN FRTG RDS	\$41,710,000	S	3A
6046	1999-0120-D-XX	0500-04-906	GAL	IH 45 S	FM 519	TEXAS CITY WYE	WIDEN TO 8 MLNS WITH TWO 2 LN FRTG RDS	\$27,240,000	S	3A
334	HR0470	0500-03-462	HAR	IH 45 S	FM 1959	BAY AREA BLVD	WIDEN TO 10 MLNS WITH 2 HOV LNS & TWO 3 LN FRTG RDS	\$42,000,000	S	3A
1674	1994-0710-XX	0500-03-435	HAR	IH 45 S	@ IH 610 (S) I/C		BR PAINTING STR. # 222, 240, 241 (REHAB)	\$90,000	S	7
2336	1996-0264-XX	UNK	HAR	IH 45 S	BAY AREA BLVD	FM 1959	RAMP REVERSALS TO FACILITATE TRFFC & ELIMINATE SAFETY HAZARD	\$1,500,000	S	TBD
455	1996-0263-XX	UNK	HAR	IH 45 S	@ FM 1959		CONST DIAMND I/C & ELIMINATE EXSTG CLOVER-LEAF I/C	\$2,000,000	L	3A

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470	1996-0256- - XX	0500-03-482	HAR	IH 45 S	@ EL DORADO		CONSTRUCT EBOUND BRIDGE	\$2,000,000	S	4C
102	1996-0261- - XX	UNK	HAR	IH 45 S	@ IH 610 S		WID CNNCTRS & REPL S.B. M/L BRDG	\$6,000,000	S	TBD
6042	1999-0086- - XX	UNK	HAR	IH 45 S	BAY AREA BLVD	CLEAR CREEK	WIDEN TO 10 MLNS WITH 2 HOV LNS & TWO 3 LN FRTG RDS	\$30,380,000	S	3A
1678	1994-0714- - XX	0271-14-168	HAR	IH 610	ELLA BLVD	AIRLINE DR	BRIDGE PAINTING @ # 305,148,73,74 & 75 (REHAB)	\$750,000	S	7
1679	1994-0715- - XX	0271-15-050	HAR	IH 610	PLUM CREEK @ SH 225 I/C (STR #9)		PAINT STRUCTURES	\$20,000	S	7
1681	1994-0717- - XX	0271-16-092	HAR	IH 610	@ S POST OAK I/C		BRIDGE PAINTING STR. # 369, 373, 374, 375 AND 443 (REHAB)	\$80,000	S	7
337	HR0478	0271-14-106	HAR	IH 610	W TC JESTER BLVD	IH 45	WIDEN TO 10 MLN & TMS	\$38,260,000	L	3A
1653	1994-0600- - XX	0271-16-111	HAR	IH 610	0.40 MI E OF MYKAWA	0.55 MI W OF MYKAWA	CONST FULLY DIRECTIONAL I/C @ NEW SH 35	\$72,200,000	S	3A
335	HR0472	0271-14-153	HAR	IH 610	IH 10 (E)	US 59 (N)	REHAB & WID TO 10 ML & TMS	\$35,680,000	L	3A
1682	1994-0718- - XX	0271-17-101	HAR	IH 610	BELLAIRE BLVD	BISSENET	BRIDGE PAINTING STR. # 322 & 323 (REHAB)	\$80,000	S	7
305	HR0076	0271-16-078	HAR	IH 610	SH 288	WOODRIDGE	WIDEN TO 10 MLN	\$22,673,000	L	3A
6097	1999-0273- - XX	0271-17-135	HAR	IH 610	N OF IH 10	S OF IH 10	RECONSTRUCT NORTH & SOUTH MAIN LNS	\$67,000,000	S	4CS

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105	HR0320	UNK	HAR	IMPERIAL VALLEY DR	RANKIN	AIRTEX	CONST 4 LN UNDIV	\$9,540,000	S	4C
641	1998-0121-XX	UNK	FOR	INDEPENDENCE W FUQUA		CHIMNEY ROCK	CONST 4 LN UNDIV	\$1,330,000	S	4C
400	1996-0137-XX	UNK	FOR	INDEPENDENCE MOORE BLVD (A)		STAFFORDSHIRE	CONST 2 LN CONCRT DIV W/ STRM, ESPLANADES, C&G, ST LIGHTS, & LNDSPG	\$5,334,000	L	4C
401	1996-0138-XX	UNK	FOR	INDEPENDENCE MOORE RD BLVD (B)		FIFTH ST	CONST 2 LN CONCRT UNDIV W/ STRM, C&GS, EXPLANADES, ST LIGHTS & LNDSCPG	\$2,730,000	L	4C
402	1996-0139-XX	UNK	FOR	INDEPENDENCE FIFTH ST BLVD (C)		FM 1092	CONST 2 LN CONCRT DIV W/ STRM, C&GS, EXPLANADES, ST LIGHTS & LNDSCPG	\$3,578,890	L	4C
106	HR0426	UNK	HAR	JOHN RALSTON RD	US 90 (BEAUMONT HWY)	IH 10 (E)	CONST 4 LN RD	\$23,810,000	L	4C
643	1998-0122-XX	UNK	HAR	KATY-FT BEND	FRANZ	MORTON	CONST 4 LN ROAD	\$2,130,000	S	4C
277	FB0230	UNK	FOR	KATY-FT BEND RD	HARRIS C/L	.5 MILE S OF HAR C/L	CONST NEW 2 LN ROAD	\$1,200,000	L	4E
107	HR3370	UNK	HAR	KINGSLAND BLVD	PEEK RD, SH 99	PIN OAK RD IN KATY	WIDEN TO 4 LN UNDIV	\$10,470,000	L	4C
108	99SOV	UNK	HAR	KINGSLAND RD	SH 6	BARKER-CLODINE	CONST NEW 4 LN ROAD	\$18,930,000	L	4C
345	HR3380	UNK	HAR	KINGWOOD	MILLS BRANCH DR	SH 99	CONST 4 LN UNDIV	\$28,420,000	L	4E
5011	HR3410A	UNK	HAR	KIRBY	HOLMES	REED	CONST 4 LN DIV	\$2,200,000	L	4C

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109	HR3410B	UNK	HAR	KIRBY	REED	ALMEDA	WIDEN TO 4 LN RD	\$1,000,000	L	4C
975	1998-0124-XX	UNK	FOR	KIRKWOOD	US 59	HAR C/L	WIDEN TO 6 LN DIV	\$3,490,000	L	4C
540	HR3420A	UNK	HAR	KIRKWOOD	WESTHEIMER	RICHMOND	CONST 4 LN DIV	\$2,863,000	S	4C
346	HR3420B	UNK	HAR	KIRKWOOD	RICHMOND	HARWIN	CONST 4 LN UNDIV	\$3,200,000	S	4C
2383	1996-0324-XX	UNK	FOR	KUNZ	@ BIG CRK		REPLACE BRIDGE	\$248,000	S	TBD
7054	MG0270-A-XX	UNK	MON	KUYKENDAHL	FM 1488	LAKE WOODLANDS DR	PH 1: CONSTRUCT 2 LN (MISSING SEGMENTS)	\$5,316,000	S	4D
7055	MG0270-B-XX	UNK	MON	KUYKENDAHL	FM 1488	WOODLANDS PKWY	PH 2: WIDEN TO 4 LN DIV	\$11,890,000	S	4D
377	1996-0023-XX	UNK	MON	LAKE CREEK RD	FM 1488 @ IH 45	FM 2978	CONST NEW 2 LN DIV	\$8,700,000	L	4E
412	1996-0153-XX	UNK	FOR	LAKE OLYMPIA PKWY (A)	THOMPSONS FERRY RD	CROSSLAKES BLVD	CONST 4 LN CONCRT DIV W/ STRM, ESPLANADES, C&G, ST LIGHTS & LNDSCPNG	\$11,475,000	L	4C
424	1996-0165-XX	UNK	FOR	LAKE OLYMPIA PKWY (B)	MISSOURI CITY LIMIT	HILLCROFT	CONST 4 LN CONCRT DIV W/ STRM, ESPLANADES, C&G, ST LIGHTS & LNDSCPG	\$3,330,000	S	4C
425	1996-0166-XX	UNK	FOR	LAKE OLYMPIA PKWY (C)	HILLCROFT	SH 122	CONST 4 LN CONCRT DIV W/ STRM, ESPLANADES, C&G, ST LIGHTS & LNDSCPG	\$9,364,680	L	4C
3089	1996-0857-XX	UNK	MON	LAKE WOODLANDS	IH 45	GOSLING	ATMS: SIGNAL SYNCHRONIZATION	\$118,600	S	5

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375	1996-0021-XX	UNK	MON	LEAGUE LINE	RDIH 45	SH 105	CONST NEW 2 LN ASPHALT RD	\$10,230,000	L	4E
376	1996-0022-XX	UNK	MON	LEAGUE LINE	RDFM 1484	IH 45	CONST NEW 2 LN ASPHALT RD	\$8,580,000	L	4E
473	HR3480	UNK	HAR	LEE RD	FM 1960	WILL CLAYTON PKWY	RECONST & REALIGN TO 4 LN ROADWAY	\$2,850,000	S	4C
646	1998-0125-XX	UNK	FOR	LEXINGTON	FONDREN	HILLCROFT	CONST 4 LN UNDIV ROAD	\$1,220,000	S	4C
437	1996-0523-XX	UNK	FOR	LEXINGTON BLVD	OXBOW DR	COMMONWEALTH BLVD/SH 6 B/P	CONST 4 LN BLVD	\$1,840,000	L	4C
413	1996-0154-XX	UNK	FOR	LEXINGTON BLVD (B)	INDEPENDENCE BLVD	STAFFORDSHIRE RD	CONST 4 LN CONCRT DIV W/ STRM, ESPLANADES, C&G, ST LIGHTS & LNDSCPNG	\$6,140,160	S	4C
426	1996-0167-XX	UNK	FOR	LEXINGTON BLVD (C)	STAFFORDSHIRE RD	COLUMBIA BLUE	WID TO 4 LN CONCRT DIV W/ ESPLANADES, C&G, ST LIGHTS & LNDSCPG	\$2,335,008	L	4C
427	1996-0168-XX	UNK	FOR	LEXINGTON BLVD (D)	COLUMBIA BLUE	FM 2234	CONST 4 LN CONCRT DIV W/ STRM, ESPLANADES, C&G, ST LIGHTS & LNDSCPG	\$7,799,221	S	4C
5006	N-0587C	UNK	HAR	LEY	N WAYSIDE	MESA	WIDEN TO 4 LN DIV	\$4,000,000	L	4C
533	1995-0393-XX	8004-12-003	HAR	LITTLE YORK	E OF HARDY RD	US 59	WIDEN TO 4 LN DIV (RS MEDN) URB ST FCTY	\$7,900,000	S	17
110	HR0584	UNK	HAR	LITTLE YORK	GREENHOUSE	BARKER CYPRESS	WIDEN TO 6 LN DIV	\$5,620,000	S	4C
111	HR3540A	UNK	HAR	LITTLE YORK W	US 290	HOU CITY LIMITS	WIDEN TO 6 LN DIV	\$6,160,000	L	4C

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5014	N-0612	UNK	HAR	LOCKWOOD	BENNINGTON	TIDWELL	WIDEN TO 4 LN DIV	\$4,650,000	L	4C
112	HR3550	UNK	HAR	LOCKWOOD	TIDWELL	HIRSCH	WIDEN TO 4 LN UNDIV	\$1,600,000	S	4C
347	HR3640	UNK	HAR	LOUETTA RD	TELGE	GRANT	CONST 4 LN DIV	\$3,950,000	S	4C
113	HR0083	0389-13-040	HAR	LP 201 (SH 146)	@ SP 330		CONST 1 DIR CON - EB TO SB (6 LN)	\$5,300,000	S	3A
536	HR0084	0389-13-039	HAR	LP 201 (SH 146)	E ELVINTA	FERRY RD	CONST 6 MLN & GSEP	\$6,410,000	L	3A
187	MG0027	0338-11-028	MON	LP 336	0.06 MI E OF IH 45	CONROE CL 0.47 MI E OF MPRR	WIDEN TO 6 LN DIV	\$7,673,000	S	4D
645	1998-0126- - XX	UNK	HAR	LP 410	SHOREACRES	PORT RD	CONST 4 LN UNDIV	\$6,160,000	L	4C
114	1993-0165- - XX	0177-15-003	HAR	LP 494	MON C/L	US 59	WIDEN TO 4 LN DIV RUR	\$2,275,000	S	4C
1663	1994-0654- - XX	0177-14-019	MON	LP 494	@ WHITE OAK CREEK		REHAB BRIDGE	\$230,000	S	6A
188	MG0028	0177-14-010	MON	LP 494	KINGWOOD	HAR C/L	WIDEN TO 4 LN DIV RUR	\$2,285,000	S	4C
9684	1996-0849- - 98	0177-14-018	MON	LP 494	ANTIQUE RD		STORM SEWER CONST	\$114,186	S	7
1151	1996-0425- - XX	UNK	LIB	LP 573	BOULEVARD ST	BOOTHE ST	CONSTRUCT CONTINUOUS LEFT TURN LANE BY REMOVING MEDIAN	\$500,000	S	5

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115	HR3680	UNK	HAR	M L KING BLVD	ALMEDA-GENOA	BW 8 (S)	CONSTRUCT (IN SECS) & WIDEN TO 4 LN UNDIV	\$2,090,000	L	4C
6003	1996-0769- - XX	UNK	HAR	MANCHESTER	@ RR CROSSING		CONST GSEP	\$10,000,000	L	5
399	1996-0127- - XX	UNK	GAL	MAPLE LEAF (ALGOA-FRIENDSWOOD)	FM 517	FM 518	CONST 4 LN DIV	\$10,209,000	L	4E
2384	1996-0326- - XX	UNK	FOR	MAREK	GUY CRK		REPLACE BRIDGE	\$57,750	S	TBD
116	HR3700	UNK	HAR	MARKET ST	N WAYSIDE	FIDELITY	WIDEN TO 4 LN UNDIV	\$5,090,000	L	4C
445	1996-0327- - XX	UNK	FOR	MASON	FM 1093	FM 359	CONST NEW 4 LN DIV EXTENSION	\$44,570,000	L	4E
5021	N-0625	UNK	HAR	MERCURY	IH 10 (E)	WALLISVILLE	CONST 4 LN DIV	\$3,800,000	L	4C
117	HR3850	UNK	HAR	MESA RD	IH 610(E)	MCCARTY ROAD	WIDEN TO 4 LN UNDIV	\$3,300,000	S	4C
5038	NI-005	UNK	HAR	MESA RD	LEY	LITTLE YORK	WIDEN TO 4 LN DIV	\$9,280,000	L	4C
348	HR3840	UNK	HAR	MESA RD	LITTLE YORK	BW 8 (N)	CONST NEW 4 LN ROADWAY	\$8,400,000	L	4C
349	HR3860	UNK	HAR	MIDDLEBROOK DR	RED BLUFF	BAY AREA BLVD	WIDEN TO 4 LN	\$6,300,000	L	4C
118	HR3890B	UNK	HAR	MONROE	FUQUA	BW 8 (S)	CONST 4 LN DIV	\$6,790,000	L	4C

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429	1996-0057-XX	UNK	BRA	MONROE BLVD	BW 8 (HAR)	SH 35 (BRA)	CONST 2 LN EXT	\$9,387,000	L	4C
239	99SOV	UNK	HAR	MORTON	GREENHOUSE	MASON RD	CONST NEW 4 LN UNDIV	\$6,000,000	L	4C
120	HR3930	UNK	HAR	MT HOUSTON	US 59 (N)	BW 8 (E)	WIDEN TO 4 LN	\$15,320,000	L	4C
119	HR3920	UNK	HAR	MT HOUSTON	IH 45 (N)	ALDINE WESTFIELD	WIDEN & CONST TO 4 LN UNDIV	\$11,500,000	S	4C
2386	1996-0328-XX	UNK	FOR	MULLINS REYNOLDS	@ BESSIES CRK		REPLACE BRIDGE	\$408,000	S	TBD
414	1996-0155-XX	UNK	FOR	MURPHY RD (A)	GLENN LAKES BLVD	CROSSLAKES BLVD	CONST 2 LN CONCRT DIV W/ STRM, ESPLANADES, C&G, ST LIGHTS & LNDSCPNG	\$585,000	S	4C
406	1996-0147-XX	UNK	FOR	MURPHY RD (B)	MISSOURI CITY LIMIT	PALM ROYALE DR	CONST 2 LN CONCRT UNDIV W/ STRM, ESPLANADES, C&G, ST LIGHTS & LNDSCPG	\$7,114,500	L	4C
122	1996-0289-XX	UNK	HAR	MYKAWA RD	AIRPORT	BW 8	WIDEN TO 4 LN & IMPRV DRNG	\$40,000,000	L	4C
189	MG0320	UNK	MON	N 2ND STREET (CONROE)	LP 336 (N)	SH 105	WIDEN TO 4 LN UNDIV	\$4,320,000	L	4D
389	1996-0366-XX	UNK	HAR	N AEROSPACE AVE	CHALLENGER 7 PKWY	PRESTON AVE	CONST 4 LN DIV EXTENSION CONNECTING ELLINGTON FLD INTERIOR W/ BW 8	\$6,281,543	L	4C
124	HR4000	UNK	HAR	N MAIN ST	IH 45 (N)	20TH	WIDEN TO 4 LN UNDIV	\$3,540,000	S	4C
6064	1999-0256-XX	0981-01-902	HAR	NASA 1	IH 45	FM 528	CONSTRUCT 4 TO 6 LN DIV ON NEW LOCATION	\$5,900,000	S	12

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4054	1996-0705-XX	UNK	GAL	NEW BAY CROSSING	TEXAS CITY WYE	EIGHT MILE RD	CONST NEW 4 LN BRIDG CROSSING BETWEEN MAINLAND & GALVESTON ISLAND	\$147,300,000	L	3A
435	1996-0093-XX	UNK	FOR	NEW TERRITORY BLVD	SH 99	SH 6 B/P	CONST 4 LN BLVD	\$5,500,000	L	4C
4070	MG0340B	UNK	MON	NICHOLS SAWMILL RD	S OF BUTERA RD	FM 2920 IN HAR CO	CONST NEW 2 LN RD	\$8,040,000	L	4E
372	MG0340A	UNK	MON	NICHOLS SAWMILL RD	FM 1774	S OF BUTERA RD	RECONST 2 LN RD	\$6,881,800	L	4F
350	HR4100	UNK	HAR	NORMANDY	WALLISVILLE RD	US 90	CONST NEW 4 LN ROAD	\$4,370,000	L	4C
125	HR4170	UNK	HAR	O.S.T.	M L KING BLVD	WAYSIDE	WIDEN TO 6 LN	\$2,200,000	L	4C
329	HR0410	UNK	HAR	OATES	WALLISVILLE	US 90 (BEAUMONT HWY)	CONST 4 LN UNDIV	\$9,270,000	L	4C
126	HR4105	UNK	HAR	OATES	MARKET	IH 10	WIDEN TO 4 LN UNDIV	\$4,600,000	L	4C
3024	1994-0340-A-XX	0912-73-047	GAL	OFFATS BAYOU CROSSING	IH 45	FM 3005	PH 1 - CONDUCT P.E. FOR NEW 4 LN DIV	\$500,000	S	4D
205	1994-0340-B-XX	0912-73-900	GAL	OFFATS BAYOU CROSSING	IH 45	FM 3005	CONST 4 LN ON NEW LOC W/DIR CONN	\$29,100,000	L	3A
18	1996-0524-XX	UNK	FOR	OILFIELD RD	COMMONWEALTH BLVD	SH 6 B/P	RECONST & WIDEN TO 4 LN BLVD	\$16,870,000	L	4C
2387	1996-0329-XX	UNK	FOR	OLD NDVLL FAIRCHL	SH 36	FM 361	UPGRDE 2 LN	\$3,900,000	S	TBD

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649	1998-0127- - XX	UNK	FOR	OLD RICHMOND	ELDRIDGE	SH 6	CONST 4 LN UNDIV ROAD	\$3,160,000	L	4C
128	99SOV	UNK	HAR	PARK ROW	SH 99	PORTER	CONST NEW 4 LN ROAD	\$3,500,000	S	4C
5017	N-0620	UNK	HAR	PARKER	AIRLINE	HARDY TOLL RD	WIDEN TO 4 LN DIV	\$6,788,952	S	4C
129	HR4250	UNK	HAR	PARKER	US 59 (N)	CHEEVES	WIDEN TO 4 LN DIV	\$7,230,000	L	4C
5018	HR4260	UNK	HAR	PARKER	WEST MONTGOMERY	NORTH SHEPHERD	CONST 4 LN DIV	\$1,875,000	L	4C
5040	NI-008	UNK	HAR	PARKER RD	HARDY TOLL RD	US 59	WIDEN TO 4 LN DIV	\$4,800,000	L	4C
5039	NI-006	UNK	HAR	PARKER RD	CHEEVES	N WAYSIDE	WIDEN TO 4 LN DIV	\$6,381,838	L	4C
130	1996-0288- - XX	UNK	HAR	PASADENA BLVD	SOUTHMORE	RED BLUFF	RECONST 4 LN FAC TO INCLUDE CTL, IMPRVD GEOMETRY, DRNG IMPRVMT & NEW BIKE LNS	\$10,000,000	S	TBD
5025	N-0635	UNK	HAR	PATTERSON	ELDRIDGE	SH 6	WIDEN TO 4 LN DIV	\$5,400,000	L	4C
986	1994-0230-A- XX	UNK	BRA	PEARLAND PKWY (HUGHES RD)	BW 8	FM 518 IN PEARLAND	CONST NEW 4 LN EXT	\$17,970,000	S	4C
2773	HR4280	UNK	HAR	PERRY RD	FM 1960	SH 249	WIDEN TO 4 LN ASPHALT CONC PVMT W/ OPEN DITCH, CLT & SIGNALS	\$6,904,988	L	4C
240	99SOV	UNK	FOR	PIN OAK RD	SH 99	GREEN-BUSH	CONST NEW 4 LN ROAD	\$3,900,000	L	4C

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131	HR4320	UNK	HAR	POLK	LOCKWOOD	HUGHES	WIDEN TO 4 LN UNDIV	\$2,590,000	S	4C
2388	1996-0330-XX	UNK	FOR	POOL HILL	BROOKSHIRE CRK		REPLACE BRIDGE	\$180,000	S	TBD
7042	1999-0286-XX		GAL	PORT OF GALVESTON	NA	NA	PORT OF GALVESTON CRUISE SHIP TERMINAL TRANSIT ACCESS IMPROVEMENTS	\$2,137,200	S	5
5027	N-0641	UNK	HAR	RANKIN RD	US 59	INTERCONTINENTAL AIRPORT	WIDEN TO 4 LN DIV	\$8,417,405	L	4C
2389	1996-0331-XX	UNK	FOR	RASTUS	AMERICAN WATER CANAL		REPLACE BRIDGE	\$160,000	S	TBD
3093	1998-0128-XX	UNK	MON	RAYFORD	IH 45	RICHARD (HANNAN)	WIDEN TO 6 LN DIV	\$1,515,800	S	4E
5001	HR4110	UNK	HAR	REED RD	ALMEDA	HOLMES	CONST 4 LN DIV	\$4,230,000	S	4C
1711	1994-0847-XX	0912-34-057	FOR	REINECKE RD	CR W OF ORCHARD (AT&SF)		UPDATE PROTECT DEVICES @ RR SCHOOL BUS XINGS	\$85,000	S	4A
7057	1998-0129-B-XX	UNK	MON	RESEARCH FOREST	FM 2978	ALDEN BRIDGE	PH 2: WIDEN TO 4 LN DIV ROAD	\$6,640,000	S	4E
7056	1998-0129-A-XX	UNK	MON	RESEARCH FOREST	FM 2978	BRANCH CROSSING	PH 1: CONST NEW 2 LN DIV ROAD	\$1,764,000	S	4E
2925	1996-0435-XX	UNK	MON	RESEARCH FOREST DR	IH 45	GOSLING RD	WIDEN TO 6 LN DIV	\$4,605,000	L	4D
4068	T96025-XX	UNK	MON	RESEARCH FOREST P&R (PH 2)	UNK		EXPANSION OF PARK & RIDE INCLUDES DESIGN & CONSTRUCTION OF 400 SPACES	\$4,000,000	L	5

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458	1996-0006-XX	UNK	MON	RICHARDS RD	RAYFORD RD	TAMINA RD	RECONST, REHAB, & CONST 2 LN RUR RDWY	\$7,620,000	S	TBD
459	1996-0007-XX	UNK	MON	RICHARDS RD	TAMINA RD	SH 242	RECONST, REHAB, & CONST 2 LN RUR RDWY	\$3,920,000	S	TBD
132	HR4450	UNK	HAR	RICHEY RD	SH 249	IH 45 (N)	CONST 4 LN RD IN SECTIONS	\$16,050,000	S	4C
134	1996-0063-XX	UNK	HAR	RICHMOND	W OF ROGERDALE	WILCREST	WIDEN TO 6 LNS	\$1,250,000	L	4C
3056	1998-0130-XX	UNK	MON	RILEY-FUZZEL	RAYFORD	HARDY	WIDEN TO 4 LN UNDIV	\$3,760,900	L	4E
2390	1996-0332-XX	UNK	FOR	ROBINOWITZ	ROBINOWITZ DITCH		REPLACE BRIDGE	\$64,350	S	TBD
3094	1998-0131-XX	UNK	MON	ROBINSON	IH 45	HARDY	WIDEN TO 4 UNDIV	\$5,134,900	L	4E
135	1996-0065-XX	UNK	HAR	ROGERDALE	WESTHEIMER	N OF WESTPARK	WIDEN TO 4 LNS W/ C&G	\$5,330,000	S	4C
650	1998-0132-XX	UNK	HAR	ROSSLYN/CEBR A	TIDWELL	LITTLE YORK	CONST 4 LN UNDIV ROAD	\$10,280,000	L	4C
651	1998-0133-XX	UNK	HAR	S HOUSTON	ATASCOSITA	BW 8	CONST 4 LN DIV ROAD	\$2,760,000	S	4C
351	HR4640	UNK	HAR	S WAYSIDE DR	AIRPORT BLVD	BW 8 (S)	CONST 4 LN UNDIV	\$10,330,000	L	4C
3091	1996-0858-XX	UNK	MON	SAWDUST/GRO GAN'S MILL	IH 45	WOODLANDS PKWY	ATMS: SIGNAL SYNCHRONIZATION	\$215,400	S	5

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2392	1996-0334-XX	UNK	FOR	SAWMILL	WATERS LAKE BAYOU		REPLACE BRIDGE	\$124,000	S	TBD
2391	1996-0333-XX	UNK	FOR	SAWMILL	WATERS LAKE BAYOU		REPLACE BRIDGE	\$49,500	S	TBD
136	HR4766	UNK	HAR	SCOTT ST	EAST OREM	BW 8 (S)	CONST 4 LN RD	\$4,600,000	L	4C
2104	1996-0014-XX	UNK	GAL	SEAWALL BLVD	SH 87	FM 3005/SP 342	DESIGNATE AS TEMP STATE SP CNNTNG SH 87 W/ FM 3005/SP 342 & REHAB	\$1,000,000	S	TBD
5054	1996-0723-XX	UNK	FOR	SEG 1: HIKE/BIKE TRAIL	CITY HALL/CIVIC CNTR	COMMUNITY PARK	CONST HIKE/BIKE TRAIL	\$2,795,600	S	4B
5055	1996-0724-XX	UNK	FOR	SEG 3: HIKE/BIKE TRAIL	FONDREN PARK	CITY HALL/CIVIC CNTR	CONST HIKE/BIKE TRAIL	\$3,004,400	S	5
652	1998-0134-XX	UNK	FOR	SENIOR RD	FM 521	FARRELL RD	CONST 4 LN UNDIV ROAD	\$27,300,000	L	4E
1750	1994-2033-XX	0338-05-016	LIB	SH 105	@ E FK SAN JAC RIV		REHAB BRIDGE	\$706,000	S	6A
199	1994-0031-XX	0338-05-019	LIB	SH 105	2.1 MI S OF LOOP 573 W	SH 105 W OF CLEVELAND	CONST NEW LOOP - 4 LNS CONTROLLED ACCESS	\$25,000,000	S	3A
965	1998-0135-XX	0338-02-900	MON	SH 105	GRIMES C/L	FM 149	WIDEN TO 4 LN DIV RUR	\$24,560,000	L	3B
504	MG0029	0338-04-043	MON	SH 105	FM 1314	LP 336 (E)	WIDEN TO 4 LN DIV RUR	\$5,232,000	S	3B
366	MG0030	0338-04-048	MON	SH 105	LP 336	SAN JAC C/L	WIDEN TO 4 LN DIV RUR	\$28,055,000	L	3B

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2022 MTP: Short-Range and Long-Range Roadway Projects

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966	1998-0136- - XX	UNK	MON	SH 105	FM 149	LAKE CONROE	WIDEN TO 6 LN DIV	\$16,580,000	L	4E
276	FB0024	3585-02-002	FOR	SH 122	SH 6	SH 99	CONST TWO 2 LN FRTG RDS	\$45,154,000	L	3A
922	1998-0139- - XX	UNK	CHA	SH 146	CHA C/L	IH 10	WIDEN & UPGRADE TO 6 LN FWY	\$17,800,000	L	4C
6072	1999-0265- - XX		GAL	SH 146	0.25 MI NORTH OF FM 1765	0.25 MI SOUTH OF FM 1764	CONSTRUCT GSEP	\$6,000,000	S	TBD
468	1996-0392- - XX	UNK	GAL	SH 146	HAR C/L	SH 6 / IH 45 INTERCHANGE	WIDEN & UPGRADE TO 6 LN DIV	\$150,000,000	L	3A
139	1996-0244- - XX	0389-05	HAR	SH 146	NASA RD 1	GAL C/L	WID & UPGRADE TO 6 LN DIV	\$10,000,000	S	3A
3031	1996-0698- - XX	0389-12-902	HAR	SH 146	BH 146 E	SH 225	INSTALL TRAFFIC MGMNT SYS @ BAYTOWN BRIDGE	\$500,000	L	5
1105	1996-0282- - XX	UNK	HAR	SH 146	TYLER ST	SP 201	INSTALL CTMS - INCL SURVEILLANCE SYS, COMMUNICATN SYS, SATELLITE COMPUTER FAC, & MONITORING CONTRL	\$3,000,000	L	5
137	HR4810	0389-05-087	HAR	SH 146	FAIRMONT PKWY	RED BLUFF RD	WIDEN TO 6 M/L	\$16,000,000	S	3A
138	1996-0415- - XX	0389-05	HAR	SH 146	RED BLUFF	NASA 1	UPGRADE EXISTING RDWY TO 6 LN DIV	\$20,000,000	S	3A
1104	1996-0281- - XX	UNK	HAR	SH 146	SP 201	CHAMBERS C/L	INSTALL CTMS - INCL SURVEILLANCE SYS, COMMUNICATN SYS, SATELLITE COMPUTER FAC, & MONITORING CONTRL	\$7,200,000	L	5
1675	1994-0711- - XX	0389-12-066	HAR	SH 146	@ GOOSE CREEK		BRIDGE PAINTING STR. # 35 (REHAB)	\$20,000	S	7

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9499	1998-0814- - 98	0388-03-067	LIB	SH 146	0.8 KM N SH 105 IN MOSS HILL. SOUTH	6.4 KM S OF SH 105	RECONSTR ROADWAY, ADD SHOULDERS	\$1,500,000	S	13B
9601	1998-0015- - XX	0388-02-054	LIB	SH 146	POLK COUNTY LINE. SOUTH	5.79 KM S OF FM 787	RECONSTRUCT ROADWAY AND ADD SHOULDERS	\$4,000,000	S	13B
168	1994-2016- - XX	0389-01-027	LIB	SH 146	CHA C/L	US 90	WIDEN TO 4 LN UNDIV RUR	\$22,500,000	L	3A
169	1994-2022- - XX	0388-03-053	LIB	SH 146	FM 834	SH 146 BYPASS	WIDEN TO 4 LN UNDIV RUR	\$5,055,000	L	4E
1485	1993-0619- - XX	0409-02-021	WAL	SH 159	@ BRAZOS RIVER		REHAB BRIDGE	\$1,496,000	S	6A
1676	1994-0712- - XX	0502-02-007	HAR	SH 225	@ IH 610 I/C		BR PAINTING STR. # 50, 351, 347 AND 348 (REHAB)	\$40,000	S	7
1945	1995-0372- - XX	0502-01-912	HAR	SH 225	AT SPT RR SH 225 AND GOODYEAR RD	IN HOUSTON	REMOVE AND REPLACE PLANKING PANELS	\$20,800	S	16
1946	1995-0373- - XX	0502-01-913	HAR	SH 225	AT SPT RR SH 225 AND GOODYEAR E/B	IN HOUSTON	REMOVE AND REPLACE PLANKING PANELS	\$18,400	S	16
968	1998-0141- - XX	UNK	MON	SH 242	M P RR	US 59	WIDEN TO 4 LN DIV	\$24,100,000	L	4E
967	1998-0140- - XX	UNK	MON	SH 242	GREENBRIDGE	M P RR	WIDEN TO 6 LN DIV	\$8,660,000	L	4E
216	1994-0771-B- XX	0720-03-103	HAR	SH 249	WESTLOCK DR	WILLOW CREEK	PH 2: CONST 6 LN FRWY & TSM	\$26,534,000	S	4D
339	HR0497	0720-03-074	HAR	SH 249	BROWN RD	MON C/L	CONST TWO 3 LN FRTG RDS	\$6,793,000	L	3A

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306	HR0096	0720-03-086	HAR	SH 249	@ COMPAC CNTR DR		CONST I/C	\$2,500,000	S	16
913	1998-0142-XX	UNK	HAR	SH 249	BROWN RD	MON C/L	CONST 6 M/L	\$5,040,000	L	3A
6087	HR0098-B-XX	0720-03-084	HAR	SH 249	WILLOW CREEK	BROWN RD (PHASE 1)	PH 2: CONSTRUCT TWO 3 LANE FRONTAGE ROADS WITH GRADE SEPARATIONS AT FM 2920 AND TSM	\$15,000,000	S	3A
307	HR0098-C-XX	0720-03-102	HAR	SH 249	WILLOW CREEK	BROWN RD (PHASE 2)	CONSTRUCT 6 LN FWY	\$22,000,000	L	3A
915	1998-0143-XX	UNK	MON	SH 249	FM 1774	GRIMES C/L	CONST 4 LN DIV HWY	\$40,000,000	L	3A
914	1998-0144-XX	UNK	MON	SH 249	HAR C/L	FM 1774	CONST 6 M/L	\$27,903,700	L	3A
2044	1995-0475-XX	3595-01-903	GAL	SH 275	PORT INDUSTRIAL BLVD IN GALVESTON (SPT)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
3011	1996-0472-XX	0598-02-033	BRA	SH 288	HAR C/L	SH 6	INSTALL CTMS	\$4,980,000	L	5
3012	1996-0473-XX	0598-03-900	BRA	SH 288	@ CR 44		CONSTRUCT GSEP OF M/L OVER CR 44	\$6,200,000	L	5Z
3013	1996-0474-XX	0598-04-017	BRA	SH 288	@ FM 2004		CONSTRUCT GSEP	\$3,884,000	S	5
9440	1998-0066-XX	0111-08-107	BRA	SH 288	@ DOW BARGE CANAL		REPLACE AND LENGTHEN BRIDGE	\$16,000,000	S	6A
5082	1996-0750-XX	0598-03-902	BRA	SH 288	@ CR 220B		CONSTRUCT GSEP	\$6,200,000	L	5

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1087	1996-0223-XX	UNK	BRA	SH 288	SH 35	SH 332	INSTALL CTMS - INCL SURVEILLNCE SYS, COMMUNICATN SYS, SATELLITE COMPUTER FAC, & PROV MONITORING & CONTRL	\$4,800,000	L	5
1086	1996-0222-XX	UNK	BRA	SH 288	SH 332	BS 288	INSTALL CTMS - INCL SURVEILLNCE SYS, COMMUNICATN SYS, SATELLITE COMPUTER FAC, & PROV MONITORING & CONTRL	\$3,600,000	L	5
1085	1996-0221-XX	UNK	BRA	SH 288	FM 1462	S OF SH 35	INSTALL CTMS - INCL SURVEILLNCE SYS, COMMUNICATN SYS, SATELLITE COMPUTER FAC, & PROV MONITORING & CONTRL	\$8,160,000	L	5
244	BR0004	0598-02-019	BRA	SH 288	@ CR 58 & @ CR 59		CONST TWO O/P STRUCTURES	\$10,000,000	S	3A
3038	T96019-XX	UNK	BRA	SH 288 P&R	@ FM 518 & SH 35		CONST 2 PARK & RIDES: EACH 1.6 MIL W/ 125 SPACES	\$3,200,000	L	5
45	GL0017	0051-03-050	GAL	SH 3	NCL OF TEXAS CITY	0.33 MI N OF FM 1764	RECONSTRUCT & WIDEN TO 4 MLNS DIV WITH RAISED MEDIAN	\$6,733,000	S	3A
2045	1995-0476-XX	0051-02-900	HAR	SH 3	WEBSTER RD IN WEBSTER (UP)		UPDATE RR SIG & PROTECT DEV	\$100,000	S	4A
170	1994-2018-XX	0593-01-075	LIB	SH 321	LP 573, IN CLEVELAND	S TO SH 105	WIDEN & RECONST TO 4 LN DIV URB W/L TRN	\$12,500,000	L	4D
1513	1993-2014-XX	0593-01-089	LIB	SH 321	@ MOPAC RR		REHAB BRIDGE	\$210,000	S	6A
245	BR0005	1524-01-041	BRA	SH 332	0.124 MI E OF NEW SH 288	BS 288B	CONST GSEP ONLY (PHASE I)	\$24,148,000	S	3A
9396	1998-0171-XX	0586-01-055	BRA	SH 332	@ INTERCOASTAL CANAL		CONST BRIDGE & APPROACHES (2ND BRDG)	\$12,286,000	L	4D
247	BR0007	0586-01-048	BRA	SH 332	0.3 MI N OF FM 523	0.3 MI S OF FM 523	CONST GSEP	\$7,509,000	S	13B

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250	BR0011	0847-03-026	BRA	SH 332	SH 36	FM 521 NR BRA	WIDEN TO 4 LN DIV RUR & REPLACE BRDG	\$10,704,000	S	4E
248	BR0008	0586-01-051	BRA	SH 332	0.3 MI S OF FM 523	0.446 MI N OF INTRACOAST CANL	WIDEN TO 4 LN DIV RUR	\$5,850,000	L	4D
249	BR0010	1524-01-047	BRA	SH 332	1.4 KM E OF FM 521	SH 288	RECONST & WID TO 4 LN	\$17,647,000	S	13B
246	BR0006	1524-01-060	BRA	SH 332	0.124 MI E OF NEW SH 288	0.307 MI E OF BS 288B	CONST 4 ML W/FRTG RDS (PHASE II)	\$15,532,000	S	4D
520	BR0014	0178-03-100	BRA	SH 35	FM 2403	BS 35-C	WIDEN TO 4 LN DIV RUR	\$2,252,000	S	4D
519	BR0013	0179-01-034	BRA	SH 35	CANNON ST (THOMAS WRIGHT)IN ANGLETON	SH 288	WIDEN FR 4 TO 6 LN DIV C&G	\$3,700,000	S	4D
518	BR0012	0179-01-033	BRA	SH 35	BS 288B	CANNON ST (THOMAS WRIGHT)IN ANGLETON	WIDEN FR 2 LNS TO 3 LN ONE-WAY PAIR C&G	\$2,300,000	S	4D
1062	1994-0378- - XX	0178-03-905	BRA	SH 35	@ MUSTANG RD & @ FM 1459		ADD LTLS	\$140,000	S	5
522	BR0016	0178-03-110	BRA	SH 35	LP 558	ROCK ISLAND ST IN ANGLETON	WIDEN TO 6 LN DIV C&G	\$10,457,000	L	4D
912	1998-0145- - XX	0178-10-900	BRA	SH 35	BRA C/L	BS 35-C (LP 409) IN ALVIN	CONST NEW 6 LN FWY	\$118,090,000	L	3A
927	1998-0146- - XX	0170-03-000	BRA	SH 35	FM 2403	FM 523 (ANGLETON)	WIDEN TO 4 LN DIV	\$43,530,000	L	4E
523	BR0017	0178-03-111	BRA	SH 35	ROCK ISLAND ST IN ANGLETON	BS 288B	WIDEN FR 2 LNS TO 3 ONE-WAY PAIR C&G	\$1,230,000	S	4D

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1100	1996-0277- - XX	UNK	HAR	SH 35	IH 45	LP 610	INSTALL CTMS - INCL SURVEILLANCE SYS, COMMUNICATN SYS, SATELLITE COMPUTER FAC, & MONITORING CONTRL	\$5,400,000	L	5
209	1994-0561- - XX	0178-09-020	HAR	SH 35	0.13 MI S OF S WAYSIDE	0.02 MI S OF BELLFORT	NEW 8 LN FRWY & TMS	\$14,718,000	S	3A
202	1994-0302- - XX	0178-09-018	HAR	SH 35	IH 45 IN HOUSTON	GRIGGS RD	8 LN FRWY ON NEW LOC & TMS	\$34,668,000	S	3A
310	HR0104	0178-09-016	HAR	SH 35	N OF BELLFORT	N OF ALMEDA-GENOA	CONST 8 LN FRWY	\$43,882,000	L	3A
210	1994-0562- - XX	0178-09-019	HAR	SH 35	0.27 MI N OF WAYSIDE	0.13 MI S OF WAYSIDE	CONST NEW 8 LN FRWY	\$9,350,000	S	3A
471	HR0101	0178-09-023	HAR	SH 35	@ BW 8		CONST I/C	\$29,400,000	L	3A
309	HR0103	0178-09-024	HAR	SH 35	N OF ALMEDA-GENOA	BW 8	CONST 8 ML & FRTG RD	\$22,905,000	L	3A
254	BR0021	0188-06-046	BRA	SH 36	JONES CREEK	0.2 MI N OF BRAZOS RIV DIVERSION CHANNEL	WIDEN TO 4 LN DIV RUR	\$2,275,000	S	3B
251	BR0018	0111-08-100	BRA	SH 36	0.9 MI S OF THE BRAZOS RIV	FM 1495	WIDEN TO 4 LN DIV RUR	\$2,000,000	L	3B
255	BR0022	0188-05-027	BRA	SH 36	S OF BRAZORIA	JONES CREEK	WIDEN TO 4 LN DIV RUR	\$12,500,000	S	3B
263	FB0010	0188-01-016	FOR	SH 36	US 59	FM 2218	WIDEN TO 4 LN DIV RUR	\$6,000,000	S	4E
900	1998-0147- - XX	UNK	FOR	SH 36	AUSTIN C/L	SH 36 BYP (SP 10)	WIDEN TO 4 LN DIV	\$22,110,000	L	4E

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311	HR0105	1685-05-056	HAR	SH 6	.4 MI N OF FM 529	.3 MI S OF FM 529	CONST 6 LN GSEP W/ ACCESS RDS @ FM 529	\$6,714,000	L	3A
312	HR0106	1685-05-047	HAR	SH 6	0.6 MI N OF IH 10	0.5 MI S OF IH 10	CONST 4 LN BR OVER IH 10 & PARK ROW BLVD WITH ACCESS RAMP	\$15,000,000	S	3A
313	HR0107	1685-05-067	HAR	SH 6	0.7 MI N OF FM 1093	1.1 MI S OF FM 1093	CONST 6 LN GSEP W/ACC RDS	\$16,221,000	S	3A
6065	1999-0257- - XX	1685-05-900	HAR	SH 6	MEMORIAL DR	FM 1093	WIDEN TO 8 LN DIV WITH C&G	\$15,400,000	S	TBD
3040	T96014-XX	UNK	FOR	SH 6 - MISSOURI @ FM 1092 CITY P&R			CONST PARK & RIDE (500 SPACES)	\$4,000,000	L	5
507	MG0033	0110-04-129	MON	SH 75	S POST OAK DR	IH 45 U/P	WIDEN TO 4 LN DIV	\$1,900,000	S	4D
505	MG0031A	0110-03-035	MON	SH 75	0.20 MI N OF FM 1097	FM 2432	WIDEN TO 4 LN DIV C&G	\$500,000	L	4E
506	MG0032	0110-03-033	MON	SH 75	FM 2432	TEAS NURSERY RD	WIDEN TO 4 LN DIV	\$10,439,000	L	4E
1695	1994-0811- - XX	0367-04-902	GAL	SH 87	@ BOLIVAR FERRY LANDING		REPLACE ELECT. CABLE & LIGHT APPARATUS ON 2 BREAKWATERS	\$250,000	S	16F
1693	1994-0804- - XX	0367-04-900	GAL	SH 87	@ BOLIVAR FERRY LANDING		CONST ONE 750' WOOD BREAKWATER & REPL ELECT CABLE	\$500,000	S	16F
930	1998-0148- - XX	UNK	GAL	SH 87	BOLIVAR	SH 275 @ 53RD ST	CONST 4 LN DIV HWY W/ BRIDGES @ HOU TX CITY & GAL CHANNELS	\$130,000,000	L	3A
1024	1994-0349- - XX	0051-04-900	GAL	SH 87	E OF 6TH ST	W OF 59TH ST	INSTALL ATMS	\$776,000	L	5

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1025	1994-0350-XX	0367-06-900	GAL	SH 87	HARBOR VIEW	E OF 6TH ST	INSTALL ATMS	\$282,000	L	5
2323	1996-0248-XX	UNK	GAL	SH 87, GAL FERRY (0367-04-901A)	UNK		RECONST 4 EXSTNG LANDINGS & NEW FENDER SYSTEMS	\$6,000,000	S	16
2322	1996-0247-XX	0367-05-901	GAL	SH 87, GAL FERRY (0367-05-901)	UNK		THIRD REPLMT VESSEL	\$9,000,000	S	16
393	1996-0116-XX	UNK	GAL	SH 96	@ SH 3		CONST GSEP	\$5,850,000	L	5
394	1996-0117-XX	UNK	GAL	SH 96	@ IH 45		CONST GSEP I/C	\$5,850,000	L	5
395	1996-0118-XX	UNK	GAL	SH 96	@ FM 270		CONST GSEP	\$5,850,000	L	5
2918	T96007-XX	UNK	GAL	SH 96	@ IH 45		CONSTRUCT PARK & RIDE (472 SPACES)	\$300,000	S	5
258	BR0025	3510-02-002	BRA	SH 99	SH 288 (SEG C)	FOR C/L	CONST 4 LN HWY W/I/C @ SH 288 (SEG C)	\$42,763,000	S	3A
257	BR0024	3510-02-001	BRA	SH 99	GAL C/L (SEG B)	SH 288	CONST 4 LN DIV RUR HWY WITH I/C @ SH 35 (SEG B)	\$45,000,000	S	3A
259	CH0002	3510-10-001	CHA	SH 99	LIB C/L	IH 10 (SEG I-1)	CONST 4 LN DIV RUR	\$25,340,000	L	3A
6086	1995-0489-A-XX	3510-10-003	CHA	SH 99	0.608KM S OF FM 565	SP 55 AT FM 1405	CONST 4 LN DIV RUR HWY & INTERCHANGES (PH 2)	\$18,660,000	S	12
6067	1999-0259-XX	3510-04-903	FOR	SH 99	0.3 MI S OF FM 1093	N OF US 90A	WIDEN TO 6 M/LNS	\$53,500,000	S	4E

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219	1994-0783- - XX	3510-04-006	FOR	SH 99	@ US 90A		CONST BRIDGE & APPROACHES	\$12,400,000	S	13
6066	1999-0258- - XX	3510-04-902	FOR	SH 99	HAR C/L	FM 1093	WIDEN TO 6 M/LNS	\$19,000,000	S	4E
6068	1999-0260- - XX	3510-04-904	FOR	SH 99	S OF US 90A	US 59	WIDEN TO 6 M/LNS	\$22,500,000	S	4E
266	FB0013	3510-03-001	FOR	SH 99	BRA C/L (SEG. C)	US 59	CONST 4 LN HWY W/WC @ BRA RIV	\$62,967,000	S	3A
265	FB0012	3510-04-004	FOR	SH 99	0.3 MI S OF FM 1093	0.3 MI N OF FM 1093	CONST 4 LN O/P @ SP RR	\$5,198,000	S	13
283	GL0018	3510-01-001	GAL	SH 99	IH 45 (S) SEG B	BRA C/L	CONST 4 LN DIV RUR	\$28,800,000	S	3A
284	GL0019	3510-01-002	GAL	SH 99	SH 146 (SEG A)	IH 45 (S)	WIDEN TO 4 LN DIV RUR HWY W/I/C @ SH 146 & IH 45	\$22,500,000	L	3A
396	1996-0124- - XX	UNK	GAL	SH 99	@ IH 45 (S)		CONST GSEP I/C	\$8,380,000	L	5
7034	1999-0014- - XX		HAR	SH 99	AT KINGSLAND BLVD		CONSTRUCT GSEP	\$3,200,000	S	4C
316	HR0111	3510-06-002	HAR	SH 99	US 290 (SEG F1)	SH 249	CONST 4 LN DIV RUR SECT	\$36,557,000	S	13A
315	HR0110	3510-08-001	HAR	SH 99	MON C/L	US 90 (SEG H)	CONST 4 LN DIV RUR, I/C @ US 90	\$71,906,000	L	3A
314	HR0109	3510-06-001	HAR	SH 99	IH 45	MON C/L @ W END SPR CK BRDG	CONST 4 LN DIV PKWY	\$2,020,000	S	13A

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217	1994-0777-XX	3510-06-003	HAR	SH 99	SH 249 (SEG F2)	IH 45 (N)	CONST 4 LN DIV RUR SECT	\$53,334,000	S	13A
328	HR0408	3510-05-002	HAR	SH 99	FRANZ RD (SEG E)	US 290	CONST 4 LN DIV RUR SECT	\$53,040,000	S	13A
7033	1999-0013-XX		HAR	SH 99	AT BAYHILL HIGHLAND KNOLLS		CONSTRUCT GSEP	\$3,200,000	S	4C
6069	1999-0261-XX	3510-05-902	HAR	SH 99	IH 10	FOR C/L	WIDEN TO 6 M/LNS	\$22,000,000	S	4C
353	LB0002	3510-09-001	LIB	SH 99	HAR C/L	CHA C/L (SEG I-1)	CONST 4 LN DIV RUR	\$19,000,000	L	3A
218	1994-0781-XX	3510-07-001	MON	SH 99	HARRIS C/L @ W END SPRING CRK BR (SEG G)	US 59	CONST 4 LN DIV RUR SECT	\$60,233,000	S	13A
367	MG0034	3510-07-003	MON	SH 99	US 59 (SEG H)	HAR C/L	CONST 4 LN DIV RUR	\$37,313,000	L	3A
3042	T96016-XX	UNK	FOR	SH 99 - FT BEND @ FM 1093 CO P&R			CONST PARK & RIDE (PH 1 - 250 SPACES)	\$2,000,000	L	5
2393	1996-0341-XX	UNK	FOR	SHORT	SNAKE CRK		REPLACE BRIDGE	\$352,000	S	TBD
5031	N-0666	UNK	HAR	SIXTH W	YALE	SHEPHERD	CONST 4 LN UNDIV	\$4,410,763	S	4C
191	MG0520	UNK	MON	SORTERS/MCCL FM 1314 ENNON RD		US 59	WIDEN TO 4 LN UNDIV	\$13,920,000	L	4E
261	FB0008	0187-05-036	FOR	SP 10 (SH 36 B/P)	5.2 MI W OF ROSENBERG	US 59	WIDEN BYPASS TO 4 LN DIV RDWY	\$9,838,000	L	3B

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9695	1998-0150-XX	0187-05-048	FOR	SP 10	(SH 36 B/P)US 59	SH 36	WIDEN TO 4 LNS DIV RUR (PHASE 2)	\$5,000,000	S	3B
9692	1996-0233-XX	0187-05-050	FOR	SP 10	(SH 36 B/P)US 59	SH 36 (1.5 MI S OF PLEAK)	CONST 2 LN RUR HWY ON NEW LOC (PHASE 1)	\$11,000,000	S	4CS
9411	1994-0331-B-XX	0508-07-021	HAR	SP 330	IH 10	2.0 MI N OF SH 146	CONST 6 MLNS (PHASE 2)	\$25,800,000	S	4C
4	1995-0490-XX	3187-01-005	CHA	SP 55	BS 146-E	SH 99 @ FM 1405	WIDEN TO 4 LN DIV RUR	\$5,000,000	S	3A
21	1996-0004-XX	UNK	FOR	STAFFORD RD & BW 8	STAFFORDSHIRE RD	FM 2234	REPLACE 2 LN ASPHALT RD WITH 4 LN CONCRETE BLVD, PROVIDE DIRECT CONNECTION AND GSEP ACROSS US 90A	\$27,272,725	S	4C
46	GL0330	UNK	GAL	STEWART	75TH STREET	STATE PARK	WIDEN TO 4 LN UNDIV	\$20,600,000	L	4D
352	HR5300	UNK	HAR	STRAWBERRY	SPENCER	FAIRMONT	CONST 6 LN DIV	\$1,800,000	L	4C
5061	1996-0730-XX	UNK	FOR	SWEETWATER BLVD	@ DITCH "A"		CONST BIKE/PED BRIDGE OVER "DITCH A"	\$207,600	L	5
143	HR5365	UNK	HAR	T C JESTER	FM 1960	LOUETTA	CONST 4 LN UNDIV	\$7,350,000	S	4C
654	1998-0151-XX	UNK	HAR	T C JESTER	BW 8	SH 249	CONST 4 LN ROAD	\$9,280,000	S	4C
655	1998-0152-XX	UNK	HAR	T C JESTER	W RANKIN	GREENS RD	CONST 4 LN ROAD	\$2,870,000	S	4C
659	1998-0153-XX	UNK	HAR	T C JESTER	LOUETTA	SPRING CYPRESS	CONST 4 LN ROAD	\$4,000,000	S	4C

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5023	HR0129	UNK	HAR	T C JESTER E	ELLA	WEST 11TH	CONST 4 LN DIV	\$2,320,000	S	4C
7009	1995-0394-B-XX		HAR	T C JESTER W	SH 249	GULF BANK	CONST 4 LN DIV (RS MEDN) URB ST FCTY	\$5,500,000	S	4C
144	1995-0394-A-XX	8139-12-003	HAR	T C JESTER W	GULF BANK	VICTORY DR	CONST 4 LN DIV (RS MEDN) URB ST FCTY	\$4,762,873	S	4C
2787	HR5350B	UNK	HAR	TANNER RD	ELDRIDGE	GESSNER	WIDEN TO 4 LN ASPHALT W/ TRN LNS	\$12,915,652	L	4C
542	GL0020	UNK	GAL	TEXAS CITY	UNK		TEXAS CITY/BOLIVAR FERRY CONNECTION	\$5,000,000	S	16F
3050	1996-0756-XX	UNK	MON	THE WOODLANDS TOWN CTR	GROGANS MILL RD	WOODLANDS PKWY	CONSTRUCT PEDESTRIAN/TRANSIT CORRIDOR ALONG SOUTHERN CORRIDOR (PH IV)	\$4,375,000	L	5
4069	1996-0757-XX	UNK	MON	THE WOODLANDS TOWN CTR	LAKE ROBBINS	GROGANS MILL RD	CONSTRUCT PEDESTRIAN SYSTEM, CONNECTIONS & STREETScape	\$3,500,000	S	5
7046	1999-0064-00		GAL	TOURIST TRANSIT TERMINAL	VA	VA	LINK TOURIST ATTRATIONS W/ SHUTTLE BUS SVC & BUILD NEW TR TERMINALS	\$1,210,000	S	5
2273	1996-0194-XX	UNK	FOR	TR #1 - #11	UNK		CONST HIKE & BIKE TRAIL	\$2,376,000	S	5
2281	1996-0202-XX	UNK	FOR	TR #12 - #21	UNK		CONST HIKE & BIKE TRAIL	\$2,397,600	S	5
3059	1998-0154-XX	UNK	MON	TRAM (GALAXY)	ESSEX	FM 1485	CONST 4 LN DIV	\$11,062,127	L	4E
3060	1998-0155-XX	UNK	MON	TRAM (GALAXY)	FM 2090	LONG ST	WIDEN TO 4 LN DIV	\$3,955,100	L	4E

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462	1996-0170-XX	UNK	FOR	TRAMMEL FRESNO RD	CROSSLAKES BLVD	SIENNA PKWY	CONST 4 LN CONCRT DIV W/ STRM, ESPLANADES, C&G, ST LIGHTS & LNDSCPG	\$9,930,000	L	4C
656	1998-0156-XX	UNK	FOR	TRAMMEL-FRESNO	SH 6	SIENNA PKWY	CONST 4 LN UNDIV ROAD	\$2,080,000	L	4C
9730	1998-0175-XX	UNK	FOR	TRAMMEL-FRESNO P&R	NEAR HILLCROFT, SH 6 &		CONST PARK & RIDE - 300 SPACES	\$1,560,000	L	5
9371	1996-0433-C-XX	UNK	HAR	TRANSFER STA @ INDSTRL	UNK		EXTEND RAILROAD TRACK FOR SHIPSIDE SERVICE (PH 3)	\$3,362,500	S	5
146	HR5511	UNK	HAR	TREASCHWIG	ALDINE WESTFIELD	CYPRESSWOOD	WIDEN TO 4 LN UNDIV W/ STRM SEWERS,BRIDGES & SIGNALS	\$7,000,000	S	4C
185	MG0260A	UNK	MON	TREASCHWIG/KI	CYPRESSWOOD NGWOOD	SPRING CREEK	CONST NEW 4 LN RD	\$20,000,000	L	4E
9759	MG0260B	UNK	MON	TREASCHWIG/KI	SPRING CREEK NGWOOD	SORTERS MCLENNAN	CONST NEW 4 LN RD	\$15,000,000	L	4E
2394	1996-0342-XX	UNK	FOR	TRINITY	FOSS CRK		REPLACE BRIDGE	\$57,750	S	TBD
147	1996-0381-XX	UNK	HAR	UNDERWOOD DR	FAIRMONT PKWY	RED BLUFF	COMPLETION OF UNDERWOOD DR (4 LN)	\$4,830,000	S	4C
7052	FB0011-D-XX		FOR	UNIVERSITY BLVD	END OF COMMONWEALTH BLVD	BOUNDARY OF FIRST COLONY LEVEE IMPROVEMENT DIST #2	CONSTRUCT 4 LN C&G RDWAY	\$0	S	4C
7051	FB0011-C-XX		FOR	UNIVERSITY BLVD	END OF COMMONWEALTH BLVD	US 59	PH 2: WIDEN TO 8 LN DIV RDWAY	\$0	L	4C
4091	T96048-XX	UNK	BRA	UNK	UNK		PH 2-PARK & RIDE SERVICES (FY 00) *FUNDING CONTINGENT UPON RESULTS OF PH 1	\$420,000	S	5

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2253	1996-0174- - XX	UNK	FOR	UNK	UNK		EMERGNCY VEH OVERRIDE SYS FOR EXSTG TRFFC SIGNLS	\$1,088,750	S	5
1125	1996-0108- - XX	UNK	FOR	UNK	UNK		TRFFC SIGNAL CONTROL CENTER	\$2,000,000	S	5
9409	T96101A	UNK	GAL	UNK	UNK		OP ASSIST FOR NEW FIXED RT BUS SVC IN TEXAS CITY	\$327,856	S	5
9410	T96101B-XX	UNK	GAL	UNK	UNK		OP ASSIST FOR NEW FIXED RT BUS SVC IN TEXAS CITY	\$360,236	S	5
9412	T96144-XX	UNK	GAL	UNK	UNK		COST OF LEASING VEHICLES TO PROVIDE NEW FIXED RT SVC IN TEXAS CITY	\$175,000	S	5
9349	T96029-XX	UNK	GAL	UNK	UNK		UPGRADE ALL RAIL ACCES TO ISLE: SF RR BETWN GAL & ALVIN, UPGRADE GH&G RR PORT OF GAL TRACK, HISTORIC RAIL	\$8,000,000	L	5
4081	T96038-XX	UNK	GAL	UNK	UNK		COMMUTER VANPOOL & PARK AND RIDE SVCS (FY 99)	\$416,040	S	5
2433	1996-0416- - XX	UNK	GAL	UNK	UNK		PROVIDE FERRY SVC BETWN BOLIVAR ISLE & TEXAS CITY	\$40,000,000	L	5
4082	T96039-XX	UNK	GAL	UNK	UNK		COMMUTER VANPOOL & PARK AND RIDE SVCS (FY 00)	\$416,040	S	5
4080	T96037-XX	UNK	GAL	UNK	UNK		COMMUTER VANPOOL & PARK AND RIDE SVCS (FY 98)	\$416,040	S	5
2342	1996-0270- - XX	UNK	HAR	UNK	UNK		PRIORITY CORRDR PUBLIC INFO/PROGR ADMIN	\$300,000	S	TBD
9368	T96057-XX	UNK	HAR	UNK	UNK		FUTURE ADDITION OF 13 SERVICE ROUTES	\$7,636,340	L	5

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2338	1996-0266- - XX	UNK	HAR	UNK	UNK		ELECTRICAL WORK F/ SATELLITE BLDGS - UPS SWITCH IN KATY SATELLITE BLDG / ADDTL ELEC WRK & UPGRDES FOR OTHERS	\$100,000	S	4D
5095	T96053-XX	UNK	HAR	UNK	UNK		ADDITION OF 10 SERVICE ROUTES (OP ASSISTANCE)	\$8,765,045	S	5
2125	1996-0056- - XX	UNK	HAR	UNK	UNK		TEXAS LIMITED / UNION STATION TRACK & SIGNAL CIRCUIT	\$5,355,600	L	5
2339	1996-0267- - XX	UNK	HAR	UNK	UNK		HOUSTON TRANSTAR DELIVERY 2 FUNCTIONS	\$2,250,000	L	5
5092	1996-0762- - XX	UNK	HAR	UNK	UNK		COMMUTER & FAST TRAK VAN PURCHASES (CNG)	\$687,500	L	5
9386	1996-0807- - XX	UNK	HAR	UNK	UNK		INTEGRATING OF OPERATING PERSONNEL FROM VARIOUS AGENCIES	\$400,000	S	5
5098	T96052-XX	UNK	MON	UNK	UNK		PROVIDE OPERATION OF 6 ADDTL BUSES TO SERVE RESEARCH FOREST P&R EXPANSION	\$600,000	S	5
9742	1998-0010- - XX	UNK	VA	UNK	UNK		FUTURE INTERMODAL PROJECTS (FY 08-20)	\$44,633,289	L	5
9747	1998-0183- - XX	UNK	VA	UNK	UNK		FUTURE TSM- INTERSECTION/TRAFFIC FLOW IMPROVEMENTS (FY 08-20)	\$16,234,986	L	5
4071	T96026-XX	UNK	VA	UNK	UNK		CONSTRUCT SUBREGIONAL OPERATION/MAINTENANCE FAC IN LIB CO TO SVC VEHICLES IN VARIOUS COS	\$1,400,000	S	5
9731	1998-0005- - XX	UNK	VA	UNK	UNK		FUTURE AIR QUALITY PROJECTS (FY 01-07)	\$19,819,156	S	5
5099	1996-0109-C- XX	UNK	VA	UNK	UNK		REGIONAL COMMUTE ALTERNATIVES PROG (FY 01-07)	\$11,958,331	S	5

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3046	T96020-XX	UNK	VA	UNK	IN GAL, BRA, WAL, FOR		NEW START TRANSIT OP. SUBSIDIES	\$20,000,000	L	5
9733	1998-0009-XX	UNK	VA	UNK	UNK		FUTURE INTERMODAL PROJECTS (FY 01-07)	\$18,920,705	S	5
9734	1998-0174-XX	UNK	VA	UNK	UNK		FUTURE TRANSIT SERVICE PROJECTS (FY 01-07)	\$27,918,380	S	5
9735	1998-0196-XX	UNK	VA	UNK	UNK		FUTURE HOV PROJECTS (FY 01-07)	\$22,754,764	S	5
9736	1998-0172-XX	UNK	VA	UNK	UNK		FUTURE TRANSPORTATION DEMAND PROJECTS (FY 01-07)	\$9,079,742	S	5
9737	1998-0180-XX	UNK	VA	UNK	UNK		FUTURE TSM-GSEP PROJECTS (FY 01-07)	\$2,556,656	S	5
9744	1998-0173-XX	UNK	VA	UNK	UNK		FUTURE TRANSPORTATION DEMAND PROJECTS (FY 08-20)	\$74,528,889	L	5
9739	1998-0181-XX	UNK	VA	UNK	UNK		FUTURE TSM-INTERSECTION/TRAFFIC FLOW IMPROVEMENTS (FY 01-07)	\$1,218,827	S	5
9740	1998-0006-XX	UNK	VA	UNK	UNK		FUTURE AIR QUALITY PROJECTS (FY 08-20)	\$57,481,389	L	5
9741	1998-0008-XX	UNK	VA	UNK	UNK		FUTURE BIKE/PEDESTRIAN PROJECTS (FY 08-20)	\$24,266,688	L	5
9732	1998-0007-XX	UNK	VA	UNK	UNK		FUTURE BIKE/PEDESTRIAN PROJECTS (FY 01-07)	\$1,306,961	S	5
9743	1998-0197-XX	UNK	VA	UNK	UNK		FUTURE HOV PROJECTS (FY 08-20)	\$23,608,889	L	5

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9745	1998-0182-XX	UNK	VA	UNK	UNK		FUTURE TSM-GRADE SEPARATION PROJECTS (FY 08-20)	\$308,889	L	5
9738	1998-0012-XX	UNK	VA	UNK	UNK		FUTURE TSM-SIGNALIZATION PROJECTS (FY 01-07)	\$3,003,527	S	5
7000	1999-0276-XX	0050-06-056	HAR	US 290	AT BECKER		CONSTRUCT INTERIM GSEP	\$6,000,000	S	4CS
3014	1996-0475-XX	0050-06-054	HAR	US 290	0.3 MI E OF MUESCHKE	0/186 MI W OF TELGE	INSTALL CTMS	\$2,709,000	L	5
6099	1999-0275-XX	0050-06-045	HAR	US 290	AT ROBERTS		CONSTRUCT INTERIM GSEP	\$6,000,000	S	4CS
7001	1999-0277-XX	0050-06-057	HAR	US 290	AT BAUER		CONSTRUCT INTERIM GSEP	\$6,000,000	S	4CS
3016	1996-0477-XX	0050-08-078	HAR	US 290	1.86 MI W OF TELGE RD	HUFFMEISTER	INSTALL CTMS	\$1,050,000	L	5
1696	1994-0813-XX	0050-09-053	HAR	US 290	0.10 MI E OF DACOMA ST	43RD ST	LANDSCAPE DEVELOPMENT	\$500,000	S	16F
910	1998-0157-XX	UNK	HAR	US 290	E OF HOCKLEY	W OF CYPRESS BY-PASS	WIDEN & UPGRADE TO 6 LN FWY	\$66,500,000	L	3A
1107	1996-0284-XX	UNK	HAR	US 290	HOCKLEY	WAL C/L	INSTALL CTMS - INCL SURVEILLANCE SYS, COMMUNICATN SYS, SATELLITE COMPUTER FAC, & MONITORING CONTRL	\$3,600,000	L	5
319	HR0116B-XX	0050-06-045	HAR	US 290	E OF HOCKLEY (BECKER RD)	W OF CYPRESS BY-PASS	CONST INTERIM GSEP	\$15,000,000	L	3A
932	1998-0158-XX	UNK	HAR	US 290	IH 610	FM 529	WIDEN TO 8 - 10 LN FWY	\$22,370,000	S	3A

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1082	1996-0218-XX	UNK	WAL	US 290	HARRIS C/L	WASHINGTON C/L	INSTALL CTMS - INCL SURVEILLNCE SYS, COMMUNICATN SYS, SATELLITE COMPUTER FAC, & PROV MONITORING & CONTRL	\$9,200,000	L	5
1677	1994-0713-XX	0114-11-061	WAL	US 290	AT STRS #116 AND 117 (0.001)		PAINT STRUCTURES	\$100,000	S	7
196	1994-0645-XX	0114-11-065	WAL	US 290	@ BRAZOS RIVER RELIEF STRUCTURES		BRIDGE WIDENING	\$933,000	S	6A
3047	T96021-XX	UNK	WAL	US 290 - WALLER CO P&R	ALONG US 290 IN WALLER		CONST PARK & RIDE (500 SPACES)	\$2,000,000	L	5
9833	1996-0734-B-XX	UNK	HAR	US 59 NE	AT BW 8 N		CONSTRUCT BW 8 TO US 59 N DIRECT CONNECTORS (E-B TO S-B, W-B TO N-B, W-B TO S-B)	\$0	L	5
152	1994-0818-XX	0177-07-903	HAR	US 59 NE	@ WILL CLAYTON PKWY		CONST HOV I/C	\$4,500,000	S	16 (SEC 3)
148	1993-0087-B-XX	0177-07-901	HAR	US 59 NE	GREENS RD	MEDICAL CENTER RD	CONST HOV LN	\$4,895,000	S	16 (SEC 3)
214	1994-0573-XX	0177-07-089	HAR	US 59 NE	GREENS RD	0.24 MI N OF ALDINE BENDER	CONST 4 DIR CON TO BW 8	\$33,014,000	S	3A
354	LB0003	0177-03-076	LIB	US 59 NE	N END OF CLEVELAND BYPASS	SAN JAC C/L	CONST 4 LN RUR FWY	\$9,000,000	L	3A
223	1994-2001-XX	0177-03-064	LIB	US 59 NE	MON C/L	SOUTH END OF CLEVELAND BY-PASS	WIDEN TO 6 LN RUR FRWY	\$62,000,000	S	3A
9913	1999-0117-B-XX	0177-05-088	MON	US 59 NE	.0518 KM S OF E RIVER DR	1.158 KM N OF E RIVER DR	PH 2: CONSTRUCT INTERIM INTERCHANGE AT EAST RIVER DRIVE	\$500,000	S	3A
6076	1999-0269-XX	0177-05-094	MON	US 59 NE	1.0 MI N OF COMMUNITY DR	ROMAN FOREST BLVD	RECONSTRUCT MAIN LANES & GSEPS (PH 1)	\$7,235,457	S	4D

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6031	1996-0866-C-XX	0177-05-090	MON	US 59 NE	0.156KM N OF ROMAN FOREST BLVD	1.524KM N OF COMMUNITY	WIDEN TO 6 LN FWY W/GSEPS,RAMPS & SB FRTG RD (PHASE 2)	\$25,853,000	S	3A
370	MG0037	0177-05-057	MON	US 59 NE	N OF FM 1314	N OF NORTH PARK DR	WIDEN TO 6 MLN & U TRNS @ FM 1314	\$31,110,000	S	3A
6077	1999-0270-XX	0177-05-902	MON	US 59 NE	1.448 KM S OF FM 2090	ROMAN FOREST BLVD	RECONSTRUCT MAIN LANES (PH 1)	\$15,907,000	S	TBD
6092	1999-0084-B-XX	0177-05-089	MON	US 59 NE	1.219 KM S OF FORTORIA RD	0.655 KM N OF FOSTORIA RD	PH 2: CONSTRUCT INTERIM INTERCHANGE AT FOSTORIA ROAD	\$5,000,000	S	3A
369	MG0036	0177-05-058	MON	US 59 NE	N OF COMMUNITY DR	N OF FM 1314	WIDEN TO 6 MLNS	\$20,075,000	S	3A
211	1994-0565-XX	0177-05-055	MON	US 59 NE	HAR C/L	NORTH PARK DR	WIDEN TO 8 LNS	\$22,770,000	S	4C
9999	1996-0866-A-XX	0177-05-092	MON	US 59 NE	LIB C/L	1.448KM S OF FM 2090	WIDEN TO 6 LN FWY W/GSEPS (PHASE 2)	\$21,379,773	S	3A
6030	1996-0866-B-XX	0177-05-091	MON	US 59 NE	1.448KM S OF FM 2090	0.156KM N OF ROMAN FOREST BLVD	WIDEN TO 6 LN FWY W/GSEPS,RAMPS & SB FRTG RD (PHASE 2)	\$28,882,223	S	3A
1089	1996-0226-XX	UNK	MON	US 59 NE	HAR C/L	LIB C/L	INSTALL CTMS - INCL SURVEILLANCE SYS, COMMUNICATN SYS, SATELLITE COMPUTER FAC, PROV MONITORING & CONTRL	\$10,620,000	L	5
278	FB0350	UNK	FOR	US 59 SW	@ HAMLINK RD		INTERCHANGE	\$7,700,000	L	3E
5076	1996-0744-XX	UNK	FOR	US 59 SW	WILLIAMS TRACE BLVD	SH 6	CONSTRUCT REVERSIBLE HOV LN TO ULTIMATE CONFIGURATION	\$2,829,000	S	5
3017	1996-0478-XX	0089-09-900	FOR	US 59 SW	@ SP 10		CONSTRUCT GSEP	\$4,000,000	S	5

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2022 MTP: Short-Range and Long-Range Roadway Projects

List Includes: Roadway, CMAQ, Rehabilitation, Safety, Enhancement and Miscellaneous Projects

(Sorted by street, county)

PROJ ID	PROJ NUMBER	CSJ NUMBER	CO	STREET	FROM LOCATION	TO LOCATION	PROJECT DESCRIPTION	TOTAL COST	PROJ STATUS	FUNDING SOURCE
5080	1996-0748-XX	UNK	FOR	US 59 SW	SP 41	WILLIAMS TRACE BLVD	CONSTRUCT REVERSIBLE HOV LN TO ULTIMATE CONFIGURATION	\$1,795,000	S	5
1081	1996-0241-XX	UNK	FOR	US 59 SW	SP 529	WHARTON C/L	INSTALL CTMS - INCL SURVEILLNCE SYS, COMMUNICATN SYS, SATELLITE COMPUTER FAC, & PROV MONITORING & CONTRL	\$8,400,000	L	5
5079	1996-0747-XX	UNK	FOR	US 59 SW	@ SP 41		CONSTRUCT 2 BRAIDED RAMPS	\$5,382,000	S	5
23	1994-0259-XX	0027-12-983	FOR	US 59 SW	W OF S KIRKWOOD	RAMPS @ SP 41	CONSTRUCT HOV LN	\$3,910,000	S	5
480	1996-0001-XX	UNK	FOR	US 59 SW	SH 36	FM 2218	CONST FRTG RD	\$10,250,000	L	4D
5078	T96056-XX	UNK	FOR	US 59 SW	NEAR SWEETWATER BLVD		CONSTRUCT PARK & RIDE FACILITY	\$4,500,000	S	5
5077	1996-0745-XX	UNK	FOR	US 59 SW	@ SP 41, WILLIAMS TRAC		IMPROVEMENTS TO FRONTAGE ROAD INTERSECTIONS	\$930,000	S	5
1080	1996-0240-XX	UNK	FOR	US 59 SW	SH 6	SP 529	INSTALL CTMS - INCL SURVEILLNCE SYS, COMMUNICATN SYS, SATELLITE COMPUTER FAC, & PROV MONITORING & CONTRL	\$9,600,000	L	5
6048	1996-0234-A-XX	0027-12-097	FOR	US 59 SW	W OF FM 2759	W OF FM 762	WIDEN TO 8 MLNS WITH GSEPS, 2-WAY DIAMOND HOV, ITS,TMS,UPGRADE TO URBAN FWY & BUS PRIORITY CORRIDOR TREATMENT	\$32,303,204	S	3A
6049	1996-0234-B-XX	0027-12-909	FOR	US 59 SW	W OF FM 762	W OF SH 36	WIDEN TO 6 MLN RUR FWY WITH GSEPS, ITS,TMS & BUS PRIORITY CORRIDOR TREATMENT	\$35,064,973	S	3A
6050	1996-0234-C-XX	0027-12-910	FOR	US 59 SW	W OF SH 36	W OF SP 10	WIDEN TO 6 MLN RUR FWY WITH GSEPS, ITS,TMS & BUS PRIORITY CORRIDOR TREATMENT	\$41,372,058	S	3A
6051	1996-0388-A-XX	0089-09-904	FOR	US 59 SW	W OF SP 10	W OF HAMLINK	WIDEN TO 6 LN RUR FWY W/ GSEPS, ITS, TMS	\$17,304,273	S	3A

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(Sorted by street, county)

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6052	1996-0388-B-XX	0089-09-905	FOR	US 59 SW	W OF HAMLINK	W OF FM 360	WIDEN TO 6 LN RUR FWY W/ GSEPS, ITS, TMS	\$22,140,000	S	3A
6053	1996-0388-C-XX	0089-09-906	FOR	US 59 SW	W OF FM 360	W OF DARST RD	WIDEN TO 6 LN RUR FWY W/ GSEPS, ITS & TMS	\$27,140,000	S	3A
6063	1996-0388-D-XX	0089-09-907	FOR	US 59 SW	W OF DARST RD	WHARTON C/L	WIDEN TO 6 LN RUR FWY W/ GSEPS, ITS & TMS	\$34,166,682	S	3A
155	1996-0251- -XX	UNK	HAR	US 59 SW	SP 527	SH 288	WIDEN TO 8-10 M/L W/ HOV	\$12,000,000	L	3A
6098	1999-0274- -XX	0177-11-135	HAR	US 59 SW	POLK ST AT CHARTRES BLVD	END OF SECTION	CONSTRUCT NORTHBOUND EXIT RAMP	\$1,200,000	S	4CS
9830	1994-0587-B-XX	0028-02-070	HAR	US 90	WALLISVILLE	UVALDE	PH 2 - CONST 2 3 LN FRTG RD	\$7,400,000	S	3A
157	1994-0587-C-XX	0028-02-054	HAR	US 90	RAMPS SW OF MERCURY DR	UVALDE	PH 3 - CONST 4 LN FWY	\$19,310,000	S	3A
322	HR0120	0028-02-044	HAR	US 90	RAMPS SW OF MERCURY	BW 8	ADD GSEP @ MAJOR I/CS	\$43,906,000	S	3A
1102	1996-0279- -XX	UNK	HAR	US 90	IH 10	LIB C/L	INSTALL CTMS - INCL SURVEILLANCE SYS, COMMUNICATN SYS, SATELLITE COMPUTER FAC, & MONITORING CONTRL	\$14,100,000	L	5
321	HR0119-B-XX	0028-02-055	HAR	US 90	IH 10 (OATS ROAD)	MERCURY DR	PH 2: CONSTRUCT 4 LANE FREEWAY WITH GRADE SEPARATION AT MERCURY	\$9,193,000	S	3A
9829	1994-0587-A-XX	0028-02-054	HAR	US 90	RAMPS SW OF MERCURY DR	WALLISVILLE	PH 1 - CONST 2 3 LN FRTG RD	\$6,080,000	S	3A
9831	1994-0587-D-XX	UNK	HAR	US 90	RAMPS SW OF MERCURY	UVALDE	PH 4 - WIDEN TO 6 LN FWY	\$30,000,000	L	3A

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(Sorted by street, county)

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941	1998-0159-XX	UNK	HAR	US 90	0.5 MI N OF RUNNEBURG	LIB C/L	CONST & UPGRADE TO 4 LN FWY	\$73,130,000	L	4E
9696	1998-0160-XX	UNK	HAR	US 90	IH 10	UVALDE	CONST 6 M/L FWY	\$30,000,000	L	3A
9709	1998-0190-XX	UNK	LIB	US 90	@ UP RR IN DAYTON		CONST GSEP	\$12,000,000	L	4D
172	1994-2010-XX	0028-04-051	LIB	US 90	0.2 MI E OF FM 563	DEVERS (SH 61)	WIDEN & RECONST TO 4 LN DIV RUR	\$13,000,000	L	4E
1739	1994-2007-98	0028-05-035	LIB	US 90	JEFFERSON C/L	1.0 MI W OF LIBERTY C/L	WID & RECONST TO 4 LN DIV RUR	\$3,300,000	S	4E
472	LB0120	UNK	LIB	US 90	@ 563		CONST GSEP	\$6,900,000	L	3A
1152	1996-0426-XX	UNK	LIB	US 90	EAST ST	TENNESSEE ST	CONSTRUCT CONTINUOUS LEFT TURN LANE	\$375,000	S	5
173	1994-2011-XX	0028-05-042	LIB	US 90	4.0 MI W OF JEFF C/L	SH 61 IN DEVERS	WIDEN & RECONST TO 4 LN DIV RUR	\$7,000,000	L	4E
9419	FB0019B	2105-01-034	FOR	US 90A	@ FM 2234/GESSNER		CONST GSEP	\$10,500,000	S	4C
9428	1998-0016-B-XX	0027-06-046	FOR	US 90A	AT & SF RR IN ROSENBERG		CONST EXPANDED RR U/P	\$6,500,000	S	4G
1661	1994-0649-XX	0027-08-136	FOR	US 90A	@ PRISON FARM U/P		REHAB BRIDGES	\$200,000	S	6A
9395	FB0021D	0027-08-108	FOR	US 90A	0.3 MI W OF SH 6	FM 1876	WIDEN TO 8 LN DIV WITH IMPROVEMENTS AT DITCH "H"	\$8,489,000	S	4C

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9394	FB0021C	0027-08-108	FOR	US 90A	FM 1876	W OF US 59	WIDEN TO 8 LN DIV	\$7,433,000	S	4C
275	FB0023	0027-08-137	FOR	US 90A	LP 762	0.3 MI W OF SH 6	WIDEN TO 6 LN DIV	\$21,219,000	L	3A
272	FB0020	0027-07-026	FOR	US 90A	0.17 MI E OF FM 1640	FM LP 762	WIDEN TO 6 LN DIV C&G SECT	\$10,327,000	L	3A
274	FB0022	0027-06-038	FOR	US 90A	FM 1640	0.17 MI E OF FM 1640	WIDEN TO 6 LN DIV C&G SECT	\$890,000	L	3A
1491	1993-0623-XX	0027-08-135	FOR	US 90A	@ BULLHEAD SLOUGH		REHAB BRIDGE	\$260,000	S	6A
971	1998-0161-XX	UNK	FOR	US 90A	SH 6	SH 99	WIDEN TO 8 LN W/ GSEPS	\$16,300,000	S	3A
1947	1995-0374-XX	0027-10-910	HAR	US 90A	AT SPT RR US 90A AND HOLMES RD	IN HOUSTON	REMOVE AND REPLACE PLANKING PANELS	\$100,000	S	16
929	1998-0162-XX	UNK	HAR	US 90A	LAWNDALE	POLK	WIDEN TO 6 LNS	\$1,110,000	L	3A
340	HR0568	0027-09-064	HAR	US 90A	@ ALMEDA (FM 521)		ALMEDA RD O/PASS (NEW I/C)	\$5,580,000	L	3A
3044	T96018-XX	UNK	FOR	US 90A - RICHMOND/ROSN	ALONG US 90A IN FT BEND		CONST PARK & RIDE (250 SPACES)	\$3,500,000	L	5
9802	1996-0706-B-XX	UNK	GAL	VA	UNK		PH 2 - INSTALL COMPUTERIZED TRAFFIC CONTROL SYSTEM IN CBD	\$2,000,000	S	5
9847	1993-0611-A-98	0912-00-105	HAR	VA	HOUSTON TRANSTAR		MEDIA OUTREACH	\$442,000	S	5

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9718	1998-0192- - XX	UNK	HAR	VA	UNK		RCTSS PROGRAM - IMPROVE TRAFFIC CONTROL DEVICES ON MAJOR THOROUGHFARES (FY 01-07)	\$7,500,000	S	5
3022	1996-0483- - XX	0912-00-124	HAR	VA	@ HOU	TRANSTAR CTR	ENHANCE & EXPANSION OF COMPUTER SYS - PH 4	\$2,500,000	L	5
1092	1996-0268- - XX	UNK	HAR	VA	UNK		INCIDENT MANAGMT & TRAVELR INFO FOR CRITICAL RDWY	\$700,000	S	5
5085	1996-0753- - XX	UNK	HAR	VA	UNK		EXPANSION OF RCTSS PROGRAM - INSIDE BELTWAY NOT ON BUS RTS	\$32,400,000	S	5
1908	1995-0301- - XX	0912-00-909	HAR	VA	VARIOUS LIMITS		FUTURE ON-SYSTEM BRIDGE PROJECTS	\$1,030,173	S	6A
1910	1995-0302- - XX	0912-00-924	HAR	VA	VARIOUS LIMITS		FUTURE OFF-SYSTEM BRIDGE REPLACEMENT PROJECTS	\$15,000	S	6B
9717	1998-0191- - XX	UNK	HAR	VA	UNK		RCTSS: TRAFFIC SYNCHRONIZATION/CONGESTION & INCIDENT MGMNT (FY 01-07)	\$7,500,000	S	5
5086	1996-0754- - XX	UNK	HAR	VA	UNK		EXPANSION OF RCTSS PROGRAM - OUTSIDE BELTWAY NOT ON BUS RTS	\$37,536,000	S	5
1950	1995-0377- - XX	0912-00-906	HAR	VA	VARIOUS LIMITS		REHAB OF STATE HIGHWAYS	\$3,140,000	S	14
1093	1996-0269- - XX	UNK	HAR	VA	UNK		INTEGRATED TRANSP MANAGMT IN HIGH WATER AREAS	\$450,000	S	5
1091	1996-0265- - XX	UNK	HAR	VA	UNK		AUTOMATED INCIDENT MANAGMT STRATEGIES & SUPPORT SYSTEM	\$450,000	S	5
1923	1995-0307- - XX	0912-00-930	HAR	VA	VARIOUS LIMITS		MISC DISCRETIONARY PROJECTS	\$774,000	S	11

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1046	1995-0386-XX	0912-71-924	HAR	VA	VARIOUS LIMITS		IVHS CORRIDOR DEMONSTRATION	\$5,000,000	S	15
1043	1993-0647-XX	0912-71-922	HAR	VA	VARIOUS LIMITS		IVHS CORRIDOR DEMONSTRATION	\$5,000,000	S	15
9749	1998-0194-XX	UNK	VA	VA	UNK		ATMS/CTMS/RCTSS PROGRAM (FY 08-20)	\$69,062,500	L	5
6001	1996-0520-C-XX	UNK	VA	VA	UNK		REGIONAL VANPOOL PROGRAM FY 01 - 07	\$9,710,680	S	5
9746	1998-0011-XX	UNK	VA	VA	UNK		FUTURE TSM-SIGNALIZATION PROJECTS (FY 08-20)	\$140,670,889	L	5
6000	1996-0521-D-XX	UNK	VA	VA	UNK		TELECOMMUTING PROGRAM FY 01 - 07	\$837,305	S	5
9387	1995-0069-G-XX	UNK	VA	VA	VARIOUS LIMITS		CONT OF ALT FUEL PROGRAM (\$1.760M/YR) FY 01-05	\$8,800,000	S	5
5087	1996-0755-XX	UNK	VA	VA	UNK		EXPANSION OF RCTSS PROGRAM - SIGNALS OUTSIDE METRO SERVICE AREA	\$50,388,000	L	5
9721	1998-0195-XX	UNK	VA	VA	UNK		EXPANSION OF RCTSS PROGRAM - OUTSIDE BELTWAY 8 ON BUS RTS PRIORITY 1 (FY 01-07)	\$14,000,000	S	5
9719	1998-0193-XX	0912-71-932	VA	VA	UNK		ATMS/CTMS/RCTSS PROGRAM (FY 01-07)	\$37,207,500	S	5
9389	1996-0492-D-XX	UNK	VA	VA	8-COUNTY NON-ATTAINMEN		CLEAN AIR ACTION PUBLIC OUTREACH PROG (\$ 440K/YR)	\$3,850,000	S	5
408	1996-0149-XX	UNK	FOR	VICKSBURG DR	HILLCROFT	SH 122	CONST 4 LN CONCRT DIV W/ STRM, ESPLANADES, C&G, ST LIGHTS & LNDSCPNG	\$5,508,000	S	4C

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2395	1996-0347- - XX	UNK	FOR	W AIRPORT	RED GULLY CRK		NEW BRIDGE	\$280,500	S	TBD
976	1998-0163- - XX	UNK	FOR	W AIRPORT BLVD	W OF S KIRKWOOD	HAR C/L	WIDEN TO 6 LN DIV	\$5,960,000	S	4C
432	1996-0091- - XX	UNK	FOR	W AIRPORT BLVD	ELDRIDGE RD	SH 6	CONST 1/2 OF 4 LN BLVD W/ STRM & RELATED DRNG	\$2,781,200	S	4C
434	1996-0092- - XX	UNK	FOR	W AIRPORT BLVD	SH 6	SH 99	CONST 4 LN BLVD	\$10,000,000	S	4E
969	1998-0165- - XX	UNK	MON	W LAKE HOUSTON PKWY	FORD RD	ROMAN FOREST	CONST 4 LN UNDIV ROAD	\$15,190,000	L	4E
970	1998-0167- - XX	UNK	MON	WALDEN (EXT)	WALDEN	FM 149	CONST 2 LN UNDIV ROAD	\$3,420,000	L	4E
5048	N-0626	UNK	HAR	WALLISVILLE	NORTH WAYSIDE	IH 610 (E)	WIDEN TO 4 LN DIV	\$4,240,000	L	4C
5042	HR4030	UNK	HAR	WAYSIDE	LEY	TIDWELL	WIDEN TO 6 LN DIV	\$3,600,000	S	4C
2397	1996-0350- - XX	UNK	FOR	WEEKS	ROBINOWITZ DICH		REPLACE BRIDGE	\$54,450	S	TBD
2398	1996-0351- - XX	UNK	FOR	WERNEKE	SNAKE CRK		REPLACE BRIDGE	\$264,000	S	TBD
142	HR5270	UNK	HAR	WESLAYAN	BISSONNET	BELLAIRE BLVD	WIDEN TO 4 LN UNDIV	\$2,820,000	S	4C
158	HR0596	UNK	HAR	WEST RD	AIRLINE	US 59 (N)	CONST 4 LN UNDIV	\$14,160,000	S	4C

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948	HR0595	UNK	HAR	WEST RD	HOLLISTER	VETERANS MEMORIAL	CONST NEW 4 LN	\$11,620,000	S	4C
341	HR0597	UNK	HAR	WEST RD	SH 99	BARKER-CYPRESS	CONST NEW 4 LN UNDIV	\$26,660,000	L	4E
2986	1996-0447- - XX	UNK	HAR	WESTHEIMER	@ WILCREST		INTERSECTION IMPROVEMENTS	\$150,000	S	5
161	99SOV	UNK	HAR	WESTPARK	WILCREST	DAIRY ASHFORD	CONST NEW 6 LN DIV	\$6,300,000	S	4C
160	99SOV	UNK	HAR	WESTPARK	ELDRIDGE	SH 6	CONST NEW 6 LN ROAD	\$3,600,000	S	4C
163	HR0608B	UNK	HAR	WESTVIEW	GESSNER	WIRT RD	WIDEN TO 4 LN	\$9,020,000	S	4C
5009	N-0591	UNK	HAR	WESTVIEW	BW 8 (W)	BRITTMORE	CONST 4 LN DIV	\$1,050,000	S	4C
164	HR0610A	UNK	HAR	WHEELER	BLODGETT	CALHOUN	WIDEN TO 4 LN UNDIV	\$2,200,000	L	4C
4096	HR0610B	UNK	HAR	WHEELER	OST	SH 35	CONST 4 LN UNDIV	\$5,150,000	L	4C
5050	1996-0719- - XX	UNK	HAR	WHITE OAK/KATY RAIL	14TH ST	MAIN ST	BIKE TRAIL/LANE ON RDS & RR ROW	\$2,136,000	L	5
165	1996-0060- - XX	UNK	HAR	WILCREST	MEMORIAL	BELLAIRE	WIDEN TO 6 LNS	\$6,510,000	L	4C
166	HR0612	UNK	HAR	WILL CLAYTON PKWY	US 59 (N)	WILSON	WIDEN TO 4 LN W/ CLT, BRIDGES & SIGNALS	\$5,240,000	S	4C

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978	1998-0168- - XX	UNK	FOR	WILLIAMS TRACE BLVD	US 59	OYSTER CREEK	WIDEN TO 6 LN DIV	\$2,080,000	S	4C
5060	1996-0729- - XX	UNK	FOR	WILLIAMS TRACE BLVD	@ OYSTER CREEK		CONST BIKE/PED BRIDGE OVER OYSTER CREEK	\$234,000	L	5
192	MG0056	UNK	MON	WILLIS-C/L RD	FM 2432	SAN JAC C/L	WIDEN TO 4 LN UNDIV	\$13,440,000	L	4E
167	HR0614B	UNK	HAR	WILSON RD	BW 8 (N)	FM 1960 BYPASS	WIDEN TO 4 LN	\$4,500,000	L	4C
342	HR0619	UNK	HAR	WOODFOREST	OATES	JOHN RALSTON	CONST 4 LN UNDIV	\$12,330,000	S	4C
343	HR0620	UNK	HAR	WOODLAND HILLS	KINGWOOD	MON C\L	CONST 4 LN RD	\$4,110,000	S	4C
344	HR0621	UNK	HAR	WOODLAND HILLS	HAMBLIN RD	BW 8 (N)	CONST 6 LN DIV W/ BRIDGE OVER SPRING CRK	\$40,440,000	S	4C
193	MG0057	UNK	MON	WOODLAND HILLS	NORTH PARK	FORD ROAD	CONST NEW 2 LN UNDIV	\$1,690,000	L	4E
7060	MG0058D	UNK	MON	WOODLANDS PKWY	FM 2978	SH 249	PH 3: WIDEN TO 4 LN DIV	\$0	L	4E
7059	MG0058C	UNK	MON	WOODLANDS PKWY	FLINTRIDGE	FM 2978	PH 2: WIDEN TO 4 LN DIV	\$2,928,000	L	4E
2924	1996-0434- - XX	UNK	MON	WOODLANDS PKWY	IH 45	GOSLING RD	WIDEN TO 6 LN DIV	\$6,178,000	S	4D
195	MG0058B	UNK	MON	WOODLANDS PKWY	BRANCH CROSSING	FM 2978	PH 1: CONST NEW 2 LN DIV	\$2,835,000	L	4E

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242	99SOV	UNK	FOR	WOODS RD	IH 10 (W)	FM 359	CONST NEW 2 LN UNDIV	\$6,350,000	L	4E
241	99SOV	UNK	WAL	WOODS RD	MORTON	US 90	CONST NEW 2 LN UNDIV	\$3,820,000	L	4E
2400	1996-0353- XX	UNK	FOR	Y U JONES	RABBS BAYOU		REPLACE BRIDGE	\$360,000	S	TBD
2399	1996-0352- XX	UNK	FOR	Y U JONES	LOWER RABBS BAYOU		REPLACE BRIDGE	\$288,000	S	TBD

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2022 MTP: Locally Funded Projects

(sorted by street, co)

PROJ ID	CO	STREET	FROM LOCATION	TO LOCATION	PROJECT DESCRIPTION	LEAD AGENCY	TOTAL COST
6025	HAR	ALDINE WESTFIELD	FM 1960	N SPRING	CONSTRUCT CENTER LEFT TRN (CFT) LN	HARRIS COUNTY	\$1,000,000
9064	HAR	ALDINE WESTFIELD	BW 8	FM 1960	WIDEN & RECONSTRUCT TO 4 LN DIV W/ C&G	HARRIS COUNTY	\$5,000,000
6017	HAR	ALIEF CLODINE	SH 6	FOR C/L	WIDEN TO 4 LN CONCRETE W/ STORM SEWERS	HARRIS COUNTY	\$6,000,000
2595	HAR	ALMEDA GENOA	ALMEDA RD	SH 288	WIDEN TO 4 LN CONCRT BLVD SECT W/ STRM SEWER	CITY OF HOUSTON/HARRIS COUNTY	\$6,467,000
6004	HAR	BARKER CYPRESS	KEITH HARROW	W LITTLE YORK	WIDEN TO 4 LNS W/ MEDIAN & TRN LNS	HARRIS COUNTY	\$900,000
9071	HAR	BARKER CYPRESS RD	1.8 MI S SOUTH RD	STA 110+00 - PHASE II (WEST RD)	WID TO 4 LN CONCRETE BLVD - PHASE II	HARRIS COUNTY	\$2,890,700
9075	HAR	BAY AREA BLVD	EL CAMINO REAL	SPACE CENTER	WID 6 LNS	CITY OF HOUSTON	\$535,000
620	HAR	BEAMER RD	S CANYON	W BAY AREA BLVD	WIDEN TO 4 LN CONCRETE BLVD SEC W/ BRIDGES & DRAINAGE	HARRIS COUNTY	\$7,000,000
9076	HAR	BEAMER RD	S CANYON	SAGEDOWN	WIDEN FROM 2 TO 4 LN BLVD SEC W/ BRIDGES & DRAINAGE	HARRIS COUNTY	\$1,500,000
5015	HAR	BELLFORT W	SYNOTT	WEST CITY LIMITS	CONST 4 LN DIV	CITY OF HOUSTON	\$1,100,000
9080	HAR	BELLFORT W	BUFFALO SPEEDWAY	STELLA LINK	CONST 2 24' CONCRT RDWYS	CITY OF HOUSTON	\$2,600,000
9087	HAR	BLALOCK	TAYLORCREST	MEMORIAL	RECONST & REPAVE 2 LN OPEN DITCH ASPH RDWY	METRO	\$100,000
9088	HAR	BLALOCK FOREST	BLALOCK	TERMINUS	RECONST 2 LN ASPH RDWY	METRO	\$490,000
9279	HAR	BRITTMORE	US 290	TANNER RD	WIDEN TO 4 LN RD	HARRIS COUNTY	\$6,567,000

2022 MTP: Locally Funded Projects

(sorted by street, co)

PROJ ID	CO	STREET	FROM LOCATION	TO LOCATION	PROJECT DESCRIPTION	LEAD AGENCY	TOTAL COST
6019	HAR	BRITTMORE RD	CLAY	TANNER	WIDEN TO 4 LN UNDIV CONCRETE PAVEMENT W/ CLT, CURBS SEWERS & SIGNAL UPGRADES	HARRIS COUNTY	\$4,430,000
9094	HAR	BUNKERHILL RD	TAYLORCREST	MEMORIAL	RECONSTR 2 LN RDWY	METRO	\$250,000
9284	FOR	BURNEY RD	JESS PIRTLE BLVD	VOSS RD	RECONST & WIDEN TO 40' RDWY W/ TRN BAYS	CITY OF SUGAR LAND	\$2,400,000
2994	HAR	BW 8	S OF BRIAR FOREST		CONSTRUCT ADDT'L RAMPS TO TOLLROAD	TXDOT/HCTRA	\$2,000,000
9113	HAR	CLAY RD	FRY RD	W OF WESTFIELD VILLAGE DR	WID TO 4 LN DIV ASPHALT RD W/ ROADSIDE DITCHES	HARRIS COUNTY	\$1,700,000
6023	HAR	CUTTEN RD	W GREENS	FM 1960	WIDEN TO 4 LN CONCRETE BLVD W/ STORM SEWERS, CURBS, MEDIANS & SIGNALS	HARRIS COUNTY	\$7,000,000
6018	HAR	CYPRESS N HOUSTON	US 290	JONES	WIDEN TO 6 LN W/ MEDIAN & TRN LNS	HARRIS COUNTY	\$6,500,000
9117	HAR	CYPRESSWOOD DR	S OF GRANT RD	E OF ELDRIDGE PKWY N	CONST NEW 4 LN CONCRETE BLVD SECTION	HARRIS COUNTY	\$300,000
65	HAR	DELL DALE	WOODFOREST	MARKET	WIDEN TO 4 LN DIV W/ CLT	HARRIS COUNTY	\$3,538,400
9122	HAR	EL DORADO BLVD	CARRACK	BEAMER RD	CONST STANDRD 4 LN CONCRT BLVD SEC	HARRIS COUNTY	\$500,000
9287	HAR	EL DORADO BLVD	IH 45	BEAMER RD	CONSTRUCT 4 LN CONCRETE BLVD SEC W/ BRIDGES & DRAINAGE	CITY OF HOUSTON/HARRIS COUNTY	\$4,500,000
628	HAR	ELLA	SH 249	WEST RD	CONST 4 LN CONCRETE BLVD SEC W/ BRIDGES & DRAINAGE	HARRIS COUNTY	\$3,500,000
6071	HAR	ELLA	GULF BANK	SH 249	CONST 4 LN CONCRETE BLVD SEC W/ BRIDGES & DRAINAGE	HARRIS COUNTY	\$2,200,000
9124	HAR	ELLA BLVD	GEARS RD	2400' S OF RANKIN RD	CONST NEW 4 LN CONCRETE BLVD W/ BR & TRAFFIC SIGS	HARRIS COUNTY	\$4,000,000

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(sorted by street, co)

PROJ ID	CO	STREET	FROM LOCATION	TO LOCATION	PROJECT DESCRIPTION	LEAD AGENCY	TOTAL COST
9133	HAR	FONDREN BRIDGE	OVER BUFFALO BAYOU		RECONST 2 LN BRIDGE	METRO	\$634,000
6005	HAR	FRANZ RD	WESTGREEN	MASON RD	WIDEN TO 4 LN CONCRETE W/ STORM SEWERS	HARRIS COUNTY	\$3,870,000
6027	HAR	FRANZ RD	MASON RD	SH 99	WIDEN TO 4 LN CONCRETE RD W/ STORM SEWERS	HARRIS COUNTY	\$4,060,000
9137	HAR	FRANZ RD	SH 99	KATY HOCKLEY CUT OFF LN	WIDEN TO 4 LN CONCRETE BLVD W/ STORM SEWERS	HARRIS COUNTY	\$0
9143	HAR	FUQUA	MYKAWA	TELEPHONE	CONST NEW 4 LN CONCRETE ROAD	CITY OF HOUSTON	\$551,000
1077	HAR	GARTH RD	BAKER	INDEPENDENCE	ADD 5TH LN	CITY OF BAYTOWN	\$100,000
9997	HAR	GARTH RD	IH 10	WALLISVILLE	4 LN CONCRETE W/ CLT, C&G, STORM SEWER	HARRIS COUNTY	\$3,934,000
6020	HAR	GEARS RD	VETERANS MEMORIAL	ELLA	WIDEN TO 4 LN UNDIV CONCRETE PAVEMENT W/ CURBS, SEWERS, BRIDGE & SIGNAL UPGRADES	HARRIS COUNTY	\$4,100,000
9274	HAR	GENOA RED BLUFF	BURKE RD	BW 8	WID TO 4 LN DIV CONCRT RD W/C&G & CLT	HARRIS COUNTY	\$1,831,000
9282	HAR	GENOA RED BLUFF	BW 8	JANA LN	WIDEN TO 5 LN CONCRT RD W/ C&G & STRM SEWER	HARRIS COUNTY	\$6,300,000
9145	HAR	GESSNER	@IH 10		RCONST OF RT TURN LNS	METRO	\$1,364,000
9149	HAR	GOSLING RD	BRIDGE ACROSS SPRING CREEK	W/APPROCHES	CONST NEW 2 LN BR W/APPROACHES	HARRIS COUNTY	\$5,000,000
9152	HAR	GOSLING RD	FM 2920	SPRING STUEBNER RD	CONST NEW 2 LN RDWY	HARRIS COUNTY	\$1,400,000
6016	HAR	GREENHOUSE	HANSTEN COURT	GREENWIND CHASE	4 LN CONCRETE W/ STORM SEWERS	HARRIS COUNTY	\$1,250,000

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PROJ ID	CO	STREET	FROM LOCATION	TO LOCATION	PROJECT DESCRIPTION	LEAD AGENCY	TOTAL COST
9155	HAR	GREENHOUSE RD	N OF MISTY COVE	CLAY RD	WID TO 4 LN DIV CONCRETE RD W/ STRM DRNG	HARRIS COUNTY	\$1,600,000
9156	HAR	GREENHOUSE RD	N OF MORTON RD	N OF MISTY COVE	WID TO 4 LN DIV CONCRETE RD W/ STRM DRNG	HARRIS COUNTY	\$2,800,000
9157	HAR	GREENHOUSE RD	SAUMS RD	SPANISH NEEDLE DR	WID TO 4 LN DIV CONCRETE RD W/ STRM DRNG	HARRIS COUNTY	\$1,700,000
9158	HAR	GREENS	IH 45 (N)	IMPERIAL VALLEY	WID 2 24' CONCRT RDWYS TO 2 33' CONCRT RDWYS	CITY OF HOUSTON	\$700,000
6021	HAR	GREENS RD	OLD GREENS	ALDINE WESTFIELD	WIDEN TO 4 LN BLVD W/ CURBS, STORM SEWERS, MEDIANS & SIGNALS	HARRIS COUNTY	\$4,400,000
6061	HAR	GREENS RD	JFK	ALDINE WESTFIELD	WIDEN TO 4 LN DIV	CITY OF HOUSTON	\$650,000
451	HAR	HARDY TOLL RD	IH 610	HOUSTON CBD	CONST 6 LN TOLL EXTENSION	HCTRA	\$76,000,000
9992	HAR	HIRSCH	MT HOUSTON	LANGLEY RD	CONSTRUCT 2 LN CONCRETE BLVD SECTION, 3 SIGNALIZED INTERSECTIONS, DRAINAGE	HARRIS COUNTY	\$2,500,000
9990	HAR	HOMESTEAD	MT HOUSTON	GREENS BAYOU	WIDEN TO 4 LN CONCRETE BLVD SECTION W/ BRIDGES & DRAINAGE	HARRIS COUNTY	\$3,850,000
947	HAR	HOWELL-SUGARLAND	ALIEF-CLODINE	BISSONNET	WIDEN TO 4 LN CONCRT W/ C&G	HARRIS COUNTY	\$2,500,000
9166	HAR	HUFFMEISTER	CYPRESS N HOUSTON	TELGE	WID TO 4 LN CONCRETE BLVD W/ BRIDGE OVER CYPRESS CRK	HARRIS COUNTY	\$10,000,000
9998	HAR	JANA LN	FAIRMONT	SPENCER	CONSTRUCT 4 LN CONCRETE BLVD W/ C&G, STORM SEWER	HARRIS COUNTY	\$2,530,000
9172	HAR	KATY-FORT BEND RD	SH 99	800' W SH 99	CONST TRANSITION BETWN 2 LN & 4 LN SEC	HARRIS COUNTY	\$550,500
6013	HAR	KATY-FT BEND CO RD	IH 10	FRANZ RD	WIDENT TO 4 LN CONCRETE BLVD W/ STORM SEWER, BRIDGE & SIGNALS	HARRIS COUNTY	\$2,850,000

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(sorted by street, co)

PROJ ID	CO	STREET	FROM LOCATION	TO LOCATION	PROJECT DESCRIPTION	LEAD AGENCY	TOTAL COST
9173	HAR	KEMPWOOD DR	BW 8	SPRING SHADOWS SUBDIV	CONST STANDRD 4 LN CONCRETE BLVD SEC	HARRIS COUNTY	\$982,600
5003	HAR	KIRKWOOD	ALIEF CLODINE	BISSONNET	WIDEN TO 4 LN DIV	CITY OF HOUSTON	\$10,425,000
9176	HAR	KUYKENDAHL RD	SPRING CYPRESS	FM 2920	WID TO 4 LN CONCRETE UNDIV W/ CLT IN SECTIONS, SIGNALS, SEWERS & LEFT TRN LNS	HARRIS COUNTY	\$3,850,000
9178	HAR	LAKESHORE DR	NASA RD 1	TALLOWOOD	RECONST 2 LN RDWY	METRO	\$2,100,000
9299	HAR	LEY	HOMESTEAD	N WAYSIDE	WIDEN TO 4 LNS	CITY OF HOUSTON	\$1,455,000
6062	HAR	LITTLE YORK	N SHEPHERD	ALABONSON	WIDEN TO 4 LN UNDIV RD	CITY OF HOUSTON	\$9,650,000
6029	HAR	LITTLE YORK W	QUEENSTON BLVD	SH 6	4 LN CONCRETE W/ C&G, STORM SEWERS, LANGHAM CRK BRIDGE	HARRIS COUNTY	\$0
9181	HAR	LITTLE YORK W	EMPIRE CENTRAL BLVD	FAIRBANKS N HOUSTON RD	WIDEN TO STANDRD 4 LN CONCRETE BLVD SEC W/ CENTER TRN LN	HARRIS COUNTY	\$1,798,000
9182	HAR	LITTLE YORK W	FAIRBANKS N HOUSTON RD	HOUSTON CITY LIMITS	WIDEN TO STANDRD 4 LN CONCRETE BLVD SEC W/ CENTER TRN LN	HARRIS COUNTY	\$2,262,000
9184	HAR	LITTLE YORK W	BINGLE	CITY LIMITS	WID TO 4 LN DIV	CITY OF HOUSTON	\$280,000
9185	HAR	LONG POINT	HEMPSTEAD	GESSNER	WIDEN TO 4 LN W/ CLT	CITY OF HOUSTON	\$5,000,000
9187	HAR	MEMORIAL DR	DUCHESNE	VOSS	RCONST 2 LN RDWY	HARRIS COUNTY	\$3,000,000
6008	HAR	MORTON	BARKER CYPRESS	GREENHOUSE	WIDEN TO 4 LN W/ MEDIAN & TRN LNS	HARRIS COUNTY	\$1,000,000
9293	HAR	OREM	ALMEDA	TELEPHONE	CONST NEW 4 LN CONCRETE BLVD SEC W/ BRIDGES & DRAINAGE	CITY OF HOUSTON/HARRIS COUNTY	\$22,300,000

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(sorted by street, co)

PROJ ID	CO	STREET	FROM LOCATION	TO LOCATION	PROJECT DESCRIPTION	LEAD AGENCY	TOTAL COST
127	HAR	PARK ROW	BARKER CYPRESS	RICEFIELD (BENTVINE)	CONST NEW 4 LN ROAD	HARRIS COUNTY	\$3,000,000
5043	HAR	PARKER	IH 45	AIRLINE	WIDEN TO 4 LN DIV	CITY OF HOUSTON	\$3,100,000
9197	HAR	PIFER	BEINHORN	BRIDGEWOOD	RECONST 2 LN RDWY	METRO	\$50,000
6059	HAR	PINEMONT	T C JESTER	ELLA	WIDEN TO 4 LN DIV	CITY OF HOUSTON	\$408,000
6060	HAR	PINEMONT	HOLLISTER	HEMPSTEAD	WIDEN TO 4 LN DIV	CITY OF HOUSTON	\$2,275,000
9198	HAR	PINEY POINT / GREENBAY	SOLDIER'S CRK	MEMORIAL	RECONST 2 LN ASPHLT OPEN DTCH RDWYS TO 2 LN CONCRETE	METRO	\$4,800,000
9200	HAR	QUEENSTON BLVD	FM 529	COPPERFIELD SUBDIV	CONST STANDRD 4 LN CONCRETE BLVD SEC	HARRIS COUNTY	\$1,500,000
9205	HAR	SAUMS RD	E OF FRY RD	W OF HCFCD UNIT U101-02-00	WID TO 4 LN CONCRETE BLVD SEC	HARRIS COUNTY	\$2,000,000
9207	HAR	SCARSDALE BLVD	BOGEY WY	FM 518	CONST STANDRD 4 LN CONCRETE BLVD SEC	HARRIS COUNTY	\$6,100,000
9301	HAR	SOUTH SHAVER	IH 45 (S)	SH 3	WIDEN TO 6 LN DIV	CITY OF HOUSTON	\$403,000
9227	HAR	SPACE CENTER BLVD	EXISTING SPACE CTR BLVD	GENOA-RED BLUFF RD	CONST STANDRD 4 LN CONCRETE BLVD SEC W/ C&G	HARRIS COUNTY	\$7,200,000
9228	HAR	SPEARS RD	VETERANS MEMORIAL BLVD	SPEARS-GEARS RD	WIDEN TO REINFORCED 4 LN CONCRETE BLVD SEC	HARRIS COUNTY	\$6,700,000
141	HAR	SPRING CYPRESS	SH 249	FM 2920	WIDEN TO 4 LN W/ DITCHES, LEFT TRN LNS AT INTERSECTIONS, BRIDGES & SIGNALS	HARRIS COUNTY	\$13,000,000
6022	HAR	SPRING CYPRESS RD	N ELDRIDGE	SH 249	WIDEN TO 4 LN UNDIV ASPHALT W/ DITCHES	HARRIS COUNTY	\$1,000,000

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(sorted by street, co)

PROJ ID	CO	STREET	FROM LOCATION	TO LOCATION	PROJECT DESCRIPTION	LEAD AGENCY	TOTAL COST
9229	HAR	STELLA LINK	BELLAIRE	MAIN	RECONST STELLA LINK	CITY OF HOUSTON	\$2,600,000
9995	HAR	STRAWBERRY RD	FAIRMONT	GRB(?)	2 LN CONCRETE W/ C&G, STORM SEWER	HARRIS COUNTY	\$838,000
9230	HAR	STREY LANE	MEMORIAL	TAYLORCREST	RECONST 2 LN OPEN DITCH ASPHLT RDWY	METRO	\$275,000
9232	HAR	TELGE RD	@ CYPRESS CREEK		WID BRDG TO 5 LNS W/ TWO 6 FT SIDEWALKS	HARRIS COUNTY	\$923,000
9235	HAR	TEXAS AVE	NASA RD 1	BAY AREA BLVD	WID 2 TO 4 LN UNDIV	HARRIS COUNTY	\$3,250,000
9237	HAR	TIDWELL RD	PEARL POINT	BW 8	CONST STANDRD 4 LN CONCRETE BLVD SEC W/ BRIDGES & DRAINAGE	HARRIS COUNTY	\$2,560,000
9239	HAR	TOWNSEN BLVD	US 59	FM 1960	WID TO 4 LN W/ C&G & GSEP AT N HOUSTON AVE	HARRIS COUNTY	\$4,700,000
9295	HAR	TREASCHWIG	FM 1960	HARDY TOLL ROAD	CONST NEW 4 LN OPEN DITCH C&G	HARRIS COUNTY	\$10,920,000
6028	HAR	TRI-CITY BEACH RD	TEXAS AVE	EVERGREEN	WIDEN TO 4 LN CONCRETE BLVD W/ C&G, STORM SEWER	HARRIS COUNTY	\$1,479,580
7053	FOR	UNIVERSITY BLVD	BOUNDARY OF FIRST COLONY LEVEE IMPROVEMENT DIST #2	SH 6	CONSTRUCT 4 LN C&G RDWAY	UNDECIDED	\$0
9256	HAR	VOSS RD	KATY FRWY	WESTVIEW	POINT REPAIR & ASPH O/LAY 2 LN OPEN DITCH ASPH RDWY	METRO	\$200,000
667	HAR	W LAKE HOUSTON PKWY	RR BRIDGE	BW 8	WIDEN TO 4 LN DIV (WEST SEC) W/ BRIDGES & DRAINAGE	HARRIS COUNTY	\$3,000,000
6024	HAR	W RICHEY RD	W GREENS	CHAMPTON FOREST	CONST 4 LN CONCRETE BLVD W/ CURBS, STORM SEWERS & TRN LNS	HARRIS COUNTY	\$1,700,000
9994	HAR	WADE RD	IH 10	WALLISVILLE	CONSTRUCT 2 LN CONCRETE PAVEMENT	HARRIS COUNTY	\$1,052,000

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PROJ ID	CO	STREET	FROM LOCATION	TO LOCATION	PROJECT DESCRIPTION	LEAD AGENCY	TOTAL COST
9259	HAR	WESLAYAN	BELLAIRE	BISSONNET	COMPLETE RECONST 2 LN CONCRETE C&G RDWY	METRO	\$1,310,000
159	HAR	WESTGREEN BLVD	WESTFORK DR	FRANZ	CONSTRUCT 4 LN UNDIV W/ STORM SEWERS	HARRIS COUNTY	\$2,090,000
6006	HAR	WESTHEIMER PKWY	FRY RD	FM 1093	WIDEN TO 4 LN BLVD IN SECTIONS	HARRIS COUNTY	\$8,180,000
2731	HAR	WESTPARK	W OF DAIRY ASHFORD @ HCFCD DITCH		CONST BRIDGE	CITY OF HOUSTON	\$600,000
985	HAR	WESTPARK MET	SH 6	IH 610	CONST 4 LN TOLL FACILITY	HCTRA	\$240,000,000
9266	HAR	WESTVIEW	BW 8	GESSNER	CONST NEW 4 LN CONCRETE RD	CITY OF HOUSTON	\$473,000
9268	HAR	WILCREST	HARWIN	WESTHEIMER	RECONST MAJOR ART WILCREST	CITY OF HOUSTON	\$2,879,000
5010	HAR	YALE	TIDWELL	PARKER	WIDEN TO 4 LN DIV	CITY OF HOUSTON	\$4,500,000
9271	HAR	YELLOWSTONE	LONDON	MLK	RECONST YELLOWSTONE BLVD	CITY OF HOUSTON	\$1,955,000

Total Cost: \$643,115,780

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2000 - 2002 TRANSPORTATION IMPROVEMENT PROGRAM:
Section 5307 Transit Projects
(\$ X 000)

PROJECT NUMBER	LEAD AGENCY	GRANT NUMBER	FUND CAT	PROJECT NAME	PROJECT COST				UNCOMMITTED BALANCE *	PROGRAM YEAR
					FEDERAL COST	STATE COST	LOCAL COST	TOTAL COST		
96TR59	METRO	TX-90-X202	5307	FY1991 Program of Projects Eastex HOV Lane Segment 1B - Tidwell to Will Clayton, Kelley Interchange (Formerly 950263)	\$20,430.0		\$5,107.5	\$25,537.5	\$23.5	2000
950063	METRO	TX-90-X237	5307	FY1992 Program of Projects Advanced Radio Communication System	\$16,307.1		\$4,076.8	\$20,383.9	\$301.5	2000
94359	METRO	TX-90-X337	5307	FY1995 Program of Projects Acquisition 58 Articulated buses Acquisition 102 Midsized buses Bus project management	\$16,107.1 \$19,248.8 \$789.3		\$3,299.0 \$3,942.5 \$197.3	\$19,406.1 \$23,191.3 \$986.6	\$0.0 \$0.0 \$193.3	2000 2000 2000
950066	METRO	TX-90-X337	5307	FY1995 Program of Projects Metropolitan Area Network (Fiber Optic) Addicks P&R Expansion	\$5,986.5 \$1,452.4		\$1,496.6 \$361.1	\$7,483.1 \$1,815.5	\$4,252.8 \$539.3	2000 2000
950266	METRO	TX-90-X372	5307	FY1996 Program of Projects Polk BOF Expansion	\$6,560.0		\$1,640.0	\$8,200.0	\$7,387.3	2000
96TR17	METRO	TX-90-X372	5307	FY1996 Program of Projects Business Development Program Training	\$50.0		\$12.5	\$62.5	\$15.4	2000
96TR55	METRO	TX-90-X403	5307	FY1997 Program of Projects: Bus Acquisitions Acquisition of 25 29' buses Acquisition of 78 45' buses Bus project management	\$4,985.5 \$22,853.2 \$412.0		\$1,021.1 \$4,680.8 \$103.0	\$6,006.6 \$27,534.0 \$515.0	\$233.9 \$23.9 \$404.5	2000 2000 2000
T96140-XX	METRO	TX-90-X403	5307	FY1997 Program of Projects Business Development Program Training	\$160.0		\$40.0	\$200.0	\$132.6	2000
96TR52	METRO	TX-90-X436	5307	FY1998 Program of Projects: Bus Acquisitions (Award pending) Acquisition of 16 29' trolley buses Acquisition of 80 40' buses Acquisition of 14 45' buses Acquisition of 28 60' buses Bus project management	\$3,506.8 \$15,926.5 \$4,213.5 \$8,566.4 \$1,358.5		\$718.2 \$3,262.1 \$863.0 \$1,754.6 \$339.6	\$4,225.0 \$19,188.6 \$5,076.5 \$10,321.0 \$1,698.1	\$0.0 \$0.0 \$0.0 \$0.0 \$1,698.1	2000 2000 2000 2000 2000
T96103-XX	METRO	TX-90-X436	5307	FY1998 Program of Projects (Award pending) Business Development Program Training	\$160.0		\$40.0	\$200.0	\$200.0	2000
T96072B-XX	METRO	TX-90-X436	5307	FY1998 Program of Projects (Award pending) Northwest Station Park & Ride Expansion (Land)	\$820.0		\$205.0	\$1,025.0	\$0.0	2000
	METRO	TX-90-X436	5307	FY1998 Program of Projects (Award pending) Bicycle Racks/Lockers (CMAQ \$)	\$29.6		\$7.4	\$37.0	\$37.0	2000
	METRO	TX-90-X436	5307	FY1998 Program of Projects (Award pending) Regional Computerized Traffic Signal System (CMAQ \$)	\$3,500.0		\$875.0	\$4,375.0	\$4,375.0	2000

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Section 5307 Transit Projects
(\$ X 000)

PROJECT NUMBER	LEAD AGENCY	GRANT NUMBER	FUND CAT	PROJECT NAME	PROJECT COST				UNCOMMITTED BALANCE *	PROGRAM YEAR
					FEDERAL COST	STATE COST	LOCAL COST	TOTAL COST		
T96101-XX	METRO	TX-90-X455	5307	FY1999 Program of Projects: Bus Acquisitions (Award pending)						
				Acquisition of 130 40' buses	\$25,884.7		\$5,301.7	\$31,186.4	\$0.0	2000
				Acquisition of 28 60' buses	\$8,924.0		\$1,827.8	\$10,751.8	\$0.0	2000
				Acquisition of 118 METROLift vans	\$4,897.0		\$1,003.0	\$5,900.0	\$5,900.0	2000
				Acquisition of 2 29' electric buses (CMAQ \$)	\$440.0		\$110.0	\$550.0	\$550.0	2000
				Bus project management	\$908.0		\$227.0	\$1,135.0	\$1,135.0	2000
				Bus Improvements/Capital Maintenance	\$951.0		\$237.8	\$1,188.8	\$1,188.8	2000
	METRO	TX-90-X455	5307	FY1999 Program of Projects: Enhancement Project (Shelters) (Award pending)	\$723.5		\$180.9	\$904.4	\$904.4	2000
	METRO	TX-90-X455	5307	FY1999 Program of Projects (Award pending) Northwest Station Park & Ride Expansion (A/E)	\$528.0		\$132.0	\$660.0	\$660.0	2000
	METRO	TX-90-X455	5307	FY1999 Program of Projects (Award pending) Preventive Maintenance/Major Facilities Rehabilitation Initiative	\$1,193.8		\$298.4	\$1,492.2	\$1,492.2	2000
	METRO	TX-90-X455	5307	FY1999 Program of Projects (Award pending) Central Air Conditioning (CMAQ \$)	\$1,200.0		\$300.0	\$1,500.0	\$1,500.0	2000
	METRO	TX-90-X455	5307	FY1999 Program of Projects (Award pending) Central Business District Shuttle (CMAQ	\$2,850.0		\$712.5	\$3,562.5	\$3,562.5	2000
T96120-XX	METRO		5307	FY2000 Program of Projects: Bus Acquisitions						
				Acquisition of 181 40' buses	\$36,335.9		\$7,442.3	\$43,778.1	\$0.0	2000
				Acquisition of 18 ELFs	\$1,494.0		\$306.0	\$1,800.0	\$1,800.0	2000
				Bus project management	\$760.0		\$190.0	\$950.0	\$950.0	2000
				Bus Improvements/Capital Maintenance	\$1,157.4		\$289.3	\$1,446.7	\$1,446.7	2000
	METRO		5307	FY2000 Program of Projects: Enhancement Project (Shelters)	\$430.6		\$107.6	\$538.2	\$538.2	2000
	METRO		5307	FY2000 Program of Projects Preventive Maintenance/Major Facilities Rehabilitation Initiative	\$1,292.4		\$323.1	\$1,615.5	\$1,615.5	2000
	METRO		5307	FY2000 Program of Projects Regional Computerized Traffic Signal System (CMAQ \$)	\$2,500.0		\$625.0	\$3,125.0	\$3,125.0	2000
	METRO		5307	FY2000 Program of Projects Central Business District Shuttle (CMAQ	\$2,850.0		\$712.5	\$3,562.5	\$3,562.5	2000

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2000 - 2002 TRANSPORTATION IMPROVEMENT PROGRAM:
Section 5307 Transit Projects
(\$ X 000)

PROJECT NUMBER	LEAD AGENCY	GRANT NUMBER	FUND CAT	PROJECT NAME	PROJECT COST				UNCOMMITTED BALANCE *	PROGRAM YEAR
					FEDERAL COST	STATE COST	LOCAL COST	TOTAL COST		
	METRO		5307	FY2001 Program of Projects: Bus Acquisitions Acquisition of 9 40' buses Acquisition of 40' buses Acquisition of 118 METROLift vans Bus project management Bus Improvements/Capital Maintenance	\$1,772.3 \$31,431.2 \$4,897.0 \$776.0 \$2,934.6		\$363.0 \$6,437.7 \$1,003.0 \$194.0 \$733.6	\$2,135.3 \$37,869.0 \$5,900.0 \$970.0 \$3,668.2	\$0.0 \$37,869.0 \$5,900.0 \$970.0 \$3,668.2	2001 2001 2001 2001 2001
	METRO		5307	FY2001 Program of Projects: Enhancement Project (Shelters)	\$463.7		\$115.9	\$579.6	\$579.6	2001
	METRO		5307	FY2001 Program of Projects Preventive Maintenance/Major Facilities Rehabilitation Initiative	\$1,396.0		\$349.0	\$1,745.0	\$1,745.0	2001
	METRO		5307	FY2001 Program of Projects Headquarters Building (A/E)	\$2,688.0		\$672.0	\$3,360.0	\$3,360.0	2001
	METRO		5307	FY2002 Program of Projects: Bus Acquisitions Acquisition of 40' buses Bus project management Bus Improvements/Capital Maintenance	\$26,162.8 \$1,748.4 \$2,695.0		\$6,927.4 \$452.6 \$1,401.0	\$33,117.4 \$2,201.0 \$4,096.0	\$33,117.4 \$2,201.0 \$4,096.0	2002 2002 2002
	METRO		5307	FY2002 Program of Projects: Enhancement Project	\$497.0		\$124.0	\$621.0	\$621.0	2002
	METRO		5307	FY2002 Program of Projects Preventive Maintenance/Major Facilities Rehabilitation Initiative	\$11,487.0		\$5,962.0	\$17,449.0	\$17,449.0	2002
T96062-98	City of Galveston		5307	City of Galv - General Transit Planning	\$80.0		\$20.0	\$100.0	N/A	2000
T96064-98	City of Galveston		5307	City of Galv - Operating Assistance - Fixed Rt. Bus & Rail	\$641.0		\$806.2	\$1,447.2	N/A	2000
	City of Galveston		5307	City of Galv - General Transit Planning & Operating Assistance	\$781.2		N/A	N/A	N/A	2001
	City of Galveston		5307	City of Galv - General Transit Planning & Operating Assistance	\$845.4		N/A	N/A	N/A	2002
T96040-98	Gulf Coast		5307	Galv Co. - General Transit Planning, Op Assistance & Capital Items	\$926.6		\$230.9	\$1,157.5	N/A	2000
	Gulf Coast		5307	Galv Co. - General Transit Planning, Op Assistance, Misc. Capital Items	\$1,001.6		\$250.4	\$1,252.0	N/A	2001
	Gulf Coast		5307	Galv Co. - General Transit Planning, Op Assistance, Misc. Capital Items	\$1,076.2		\$269.1	\$1,345.3	N/A	2002

2022 MTP
2000 - 2002 TRANSPORTATION IMPROVEMENT PROGRAM:
Section 5309 Transit Projects
(\$ X 000)

PROJECT NUMBER	LEAD AGENCY	GRANT NUMBER	FUND CAT	PROJECT NAME	PROJECT COST				UNCOMMITTED BALANCE *	PROGRAM YEAR
					FEDERAL COST	STATE COST	LOCAL COST	TOTAL COST		
96TR11	METRO	TX-03-0196	5309	Southwest HOV Corridor: Segment V HOV Lane (Application pending; grant award scheduled 01/99)	\$18,844.5		\$7,328.4	\$26,172.9	\$26,172.9	2000
96TR10	METRO	TX-03-0119	5309	North HOV Corridor Northline TC Stuebner Airline P&R Local share includes \$12.934M overmatch for Crosstimbers Ramp	\$46,765.0		\$28,522.30	\$75,287.30	\$22,849.9	2000
96TR13	METRO	TX-03-0150	5309	Regional Bus Plan (See project listing) (Note: Of \$500.0 million Federal funds, \$287.0 million is currently under grant contract.)	\$500,000.0		\$500,000.0	\$1,000,000.0	\$88,787.1	2000
950277	METRO	TX-03-174	5309	FY 1995 Fixed Guideway Modernization	\$3,854.8		\$963.7	\$4,818.5	\$4,115.2	2000
96TR57	METRO	TX-03-187	5309	FY 1996 Fixed Guideway Modernization	\$1,752.1		\$438.0	\$2,190.1	\$2,190.1	2000
96TR56	METRO	TX-03-X190	5309	FY 1997 Fixed Guideway Modernization	\$2,404.9		\$601.2	\$3,006.1	\$3,006.1	2000
		TX-03-0195		Advanced Transit Plan 2020 (1998-2003) (Awarded 09/29/98) CBD to Astrodome - Major Investment Study	\$996.8		\$249.2	\$1,246.0	\$1,025.0	2000
	METRO		5309	Advanced Transit Plan 2020 (1998-2003) (Future Award) (See project listing)	\$302,003.2		\$302,750.8	\$604,754.0	\$604,754.0	2000
T96115-XX	METRO	TX-03-XXXX	5309	FY 1998/1999 Fixed Guideway Modernization	\$8,166.3		\$2,041.6	\$10,207.9	\$10,207.9	2000
T96116-XX	METRO			(Application pending; grant award scheduled 06/99)						
T96117-XX	METRO	TX-03-XXXX	5309	FY 2000 Fixed Guideway Modernization	\$5,582.7		\$1,395.7	\$6,978.4	\$6,978.4	2000
	METRO		5309	FY 2001 Fixed Guideway Modernization	\$7,714.8		\$1,928.7	\$9,643.5	\$9,643.5	2001
	METRO		5309	FY 2002 Fixed Guideway Modernization	\$8,492.7		\$2,123.2	\$10,615.9	\$10,615.9	2002
	Gulf Coast Center		5309	Welfare to Work Program	TBD		TBD	TBD		

* Not under contract or not yet expended

2022 MTP
2000 - 2002 TRANSPORTATION IMPROVEMENT PROGRAM:
Section 5309 Transit Projects
(\$ X 000)

PROJECT NUMBER	LEAD AGENCY	GRANT NUMBER	FUND CAT	PROJECT NAME	PROJECT COST				UNCOMMITTED BALANCE *	PROGRAM YEAR
					FEDERAL COST	STATE COST	LOCAL COST	TOTAL COST		
T96022E-98	City of Galveston		5309	Complete Gal Rail Trolley Ext to UTMB	\$3,200.0		\$800.0	\$4,000.0	N/A	2000
T96143-98	City of Galveston		5309	Purchase of Replacement Buses (excludes cost of vehicle conversion)	\$1,600.0		\$400.0	\$2,000.0	N/A	2000
	City of Galveston		5309	FY 2001 - 2002 Category 5309 Projects	TBD		TBD	TBD	N/A	2001 - 2002
	Brazos Transit		5309	FY 2000: Reimbursement of eligible capital operating expenses for Mon Co Commuter Program	\$1,000.0		\$250.0	\$1,250.0		2000
	Brazos Transit		5309	FY 2001: Reimbursement of eligible capital operating expenses for Mon Co Commuter Program	\$1,000.0		\$250.0	\$1,250.0		2001
	Brazos Transit		5309	FY 2002: Reimbursement of eligible capital operating expenses for Mon Co Commuter Program	\$1,000.0		\$250.0	\$1,250.0		2002

* Not under contract or not yet expended

2022 MTP
2000 - 2002 TRANSPORTATION IMPROVEMENT PROGRAM:
Section 5314 Transit Projects
(\$ X 000)

PROJECT NUMBER	LEAD AGENCY	GRANT NUMBER	FUND CAT	PROJECT NAME	PROJECT COST				UNCOMMITTED BALANCE *	PROGRAM YEAR
					FEDERAL COST	STATE COST	LOCAL COST	TOTAL COST		
950273	METRO	TX-26-0004	5314	Advanced Technology Transit Bus	\$4,488.0		\$1,122.0	\$5,610.0	\$868.2	2000
950278	METRO	TX-26-0006	5314	Smart Commuter Intelligent Transportation System	\$500.0	\$2,500.0	\$2,000.0	\$5,000.0	\$42.2	2000
	METRO	TX-26-7007	5314	FY 1999 Vehicle Read End Collision Avoidance Demonstration	\$400.0		\$100.0	\$500.0	\$500.0	2000
	METRO		5314	FY 2000 Vehicle Read End Collision Avoidance Demonstration	\$350.0		\$87.5	\$437.5	\$437.5	2000

* Not under contract or not yet expended

2022 MTP
2000 - 2002 TRANSPORTATION IMPROVEMENT PROGRAM:
METRO LOCALLY FUNDED PROJECTS
(\$ X 000)

PROJECT NUMBER	LEAD AGENCY	GRANT NUMBER	FUND CAT	PROJECT NAME	FY2000	FY2001	FY2002
	METRO		Local	Eastex HOV Corridor: 1A - CBD to Tidwell 1A.2 Lyons to Franklin 1A.3 I-10 to Franklin - Direct Connectors and Ramps Project Management Program Contingency (excludes 1A.FR Frontage Road & 1A.7T Tidwell Interchange)	\$1,513	\$1,084	\$869
	METRO		Local	FY 1999 Katy HOV Extension: SH 6 to Mason Road	\$2,250	\$0	\$0
	METRO		Local	HOV Surveillance, Communications and Control System Gulf HOV SC&C Katy HOV SC&C North HOV SC&C Southwest HOV SC&C Northwest HOV SC&C Eastex HOV SC&C	\$3,685	\$109	\$0
	METRO		Local	Passenger Shelters Passenger Shelters - Regular Passenger Shelters - Special Shelters and Bus Stop Lighting	\$385	\$375	\$375
	METRO		Local	Facility Upgrades	\$7,057	\$3,000	\$3,000
	METRO		Local	LNG Facilities and Equipment	\$177	\$617	\$190
	METRO		Local	Support Vehicles	\$2,566	\$1,855	\$1,828
	METRO		Local	Telephone Interconnect System	\$100	\$25	\$25
	METRO		Local	Tools and Equipment	\$1,207	\$1,253	\$1,413
	METRO		Local	Management Information Systems	\$6,000	\$6,000	\$6,000
	METRO		Local	Furniture and Office Equipment	\$210	\$220	\$230
	METRO		Local	Leasehold Improvements (1201 Louisiana & Ridestores)	\$155	\$160	\$165
	METRO		Local	Advanced Radio Communication System	\$0	\$0	\$500
	METRO		Local	Buffalo Bayou Facility Buildout	\$695	\$0	\$0
	METRO		Local	Automatic Vehicle Identification System Full Fleet	\$991	\$0	\$0
	METRO		Local	Intelligent Transportation System - Translink Laboratory	\$188	\$188	\$188
	METRO		Local	Transit Mobility Improvement Program System Accessibility Bus Pads / Bus Lanes Curb Cut / Intersection Improvements Transit Street Reconstruction	\$2,245	\$735	\$380

2022 MTP
2000 - 2002 TRANSPORTATION IMPROVEMENT PROGRAM:
METRO LOCALLY FUNDED PROJECTS
(\$ X 000)

PROJECT NUMBER	LEAD AGENCY	GRANT NUMBER	FUND CAT	PROJECT NAME	FY2000	FY2001	FY2002
	METRO		Local	Katy HOV Eastern Extension Temporary Slip Ramps	\$100	\$0	\$0
	METRO		Local	HOV System - Operational Development	\$50	\$50	\$50
	METRO		Local	Downtown Transit Superstop Facility	\$400	\$0	\$0
	METRO		Local	Priority Corridor Projects Program Administration Office Integrated Corridor Transportation Management En-Route Transit Information Systems ITS Enhanced Incident Management Auto Traffic Management In Flood Prone Areas Dissemination of Information Automated Incident Management Strategies Quickride (Priority Lane Pricing) Future Projects	\$951	\$759	\$260
	METRO		Local	Intelligent Transportation System - Research Center of Excellence Enhance Customer Information Gulf Advance Bus NOTIF Integrate Transit ATMS METROLift Capacity ATIS for CBD Phase II Real Time Video Surveillance Future Projects	\$648	\$712	\$712
	METRO		Local	Transit Capital Program Development 2020 Long Range Plan West Loop MIS Westpark MIS Other MIS/Capital Development Special Projects Engineering Studies Capital Environmental Studies Interagency Coordination	\$2,230	\$2,730	\$1,930
	METRO		Local	Strategic Planning and C.I.P. Management	\$100	\$100	\$100
	METRO		Local	Groundwater Remediation	\$25	\$0	\$0
	METRO		Local	Capital Project Planning Federal Clean Air Act Americans with Disabilities Act CPTED Corridor Level Modeling Weekend Service Modeling 95 Model Validation	\$84	\$36	\$36
	METRO		Local	Development Projects	\$500	\$500	\$500
	METRO		Local	Uptown/Galleria Package of Projects	\$6,100	\$5,300	\$2,000
	METRO		Local	Gulf HOV/South Loop (I-610) Ramps	\$0	\$0	\$0
	METRO		Local	Bus Acquisitions (Local Component)	\$0	\$0	\$0

2022 MTP: SECTION 5309 TRANSIT PROJECTS FY 03 - 07
(formerly Section 3)

PROJECT NUMBER	LEAD AGENCY	PROJECT DESCRIPTION	FUND CAT	FEDERAL COST	STATE COST	LOCAL COST	TOTAL COST	PROGRAM YR
T96065B-XX	METRO	LNG COMPONENT, MISSION BEND P&R PHASE II, BUS ACQUISITION	5309	\$39,509,500		\$39,509,500	\$79,019,000	03-07
T96087A-XX	METRO	KATY HOV CORRIDOR: KATY HOV CBD TO SH 6 NORTHWEST TRANSIT CTR MODIFICATION MEMORIAL CITY TRANSIT CTR KATY / WEST BELT P&R MODIFICATION KINGSLAND P&R RELOC & EXPANSION	5309	\$159,005,000		\$159,005,000	\$318,010,000	03-07
T96089A-XX	METRO	POST OAK CORRIDOR: POST OAK TR IMPROVMNTS	5309	\$25,000,000		\$25,000,000	\$50,000,000	03-07
T96073B-XX	METRO	SH 6 / FM 1960 CORRIDOR: SH 6 / FM 1960 IMPROVEMENTS COPPERFIELD P&R	5309	\$25,000,000		\$25,000,000	\$50,000,000	03-07
T96079B-XX	METRO	WESTPARK HOV CORRIDOR: WESTPARK HOV HILLCROFT TRANSIT CTR TO WESTCHASE P&R	5309	\$28,210,000		\$28,210,000	\$56,420,000	03-07
T96097-XX	METRO	HEIGHTS TR CENTER MODIFICATION	5309	\$263,000		\$263,000	\$526,000	03-07
T96081-XX	METRO	SOUTHEAST TR CENTER MODIFICATION	5309	\$442,500		\$442,500	\$885,000	03-07
T96074B-XX	METRO	REGIONAL COMPUTERIZED TRAFFIC SIGNAL SYSTEM	5309	\$11,750,000		\$11,750,000	\$23,500,000	03-07
T96075B-XX	METRO	INTELLIGENT TRANSPORTATION SYSTEMS	5309	\$12,000,000		\$12,000,000	\$24,000,000	03-07
T96076B-XX	METRO	TRANSIT STREET IMPROVEMENTS	5309	\$12,500,000		\$12,500,000	\$25,000,000	03-07

2022 MTP: SECTION 5309 TRANSIT PROJECTS FY 08 - 22
(formerly Section 3)

PROJECT NUMBER	LEAD AGENCY	PROJECT DESCRIPTION	FUND CAT	FEDERAL COST	STATE COST	LOCAL COST	TOTAL COST	PROGRAM YR
T96136-XX	CITY OF GALVESTON	CONST TROLLEY EXT TO MOODY GARDENS	5309	\$12,000,000		\$3,000,000	\$15,000,000	08-22
T96065C-XX	METRO	LNG COMPONENT BUS ACQUISITION KATY HOV SH 6 TO MASON RD	5309	\$19,955,000		\$19,955,000	\$39,910,000	08-22
T96096-XX	METRO	CBD TO DOME CORRIDOR	5309	\$113,765,000		\$113,765,000	\$227,530,000	08-22
T96085-XX	METRO	EASTEX HOV CORRIDOR: EASTEX HOV KINGWOOD TO PORTER KASHMERE TRANSIT CTR MODIFICATION ATASCOCITA P&R PORTER P&R	5309	\$13,780,000		\$13,780,000	\$27,560,000	08-22
T96068C-XX	METRO	GULF HOV CORRIDOR: FRIENDSWOOD P&R	5309	\$10,025,000		\$10,025,000	\$20,050,000	08-22
T96086-XX	METRO	I-10 EAST CORRIDOR: BAYTOWN P&R	5309	\$8,450,000		\$8,450,000	\$16,900,000	08-22
T96087B-XX	METRO	KATY HOV CORRIDOR: KATY HOV MASON TO KATY, TX KINGSLAND T-RAMP KATY P&R RELOCATION	5309	\$9,115,000		\$9,115,000	\$18,230,000	08-22
T96088-XX	METRO	NORTH CORRIDOR: NORTH HOV EXT TO MONTGOMERY C/L CYPRESSWOOD P&R WOODLANDS TRANSIT CTR	5309	\$12,495,000		\$12,495,000	\$24,990,000	08-22
T96089B-XX	METRO	POST OAK CORRIDOR: POST OAK TR IMPROVMNTS	5309	\$25,000,000		\$25,000,000	\$50,000,000	08-22
T96090-XX	METRO	SAM HOUSTON TOLL RD IMPROVEMENTS	5309	\$632,000		\$632,000	\$1,264,000	08-22
T96091-XX	METRO	SH 225 CORRIDOR: SH 225 TRANSIT IMPROVEMENTS DEER PARK P&R	5309	\$4,073,000		\$4,073,000	\$8,146,000	08-22
T96092-XX	METRO	SH 249 / BURLINGTON NORTHERN CORRIDOR	5309	\$72,820,000		\$72,820,000	\$145,640,000	08-22
T96073C-XX	METRO	SH 6 / FM 1960 CORRIDOR: SH 6 / FM 1960 IMPROVEMENTS	5309	\$12,500,000		\$12,500,000	\$25,000,000	08-22
T96093-XX	METRO	SH 288 HOV CORRIDOR: PEARLAND P&R	5309	\$3,225,000		\$3,225,000	\$6,450,000	08-22
T96094-XX	METRO	SOUTH LOOP CORRIDOR: SOUTH LOOP TSM WEST LOOP TO SH 288 SOUTH LOOP HOV SH288 TO IH 45 (S)	5309	\$15,000,000		\$15,000,000	\$30,000,000	08-22
T96077B-XX	METRO	SOUTHWEST HOV: SHEPHERD TO SH 6	5309	\$67,135,000		\$67,135,000	\$134,270,000	08-22
T96095-XX	METRO	MISSOURI CITY P&R MODIFICATION	5309	\$755,000		\$755,000	\$1,510,000	08-22
T96079C-XX	METRO	WESTPARK HOV CORRIDOR: WESTPARK HOV WESTCHASE P&R TO MISSION BEND	5309	\$22,330,000		\$22,330,000	\$44,660,000	08-22
T96080-XX	METRO	MAGNOLIA TR CENTER MODIFICATION	5309	\$563,000		\$563,000	\$1,126,000	08-22
T96082-XX	METRO	WESTCHASE TR IMPROVEMENTS	5309	\$500,000		\$500,000	\$1,000,000	08-22
T96083-XX	METRO	FT BEND PARKWAY P&R	5309	\$3,453,500		\$3,453,500	\$6,907,000	08-22
T96076C-XX	METRO	TRANSIT STREET IMPROVEMENTS	5309	\$25,000,000		\$25,000,000	\$50,000,000	08-22
T96084-XX	METRO	BUS ACQUISITIONS (NEW BUSES FOR 2020)	5309	\$7,625,000		\$7,625,000	\$15,250,000	08-22

2022 MTP: SECTION 5307 TRANSIT PROJECTS FY 03 - 07
(formerly Section 9)

PROJECT NUMBER	LEAD AGENCY	PROJECT DESCRIPTION	FUND CAT	FEDERAL COST	STATE COST	LOCAL COST	TOTAL COST	PROGRAM YR
T96137-XX	METRO	FUTURE PROJECTS: BUS ACQUISITIONS - 5307 (FY 01 - 07)	5307	\$197,540,000		\$40,460,000	\$238,000,000	03-07
T96138-XX	GULF COAST CENTER	FUTURE PROJECTS: GALV. CO - OPERATING ASSISTANCE (FY 01 - 07)	5307	\$3,413,907		\$3,413,907	\$6,827,814	03-07
T96118-XX	GULF COAST CENTER	FUTURE PROJECTS: GALV. CO - GENERAL TRANSIT PLANNING (FY 01 - 07)	5307	\$532,000		\$133,000	\$665,000	03-07
T96139-XX	CITY OF GALVESTON	FUTURE PROJECT: CITY OF GALV. - GENERAL TRANSIT PLANNING (FY 01 - 07)	5307	\$560,000		\$140,000	\$700,000	03-07
T96119-XX	CITY OF GALVESTON	FUTURE PROJECT: CITY OF GALV. - OPERATING ASSISTANCE - FIXED RT. BUS & RAIL (FY 01 - 07)	5307	\$8,104,673		\$2,026,168	\$10,130,841	03-07

2022 MTP: SECTION 5307 TRANSIT PROJECTS FY 08 - 22
(formerly Section 9)

PROJECT NUMBER	LEAD AGENCY	PROJECT DESCRIPTION	FUND CAT	FEDERAL COST	STATE COST	LOCAL COST	TOTAL COST	PROGRAM YR
T96121-XX	METRO	FUTURE PROJECTS: BUS ACQUISITIONS (FY 08 - 20)	5307	\$366,860,000		\$75,140,000	\$442,000,000	08-22
T96122-XX	GULF COAST CENTER	FUTURE PROJECTS: GALV. CO - OPERATING ASSISTANCE (FY 08 - 20)	5307	\$6,340,113		\$6,340,113	\$12,680,226	08-22
T96123-XX	GULF COAST CENTER	FUTURE PROJECTS: GALV. CO - GENERAL TRANSIT PLANNING (FY 08 - 20)	5307	\$988,000		\$247,000	\$1,235,000	08-22
T96124-XX	CITY OF GALVESTON	FUTURE PROJECT: CITY OF GALV. - GENERAL TRANSIT PLANNING (FY 08 - 20)	5307	\$1,040,000		\$260,000	\$1,300,000	08-22
T96125-XX	CITY OF GALVESTON	FUTURE PROJECT: CITY OF GALV. - OPERATING ASSISTANCE - FIXED RT. BUS & RAIL (FY 08 - 20)	5307	\$15,051,536		\$3,762,883	\$18,814,419	08-22
T96134-XX	CITY OF BAYTOWN	FUTURE PUBLIC TRANSIT SERVICE	5307	\$2,600,000		\$650,000	\$3,250,000	08-22

2022 MTP: SECTION 5310 TRANSIT PROJECTS FY 03 - 07
(formerly Section 16)

PROJECT NUMBER	LEAD AGENCY	PROJECT DESCRIPTION	FUND CAT	FEDERAL COST	STATE COST	LOCAL COST	TOTAL PROGRAM COST	PROGRAM YR
T96126-XX	TXDOT	FUTURE 5310 PROJECTS (FY 01 - 07)	5310	\$839,065		\$209,766	\$1,048,831	03-07

2022 MTP: SECTION 5310 TRANSIT PROJECTS FY 08 - 22
(formerly Section 16)

PROJECT NUMBER	LEAD AGENCY	PROJECT DESCRIPTION	FUND CAT	FEDERAL COST	STATE COST	LOCAL COST	TOTAL PROGRAM COST	YR
T96127-XX	TXDOT	FUTURE 5310 PROJECTS (FY 08 - 20)	5310	\$1,558,263		\$389,566	\$1,947,829	08-22

2022 MTP: SECTION 5311 TRANSIT PROJECTS FY 03 - 07
(formerly Section 18)

PROJECT NUMBER	LEAD AGENCY	PROJECT DESCRIPTION	FUND CAT	FEDERAL COST	STATE COST	LOCAL COST	TOTAL PROGRAM COST	PROGRAM YR
T96128-XX	BRAZOS TRANSIT	RURAL MOBILITY OPERATING COST (FY 01-07)	5311	\$30,647,183	\$8,247,512	\$6,823,950	\$45,718,645	03-07
T96129-XX	GULF COAST CENTER	BRA CO PUBLIC TRANSIT SVCS - OP ASSISTANCE, EQUIPMENT & ADMINISTRATIVE ACT (FY 01-07)	5311	\$1,462,139	\$725,417	\$368,270	\$2,555,826	03-07
T96130-XX	COLORADO TRANSIT	OPERATING ASSISTANCE (FY 01-07)	5311	\$3,710,910	\$1,240,631	\$1,125,229	\$6,076,770	03-07

2022 MTP: SECTION 5311 TRANSIT PROJECTS FY 08 - 22
(formerly Section 18)

PROJECT NUMBER	LEAD AGENCY	PROJECT DESCRIPTION	FUND CAT	FEDERAL COST	STATE COST	LOCAL COST	TOTAL PROGRAM COST	PROGRAM YR
T96131-XX	BRAZOS TRANSIT	RURAL MOBILITY OPERATING COST (FY 08-20)	5311	\$56,916,197	\$15,316,808	\$12,673,050	\$84,906,055	08-22
T96132-XX	GULF COAST CENTER	BRA CO PUBLIC TRANSIT SVCS - OP ASSISTANCE, EQUIPMENT & ADMINISTRATIVE ACT (FY 08-20)	5311	\$2,715,401	\$1,347,203	\$683,930	\$4,746,534	08-22
T96133-XX	COLORADO TRANSIT	OPERATING ASSISTANCE (FY 08-20)	5311	\$6,891,690	\$2,304,029	\$2,089,711	\$11,285,430	08-22

Unfunded Needs in the Region

STREET	CO.	FROM	TO	PROJECT DESCRIPTION	ESTIMATED PROJECT COST
27TH	GAL	BAYSHORE	FM 517	Widen from 2 to 4 lanes	\$1,210,571
ALDINE MAIL	HAR	HARDY	ALDINE WEST	Widen from 2 to 4 lanes	\$2,058,462
ALDINE WESTFIELD	HAR	RICHEY	RANKIN	Widen from 2 to 4 lanes	\$2,070,168
ALLEN GENOA	HAR	SOUTHMORE	PASADENA	Widen from 4 to 6 lanes	\$1,924,968
ALMEDA GENOA	HAR	BLACKHAWK	MONROE	Widen from 4 to 6 lanes	\$1,792,111
ANTOINE	HAR	IH 10	VICTORY	Widen from 4 to 6 lanes	\$8,741,679
ATASCOCITA	HAR	LAKE HOUSTON	JETRO	Widen from 4 to 6 lane divided	\$8,179,877
AVE. D	HAR	FRANZ	MORTON	Widen from 2 to 4 lanes	\$2,056,927
BAMMEL	HAR	BW 8	RICHEY	Widen from 4 to 6 lanes	\$3,396,237
BARKER CYPRESS	HAR	KINGSLAND	MORTON	Widen from 2 & 4 to 6 lane divided	\$4,592,352
BAY AREA	GAL	FM 528	SH 3	Widen from 6 to 8 lanes	\$4,037,011
BAY AREA	HAR	SPACE CENTER	MIDDLEBROOK	Widen from 4 to 6 lanes	\$2,727,586
BEAMER	HAR	BAY AREA BLVD	DIXIE FARM	Widen from 4 to 6 lanes	\$2,987,155
BEAMER	HAR	SCARSDALE	BW 8	Widen from 4 to 6 lanes	\$3,049,151
BEECHNUT	HAR	IH 610 (W)	ELDRIDGE	Widen from 6 to 8 lanes	\$25,154,381
BINGLE	HAR	HAMMERLY	TIDWELL	Widen from 6 to 8 lanes	\$3,903,517
BISSONNET	HAR	HAR C/L	US 59	Widen from 6 to 8 lane divided	\$26,179,948
BLALOCK	HAR	SAN FELIPE	HAMMERLY	Widen from 4 to 6 lanes	\$4,624,388
BUNKER HILL	HAR	TAYLORCREST	WESTVIEW	Widen to 6 lane divided	\$4,175,031
BW 8 (W)	HAR	US 290	W BELLFORT	Add 2 freeway lanes	\$21,530,277
CALVARY	MON	FM 234	IH 45	Widen from 2 to 4 lanes	\$6,313,972
CEMETERY	GAL	FM 517	SH 6	Widen from 2 to 4 lanes	\$5,317,539
CLAY	HAR	BARKER CYRESS	SH 6	Widen from 4 to 6 lanes	\$2,202,576
CLAY	HAR	KATYLAND	SH 99	Widen from 2 to 6 lane divided	\$8,762,511
COOK	HAR	BRAESWOOD	BELLAIRE	Widen from 4 to 6 lanes	\$2,745,450
CR 171	BRA	FM 523	S. MAIN AVE.	Widen from 2 to 4 lanes	\$5,890,265
CR 213	BRA	CR 428	SH 558	Widen from 2 to 4 lanes	\$1,365,034
CR 316	BRA	FM 521	SOUTHBOUND	Widen from 2 to 4 lanes	\$3,622,715
CROSBY	HAR	IH 10	WALLISVILLE	Widen from 4 to 6 lanes	\$2,056,927
CYPRESS ROSEHILL	HAR	HUFFMEISTER	HAR C/L	Widen from 2 to 4 lanes	\$14,202,371
CYPRESS- WOOD	HAR	ELLA	STUEBNER	Widen from 4 to 6 lanes	\$4,933,556
DAIRY ASHFORD	HAR	WESTHEIMER	IH 10	Add GSEPs	\$2,999,035
DALLAS RD	BRA	CR 103	SH 35 (W)	Widen from 2 to 4 lanes	\$3,053,359
EL CAMINO	HAR	NASA	BAY AREA	Widen from 4 to 6 lanes	\$2,005,065
ELDRIDGE	HAR	BELLAIRE	RICHMOND	Widen from 4 to 8 lanes	\$6,510,488
ELDRIDGE	HAR	HAR C/L	N. BEECHNUT	Widen from 4 to 6 lane divided	\$4,230,270
ELDRIDGE	HAR	US 290	CYPRESS	Widen from 4 to 6 lanes	\$3,556,510
ELDRIDGE	HAR	WESTHEIMER	IH 10	Widen from 4 to 6 lane divided	\$12,073,835
ELLA	HAR	20TH	PINEMONT	Widen from 4 to 8 lanes	\$8,952,117
ELLA	HAR	GULF BANK	MT. HOUSTON	Widen from 2 to 4 lanes	\$1,644,629
FM 1010	LIB	FM 2090	LIB C/L	Widen from 2 to 4 lanes	\$4,086,143
FM 1092	FOR	CARTWRIGHT	US 90	Widen from 4 to 6 lanes	\$1,698,027
FM 1093	FOR	MONTGOMERY	HARLEM	Widen from 4 to 8 lane divided	\$32,998,224
FM 1093	FOR	PEEK	HARLEM	Widen from 4 to 6 lanes	\$3,900,772
FM 1093	FOR	PEEK	BELLAIRE	Widen from 4 to 6 lanes	\$3,463,825

Unfunded Needs

STREET	CO.	FROM	TO	PROJECT DESCRIPTION	ESTIMATED PROJECT COST
FM 1226	GAL	FM 518	SH 96	Widen from 2 to 4 lanes	\$1,845,074
FM 1314	MON	FM 242	FM 336	Widen from 4 to 6 lanes	\$8,939,024
FM 1314	MON	OLD HOUSTON	SH 99	Widen from 4 to 6 lanes	\$6,750,919
FM 1488	WAL	US 290	HAR C/L	Widen from 2 to 4 lanes	\$4,496,609
FM 1489	FOR	SH 36	FM 1093	Widen from 2 to 4 lanes	\$7,399,719
FM 149	MON	WOODLANDS	FM 1488	Widen from 2 to 4 lanes	\$2,758,690
FM 1960	HAR	HARDY	US 290	Add GSEPs	\$3,741,516
FM 1960	LIB	LIBERTY	HAR C/L	Widen from 2 to 4 lanes	\$13,033,808
FM 1994	FOR	SH 36	FM 762	Widen from 2 to 4 lanes	\$15,950,159
FM 2025	LIB	US 59	LIB C/L	Widen from 2 to 4 lanes	\$4,535,418
FM 2351	GAL	GAL C/L	BRA C/L	Widen from 4 to 6 lanes	\$3,662,437
FM 2351	HAR	JANA	HAR C/L	Widen from 4 to 6 lane divided	\$12,270,908
FM 242	MON	IH 45	FM 1314	Widen from 6 to 8 lanes	\$8,247,131
FM 2611	BRA	FM 2918	SH 36	Widen from 2 to 4 lanes	\$6,062,396
FM 2919	FOR	FOR C/L	LP 541	Widen from 2 to 4 lanes	\$5,383,743
FM 2920	HAR	CYPRESS	BAUER	Widen from 4 to 6 lanes	\$16,071,785
FM 2920	HAR	S. CHERRY	SH 99	Widen from 4 to 6 lane divided	\$13,127,220
FM 2977	FOR	FM 361	FM 762	Widen from 2 to 4 lanes	\$12,530,657
FM 359	FOR	US 90	W. BELLFORT	Widen from 4 to 6 lane divided	\$17,092,373
FM 3083	MON	IH 45	SH 105	Widen from 2 to 4 lanes	\$2,761,190
FM 517	BRA	SH 6	BRA C/L	Widen from 4 to 6 lanes	\$1,725,907
FM 517	GAL	VELASIO	GAL C/L	Widen from 4 to 6 lanes	\$1,858,315
FM 518	BRA	GAL C/L	CR 103	Widen from 4 to 6 lane divided	\$12,774,419
FM 518	GAL	SH 146	FM 1266	Widen from 4 to 6 lanes	\$1,884,796
FM 528	GAL	FM 518	BAY AREA BLVD	Widen from 6 to 8 lanes	\$3,821,327
FM 529	HAR	FRY	BARKER CYPRESS	Widen from 4 to 6 lanes	\$2,321,743
FM 529	HAR	HUFFMIESTER	US 290	Widen from 6 to 8 lanes	\$8,167,686
FM 762	FOR	CR 25	FM 1994	Widen from 2 to 4 lanes	\$7,320,274
FM 787	LIB	FM 223	GROLE	Widen from 2 to 4 lanes	\$14,228,853
FONDREN	HAR	BEECHNUT	SAN FELIPE	Widen from 6 to 8 lane divided	\$20,514,206
FRY RD	HAR	CLAY	LITTLE YORK	Widen from 2 to 4 lanes	\$3,079,841
GESSNER	HAR	GREENS	FALLBROOK	Widen from 4 to 6 lane divided	\$5,529,806
GESSNER	HAR	HARWIN	WESTVIEW	Add GSEPs	\$3,197,312
GLENLOCH	MON	SAWDUST	WOOLAND PKWY	Widen from 2 to 4 lanes	\$2,666,005
GREENBRIAR	HAR	GREENBRIAR	S. W. FWY	Widen to 4 lane divided	\$9,817,797
HAMBLE	HAR	NORTHPARK	HAR C/L	Widen from 2 to 4 lanes	\$2,017,205
HARDY	HAR	GREENS	RANKIN	Widen from 2 to 4 lanes	\$2,218,656
HARLEM	FOR	AIRPORT	US 90A	Widen from 2 & 4 to 6 lanes	\$5,146,638
HUFFSMITH	HAR	SH 249	FM 2978	Widen from 2 to 4 lanes	\$3,040,119
HUMBLE	GAL	SH 3	GULF	Widen from 2 to 4 lanes	\$3,079,841
IH 10	HAR	CROSBY	SHELDON	Add 4 freeway lanes	\$12,499,664
IH 10	HAR	UVALDE	CBD	Add 2 freeway lanes	\$14,350,547
IH 45 (N)	HAR	FM 1960	HAR C/L	Add 4 freeway lanes	\$14,563,302
IH 45 (N)	MON	FM 830	WALKER C/L	Widen from 6 to 10 freeway lanes	\$24,198,647
IH 45 (N)	HAR	RANKIN (W)	CBD	Add 2 freeway lanes	\$18,915,273
IH 45 (S)	HAR	CBD	FM 2351	Add 4 freeway lanes	\$44,268,137
IH 610 (S)	HAR	SH 225	US 90	Add 2 freeway lanes	\$14,205,920
IH 610 (W)	HAR	US 290	BRAESWOOD	Add 2 freeway lanes	\$13,352,623
JFK	HAR	ALDINE BENDER	LEE RD	Widen from 4 to 8 lanes	\$26,317,640
JONES	HAR	WEST	CYPRESSWOOD	Widen from 6 to 8 lanes	\$6,366,935
KINGSLAND	HAR	FRY	MASON	Upgrade to a major collector	\$5,234,177

Unfunded Needs

STREET	CO.	FROM	TO	PROJECT DESCRIPTION	ESTIMATED PROJECT COST
KINGWOOD	HAR	LAKE HOUSTON	ALONG KINGWOOD	Widen from 4 to 6 lanes	\$2,838,135
KUYKENDAHL	HAR	ELLA	CYPRESS-WOOD	Widen from 4 to 6 lanes	\$6,022,674
KUYKENDAHL	HAR	FM 2920	HAR C/L	Widen from 2 to 4 lanes	\$10,713,294
KUYK-HUFFSMITH	HAR	KUYKENDAHL	FM 2978	Widen from 2 to 4 lanes	\$3,066,600
LEE RD	HAR	RANKIN	FM 1960	Widen from 4 to 6 lanes	\$3,155,946
LITTLE YORK	HAR	ELLA	IH 45	Widen from 2 to 4 lanes	\$1,294,715
LK. WOODLAND	MON	GOSLING	GROGAN MILL	Widen from 2 lane undivided to 6 lane divided	\$16,330,631
LOUETTA	HAR	KUYKENDAHL	T.C. JESTER	Widen from 4 to 6 lanes	\$1,484,201
LP 184	HAR	LEE RD	OLD HUMBLE	Widen from 4 to 6 lanes	\$3,996,963
LP 197	GAL	25 TH	21 ST	Widen from 4 to 6 lanes	\$1,606,739
LP 336	MON	FM 1314	FM 1484	Widen from 2 lanes undivided to 6 lanes divided	\$22,677,709
MASON	HAR	FRANZ	MORTON	Widen from 2 to 4 lanes	\$1,619,980
MONTGOMERY	FOR	FM 359	FOR C/L	Widen from 2 to 4 lanes	\$8,247,131
MUESCHKE	HAR	HAR C/L	SH 99	Upgrade to a major collector	\$3,252,880
N. SHEPHERD	HAR	610 LOOP	LITTLE YORK	Widen from 4 to 8 lanes	\$18,978,817
NASA 1	HAR	IH 45 (S)	SATURN	Widen from 4 & 6 to 8 lanes	\$4,523,995
NASA 1	GAL	SATURN	BEAMER	Widen from 6 to 8 lanes	\$4,250,603
NASA 1	HAR	SPACE CENTER	SH 146	Widen from 4 to 6 lanes	\$4,668,739
NORTH PARK	HAR	LAKE HOUSTON	KINGWOOD	Widen from 2 to 4 lanes	\$1,351,793
OLD WESTHEIMER	HAR	WESTPARK	WESTHEIMER	Widen from 2 to 4 lanes	\$2,202,576
PARK ROW	HAR	MASON	FRY	Widen from 2 to 4 lanes	\$2,308,503
PIN OAK	FOR	SH 99	IH 10	Widen from 2 & 4 to 6 lanes	\$5,568,766
RED BLUFF	HAR	SPENCER	BW 8	Widen from 4 to 6 lanes	\$2,533,597
S. BRAESWOOD	HAR	FONDREN	CHIMNEY ROCK	Widen from 4 to 6 lane divided	\$10,308,179
SAN FELIPE	HAR	CHIMNEY ROCK	POST OAK	Widen from 6 to 8 lane divided	\$3,094,629
SEAWALL	GAL	6TH	37TH	Widen from 4 to 6 lanes	\$2,285,403
SH 105	MON	CROCKETT	LP 336	Widen from 4 to 6 lanes	\$6,141,841
SH 105	MON	ESTORIA	MON C/L	Widen from 2 to 4 lanes	\$12,332,045
SH 105	LIB	US 59	GAL C/L	Widen from 2 to 4 lanes	\$5,171,890
SH 225	HAR	IH 610 (E)	SHAVER	Add 2 freeway lanes	\$5,825,789
SH 249	HAR	BREEN	GREENS	Widen from 6 to 8 lanes	\$6,883,327
SH 249	HAR	EXXON-HUMBLE	FM 2920	Widen from 4 to 6 lanes	\$2,282,021
SH 288	BRA	ORANGE (S)	DALLAS	Add 2 freeway lanes	\$2,515,394
SH 288	HAR	OST	CBD	Add 2 freeway lanes	\$3,555,150
SH 288	BRA	SH 332	FM 523	Widen from 6 to 8 lanes	\$8,746,327
SH 3	HAR	IH 45 (S)	GAL C/L	Replace existing drainage system; add curb & gutter	\$40,000,000
SH 332	BRA	SH 36	FM 521	Widen from 4 to 6 lanes	\$1,606,739
SH 332	BRA	SH 36	OYSTER CREEK	Widen from 4 to 6 lanes	\$2,321,743
SH 35	BRA	CR 179	FAIRWAY	Widen from 4 to 6 lanes	\$1,308,065
SH 35	BRA	FM 1459	SH 36	Widen from 4 to 6 lanes	\$5,065,964
SH 35	BRA	FM 528	FM 517	Widen from 4 to 6 lanes	\$2,361,466
SH 36	FOR	FM 1994	FM 2218	Widen from 4 to 6 lanes	\$5,718,135
SH 36	BRA	FM 521	CR 353	Widen from 2 to 4 lanes	\$2,332,842
SH 36	FOR	SH 36	FM 2218	Widen from 4 to 6 lanes	\$12,755,751
SH 6	GAL	FM 646	BRA C/L	Widen from 4 to 6 lanes	\$6,830,363
SH 6	FOR	US 59	BRA C/L	Widen from 6 to 8 lanes	\$7,540,227
SH 99	VA	IH 10 (W) Going North/E/S/West	US 59 (S)	Widen & upgrade to 6 lane freeway	\$450,000,000

Unfunded Needs

STREET	CO.	FROM	TO	PROJECT DESCRIPTION	ESTIMATED PROJECT COST
SHEPHERD	HAR	RICHMOND	DALLAS	Widen from 4 to 6 lanes	\$2,405,549
STUEBNER	HAR	SPRING	FM 2920	Widen from 2 to 4 lanes	\$2,162,854
AIRLINE	HAR	CYPRESS	WESTPARK	Widen from 2 to 4 lanes	\$6,896,568
SYNOTT	HAR	BRAESWOOD	RANKIN	Widen from 4 to 6 lanes	\$6,459,621
TC JESTER	HAR	CYPRESSWOOD	LITTLE YORK	Widen from 4 to 6 lanes	\$2,325,452
TEXAS	GAL	29 AVE.	CEDAR	Widen from 4 to 6 lanes	\$2,739,285
TRAM	MON	EAST RIVER	FM 2090	Widen from 2 to 4 lanes	\$3,080,200
US 59 (N)	HAR	HAR C/L	CBD	Add 2 freeway lanes	\$18,857,422
US 59 (N)	FOR	WILLIAMS	FM 762	Add 2 freeway lanes	\$12,126,001
US 59 (S)	HAR	ALDINE MAIL RT	LEE	Add 2 freeway lanes	\$2,791,367
US 90A	FOR	SH 6	HOLCOMBE	Construct diamond lanes	\$3,500,000
VOSS	HAR	WESTHEIMER	IH 10	Widen from 4 & 6 to 8 lanes	\$4,567,796
W LAKE HOUSTON PKWY	MON	MON C/L	FM 1485	Widen from 4 to 6 lanes	\$4,218,551
W. BELLFORT	FOR	EASTBOUND	FM 723	Widen from 2 to 4 lanes	\$2,427,670
WALDEN	MON	LAKE CONROE	SH 105	Widen from 4 to 6 lanes	\$3,821,327
WINDFERN	HAR	JONES	BW 8 (N)	Widen from 2 to 4 lanes	\$3,530,029
WINKLER	HAR	GALVESTON	IH 45	Widen from 4 to 6 lanes	\$1,898,269
TOTAL:					\$1,586,487,112

Costs To Be Determined:

STREET	CO.	FROM	TO	PROJECT DESCRIPTION	LEAD AGENCY
BAY AREA BLVE	HAR	@ CLEAR CRK	CNNT FM 518 & FM 528	CONST BRIDGE	CLEAR LAKE TRANSP PARTNERSHIP
CITY OF BAYTOWN	HAR			PUBLIC TRANSIT SERVICE	
CLEAR LAKE AREA	HAR			TRFFC SIG PROGRESSION & DEPLOYMT PLN FOR TRFFC CONTROLS THRGHOUT AREA IN CONJUNCTN W/ TXDOT'S TRANSTAR & METRO'S CONST GSEP	CLEAR LAKE TRANSP PARTNERSHIP
FAIRMONT PKWY	HAR	@ SP RR			CITY OF LA PORTE
FM 1092	FOR	AMERICAN WATER CANAL	SH 6	SIDEWALK	CITY OF MISSOURI CITY
FM 2234	FOR	US 90A	MISSOURI CITY LIMITS	SIDEWALK	CITY OF MISSOURI CITY
FM 270	GAL	S END CLEAR CRK BR	FM 646	CONST HIKE & BIKE TRAIL	CITY OF LEAGUE CITY
FM 2854	MO	IH 45	US 75	MAKE IMPROVEMENTS	MONTGOMERY COUNTY
FM 3345	FOR	DULLES AVE	FM 2234	RESTRIPPING BIKE LN TRL	CITY OF MISSOURI CITY
FM 360	FOR	SH 36	US 59	UPGRDE 2 LN	FT BEND COUNTY
FM 518	GAL	@ IH 45		CONST ADDT'L TRN LNS	CITY OF LEAGUE CITY

APPENDIX C: Summary of Conformity Determination



Conformity Determinations
for the
2022 Metropolitan Transportation Plan
and the
2000 - 2002 Transportation Improvement Program

for the
**Houston-Galveston
Transportation Management Area**

March 23rd, 2000

HOUSTON-GALVESTON AREA COUNCIL
TRANSPORTATION DEPARTMENT

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EXECUTIVE SUMMARY

The Houston-Galveston Area Council (H-GAC) has conducted an analysis of the 2022 Metropolitan Transportation Plan and the 2000 – 2002 Transportation Improvement Program for conformance with the State Implementation Plan's ozone 9% Rate-of-Progress for the Houston-Galveston ozone nonattainment area. The analysis, undertaken in accordance with procedures established under federal and state regulation and guidance, comprised projected regional vehicular emissions for specific landmark years in the future. The purpose of the analysis is to demonstrate that future transportation plans are consistent with the state's air quality goals for the region.

The results of the conformity determination show that the 2022 Metropolitan Transportation Plan and the 2000 - 2002 Transportation Improvement Program for the Houston-Galveston Transportation Management Area meet the requirements of the State Implementation Plan, the Clean Air Act (42 U.S.C. 7504, 7506 (c) and (d)) as amended on November 15, 1990 and the final conformity rule (40 CFR Parts 51 and 93).

Table 1: Conformity Analysis Summary by Analysis Year

Analysis Year	VOC Emissions (tons/day)	NOx Emissions (tons/day)
1990 Baseline	251.7	337.1
2000	114.15	268.34
2007	93.26	227.56
2015	82.20	191.02
2022	86.72	196.48

The results of the conformity analysis, shown in Figures 1 and 2 and Table 1, indicate that the transportation projects outlined in the 2022 Metropolitan Transportation Plan and the 2000 – 2002 Transportation Improvement Program adhere to regional air quality targets and requirements. The graph and table summarize VOCs and NOx emissions for each analysis year as compared to the Motor Vehicle Emissions Budget for the region and 1990 emissions levels. The data show that the emissions from each analysis year fall below both the emission budget of 132.68 tons VOC per day and 283.01 tons Nitrogen Oxide (NOx) per day and 1990 emission levels. Table 1 shows

that commitments to the timely implementation of Transportation Control Measures contained in the State Implementation Plan have been kept. Therefore, the analysis supports the finding of conformance with the SIP and its 9% Rate of Progress Budgets.

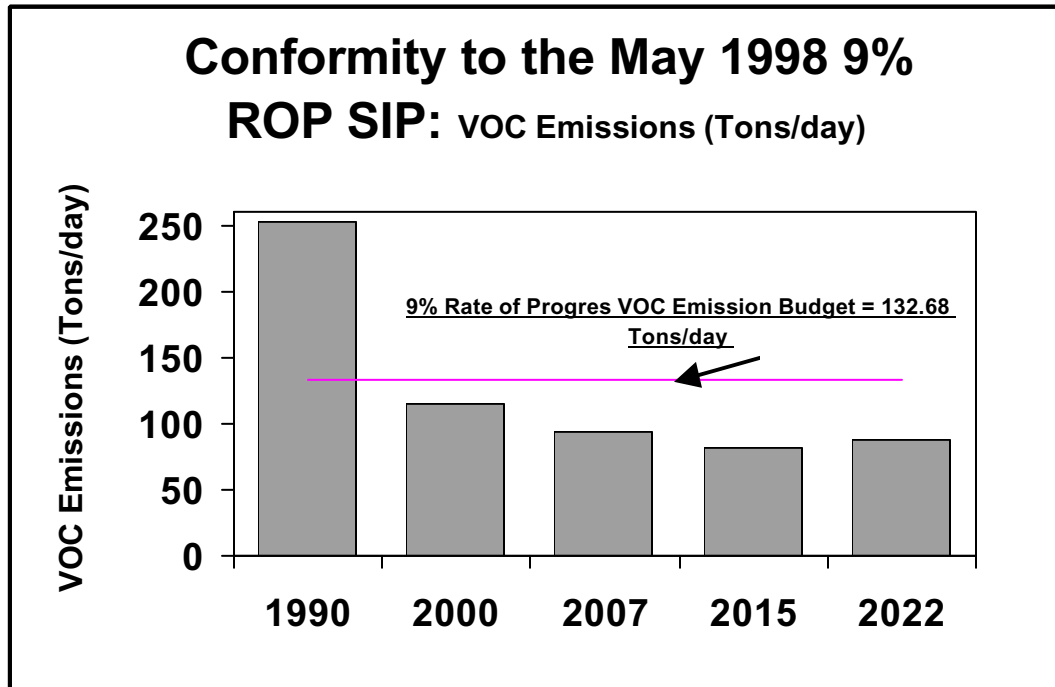


Figure 1: Conformity of the MTP & TIP: VOC Emissions

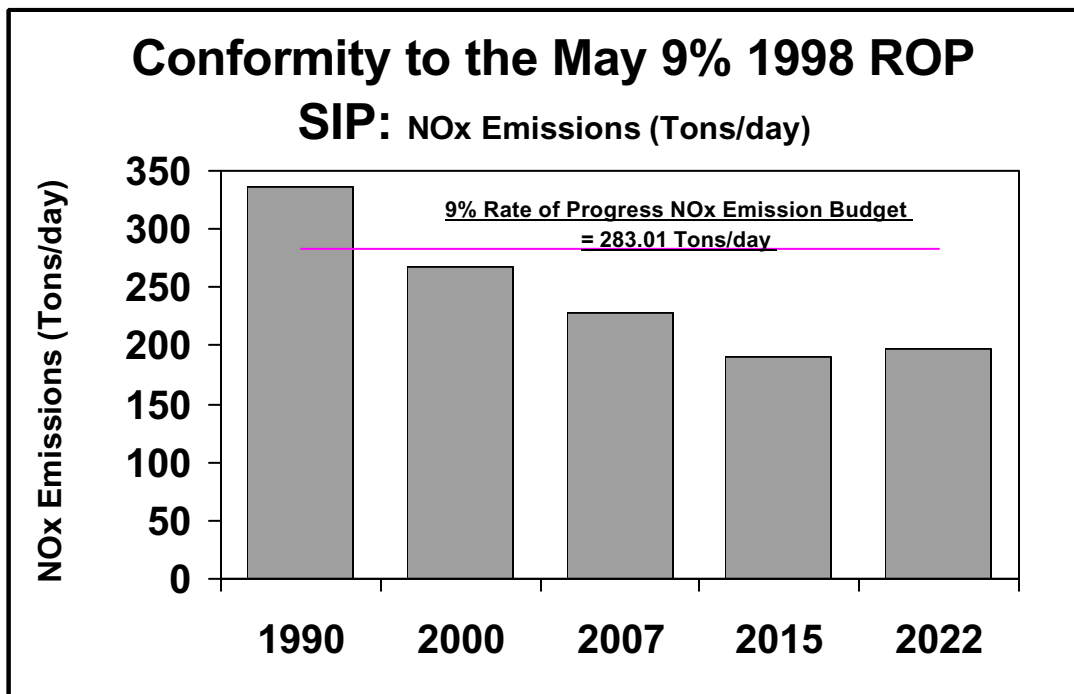


Figure 2: Conformity of the MTP & TIP: NO_x Emission

Preparation of this conformity analysis has been undertaken with extensive interagency consultation and frequent opportunity for public comment. Two formal opportunities for public review and comment have been conducted. A thirty day review and comment of the proposed conformity process was initiated at a public meeting held on September 9th, 1999 and remains available for comment on H-GAC's agency web site. A second 30-day public comment period for review of the final conformity analysis was open from January 24, 2000 through February 23, 2000.

I. INTRODUCTION AND BACKGROUND

With the signing of the Clean Air Act Amendments of 1990 (CAAA) into law, the Houston-Galveston region was designated non-attainment for exceeding the National Ambient Air Quality Standard (NAAQS) for the pollutant ozone. On a scale ranging from marginal to extreme, the Houston-Galveston region was labeled as "Severe-II" and given until the year 2007 to attain the ozone standard. The CAAA requires each state to submit a state implementation plan (SIP) to the U.S. Environmental Protection Agency (EPA). The SIP is a legally binding document that defines the structure through which emissions will be reduced and the ozone standard will be attained. As the central focus of the air quality planning process, the SIP ties in transportation planning through the conformity provisions in the CAAA. These provisions verify that federal actions on transportation projects are consistent with the air quality objectives contained in the SIP. In many cases, transportation-related control measures identified in the SIP are contained and funded in the metropolitan transportation plan (MTP) and the transportation improvement program (TIP).

Section 176(c)(4) of the CAAA required EPA to promulgate rule-making on conformity determinations for transportation plans and programs. In response to this requirement, the EPA published its Criteria and Procedures for Determining Conformity to State or Federal Implementation Plans of Transportation Plans, Programs, and Projects Funded Under Title 23 U.S.C. or the Federal Transit Act in the Federal Register on November 24, 1993. This conformity rule requires metropolitan planning organizations (MPOs) and the U.S. Department of Transportation to make conformity determinations on metropolitan transportation plans and transportation improvement programs before they are adopted, approved, or accepted in air quality non-attainment areas. EPA has promulgated three separate amendments to the conformity rule, most recently in August of 1997. Most aspects of the August 1997 amendments did not become effective until the State of Texas recently proposed revisions of its Conformity State Implementation Plan to the EPA in November 1998.

Special provisions are described in the final conformity rule for MPOs to conduct conformity determinations on their plans and TIPs. These criteria and procedures vary according to the pollutant for which the area is designated nonattainment and also according to the time period in which the determination is conducted. The conformity rule requires that conformity analysis adhere to a number of requirements:

- The analysis process must use the most recent planning assumptions in force at the time of the conformity determination and employ the latest available emissions model.
- The transportation plan and TIP must provide for the timely implementation of transportation control measures (TCMs) from the applicable implementation plan.
- A regional emissions analysis must be conducted for significant air quality milestone years and the MTP horizon year.
- Volatile organic compounds (VOCs) and nitrogen oxide (NOx) emissions from each analysis year must be less than the motor vehicle emissions budget (MVEB) established in the May 1998 9% Rate of Progress SIP.
- Emissions from each analysis year must be shown to be less than 1990 baseline emissions levels.

H-GAC, as MPO for the Houston-Galveston Transportation Management Area (TMA), is required to review the transportation plan and determine its conformity with the 1998 Texas 9% Rate of Progress SIP for Ozone Attainment for the Houston-Galveston Ozone Nonattainment Area, in accordance with the EPA's final conformity rule published in the Federal Register on August 15th, 1997.

A. Early and continuing consultation

Local, state and federal transportation and air quality agencies affected by conformity were consulted on the scope, schedule, methodologies and products of the conformity finding. A steering committee composed of representatives of each of the following agencies consulted regularly during the conformity process:

- The Houston-Galveston Area Council (H-GAC)
- The Metropolitan Transit Authority of Harris County (METRO)
- The City of Houston
- Harris County
- The Texas Department of Transportation (TxDOT)
- The Texas Natural Resources Conservation Commission (TNRCC)
- The Federal Highway Administration (FHWA)
- The Federal Transit Administration (FTA)
- The US Environmental Protection Agency (EPA)

B. Public involvement

Public Involvement is also a key feature of the conformity process. Subsequent to interagency review and comment, H-GAC published its proposed conformity methodology and schedule for public review and comment for a 30 day period. In addition, this information was made available at a public meetings. Additional public comments were collected at these meetings.

Another public comment period on the completed draft conformity finding was held from January 24th to February 24th, 2000. During this period, a public meeting was held to receive additional comments and questions. Written comments and questions received written response within two weeks of the close of the comment period for the draft finding. Public comment was also received by the Transportation Policy Council at such time as scheduled for consideration and action. Appendix E1 contains more detailed information on the public process.

C. Interagency Review and Comment

Interagency review and comment on the conformity finding was conducted in accordance with consultative process identified in the Conformity SIP. Because of the limited time to complete the conformity process, H-GAC requests that, to the extent practicable, reviewing agencies consider concurrently reviewing the draft final conformity document. H-GAC will be responsible for insuring that all comments and responses are available to the interagency steering committee.

D. Emissions Analysis Methodologies

Emissions Analysis Methodologies are consistent with procedures used to estimate the rate of progress emissions budgets. The interagency consultative process was used to define any necessary changes to emissions calculations due to federal control measures that have been promulgated since adoption of the 9% Rate of Progress SIP, such as National Low Emission Vehicle (NLEV) and Heavy Duty Diesel Vehicle (HDDV) standards. Network based modeling was used to estimate travel inputs to the emissions analysis.

E. Documentation

The format and content of the conformity documentation was determined by the conformity steering committee. It includes the following for each analysis year which network-based travel modeling is conducted:

- Summary of economic/demographic inputs to the travel modeling process by analysis year;
- Listing of emissions model inputs by analysis year;
- Listing of off-model reductions and methodologies used;
- Discussion of HPMS adjustments
- Summaries of travel demand forecasts (person, vehicle and transit trips by mode and purpose) and summaries of vehicle miles of travel (by major functional classifications and vehicle speed) for each analysis year;
- Listings of regionally significant and non-federal added capacity highway and transit projects by analysis year, including funding source;
- Listing of CMAQ projects and
- Network link listings by analysis year.

II. DEMONSTRATION OF CONFORMITY

To demonstrate conformity as defined by EPA's final rule, analysis of transportation plans and TIPs must address the following criteria:

- Are the MTP and TIP consistent with the most recent estimates of on-road mobile source emissions?
- Does the MTP and TIP provide for expeditious implementation of transportation control measures (TCMs) in the applicable SIP?
- Does the MTP and TIP contribute to annual emissions reductions consistent with Section 182(b) and Section 187(a)(7) of the CAAA? This criteria is met and conformity is demonstrated if both VOC and NO_x emissions in each of the analysis years modeled are:
 - Less than the 1990 base year emissions inventory, and
 - Less than the specified emissions "budget" in the May 1998 9% Rate of Progress SIP.

Each of these criteria is discussed briefly below.

A. Consistency with Emissions Estimates

Estimates of on-road mobile source emissions are based on recent model runs of H-GAC's travel demand forecasting models and the EPA's Mobile Emissions Factor Model, MOBILE5a_h. The travel demand modeling procedures rely on up-to-date projections of population, employment, travel and congestion. Emission estimation procedures use input data developed from a TNRCC data-builder program¹ specific to the Houston-Galveston area, reflecting controls in place or expected to be in place for each analysis year.

1) Travel Demand Modeling Procedures

Population and Employment Forecasts:

The 1990 Census Summary Tape File 1 (STF1) is the source of the 1990 Base Year population data for each of the eight counties and their respective census tracts. The 1990 MPO Abstract Tape (MPOAT) acquired from Dun's Marketing Services, a subsidiary of Dun & Bradstreet, is the source of 1990 base year place of work employment data at the county and census tract levels.

In 1997, the Houston-Galveston Area Council (H-GAC) began a two phased process to update a set of forecasts originally produced in 1995. The first step involved the development of new household and employment estimates for the year 2000. Estimates for employment were developed with employer-level data and were controlled to an estimate of total wage and salary employment for the eight-county region from the Bureau of Economic Analysis (BEA). As the employment estimates were derived from data that was described at a level of geography more detailed than the traffic analysis zone (TAZ) geography used in travel demand analysis, the estimates (after controlled to regional total) were aggregated to the TAZ-level.

Estimates of year 2000 households were derived from two data sources at different levels of detail. For the most populous part of the eight-county region, parcel level estimates of the number of households were acquired from a third party data source. For the remainder of the region, estimates of households at the TAZ-level were

¹ This program was developed by Wayne Young, TNRCC, in a joint effort with H-GAC in gathering the most up to date data for the region.

provided by the Planning Office of the Texas Department of Transportation – Houston District. After the TAZ level data were controlled to the regional totals, some re-allocations were made among TAZs in corridors where very detailed inventories of existing population and employment had been developed during the course of corridor studies.

The second major effort undertaken to develop updated forecasts was to develop new regional forecasts for households, population and employment for the 8-county transportation planning region. H-GAC made use of the REMI model to develop the new regional demographic forecasts. H-GAC made use of an 8-county regional version of the REMI model to explore two alternative demographic scenarios. Based upon the recommendations of an expert panel assembled by H-GAC and staff from REMI, H-GAC decided to vary two major inputs to the REMI model. The first variable was level of transportation investment and the second was energy prices. The two scenarios constructed were labeled as “conservative” and “aggressive”. REMI-based forecasts were developed for each year between the current year (year 2000) and the horizon year (2025). The horizon year chosen for this update of the air quality conformity analysis of the 2022 MTP is the year 2022.

Following a review of the alternative regional forecasts from the two alternative scenarios, H-GAC determined that the most likely scenario and the one to be used as the basis for developing new forecasts was the “aggressive” scenario. Using an allocation process developed specifically for this effort the new regional forecasts were then allocated 199 sub-areas referred to as Regional Analysis Zones (RAZs). In this allocation process, all 199 sub-areas compete with each other for based on historic growth trends and land availability. This process was repeated for each of the three forecast years (i.e., 2007, 2015 and 2022). Land availability was re-estimated after every application of the process to account for land consumed or returned to the available land “inventory”. The resulting RAZ allocations were then allocated to traffic analysis zones (TAZs) based upon the TAZs share of RAZ from the original forecast.

Table 2 below presents the 1990 estimates (which were the basis for the forecast) as well as forecasted 2000, 2007, 2015 and 2022 population, households and employment for the eight-county non-attainment area.

**Table 2: Regional Household Population and Employment Estimates
and Forecasts 1990, 2000, 2007, 2015 and 2022**

	YEAR				
	1990	2000	2007	2015	2022
Households	3,680,600	4,489,900	4,910,700	5,509,900	6,089,300
Employment	1,810,000	2,371,100	2,632,900	2,877,700	3,047,100

Source: H-GAC, September, 1999.

Scenario Development and Modeling:

To address the conformity tests, analysis year networks were developed for 2000, 2007, 2015, and 2022. Results from the 1990 base year network, developed for previous emissions inventory and conformity analyses, were also used for comparison. The modeling practices employed in this conformity analysis are the same practices used by H-GAC in modeling for the SIP, MTP, TIP and other projects.

Base (1990) Scenario

Using the 1990 household and employment forecasts for the eight county TMA, trip generation (i.e., production and attraction) estimates were developed for each of six trip purposes: Homebased Work (HBW), Homebased School (HBSCH), Homebased Shop (HBSHP), Homebased Other (HBO), Non-Homebased (NHB), and Truck-Taxi Trips (TRTX). The trip production models used to produce these estimates are cross-classification models based on household size and income, while the attraction models are based on employment. The 1990 external-local and external-through trip tables were based on 1990 external station (cordon) volumes.

Table 3 details the resulting person and vehicle trip estimates by purpose for the year 1990. The HBSCH, HBSHP, and HBO trips have been summed to a Homebased Non-Work (HBNW) total.

Table 3: Internal Trips by Purpose for The 8 County Transportation Planning Region

Purpose	1990	% of Total
HBW Person Trips	2,200,543	17.1
HBNW Person Trips	6,155,066	48.0
NHB Person Trips	3,806,188	29.6
TRTX Vehicle Trips	675,625	5.3
Total Internal Trips	12,837,422	100.0

Using a 1990 highway network and a set of F-factors calibrated to the year 1985 and validated to the year 1990, person trips by purpose as well as the Truck-Taxi and External-local vehicle trips were distributed using the Disaggregate Trip Distribution Model (the Atomistic Model) of the TxDOT Trip Distribution Package (TTDP). Table 4 details by a general facility type structure the 1990 network which was used in the trip distribution as well as the assignment phases of this scenario analysis.

Table 4: 1990 Network for The 8 County Transportation Planning Region

Miles	Freeway/Tollway	Principal Arterial	Other Arterial	Collector	HOV Lanes ^A
Centerline	510	818	2,112	2,245	44
Lane	2,848	3,294	6,382	4,624	44

Source: H-GAC, 2000 ^A Excluding ramp structures

Transit mode shares were estimated based upon METRO's 1990 Transit On-Board Survey. Following the estimation of transit mode share, the Mezzo-level High Occupancy Vehicle (HOV) carpool model of the TTDP was utilized to account for and estimate the level of usage of the HOV lane system by carpools and to convert the person trip tables to vehicle trip tables. Based upon the transit mode share estimates produced by the METRO and the auto occupancy estimates from the H-GAC 1984 Regional Travel Survey (subsequently revised based upon the 1990 Nationwide

Personal Transportation Survey (NPTS)), the HOV carpool demand on the 1990 HOV lane system was estimated.

Following the conversion of the person trip tables to vehicle trip tables, the vehicle trip tables were factored by trip purpose to represent the time periods desired for the estimation of time-of-day travel demand. The procedure used by H-GAC to factor trip tables relies on time-of-day trip table factors by trip purpose and the trip table factoring procedures of the TTDP. The trip table factors were developed based on an analysis of the 1984 H-GAC Regional Travel Survey data. Because the Regional Travel Survey contained no data on truck/taxi and external travel, survey data from other urban areas was used to develop trip table factors for those trip purposes.

In addition to factoring the 24-hour trips to represent the desired time period, the trip tables are converted from production-to-attraction orientation to origin-destination orientation. The factors used to perform this step are also based on the H-GAC Regional Travel survey.

Time-of-Day Trip Table Factors

Based on analyses of the trip table factors developed in 30-minute intervals, the daily vehicle trip tables were separated into the following time periods:

AM Peak	-	6:30 AM to 8:30 AM
Mid-day	-	8:30 AM to 3:30 PM
PM Peak	-	3:30 PM to 6:30 PM
Overnight	-	6:30 PM to 6:30 AM

Following the separation of the 24-hour trip tables by purpose for each of the four time periods, the trip tables for each trip purpose were summed to develop a single time-of-day trip table (e.g., AM Peak trip table). Each time-of-day trip table was then assigned to the appropriate 1990 time-of-day network. The time-of-day networks are the 1990 network with capacities reflective of the appropriate time-of-day. For example, the facilities represented in the 1990 AM peak network have 2-hour peak period capacities which vary by facility type, number of lanes, and area type.

The resulting time-of-day link volume estimates were then input to H-GAC's post-assignment speed model to develop link-level time-of-day speed estimates. The post-

assignment speed model is based on procedures recommended in the report entitled Highway Vehicle Speed Estimation Procedures For Use in Emissions Inventories prepared by Cambridge Systematics for the U.S. Environmental Protection Agency in September 1991.

The speed estimation model relies primarily on the speed estimation techniques described in the Highway Capacity Manual (HCM). The HCM relationships are used to estimate the speeds for estimated volume-to-capacity ratios from zero to one. The extensions of the models for volume-to-capacity ratios exceeding one are based on the traditional Bureau of Public Roads (BPR) impedance adjustment function. The methods rely on the estimated volume-to-capacity ratio as a key measure of congestion for estimating the congested speed based on the constrained equilibrium volume of a link. Separate procedures are used for freeways and non-freeway streets.

The speed model was developed and calibrated by applying them to the 1985 AM and PM peak-period assignments for the Houston-Galveston region and comparing the modeled directional speeds to more than 8,000 observed directional link speeds encoded in the link data. The models were also validated to year 1990 observed directional speeds.

The centroid connectors in the Houston-Galveston TMA networks represent local street facilities that provide access to higher-level roadway facilities. Local streets are generally relatively low volume uncongested streets. Since there is not a one-to-one correspondence between centroid connectors and the local streets (i.e., a single centroid connector usually represents more than one local street) and since local streets generally operate without significant congestion, the speed models were not used to estimate the centroid connector speeds. The estimated speeds for the vehicle miles traveled (VMT) represented on centroid connectors was estimated based on the area type of the zone which is connected to the roadway network by the centroid connector and the length of the centroid connector. The estimated speed for intrazonal VMT (travel within a zone) is developed from the average of the centroid connector speeds for the zone.

The estimated level of travel (VMT) and congestion (speed) by link serve as inputs to the emissions model.

Analysis Years

Using the household and employment forecasts for 2000, 2007, 2015, and 2022, trip generation (i.e., production and attraction) estimates were developed for each of six trip purposes; Homebased Work (HBW), Homebased School (HBSCH), Homebased Shop (HBSHP), Homebased Other (HBO), Non-Homebased (NHB), and Truck-Taxi Trips (TRTX). The trip production models used to produce these estimates are cross-classification models based on household size and income, while the attraction models are based on employment. Trip generation estimates for external-local and external-through vehicle trips for all scenarios were developed by extrapolating historic growth in traffic between 1985 and 1996.

Table 5 summarizes the resulting person and vehicle trip estimates by purpose for the years 2000, 2007, 2015, and 2022. The HBSCH, HBSHP, and HBO trips have been summed to a Homebased Non-Work (HBNW) total.

Table 5: Internal Trips by Purpose for the 8 County Transportation Planning Region

Purpose	2000	% of Total	2007	% of Total	2015	% of Total	2022	% of Total
HBW Person Trips	2,720,063	17.7	3,024,435	17.3	3,436,578	17.8	3,840,497	17.9
HBNW Person Trips	7,032,442	45.7	8,176,738	46.7	8,725,077	45.3	9,659,526	45.2
NHB Person Trips	4,806,794	31.2	5,338,286	30.5	6,051,377	31.4	6,755,309	31.6
TRTX Veh. Trips	830,475	5.4	957,017	5.5	1,048,064	5.4	1,129,689	5.3
Total Trips	15,389,774	100.0	17,496,476	100.0	19,261,096	100.0	21,385,021	100.0

Source: H-GAC, 2000

The regional roadway networks used in the conformity analysis represent the system of roadways assumed to be operational in each of the four analysis years. Therefore, the 2000 roadway network represents current roadways, plus roadways under construction, plus roadways expected to be operational by the end of FY 2000. The 2007 network

includes all roadways in the 2000 roadway network plus all roadways expected to be operational by the end of FY 2007. The 2015 roadway network includes all roadways in the 2007 network plus all roadways expected to be operational by the end of FY 2015. The 2022 roadway network includes all roadways in the 2015 roadway network plus all remaining projects in the Houston-Galveston 2022 Metropolitan Transportation Plan. Table 6 summarizes the regional roadway networks for 2000, 2007, 2015 and 2022. Appendix E2 of this document contains a listing of roadway projects by scenario. Appendix E3 contains a link-level listing of the roadway modeling networks used in the analysis.

Table 6: Roadway Networks for The 8 County Transportation Planning Region

	Miles	Freeway/ Tollway	Principal Arterial	Other Arterial	Collector	HOV Lanes ^A
2000	Centerline	603	1,149	3,018	1,502	89
	Lane	3,616	4,485	8,903	3,227	90
2007	Centerline	659	1,213	3,082	1,499	160
	Lane	4,209	4,968	9,473	3,248	250
2015	Centerline	702	1,325	3,190	1,516	175
	Lane	4,755	5,551	10,441	3,371	292
2022	Centerline	725	1,371	3,219	1,577	187
	Lane	4,885	5,873	10,824	3,791	316

Source: H-GAC, 2000 ^A Excluding ramp structures

Using the highway networks and a set of F-factors calibrated to the year 1985 and validated to the year 1990, the estimates of person trips by purpose as well as the Truck-Taxi and External-local vehicle trips were distributed using the Disaggregate Trip Distribution Model (the Atomistic Model) of the TTDP.

The estimates of person trips by trip purpose along with network descriptions of the roadway and transit facilities and services² were then input to the regional mode choice model. This model developed forecasts of person trips by 8 auto sub-modes (single-occupant non-toll, single-occupant toll, 2 person non-toll, 2-person toll, 3 person non-

² Provided by the Metropolitan Transit Authority (METRO)

toll, 3-person toll, 4+ person non-toll and 4+ person toll) and six transit sub-modes (walk-to-local bus, walk-to-express bus, walk-to-commuter bus, walk-to-urban rail, drive-to-park-and-ride and drive-to-kiss-and-ride) for each of the analysis years.

Following the conversion of the auto person trip tables by mode to auto vehicle trip tables by mode, the vehicle trip tables were factored by trip purpose to represent the four time periods (AM Peak, Mid-day, PM Peak, and Overnight). Following the separation of the 24-hour trip tables by purpose to time-of-day trip tables by purpose, the trip tables by purpose were summed to develop a single time-of-day trip table (e.g., AM Peak trip table) for each mode. Each modal time-of-day trip table was then assigned simultaneously to the appropriate analysis year time-of-day network. Four time-of-day networks for each analysis year were created to correspond to the four time-of-day trip tables. These networks were created using the same time-of-day capacities that were used in the base year analysis.

The assigned time-of-day link volumes were then input to H-GAC's post-assignment speed model to develop link-level time-of-day speed estimates. The estimated speeds for the VMT represented on centroid connectors was estimated based on the area type of the zone which is connected to the roadway network by the centroid connector and the length of the centroid connector. The estimated speed for intrazonal VMT was developed from the average of the centroid connector speeds for the zone.

Transit and Toll Pricing Policies and Assumptions

In September of 1994 a fare increase was approved by the Metropolitan Transit Authority (METRO) Board of Directors. Prior to September of 1994, there had been no transit fare increase since the previous conformity determination of the MTP. Prior to and following the period since the last conformity analysis in November 1995, transit ridership levels were stable overall, with very slight declines in certain markets. However, since the summer of 1997, ridership levels have risen. Although, a complete understanding of the reasons for the increase are pending the analysis of marketing/survey data, it appears that revised fare structures and increased marketing efforts have played a role.

Assumptions regarding the level of transit service for the conformity determination of the MTP are consistent with METRO's 2020 Regional Transit Plan (HORIZON 2020) and

subsequently completed Major Investment Studies. Transit fares were assumed to remain at existing levels throughout the analysis period.

Both existing and future toll facilities were evaluated assuming currently reflected toll pricing would remain at a fixed amount.

Travel Model Results

The results from the travel models reflect the expected demographic trends in the region over the next couple of decades, as shown in Table 7. Vehicle miles of travel (VMT) is forecasted to climb almost 47 percent from 2000 to 2022 to a total of nearly 169 million per day in the region. The growth is forecasted to occur at a rate of about 1.7 percent per year until 2007, and then at two percent per year through the rest of the forecast period. The vehicle miles of travel and average speed results for each county and facility type for each of the analysis years are presented in Appendix E5.

Table 7: Summary Statistics – Travel Model Results for the 8 County Transportation Planning Region

Analysis Year	Vehicle Miles of Travel (Million VMT)	Average Speeds (mph)
1990	92.42	37.69
2000	115.56	39.10
2007	129.36	39.59
2015	149.28	39.67
2022	168.68	39.37

Source: H-GAC, 2000

2) Transit Bus VMT

Estimates of bus VMT were developed based upon the transit service levels for each year as provided to H-GAC by METRO.

3) Highway Performance Monitoring System Adjustments

As part of the process of developing emissions inventories for the EPA, H-GAC is required to adjust the estimates of vehicle miles of travel from the H-GAC travel demand models to be consistent with the VMT estimates collected for the Highway Performance Monitoring System (HPMS), a national standard. With the development of the revised emissions estimates for the revised 9% Rate-of-Progress State Implementation Plans, H-GAC began a practice of developing and applying an HPMS adjustment factor for both regionally significant (non-local) roads and local streets. Table 8 below presents updated HPMS non-local and local adjustment factors.

Table 8: HPMS Adjustment Factors Developed from 1995 VMT Estimates

Road Type Group	HPMS Adjustment Factor
Non-Local	1.0062
Local	1.0777

4) Emissions Modeling Procedures

Time-of-day mobile volatile organic compound (VOC) and nitrogen oxide (NOx) emissions estimates for the **2022** Metropolitan Transportation Plan and the 2000 - 2002 Transportation Improvement Program conformity analysis were developed from the link-based travel demand VMT and speeds estimates, and from vehicular emission factors. Rates for each link speed were obtained and multiplied by the link VMT to give VOC and NOx emissions for each link. Total emissions for each scenario were then obtained by aggregating the link-level results over a 24-hour period.

Emission Rates

Emission rates, or factors, were developed using the Environmental Protection Agency MOBILE5a_h mobile emissions model and procedures developed during the revisions to the 9% Rate-of-Progress State Implementation Plans (SIP) in 1996³. "Registration" emission factors, representing the emissions rates of vehicles based on their county of registration, were calculated using MOBILE5a_h, a modified version of the original MOBILE5a to account for updated inspections/maintenance program credits. POLFAC5B, a program developed by the Texas Transportation Institute (TTI), was then

³ See Appendix E4 for MOBILE5a_h inputs and outputs

used to run MOBILE5 at multiple speeds. The inputs to the MOBILE5a_h model were the same as those used in the development of recent emissions inventory reports⁴, with adjustments made to address the different analysis years and the changing fleet of vehicles subject to the Harris County inspections/maintenance program.

The emission rates obtained by POLFAC5B also reflect new federal measures, such as the National Low Emission Vehicle (NLEV) and Heavy Duty Diesel standards coming into effect in 2001 and 2004 respectively. "Commute" emission factors, or emission rates effectively representing the traffic in the counties at any one time of day, were then obtained using another TTI program, RATEADJ.⁵ This program corrects emission factors for each county to reflect the vehicles traveling in each county that are registered elsewhere. This is particularly important considering that Harris County is presently the only county in the 8-county nonattainment area that has an Inspection and Maintenance Program. This process is undertaken to ultimately yield emissions that are representative of the traffic at any one place at any one time. Appendix E4 contains a more detailed listing and explanation of inputs used.

Highway Network Emissions

Emissions were then obtained using a third TTI program, IMPSUMA, which assigns emission factors to network links based on link speeds. The program then multiplies the emission factors by the link VMT and then aggregates the link emissions to county-level totals. IMPSUMA is run separately for each time period and for one 24 hour time period for local roads. Total emissions of NO_x and VOCs including diurnal emissions are produced for each roadway type in each county.

Bus Emissions

Emissions attributable to transit buses are estimated by time-of-day and for freeway and non-freeway road types for Harris County only. Buses are assumed to operate at the average operational speeds specific to the time and facility. Bus emissions are estimated by multiplying VMT by the appropriate Heavy Duty Diesel Vehicle (HDDV)

⁴ See the H-GAC reports *Revised Rate-of-Progress State Implementation Plan On-Road Mobile Source Emissions Inventories*, August 1996, and the *Revised On-Road Mobile Source Emissions Inventory Estimates in Support of the Vehicle Miles of Travel Offset State Implementation Plan*, June 1997.

⁵ See Appendix E4 for excerpt from the August, 1996 H-GAC report regarding the development of "commute" factors.

emission factor from the Mobile model. The resulting emissions are added to the Harris County HDDV emissions totals and, hence, the regional highway emission totals.

Emissions from Non-recurring Congestion

Non-recurring congestion consists of any non-routine congestion resulting from accidents or other random incidents. Although the travel demand modeling and speed estimation processes used by H-GAC account for delay associated with recurring congestion, they do not allow for the estimation of delay caused by non-recurring congestion. To address non-recurring congestion, H-GAC uses a delay-based procedure to estimate the emissions that would result from the delay caused by non-recurring congestion on Harris county freeways⁶.

The procedure to estimate the effects of non-recurring congestion is based on research presented in "Urban Freeway Congestion: Quantification of the Problem and Effectiveness of Potential Solutions" by Jeffrey A. Lindley, ITE Journal, January 1987. Lindley suggested that freeway delay could be characterized as follows:

Total Freeway Delay = $\frac{1}{3}$ Recurring Congestion + $\frac{2}{3}$ Non-recurring Congestion

Non-recurring Congestion = $2(\text{Recurring Congestion})$

Where recurring delay represents the difference in vehicle hours of travel at hypothetical free-flow speeds and at estimated scenario freeway speeds. The delay associated with non-recurring congestion is estimated at twice the recurring delay and is then added to the recurring delay and free-flow travel time to establish a new estimate of total freeway vehicle hours of travel. By dividing the new estimate of freeway VHT to the estimate of travel on freeways (VMT), a new estimate of average travel speed on freeways is obtained. The effect of non-recurring congestion on emissions is then estimated by calculating the percentage change in freeway emissions due to the change in average travel speeds.

⁶ By convention, it has been assumed that Harris County freeways bear the vast majority of the incidents that result in non-recurring congestion.

H-GAC performed this calculation by time of day for freeway travel in Harris County and summed the differences to establish a percent daily change in emissions. An example calculation using data from the AM Peak Period is provided below.

$$VHT_F = VHT_U + VHT_C + VHT_N$$

where,

VHT_F = vehicle hours of travel on freeways

VHT_U = vehicle hours of travel occurring under uncongested conditions.

VHT_C = vehicle hours of travel occurring under recurring congestion.

VHT_N = vehicle hours of travel occurring under non-recurring congestion.

Sample Calculation:

$$VHT_F = 95,700 + 28,900 (+ VHT_N)$$

$$VHT_F = 124,600 (+ VHT_N)$$

With an estimated VMT of 5,979,000, the 124,600 VHT equates to approximately 48 mph. Incorporating non-recurring delay is as follows:

$$VHT_F = 95,700 + 28,900 + 57,800$$

$$VHT_F = 182,400$$

Using the same estimate of travel and the new estimate of delay of 182,400 the estimated speed including non-recurring delay is 33 mph. The increase in emissions is simply estimated by applying the appropriate emission factors for each speed to the estimated freeway VMT. The above calculation was repeated for each of the four time periods for which Harris County freeway VMT was estimated, with the estimated emissions summed for each scenario (not including and including non-recurring delay). The difference was calculated for a day and applied to the emissions total as a percent change.

Using this procedure, the daily VOC emission total was adjusted upward by the amounts shown in Table 9 to account for non-recurring congestion. These adjustments were made to the travel model highway results.

Table 9: Non-Recurring Congestion Emission Adjustment

Analysis Year:	2000	2007	2015	2022
Adjustment:	0.0	0.0	0.0	0.022

Source: H-GAC, 2000

This methodology does not apply to NO_x emissions. The methodology to determine the emissions effects of nonrecurring congestion is based on the change in average speeds. Because NO_x emissions increase with speeds above 20 miles per hour (whereas VOC emissions decrease), this methodology would yield results indicating that freeway NO_x emissions would decrease as a result of the decrease in average speeds associated with nonrecurring congestion. Since such an outcome seems counterintuitive, NO_x levels on Harris County freeways are not ultimately adjusted for the effects of nonrecurring congestion.

Adjustment for NO_x Reductions from Phase II Reformulated Gasoline

This region started using phase II reformulated gasoline (RFG) in 2000. The reductions in NO_x emissions from the use of phase II RFG are not included in the MOBILE5a program. EPA directs that areas using MOBILE5a to model their emissions, use MOBILE5b to compute reductions in NO_x emissions from RFG. The methodology laid out by the EPA in MOBILE5 Information Sheet #7, September 1998, was used to create the reduction factors in Table 10. The reduction factors were calculated separately for each of the for gasoline vehicle types for all three county types for each analysis year.

Table 10: Reduction Factors for NO_x from Phase II RFG

Analysis Year	County	LDGV	LDGT1	LDGT2	HDGV
2000	Harris	0.948	0.960	0.962	0.956
	Urban	0.950	0.951	0.960	0.958
	Rural	0.948	0.959	0.964	0.963
2007	Harris	0.946	0.950	0.958	0.951
	Urban	0.951	0.956	0.956	0.952
	Rural	0.949	0.945	0.960	0.954
2015	Harris	0.953	0.945	0.956	0.950
	Urban	0.949	0.947	0.955	0.950
	Rural	0.946	0.949	0.953	0.949
2022	Harris	0.938	0.932	0.956	0.950
	Urban	0.948	0.946	0.960	0.950
	Rural	0.946	0.949	0.959	0.951

Source: ERG, 11/99

B. Expedient Implementation of Transportation Control Measures

The Clean Air Act Amendments of 1990 required regions in nonattainment for one of the criteria pollutants to make enforceable commitments to implement, maintain and monitor Transportation Control Measures (TCMs). Pursuant to regulation, the Texas Natural Resource Conservation Commission requires an annual report on the status of regional TCMs included in the State Implementation Plan (SIP). The report contains an evaluation of categories of transportation control measure projects for which implementation agencies have committed in post-1990 SIP amendments to implementation magnitude and schedules and for which the Metropolitan Planning Organization (MPO) has committed to the funding and projected emission reductions. Accordingly, the evaluation focuses on the collective magnitude, timing, funding and air quality benefits of the projects by category.

A summary of the current status of TCMs are shown in Tables 11-13. The summary provides the SIP magnitude and emissions commitments, as well as the TCM schedule status. For each milestone year, "commitments" refers to new/additional projects expected to be open for service prior to the milestone. Therefore, for example, the amounts listed in Table 12 represent quantitative indicators associated with the total of

all projects in each SIP category anticipated to be open for service between October 1996 and October 1999. The TCM project listing is contained in Appendix 6.

**Table 11: TCM Status for Milestone Year 1996 Commitments
in the 9% Rate of Progress SIP**

TCM	Commitments in SIP		Current Status of Categories (as % of Magnitude)		
	Magnitude	VOC Rdctns (lb/d)	Mileage/Other, % Let	Mileage/Other, % Operational	% Operational by 1996
1. Signalization	2.9 mi	2.14	100 %	100%	100 %
2. High-Occupancy Vehicle (HOV) Lanes	14.7 mi	317.73	100 %	100 %	100 %
3. Park & Ride Lots	3,745 spcs	52.00	100 %	100 %	100 %
4. Arterial Traffic Management System (ATMS)	41.0 mi	57.58	100 %	100 %	100 %
5. Computerized Traffic	22.2 mi	126.83	100 %	100 %	100 %

Source: H-GAC, 1999

Table 12: TCM Status for Milestone Year 1999 Commitments in the 9% ROP SIP

<u>TCM</u>	<u>Commitments in SIP</u>		<u>Commitments Achieved</u>		<u>Current Status of Categories (as % of Magnitude)</u>		
	<u>Magnitude</u>	<u>VOC Rdctns (lb/d)</u>	<u>Magnitude</u>	<u>VOC Rdctns (lb/d)</u>	<u>Mileage /Other, % Let</u>	<u>Mileage/Other, % Operational</u>	<u>% Operational by 1999</u>
1. Signalization	49.3 mi	23.05	65.74 mi	30.74	100 %	100 %	100 %
2. Bicycles ⁷	262.3 mi	198.95	13.12 mi	9.95	87 %	5 %	5 %
3. HOV Lanes / Vanpool	3.5 mi 225	69.48 145.1	4.73 mi 233 vans	93.90 150.26	100 % 100 %	100 % 100 %	100 % 100 %
4. Park & Ride Lots	1,643 spcs	91.49	1,867 spcs	103.96	100%	100 %	100 %
5. Arterial Traffic Management System	65.8 mi	91.38	94.31 mi	130.97	100 %	100 %	100 %
6. Computerized Traffic Management System (CTMS)	70.3 mi	320.11	93.72 mi	426.75	100%	100 %	100 %
7. Accident Investigation Sites	3.20 mi	50.94	3.20 mi	50.94	100 %	100 %	100 %
Total		990.5		997.5			

Source: H-GAC, 1999

Table 13: TCM Status for Milestone Year 1996 Commitments in the 9% ROP SIP

<u>TCM</u>	<u>Commitments in SIP</u>		<u>Current Status of Categories (as % of Magnitude)</u>		
	<u>Magnitude</u>	<u>VOC Rdctns (lb/d)</u>	<u>Mileage/Other, % Let</u>	<u>Mileage/Other, %</u>	<u>% Operational by 2007</u>
1. Arterial Traffic Management System (ATMS)	2.09 mi	1.71	100 %	0 %	100 %
2. Computerized Traffic Management System (CTMS)	59.5 mi	339.33	34 %	0 %	100 %
3. Accident Investigation Sites	30.00 mi	221.59	0 %	0 %	100 %

Source: H-GAC, 1999

⁷ The following bike projects were not originally part of the region's SIP commitments, however they have been accounted for in Table 12.

- Texas City Trails: 4.0 miles of trail let to contract in 3/98
- Bayland Park Marina: 0.95 miles of trail let to contract in 11/98

C. Annual Emissions Reductions Estimates

The third main conformity criterion regards the consistency of the Metropolitan Transportation Plan and the Transportation Improvement Program with the ozone standard attainment demonstration and reasonable further progress requirements under the State Implementation Plan. Consistency with the SIP, as stated earlier, is demonstrated by meeting the two conformity tests: "budget" and "below the base year maximum."

To address this criterion, H-GAC has developed the following evaluation components:

- Base year inventory – A base estimate of emissions – namely the base year 1990.
- Analysis years. 2000, 2007, 2015, and 2022 were selected as analysis years representing the outcome of the projects beyond the Baseline scenario contained in the 2022 MTP. As with the Baseline scenarios proposed facilities are placed into the appropriate analysis year based upon the assumed operational date of the facility.

Analysis years were developed to evaluate mobile source VOC and NOx emissions, as stated in the background section. The results of the emissions analysis are shown in Tables 14 and 15.

Table 14: Conformity Finding of The 2022 MTP Volatile Organic Compounds (VOC) Emissions Analysis (tons per day)

CATEGORY	Volatile Organic Compounds				
	1990 Base	2000	2007	2015	2022
Highway Emissions	251.7	115.07	95.55	84.60	89.57
Emissions reductions from Non-Added-Capacity (N-A-C) projects: ⁸					
CMAQ & Other projects	N/A	0.92	2.29	2.40	2.85
Total emissions after N-A-C adjustments	251.7	114.15	93.26	82.20	86.72
9% ROP SIP Budget:		132.68	132.68	132.68	132.68

⁸ Calculations and Methodology for these emissions reductions are contained in Appendix 7.

Table 15: Conformity Finding of The 2022 MTP Nitrogen Oxides (NOx) Emissions Analysis (tons per day)

CATEGORY	Nitrogen Oxides				
	1990 Base	2000	2007	2015	2022
Highway Emissions	337.1	269.81	229.10	192.15	197.58
Emissions reductions from Non-Added-Capacity (N-A-C) projects: ⁹					
CMAQ & Other projects	N/A	1.47	1.54	1.13	1.10
Total emissions after N-A-C adjustments	337.1	268.34	227.56	191.02	196.48
9% ROP SIP Budget:		283.01	283.01	283.01	283.01

1. Highway Emissions Estimates

As described earlier, emissions estimates are calculated using travel demand model data and EPA mobile source emission rates. The results are shown in the first lines of Tables 14 and 15, indicating transportation emissions continue to decline through the designated ozone attainment year for the region.

2. Emissions Reductions Measures

Congestion Mitigation and Air Quality Projects and Transportation Control Measures:

Under the Congestion Mitigation and Air Quality (CMAQ) Program, the non-added-capacity transportation projects are eligible for CMAQ funds in nonattainment areas. The projects funded with CMAQ money are aimed at reducing mobile source emissions. In addition, the conformity analysis attempts to take into account any other transportation control measures (TCMs). Examples of CMAQ and/or TCM projects in this analysis include:

- Regional Computerized Traffic Signal System (RCTSS)
- Arterial Traffic Management Systems (ATMS)
- Intersection Improvements
- Park-and-ride lots
- High Occupancy Vehicle Lanes (HOV)

⁹ Calculations and Methodology for these emissions reductions are contained in Appendix 7.

- Transit Service Projects

Methodologies for estimating the emissions reductions relating to CMAQ/TCM projects as well as the actual CMAQ/TCM projects used in the plan's emissions reduction analysis are discussed in detail in Appendix 7.

The 2000 analysis year contains all existing and committed non-added-capacity roadway projects from the 2000 TIP that will be operational by the end of FY 2000 and meet the baseline criteria. For the CMAQ evaluation, a project meeting the baseline criteria must either be under construction or it was listed in the first 3 years of the previously conforming plan and/or TIP. The projects were analyzed with 2000, 2007, 2015 and 2022 emission factors to determine the level of emission reductions that would occur in the respective calendar year.

The 2007 analysis year includes projects from the 2000 analysis year plus projects with a letting date between FY 2000-2006 that will be operational by the end of FY 2007. The 2015 and 2022 analysis years follow the same pattern.

Pertinent calendar year emissions factors were applied for each analysis year. To determine total net emissions, the emission estimates were then subtracted from the emissions resulting from the "Highway" emissions for each analysis year. A listing of all CMAQ projects is contained in Appendix 7 of this document.

Clean Fuel Programs:

The Clean Fuel Programs incorporate both the Texas Clean Fleets Program (TCF) and the Houston-Galveston Alternative Fueled Vehicle (AFV) Program, as well as the Federal Energy Policy Act (EPACT) Program. The TCF requires fleet owners operating in serious, severe or extreme nonattainment areas to purchase a percentage of low emission vehicles (LEVs) when replacing or adding fleet vehicles. A LEV is defined as a vehicle certified to meet the federal LEV standards. Although there are exceptions, the program affects private fleets with greater than 25 fleet vehicles, local government fleets of 15 or more fleet vehicles, and mass transit fleets.

The EPACT program requires that an increasing percentage of new light duty vehicle purchases be alternative fuel vehicles for state and federal fleets and alternative fuel provider fleets greater than 50 vehicles. The Houston-Galveston AFV Program supports the efforts of public and private fleets in complying with the TCF program and EPACT regulations by providing funding for alternative fuel vehicle purchases and conversions.

The emission benefits for all alternative fuel programs were based on comparing the total emissions from the affected fleet vehicles to the emissions which the same number of conventional vehicles would have produced in the absence of the fleet program. The emission reductions from the TCF program were based on a comparison of LEV emissions to regular fleet emissions. Reductions from propane vehicles were also based on LEV emissions standards, since these vehicles are assumed to be as clean as a LEV, however, specific emission factors for Propane were not available. Emission reductions from electric vehicles were taken as the total emissions from regular vehicles that fleet replaced. Finally, compressed natural gas (CNG) vehicle emission reductions are based on a comparison of emission factors specifically for CNG to those from regular vehicles.

3. The Conformity Tests

As indicated by Tables 14 and 15, the conformity analysis of the 2022 Metropolitan Transportation Plan and the 2000-2002 Transportation Improvement Program demonstrates that the required conformity tests are passed. That is,

- In no analysis year are emissions expected to exceed the Motor Vehicle Emissions Budget of 132.68 tons VOC per day and 283.01 tons Nitrogen Oxide (NOx) per day.
- In no analysis year are emissions expected to exceed those of the base year, 1990.

Hence, the tests for the plan and the TIP have been met.

III. CONCLUSION

Mobile source emissions estimated for the **2022 MTP** and the 2000 - 2002 TIP are consistent with the most recent projections of population, employment, travel and congestion available. The **2022 MTP** demonstrates attainment of TCM targets established in the SIP and provides for expeditious implementation of additional measures designed to reduce congestion and vehicular travel demand.

H-GAC believes that it is both necessary and appropriate to take credit for emissions reductions due to the implementation of CMAQ/TCM projects, and the Texas Clean Fleets (TCF) Program, given current analysis methodologies and knowledge of the programs.

VOC and NOx emissions estimates from all the analysis years, shown in Tables 14 and 15, are lower than those estimated for the 1990 Base Year. Additionally, VOC and NOx emissions are lower than the VOC and NOx budget established by the 1998 Texas 9% Rate of Progress SIP. The **2022** Metropolitan Transportation Plan (MTP) and the 2000 - 2002 Transportation Improvement Program, therefore, pass both conformity tests required under EPA's Final Conformity Rule. The transportation improvements in the **2022** MTP and the 2000 - 2002 TIP are in conformity with both the SIP and the Clean Air Act, as amended.

APPENDIX D: Development of 2022 MTP Demographic Forecasts



APPENDIX D

DEVELOPMENT OF 2022 DEMOGRAPHIC FORECASTS

The production of the 1999-2025 demographic forecast for the H-GAC region involved three primary steps: the generation of regional control totals for population and employment, the allocation of population to the RAZ level, and the allocation of employment to the RAZ level. Summary technical documentation for each of these steps follow.

D.1. Generating Regional Control Totals

The REMI econometric model was used to generate regional population and employment control totals for the 1999-2025 demographic forecast of the Houston-Galveston-Brazoria Consolidated Metropolitan Statistical Area (CMSA). The REMI model constructs regional and national economic forecasting models which reveal the economic and demographic impact that public policy initiatives or external events may have on a local economy. Due to time and budget constraints, only national crude oil price influence and local transportation funding alternatives were examined.

Instead of predicting a single scenario, six scenarios are selected and a range of population and employment were explored. The highest level of population and employment occurs when both national crude oil price rise and MTP is funded under the aggressive scenario. The lowest level of population and employment is recorded when national crude oil price fall combined with MTP's conservative scenario. Among the two extreme scenarios, four other scenarios show mid situations. We incorporate REMI's residual growth rate for 49 sectors and adjust aggregate economic migrants to further specify our regional economy. The six scenarios are listed below:

1. Baseline MTP under national crude price rise;
2. Aggressive MTP under national crude price rise;
3. Conservative MTP under national crude price rise;
4. Baseline MTP under national crude price drop;
5. Aggressive MTP under national crude price drop;
6. Conservative MTP under national crude price drop.

Assumptions Concerning the Effect of National Crude Oil Price Influenceⁱ

If the crude oil price increases by 25% from 1998 price (\$12.09 nominal dollars per barrel for imported crude oil), the average price of gasoline oil and fuel oil in the U.S. market will increase by 13% of 1998's priceⁱⁱ. Since US consumption of gasoline oil and fuel oil holds 2.6% of total U.S. consumption for the year 1998, consumer expenditure price index (all personal consumption expenditures) will increase by 0.34% from 1998's price due to the increment in crude oil prices.

If the crude oil price drops by 25% from 1998's imported crude oil price, the average price of gasoline oil and fuel oil is predicted to drop by 13% in 1999. As a result, consumer price index drops by 0.34% from 2.6% of 1998's total consumption.

Production of U.S. crude oil is assumed to increase by 25% from 1998's output starting from 1999. Since 1% increment in crude oil price corresponds to 1% rise in U.S. crude oil production, a 25% increase in crude oil leads to a 25% rise in U.S. crude oil production. Similarly, U.S. crude oil production cuts by 25% from its current production if the crude oil price expunges by 25% from market price.

At the regional level, oil and gas mining production is assumed to fluctuate with the U.S. national transformation. Productions as well as exports in oil and gas related chemicals, petrochemicals, machinery are assumed to be affected the same degree as the rest of regions in the United States.

Regional Effects Under the Metropolitan Transportation Plan

Six transportation investment scenarios are specified for the period from 2000 to 2025. The baseline scenario has \$75 million invested annually in addition to historical average investment in transportation. The aggressive scenario describes when additional \$202 million per year is invested in transportation maintenance and capital expansion. The conservative scenario shows what if there is a shortage of \$75 million each year in transportation investment. The historical average investment in transportation maintenance and capital expansion is \$1.775 billion per year from 1990 to 1995. Production cost saving is the sum of truck and car operation cost saving and delivery time saving due to the new road expansion. The factor in production cost savings is \$2.2 dollar (in 1998 U.S. dollars) for each dollar invested in new road expansion. The production cost saving is weighted by the number of employees for 49 private sectors in Houston-Galveston-Brazoria CMSA. A factor of \$0.13 (in 1998 U.S. dollars) is used to calculate consumer travel time saving resulted from the construction of new roads

Regional Economy and Demography at the Year 2025

By the year 2025, total population would reach 6,564,020 persons under the most aggressive scenario. Among them, the white accounts for 76.4%, Black for 15.8%, and others for 7.8%. The annual population growth rate from 1999 to 2025 is between 1.2% and 1.5% for the two extreme scenarios. Total employment hits 3,651,448 persons at the year 2025. Amongst the available jobs, 88% of the total jobs are private non-farm jobs, 11.8% of the total are government jobs, and 0.2% of the total jobs are farm jobs. The annual employment growth rate for the forecast period is 1.2% for the highest possible growth scenario. The real relative wage rateⁱⁱⁱ increases by 0.011 percentage point from 1999 to 2025. The real relative employment opportunity^{iv} is going up by 0.013 percentage point. Therefore, our regional economy is creating more high paying jobs and employment opportunities compared to that the rest of regions in the United States.

D.2. Allocation of Regional Employment

The following provides a brief summary of the employment allocation. Two major factors determined the control total share of employment allocated to a particular RAZ

- RAZ level growth rates based on 1990-1999 historical employment databases, and
- historical land use conversion rates constrained by the availability of vacant and re-useable land.

The steps process used in allocating employment follows:

- Employment and population control totals were obtained from an econometric model of the regional economy. Even though the most aggressive modeling scenario, the control totals obtained under this scenario were on par with those of other government agencies.
- Using 1999 regional employment databases, employment was grouped into six categories, (office, retail, industrial, medical, education, and Government) and aggregated to the RAZ level. Then, 1990 and 1999 regional employment databases were used to estimate RAZ level growth rates. Growth rates were restricted to values between 0 and 10%.
- These growth rates were applied to each RAZ to project growth for a target year.
- Land use conversion rates were calculated based on historical land use and employment data. Conversion rates were calculated for three different zones: areas within 610 loop, areas outside of the 610 loop, and for the CBD like activity centers (CBD, Greenway Plaza, Galleria Area)
- Growth constraints were applied based on the availability of vacant and re-useable land.
- Given land-use constrained growth for a target year, the regional share of controlled employment was calculated for each RAZ.

Allocation of Regional Population

Regional households and population were allocated to the RAZ level under the assumption that RAZ level population and household growth would follow may be fitted to a logistic curve. Logistic growth rates were used in all areas, except for the in the CBD. Data on land use patterns were used to constrain growth. That is, if there was not enough land available for the addition of the new households, then the number of households was held constant through the rest of the forecasted period. The residential density used to determine the amount of land needed for each new

household was based on the residential densities in 1990. The base landuse data used to control residential growth was from 1990. In some cases, additional land use data to collect additional information which would provide some insight to areas where the use of land may have changed significantly since 1990.

In the CBD, an exponential growth rate was applied and households were allowed to grow beyond the amount of available land. These assumptions were made because of current gentrification occurring in the CBD and surrounding areas.

The calculated growth rates were used to “grow” households each year through 2025 for each of the RAZs. These predicted numbers were then scaled to the REMI regional forecast.

The household population and total population was determined using previously predicted average household sizes and population in group quarters by RAZ. The household population was determined by multiplying the number of households by average household size. The total population was determined by adding predicted group quarters population to the household population.

The previous forecast allocation activities included an analysis of historical patterns in average household size and group quarters population. Change in patterns of average household size were predicted using these historical data and current literature and family living patterns. Specifically, the previous forecast noted that trends in the HGAC region were similar to national and state trends. It was noted that household formation was “occurring at a faster rate than the population growth (3.5 percent for the U.S. and 2.6 percent for the state), because of the decrease in average household size. Overall, the assumptions were for decreasing sizes in the average households.

Group quarters population include, but are not limited to, those persons residing in prisons, institutions, and college dormitories. Growth or decline in group quarters population was predicted using historical data and information that was current at the time of the previous forecast which described planned projects for group quarters.

Notes for Population Allocation:

The logistic growth curve was determined for each of the RAZs using the following steps:

1. To calculate the interim year 1991 through 1994, use interpolation based on 90-95 growth rates from 1990 to 1995 Population and Household Estimates.

2. To calculate the 1995 to 2000 interim years, recent growth rates are used to "grow" the 1995 estimates to 2000^a using the following conditional statements

```

IF z > y AND z > x AND z > w AND z > v AND z > u
  THEN new2000 = ((z + 1)5)*1995
ELSE IF y > x AND y > w AND y > v AND y > u
  THEN new2000 = ((y + 1)5)*1995
ELSE IF x > w AND x > v AND x > u
  THEN new2000 = ((x + 1)5)*1995
ELSE IF w > v AND w > u
  THEN new2000 = ((w + 1)5)*1995
ELSE IF v > u
  THEN new2000 = ((v + 1)5)*1995
ELSE new2000 = ((u + 1)5)*1995

```

where:

1995 = 1995 estimate
 new2000 = new CRUDE estimate for 2000
 u = new 90 to 20 CAGR (from results of METHOD I)
 v = old 90 to 20 CAGR
 w = CAGR between 1990 and 1995 estimates
 x = CAGR between 1995 and 1997 housing unit counts provided by TxDOT
 y = CAGR between utility connections counted in 1997 and new hookups in 1999 provided by HL&P
 z = CAGR 1991 and 1998 "Real Estate study data"

^a the TxDOT data represents the 2-year period of growth between 1995 and 1997 and the HL&P data represents the 2-year period of growth between 1997 and 1999 however both of the rates of growth are used in the above calculations based on the following assumption: the growth rates found between 1995 and 1997 in the TxDOT data are assumed to continue through the year 2000

ⁱ Energy related data is from Energy Information Administration: <http://www.eia.doe.gov>

ⁱⁱ The percent change is based on annual historical average rate for all grades of gasoline oil and fuel oil in the U.S. market.

ⁱⁱⁱ The real relative wage rate (relative to the US); a determinant of economic migrants; takes into account average wage by industry and cost of living in region (including taxes and housing prices).

^{iv} The residence adjusted employment divided by the labor force relative to the US; a measure of the probability of being employed; a determinant of economic migrants.