



Hays County Transportation Plan



Hays County Transportation Plan

Prepared for:
Hays County
111 East San Antonio Street
San Marcos, Texas 78666

Prepared by:
Parsons Brinckerhoff
901 MoPac Expressway South
Suite 595
Austin, Texas 78746

March 2013



Contents

Section 1 – Goals and Objectives

1.1. Introduction.....	1
1.2. Purpose of Hays County Transportation Plan	1
1.3. Goals and Objectives of the Hays County Transportation Plan	2
1.4. Other Considerations	4
1.5. Public Involvement Overview.....	5
1.6. Outreach Conducted.....	5
1.7. Public Meetings.....	6
1.7.1.Phase 1	6
1.7.2.Phase 1 Results	7
1.7.3.Phase 2	8
1.7.4.Phase 2 Results	9
1.8. Advisory Groups.....	9
1.9. Technical Advisory Group.....	10
1.10. Citizens Advisory Group	10
1.11. Public Involvement Summary	10

Section 2 - Review of Existing Plans and Reports

2.1. Overview	11
2.2. Key Findings	11
2.3. Summaries of Reviewed Plans and Reports	12
2.3.1. Hays County Multi-Corridor 2025 Transportation Plan	12
2.3.2. HB 1445 City-County Subdivision Regulation Agreements in Hays County	14
2.3.3. Capital Area Metropolitan Planning Organization (CAMPO) 2030 and 2035 Plans	17
2.3.4. Journey to Work Commuting Data	18
2.3.5. CAMPO Congestion Management Process State of the System Report, November 2009.....	19
2.3.6. Hays County Capital Improvement Program	20
2.3.7. Water and Wastewater Facilities Plan for West of the IH-35 Corridor, February 2011.....	23
2.3.8. CAMPO FY 2011-2014 Transportation Improvement Program	25





2.3.9. Hays County Strategic Policy and Implementation Plan (2010).....	27
2.3.10. Local Transportation Plans within Hays County.....	32
2.3.10.1. San Marcos Transportation Master Plan.....	32
2.3.10.2. City of Kyle Transportation Master Plan.....	35
2.3.10.3. Buda Master Transportation Plan	36
2.3.10.4. Transportation Master Plan for the City of Wimberley	38
2.3.10.5. City of Dripping Springs Transportation Plan.....	41
2.3.10.6. Conclusion from Review of Existing City Plans within Hays County.....	42
<u>Section 3 - Existing Demographics and Land Use</u>	
3.1. Existing Conditions.....	43
3.1.1. Population	43
3.1.2. Employment.....	44
3.1.3. Commuting Patterns.....	46
3.2. Economic Development	46
3.3. Socioeconomic Characteristics.....	47
3.3.1. Race.....	47
3.3.2. Income	48
3.3.3. Environmental Justice.....	48
3.4. Population and Employment Forecasts.....	49
3.4.1. Methodology.....	49
3.4.2. Demographics.....	50
3.5. Demographic Highlights	50
3.6. Land Use.....	51
3.6.1. Existing Land Use	51
3.6.2. Future Land Use	52
<u>Section 4 - Existing System Assessment</u>	
4.1. Existing Roadway Network	53
4.2. Major Roadway Description.....	53
4.2.1. Interstate Highways	53
4.2.2. US Highways	53





4.2.3. State Highways.....	55
4.2.4. Farm-to-Market and Ranch-to-Market Roads	55
4.3. Roadway Functional Class.....	55
4.4. Existing Roadway Capacity	59
4.5. Existing Traffic Volumes	61
4.6. Existing Traffic Conditions	63
4.7. Bridge Inventory	66
4.8. Other Modes of Transportation	69
4.8.1. Bicycle and Pedestrian Facilities.....	69
4.8.2. Transit Facilities and Services.....	71
4.8.3. Commuter Rail Service	72
4.8.3 Freight Rail Facilities and Services.....	74
4.8.5. Airports.....	77
4.9. Natural Environment	78
4.9.1. Water Resources/Drainage/Floodplains	78
4.9.2. Environmental Sensitivity Analysis	82
4.10. Safety and Crash Analysis	84
<u>Section 5 - Thoroughfare Plan</u>	
5.1. Plan Development Process.....	87
<u>Section 6 - Other Considerations</u>	
6.1. Integration of Other Modes.....	100
6.2. Context Sensitive Solutions	100
<u>Section 7 - Potential Fundin Sources</u>	
7.1. Introduction.....	102
7.2. Federal and State Funding Programs	102
7.2.1. State Highway Fund.....	102
7.2.1.1. State Motor Fuels Tax.....	103
7.2.1.2. Federal Funds.....	103
a. Transportation Equity Bonus	103
b. Surface Transportation Program.....	103





c. The National Highway System.....	104
d. Interstate Maintenance.....	104
e. Metropolitan Planning	104
f. Congestion Mitigation and Air Quality Improvement.....	105
g. Bridge Rehabilitation and Replacement Program	105
h. Highway Safety Improvement Program.....	105
i. Safe Routes to School.....	105
j. High Priority Transportation Projects	106
k. Coordinated Border Infrastructure Program.....	106
l. State and Community Highway Safety Grants	106
m. Rail-Highway Crossings Program.....	106
7.2.1.3. State Highway Fund Revenue Bonds.....	106
7.2.1.4. Motor Vehicle Registration Fees.....	106
7.2.1.5. Sales Tax on Lubricants.....	107
7.2.1.6. Toll Revenues.....	108
a. Pass-Through Tolling.....	108
7.2.2. <i>Texas Mobility Fund</i>	109
7.2.3. <i>General Revenue Fund</i>	109
7.2.3.1. Highway Beautification Fees	109
7.3. Transit Programs.....	110
7.3.1. <i>Section 5303 and 5304 Planning Programs</i>	110
7.3.2. <i>Section 5307 Urbanized Area Formula Program</i>	110
7.3.3. <i>Section 5308 Clean Fuels Grant Program</i>	111
7.3.4. <i>Section 5309 Major Capital Investments</i>	111
7.3.5. <i>Section 5310 Elderly/Persons with Disabilities Transportation Program</i>	111
7.3.6. <i>Section 5311 Rural/Non-urbanized Program</i>	111
7.3.7. <i>Section 5316 Job Access and Reverse Commute (JARC) Program</i>	111
7.3.8. <i>Section 5317 New Freedom</i>	112
7.3.9. <i>Section 5320 Transit in Parks</i>	112
7.3.10. <i>Medical Transportation Program (MTP)</i>	112





7.3.11. Human Service and Workforce Transportation.....	112
7.3.12. Non-Unified Transportation Plan (UTP) Transit Funding Programs.....	112
7.3.13. Congestion Mitigation/Air Quality (CMAQ)	112
7.3.14. Surface Transportation Program (STP).....	113
7.4. Airport and Aviation Funding	113
7.4.1. FAA Airport Improvement Program.....	113
7.4.1.1. Entitlement Grants.....	113
7.4.1.2. Discretionary Grants	114
7.4.2. Passenger Facility Charges	114
7.4.3. State Airport and Aviation Funding	115
7.4.3.1. Aviation Capital Improvement Program.....	115
7.4.3.2. Routine Airport Maintenance Program (RAMP) Grants	116
7.4.3.3. Airport Pavement Management Program	116
7.5. Local Funding Programs.....	117
7.5.1. County Road and Bridge Fund.....	117
7.5.2. County Road Bond Program.....	117
7.5.3. State Infrastructure Banks	117
7.5.4. Regional Mobility Authorities.....	118
7.5.5. Rural Improvement Districts and Special Assessment Districts	119
7.5.6. Local Sales Tax.....	119
7.5.7. Vehicle Registration Fees.....	119
7.5.8. Property Taxes.....	120

List of Tables

Table 1-1. HCTP Goals and Objectives.....	2
Table 1-2. 2035 CAMPO RTP Goals and TxDOT SLRTP Goals.....	3
Table 1-3. Phase 1 Public Involvement	8
Table 1-4. Phase 2 Public Involvement	9
Table 2-1. Hays County Development Regulations, Chapter 721 – Roadway Standards.....	16
Table 2-2. Hays County Population and Employment Estimates	18





Table 2-3. Hays County Commuting Patterns - 2009.....	18
Table 2-4. Hays County Congestion Management Projects Included in TIP.....	19
Table 2-5. Hays County Pass-Through Projects.....	21
Table 2-6. Hays County Priority Projects.....	22
Table 2-7. FY 2011-2014 TIP Projects for Hays County	25
Table 3-1. Hays County Demographics 1990 - 2010.....	43
Table 3-2. Hays County Annual Population Growth	44
Table 3-3. Hays County Employment by Industry.....	45
Table 3-4. Hays County Commuting Patterns	46
Table 3-5. Race and Hispanic Origin Trends within Hays County	47
Table 3-6. Hays County Household Income – 2000 - 2010.....	48
Table 3-7. Population and Employment Projections	50
Table 4-1. Hays County Roadway Inventory Summary.....	59
Table 4-2. Roadway Capacity Table.....	60
Table 4-3. Roadway Segment LOS and V/C Ratio.....	63
Table 4-4: Condition of Hays County Bridges by Count in 2010	67
Table 4-5. Potential Future Grade Separation in Hays County.....	76
Table 4-6. Vehicle Crashes by Severity in Hays County (2008-2010).....	84
Table 4-7. Hays County Fatal Crashes by Roadway Type (2008-2010 crash data)	85
Table 4-8. Alcohol Involved Crashes (2010).....	86
Table 4-9. Speed Involved Crashes (2010)	86
Table 5-1. HCTP Roadway Projects Matrix.....	89
Table 6-1. CSS Defined	100
Table 7-1. Federal and Local Participation in AIP Grants.....	113

List of Figures

Figure 2-1. Hays County 2025 Transportation Plan Map	13
Figure 2-2. Cities and Extraterritorial Jurisdictions of Cities in Hays County.....	15
Figure 2-3. City of San Marcos Transportation Plan Map.....	34
Figure 2-4. City of Kyle Transportation Plan Map.....	35





Figure 2-5. City of Buda Master Transportation Plan Roadway Network – All Corridors	37
Figure 2-6. City of Wimberley Transportation Plan Map.....	39
Figure 2-7. City of Wimberley Thoroughfare Master Plan	40
Figure 2-8. City of Dripping Springs Transportation Plan	41
Figure 3-1. Hays County Employment (2000 - 2010).....	45
Figure 3-2. Hays County Racial Distribution	48
Figure 4-1. Hays County Existing Transportation System.....	54
Figure 4-2. Relationship of Roadway Functional Class in Serving Traffic Mobility and Land Access.....	56
Figure 4-3. Hays County Existing Roadway Functional Classification.....	57
Figure 4-4. Hays County Existing Roadway Number of Through Lanes	58
Figure 4-5. Hays County Existing Roadway 2010 Average Daily Traffic (ADT)	62
Figure 4-6. Hays County Existing Roadway Level of Service (LOS)	65
Figure 4-7. Hays County Bridge Inventory (2010)	68
Figure 4-8. Hays County Existing Bicycle Facilities.....	70
Figure 4-9. All CARTS Routes in San Marcos.....	71
Figure 4-10. Proposed LSTAR Austin-San Antonio Passenger Rail Stations	73
Figure 4-11. Hays County Railroad Map	75
Figure 4-12. Hays County Aquifer System	79
Figure 4-13. Major Streams in Hays County.....	80
Figure 4-14. Hays County FEMA Floodplain Map	81
Figure 4-15. Environmental Sensitivity Analysis Map.....	83
Figure 4-16. Vehicle Crashes by Severity in Hays County (2008-2010)	84
Figure 4-17. Hays County and Statewide Fatal Crashes by Roadway Type (2008-2010 crash data).....	85
Figure 5-1. HCTP Adopted Thoroughfare Plan Map.....	88
Figure 5-2. Hays County Transportation Plan Resolution.....	95
Figure 5-3. Existing-plus-Committed Level of Service (LOS)	98
Figure 5-4. 2035 HCTP Thoroughfare Level of Service (LOS)	99



Hays County Transportation Plan

Section 1

Goals and Objectives

1.1. Introduction

Parsons Brinckerhoff was hired by Hays County to update its previous long-range plan, *Hays County 2025 Transportation Plan*. This update, hereinafter, referred to as the Hays County Transportation Plan (HCTP) includes:

- Goals and Objectives (Section 1)
- Review of Existing Plans and Reports (Section 2)
- Review of Existing Demographics (Section 3)
- Existing System Assessment (Section 4)
- Thoroughfare Plan (Section 5)
- Other Considerations (Section 6)
- Potential Funding Sources (Section 7)

Rapid population growth will continue to be the dominant factor influencing the use and development of transportation facilities and services in Hays County for the foreseeable future. The population of Hays County is projected to more than double within the next 25 years, increasing from 157,000 as of the 2010 Census, to over 371,000 by 2035. Employment in Hays County is also expected to grow from 48,000 in 2010 to over 137,000 in 2035. This population and employment growth has the potential to cause significant traffic congestion and increase the need for new and improved roadways, as well as the need for Hays County to develop alternative modes of transportation.

1.2. Purpose of Hays County Transportation Plan

The purpose of the Hays County Transportation Plan (HCTP) is to identify current and future transportation needs in the County and identify how best to address them. Through an open and transparent process that provides various ways for the public to stay involved and provide input, the HCTP is seeking to develop a long-range plan that will:

- Set an overall direction for transportation future of the County;
- Accommodate future growth while maintaining and improving access to destinations for the traveling public (e.g., work, school, shopping, residential);
- Address current transportation needs by identifying specific projects; and,
- Address future need by providing the information and tools needed to preserve right-of-way needed for future projects.

The HCTP Thoroughfare Plan was adopted by the Hays County Commissioners Court on January 22, 2013. **Figure 5-1** and **Table 5-1** shows the adopted Thoroughfare Plan Map and Roadway Projects Matrix, respectively. The resolution adopting the Thoroughfare Plan Map is shown in **Figure 5-2**.

1.3. Goals and Objectives of the Hays County Transportation Plan

The goals and objectives of the HCTP set the overall tone of the transportation plan by directing investments to fund improvements that best meet the mobility and safety needs of the county's patrons. The HCTP includes three (3) overarching goals accompanied by 10 objectives to clearly identify the intent of the plan's purpose (**Table 1-1**). These goals were guided by the eight (8) planning factors as outlined in the Safe, Accountable, Flexible and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU):

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
2. Increase the safety of the transportation system for motorized and non-motorized users;
3. Increase the security of the transportation system for; motorized and non-motorized users;
4. Increase the accessibility and mobility of people and for freight;
5. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns;
6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
7. Promote efficient system management and operation; and
8. Emphasize the preservation of the existing transportation system.

Table 1-1. HCTP Goals and Objectives

1.	Provide for the most efficient movement of people and goods possible
a.	Improve transportation systems performance
b.	Promote and facilitate the accessibility of places
c.	Promote and facilitate the mobility of people
2.	Improve the quality of life for County residents, businesses and visitors
a.	Develop and maintain the transportation system to protect public health, safety and welfare
b.	Develop and maintain the transportation system to protect the natural environment.
c.	Develop and maintain the transportation system to be context-sensitive
d.	Develop and maintain the transportation system to support existing communities
e.	Provide diversity and choice in the transportation system
3.	Support economic growth and activity
a.	Ensure a predictable and adequate transportation investment program to guide and leverage public and private investment decisions
b.	Invest in the transportation system to promote the attractiveness of the County

The goals and objectives of the HCTP were also developed to be consistent with the goals of the 2035 CAMPO Regional Transportation Plan (RTP) and the TxDOT 2035 Statewide Long-Range Transportation Plan (SLRTP) as shown in Table 1-2.

Table 1-2. 2035 CAMPO RTP Goals and TxDOT SLRTP Goals

2035 CAMP RTP	
Safety: Increase the safety of the transportation system.	Mobility and Access: Maintain and enhance mobility and access of goods and people within the region.
Connectivity: Improve connectivity within and between the various transportation modes for goods and for people of all ages and abilities.	Efficiency: Improve the efficiency and performance of the transportation system.
System Preservation: Ensure that the transportation system can be maintained and operated over time.	Economy: Maximize the economic competitiveness of the region.
Land Use and Economic Development: Support economic development and efficient use of land.	Cost Effectiveness: Maximize the affordability of the transportation system.
Air Quality, Climate Protection, and Energy: Minimize air pollution, greenhouse gas emissions and energy consumption related to the transportation system.	Environment, Noise, and Neighborhood Character: Minimize negative impacts to environmental resources, noise, and neighborhood character.
Social Equity: Ensure that the benefits and impacts of the transportation system are equitably distributed regardless of income, age, race, or ethnicity.	Security: Increase the security of the transportation system and the region.
TxDOT 2035 SLRTP	
Develop an organizational structure and strategies designed to address the future multimodal transportation needs of all Texans	Enhance safety for all Texas transportation system users
Maintain the existing Texas transportation system	Promote congestion relief strategies
Enhance system connectivity	Facilitate the development and exchange of comprehensive multimodal transportation funding strategies with transportation program and project partners

Subsequent updates to the HCTP will be made under the auspices of the current federal transportation authorization bill, MAP-21 (Moving Ahead for Progress in the 21st Century Act), signed into law by President Obama on July 6 2012.

1.4. Other Considerations

In addition the goals and objectives, the HCTP should:

- **Be coordinated with the five Hays County cities that have prepared and adopted transportation plans (San Marcos, Kyle, Buda, Wimberley, and Dripping Springs).**
- **Provide support for the Hays County cities and communities that do not have separate transportation plans or programs.**
- **Facilitate the coordination of new projects and future transportation planning across the County.** Periodic coordination meetings should be held and include the Hays County Transportation Department, Hays County Development Services Department, the Capital Area Metropolitan Planning Organization (CAMPO), the Capital Area Rural Transportation System (CARTS), the Capital Metropolitan Transportation Authority (Capital Metro), the Central Texas Regional Mobility Authority (CTRMA), local governments, local utility providers and, when feasible, state and federal agencies such as the Texas Department of Transportation (TxDOT) and the Federal Highway Administration (FHWA).
- **Promote alternative methods for reducing congestion.** In an effort to reduce congestion as well as maintenance on transportation facilities within Hays County, alternative methods such as public transportation, carpooling, telecommuting, the implementation of alternative work schedules, bicycling, and the development of mixed-use neighborhoods should all be promoted as part of the HCTP.
- **Promote employment growth within Hays County to reduce out of county journey-to-work commuting.**
- **Promote the use of population and employment projections into the project development process.** New transportation projects should take into account population and employment projections and associated traffic projections anticipated to occur during the expected life of the project to ensure the ability of the transportation facility to meet future demands at an acceptable level of service (LOS).
- **Promote the active assessment of transportation needs generated by future development.** Work with private developers as well as state and municipal development departments, and the Hays County Development Services Department to identify areas of future development and assess how these future developments will impact transportation needs. Require new development to pay its fair share of the cost of new roadways and roadway expansions in order to minimize the cost to Hays County taxpayers. All new transportation projects should take these assessments into consideration to ensure that transportation needs are met. These assessments could also be used to guide development to areas which may have less of an impact to the transportation system.
- **Examine options for funding each transportation project.** Federal, state, local and developer funding should be evaluated along with Public-Private-Partnerships (PPP) in determining how each transportation project could best be funded. Transportation projects with viable funding options should be prioritized over those whose funding is unlikely to be secured.

- **Promote the use of best practices for the operation of the County's roadway system in order to maximize the capacity, safety and reliability of the roadway system.** Practices to be considered include driveway access management, vehicle channelization and turning restrictions, and innovative safety design standards.

1.5. Public Involvement Overview

Since the launch of the Hays County Long Range Transportation Plan, the public involvement was the focal point of the process by providing continuous, cooperative, and collaborative communication with the general public. The team felt that the greater the amount of participation from the citizens of Hays County and those that normally travel the roads, the better the final transportation plan would be. The public involvement process was based on the following goals:

- Maintain a transparent process,
- Conduct inclusive outreach,
- Plan for an informative process,
- Work to collect meaningful input, and
- Build an understanding for the need of the plan.

The schedule was based on a 9-month project schedule as part of the HCTP. However, once the team began developing the transportation plan and gathered the first round of public input, our team slowed down the process and focused the public outreach and meetings into two phases with extra time to work with smaller community groups and stakeholders. In the first phase our team worked to collect general priorities and concerns for current and future transportation, information on driving habits, and preferences on alternative modes of transportation. Then, after a thorough review of public comments, existing conditions, population projections, current and projected levels of service, and close coordination with the Advisory Committees, the project team created a draft plan map. The second phase of public involvement was focused on sharing the draft plan and collecting input on the plan.

Comments and questions were accepted throughout the project. These were logged and are included in the appendix. Team members have reviewed and analyzed all comments. Several comments led to changes in the final plan.

The team benefited greatly from the active citizens of Hays County, who participated in this planning effort. Valuable information was received throughout the entire process. The final plan represents a balanced approach that incorporates feedback from the public and technical analysis from transportation planners. The team thanked the citizens who participated for being involved in this important effort.

1.6. Outreach Conducted

Database – Our team developed a database of community groups, city and county entities. The team then reached out to these groups to ask for additional contacts that would be interested in the process. We also included anyone that contacted us or made comments. The final database included over 700 contacts.

Email Updates – After building a database of contacts, we sent updates via email to keep the community informed and up-to-date on project-related issues and topics. Topics included meeting announcements, progress status, and information on how to comment. Nine total email updates were distributed.

Website – A separate page for this effort was developed on the Hays County website. Project materials and updates were posted on this page.

Media – Several media releases were sent to local media to share project updates and announce public meetings. The HCTP project received significant coverage from KXAN, Community Impact News, San Marcos Mercury, News Dispatch, YNN, Statesman, and as well as inclusion in chamber of commerce newsletters and local blogs.

Community Contacts – Throughout the course of the HCTP project, the public involvement team took the time to reach out via phone and in person to several community contacts that have the ability to forward project information to their own databases/members. This included groups such as Chambers of Commerce, Commissioner's and the Judge's offices, libraries, and school districts. This outreach helped to spread project information and increase participation.

Stakeholder Coordination – Our team took the time to coordinate with several stakeholders and other planning efforts. This coordination ensured the plan was in line with other ongoing planning efforts in the region to promote connectivity and reduce redundancy. Coordination meetings or contact was held with:

- Caldwell County Transportation Planning Team
- Travis County
- Transportation Planning Departments of Buda, Dripping Springs, Kyle, Neiderwald, San Marcos, Wimberley
- San Marcos Airport
- Lone Star Rail
- Capital Area Metropolitan Planning Organization

1.7. Public Meetings

1.7.1. Phase 1

The first public meeting was held on December 1, 2011, in San Marcos and the objectives were to provide information on the planning process and data collection efforts to date, as well as gather input from the public on transportation concerns and priorities. Subsequently, on January 4, 2012, a similar meeting was held in Wimberley.



The following is brief summary of the materials shared at the aforementioned meetings:

- CAMPO Population Density Map for 2010 and 2030
- Current Level of Service (LOS) Map
- Projected (LOS) Map for 2030 with no improvements
- Map of Hays County Cities and Extraterritorial Jurisdictions (ETJs)
- Existing Roadways and 2010 Average Daily Traffic Counts
- Project Fact Sheet

Attendees were able to review materials, visit one-on-one with team members, participate in a mapping exercise and complete an online survey. The mapping exercise allowed attendees to place dots in their areas of concerns and leave comments. Several computer workstations were setup throughout the room to facilitate the completion of the survey on-site.

At the conclusion of the meeting, the team reached out to community groups to share the information gathered and disseminate survey results. During this outreach effort, several requests were made to make additional presentations sharing information from the public meeting. Our team also shared information at the following meetings: Home Builders Association, Seton Hospital in San Marcos, the Kiwanis Club of San Marcos, San Marcos Lions Club, and Shady Grove HOA.

1.7.2. Phase 1 Results

Participants determined that rush hour traffic, congestion on local roads, and safety required the most attention. There was good representation from across the county and the following is a summary of the most prevalent comments received:

- Wide variation from communities and countywide such as additional transit opportunities and protection of watersheds, to very specific, such as turn lanes, traffic lights, and new or expanded roads
- Alternate routes for existing communities
 - Kyle and Buda
 - Dripping Springs (FM 150, RR 12, and US 290)
 - Wimberley (RR 12)
- Alternate routes into Austin
 - FM 967, FM 1626, FM 1826 and SH 45 SW
- Varying support for SH 45 SW from MoPac to FM 1626
- Support for converting IH 35 frontage roads to one-way
- Support for parallel routes to IH 35
- Need turn lanes and shoulders on RR 12, FM 150, FM 967, FM 1626 and SH 21 for safety
- Need second outlet for Lime Kiln Road and Hilliard Road
- Need to upgrade Elder Hill Road (CR 170)

- Need to connect Plum Creek subdivision to FM 1626 commercial area

Table 1-3. Phase 1 Public Involvement

Participation	No. Received
Attendance at December 1, 2011 Public Meeting	100+
Attendance at January 4, 2012 Wimberley Meeting	26
Mapped Comments	78
Completed Surveys	223
Written Comments Received	211

1.7.3. Phase 2

The second public meeting was held on November 8, 2012, in San Marcos. Subsequent meetings were held in Dripping Springs (November 13th), Kyle (November 14th), and in Wimberley (November 15th). At these meetings background information was shared on how the plan was developed as well as a map that represented the Draft Transportation Plan. Attendees were then asked to either leave general comments or complete a survey where comments would also be logged.

HAYS COUNTY TRANSPORTATION PLAN
OPEN HOUSE
 Please attend one of the meetings below at your convenience to view the draft Transportation Plan and maps.

<p>Thursday, November 8, 2012 4:30 to 7:30 p.m. San Marcos Activity Center 501 E. Hopkins Street San Marcos, TX 78666</p>	<p>Tuesday, November 13, 2012 4:30 to 7:30 p.m. County Precinct 4 Office 195 Roger Hanks Parkway Dripping Springs, TX 78620</p>
<p>Wednesday, November 14, 2012 4:30 to 7:30 p.m. Historic Kyle City Hall 101 S. Burleson Street Kyle, TX 78640</p>	<p>Thursday, November 15, 2012 4:30 to 7:30 p.m. Wimberley High School Library 100 Carney Lane Wimberley, TX 78676</p>

The same information will be presented at all open house meetings

We will collect feedback on the plan, make any necessary revisions, and then present the final Plan to the Commissioners Court for adoption. The draft Plan will be posted online and comments will be accepted from November 8 - November 30, 2012 at:

www.co.hays.tx.us/transportationplan

For more information or to submit comments, please contact us at:
haystransportationplan@gmail.com or (512) 533-9100 ext.10

Information shared at the meeting:

- Prevailing Transportation Issues
- Map of Existing Roadways
- Plan Purpose and Approach
- Information on Pedestrian/Bicycle and Transit
- Board on Public Input Received
- 2010 Level of Service and the Projected 2035 Level of Service Maps
- Illustrations of Proposed Roadway Sections
- Roadway Matrix (listing projects included in Plan map)
- Draft Hays County Transportation Plan Map
- Project Fact Sheet



1.7.4. Phase 2 Results

There were a wide range of comments received after citizens viewed the Draft Transportation Plan Map and many were focused on specific projects that were included. Some of the common themes throughout the commenting period were:

- Focus growth in US 290 and IH-35 corridors
- Preserve rural character, don't expand country roads, protect scenic corridors
- Protect rivers and watershed from effects of growth/expansion
- Remove the project labeled New Facility 27 from plan (near Sachtleben Rd. from Wayside Dr. - RM 32 @ Purgatory Rd.) because of environmental effects on the river, effect on property values and the River Oaks subdivision, and engineering challenges at the river crossing
- Reconsider extending SH 21 because of the proximity to De Zavala Elementary School and effects on Hills of Hays subdivision; consider Old Bastrop Road as an alternative
- Remove Flite Acres Road from the plan as the neighborhood is against improvements that would bring additional traffic to the area

Table 1-4. Phase 2 Public Involvement

Participation	No. Received
San Marcos Meeting Attendance	39
Kyle Meeting Attendance	33
Dripping Springs Meeting Attendance	30
Wimberley Meeting Attendance	47
Completed Surveys	103

1.8. Advisory Groups

Shortly after the project was started, two Advisory Groups were developed to provide Hays County and the project team with early and regular feedback on the planning process and materials. These volunteer groups were instrumental in providing local information such as other planning documents and efforts, and assistance in public involvement. A joint kickoff meeting was held with both groups and then separate meetings were held for each group. Throughout this project six total meetings were held with each group.



1.9. Technical Advisory Group

The Technical Advisory Group was appointed by Hays County and consisted of different transportation agencies (TxDOT, CAPCOG, CAMPO, CARTS, Lone Star Rail District), City Entities (Buda, Dripping Springs, Kyle, Mountain City, Neiderwald, San Marcos, Umland, Wimberley, Woodcreek, Hays City, and Bear Creek), as well as county representatives and a representative from Texas State University. The focus of the Technical Advisory Group was to provide technical information relevant to their representative agency as well as on a County wide basis.

1.10. Citizens Advisory Group

Each member of the Hays County Commissioners Court appointed 3 members to the Citizens Advisory Group through an application process. The objectives of this group were to represent their geographical area of the county and assist the project team in public involvement. Further, this group reviewed all materials prior to them being presented to the public and provided feedback on the best ways to share the information.

1.11. Public Involvement Summary

The success of the HCTP will be linked to active community involvement in Hays County that took the time to participate and share information. The tools utilized throughout this public involvement effort were enhanced by the collaborative efforts of the advisory groups, community leaders and community organizations that shared project information with the community, as well as by the general public. The HCTP's public involvement process also relied on e-mail updates and the website link, posted information on social media sites, and a good amount of media interest. Large and diverse populations of Hays County participated in this effort and have given the project team a wealth of valuable information from which to draw on in development of this plan.

Hays County Transportation Plan

Section 2

Review of Existing Plans and Reports

2.1. Overview

This section consists of a review of planning documents and studies, at the local and regional scale, that were used to develop the HCTP. The following reports were reviewed and summarized as part of this transportation plan update.

- Hays County Multi-Corridor 2025 Transportation Plan;
- Hays County Capital Improvement Program;
- Hays County Water Supply Plan;
- Hays County Strategic Plan;
- Hays County 1445 City-County Subdivision Regulation Agreements in Hays County;
- Capital Area Metropolitan Planning Organization (CAMPO) 2030 Regional Transportation Plan;
- Capital Area Metropolitan Planning Organization (CAMPO) 2035 Regional Transportation Plan;
- Capital Area Metropolitan Planning Organization (CAMPO) Congestion Management Process (CMP);
- Capital Area Metropolitan Planning Organization (CAMPO) Transportation Improvement Program (TIP); and,
- Texas Department of Transportation 2030 Committee Report.

2.2. Key Findings

One of the primary factors influencing the provision of future transportation infrastructure and services in Hays County is rapid population growth, and specifically, where this growth is occurring. Over half of the Hays County population resides within the IH-35 corridor. The population of Hays County is anticipated to more than double within the next two decades, increasing from approximately 157,000 persons (2010 Census) to over 357,000 by 2030 (CAMPO 2030 RTP). This rapid increase in population, along with its associated impact on land use, water supply, and other county facilities has the potential to cause significant traffic congestion and increase the need for new and improved facilities as well as the need for other modes of transportation.

The CAMPO CMP and the Hays County 1445 Agreements with cities in Hays County, named after House Bill 1445 enacted by the Texas legislature in 2001, both address the issue of population growth and how to manage potential congestion on the transportation system. The *Hays County 1445 Agreements with Cities in Hays County* recommends that the HCTP promotes a coordinated development review process, taking into account the 1445 agreements that are already in place and under development.

Congestion management strategies will seek to improve the efficiency of the existing and future Hays County transportation system. According to travel demand model scenarios, conducted as part of the CAMPO CMP, projected population growth will offset current and planned investments in congestion management, resulting in increased congestion. As a result, the CMP recommends incorporating congestion management policies into CAMPO's TIP. One option for including congestion management strategies into the TIP would be to require the projects in the TIP use travel demand management (TDM) or transportation system management (TSM) techniques. Another method would be to influence policies that drive the TIP and Long-Range Transportation Plan (LRTP) project selection process by awarding points for congestion management as part

of the scoring process. It is recommended the HCTP implement congestion management strategies as part of the project selection process to improve the likelihood of project inclusion into the TIP.

Population growth will also have an effect on the Hays County water supply, as reported in the *Water and Wastewater Facilities Plan for the Portion of Hays County West of the IH-35 Corridor*. Furthermore, county services such as the legal system and general quality of life as reported in the *Hays County Strategic Policy and Implementation Plan* will be impacted by the projected growth. Coordinating the planning processes in Hays County will ensure synergistic prioritization of projects maximizing positive impacts. This will also allow development or improvement of transportation infrastructure to be integrated with future land use development.

TxDOT 2030 Committee Report examines the future transportation needs of the State, taking into account the projected population growth. The report identifies projected needs and expenditures across the State, categorized by transportation mode. This report, along with the *Strategic Policy and Implementation Plan*, *Capital Improvement Program* and the *Journey to Work Commuting Data* can facilitate the development of a needs assessment for the HCTP.

While population growth will dictate the transportation needs of Hays County in the coming decades, an understanding of those needs, their potential costs, and inclusion of congestion management strategies can mitigate the impacts associated with this projected growth.

2.3. Summaries of Reviewed Plans and Reports

2.3.1. Hays County Multi-Corridor 2025 Transportation Plan

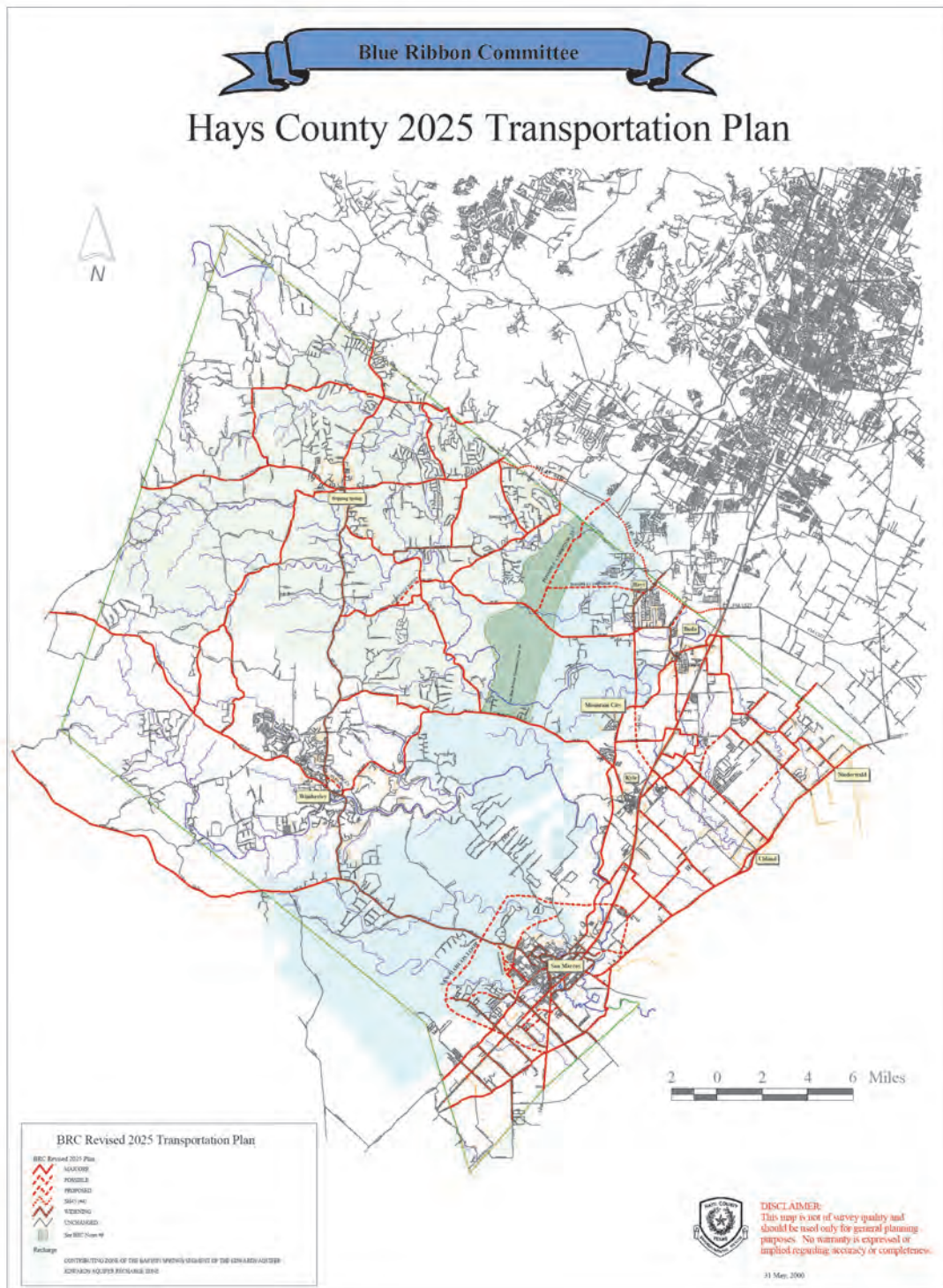
The 2025 Hays County Transportation Plan (HCTP) was adopted on May 16, 2000 by a unanimous vote of the Hays County Commissioners' Court. In November, 1999, the Commissioners' Court appointed a 19-member *Blue Ribbon Committee of the Hays County Multi-Corridor 2025 Transportation Plan*. Chaired by Ms. Judy Carr, the Committee convened weekly from January 2000 to May 2000. The Plan was based on the *Hays County Comprehensive Transportation Planning Study*, which was prepared by the consulting team of Prime Strategies, Inc., DPD, and Alliance-Texas Engineering Company.

The *Blue Ribbon Committee* made modifications to the study area map and produced the *Blue Ribbon Committee Hays County Multi-Corridor 2025 Transportation Plan*, which was subsequently adopted by the Commissioners' Court. The Plan includes the map and recommendations for high priority roadway investments.

The Plan also includes policy recommendations relative to the road system, regional transportation system, safety, transportation funding and programming, road design, development's responsibility, incentive actions, natural environment, roads in the recharge zone, social and land use heritage, planning and review entities for development, and an agenda for the Legislature and other regulatory bodies. The *Hays County 2025 Transportation Plan Map* is shown in **Figure 2-1**.

The *Hays County 2025 Transportation Plan* is an invaluable resource that will serve as foundation for the updated Hays County Transportation Plan (HCTP).

Figure 2-1. Hays County 2025 Transportation Plan Map



2.3.2. HB 1445 City-County Subdivision Regulation Agreements in Hays County

The HB1445 agreements are important to long-range transportation planning because, under state law, roadway right-of-way dedication can be required in new subdivisions if a new roadway or a roadway expansion is adopted in the official city/county transportation plan. Currently, six (6) cities in Hays County have adopted transportation plans: San Marcos, Kyle, Buda, Dripping Springs, Wimberley, and Austin.

Authored by Senator Jeff Wentworth in the Senate and Representative Bob Turner in the House, HB 1445 was enacted by the Texas Legislature in 2001, mandating that cities and counties develop written agreements (Interlocal Cooperation Agreement) that provide for coordinated city-county subdivision approval review in the extraterritorial jurisdiction (ETJ) of cities.

It was enacted after the Texas Association of Builders argued that developers were platting land in ETJs that posed conflicting city and county regulations. In the absence of the HB 1445 provisions, subdivisions would have to comply with the more stringent city or county regulation.

The size of a city's ETJ generally ranges from ½ - 5 miles, depending on the size of the city population. Each of the twelve cities in Hays Counties has an ETJ, including: Austin, Bear Creek, Buda, Dripping Springs, Hays, Kyle, Mountain City, Niederwald, San Marcos, Umland, Wimberley, and Woodcreek. **Figure 2-2** provides a map of cities and ETJs in Hays County.

Currently, the only HB 1445 agreements enforced in Hays County are with the cities of Umland and Buda. All previous Hays County 1445 agreements have expired and the County Development Services Department is in the process of re-negotiating new ones. There are four provided options under the law: 1) City regulation of all plats in the ETJ, 2) county regulation of all plats in the ETJ, 3) geographically divided regulation between city and county within the ETJ, and 4) joint regulation between city and county with one uniform set of regulations, one filing fee, and one office to file plats.

In the absence of an adopted county transportation plan, the Hays County Development Services Department ensures that all regulated roadways in new subdivisions comply with Chapter 721 – Roadway Standards of the revised Hays County Development Regulations adopted on July 19, 2011. Chapter 721 of the regulations specifies minimum right-of-way widths and building setback lines for seven roadway functional classifications in accordance with *Table 721.02 - Design Requirements Based on Roadway Classification*, as shown in **Table 2-1**.

The new HCTP has been prepared in coordination with all city transportation plans and implemented through the 1445 agreements as they are adopted. When this is achieved there will be a unified transportation plan for Hays County and its cities, and 1445 agreements in place which will permit a cooperative, coordinated development review process that will ensure dedication/reservation of needed right-of-way.

Figure 2-2. Cities and Extraterritorial Jurisdictions of Cities in Hays County

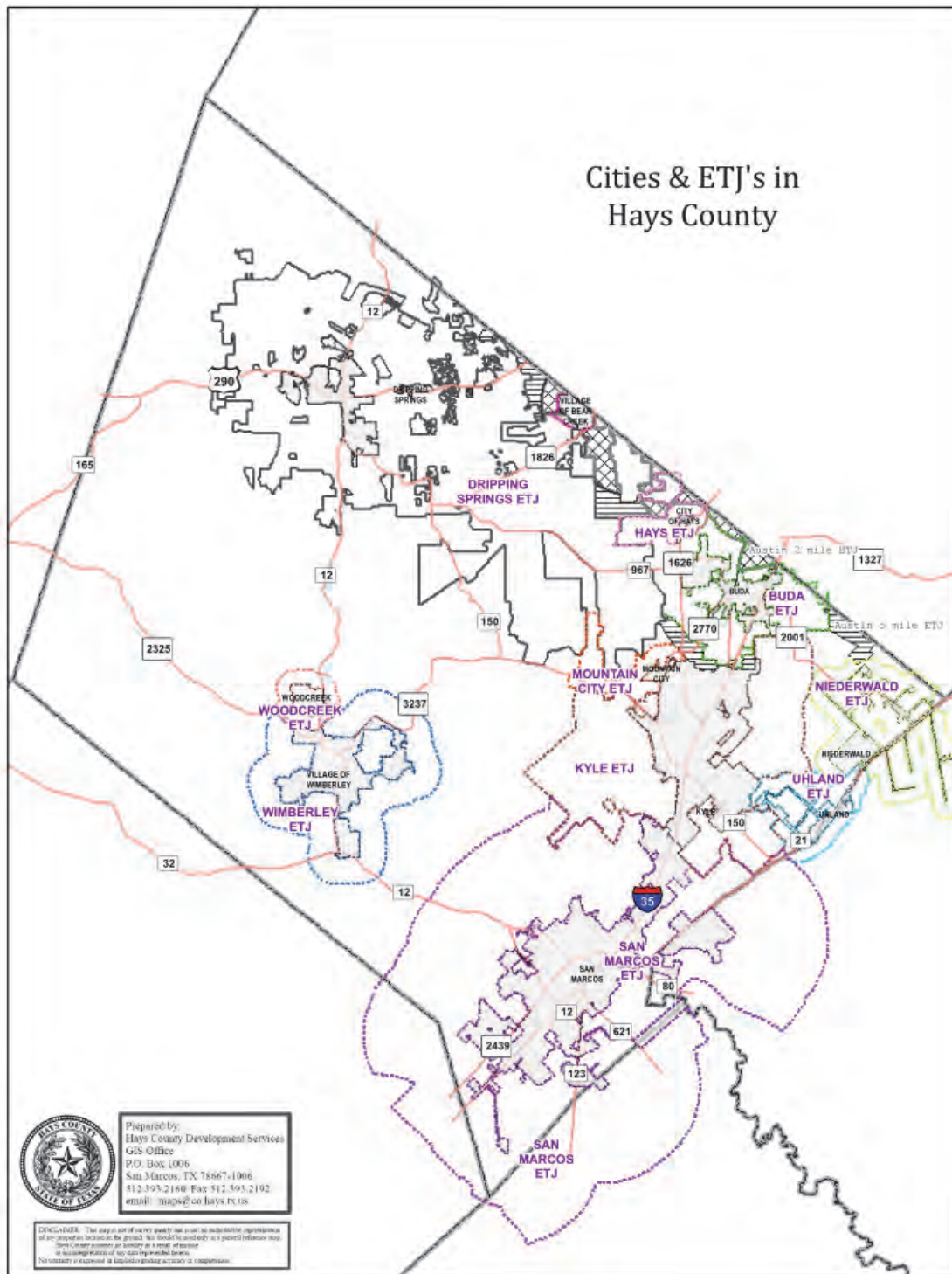


Table 2-1. Hays County Development Regulations, Chapter 721 – Roadway Standards

Functional Classification	Country Lane	Local Roadway	Urbanized Local Roadway	Minor Collector	Major Collector	Minor Arterial	Major Arterial
AASHTO Classification	Special Purpose	Local Rural	Special Purpose	Rural Collector	Rural Collector	Rural Arterial	Rural/Urban Arterial
Average Daily Traffic (ADT - one way trips*)	Not more than 100	101-1000	Not more than 1000	1001-2500	2501-5000	5001-15000	More than 15,000
Design Speed (mph)	25 mph	25 mph	25 mph	35 mph	45 mph	55mph	**
No. of Travel Lanes	2	2	2	2	2	4	**
Turn Lanes	No	No	No	No	**	**	**
Min. ROW Width (ft)	50	60	40	60	80	100	**
Building Setback (ft)	25	25	25	25	50	50	50
Width of Travelway (ft)	18	20	18	22	24	48	**
Width of Shoulders (ft)	2	4	2	5	6	8	**
Minimum Centerline Radius (ft)	200	300	200	375	675	975	**
Min. Tangent Length between Reverse or Compound Curves (ft)	50	100	50	150	300	500	**
Min. Radius for Edge of Pavement at Intersections (ft)	25	25	25	25	25	25	**
Intersection Street Angle Range (degrees)	80-100	80-100	80-100	80-100	80-100	80-100	**
Max. Grade (%)	11	11	10	10	9	8	**
Min. Street Centerline offset at Adjacent Intersections (ft)	110	125	110	125	125	125	**
Min. Stopping Sight Distance (ft)	175	175	175	250	350	550	**
Min. Intersection Sight Distance (ft)	250	250	250	350	450	550	**
Ditch Foreslope Grade	4:01	4:01	4:01	5:01	5:01	6:01	**
Ditch Backslope Grade	3:01	3:01	3:01	4:01	4:01	4:01	**
Min. Cul-de-sac ROW/ Pavement Radius (ft)	70/45	70/45	70/45	70/45	N/A	N/A	N/A
Min. "T" End ROW/ Pavement Length (ft)	80/65	80/65	80/65	N/A	N/A	N/A	N/A
Min. "T" End ROW/ Pavement Width & Radius (ft)***	40/20	40/20	40/20	N/A	N/A	N/A	N/A
Min. Lot Frontage (ft)	30	50	30	100	150	150	150
Min. Drive Spacing (ft)	50	50	50	75	120	120	120
Notes: * ADT shall be based on an average of 10 one-way trips per dwelling unit per day for residential lots. ADT calculations for commercial or other lots shall approved by the Department on a case-by-case basis. ** Noted elements shall be approved by the County Engineer on a case-by-case basis. *** "T" End Designs must conform to minimum AASHTO Standards AASHTO – American Association of State Highway and Transportation Officials Building Setback – Minimum building setback, in feet, applicable to each side of the roadway							

2.3.3. Capital Area Metropolitan Planning Organization (CAMPO) 2030 and 2035 Plans

CAMPO is the designated Metropolitan Planning Organization (MPO) for the five-county Austin-Round Rock Metropolitan Statistical Area (MSA). The counties currently included in CAMPO are Williamson, Travis, Hays, Caldwell and Bastrop. Under federal law there must be an MPO established for every city and metropolitan area in the United States with more than 50,000 people. There are currently 25 MPOs in the State of Texas.

There are two basic functions of MPOs under federal law: 1) to prepare and adopt a regional transportation plan every five years for at least 20 years in the future, and 2) review and approve all federally-funded transportation projects and studies in the MPO area, including roadways, transit, and bicycle/pedestrian facilities. In addition, the Texas Legislature and the Texas Transportation Commission have delegated to Texas MPOs the authority to select and recommend state-funded transportation projects within the individual MPO areas. CAMPO is governed by a 19-member Transportation Policy Board, composed of locally elected officials and highway and transit officials.

The two most recent CAMPO RTPs are the *CAMPO 2030 RTP*, adopted in 2005, and the *CAMPO 2035 RTP*, adopted in 2010. In preparing the plans, the CAMPO staff conducted a very extensive and comprehensive analysis over a 2-3 year period. This includes analyses of past and forecasted population and employment growth, regional travel patterns, travel modes (roadway, transit, bicycle/pedestrian), the need to expand the entire five-county transportation system in the future, the environmental effects of a proposed expansion (notably air quality), the costs of the future transportation system and the projected total revenue needed to pay for the system. This valuable information and analysis, and the expertise of the CAMPO staff, was made available to Hays County as a resource in preparing the HCTP.

There is one major difference between the CAMPO RTPs and city/county transportation plans. MPO plans are required to be fiscally constrained as prescribed by federal regulations. This means that there cannot be a larger and more costly transportation system (roads, transit, and bicycle/pedestrian) adopted in the plan than there is reasonably available future funding. City and county transportation plans are not limited by fiscal constraints, however; their intent is to reserve right-of-way through a subdivision review process as new development occurs. This is a flexible process that does not require setting a date for roadway expansion, rather establishing a system where right-of-way is obtained through the subdivision process. Roadway construction decisions are based on future development patterns and increases in traffic.

In 2005, the CAMPO area included only three (3) counties: Williamson, Travis and Hays. In 2010, the CAMPO region was expanded adding Bastrop and Caldwell counties. Therefore, the *CAMPO 2030 RTP* included the previous three (3) counties and the *CAMPO 2035 RTP* includes all five (5) counties. The population and employment data for Hays County from both plans are shown in **Table 2-2**.

Table 2-2. Hays County Population and Employment Estimates

	Year	Population	Employment
State Estimate	2005	126,200	41,000
2010 U.S. Census	2010	157,107	N.A.
2035 CAMPO RTP	2015	189,200	66,200
2035 CAMPO RTP	2025	271,600	97,800
2030 CAMPO RTP	2030	359,000	126,000
2035 CAMPO RTP	2035	371,200	137,300

Please note that the Hays County population and employment forecasts for 2030 and 2035 are very similar. Based on the Hays County 2010 U.S. Census total of 157,107 persons, this indicates an increase of about 202,000 people by 2030 and 214,000 persons by 2035, respectively. The HCTP was prepared assuming an increase in population with a range of 200,000 - 215,000 persons. For comparison, the Hays County population in 2035 is forecasted to equal about 90% of Williamson County's current population in 2010 (422,679).

When Hays County will grow to 359,000 or 371,200 people depends on the rate of future population growth. The Texas State Data Center (TXSDC) prepares alternative high, medium and low population estimates by county based on the latest U.S. Census decennial population figures.

Both the 2030 and 2035 CAMPO RTPs have been useful in preparing the HCTP in many aspects. For one, the CAMPO RTPs are based on detailed population and employment estimates by small traffic analysis zones which can readily be assumed for the HCTP. The CAMPO staff has conducted travel demand modeling for various future year scenarios, which indicate recommended roadway sizes and informs the planning process for roadway and transit improvements. Furthermore, CAMPO has developed estimates for the capital and operating costs for all planned transportation system for the entire five-county region. This information can be evaluated and updated for use in the preparation of the HCTP.

2.3.4. Journey to Work Commuting Data

The journey to work data collected by the U.S. Census is another invaluable resource for preparation of the HCTP. The journey to work data describes the travel behaviors for a given geographic area; data is also available by mode of transportation and the amount of time it takes to travel to the workplace. The data for Hays County commuting patterns in 2009 shows the following:

Table 2-3. Hays County Commuting Patterns - 2009

	Number	Percentage
Live and work in Hays County	15,903	27%
Live in Hays County, work outside	42,984	73%
Total employed Hays County residents	58,887	100%
Live outside Hays County, work inside	27,081	

This information is useful in determining if a better jobs/housing balance can be achieved over time in Hays County. The higher the percentage of Hays County residents who work in Hays County

(now 27%), the lower will be the travel demand on the County's roadways. This would reduce the need for future roadway system expansion and shorten commute times.

2.3.5. CAMPO Congestion Management Process State of the System Report, November 2009

The primary goal of CAMPO's CMP State of the System Report was to convey to the public and transportation agencies the status of congestion in the region. To this end, the CMP provides methods for monitoring, evaluating, and managing congestion across the regional transportation system with the intent of protecting the region's investments in, and improving the effectiveness of the existing and future transportation networks. The CMP is also used as a planning tool to help reduce vehicle emissions and improve regional air quality.

Current and future congestion management measures and strategies used by all regional partners, including Hays County, for analyzing the performance of the region's transportation system are identified. As a criterion for project inclusion into the Transportation Improvement Program (TIP), agencies must identify which of the congestion management measures and strategies will be implemented as part of the project-in-question. These congestion management measures and strategies include the development of a Congestion Index (CI), which identifies specific congested segments and the development of Regional Growth Centers, or shifting regional growth towards specific locations in an effort to reduce congestion.

The CMP identifies capacity projects throughout the region that are part of the TIP between 2006 and 2011 incorporating Transportation Systems Management (TSM) or Travel Demand Management (TDM) techniques. While the vast majority of these projects include bicycle/pedestrian improvements, several of these projects include access management techniques. Other projects include toll improvements, intersection improvements, the inclusion of express lanes, and grade separations as efforts to mitigate congestion.

Eight (8) congestion management projects from the TIP are located in Hays County (**Table 2-4**). The projects primarily consist of bicycle improvements with the goal of increasing recreational opportunities for residents, providing alternative transportation options, and drawing in more tourists seeking bicycle pathways. Most of these projects are also listed in the FY 2011-2014 TIP.

Table 2-4. Hays County Congestion Management Projects Included in TIP

Project Location	Project Limits	TSM / TDM Techniques
FM 3407	RM 12 to RM 2439	Bicycle /Pedestrian Improvements
FM 1626	FM 270 to Travis County Line	Bicycle Improvements
FM 1626	Hays County Line to Bliss Spillar Rd.	Bicycle Improvements
RM 12	RM 32 to San Marcos City Limit	Bicycle Improvements
Cement Plant Rd Overpass	Frontage Rd west of IH-35 to Frontage Rd east of IH-35	Pedestrian Improvements
IH-35	FM 2001 to FM 1626	Bicycle Improvements
US 290 W	0.43 miles east of RM 12 to Travis County Line	Bicycle Improvements
FM 110	IH-35/McCarty Rd to SH 123	Bicycle Improvements

The travel demand model provides an output of volume to capacity (V/C) ratio which is used to quantify future congestion levels and identify where future capacity-adding facilities need to be located. According to the model, although planned investments are effective in reducing congestion, projected population growth will offset these investments resulting in a net increase in congestion.

CAMPO's RTP provides a 25-year blueprint for growth and management of the regional transportation system and identifies how CAMPO's TIP must be consistent with this plan. While a CMP analysis was not applied to projects in the current CAMPO 2030 Plan, a CMP analysis was integrated into the long-range plan by incorporating congestion analysis for initial project selection in the CAMPO 2035 Plan.

The two main avenues identified in the report, by which CAMPO can implement congestion management strategies, are by either: (1) requiring projects in the TIP to use Travel Demand Management (TDM) or Transportation System Management (TSM) techniques, or (2) influencing the policies that drive the TIP and LRTP project selection process. The latter method can be accomplished by issuing a call for projects that manage congestion and by awarding points for congestion management as part of the project scoring process.

CAMPO action items are included in each section of the report. One of these action items is that the CMP will continue to be incorporated into the CAMPO RTP. Performance measures will continue to be developed and data from other programs will continue to be added. The CMP will provide congestion data to local jurisdictions and transportation agencies, and will continue to use the TIP project selection process to ensure continued congestion management in the region.

The CAMPO congestion data can be used in the upcoming HCTP to identify areas where congestion is projected to increase. Once these areas are identified various congestion management strategies and related projects will need to be identified and incorporated into the HCTP. Because CAMPO is looking to include congestion management and mitigation as part of the scoring system for a project's inclusion in the TIP, Hays County should clearly identify any congestion management techniques that could be employed on a given project for its' inclusion into the TIP.

2.3.6. Hays County Capital Improvement Program

In November 2008, Hays County voters approved a proposition to issue a \$207 million in Hays County road bonds for roadway safety and mobility improvements throughout the county. These improvement projects were divided into two categories of projects that would be funded through the bond issue: pass-through projects, which are those projects eligible for up to \$133 million in reimbursement from the TxDOT's Pass-Through Funding Program, and priority projects which were identified as being particularly important locally from input garnered from local entities and public input. Additional funding for both categories of projects will come from the City of Kyle (\$11 million), the City of San Marcos (\$7 million), and Federal grants (\$3 million).

Currently, there are seven pass-through projects (**Table 2-5**) that are underway across Hays County - two in the San Marcos area, four in the Buda/Kyle area, and one in the Dripping Springs area. These projects are generally larger in scale than the priority projects and typically involve realignments, reconstruction, and road-widening projects such as Projects 18 and 19 which involve the widening of 6.8 miles of FM 1626 from a two-lane rural highway into a five-lane rural facility.

Priority projects are generally small-scale and often involve such tasks as safety and intersection improvements, preliminary design engineering, environmental analyses, feasibility studies, and the purchase of right-of-way for corridor preservation. Currently, there are 23 on-going priority projects (Table 2-6) across all four precincts in Hays County.

Table 2-5. Hays County Pass-Through Projects

Project	Roadways	Status
Precinct One		
Project 20	FM 110 (San Marcos Loop), IH-35/McCarty Road to SH 123. First segment of proposed San Marcos Loop.	Estimated construction start date: May 2012
Project 24	Relocation of existing FM 150 / IH-35 frontage road intersection and realigns portion of FM 150 east of IH-35 to merge with existing FM 150 East.	Estimated construction start date: Spring 2012
Precinct Two		
Project 18	FM 1626 Segment A (FM 967 to FM 2770)	Estimated construction start date: Late 2013
Project 19	FM 1626 Segment B (Bliss Spillar Road to FM 967)	Estimated construction start date: May 2012
Project 22	IH-35 Phase 1 – Kyle Crossing (CR 210) to Kyle Parkway (FM 1626)	Open to traffic: December 2011
Project 23	IH-35 Phase 2B (FM 150 to FM 1626)	Estimated construction start date: Summer 2012
Project 25	IH-35 at FM 2001, Overpass Road	Open to traffic: September 2010
Precinct Four		
Project 21	US 290 West, Trautwein Road to Nutty Brown Road	Construction complete: December 2011

Table 2-6. Hays County Priority Projects

Project	Roadways	Status
Precinct One		
Project 11	Old Bastrop Highway (CR 266), Centerpoint to Francis Harris.	Scheduled construction completion date: Winter 2012
Project 15	Post Road (CR 140) at Blanco River	No construction date identified
Precinct Two		
Project 12a	SH 21 at High Road (CR 127)	Construction complete:
Project 12b	SH 21 at FM 2001	Construction to be completed: Spring 2012
Project 12c	SH 21 at Rohde Road (CR 126)	Project on hold pending possible future realignment of FM 2001
Project 13	Dacy Lane (CR 206), Be bee Road (CR 122) to Windy Hill Road (CR 131)	Studies began in Spring of 2010
Project 16	Lakewood Drive at FM 1626	Estimated construction completion date: Spring 2012
Project 17	RM 967 at Ruby Ranch	Scheduled construction completion date: Spring 2013
Precinct Three		
Project 4	RM 2325, Fischer Store Road (CR 181) to Carney Lane	Scheduled construction completion date: Winter 2012
Project 5	RM 12 at Old Kyle Road (Wimberley Business District)	Project design is nearing completion
Project 6	RM 12 at RM 32	Scheduled construction completion date: Spring 2012
Project 7	RM 12 Parkway Development	Project is 30% complete
Project 8	RM 12 at Hugo Road (CR 214)	Scheduled construction completion date: Spring 2012
Project 9	RM 12 at Sink Creek	Scheduled construction completion date: Spring 2012
Project 10	RM 12 at Wonder World Drive (FM 3407)	Construction completed: Fall 2010
Precinct Four		
Project 1	US 290 from RM 12 to McGregor Lane	Estimated construction completion date: Spring 2013
Project 2	RM 12 at Sports Park Drive	Estimated construction completion date: Winter 2012
Project 3a	RM 1826 at Nutty Brown Road	Scheduled construction completion date: Spring 2013
Project 3b	RM 1826 at Crystal Hills Drive	Scheduled construction completion date: Winter 2012
Project 3c	RM 1826 Darden Hill Road	Scheduled construction completion date: Spring 2013

Project	Roadways	Status
Project 3d	RM 1826 at RM 967	Scheduled construction completion date: Summer 2012
Project 14	Lime Kiln Road at Sink Creek	Studies began in Spring 2010
Project 15	Post Road (CR 140) at the Blanco River	Studies began in Spring 2010

The pass-through projects are primarily located in the northeastern portion of the county and largely focus on access to and from the Austin area in Travis County. Hays County projects in this area include roadway widening such as Project 18 (FM 1626 Segment A; FM 967 to FM 2770) in Precinct 2 which is currently under construction and should start construction in late 2013 and Project 19 (FM 1626 Segment B; Bliss Spillar Road to FM 967), also in Precinct 2, which is scheduled to begin construction in May 2012. Both of these projects involve reconstructing FM 1626 from two lanes to five lanes. Project 23 (IH-35 phase 2B; FM 150 to FM 1626) and Project 24 (relocation of FM 150/IH-35 frontage road intersection) which are both due to begin construction in the winter of 2011 and finish construction in summer and spring of 2012 respectively will allow all of the remaining two-way IH-35 frontage roads in Hays County to be converted to one-way. All four of these identified projects will improve roadway capacity and will allow for easier ingress and egress to and from the Austin area. The HCTP identifies these projects and takes into account how these projects will impact development in this area as well as how continued population growth in these areas will impact the need for new transportation facilities.

The priority projects are primarily located in Precinct 3 and Precinct 4. Project 3(RM 1826) and Precinct 4 along RM 1826 are all set to be completed between the summer of 2012 and the spring of 2013. Projects 5 through 10 in Precinct 3 are all along RM 12. Some of these projects have already been completed (Project 10) with the last of these projects scheduled to be completed by spring 2012 (Projects 6, 8, and 9). Project 12 (SH 21) in Precinct 2 is divided into three phases. The first phase (Project 12a, SH 21 at High Road/CR 127) is complete; the second phase (Project 12b, SH 21 at FM 2001) is scheduled for completion in the spring of 2012, while the third phase (SH 21 at Rohde Road/CR126) has been placed on hold pending possible future realignment of FM 2001.

2.3.7. Water and Wastewater Facilities Plan for West of the IH-35 Corridor, February 2011

Hays County is one of the fastest growing counties in the United States. The county's population has increased nearly four times its 1980 population from 40,594 to 157,107 in 30 years. The rapid growth, periodic severe drought conditions, and limited alternative water supply options have resulted in increasing demands on the limited existing water supplies in the county west of the IH-35 corridor. This impact brought about regulation of non-domestic groundwater pumping and provision of new surface water supplies into northwestern Hays County.

This Hays County Water and Wastewater Facilities Plan was conducted under the Texas Water Development Board's (TWDB) regional planning grant program. The plan considers recommendations that have been developed in the broader State-funded regional water plans. However, these regional plans usually do not consider the needs of unincorporated areas. The areas west of IH-35 need to be analyzed since they place pressure on the county's limited water resources.

The Lower Colorado River Authority (LCRA) supplies treated water services to the City of Dripping Springs, the future Headwaters development project through the City of Dripping Springs, wholesale service to various water districts and water supply corporations serving Belterra, High Pointe, Rimrock, Rutherford Ranch, Reunion Ranch, and Salt Lick communities. During November 2011, LCRA's board of directors authorized the negotiation for the sale of 18 retail water and wastewater systems in the Hill Country and LCRA's southeast service area to Croix Infrastructure as well as the negotiation for the sale of the West Travis County Regional Water and Wastewater System to the Coalition of Central Texas Utilities Development Corporation and on January 17, 2012, this sale was completed. The board has set up criteria for the sale of these water and wastewater systems to protect their investment as well as the consumer.

Hays County government submitted a grant application grant in 2008 to the Texas Water Development Board (TWDB) for a regional planning grant to study the existing water situation and examine water and wastewater management options, infrastructure needs, and policy alternatives. The study reviewed unincorporated and incorporated areas, took a detailed look at water infrastructure needs, potential wastewater needs, and possible policy actions that may facilitate the provision of adequate water and wastewater utility service and help protect environmental resources. The study area included the portion of Hays County, west of the IH-35 corridor cities. The cities of San Marcos, Kyle, and Buda had already assessed their water supply needs and therefore did not participate in the study. Hays County, along with the cities of Wimberley, Dripping Springs, Woodcreek, Hays, the conservation districts of Barton Springs/Edwards and Hays Trinity, along with the Guadalupe-Blanco River Authority, and the Lower Colorado River Authority were all included in the study.

This study assessed residential electric connections data as a basis for the study. Historic trends in electric connections were used to forecast a High Case growth scenario of the study area population. Future service needs and unmet facility needs were identified.

Western Hays County currently has a very limited water supply however; the study has forecasted that even with no new major water projects the study area population could grow another 82 percent by 2060. With prospective growth, the only identified, practical way of addressing the larger scale water supply needs and not exacerbating the local resource problem is to import water supplies from outside areas that have excess supplies. Water and wastewater recommendations arising from the High Case growth forecast were identified specifically for the northwestern and central, northeastern, southwestern, and southeastern portions of the county.

Costs for implementing the various recommended water and wastewater management measures were estimated in this study. Total needed investment in water infrastructure over the 50-year planning period is estimated at \$446 million, while total needed investment in wastewater infrastructure over the 50-year planning period is estimated at \$368 million.

The projected increases in population will continue to place additional stress on already limited water supplies. The population and employment forecasts used to prepare the HCTP should take water supply and its potential for impacting future development into consideration. A coordinated planning effort across Hays County should help to proactively avoid some growth-related impacts as the Hays County transportation system will be directly impacted by the decisions regarding where

and how to access the additional water supplies needed to accommodate growth. Population growth is generating greater pressure to implement more stringent water management actions as well as to link future land development to utility service. All of this will impact both development patterns as well as future transportation needs. Because of this, transportation officials in Hays County should coordinate efforts with county water and wastewater utilities to ensure a coordinated planning effort.

2.3.8. CAMPO FY 2011-2014 Transportation Improvement Program

In accordance with the federal legislation, the local Metropolitan Planning Organization (MPO), in this case CAMPO, is responsible for the development of a Transportation Improvement Program (TIP). This program must be updated at least once every four years and shall be approved by the MPO and the Governor. The TIP must include the projects proposed for funding under the Surface Transportation Program Title of the earlier ISTEA legislation and the Federal Transit Act and which are consistent with the LRTP developed for the area.

The TIP must include a list of priority projects to be carried out within the MPO area during the four-year period. A financial plan that demonstrates how the TIP can be funded must also be included. This plan must identify resources from public and private sources that are reasonably expected to be made available to carry out the plan. Other innovative financing options should also be identified.

For Hays County, a total of 15 projects with an expenditure of \$225,138,631 were identified in the FY 2011-2014 TIP amendments adopted July 11, 2011. These projects included nine roadway projects totaling \$222,269,256 and six bicycle/pedestrian projects totaling \$2,869,375. All projects included in the FY 2011-2014 TIP for Hays County are identified in **Table 2.7**.

Table 2-7. FY 2011-2014 TIP Projects for Hays County

Project Type	Description	Cost
Bicycle/Pedestrian	From Charles Austin St. to Long St. parallel to Hopkins Dr. (RM 12) Construction of a 6' bicycle and pedestrian path parallel to RM 12.	\$61,250
Bicycle/Pedestrian	Loop 82, from IH-35 to Sessom Dr. Construction of a 6' wide bicycle and pedestrian path with amenities.	\$155,625
Roadway	SH 45 (SW, from FM 1626 to the Travis County Line. Preparation of environmental impact statement, traffic and revenue studies, final engineering for 4 tolled mainlines and 2 continuous non-tolled access lanes.	\$12,800,000
Roadway	RM 12 from north of RM 32 to FM 3407. Preliminary engineering and ROW purchase to reconstruct to 4-lane parkway.	\$111,000,000
Roadway	FM 2001 realignment from 645' East of IH-35 Frontage Rd. to Hillside Terrace. Preliminary engineering and construction of a 4-lane divided highway.	\$4,899,000
Bicycle/Pedestrian	Capital area trail system from Barton Springs Trailhead entrance at Zilker Park to FM 150. Preliminary engineering and construction of the walk for a day trail.	\$375,000

Project Type	Description	Cost
Roadway	Loop 82 railroad overpass from Charles Austin St. to IH-35. Preliminary engineering for overpass of railroad on Loop 82.	\$44,825,000
Roadway	IH-35 from FM 1626 to Yarrington Rd. Preliminary engineering, ROW purchase and construction of 2-lane southbound frontage roads and conversion of northbound frontage roads to one way operation.	\$17,200,000
Roadway	RM 150 from IH-35 northbound frontage road to 2300' east of IH-35. Preliminary engineering and construction to realign existing RM 150 with a five-lane urban minor arterial with bridge widening and intersection improvements.	\$8,350,000
Project Type	Description	Cost
Roadway	FM 1626 from RM 967 to Brodie Lane. Preliminary engineering and construction to widen FM 1626 to a 4-lane divided roadway.	\$43,100,000
Roadway	FM 110 from IH-35/McCarty Rd to SH 123. Preliminary engineering and construction of a 4-lane divided roadway.	\$40,095,256
Bicycle/Pedestrian	North LBJ Drive from Sessom Dr. to Holland St. Construct intersection, signal, bicycle and pedestrian improvements.	\$1,250,000
Bicycle/Pedestrian	River Road/Riverside from River Rd. to Riverside Dr. Construct a 6'-8' bicycle and pedestrian path.	\$90,000
Bicycle/Pedestrian	North LBJ Bicycle Trail from Hopkins St. to University Dr. Construct bicycle trail	\$937,500
Roadway	FM 1626 from FM 2770 to RM 967. Preliminary engineering, ROW purchase and construction to widen FM 1626 to 4-lane roadway with center turn lanes.	\$40,000,000
TOTAL		\$225,138,631

In total, the CAMPO TIP for FY 2011-2014, approximately \$1.17 billion dollars has been programmed and nearly \$1.25 billion has been authorized for non-transit projects, indicating that more than sufficient funding is projected to be available to complete these projects. The largest highway financing funding sources are from local contributions (\$431 million), Pass-Through Funding (\$222 million), Federal (\$220 million), and Prop 14 (\$209 million).

The transit financial summary included at the end of the TIP only identifies the sources of funding for FY 2011 and does not summarize the projects that have been programmed. The transit financial summary identifies over \$75.8 million in funding available through Federal, State, and other sources for FY 2011.

While the current TIP provides only a listing and summary of projects currently in the TIP, the larger issue is the potential inclusion of congestion management practices as part of the scoring used to determine projects that get listed on the TIP. The inclusion of congestion management is covered

in more detail under Section 2.3.5. The HCTP should take into account both the projects that are already included in the TIP as well as how the inclusion of congestion management strategies will impact the addition of new projects to the TIP.

2.3.9. Hays County Strategic Policy and Implementation Plan (2010)

The goal of the Hays County Strategic Policy Plan, which was passed unanimously by County Commissioners on July 6, 2010, is to enhance the efficiency of service for the citizens of Hays County by providing a framework for decision-making for the Commissioners' Court that addresses nearly every aspect of County governance. Hays County has been experiencing explosive growth over the past 20 years, and this growth is projected to continue as the population is anticipated to double by 2030. This growth has resulted in a strained transportation network and water system while changing the character of the community.

In an effort to achieve the goal of enhancing efficiency of services to Hays County citizens, the plan identifies activities in which the county is currently engaged, along with short-term (1-3 years), mid-term (3-5 years), and long-term (beyond 5 years) recommendations. These recommendations were categorized into one of six broad categories where the County has a direct role to play and can have an impact on residents. For each of the short-, mid-, and long-term recommendations, individual projects are listed along with action plans identifying the actions, duration, timeline, and the party responsible for implementation. Also identified as part of each project are potential partners, how success will be measured, and the estimated funding along with possible funding sources to complete each project. The six categories, for which projects and recommendations are made, are divided into Internal Objects which covered those projects that are tied directly to County governance: Water and Wastewater, Transportation, Growth Management, Economic Development, and Quality of Life. The projects identified in each of the six identified categories represent the County's plan of action for continuing and enhancing operational efficiency during this population expansion.

The projected growth of the county is placing stress on all county facilities from the legal system to the transportation system, quality of life, and water supply. Coordinating efforts in these areas will help in proactively limiting the impacts associated with this growth. From a transportation perspective, adding roadway capacity and implementing congestion management strategies will help in limiting these impacts, however, other alternatives such as rail and bus transit should be examined in an effort to relieve the burden on the local roadway system. In helping Hays County governance improve the efficiency of services, the HCTP should consider the utilization of other modes of transportation and should take into account the activities which the County is currently engaged in as it looks to improve the efficiency of delivery in county services.

Internal Objects

This section focuses on coordinating processes and plans and streamlining existing procedures. Existing and future county plans such as the transportation plan and the water and wastewater plan are identified as being able to reap significant benefits from coordinating efforts with one another. Another coordination effort involves incorporating local city plans into one county-wide plan. The county-wide plan would identify on-going local projects and identify where coordination across jurisdictions would be beneficial. The Internal Objects section also focuses on streamlining existing procedures by centralizing such activities as collections and compliance as well as the purchasing process.

Some other projects that are being considered as part of the Internal Objects section include determining the expansion needs of police precinct offices adding an additional district judge and potentially adding an additional Court at Law. These projects are all in direct response to the rapidly expanding population of Hays County.

Water and Wastewater

The county is currently developing a water and wastewater facility plan to address the county's growth as well as a flood protection plan which will define flood risk and hopefully reduce flood insurance rates. In the short term the County is focused on implementing best practices and identifying opportunities to improve water conservation. As part of these short-term plans the county will hold a water summit with local cities, developers, and other interested parties, create an annual award recognizing best water conservation practices, increase education and outreach, and explore opportunities or new water supplies in the county such as pumping in water from adjacent aquifers or tapping into surface water supplies.

In the mid-term the County will continue to support the Texas Watershed Steward Program and continue other efforts to protect water quality and quantity through efforts such as purchasing sensitive land with significant recharge features or riparian corridors. Beyond five years, the County will study the feasibility of becoming a utility provider which would give the County greater control over the distribution of water/wastewater infrastructure and subsequently, some control over growth.

Transportation

Transportation improvements were identified as a key issue during the public input process for the Strategic Policy Plan. The increased growth in population has created a need for new roads and improvements to existing roads. Hays County has been proactive, passing bonds and making agreements with the Texas Department of Transportation (TxDOT) to address many of the critical areas. Some of the current projects include the continued development of the County Transportation Plan, active coordination with school districts to ensure county roads are adequate to service new facilities, and the continued participation in the Georgetown to San Antonio Lone Star Rail Project.

Most of the short-term transportation projects involve the use of best practices and do not involve the construction of new roads. These projects include ensuring strict adherence to county standards to minimize curb cuts as these have the effect of contributing to major traffic slowdowns, incorporating water quality best practices into road projects, and continuing to push for Scenic Road designation which would help to limit the number of billboards in the county.

Mid-term projects identified include incorporating bike and pedestrian facilities in new and upgraded county roads to increase safety for cyclists and continue to support Hays County as a cycling destination, and exploring the feasibility of contracting with Capital Metro to provide some level of bus connection to Austin. While these projects will require funding, the plan stresses that the long-term benefits would be substantial and therefore the funding should be considered investments rather than simply costs.

The long-term transportation projects in the plan include exploring the possibility for additional corridors and/or improvements to existing roads to alleviate congestion and supporting the development of rail infrastructure. Currently, there are limited cross-county roads and the need for

these facilities is expected to increase as SH 130 to the east of Hays County is completed and travelers look to access SH 130 as an alternative to IH-35 which will continue to see increased congestion. The development of rail infrastructure would not only contribute to the planned rail link between Georgetown and San Antonio, but would also help to remove rail freight from lines that currently bisect San Marcos and other communities, thereby increasing safety and reducing traffic congestion.

Growth Management

Growth management includes multiple strategies that affect where and how development occurs within the region. Growth management policies and initiatives work to mitigate problems that arise from unregulated growth, such as incompatible land uses, habitat and view-shed destruction, and increased cost in the provision of infrastructure for roads, water, and wastewater. There are currently three growth management projects ongoing in the County. The first is to streamline the permitting process by moving all permitting functions to one location, thereby establishing a “one-stop” permitting process, enabling applicants to address any permitting issues without having to travel to separate locations. The second is to strictly enforce regulations requiring any developer submitting a plat for permitting to provide a *Water Availability Study* showing that there is sufficient water available to meet the demand of their development. The third project is to adopt and implement a Habitat Conservation Plan to conserve habitat for endangered species and to protect water resources.

The short-term growth management projects primarily focus on limiting unmanaged growth by identifying growth areas, focusing development in urban areas, encouraging low-impact development, and promoting the development of pedestrian facilities and increased connectivity in the street network. For the mid- and long-term, Hays County will focus on regulating land use and development including funding the acquisition of land and development rights, and funding new staff and services to meet the demand driven by population growth.

Economic Development

Participants in the town hall meetings, focus groups, and in one-on-one interviews indicated their support for the County to engage in strategically focused economic development activities; however, counties in Texas have limited powers over economic development and generally defer to local economic development entities. In light of this, the short-term projects identified in the plan mostly focus on building upon the relationships with local economic development entities and establishing a county-wide economic development policy and a county-wide incentive policy to encourage additional business investment in the area.

Over the mid- to long-term, the plan encourages infrastructure development in areas suitable for economic development, increasing access to community college and vocational education opportunities, and being vigilant in recruiting new development from the State of Texas, health care facilities, and other technology industries. The plan also promotes Hays County as a cycling destination and proposes the development of bicycling infrastructure.

Quality of Life

The Quality of Life section of the Strategic Policy Plan seeks to ensure public safety, improved mobility, expanded recreational opportunities, and healthy and vibrant communities. A high quality of life can impact economic development and lead to a healthy and productive workforce. The county is currently engaged in supporting and potentially expanding the Capital Area Rural

Transportation System (CARTS). The county is also involved in supporting local non-profit organizations, EMS services, and the Healthy Communities Coalition.

Over the short-term Hays County plans on improving quality of life by supporting school districts and expanding recreational opportunities across the county by increasing parkland and open spaces. Over the mid- to long-term Hays County plans to provide grant writing support to local non-profit organizations, expand the health care district while increasing access to health care, and update the Hays County Strategic Plan. The updated Strategic Plan would set goals and objectives to move the county forward and reflect the on-going issues and opportunities in the county.

Texas Transportation Needs Report – 2030 Committee, February 2009 comprised of 12 volunteer business leaders appointed by the Texas Transportation Commission Chair, Deirdre Delisi in May, 2008. The 2030 Committee was charged with providing an independent assessment of the state's transportation infrastructure and mobility needs from 2009 to 2030. The committee developed the following goals for the report:

- Preserve and enhance the value of the state's enormous investment in transportation infrastructure.
- Preserve and enhance urban and rural mobility and their value to the economic competitiveness of Texas.
- Enhance the safety of Texas' traveling public.
- Initiate a discussion nonstrategic rebalancing of transportation investments among infrastructure, mobility, and non-highway modes to anticipate future needs.

The report provides a comprehensive analysis of estimated transportation needs, associated costs (in 2008 dollars), and resulting benefits from highway maintenance, urban mobility, rural mobility, and safety. This analysis was used as a tool to estimate the level of investment needed across multiple transportation modes. The report also identifies the need for more analysis to examine possible improvements in transportation efficiencies, the development of new technologies, travel options, and innovations. Due to time constraints during the development of the report, an in-depth analysis of other transportation modes that could provide highway congestion relief was not conducted.

Texas' population is projected to grow at close to twice the U.S. rate, adding between seven million and 17 million people by 2030, and the increased costs and congestion associated with this growth are viewed as a potential roadblock to Texas' growth and prosperity. Traffic delay in Texas' urban areas has already increased more than 500 percent in the last two decades as the construction of highway lane-miles has greatly lagged behind population growth and an increase in vehicle miles travelled (VMT) in the state's five largest metropolitan areas.

The report is broken into nine categories (Pavement Maintenance, Bridge Maintenance, Urban Mobility, Rural Mobility and Safety, Public Transportation, Freight Rail, Intercity Passenger Rail, Ports and Waterways, and Airports). Each of these categories discusses the challenges and conditions of the current system, and provides technical analysis of needs, benefits, funding, and costs, and finally provides the Committee's recommendations for each category.

Some of the main conclusions and recommendations identified in the report include:

- Pavement Maintenance: The maintenance needs for the existing 192,150 lane-mile pavement system along with adding pavement lane-miles to prevent worsening congestion will cost the state about \$4 billion per year (\$89 billion total between 2009 and 2030).
- Bridge Maintenance: In 2007 TxDOT spent \$490 million for bridge rehabilitation and replacement. The report recommends an annual expenditure through 2030 of \$1.5 billion dollars for bridge rehabilitation and replacement, an increase of just over \$1 billion from what is currently spent on an annual basis with just over an additional \$100 million in bridge inspection and maintenance expenditures. These expenditures would replace structurally deficient, substandard load-only and functionally obsolete bridges and increase inspection and maintenance activities to maintain safety and extend bridge life.
- Urban Mobility: The report's analysis indicates that investments in already identified projects to improve urban mobility will yield a cost-benefit of \$6 - \$11 for each dollar invested in terms of fuel savings, time savings, increased job creation, and associated tax revenues. Additionally, the cost to the state to improve urban mobility could be reduced through the development of additional transportation options which are often paid for by cities and the implementation of commuting options such as telecommuting, carpooling, and flexible work hours. The total estimated annual cost through 2030 to prevent worsening congestion is \$7.6 billion per year.
- Rural Mobility and Safety: Mobility challenges in Texas' rural areas include increasing congestion and inadequate connecting routes resulting in more expensive travel. Widening and grade-separating highways results in reduced congestion and improved mobility. The investment needed to improve mobility and safety while attaining "full-connectivity" as defined by the report would be \$19 billion total or \$0.9 billion per year through 2030.
- Public Transportation: Public transportation, generally operated by local governments, is seeing challenges in increased demand for services, limited funding options, and urban area borders which often do not coincide with the boundaries of urban transit providers. The primary recommendation of the report is to conduct a comprehensive examination of federal, state, and local partnerships to meet regional needs through coordination of funding and services.
- Freight Rail: Freight rail needs are difficult to estimate as private industry generally operates freight rail lines; however, nationally studies indicate a need for increased capacity and velocity. Taking the same national growth assumption estimates and capital shortfall estimates from the national study, Texas' annual shortfall would be around \$165 million annually or \$3.6 billion between 2009 and 2030. As part of this investment, TxDOT could more effectively partner with private railroads to pursue the public interest of making the freight rail system more efficient and effective by removing bottlenecks and addressing capacity constraints as population and freight demand grow within the state.
- Intercity Passenger Rail: With the rising costs of right-of-way and construction, resolving mobility needs with additional highway capacity will become less and less cost-competitive. Currently, all intercity passenger rail in Texas is conventional with a top

speed of 79 mph. Developing high-speed intercity passenger rail would be an expensive proposition and would require nearly 15 years to complete. Therefore, the committee recommends that TxDOT authorize a comprehensive evaluation of the viability and value to the state of the development of a high-speed rail system.

- Ports and Waterways: Texas handles more than 20 percent of the nation's ocean-going tonnage primarily through 10 ports. Between \$71 and \$90 million will be needed annually to dredge and maintain shipping channels. An additional \$3.6 billion will be needed to complete the projected non-channel infrastructure improvements such as improvements to docks, roads, rail lines, and berthing areas and channel widening/deepening projects. The committee also recommends elevating port connectivity in the surface transportation planning process and incorporating ports into the state's homeland defense planning structure.
- Airport: The same capacity constraints that adversely affect Texas' highway system are likely to affect the state's airport infrastructure and operating systems just as severely. Texas' 26 commercial airports enplaned nearly 70 million passengers in 2006 with this number expected to increase by 73 percent to 120 million enplanements in 2025. Funding is the major hurdle to further airport development. The State of Texas primarily funds general aviation airports with funding for commercial airports coming primarily through the Federal Aviation Administration. The committee recommends monitoring the adequacy of these funds to ensure a significant contribution to Texas' economic competitiveness.

The report also includes nine appendices including a public comments summary appendix and eight appendices detailing the background information for eight of the nine identified categories. No appendix was available for intercity passenger rail.

The report identifies an annual investment of \$14.3 billion (in 2008 dollars) is needed, or a total \$315 billion investment between the years 2009 – 2030, falling well short of currently identified funding. The HCTP should take into consideration the 2030 Committee's identification of future needs within the transportation system. While the 2030 Committee does not specifically address the transportation needs of Hays County, the Committee's report can be used to help gauge projected funding needs and gaps. The development of new transportation modes and the opportunities to improve the efficiency of the current system identified by the 2030 Committee should be carefully identified and considered.

2.3.10. Local Transportation Plans within Hays County

2.3.10.1. San Marcos Transportation Master Plan

The San Marcos Transportation Master Plan was adopted in 2004 (**Figure 2-3**). It was prepared by a consultant with assistance from the Transportation Advisory Board. In preparing the thoroughfare plan, the consultant analyzed future traffic volumes, projected deficiencies and evaluated alternatives. New and expanded thoroughfares were included in a recommended transportation improvement program with three categories. They are Short-Term projects (2005-2010), Intermediate-Term projects (2010-2015) and Long-Term projects (2015-2025).

Opportunities and Issues - The 2010 population within the San Marcos city limits was 44,894, according to the U.S. Census. This is 28.6 percent of the total Hays County 2010 population of 157,107. San Marcos will prepare a new comprehensive plan over the next year and it will contain an updated transportation plan, so there is an opportunity to coordinate the HCTP and San Marcos planning efforts. Also, although San Marcos and Kyle have coordinated their plans in the past, there is an opportunity through the preparation of the HCTP to renew and update that coordination.

Figure 2-3. City of San Marcos Transportation Plan Map

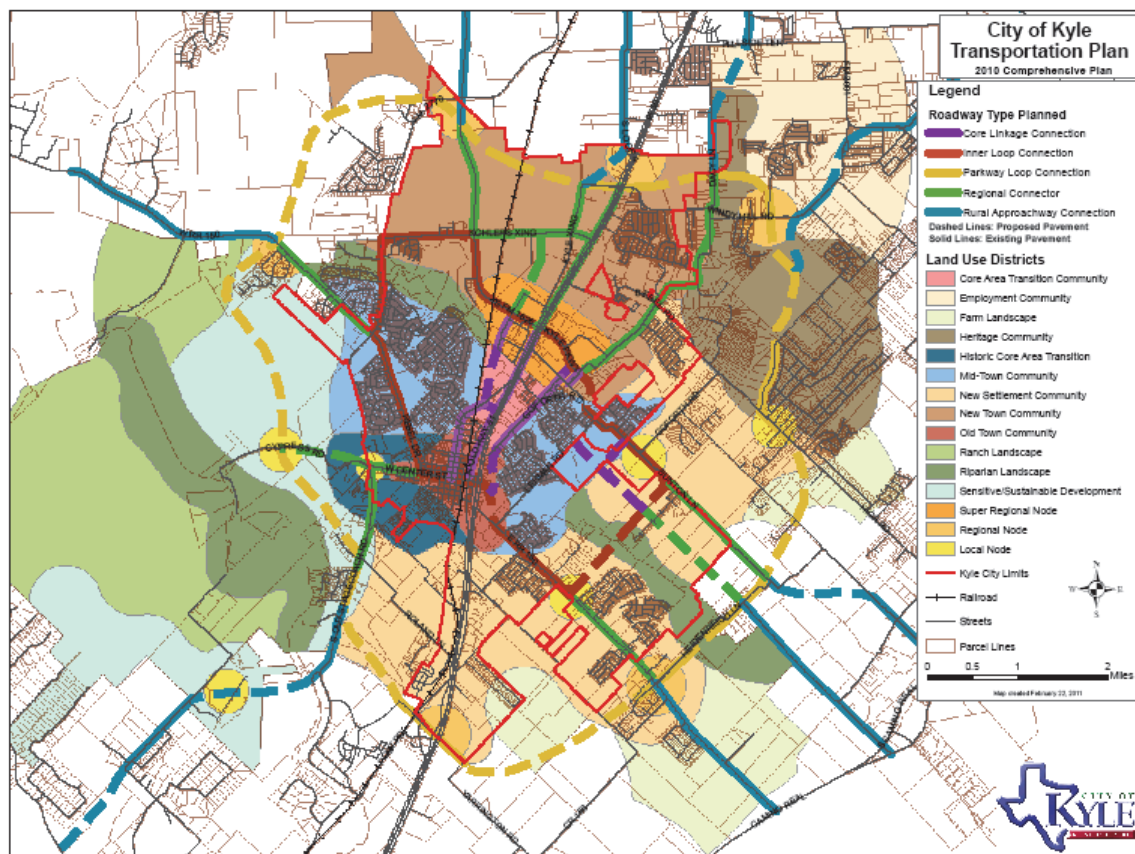


2.3.10.2. City of Kyle Transportation Master Plan

The City of Kyle Transportation Master Plan was adopted in 2005. This is Kyle's first transportation plan and it was prepared by a consultant with the aid of a Transportation Plan Advisory Committee. The Plan time period is 20 years and the plan divides needed transportation projects into three phases: Immediate Priority (years 1-2), Short-Term Priority (years 3-5) and Long-Term Priority (years 6-20). These three categories are illustrated in tables and maps, including assumed project costs. The transportation plan was updated and included in the 2010 Comprehensive Plan, which was adopted in February 2011 (Figure 2-4).

Opportunities and Issues - The 2010 population within the Kyle city limits was 28,016, according to the U.S. Census. This is 17.8 percent of the total Hays County 2010 population of 157,107. Kyle is not scheduled to update its transportation plan in 2012, so there is an opportunity through the preparation of the HCTP to coordinate its existing plan with San Marcos to the south, Buda to the north and Niederwald to the east. For example, the Hays County Commissioners Court adopted a resolution on December 20 to reroute portions of FM 2001 between IH-35 and SH 21 within the ETJ boundaries of Buda, Kyle and Niederwald. A schematic of the proposed new route has been prepared by a private land owner.

Figure 2-4. City of Kyle Transportation Plan Map

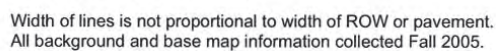


2.3.10.3. Buda Master Transportation Plan

The Buda Master Transportation Plan was adopted by the Buda City Council on January 17, 2006 (**Figure 2-5**). Like the Kyle Transportation Master Plan, the Buda Plan identified immediate, short-term, and long-term needs for the roadway network. It was based on population and employment projections made by the Capital Area Metropolitan Planning Organization (CAMPO). The new Buda 2030 Comprehensive Plan was adopted by the Buda City Council on October 18, 2011. This Plan includes a Transportation section, which promotes a multi-modal system of roadways, pedestrian and bicycle facilities, and public transit. It contains five transportation objectives and several related actions.

Opportunities and Issues - The 2010 population within the Buda city limits was 7,295, according to the U.S. Census. This is 4.6 percent of the total Hays County 2010 population of 157,107. Currently, the Buda 2006 Transportation Plan is being revised by the same consultant that prepared the 2006 Buda Plan and the 2005 Kyle Plan so there is an opportunity to coordinate the preparation of the HCTP and the Buda Plan. Also, the Buda ETJ is bordered by Austin's ETJ, which extends into Hays County. A critical issue and opportunity is the proposed SH 45 (SW) between Loop 1 and IH- 35, which lies primarily within Austin's ETJ in both Travis and Hays counties.

**Buda Master Transportation Plan
Roadway Network--All Corridors
Adopted by City Council--January 17, 2006**



2.3.10.4. Transportation Master Plan for the City of Wimberley

The *Transportation Master Plan for the City of Wimberley* was developed, reviewed and adopted over a period of three years to be consistent with the Wimberley Comprehensive Plan. The plan is based on an estimate of where and how Wimberley Valley will grow, but does not predict the timing of growth. Yogi Berra is quoted on the title sheet – “It’s tough to make predictions, especially about the future.” The Plan contains five components. Component A – the *Wimberley Valley Transportation Plan* covers an area within a 5-mile radius of the village center, extending beyond Wimberley’s ETJ in an advisory role (**Figure 2-6**). Component B – the *Village of Wimberley Thoroughfare Master Plan* covers only the Wimberley City limits and ETJ (**Figure 2-7**). Components A and B were adopted on August 2, 2007. Other components of the Plan include: C – the *City of Wimberley Emergency Access Plan*, D – the *City of Wimberley Connectivity Plan*, and E – the *City of Wimberley Pedestrian, Bicycle and Parking Plan*.

Opportunities and Issues - The 2010 population within the Wimberley city limits was 2,626, according to the US Census. This is 1.7 percent of the total Hays County 2010 population of 157,107. Wimberley is located midway between Dripping Springs and San Marcos on RM 12, 15 miles from each town. RM 12 is the major north-south arterial connection between US 290 and IH-35 and it passes through hilly terrain and environmentally sensitive areas, as well as through a narrow right-of-way in downtown Wimberley. An important issue is how to accommodate increasing travel demand on this roadway without any significant detrimental effects.

Figure 2-6. City of Wimberley Transportation Plan Map

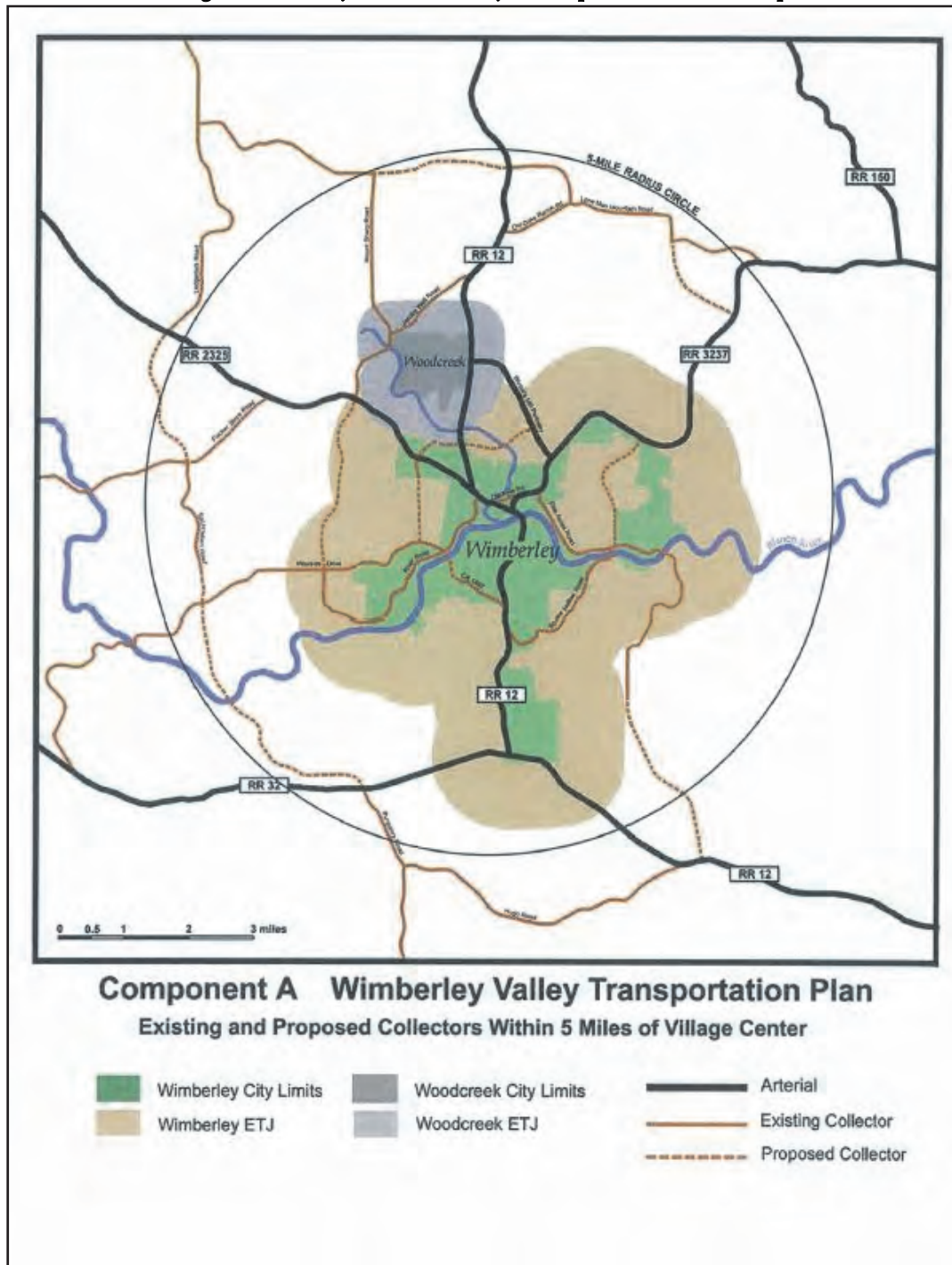
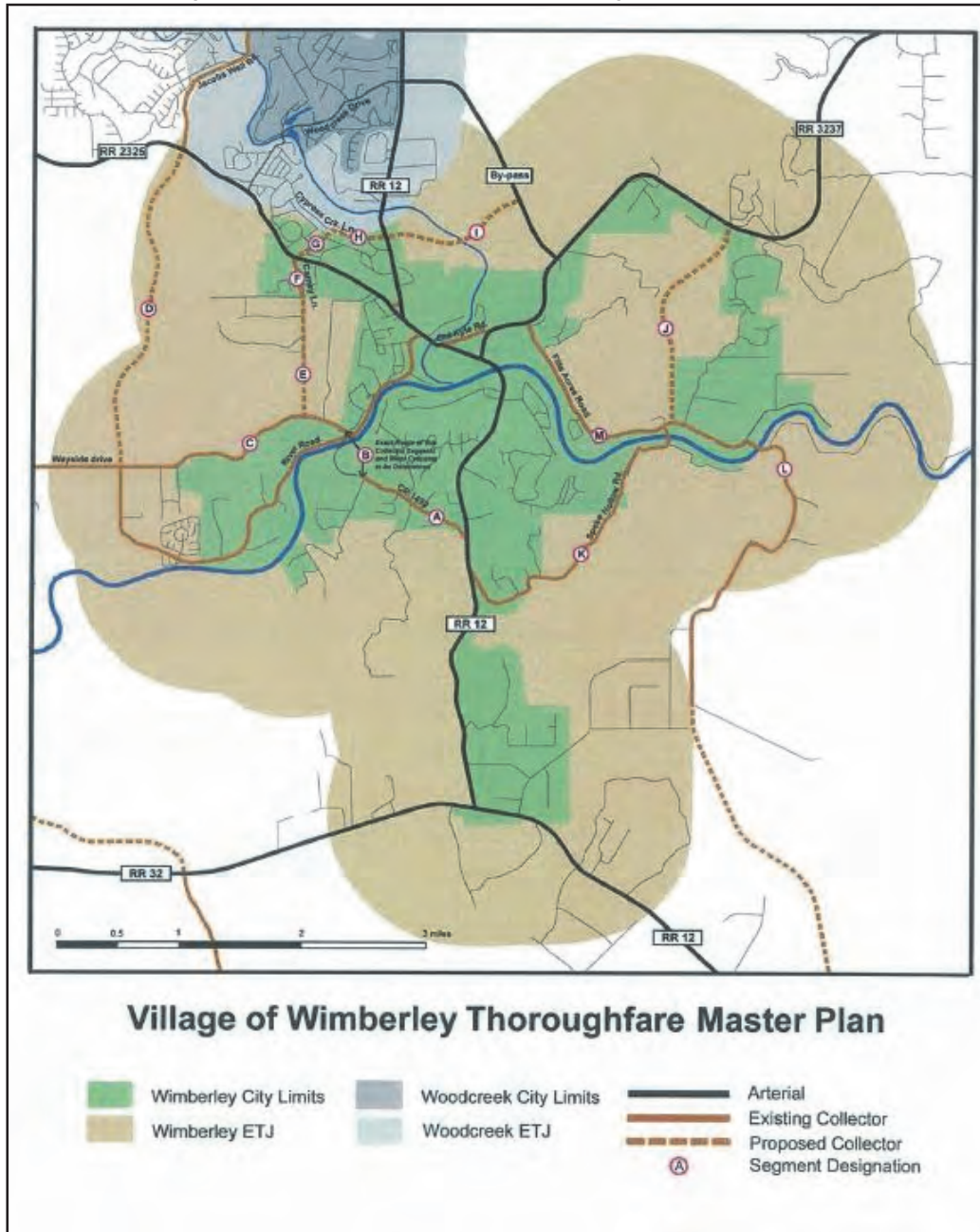


Figure 2-7. City of Wimberley Thoroughfare Master Plan

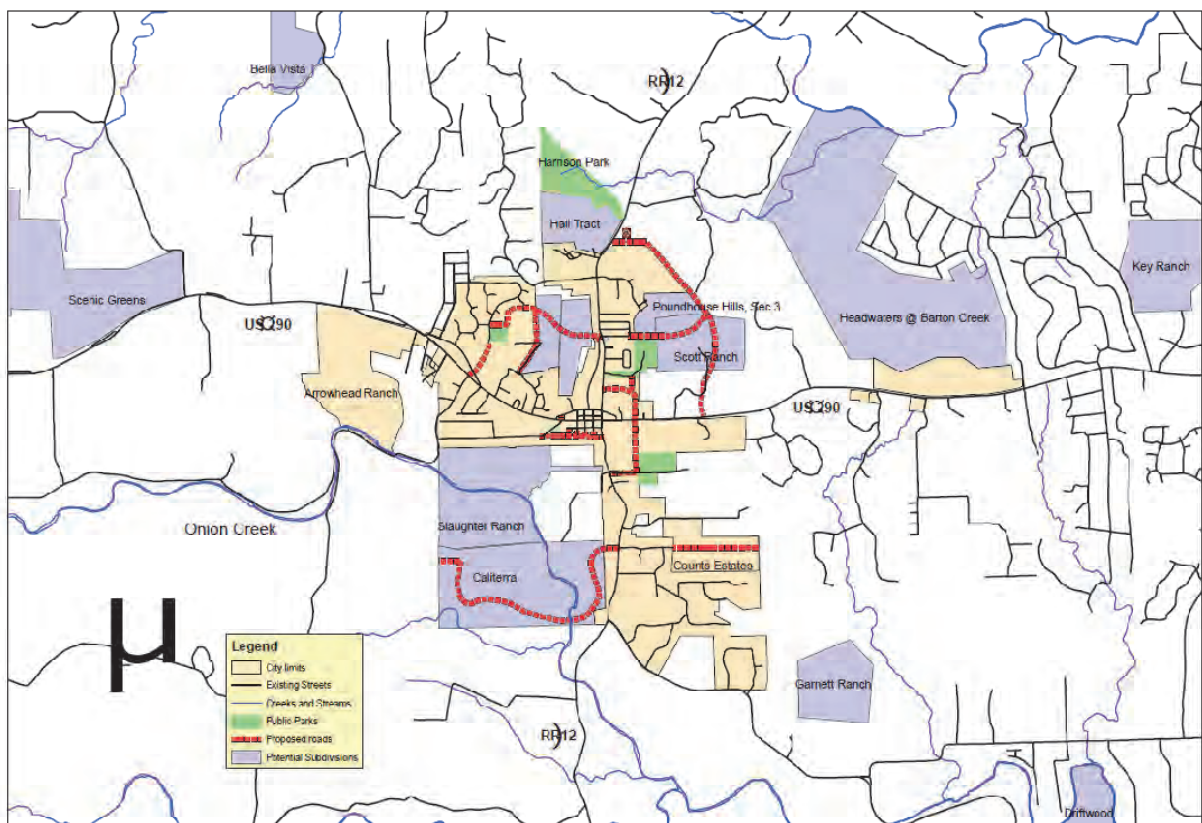


2.3.10.5. City of Dripping Springs Transportation Plan

The *City of Dripping Springs Transportation Plan* was prepared by the Dripping Springs Transportation Committee and adopted by the Dripping Springs City Council on February 12, 2008. The Transportation Plan (**Figure 2-8**) covers the incorporated area of Dripping Springs, but does not encompass the Dripping Springs Extra-Territorial Jurisdiction (ETJ) area, which is very large and extends to Austin's ETJ on the north and Buda's ETJ on the east. Dripping Springs may update its plan in 2012.

Opportunities and Issues - The 2010 population within the Dripping Springs city limits was 1,788, according to the US Census. This is 1.1% of the total Hays County 2010 population of 157,107. US 290 is one of the major east-west highways in the CAMPO area and its right-of-way is very limited through downtown Dripping Springs. Therefore, an issue for the HCTP is how to accommodate growth in travel demand in this corridor, and whether a highway bypass should be considered. Another issue and opportunity for preparation of the HCTP is the very large Buda ETJ for which no city transportation plan has been adopted.

Figure 2-8. City of Dripping Springs Transportation Plan



City of Dripping Springs
Transportation Plan (February 12, 2008)

2.3.10.6. Conclusion from Review of Existing City Plans within Hays County

These plans are based on extensive in-depth analysis of existing and projected land use patterns and transportation conditions, and were formulated and/or reviewed by city committees composed of interested and experienced citizens and staff. The transportation plans of San Marcos, Kyle and Buda are contiguous to each other. In fact, the planned San Marcos outer loop connects at its northern end with the southern end of the planned Kyle outer loop, at the Yarrington Road overpass over IH-35. All five plans provide a valuable resource for use in preparation of the Hays County Transportation Plan. However, there are areas within the county that have no planned roadways and where there is inadequate circulation because of long dead-end roadways. There is an opportunity through the HCTP to extend selected roadways to provide at least two ways into and out of residential areas. This is important both for traveling convenience and for emergency access and egress.

According to the 2010 U.S. Census about 54 percent of the existing residential population of Hays County is located within the city limits of the five cities for which transportation plans were prepared and adopted over the last seven years. If the population within the ETJs of those five cities were also included, there would be a much higher percentage of the existing Hays County population in the jurisdiction of those five cities. Therefore, an opportunity for HCTP analysis is to tabulate the population and employment data for both 2010 and the CAMPO 2035 forecast within existing city limits and ETJs. With this information there is an opportunity to better coordinate the adoption of the HCTP by the County Commissioners Court and adoption of appropriate portions of the HCTP by the respective city councils. Another benefit of this coordinated adoption is that there will be a single transportation plan for implementation through the subdivision approval process as carried out by county and city staffs.

Hays County Transportation Plan

Section 3

Review of Existing Demographics and Land Use

3.1. Existing Conditions

Demographic and socioeconomic characteristics of Hays County were analyzed to understand how the County has changed over the past 20 years. This section summarizes the people who live and work in Hays County. This analysis was used to determine the demand for transportation facilities and services in and around Hays County.

3.1.1. Population

Demographics were discussed based on several sources of data. Historic and existing United States Census (US Census) data are used for basic population information. Local municipality websites were also reviewed for additional data. For additional data categories and projections, Capital Area Metropolitan Planning Organization (CAMPO) and the Texas State Data Center (TxSDC) data were used to expand the picture of the demographics of Hays County and the region. This data was also used for preparation of the CAMPO 2035 Regional Transportation Plan (2010).

Hays County is the third largest county in the CAMPO region that also includes Travis, Williamson, Bastrop, and Caldwell counties. Hays County's population is concentrated mostly along IH-35 in the communities of San Marcos, Kyle, and Buda. Other communities in the county include Dripping Springs, Wimberley, Mountain City, Niederwald, Uhland, Woodcreek, Hays, and Bear Creek.

Based on 2010 Census data, Hays County's total population was 157,107 in 2010; this represents a 61 percent increase from the year 2000 population of 97,589. From 1990 to 2010, the county population has increased 139 percent. Hays County saw a significant population increase over the past decade. According to the Comprehensive Economic Development Strategy 2010 – 2015 report by Capital Area Economic Development District, 81 percent of the growth in Hays County came from net migration over the past decade. Only Williamson County grew at a faster rate during the same period in the region. **Table 3-3** shows the population and household growth from 1990 to 2010.

Table 3-1. Hays County Demographics 1990 - 2010

	1990	2000	2010	1990-2000	2000-2010	1990-2010
Population	65,614	97,589	157,107	48.7%	61.0%	139.4%
Households	22,218	33,410	55,245	50.4%	65.4%	148.6%

Source: US Census Bureau, 1990 - 2010

Annually, Hays County has grown an average of 5.4 percent between 2000 and 2010 with the highest growth occurring 2001 and 2006 (**Table 3-4**). The annual growth has slowed to 2.8 percent in 2009 and 3.6 percent in 2010.

Table 3-2. Hays County Annual Population Growth

Year	Total Population	Annual Growth Rate
2000	97,589	4.9
2001	104,856	7.4
2002	110,938	5.8
2003	115,967	4.5
2004	120,586	4.0
2005	126,206	4.7
2006	133,913	6.1
2007	139,699	4.3
2008	147,555	5.6
2009	151,664	2.8
2010	157,107	3.6

Sources: 2001 – 2009 annual estimates from Texas State Data Center, Population Estimates; US Census Bureau, 2010

3.1.2. Employment

Employment in Hays County is concentrated in the City of San Marcos. Within the CAMPO region, employment is centered in and around the City of Austin, in Travis County to the north of Hays County, and is mainly along the IH-35 corridor.

According to the Texas Workforce Commission (TWC), Hays County had 81,186 people in the labor force in September 2010 (not seasonally adjusted). Of those, 75,800 were employed; therefore, the unemployment rate for Hays County was 6.6 percent during the month of September 2010. This rate dropped 0.3 percent from 6.9 percent in September 2009.

The annual unemployment rate for Hays County in 2010 is estimated at 6.2 percent of the labor force (2010 American Community Survey 1-Year Estimates). The unemployment rate was 7.1 percent in 1990 and 6.3 percent in 2000 (US Census).

The industries with the highest employment in Hays County in 2010 include: educational services, and health care and social assistance; retail trade; arts, entertainment, and recreation services; and professional services. **Table 3-5** and **Figure 3-1** show the employment distribution of industries and changes from 2000 to 2010.

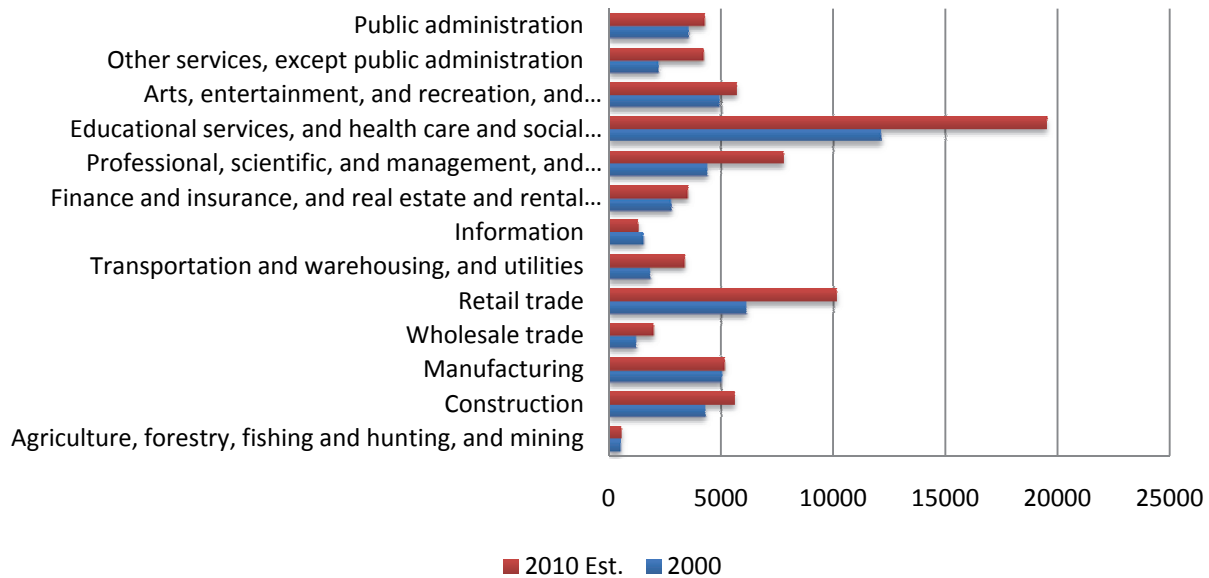
Table 3-3. Hays County Employment by Industry

Industry	2000	2000 Percentage	2010 Est.*	2010 Est. Percentage
Civilian employed population 16 years and over	50,484	100%	73,010	100%
Agriculture, forestry, fishing and hunting, and mining	535	1.1%	559	0.8%
Construction	4,299	8.5%	5,608	7.7%
Manufacturing	5,035	10%	5,128	7.0%
Wholesale trade	1,192	2.4%	1,965	2.7%
Retail trade	6,118	12.1%	10,147	13.9%
Transportation and warehousing, and utilities	1,827	3.6%	3,375	4.6%
Information	1,508	3.0%	1,289	1.8%
Finance and insurance, and real estate and rental and leasing	2,777	5.5%	3,513	4.8%
Professional, scientific, and management, and administrative and waste management services	4,386	8.7%	7,780	10.7%
Educational services, and health care and social assistance	12,123	24.0%	19,514	26.7%
Arts, entertainment, and recreation, and accommodation and food services	4,915	9.7%	5,688	7.8%
Other services, except public administration	2,218	4.4%	4,192	5.7%
Public administration	3,551	7.0%	4,252	5.8%

*2010 Estimates from American Community Survey 1-Year Estimates

Figure 3-1. Hays County Employment (2000 - 2010)

Employment by Industry



3.1.3. Commuting Patterns

According to the *2011 State of the County – Hays County Report*, the Capital Area Council of Governments (CAPCOG) estimated that of the 60,176 employed workers residing in Hays County, approximately 26 percent (or 15,903 workers) work in their home county. Conversely, 73 percent (or 44,273 workers) travel outside of Hays County for employment. Travis County represents the largest share of Hays County's employed with 41 percent (or 24,690 workers). The report also highlights that 27,071 workers travel into Hays County for employment, with Travis County residents representing the highest number of workers at 5,807 workers. Thus, more people commute to Hays County for work versus those who both live and work in Hays County. This places increased emphasis on regional connectivity with the surrounding communities.

Table 3-5 shows the number of workers in Hays County and where they travel to work. The majority of workers travel from their home in Hays County to other counties. Employment locations in the region are concentrated in Travis County within and around the City of Austin.

Table 3-4. Hays County Commuting Patterns

County	In-Commuters		Out-Commuters		Net Comparisons	
	Work in Hays County	% of In-Commuters	Out-Commuters*	% of Out-Commuters	Net Flow of Commuters	% of Total Commuters
Hays	15,903	26%	-	-	-	-
Travis	24,690	41%	5,807	18%	-18,883	-62%
Harris	3,216	5%	1,780	6%	-1,436	-5%
Bexar	2,937	5%	2,667	8%	-270	-1%
Dallas	2,766	5%	488	2%	-2,278	-7%
Williamson	1,643	3%	1,231	4%	-412	-1%
Comal	1,294	2%	2,485	8%	1,191	4%
Tarrant	1,014	2%	-	-	-1,014	-3%
Guadalupe	767	1%	2,746	9%	1,979	6%
Bell	355	1%	-	-	-355	-1%
Other	5,591	9%	14,559	46%	8,968	29%

Source: CAPCOG State of the County – Hays County Report, 2011

3.2. Economic Development

The largest employers in Hays County are Texas State University and the public school system. Hays County ranks third in the nation for job growth over the last 10 years (Tuesday, July 13, 2010; CNNMoney.com) with a reported 56.4 percent growth between 2000 and 2009. The following employers are the top 25 public and private employers in Hays County (Texas Workforce Commission, 2007):

1. Butler Manufacturing Company
2. Cabelas
3. Central Texas Medical Center
4. C-FAN
5. City of San Marcos
6. Compass Two LLC

7. Dripping Springs Independent School
8. Genlyte Thomas Group LLC
9. Grande Communications Networks Inc
10. Hays Consolidated Independent School District
11. Hays County
12. HEB Grocery Company LP
13. Hunter Industries Ltd
14. McCoy Supply
15. MTC/GSA - Texas
16. National Oilwell Varco
17. San Marcos Consolidated Independent School District
18. San Marcos Premium Outlets
19. San Marcos Treatment Center
20. Tanger Factory Outlet Center
21. Telenetwork Partners Ltd
22. Texas State University - San Marcos
23. Thermon Manufacturing Company
24. Wal-Mart Associates, Inc
25. Wimberley Independent School District

3.3. Socioeconomic Characteristics

3.3.1. Race

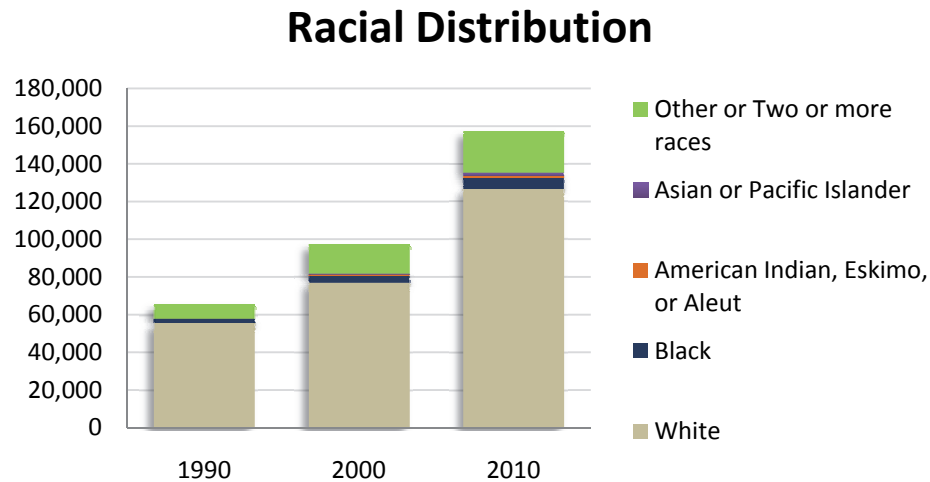
Table 3-7 shows the changes in race in Hays County since 1990. The Hispanic population has grown over the past 20 years with a significant increase between 2000 and 2010. The non-White, non-Hispanic population has grown its proportion of the total county population. **Figure 3-2** shows the distribution of race since 1990.

Table 3-5. Race and Hispanic Origin Trends within Hays County

	1990 (Percentage of Total)	2000 (Percentage of Total)	2010 (Percentage of Total)
Total Population	65,614	97,589	157,107
White	55,360 (84.4%)	77,014 (78.9%)	126,712 (80.7%)
Black	2,220 (3.4%)	3,588 (3.7%)	5,536 (3.5%)
American Indian, Eskimo, or Aleut	230 (0.4%)	678 (0.7%)	1,224 (0.8%)
Asian or Pacific Islander	427 (0.7%)	841 (0.9%)	1,958 (1.3%)
Other or Two or More Races	7,377 (11.2%)	15,458 (15.8%)	21,677 (13.8%)
Hispanic (of any race)	18,249 (27.8%)	28,859 (29.6%)	55,401 (35.3%)

Source: US Census Bureau

Figure 3-2. Hays County Racial Distribution



3.3.2. Income

Median annual household income levels in Hays County have increased over the past 10 years from \$45,006 in 2000 to \$57,332 in 2010. The percentage of households with an income greater than \$100,000 is increasing while total households with an income less than \$50,000 are decreasing. **Table 3-8** shows the distribution of household income for Hays County in 2000 and 2010.

Poverty levels in Hays County have dropped from 20.9 percent in 2000 to 15.4 percent in 2010. Based on year 2010 estimates, the poverty level has increased only slightly since 2000 from 14.3 percent to 15.4 percent.

Table 3-6. Hays County Household Income – 2000 - 2010

	2000 Total	Percentage	2010 Total	Percentage
Total households	33,465	100%	54,422	100%
Less than \$10,000	3,372	10.1%	5,005	9.2%
\$10,000 to \$14,999	2,004	6%	3,619	6.6%
\$15,000 to \$24,999	3,758	11.2%	5,004	9.2%
\$25,000 to \$34,999	3,952	11.8%	4,001	7.4%
\$35,000 to \$49,999	5,438	16.2%	6,544	12.0%
\$50,000 to \$74,999	6,662	19.9%	10,806	19.9%
\$75,000 to \$99,999	3,966	11.9%	5,998	11.0%
\$100,000 to \$149,999	2,921	8.7%	8,283	15.2%
\$150,000 to \$199,999	782	2.3%	2,811	5.2%
\$200,000 or more	610	1.8%	2,351	4.3%
Median household income (dollars)	\$45,006	-	\$57,332	-

Source: American Community Survey 1-Year Estimates (in 2010 inflation –adjusted dollars)

3.3.3. Environmental Justice

Executive Order 12898 (*Federal actions to Address Environmental Justice in Minority Populations and Low Income Populations*) issued on February 11, 1994, requires federal agencies to identify and

address disproportionately high and adverse health and environmental effects of their programs and policies on minority and low-income populations. Definitions of these populations include:

- Low-income is defined as a household with income at or below the Department of Health and Human Services poverty guidelines.
- Minority is defined as a person who is Black, Hispanic, Asian American, American Indian, or Alaskan Native.

Environmental justice populations are those that have any of the following characteristics: At least 50 percent of the population lived in families earning less than 80 percent of the county median family income; at least 50 percent of the population was a minority; or at least 25 percent of the population fall below the federal poverty level (2035 CAMPO RTP). Traffic analysis zones with environmental justice populations are located in the south and southeastern portion of the county.

The 2035 CAMPO RTP identified affordable housing locations which were located in urban areas of the county. Affordable housing identified in the 2035 plan refers to public subsidized housing. Concentrations of affordable housing were in the cities of San Marcos and Kyle. Locations were also noted in Buda and Dripping Springs.

3.4. Population and Employment Forecasts

3.4.1. Methodology

The demographic projections analyzed are based on the baseline population and employment figures used by the CAMPO in preparation of the *2035 Regional Transportation Plan Update (RTP)*. Forecasts were developed for the years 2005, 2015, 2025, and 2035.

For 2035 plan, CAMPO considered projections prepared by the TxSDC and the State Demographer under two growth scenarios. Growth scenario 1, or the “high-growth” scenario, assumed that trends in age, sex and race/ethnicity net migration rates of the 1990s will continue into the future.

The 1990s were a period of rapid growth throughout the state, especially in the Capital Area Council of Government (CAPCOG) region, and since it is unlikely that these rates will be sustainable in the long-term, this scenario is considered to be “high growth.” Growth scenario 0.5 assumed migration rates will be one half of what was experienced in the 1990s. In developing population projections for the greater Austin area, CAMPO computed an average of these two scenarios and rounded the resulting number to the nearest 100. Baseline populations used for projections consisted of four race/ethnicity groups, age, and sex net migration rates. Special populations, such as military and students which do not typically reside in a location over a longer period of time, were removed from the base populations used to develop projections.

The TxSDC updated their projections using trends from the post-2000 census and other databases. A 2000-2007 migration scenario was used to take into account post-2000 population trends. This scenario is a mix of both reduced levels of net migration and greater growth than the 1990s. Texas experienced both of these types of growth.

The demographic scenario that forms the basis for the CAMPO 2035 RTP assumes that the region will work toward implementation of the *Centers Concept* by 2035. Compared to the CAMPO

projections presented in the 2035 RTP update, the state data is slightly higher. The CAMPO projections are a better fit for long-term planning from 2000 through 2040 since they are lower than the high growth scenario. The CAMPO 2015, 2025, and 2035 forecasts are considered reasonable forecasts. The employment projections from CAMPO should be used only for long-range planning since the estimate made in 2005 for 2010 employment is lower than the actual 2010 Census employment total.

3.4.2. Demographics

Table 3-9 shows population and employment forecasts based on TAZ data. Hays County forecast population shows a 144 percent increase from 2010 to 2035.

Table 3-7. Population and Employment Projections

	2010	2015	2025	2035
Population	157,107	189,153	271,593	371,245
Households	55,245	66,535	96,515	132,751
Employment	73,010*	66,200	97,800	137,300

Sources: 2010 US Census and CAMPO traffic analysis zones

*2010 Estimate from American Community Survey

Future population density maps developed by CAMPO show population concentrated in the cities along IH-35 in Hays County. Higher population densities are projected to occur in San Marcos and Kyle. The population density is expected to stay below two persons per acre throughout the rest of the County.

Future employment density data provided by CAMPO also shows employment expanding in the same areas as future population. Employment is projected to be concentrated within the cities along IH-35.

3.5. Demographic Highlights

The data in this section was used to provide an understanding of the demographic characteristics of Hays County. Items to note include the following:

- The population in Hays County has grown significantly in the past decade and at a greater rate than the State of Texas.
- Growth is expected to continue and concentrate along the IH-35 corridor.
- Environmental justice populations are concentrated in the urban areas of the county.
- The Hispanic population grew significantly from 2000 to 2010.
- Employment is expected to increase through the next 20 years but at a slower rate than the population.
- The majority of workers residing in Hays County commute to work outside the county. However, more people commute into Hays County than those who live and work in the county.
- Educational services, and health care and social assistance; retail trade; arts, entertainment, and recreation services; and professional services account for half of the employment sectors in the county.

3.6. Land Use

3.6.1. Existing Land Use

Hays County is characterized by urban land uses concentrated along the IH-35 corridor with mostly rural land uses throughout the rest of the county. New urban land uses have increased in the county on the fringe of existing urban land uses. Agricultural loss has occurred because of this development trend. Urban uses are concentrated along IH-35 in the cities of San Marcos, Kyle, and Buda. San Marcos is located approximately 26 miles south of Austin and lower-density development has occurred between the cities. Several designated parks and open spaces are located throughout the county. Due to the topography and lack of water for development in the western portion of the county, more open space land uses are prevalent.

Single-family residential and industrial uses are located in the northern and southern portion of the City of San Marcos. There are also large amounts of vacant land in the northern and southern areas. Mixed uses are concentrated in the San Marcos Central Business District. Non-residential uses are located near the IH-35 corridor. Retail uses in San Marcos are present along IH-35. Large outlet malls and the Central Texas Medical Center are located in the southern portion of the city. The western portions of the city include a mix of single-family and multi-family residential uses. Open spaces uses are located throughout the city and along the San Marcos River. A concentration of institutional uses is the Texas State University, located west of IH-35 in San Marcos (*San Marcos Horizons Sector Plans, Technical Updates, 2007*).

The City of Kyle is characteristic of a bedroom community with several residential subdivisions. Commercial and mixed-use development is concentrated along the IH-35 corridor. Retail land uses are found in the city's historic downtown. Limited commercial development uses are found outside of the IH-35 corridor. The remainder of the city is mostly single-family residential uses that were formed from the conversion of agricultural land (*Kyle Comprehensive Plan, 2010*).

The City of Buda has primarily rural and suburban development patterns. Buda is also characteristic of a bedroom community with mostly residential land uses surrounding commercial development along the IH-35 corridor. Industrial land uses are located in the southwestern portion of the city. Agricultural uses are located at the edge of urban uses. The dominant land uses within the City of Buda include single-family and multi-family residential and vacant land. These uses account for over half of the land uses in the city. Commercial (office and retail) also accounts for nearly 17 percent of the land use in the city. Agricultural and industrial uses are more widespread in areas outside of the City of Buda limits. (*Buda 2030 Comprehensive Plan, adopted October 2011*).

Dripping Springs is a predominantly residential community with its retail and commercial uses focused on US Highway 290 (US 290) and Ranch Road 12 (*The City of Dripping Springs Comprehensive Plan, 2010*). Commercial and retail uses are located on US 290. The majority of developed land in Dripping Springs is residential, with most being low-density single-family residential. Several large parks are located in the city.

Within the city limits of Wimberley, large-lot residential development makes up the majority of the city. Commercial land uses and denser development is located in the city center. Land use has

historically evolved into mixed-uses. Development patterns in the city are characteristic of small-scale development (*City of Wimberley Comprehensive Plan, July 2008*).

3.6.2. Future Land Use

As Hays County continues to grow, more development is expected to occur near urban areas and oriented north along the IH-35 corridor towards the City of Austin. Land conservation opportunities have been identified for the region to preserve areas from new development (*Central Texas Greenprint for Growth Overall Conservation Opportunities, Hays County, Trust for Public Land, 2009*). In Hays County, conservation opportunities are the highest west of the cities along the IH-35 corridor and moderate in the western-most portions of the County. Since the south and southeastern portions of the county are more developed, less conservation opportunities are available here.

Future land use plans in San Marcos show industrial and commercial development along the IH-35 corridor (*City of San Marcos Future Land Use Map, January 2010*). Future land use is planned to be mostly low-density residential in the City of San Marcos. Open space, industrial, and commercial uses would be the next most common uses (*San Marcos Horizons Sector Plans, Technical Updates, 2007*).

The majority of the City of Kyle's future land use is designated for single-family residential uses, with some areas for apartments, manufactured housing, and multifamily residential uses. Retail and service uses are generally limited to narrow strips along main roadways, along with warehouse and manufacturing uses. Some land has been identified for parks, open space, and hike and bike trails (*Kyle Comprehensive Plan, 2010*).

Future land use in the City of Buda concentrates commercial along IH-35, industrial uses to the southwest, growth to the east, and "green" growth to the west to preserve land. Future land use in Dripping Springs is planned to let future growth enhance the existing land uses rather than encourage new growth.

Hays County Transportation Plan

Section 4

Existing System Assessment

4.1. Existing Roadway Network

Hays County's transportation system includes roadways, railroads, bridges, bike lanes/ways, transit vehicles and airports (**Figure 4-1**). In order to develop a comprehensive long-range transportation plan for the County, a variety of transportation data were collected from numerous local, regional, state and federal sources, which include roadway characteristics, bridge inventory, existing traffic condition, crash data, bicycle and pedestrian facilities, public transportation facilities and services, railroads, airports, existing land use, and natural environment. These data provided the framework for existing transportation system assessments, which establish a base to determine needs and discuss opportunities for transportation improvements in the county. Based on these data, the existing transportation system was summarized and assessed as follows below.

Hays County is currently served by one Interstate Highway (IH), one US Highway (US), several State Highways (SH), and numerous Farm-to-Market (FM) roads and Ranch-to-Market (RM) roads, which provide the basic framework of the County's roadway network that moves people and goods through and within the area. The Texas Department of Transportation (TxDOT) maintains Interstate Highways and State Highways in the county, while Hays County and the cities maintain roadways that are not part of the state or federal system. The existing roadway network characteristics were summarized in terms of functional classification, capacities, number of travel lanes, existing traffic conditions and right-of-way widths.

4.2. Major Roadway Description

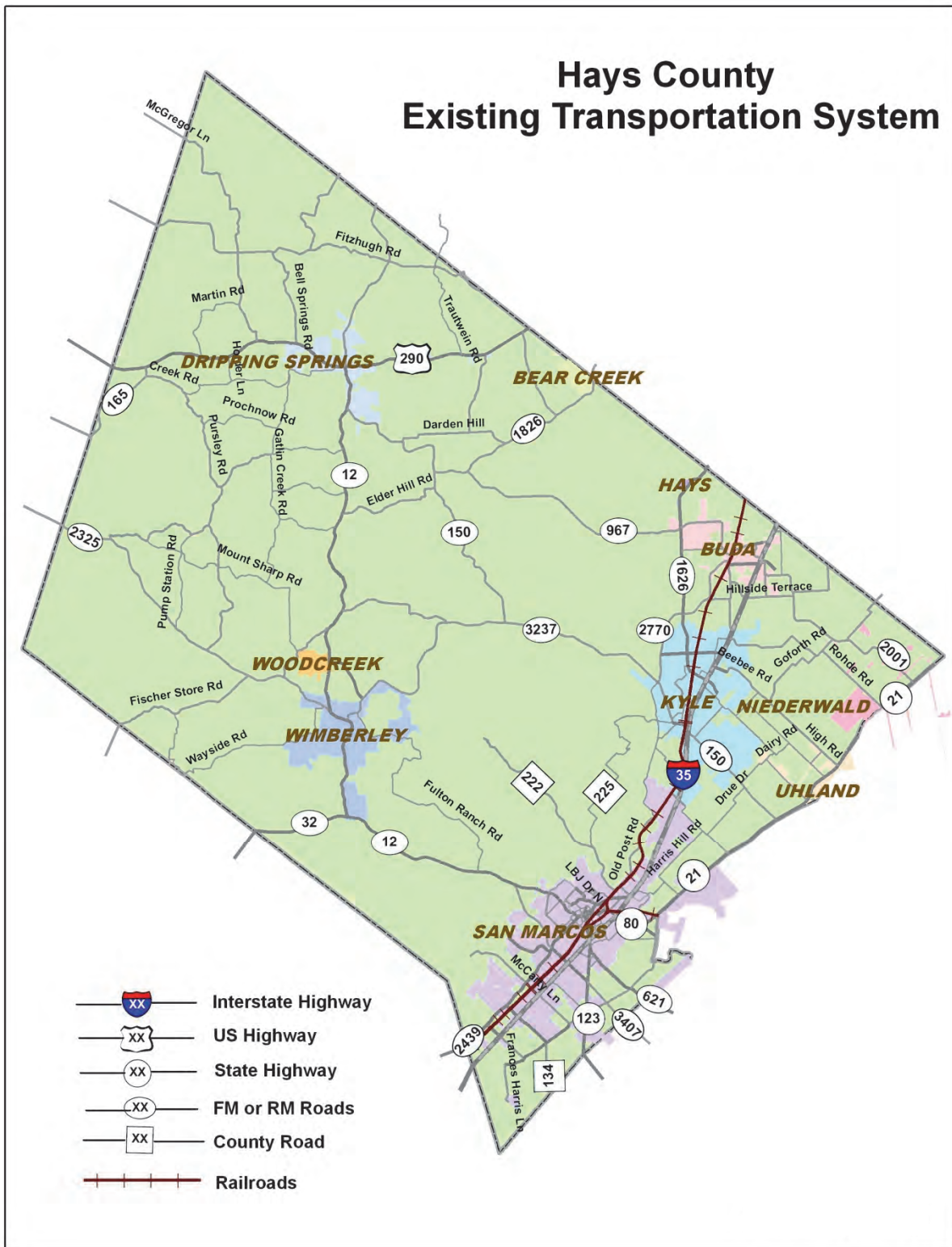
4.2.1. Interstate Highways

IH-35 is the only interstate highway serving the county. It is a controlled access highway that traverses the eastern portion of Hays County, crossing from southeast to northeast. IH-35 connects San Marcos to the Austin urbanized area to the north, and to the New Braunfels and San Antonio areas to the south. Access to and from IH 35 is provided by grade-separated interchanges and frontage roads on both east and west sides of the freeway. IH-35 is a six-lane divided highway in the study area. It is an asphalt facility with shoulders and a barrier separated by a median. The frontage roads throughout most of the county are one-way and 2-3 lanes in each direction; portions of the frontage roads remain two-way, two-lane facilities, and these are being converted to one-way frontage roads. TxDOT is responsible for the operations and maintenance of this facility.

4.2.2. US Highways

US 290 is the only US Highway that traverses through Hays County. It extends nearly 19 miles from west to east in the northern part of the county. It is a four-lane undivided highway from the Blanco County line to Dripping Springs, and a four-lane divided highway from Dripping Springs to the Travis County line.

Figure 4-1. Hays County Existing Transportation System



Source: Hays County

4.2.3. State Highways

There are three state highways that serve the County: SH 123, SH 21 and SH 80. TxDOT maintains these roadways. SH 80 is a four-lane roadway that intersects IH 35 in the City of San Marcos. It is an important facility serving the east side of San Marcos, and connects to Ranch-to-Market road (RM) 12 and downtown San Marcos on the west side of IH-35.

SH 123 connects to Guadalupe Street and downtown San Marcos on the north, and extends to the southern boundary of the county. It is a four-lane roadway, and has a posted speed limit ranging from 30 mph downtown to 65 mph at the Guadalupe County line on the south.

SH 21 is a four-lane roadway that begins at SH 80 on the east side of San Marcos, and continues northeast toward Bastrop County. It forms the boundary between Hays County and Caldwell County. The posted speed limit is 65 mph.

4.2.4. Farm-to-Market and Ranch-to-Market Roads

There are numerous Farm-to-Market and Ranch-to-Market roads serving Hays County, including FM 110, FM 150, FM 165, FM 621, FM 967, FM 1626, FM 2001, FM 2325, FM 2439, FM 2770, FM 3237, FM 3407, as well as RM 12, RM 1826 and RM 32. These FM and RM roadways are generally two-lane facilities that provide connections between major highway facilities, residential and commercial centers, and recreational areas. TxDOT maintains these FM and RM roadways.

4.3. Roadway Functional Class

Roadways can be described by the principal function that they serve: mobility for through movements or access to adjacent land. Functional classifications essentially describe roadways based upon the degree to which the roadway is expected to provide mobility and land access. **Figure 4-2 Relationship of Roadway Functional Class in Serving Traffic Mobility and Land Access** illustrates the relationship of functionally classified systems in serving traffic mobility and land access. As shown on the figure, arterials emphasize a high level of mobility for through movements, collectors offer approximately balanced service for both mobility and accessibility, and local roads provide direct access to neighborhoods with lower speeds.

The Federal Highway Administration (FHWA) provides guidelines by which TxDOT works with local governments to establish or verify roadway functional classifications for public roadways. The guidelines include target values on the number of centerline miles for each functional classification that is based on the total number of publicly maintained roadways in each city and in each county. This system also serves as a basis for establishing speed limits, parking restrictions, design standards, and access controls. The descriptions of TxDOT roadway functional classification are listed as follows:

Interstate Highways

Interstate highways provide the greatest mobility because they permit high-speed movement with limited access at ramps. Access to these facilities is generally limited to defined interchanges.

Principal Arterial

Principal arterials connect activity centers and carry large volumes of traffic at moderate to high speeds. They generally serve significant intra-area travel and longer trip purpose. US 290, SH 21, SH 123, SH 80 and RM 12 are classified as principal arterial in the study area.

Minor Arterial

Minor arterials provide a lower level of mobility and distribute traffic to smaller geographic areas than major arterials. They are continuous routes through urban and rural areas, forming the backbone of the street network, which provide intra-community continuity without penetrating identifiable neighborhoods. Most of the farm-to-market roads in the study area serve as this function.

Collector Streets

Collector streets collect traffic from local streets and channel it into the arterial system at low to moderate speeds. They provide land access and traffic circulation within residential, commercial, and industrial areas. Collectors also serve as freight access routes.

Local streets make up the majority of the roadway network and provide access to adjacent properties and neighborhoods. Local streets generally carry relatively low traffic volumes at low speed and designed to discourage through traffic. Local streets are often found in subdivisions and near non-residential land uses that do not depend on a high volume of walk-in business. They often serve short distance travel as compared to collectors or other higher-order roadways.

Based on the CAMPO 2010 roadway network, the functional classification for roadways within Hays County is shown in **Figure 4-3**. The existing roadway travel lanes for the roadway network are shown in **Figure 4-4**.

Figure 4-2. Relationship of Roadway Functional Class in Serving Traffic Mobility and Land Access

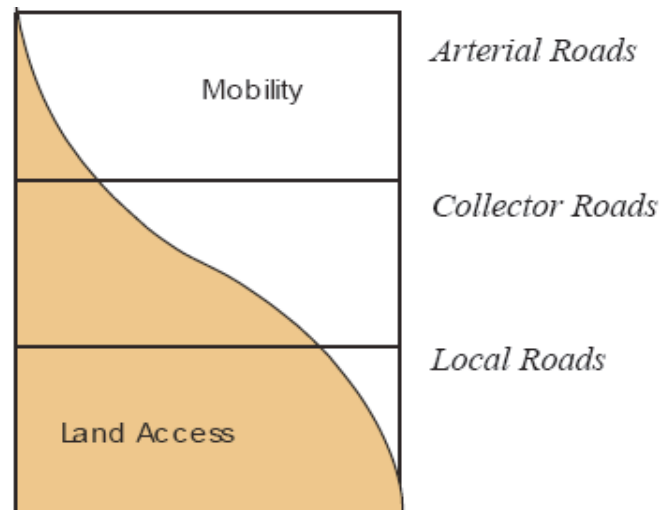
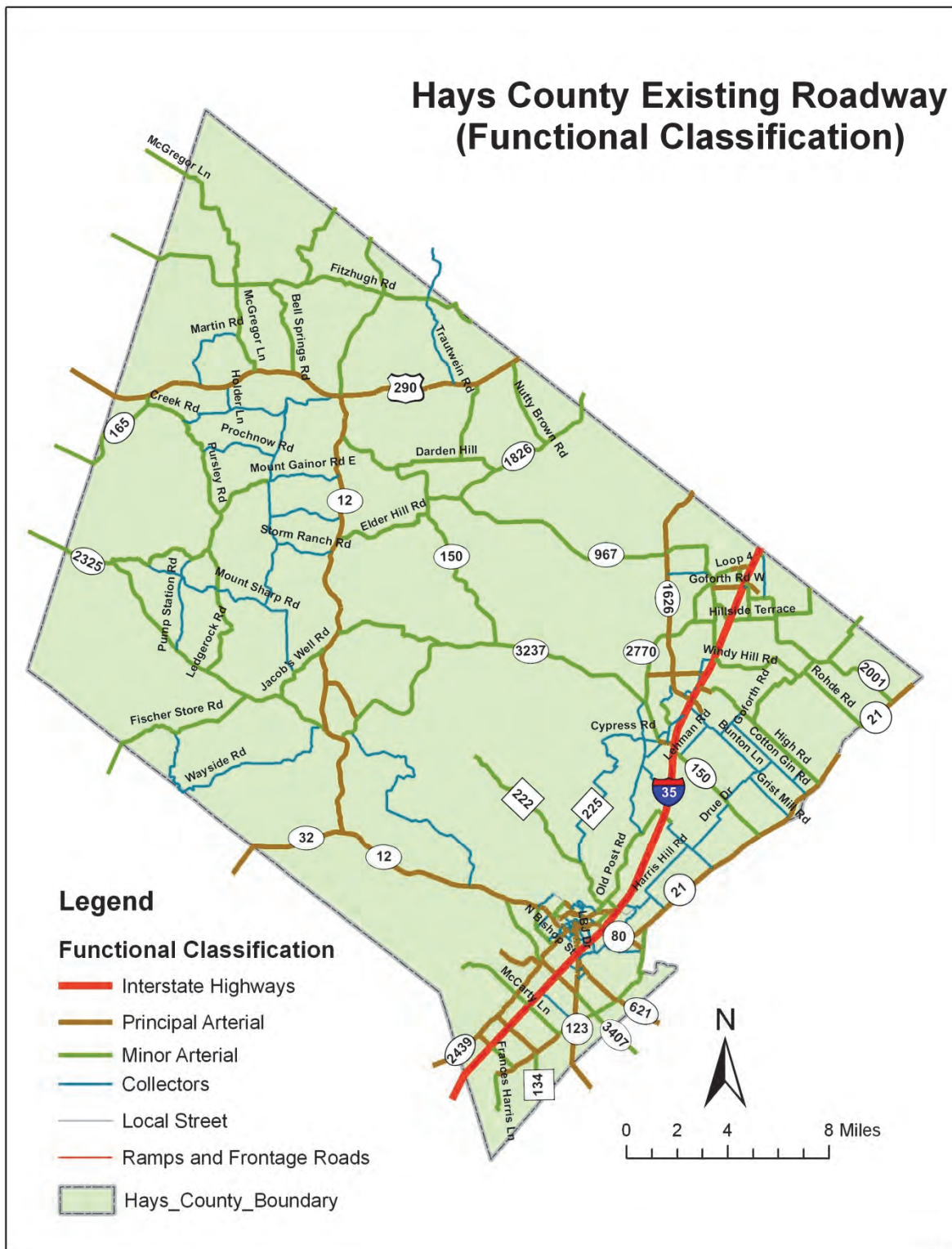
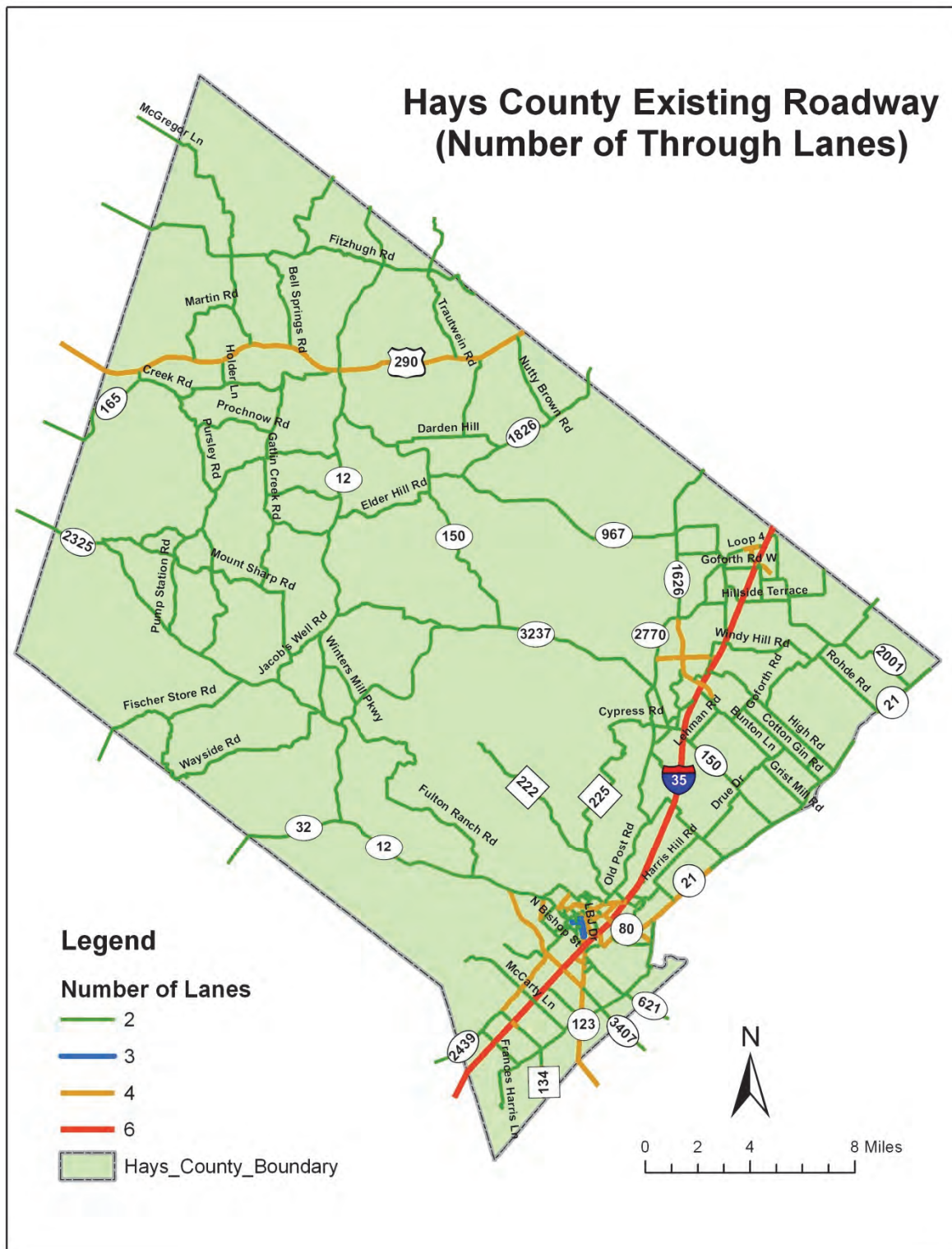


Figure 4-3. Hays County Existing Roadway Functional Classification



Source: Capital Area MPO (CAMPO) 2010 Roadway Network

Figure 4-4. Hays County Existing Roadway Number of Through Lanes



Source: Capital Area MPO (CAMPO) 2010 Roadway Network

The summary of centerline roadway miles and centerline lane miles of each functional classification for the Hays County existing roadway network is listed in **Table 4-1**:

Table 4-1. Hays County Roadway Inventory Summary

Functional Classification	Centerline Roadway Miles	Centerline Lane Miles
Interstate Highways	25	149
Principal Arterials	122	341
Minor Arterials	257	526
Collectors	145	296
Total	576	1317

Source: CAMPO 2010 Roadway Network

4.4. Existing Roadway Capacity

The capacity of a roadway is defined as the maximum number of vehicles per hour that can pass a point on a roadway. Capacity is determined by the number of lanes, the functional classification of the roadway, the roadway geometrics, and the area type (urban versus rural). The roadway capacity will be used to determine congestion levels by comparing the actual traffic volume and the capacity of the roadway. This ratio is used to measure level of service (LOS), which will be further discussed in the next section. **Table 4-2** provides the matrix that CAMPO regional travel demand model has used to determine capacity of all the roadways, and assign LOS designations to roadways in the model network.

Table 4-2. Roadway Capacity Table

Roadway Functional Class	Area Type	Daily Capacity (Vehicles per Lane)	Peak Hour Capacity (Vehicles per Lane)	HWY_SPEED (Miles per Hour)
Interstate Highway	CBD	28,200	2170	51
	Urban Intense Residential	25,100	2170	57
	Urban Residential	22,500	2160	63
	Suburban Residential	20,200	2150	68
	Rural	16,700	2130	74
Principal Arterial Divided	CBD	9,400	900	30
	Urban Intense Residential	9,000	890	35
	Urban Residential	8,000	870	41
	Suburban Residential	7,000	840	51
	Rural	5,300	760	63
Principal Arterial Undivided	CBD	9,100	770	28
	Urban Intense Residential	8,200	760	34
	Urban Residential	7,300	750	40
	Suburban Residential	6,300	720	49
	Rural	4,800	660	61
Minor Arterial Divided	CBD	8,100	810	26
	Urban Intense Residential	7,700	800	33
	Urban Residential	6,900	780	39
	Suburban Residential	6,000	760	46
	Rural	4,600	690	59
Minor Arterial Undivided	CBD	7,800	700	24
	Urban Intense Residential	7,000	690	30
	Urban Residential	6,200	670	38
	Suburban Residential	5,500	660	44
	Rural	4,200	610	55
Collector	CBD	6,000	640	23
	Urban Intense Residential	5,700	630	28
	Urban Residential	5,200	620	33
	Suburban Residential	4,500	600	40
	Rural	3,500	540	50
Local Street	CBD	3,800	410	20
	Urban Intense Residential	3,500	400	25
	Urban Residential	3,100	390	30
	Suburban Residential	2,800	380	37
	Rural	2,100	350	49

(Source: CAMPO)

4.5. Existing Traffic Volumes

Existing traffic volumes are used to evaluate congestion levels on existing roadways, identify capacity deficiencies on the existing roadway network, and serve as a base for comparison to future traffic forecasts.

Hays County does not have a complete county-wide traffic count data system. For the purpose of this study, the existing Average Daily Traffic (ADT) volumes on the roadway network shown in **Figure 4-5** reflect volumes forecasted by the CAMPO 2010 travel demand model.

[illegible]**PARSONS
BRINCKERHOFF**

4.6. Existing Traffic Conditions

Transportation system performance is commonly measured using the LOS grading system which qualitatively characterizes traffic conditions associated with varying levels of traffic. LOS ranges from LOS A, representing free-flow traffic conditions with little or no delay experienced by motorists, to LOS F, describing congested conditions where traffic flows exceed design capacity, resulting in long queues and delays. LOS A, B, and C are generally considered to be satisfactory service levels, while the influence of congestion becomes more noticeable at LOS D. LOS E is undesirable and is considered by most agencies to be the limit of acceptable delay, and LOS F conditions are considered to be unacceptable to drivers. The LOS methodology has been widely used and provides a consistent tool for evaluating roadway performance. It is common for urban and rural communities to adopt LOS D as the minimum standard for acceptable roadway performance (*FHWA Highway Capacity Manual 2000*).

The LOS for an individual roadway segment is measured by comparing the actual traffic volumes to the capacity of the roadway segment. The volume-to-capacity (V/C) ratio thresholds and traffic flow characteristics for each LOS level are presented in **Table 4-3**.

Table 4-3. Roadway Segment LOS and V/C Ratio

Roadway LOS	Description	Max V/C Ratio
LOS A (Under Capacity)	Free-flow (FF) operation	0.35
LOS B (Under Capacity)	Reasonable free-flow; Ability to maneuver is only slightly restricted	0.5
LOS C (Under Capacity)	Stable flow; At or near free-flow operations; Freedom to maneuver is noticeably restricted; Queues may form	0.65
LOS D (Near Capacity)	Approaching unstable flow; Operation near or at capacity; Speeds decline slightly with increasing traffic volumes; Freedom to maneuver is much more limited; Longer delays and congestion noticeable.	0.8
LOS E (At Capacity)	Unstable flow; Operation at capacity; No usable gap in the traffic stream to maneuver; Operations are extremely volatile.	1
LOS F (Over Capacity)	Forced or breakdown flow; Demand is greater than capacity; unacceptable delay; Stop-and-go conditions.	> 1.00

Source: Transportation Research Board, Highway Capacity Manual 2000

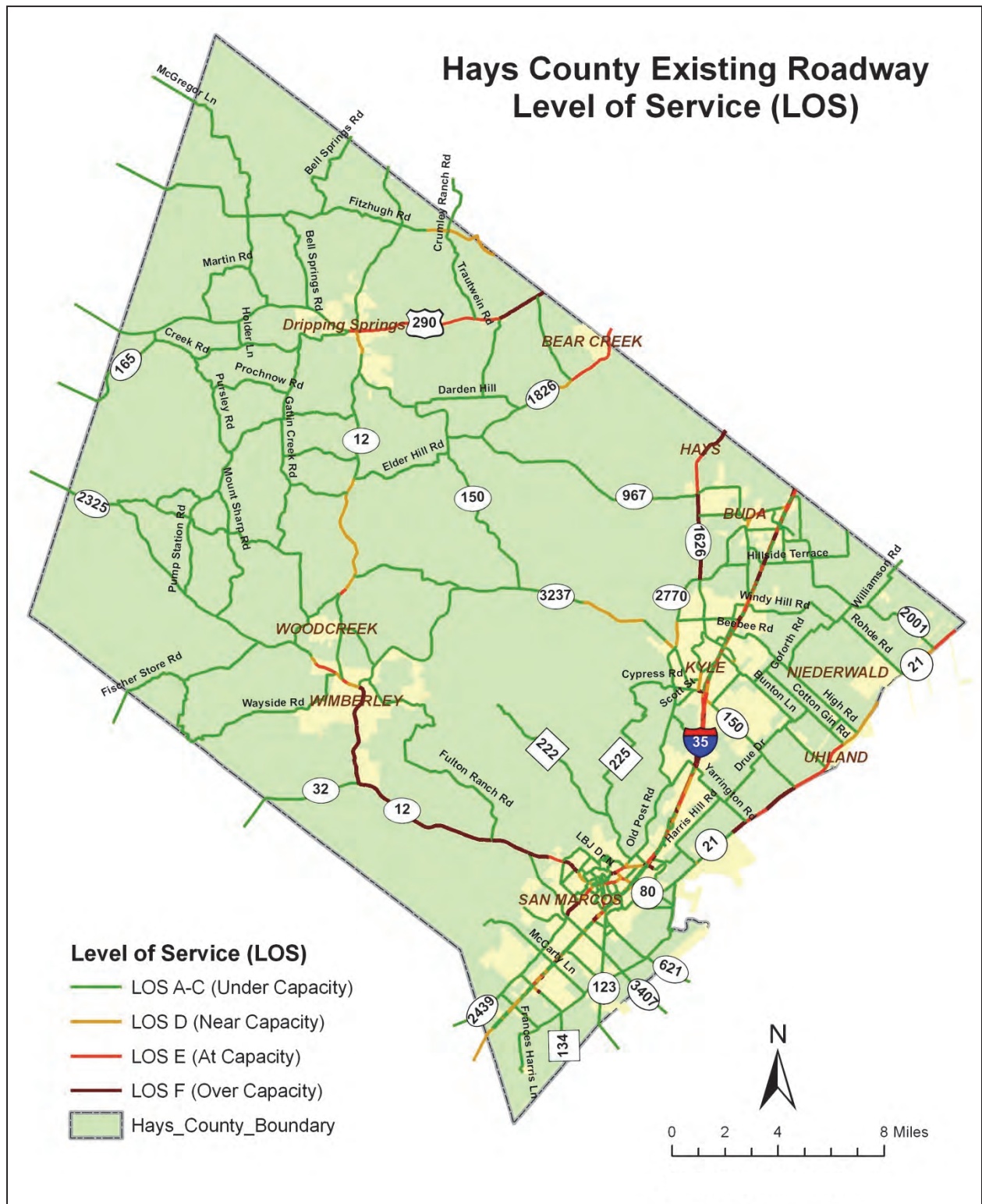
Based on the existing traffic volumes as predicted by the CAMPO travel demand model and V/C ratio thresholds as listed above, the existing roadway average daily LOS results were calculated and illustrated in **Figure 4-6**.

As shown on the map, most roadways within the study area currently operate at acceptable LOS D or better. I-35, US 290 east of RM 12, and several of the state highways including RM 12, SH 21, FM 1626,

FM 2325 within Wimberley, FM 2439 near downtown San Marcos show the most congestion (LOS E or F).

Please note that this methodology provides a macro-level assessment of the entire roadway network within Hays County. It does not assess the peak-hour congestion and the impact of traffic control devices at intersections during peak-hour operations. More detailed analysis using peak-hour volume and intersection data is recommended for the next level study to further identify and investigate the bottleneck locations and congested corridors.

Figure 4-6. Hays County Existing Roadway Level of Service (LOS)



Source: Capital Area MPO (CAMPO) 2010 Roadway Network

4.7. Bridge Inventory

Bridges are another important element in the transportation system. Maintaining the bridge network is important for safety enhancement and traffic congestion relief. Bridges are also important to enhance the connectivity of the roadway network, and facilitate the development of a multimodal transportation system.

The Federal Highway Administration (FHWA) established the National Bridge Inventory (NBI) to monitor the condition of bridges on public roads. The NBI identifies bridge characteristics including age, sufficiency and composition. TxDOT uses this federal definition to classify the condition of bridges into the following categories:

Sufficient structure (good or better): A sufficient structure meets current federal and Texas requirements. It is structurally sound, functionally adequate, and suitable for appropriate weight vehicles.

Non-sufficient structure: A non-sufficient structure is structurally deficient, functionally obsolete, or sub-standard for load only.

Structurally deficient structure: A bridge is classified by the FHWA as structurally deficient if it meets any of the following criteria:

- It has an extreme restriction on its load-carrying capacity.
- It has deterioration severe enough to reduce its load-carrying capacity below its original as-built capacity.
- It is closed.
- It is frequently over-topped during flooding, creating severe traffic delays.

Functionally obsolete structure: A bridge is classified by the FHWA as functionally obsolete if it fails to meet its design criteria in any one of the following areas:

- Deck geometry
- Load-carrying capacity
- Vertical or horizontal clearances
- Approach roadway alignment

Sub-standard for load only structure: A bridge is considered sub-standard for load only if it is not classified as structurally deficient or functionally obsolete, but has a load capacity less than the maximum load permitted by state law. It has not deteriorated or has not deteriorated severely enough to reduce its load capacity beneath its original as-built capacity, but its original as-built capacity was not designed to carry current legal loads. A sub-standard for load only structure is load-posted or recommended for load posting.

Load-posted bridge: A bridge that is load-posted has a safe load capacity less than the state legal load, and its load capacity is communicated by signs at the bridge site.

Land-locking bridges: This report classifies a bridge as land-locking if it restricts traffic into an area because of load limitations or closures. These bridges are load-posted or closed.

In addition, the NBI also uses a rating system ranging from 0 to 100 to evaluate the sufficiency level of bridges. A rating of 50 or less signifies that a bridge structure is eligible to receive funding for replacement. A rating between 51 and 80 signifies a bridge is eligible for rehabilitation funding.

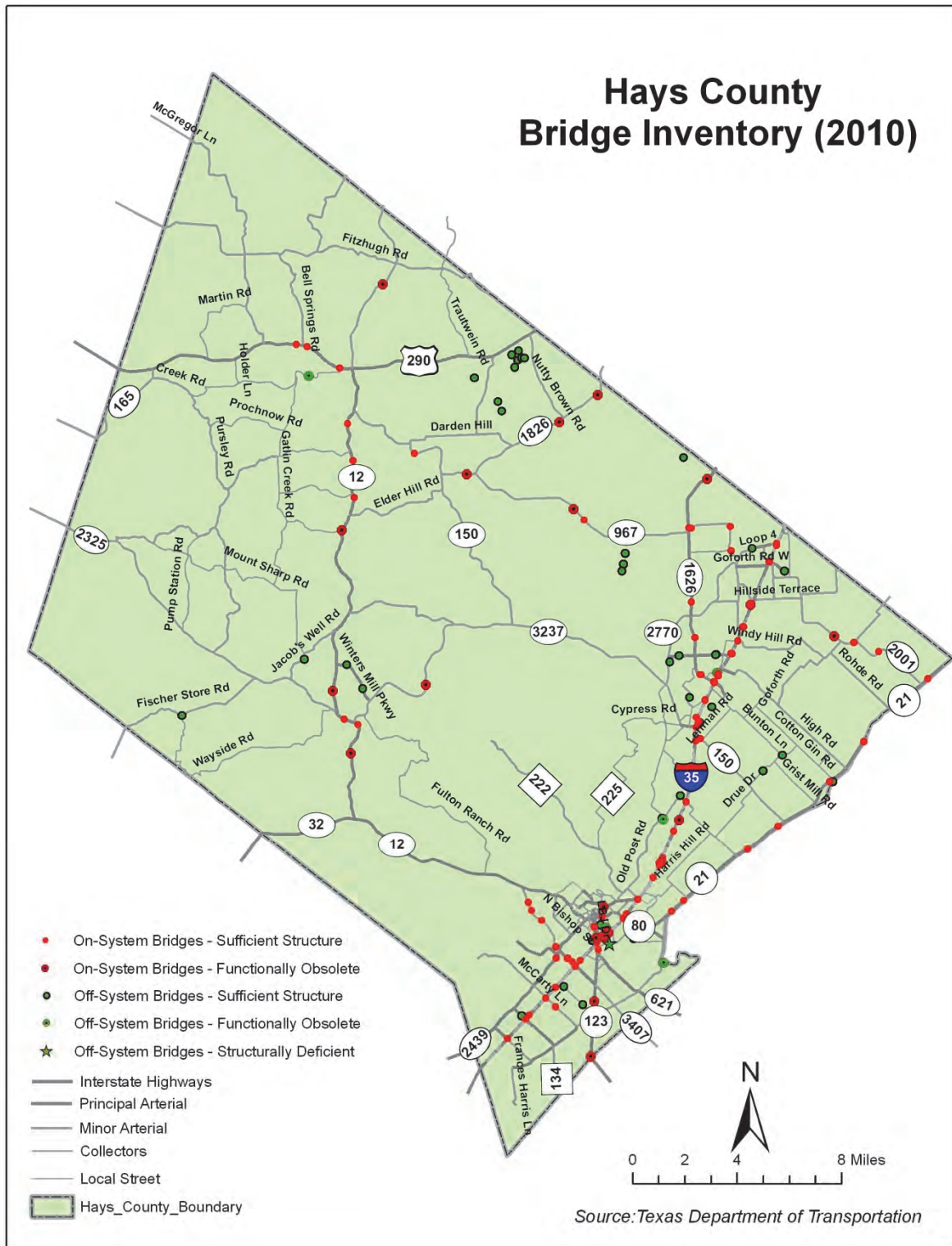
Based on the TxDOT Bridge Inventory reports, Hays County has a total of 160 bridges, including 44 off-system bridges and 116 on-system bridges. On-system bridges are on the designated state highway system, are maintained by TxDOT, and are typically funded with a combination of federal and state or state-only funds. Off-system bridges are not part of the designated state highway system and are under the direct jurisdiction of a local government such as a county, city, other political subdivision of the state, or special district with authority to finance a highway improvement project. **Figure 7** below illustrates all the bridges within Hays County. **Table 4-4** shows the condition of these bridges as of Year 2010. Eighty-two percent of total bridges are in good condition. Only one off-system bridge on Cape Road has been identified as structurally deficient.

Table 4-4: Condition of Hays County Bridges by Count in 2010

Condition	On-System		Off-System		All bridges	
	Number of Bridges	Percent	Number of Bridges	Percent	Number of Bridges	Percent
Sufficient Bridges (Good or better)	93	80%	38	86%	131	82%
Structurally Deficient	0	0%	1	2%	1	1%
Functionally Obsolete	23	20%	5	11%	28	18%
Total	116	100%	44	100%	160	100%

Source: Texas Department of Transportation

Figure 4-7. Hays County Bridge Inventory (2010)



Source: Texas Department of Transportation (TxDOT)

4.8. Other Modes of Transportation

The Hays County transportation network also includes infrastructure that provides opportunities for other modes of travel, including bicycle/pedestrian facilities, transit facilities and services, railroads, truck routes and airports.

4.8.1. Bicycle and Pedestrian Facilities

Most of the pedestrian system is provided by locally developed sidewalks along arterials. Bicycle access is primarily provided by interconnected, low-volume streets, and shoulders or bicycle lanes on higher volume streets¹. Due to the rural nature of most parts of Hays County, most roads are shared roadways for bicyclists and pedestrians.

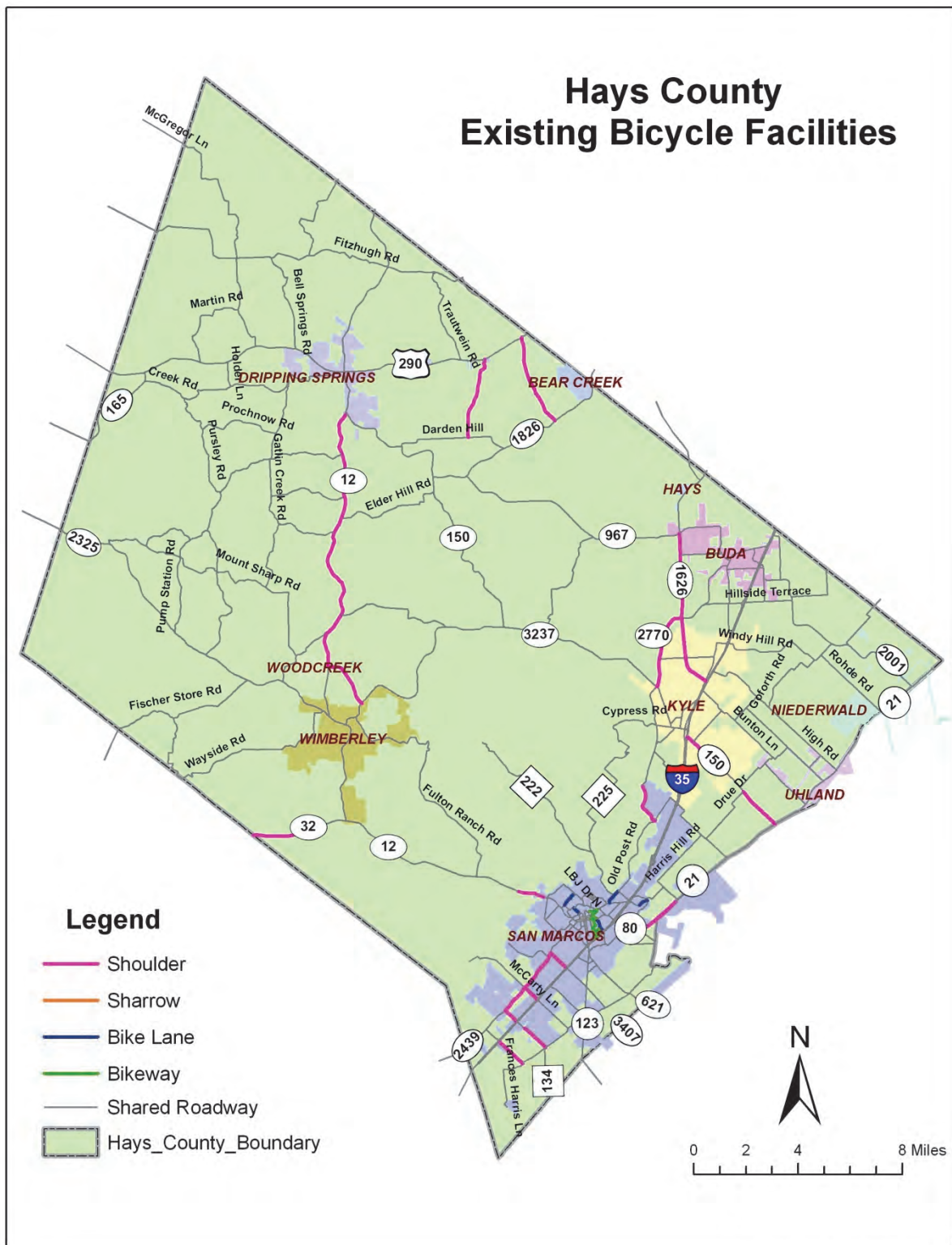
Figure 4-8 shows the existing inventory of facilities within Hays County designated for bicycle use. The map shows most of the bicyclists share roadways with motorists in the County. Other than the shared roadway, there are shoulders provided on 44-miles both on-system and off-system streets, which constitute 7% of the entire roadway network. However, the shoulders along RM 12 between FM 150 and FM 3237 are considered to be inadequate for bicyclists. There are also a few bike lanes and bikeways in the City of San Marcos, including segments on River Road, Old Post Road, Holland St, Loop 82, and Comanche N.

Most state highways and county roadways in Hays County don't have sidewalks given the rural nature of the land use along the roadway. Sidewalks are primarily located in the incorporated cities. In the City of San Marcos, sidewalks are well provided around the downtown area, while most of the older parts of the City have scattered or no sidewalks.

As bicycling and walking have been recognized as active transportation choices that will bring benefits for mobility, air quality, health, and quality of life, providing a balanced and well-connected transportation network for bicyclists and pedestrians has been increasingly important for the county. The City of San Marcos Master Transportation Plan has identified more corridors to improve the bicycle and pedestrian mobility and safety by providing designated bike routes and sidewalks. Countywide, more bike lanes and sidewalks for arterials and collectors, or in lieu of a bike lane, a multi-use path or shared use travel lane need to be planned to fill the gaps for bicyclist and pedestrian access.

1. CAMPO 2035 Long Range Transportation Plan

Figure 4-8. Hays County Existing Bicycle Facilities



4.8.2. Transit Facilities and Services

Figure 4-9. All CARTS Routes in San Marcos

Capital Area Rural Transportation System (CARTS)

Public transit service is operated by the Capital Area Rural Transportation System (CARTS) in Hays County. CARTS is a rural transit district formed through inter-local agreement by nine county governments in the 7,200-square-mile region surrounding Austin. It is a mixture of a rapidly growing metropolitan center surrounded by rural, suburban, exurban and rapidly urbanizing rural to metropolitan transition areas. Within Hays County, CARTS provides both fixed-route bus services in the City of San Marcos and demand response Community Transit services that provide curb-to-curb public transportation to citizens in the service communities.

Fixed-route City Bus – San Marcos

CARTS Around Town (CAT) in the City of San Marcos is a municipal fixed-route bus service offering regular route service connecting neighborhoods and downtown businesses for citizens and visitors. All fixed route services offer wheelchair accessible vehicles. A total of 10 routes operate throughout the City, as shown in **Figure 4-9**. Major destinations include the Factory Outlet Malls, H.E.B., Wal-Mart, Springtown Mall, the Playscape Park and many school campuses in the area. Hours of operation are Monday through Friday from 7 a.m. to 6 p.m., except for major holidays. All routes arrive in and depart from the San Marcos Station, which is a multi-modal transportation center and serves as the hub for CAT local transit service.



Community Transit Services

CARTS also offers demand-responsive curb-to-curb transportation services throughout Hays County, which is especially ideal for disabled individuals or others requiring special assistance. Rides are scheduled by phone Monday through Friday, from 8:00 am to 4:00 pm. 24-hour advance notice is required.

4.8.3. Commuter Rail Service

National Connection

Amtrak is a national passenger rail provider operating the Texas Eagle route traveling daily between Chicago and San Antonio. The route serves the San Marcos Intermodal station, where Amtrak passengers can also transfer to buses and make connections to cities not served by rail on Amtrak thruway service.

Intercity Passenger Rail

Intercity passenger rail service between Georgetown and the San Antonio areas is being developed by the Lone Star Rail District (LSTAR), which is a key initiative in Central and South Texas to help improve the mobility and safety on the IH-35 Corridor due to the extraordinary population growth and increase in NAFTA trade flow. The adopted locally preferred alternative is a 112-mile regional passenger rail system located in the existing Union Pacific rail corridor for most of its length. 16 stations have been proposed along the rail line to connect the cities of Georgetown, Round Rock, Austin, Kyle/Buda, San Marcos, New Braunfels, Schertz, and San Antonio. **Figure 4-10** shows the proposed LSTAR stations; two of them are located in Hays County. According to the *Lone Star Regional Passenger Rail Project Status Report* in 2011, significant technical work has been completed for the project, which includes conceptual engineering, alternative analysis, station location studies, station economic impact studies, ridership studies, operating plans, capital and operating cost estimate, and financial and economic benefits studies. The environmental clearance process is under way since January 2010, and will take 2-3 years to complete. Completion and federal approval of engineering and environmental studies and receipt of a notice-to-proceed is anticipated for the Year 2013 and will allow LSTAR rail to begin final design and construction.

Figure 4-10. Proposed LSTAR Austin-San Antonio Passenger Rail Stations

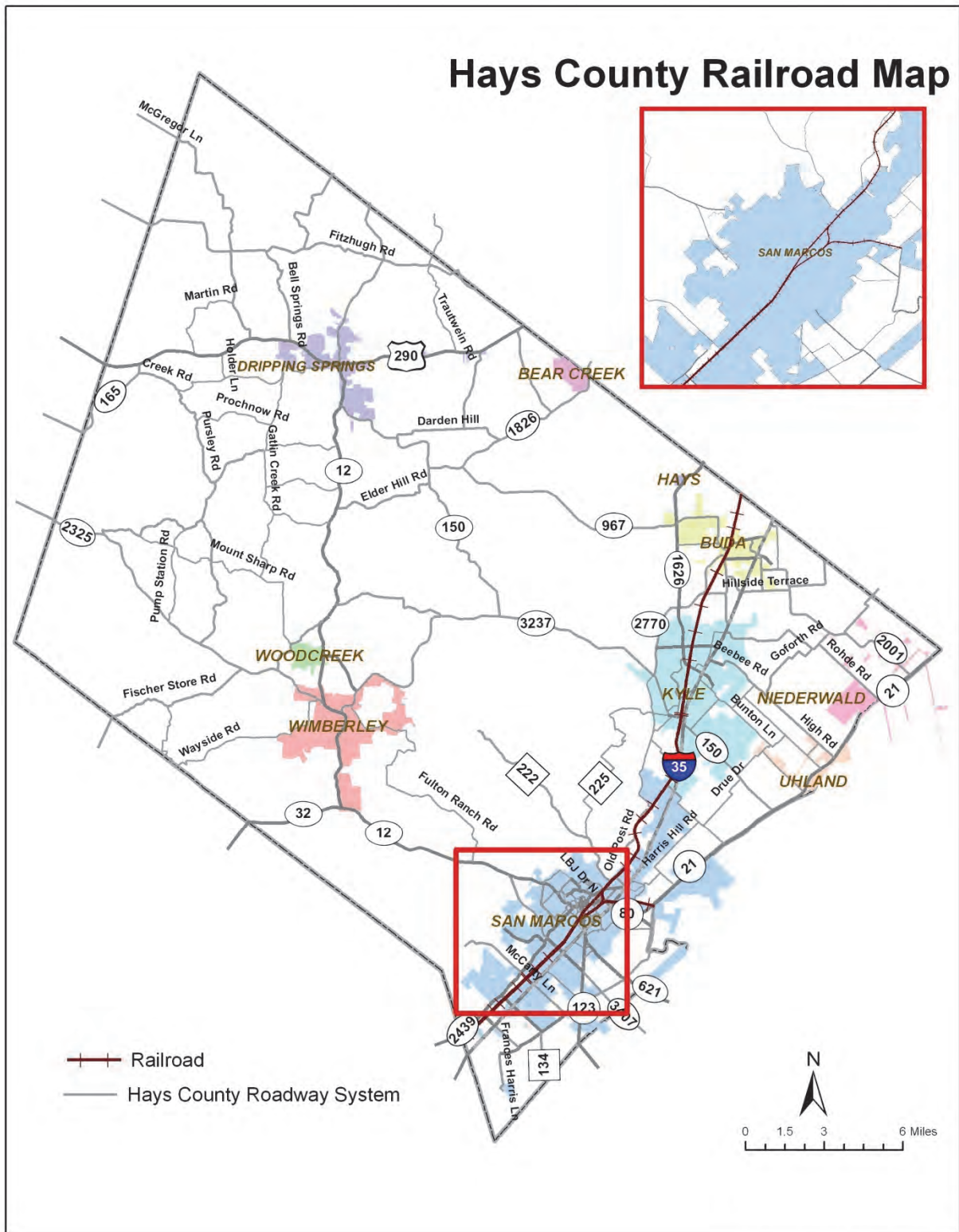


4.8.4. Freight Rail Facilities and Services

Union Pacific (UPRR) Railroad is the largest rail network in the United States. It operates over 32,000 miles of track, covering 23 states in the western two-thirds of the United States. The railroad links every major West Coast and Gulf Coast port and provides service to the east through its four major gateways in Chicago, St Louis, Memphis and New Orleans. The railroads form an important network to deliver the energy, food, raw materials and consumer goods in the United States and across the world. Major commodities hauled by UPRR in Texas include chemicals, export grain, gravel and aggregates, automobiles and automobile parts, paper, glass, coal and general merchandise.

UPRR operates and maintains two rail tracks within Hays County, which bisect at the center of City of San Marcos. **Figure 4-11** shows the layout of the Hays County rail network.

Figure 4-11. Hays County Railroad Map



Source: Hays County

The traffic delay and public safety issues at railroad crossing locations are a major concern of the local governments. Grade separations consist of roadway overpasses and underpasses that separate vehicular traffic from rail traffic, minimizing the safety exposure and noise associated with the roadway/rail interface. The *San Antonio Region Freight Study* conducted by TxDOT in 2008 identified eight potential future grade separation locations with associated average annual daily traffic (AADT) volumes, estimated costs, and estimated public benefits over a 20-year period. The potential grade separation locations identified for Hays County are listed in **Table 4-5**.

Table 4-5. Potential Future Grade Separation in Hays County

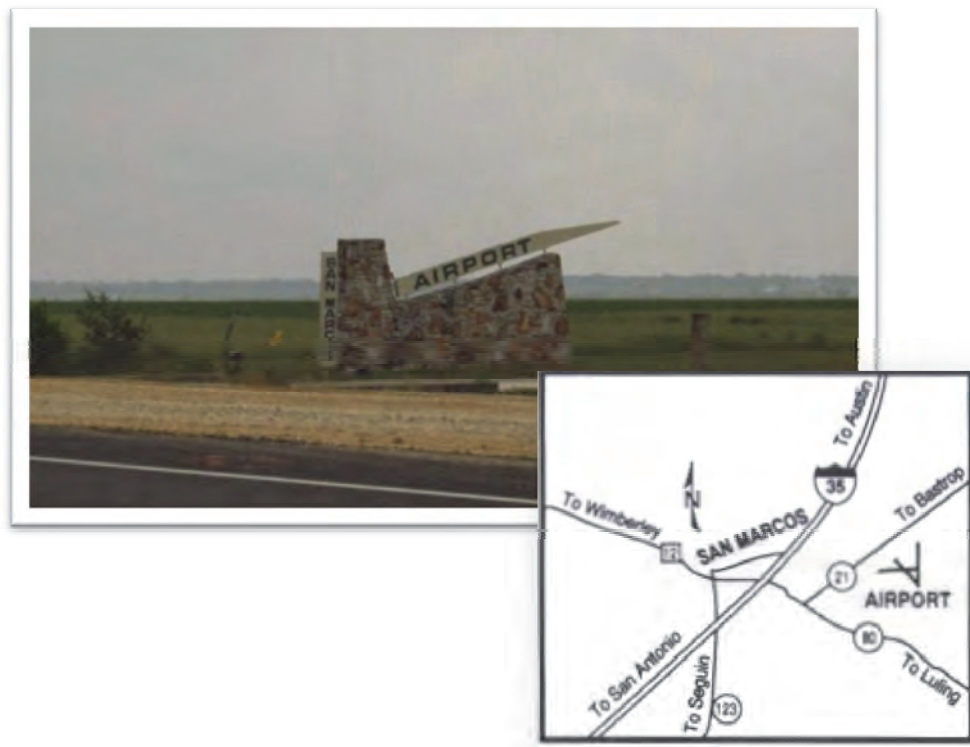
Street Name	City Name	AADT	Estimated Cost	20-year Benefits (2007 Dollar)	Benefit/Cost ratio
Aquarena Springs/Loop 82 and Post Road	San Marcos	20,400	\$14,800,000	\$14,180,000	0.96
Bugg Lane	San Marcos	8,400	\$6,100,000	\$8,800,000	1.44
Center Street/FM 150	Kyle	5,000	\$5,200,000	\$3,370,000	0.65
CM Allen Pkwy/RM 12	San Marcos	37,900	\$22,200,000	\$41,620,000	1.87
Guadalupe Street/Loop 82	San Marcos	17,900	\$6,500,000	\$25,220,000	3.88
Kohlers Xing/CR 171	Kyle	7,200	\$5,000,000	\$5,160,000	1.03
LBJ Drive	San Marcos	16,500	\$7,000,000	\$22,080,000	3.15
		Total	\$66,800,000	\$120,430,000	1.80

Source: TxDOT San Antonio Region Freight Study 2008

4.8.5. Airports

San Marcos Municipal Airport is centrally located on SH 21 in northeast San Marcos, just three miles from downtown San Marcos, 25 miles from the State Capitol of Austin and 45 miles from San Antonio. With this strategic location, it attracts pilots from all over Central Texas. The airport is classified by the Federal Aviation Administration (FAA) as a reliever airport, which provides users an alternate to the congestion at Austin Bergstrom International Airport and at San Antonio International Airport. The airport has four runways that range between 5,500 to 6,300 feet in length, and contains five corporate aircraft and maintenance hangars, T-hangar spaces for 28 airplanes, a carport-style shelter with a 14-plane capacity, a large aircraft parking apron, and a terminal building.

The airport master plan completed in 1992 forecasted growth in airport activity and identified the needs for future facility and services.



4.9. Natural Environment

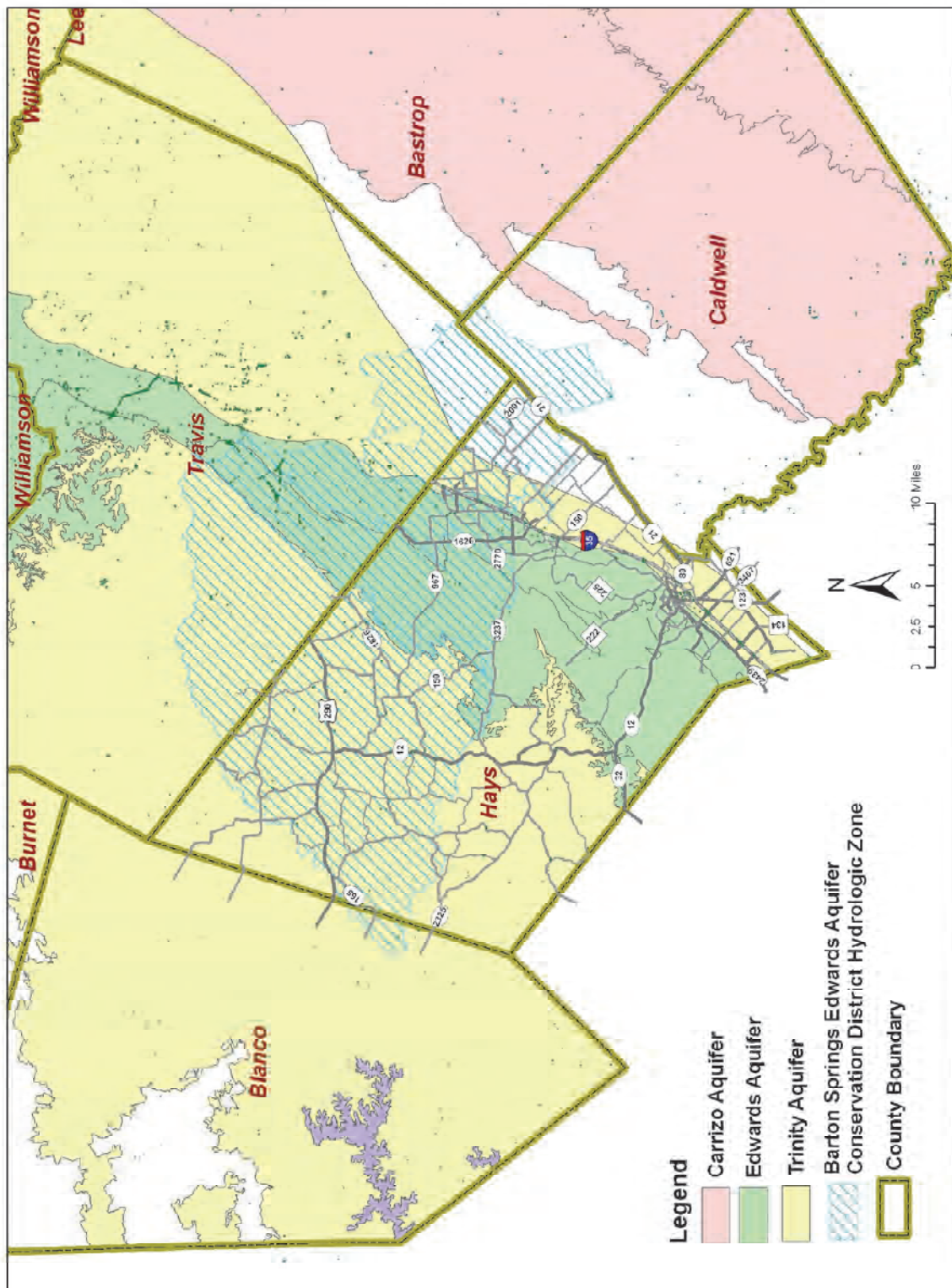
Hays County is one of the fastest growing counties in Texas. Founded in 1948, Hays County has grown from less than 500 residents to 157,107 in 2010. One of the most important factors to attract new residents and business owners is the unique location and natural environment that contributes to the high quality of life in the community. For those driving south from Austin or north from San Antonio, the rural roads of Hays County serve as the entry into the venerable landscape of the Texas Hill Country. Ancient springs, abundant creeks and rivers, historic charm and natural beauty make Hays County an ideal place to live and work. However, the tremendous growth has increasingly impacted the limited natural resources and environment in the county. Hays County, like much of the Central Texas Region, is facing the challenge of growing in population and employment while preserving the natural environment and unique characters.

4.9.1. Water Resources/Drainage/Floodplains

Water is an important natural resource for Hays County. The primary source of water in the county is groundwater. Groundwater resources in the county lie in three major aquifer systems, the Edwards Aquifer (San Antonio Region), the Barton Springs Edwards Aquifer, and the Trinity Group Aquifer, as shown in **Figure 4-12**. The Edwards Aquifer extends across approximately 4,350 square miles over portions of eleven Texas Counties from Bell County to Kinney County. It provides water for over 1.5 million people, and irrigation for thousands of acres of cropland.

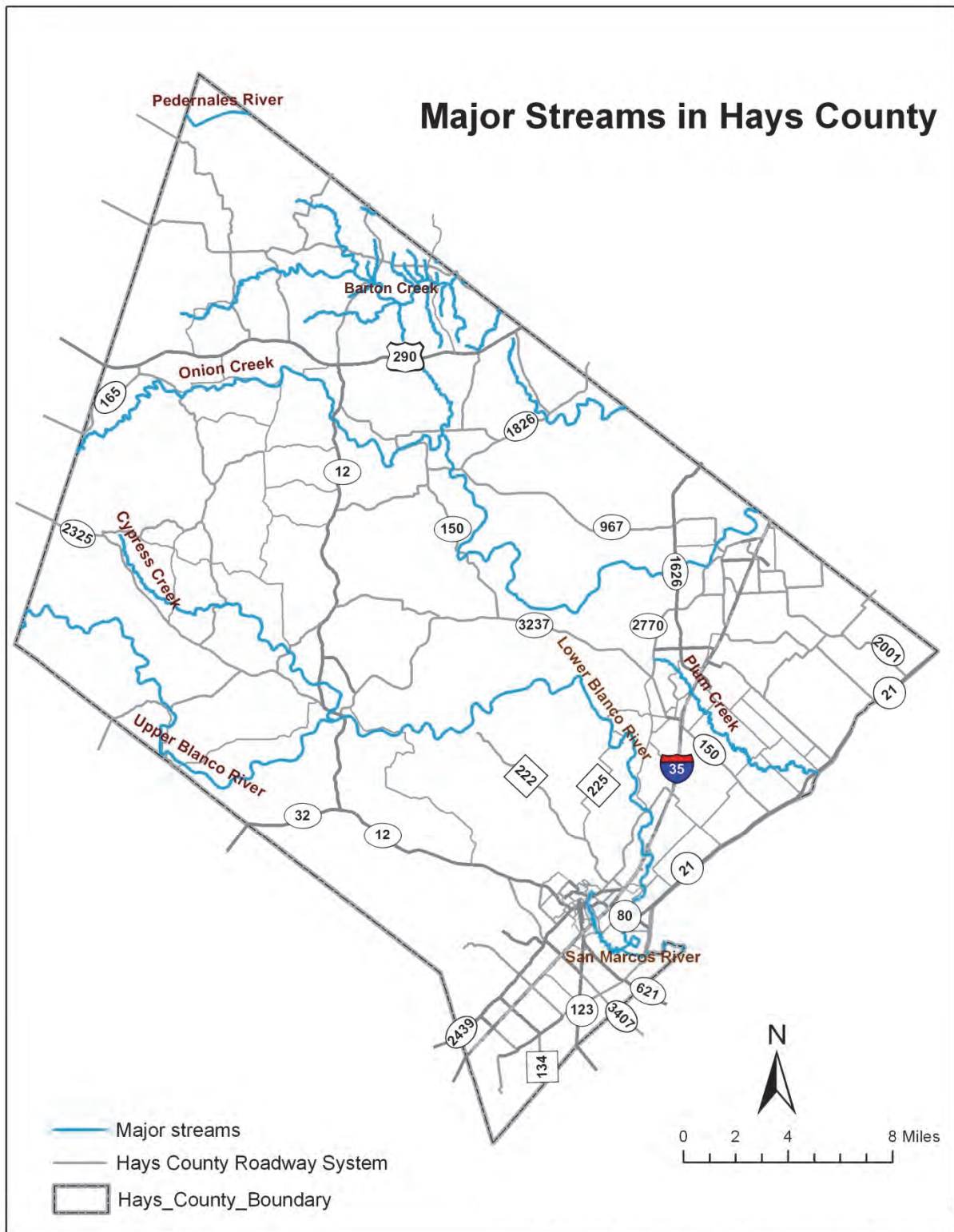
Several rivers and major creeks cross portions of Hays County, including the Blanco River, San Marcos River, Pedernales River, Cypress Creek, Onion Creek, Bear Creek, Plum Creek and Barton Creek. These major waterways, and the numerous minor streams and creeks that feed them, are important water resources that support wildlife, riparian habitat, recreational uses, and aesthetics. Several significant springs occur in Hays County, including San Marcos Springs and Fern Bank Springs (which have been designated as critical habitat for several federally listed species) and Jacob's Well. There are also many other minor springs located across the County that discharge water from the Edwards Aquifer, Trinity Aquifer, and local groundwater sources. The protection of drinking water and surface water features is a compelling issue in the region. The location of the rivers, creeks, springs are shown in **Figure 4-13**. The flood plain map produced by Federal Emergency Management Agency (FEMA) is shown in **Figure 4-14**, in which the 100 Year Flood Plain is defined as an area with 1% or greater chance of being flooded within the given year, while the 500 Year Flood Plain is an area with a 0.2 % or greater chance of being flooded within a given year. The map is used to evaluate the flood risk in the area.

Figure 4-12. Hays County Aquifer System



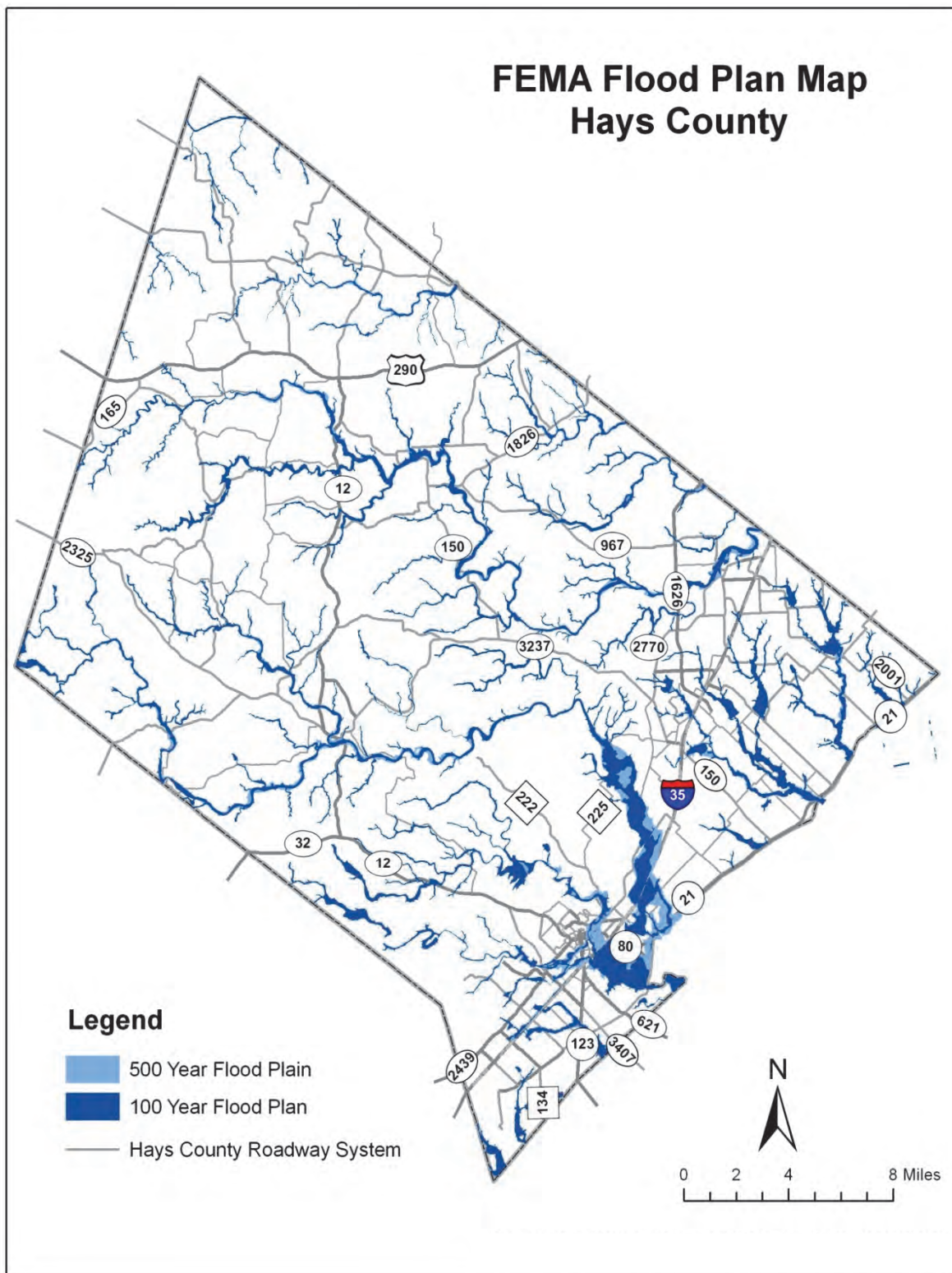
Source: Capital Area Council of Governments (CAPCOG)

Figure 4-13. Major Streams in Hays County



Source: Capital Area Council of Governments (CAPCOG)

Figure 4-14. Hays County FEMA Floodplain Map



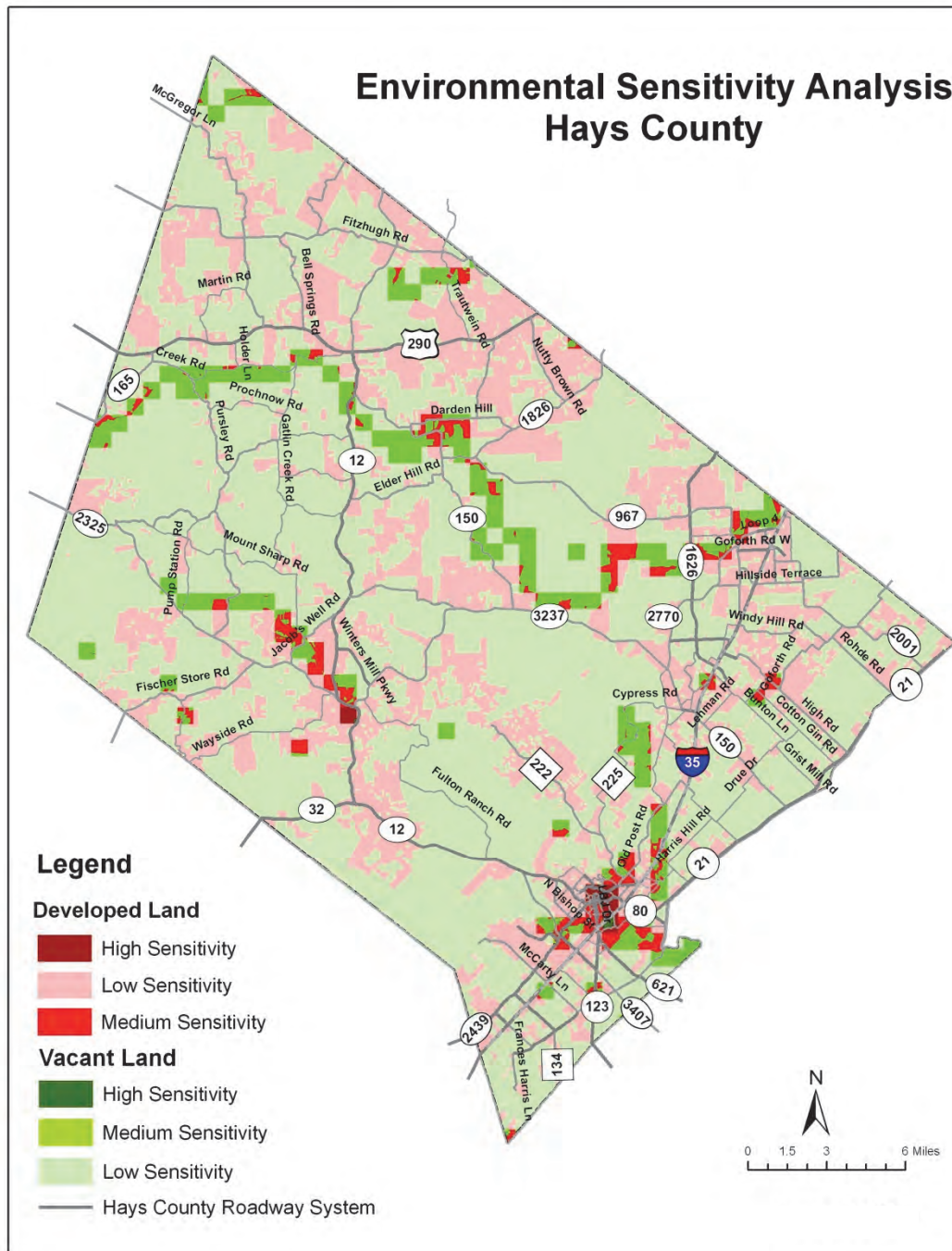
Source: Capital Area Council of Governments (CAPCOG)

4.9.2. Environmental Sensitivity Analysis

An Environmental Sensitivity Analysis map was created by the CAMPO as part of the statewide TxDOT Baseline Analysis project. On the map, the state is divided into one kilometer square grid cells. 16 factors were calculated for each cell: stream density, impaired waters, flood plain, ozone nonattainment, hazardous waste facilities, managed lands, agricultural lands, wetlands, wildlife habitat, federal and state threatened and endangered species, population density, minority and low income population and ecologically significant stream segments. The map represents the total sum of those evaluation factors for each cell, ranked by sensitivity, plus vacant and developed land areas². The maps were developed to aid in regional transportation planning decisions. The Environmental Sensitivity Analysis for Hays County is shown in **Figure 4-15**.

2. CAMPO 2035 Long Range Transportation Plan

Figure 4-15. Environmental Sensitivity Analysis Map



Source: Capital Area MPO (CAMPO)

4.10. Safety and Crash Analysis

Public safety is a high priority for agencies responsible for the planning, design, construction, operation, and maintenance of public transportation facilities. To identify potential safety deficiencies on the county's roadway system, a crash analysis was performed using 2008-2010 crash data obtained from TxDOT. A summary of the total reported crashes occurring on all public roads in the county were created to compare to state-wide averages and identify the trends of crash history in Hays County.

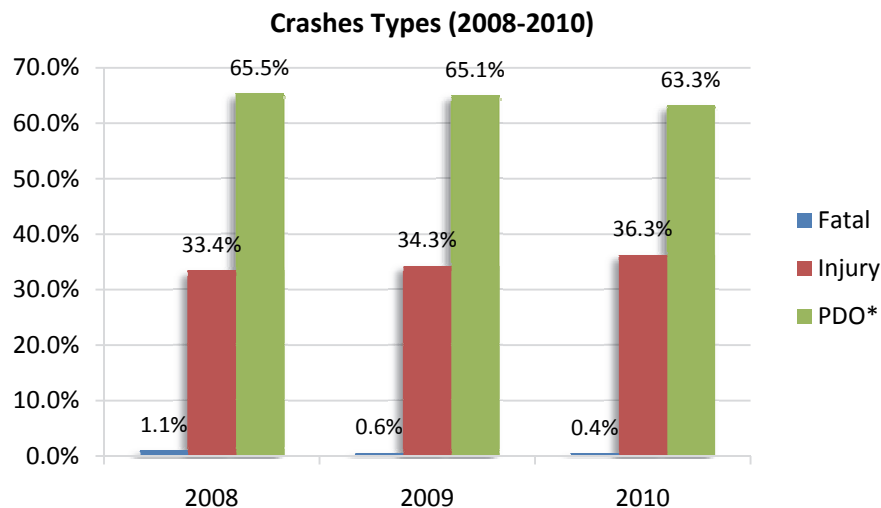
Table 4-6 shows the vehicle crashes by severity in Hays County between Year 2008 and Year 2010. A corresponding bar chart is presented in **Figure 4-16**. The data indicated that the crash severity in Hays County is stable even though the injury rate has gone slightly up in the past three years. An approximate 800 crashes (35% of the total crashes) every year involve injuries and fatalities.

Table 4-6. Vehicle Crashes by Severity in Hays County (2008-2010)

Year	Fatal Crashes	Serious Injury Crashes	Other Injury Crashes	Non-injury Crashes	Unknown Severity Crashes	Total
2008	26	406	395	1,483	86	2,396
2009	14	392	396	1,427	66	2,295
2010	10	404	433	1,402	57	2,306

Source: Texas Department of Transportation

Figure 4-16. Vehicle Crashes by Severity in Hays County (2008-2010)



* PDO : Property Damage Only

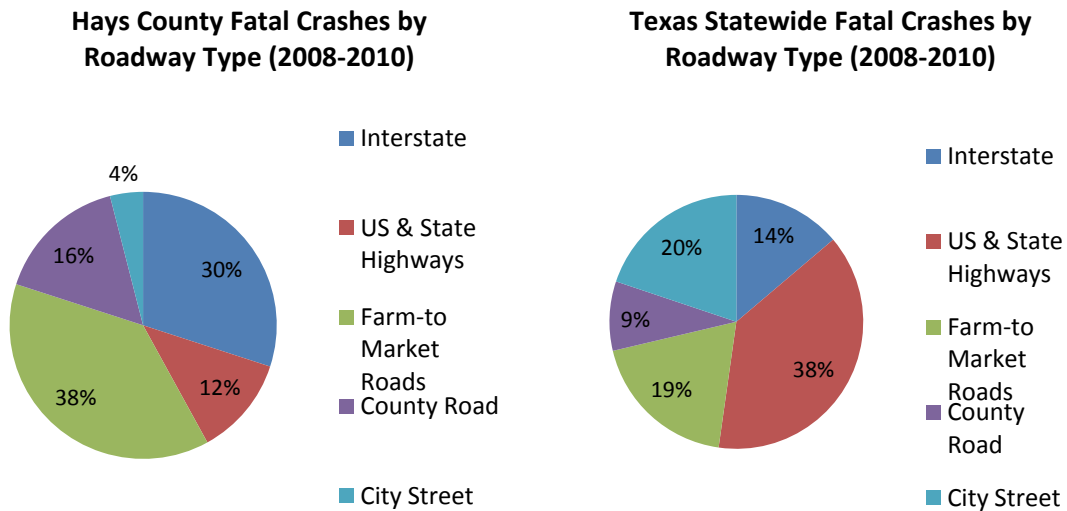
Source: Texas Department of Transportation

The fatal crashes by roadway type are listed in Table 7. The percentage of fatal crashes by roadway type is shown in **Figure 4-17**.

Table 4-7. Hays County Fatal Crashes by Roadway Type (2008-2010 crash data)

Roadway Type	Rural	Urban	Total
Interstate	5	10	15
US & State Highways	5	1	6
Farm-to Market Roads	17	2	19
County Road	8	0	8
City Street	0	2	2
Toll way	0	0	0
Other Roads	0	0	0
Toll Bridges	0	0	0
No data	0	0	0
Total	35	15	50

Source: Texas Department of Transportation

Figure 4-17. Hays County and Statewide Fatal Crashes by Roadway Type (2008-2010 crash data)

Source: Texas Department of Transportation

As the data indicates, the ratio of fatal crashes occurring on the (IH-35 in Hays County – 30 percent – was substantially higher than the statewide average of 14 percent of the total fatal crashes occurring on Interstate facilities in the same reporting period (2008-2010). The ratio of fatal crashes on Farm-to-Market roads in Hays County – 38 percent, was twice as much as the statewide average rate of 19 percent. The ratio of fatal crashes on County and City roads – 20 percent, was lower than the statewide average ratio of 29%.

Two major factors that contributed to the crashes are alcohol and speeding. Based on the 2010 crash data, the percentage of speed involved crashes and alcohol involved crashes for each crash severity category were calculated and compared to state average rates. **Table 4-8** and **Table 4-9** show the speed and alcohol involved crashes in Hays County and Texas statewide, respectively.

Table 4-8. Alcohol Involved Crashes (2010)

Crash Types by Severity	Hays County			Texas (Statewide)		
	Alcohol Involved Crashes	Total Crashes	Alcohol Involved Percent	Alcohol Involved Crashes	Total Crashes	Alcohol Involved Percent
Fatal Crashes	5	10	50%	964	2,746	35%
Serious Injury Crashes	67	404	17%	6,713	59,660	11%
Other Injury Crashes	44	433	10%	4,075	80,766	5%
Non-Injury Crashes	91	1,402	6%	12,116	232,073	5%
Unknown Severity Crashes	5	57	9%	1,177	12,932	9%
Total	212	2,306	9%	25,045	388,177	6%

Source: Texas Department of Transportation

Table 4-9. Speed Involved Crashes (2010)

Crash Types by Severity	Hays County			Texas (Statewide)		
	Speed Involved Crashes	Total Crashes	Speed Involved Percent	Speed Involved Crashes	Total Crashes	Speed Involved Percent
Fatal Crashes	3	10	30%	678	2,746	25%
Serious Injury Crashes	54	404	13%	6,168	59,660	10%
Other Injury Crashes	36	433	8%	4,123	80,766	5%
Non-injury Crashes	102	1,402	7%	13,602	232,073	6%
Unknown Severity Crashes	17	57	30%	1,500	12,932	12%
Total	212	2,306	9%	26,071	388,177	7%

Source: Texas Department of Transportation

Hays County Transportation Plan

Section 5

Adopted Thoroughfare Plan

5.1. Plan Development Process

The HCTP Major Thoroughfare Plan and Roadway Matrix is the result of a 24-month planning and vision process designed to address the mobility concerns of Hays County residents and business community, and recommended needed transportation improvements. Draft copies of the roadway matrix were presented to the HCTP Technical Advisory Group (TAG) and the Citizens Advisory Group (CAG) at several meetings for review and comment.

Initial work on the HCTP Thoroughfare Plan began by summarizing related county and city roadway plans in December 2011. Work began with the preparation of the Summary of County and City Roadway Plans in December, 2011. The transportation plans, along with all applicable standards and ordinances, were collected for Hays County, San Marcos, Kyle, Buda, Wimberley and Dripping Springs. These plans contain standard roadway cross-section and right-of-way (ROW) dimensions as adopted by each city and Hays County. In July 2012, the first draft of the roadway showing level of service (LOS) on all facilities modeled for the year 2035. Subsequently, the roadway matrix was updated to show recommended cross-sections in September 2012.

The ROW dimensions were based on a review of standards from Hays County, municipalities and CAMPO. Based on discussions with TxDOT the needed right-of-way width was initially set for 200 feet on SH 21 and SH 80, and all farm-to-market and ranch-to market roadways. The basis for this 200-foot requirement was assumed needed space for ground water quality protection treatment and structures. The draft matrix was reviewed and revised by the team and a new October 24 draft was presented to the TAG, CAG on October 25, and at public open houses.

Based on this information, the team concluded that the required right-of-way dimensions on state highways in the October 24, matrix draft were greater than what is reasonably needed. As a result, the team reviewed best practice right-of-way standards and produced the attached table titled HCTP ROW Requirements showing right-of-way needs for rural sections for all roadway cross sections requirements for both on-state and off-state roadways. Less right-of-way may be required for urban roadway sections designed with curb and gutter, normally used within city limits. The team also prepared the attached table titled Arterial Roadway Definitions based on information developed by CAMPO staff.

After consulting with TxDOT, a revised roadway matrix with smaller ROW requirements was prepared in December 2012, and presented to the TAG and CAG on January 10, 2013. With their modifications addressed, the Thoroughfare Plan Map and the Roadway Projects Matrix were adopted by the Commissioner's Court on January 22, 2013. **Figure 5-1** and **Table 5-1**, shows the adopted HCTP Thoroughfare Plan Map and Roadway Projects Matrix, respectively. The resolution officially adopting the Thoroughfare Map and Roadway Projects Matrix is shown in **Figure 5-2**.

Figure 5-1. HCTP Adopted Thoroughfare Plan Map

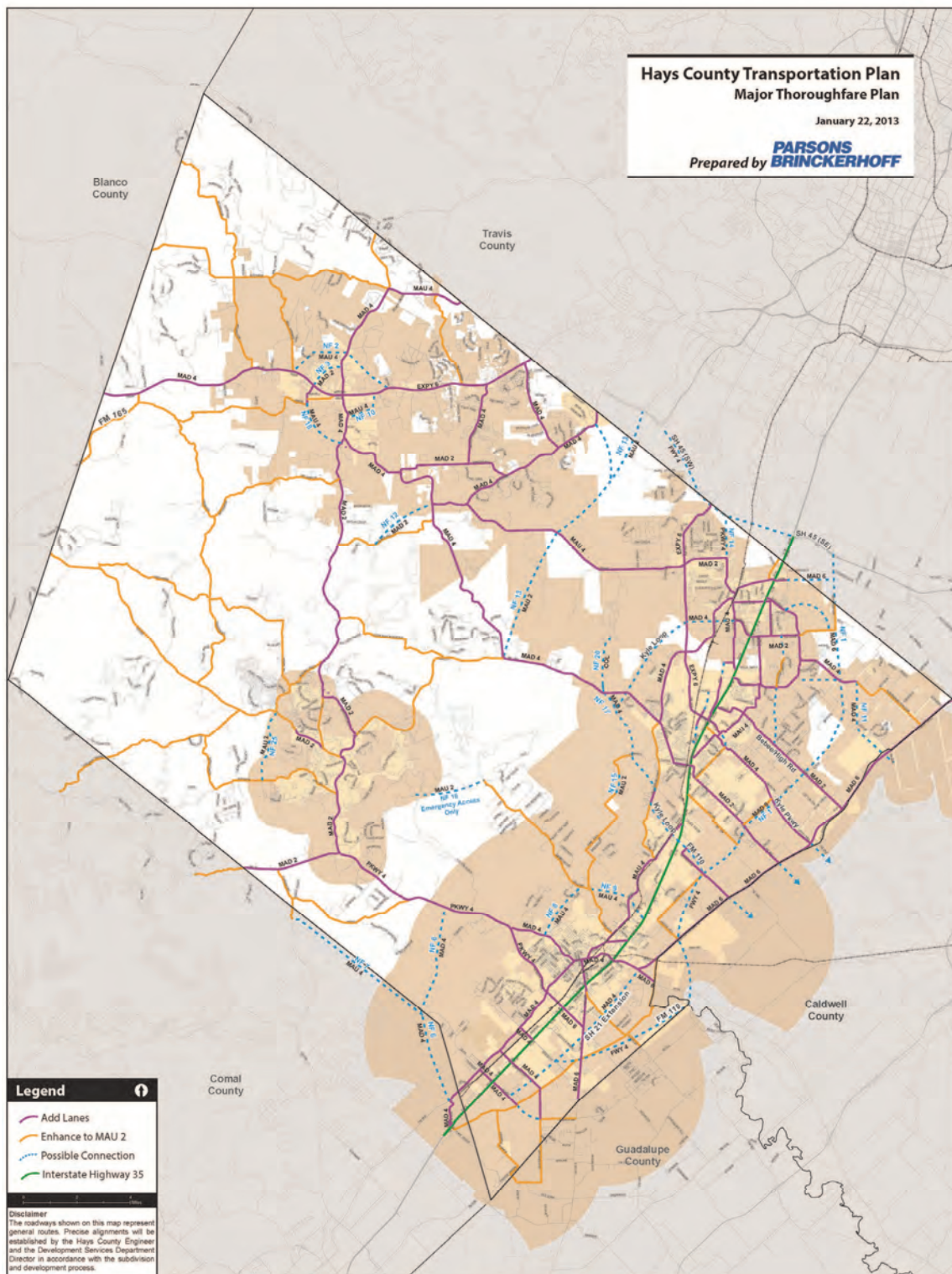


Table 5-1. HCTP Roadway Projects Matrix

Roadways		Thoroughfare Program		
Roadway Name	Segment	Existing Cross Section	Recommended Cross Section	Recommended Right-of-way (Feet)
STATE ROADWAYS				
IH 35	Travis County Line - Comal County Line	FWY 6	Corridor Study	
US 290 (W)	Blanco County Line - RM 165	MAU 4	MAD 4	200
US 290 (W)	RM 165 - NF 2	MAU 4	MAD 4	200
US 290 (W)	NF 2 - RM 12	MAD 4	MAD 4	200
US 290 (W)	RM 12 - Nutty Brown Rd/Travis County Line	MAD 4	EXPY 6	400
SH 21	Caldwell County Line - CR 159 (Yarrington)	MAU 2	MAD 6	200
SH 21	CR 159 (Yarrington) - SH 80	MAU 2	MAD 6	200
SH 21	SH 80 - Posey Rd	None	MAD 4	200
SH 45 (SW)	Loop 1 - FM 1626 (Travis and Hays counties)	None	FWY 4 Toll	400
SH 45 (SW)	FM 1626 - IH 35 (Hays and Travis counties)	None	TBD	400
SH 80 / Old RR 12	RM 12/Wonder World Dr - Holland St	MAU 4	MAD 4	
SH 80 / Old RR 12	Holland St - Lindsey	MAU 2	MAD 4	
SH 80 / Old RR 12 / Moore St	Lindsey - Hopkins	MAU 3	MAD 4	
SH 80 / E. Hopkins	Moore St - Loop 82	MAU 3	MAD 4	
SH 80 / E. Hopkins	Loop 82 - CM Allen	MAU 4	MAD 4	
SH 80 / E. Hopkins	CM Allen - IH 35	MAD 4	MAD 4	
SH 80	IH 35 - SH 21	MAD 4	MAD 4	
SH 80	SH 21 - Caldwell County Line	MAU 4	MAD 6	200
SH 123	IH 35 - FM 621	MAD 4	MAD 6	
SH 123	FM 621 - Wonder World Dr	MAU 4	MAD 6	
SH 123	Wonder World Dr - Guadalupe County Line	MAU 4	MAD 6	200
Loop 82 / Aquarena Springs Dr	IH 35 - Sessom Dr	MAU 4	MAD 4	
Loop 82 / University Dr	Sessom Dr - Guadalupe St	MAU 4	MAD 4	
Loop 82 / Guadalupe	University Dr - Grove St (One way SB)	MAU 3	MAD 4	
Loop 82 / LBJ	University Dr - Grove St (One way NB)	MAU 3	MAD 4	
Loop 82	Guadalupe St/Grove St - LBJ Dr (One way)	MAU 3	MAD 4	
Loop 82	LBJ Dr - IH 35 (Two way)	MAU 4	MAD 4	
FM 110 (E)	IH 35 (N) - Turnersville Rd Extension (NF 1)	None	FWY 4	220
FM 110 (E)	Turnersville Rd Extension (NF1) - SH 123	None	FWY 4	220
FM 110 (E)	SH 123 - McCarty Ln	None	FWY 4	220
FM 110 (E)	McCarty Ln - IH 35	MAD 4	Existing	Existing

Roadways		Thoroughfare Program		
Roadway Name	Segment	Existing Cross Section	Recommended Cross Section	Recommended Right-of-way (Feet)
FM 150 (W)	RM 12 - RM 1826	MAU 2	MAD 4	150
FM 150 (W)	RM 1826 - FM 3237	MAU 2	MAD 4	150
FM 150 (W)	FM 3237 - Kyle Loop (SW)	MAU 2	MAD 4	150
FM 150 (W)	Kyle Loop (SW) - FM 2770	MNR 2	MAD 4	150
FM 150 (W) / Rebel Dr	FM 2770 - W. Center St @ Rebel Dr	MNR 2	MAD 2	100
FM 150 (W) / Center St	Rebel Dr - IH 35	MAU 2	MAD 2	Existing
FM 150 (E)	IH 35 - SH 21	MAU 2	MAD 2	100
FM 165	US 290 - Blanco County Line	MNR 2	MAU 2	100
FM 621	SH 123 - Guadalupe County Line	MAU 2	MAU 2	100
FM 967	FM 1826 - FM 1626	MAU 2	MAU 4	150
FM 967	FM 1626 - Main St	MAU 2	MAD 2	150
FM 967 / S. Loop 4 / S. Main St	Main St - W. Goforth	MAU 2	MAU 4	100
FM 967 / S. Loop 4 / S. Main St	W. Goforth - IH 35	MAU 2	MAU 4	100
FM 1626	SH 45 SW - FM 967	MAU 2	EXPY 6	200
FM 1626	FM 967 - FM 2770	MAU 2	EXPY 6	200
FM 1626	FM 2770 - IH 35	MAD 4	EXPY 6	200
FM 2001/Overpass Rd	IH 35 - Old Goforth	MAU 2	MAD 4	150
FM 2001	Old Goforth - Goforth	MAU 2	MAD 4	150
FM 2001 (new alignment - NF 11)	Goforth - SH 21	MAU 2	MAD 4	150
FM 2439/Hunter Rd)	SH 80 - Bishop	MNR 2	MNR 2	Existing
FM 2439/Hunter Rd)	Bishop - RM 12/Wonder World Dr	MNR 2	MAD 2	100
FM 2439 / Hunter Rd	RM 12 - Centerpoint Rd	MAD 4	MAD 4	150
FM 2439 / Hunter Rd	Centerpoint Rd - Comal County Line	MAU 2	MAD 4	150
FM 2770 / Jack C. Hays Trail	FM 967 / Main St - FM 1626	MAU 2	MAD 4	150
FM 2770 / Jack C. Hays Trail	FM 1626 - FM 150 (W)	MAU 2	MAD 4	150
RM 12	FM 3238 - Fitzhugh Rd	MAU 2	MAU 2	100
RM 12	Fitzhugh Rd - FM 150 (W)	MAU 2	MAD 4	150
RM 12	FM 150 (W) - Winters Mill Pkwy	MAU 2	MAD 2	100
RM 12	Winters Mill Pkwy - FM 3237	MAU 2	MAU 2	Existing
RM 12 (New BR 12)	FM 3237 - RM 32	MAU 2	MAD 2	100

Roadways		Thoroughfare Program		
Roadway Name	Segment	Existing Cross Section	Recommended Cross Section	Recommended Right-of-way (Feet)
RM 12	RM 32 - Old RR 12/SH 80	MAU 2	PKWY 4	200
RM 12 (Wonderworld Dr)	Old RR 12/SH 80 - FM 2439/Hunter Rd	MAD 4	PKWY 4	200
RM 12 (Wonderworld Dr)	FM 2439/Hunter Rd - SH 123	MAD 4	MAD 6	120
RM 32	Comal County Line - RM 12	MAU 2	MAD 2	100
RM 1826	SH 45 - Darden Hill Rd	MAU 2	MAD 4	150
RM 1826	Darden Hill Rd - FM 150 (W)	MAU 2	MAD 4	150
RM 1826 / Elder Hill Bypass	FM 150 (W) - RM 12 @ Elder Hill Rd(CR 170)	None	MAD 2	100
RM 2325	Blanco County Line - Jacobs Well Rd	MAU 2	MAU 2	100
RM 2325	Jacobs Well Rd - Wimberley City Limits	MAU 2	MAU 2	100
RM 2325	Wimberley City Limits - RM 12	MAU 2	MAD 2	100
RM 3237	RM 12 - Flite Acres Rd	MAU 2	MAU 2	100
RM 3237	Flite Acres Rd - Winters Mill Pkwy	MAU 2	MAU 2	100
RM 3237	Winters Mill Pkwy - FM 150	MAU 2	MAU 2	100
COUNTY/CITY ROADWAYS				
Bebee Rd/High Rd	IH 35 - SH 21	MNR 2	MAD 2	100
Bunton Creek Rd	IH 35 - Kyle Pkwy	MNR 2	MAD 2	80
Centerpoint Rd / CR 234	FM 2439/Hunter Rd - IH 35	MNR 2	MAD 4	100
Centerpoint Rd / CR 234	IH 35 - Old Bastrop Hwy	MNR 2	MAD 4	100
Centerpoint Rd / CR 234	Old Bastrop Hwy - Beback Inn Rd/Posey Rd	MNR 2	MAD 4	100
Centerpoint Rd / CR 234	Beback Inn Rd/Posey Rd - Frances Harris	MNR 2	MAU 2	80
CR 1492/Wayside Dr	RM 12 to Sachtleben Dr	MNR2	MAU 2	80
CR 158	IH 35 - Turnersville Rd Extension	MNR 2	MAU 2	80
Creek Rd / CR 190	FM 165 - Roger Hanks Pkwy.	MNR 2	MAU 2	80
Creek Rd / CR 190	Roger Hanks Pkwy - US 290	MNR 2	MAU 2	80
Dacy Ln/Goforth Rd	Hillside Terrace - IH 35	MNR 2	MAU 4	100
Darden Hill Rd/CR 162	FM 150 - FM 1826	MNR 2	MAD 2	100
Elder Hill Rd / CR 170	RM 12 - FM 150	MNR 2	MAU 2	80
Fischer Store Rd / CR 181	FM 2325 - Comal County Line	MNR 2	MAU 2	80
Fitzhugh Rd / CR 101	Blanco County Line - RM 12	MNR 2	MAU 2	80
Fitzhugh Rd / CR 101	RM 12 - Travis County Line	MNR 2	MAU 4	100

Roadways		Thoroughfare Program		
Roadway Name	Segment	Existing Cross Section	Recommended Cross Section	Recommended Right-of-way (Feet)
Flite Acres Rd	RR 2237 - Little Arkansas Rd	MNR 2	MAU 2	80
Frances Harris Ln /CR 265/	Old Bastrop Hwy - Centerpoint Rd	MNR 2	MAU 2	80
Fulton Ranch Rd	Little Arkansas Rd - RM 12	MNR 2	MAU 2	80
Garlic Creek Pkwy (NF 14)	SH 45 (S) - FM 967	None	PKWY 4	150
Goforth Rd / CR 119	FM 2001 - Hillside Terrace	MNR 2	MAU 2	80
Goforth St W. / CR 228	FM 967 - IH 35	MAU 2	MAU 2	80
Harris Hill Rd / CR 160	Yarrington Rd - SH 21	COL	MAU 2	80
Hilliard Rd / CR 222	Lost River Rd - Powder Horn	MNR 2	MAU 2	80
Hilliard Rd / CR 222	Powder Horn - Lime Kiln Rd	MNR 2	MAU 2	80
Hillside Terrace / CR 133	IH 35 - FM 2001	MNR 2	MAU 2	80
Jacobs Well Rd / CR 182	RM 12 - FM 2325	MNR 2	MAU 2	80
Kohlers Xing	FM 2770 - IH 35	MAD 4	MAD 4	100
Kyle Crossing	IH 35 - Kohler Xing	MAD 2/4	MAD 2/4	80
Kyle Crossing	Kohler Xing - IH 35 @ Old Bridge Trail	MNR 2	MAU 2	80
Kyle Loop (West)	FM 1626 @ RS Light - IH 35 @ FM 110/Yarrington Rd	Partial	MAD 4	100
Kyle Pkwy/Bunton/Gristmill	IH 35 @ FM 1626 - SH 21 @ Gristmill Rd	MNR 2	MAD 4	100
Ledgerock Rd / CR 244	Mount Gainor Rd - FM 2325	MNR 2	MAU 2	80
Lehman Rd	Goforth Rd - FM 150	MNR 2	MAU 2	80
Lime Kiln Rd / CR 225	Cypress Rd - Hilliard	MNR 2	MAU 2	80
Lime Kiln Rd / CR 225	Hilliard - Post Rd	MNR 2	MAU 2	80
Little Arkansas Rd	Flite Acres - Fulton Ranch	MNR 2	MAU 2	80
Lone Man Mountain Rd / CR 183	RM 12 - FM 2327	MNR 2	MAU 2	80
Main St East	IH 35 - SH 45 (SE) @ Turnersville	Partial	MAD 6	120
Main St West	Garrison Rd - IH 35	MAD 2	MAU 2	80
Marketplace Ave.	FM 967 - IH 35 @ Burleson Rd	None	MAD 4	100
McCarty Ln / CR 233	FM 2439/Hunter Rd - IH 35	MNR 2	MAD 4	100

Roadways		Thoroughfare Program		
Roadway Name	Segment	Existing Cross Section	Recommended Cross Section	Recommended Right-of-way (Feet)
McCarty Ln / CR 233	FM 110 - Old Bastrop Hwy	MNR 2	Existing	100
McGregor Ln / CR 187	Blanco County Line - US 290 (W)	MNR 2	MAU 2	80
Mount Gainor Rd / CR 220	Gatlin Creek Rd - Mount Sharp Rd	MNR 2	MAU 2	80
Mount Sharp Rd / CR 219	FM 2325 - Mount Gainor Rd	MNR 2	MAU 2	80
Nutty Brown Rd / CR 163	US 290 - FM 1826	MAD 2	MAD 4	100
Old Bastrop Hwy / CR 266	SH 21 - SH 80	MNR 2	MAU 2	100
Old Bastrop Hwy / CR 266	SH 80 - FM 110 (E)	MNR 2	MAU 2	100
Old Bastrop Hwy / CR 266	FM 110 - IH 35 (S)	MNR 2	MAU 2	100
Old Goforth Rd / CR 119	FM 2001 - Hillside Terrace	MNR 2	MAD 4	100
Old San Antonio Rd	Travis County Line - Cabelas Dr	MNR 2	MAU 2	80
Old Stagecoach Rd	Post Rd - FM 150	MNR 2	MAU 2	80
Overpass Rd (FM 2001)	See FM 2001			
Posey Rd / CR 235	FM 2439 - IH 35	MAU 2	MAD 4	100
Posey Rd / CR 235	IH 35 - SH 21	MNR 2	MAD 4	100
Posey Rd / CR 235	SH 21 - Old Bastrop Hwy	MNR2	MAD 4	100
Posey Rd / CR 235	Old Bastrop Hwy - SH 123 @ Beback Inn Rd	MNR 2	MAU 2	80
Post Rd / CR 140	IH 35 - Aquarena Springs Rd	MNR 2	MAU 4	100
Pursley Rd / Creek Rd / CR 198	FM 165 - Mt. Gainor Rd	MNR 2	MAU 2	80
Robert S. Light Blvd / CR 132	IH 35 - FM 2770	MNR 2	MAD 4	100
Robert S. Light Blvd / CR 132	FM 2770 - FM 1626	None	MAD 4	100
Ruby Ranch Rd (See NF 20)	FM 967 - FM 150 (W)	COL	COL	80
Sachtleben Dr	Fischer Store Rd to Wayside Dr	MNR2	MAU2	80
Satterwhite Rd / CR 107	FM 2001 - Turnersville Rd extension	MNR 2	MAU 2	80
Sawyer Ranch Rd / CR 164	US 290 - Darden Hill Rd	MNR 2	MAD 4	100

Roadways		Thoroughfare Program		
Roadway Name	Segment	Existing Cross Section	Recommended Cross Section	Recommended Right-of-way (Feet)
Shadow Creek Blvd	Hillside Terrace - Bebee Rd	Partial	MAD 2	100
Williamson Rd	FM 2001 - Travis County Line	MNR 2	MAU 2	80
Windy Hill Rd	IH 35 - Turnersville Rd extension.	MNR 2	MAD 2	100
Winters Mill Pkwy (new RM 12)	RM 12 - FM 3237	MAU 2	MAU 4	Existing
Yarrington Rd / CR 159	FM 110 - SH 21	MNR 2	MAD 4	100
NEW FACILITIES				
NF 1 (Turnersville Rd)	SH 45 SE - FM 110	Partial	MAD 6	150
NF 2 (Dripping Springs)	US 290 W - US 290 E (North US 290 bypass)	None	MAU 4	100
NF 3 (Roger Hanks Extension)	US 290 W - RM 12	None	MAD 2	80
NF 6 (San Marcos)	RM 12 - FM 1102	None	MAD 4	100
NF 7 (Comal County)	Purgatory Rd to NF 6	None	MAU 4	100
NF 8 (Craddick, Eastwood)	SH 80 to Hilliard Rd	None	MAU 4	100
NF 9 (Hilliard Rd Extension)	Lime Kiln Rd to IH 35 @ River Ridge	None	MAU 4	100
NF 10 (Dripping Springs)	RM 12 - US 290 (E) (Southeast bypass)	None	MAU 4	100
NF 11 (FM 2001)	FM 2001 - SH 21 @ Rohde Rd	None	MAD 4	150
NF 12 (Driftwood)	Elder Hill Rd - FM 150 @ RM 1826	None	MAD 2	100
NF 13, 23 (Escarpment Blvd)	SH 45 - FM 150 north of FM 3237	None	MAU 2	80
NF 14 (Garlic Creek Pkwy)	SH 45 - FM 967	None	PKWY 4	150
NF 15 (Lime Kiln Rd, Cypress Rd)	Blanco River crossing	Partial	MAU 2	80
NF 16 (Hilliard Rd)	Fulton Ranch Rd - Lost River Rd	None	MAU 2	80
NF 17 (Kyle)	FM 150 - Kyle Loop	None	MAD 4	100
NF 18 (FM 150) Dripping Springs	US 290 (W) to RM 12 (Southwest bypass)	None	MAU 4	100
NF 20 (Ruby Ranch Rd)	FM 967 - FM 150 (W)	Partial	Collector	80
NF 25 (Jacobs Well Rd)	FM 2325 - Wayside Dr	None	MAU 2	80

Figure 5-2. Hays County Transportation Plan Resolution

RESOLUTION

STATE OF TEXAS §
COUNTY OF HAYS §

WHEREAS, the Hays County Commissioners Court in 2011 selected a consultant team to prepare the Hays County Transportation Plan and appointed a Technical Advisory Committee and a Citizens Advisory Committee to assist in the Plan preparation; and

WHEREAS, the purpose of the Hays County Transportation Plan (HCTP) is to provide an expanded arterial roadway network in Hays County to match future growth as development occurs; and

WHEREAS, Hays County population is expected to increase from 157,000 in 2010 to about 371,000 in 2035; and

WHEREAS, the Texas Local Government Code, Chapter 232, Section 232.102, authorizes Hays County to adopt a Major Thoroughfare Plan and to require through the subdivision of land up to 120 feet of right-of-way on a street or road that functions as a major thoroughfare; and

WHEREAS, the Texas Local Government Code, Chapter 232, Section 232.102, authorizes Hays County to require more than 120 feet of right-of-way on a major thoroughfare if such requirement is consistent with a transportation plan adopted by the metropolitan planning organization of the region; and

WHEREAS, the HCTP was prepared during 2012 by the consultant team with assistance from the Technical Advisory Committee and the Citizens Advisory Committee; and

WHEREAS, the HCTP was prepared in cooperation with the elected officials and staff of cities within Hays County to ensure consistency with city transportation plans; and

WHEREAS, the HCTP was prepared with extensive public involvement including providing information and soliciting comments on the County website, two rounds of public workshops, civic organization meetings and media information; and

WHEREAS, adoption of the HCTP does not obligate the Commissioners Court to expend public funds to acquire right-of-way, build or expand roadways, as such actions will be considered independently in the future by the Commissioners Court; and

NOW, THEREFORE, BE IT RESOLVED that the Commissioners Court hereby adopts the Hays County Transportation Plan composed of the Planned Roadway Map and the Roadway Matrix dated January 22, 2012, to meet the requirements of the Texas Local Government Code as the Major Thoroughfare Plan for Hays County; and

BE IT FURTHER RESOLVED that the roadway routes shown on the Hays County Transportation Plan map are general routes for planning purposes and that the precise roadway alignments will be set jointly by the Hays County Engineer and the Development Services Department Director when appropriate; and

Figure 5-2 (con't). Hays County Transportation Plan Resolution

BE IT FURTHER RESOLVED that the Commissioners Court directs County staff to prepare amendments to the Hays County Development Regulations to ensure consistency with the adopted HCTP; and

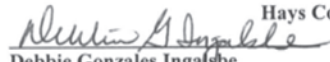
BE IT FURTHER RESOLVED that the Hays County Commissioners Court authorizes the County Judge to submit an amendment request to the Capital Area Metropolitan Planning Organization (CAMPO) to add Hays County thoroughfares to the CAMPO Regional Transportation Plan in accordance with the requirements of Chapter 232 of the Texas Local Government Code; and

BE IT FURTHER RESOLVED that the Hays County Commissioners Court authorizes the County Judge to communicate with the cities within Hays County and adjacent counties thanking them for their participation in preparing the HCTP and asking for their cooperation in implementing the HCTP.


RESOLVED, ORDERED, AND DECLARED this the 22nd day of January 2013.



Bert Cobb
Hays County Judge



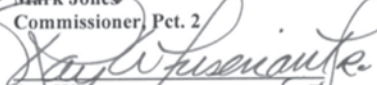
Debbie Gonzales Ingalsbe
Commissioner, Pct. 1



Mark Jones
Commissioner, Pct. 2

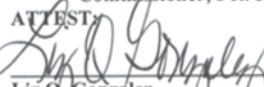


Will Conley
Commissioner, Pct. 3



Ray Whisenant
Commissioner, Pct. 4

ATTEST:



Liz Q. Gonzalez
Hays County Clerk



Using volume-to-capacity (V/C) ratio as general measure of congestion, the recommended improvements/projects are forecasted to improve the overall mobility within the county. As a comparison, the level of congestion depicted in the existing-plus-committed (E+C) network is shown in **Figure 5-3**. Conversely, the level of congestion for the 2035 HCTP is shown in **Figure 5-4**.

Figure 5-3. Existing-plus-Committed Level of Service (LOS)

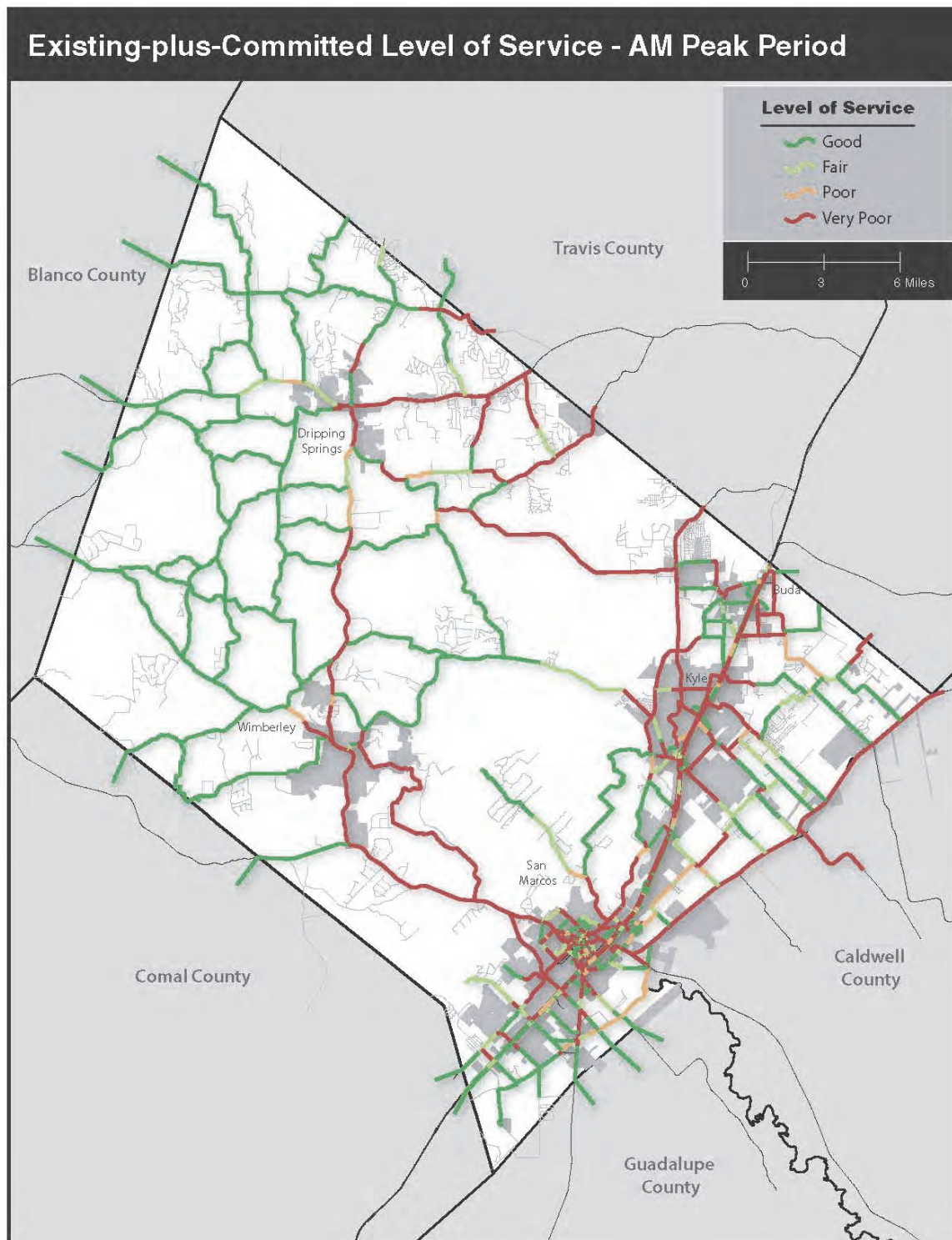
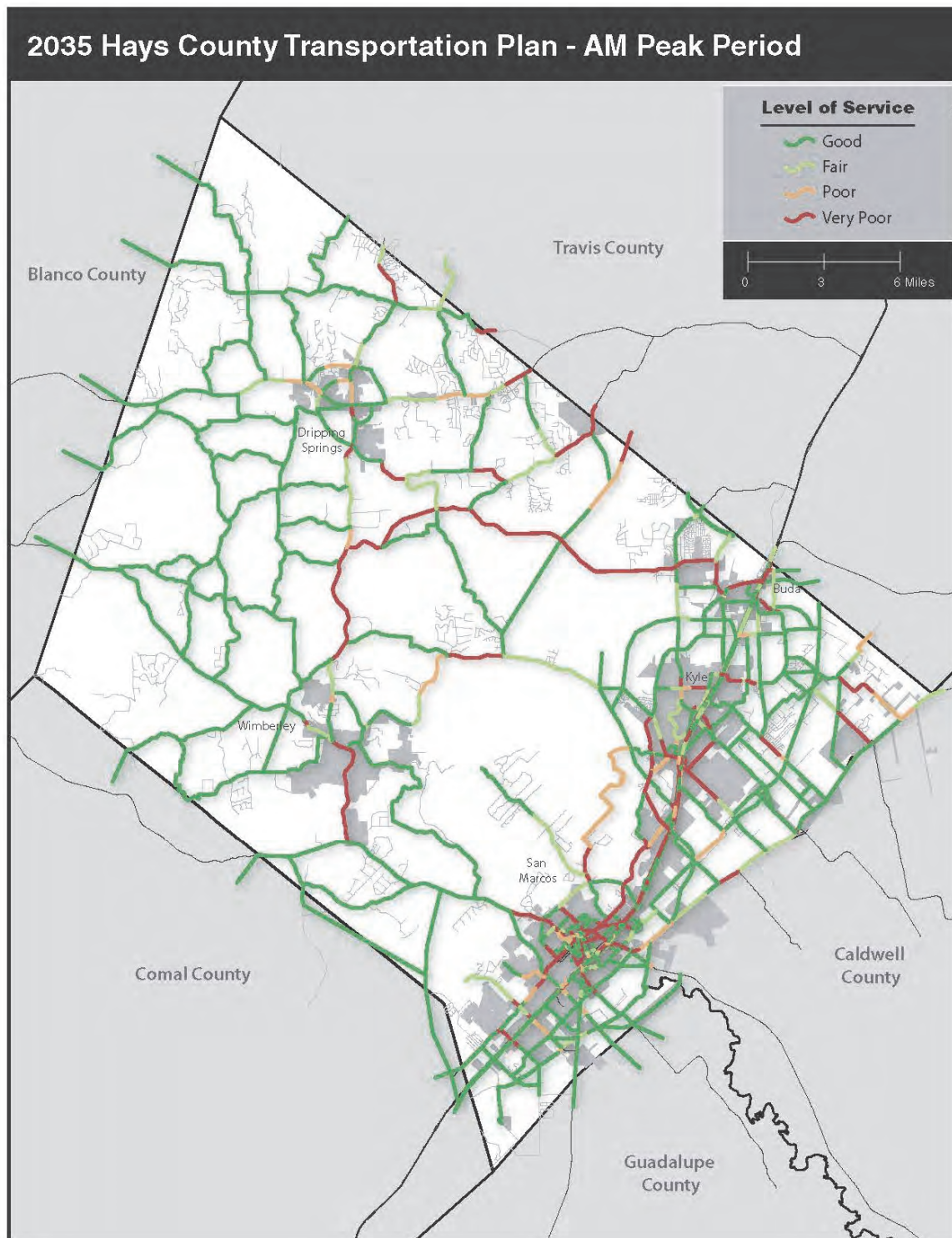


Figure 5-4. 2035 HCTP Thoroughfare Level of Service (LOS)



Hays County Transportation Plan

Section 6

Other Considerations

6.1. Integration of Other Modes

The HCTP is built primarily on roadway improvements; however, to have an efficient and sustainable transportation network it is important to include several integrated modes of travel to truly create a multimodal transportation system. Several of the recommended roadway improvements provide dedicated right-of-way to accommodate safe pedestrian and bicycle travel. Roadway improvements also lead to overall efficiencies in transit service by providing adequate lane requirements for future bus expansion.

6.2. Context Sensitive Solutions

Context Sensitive Solutions, or CSS, is a sustainable planning and design approach that seeks to develop transportation projects that are harmoniously interwoven and enhance the community fabric. **Table 6-1** summarizes the key components of CSS, as defined by the Federal Highway Administration (FHWA).

Table 6-1. CSS Defined

Context Sensitive Solutions (CSS)	Collaborative, interdisciplinary approach that involves all stakeholders in providing a transportation facility that fits its setting. It is an approach that leads to preserving and enhancing scenic, aesthetic, historic, community, and environmental resources, while improving or maintaining safety, mobility, and infrastructure conditions.
Context	Broad description of a project's physical, economic, and social setting. The context may include the community, ecological, aesthetic, and transportation conditions as well as the political and policy environment.
Interdisciplinary teams	Groups involving people with different backgrounds who work collaboratively to solve a common problem.
Stakeholders	Affected people and organizations, including agency staff and elected officials, organized groups, area residents, and business owners.

Source: Context Sensitive Solutions Primer, Federal Highway Administration

- The characteristics of CSS related transportation product or design is summarized below:
- The project is in harmony with the community, and it preserves environmental, scenic, aesthetic, historic, and natural resource values of the area;
- The project is a safe facility for all users and the community;
- The project solves the problem and satisfies the purpose and needs identified by a full range of stakeholders;
- The project exceeds the expectations of both designers and stakeholders and is perceived as adding lasting value to the community as a whole; and,
- The project involves efficient and effective use of resources (time, budget) of all involved parties.

The implementation and, subsequently, the success of CSS depend on stakeholders and interdisciplinary teams to solve transportation problems. It is important to understand that CSS is used primarily as a tool to integrate the unique needs and qualities of a community. CSS principles can be applied to various stages of the planning/development process, including:

- Long-range transportation plans
- Project Development
- Preliminary Engineering and Final Design
- Construction
- Maintenance and Operations

The HCTP was developed as a tool to recommend needed transportation investments throughout Hays County over the next 25 - 30 years. The HCTP is not intended to be comprehensive of all needed improvements.

Hays County Transportation Plan

Section 7

Potential Funding Sources

7.1. Introduction

Texas Department of Transportation (TxDOT) estimated that \$11 billion per year is spent on transportation in Texas by local, state, and federal governments. The majority of these expenditures are applied to highway and other road projects. TxDOT is the largest contributor to transportation expenditures in the state. During the 2010–11 biennium, TxDOT had a total budget of \$18.6 billion. Appropriations to TxDOT for transportation planning, right-of-way acquisition, and construction accounted for \$8.2 billion, or 48.4 percent, of the agency's budget. An additional \$5.9 billion, or 34.6 percent of TxDOT's budget, was included in the General Appropriations Act for maintenance and preservation of the state's transportation system. Another \$1.59 billion in highway and bridge construction funds was provided under the American Recovery and Reinvestment Act (ARRA) for projects advanced in the 2010–11 biennium. During the 2010–11 biennium spending on highway construction and maintenance accounted for 4.2 percent of the state's net expenditures.

This Technical Memorandum presents information regarding transportation programs and funding sources at federal, state and local levels. These funding sources include traditional programs such as fuel taxes, property taxes and sales taxes. It also includes more innovative funding mechanisms such as pass-through financing, regional mobility authorities, and many others.

7.2. Federal and State Funding Programs

State transportation funding programs at TxDOT come from three basic sources. These are the State Highway Fund (SHF), the Texas Mobility Fund (TMF) and the General Revenue Fund.

7.2.1. State Highway Fund

SHF consists of revenues generated by a variety of sources; including the two prime sources of state motor fuels tax and Federal Funds allocated to the state. In Fiscal Year (FY) 2010, SHF totaled more than \$7.5 billion. Of this, more than \$2.2 billion was contributed from state motor fuels taxes and nearly \$1.9 billion from federal funds. All other revenue sources such as bond proceeds, toll revenues, vehicle registration fees and motor lubricants sales tax receipts made up approximately \$3.5 billion of SHF.

The percentage of SHF generated by revenue sources other than fuel tax and federally allocated funds has increased greatly over the past decade. In FY 2001, other revenue sources totaled just over \$1.1 Billion, or about 22 percent of the total SHF. By contrast, these sources made up 46 percent of the total SHF in FY 2010.

The Texas Transportation Code provides that revenue required to be used for public roads by either the Texas Constitution or federal law and that is deposited to the SHF be used solely for the following purposes:

- To improve the state highway system;
- To mitigate adverse environmental effects resulting from state highway construction or maintenance; and
- Policing and administration of state traffic and safety laws by the Texas Department of Public Safety (DPS) on state highways.

All other funds in the SHF are statutorily authorized to be used for any function that the TxDOT performs.

The largest expenditure from the SHF is for highway construction. During the 2010–11 biennium, construction and construction-related activities made up 48.4 percent of all SHF expenditures. Historically, the primary uses of revenue from the fund for purposes other than highway construction have been for salaries and wages, employee benefits, highway repairs and maintenance, and professional services and fees.

7.2.1.1. State Motor Fuels Tax

The motor fuels tax is applied to the sale of gasoline, diesel fuel, and liquefied gas. The gasoline tax was first imposed at the rate of \$.01 per gallon in 1923. Three-fourths of the revenue was deposited to the SHF and the remaining one-fourth was deposited to the Available School Fund. In 1941, a \$.08 per gallon tax was applied to the purchase of diesel fuel and a \$.04 per gallon tax was applied to the sale of liquefied gas.

Article VIII, Section 7-a, was added to the Texas Constitution in 1946, requiring three-fourths of all net revenue generated by motor fuels taxes to be used only for acquiring rights-of-way; constructing, maintaining, and policing public roadways; or for the payment of principal and interest on certain road district bonds or warrants. The Texas Constitution dedicates the remaining one-fourth of the motor fuels tax to the Available School Fund. This amendment legally formalized the practice that had been in place since the state gasoline tax was instituted.

7.2.1.2. Federal Funds

Federal transportation funding is primarily allocated from the Federal Highway Trust Fund, which is capitalized from federal gasoline and diesel taxes; truck, bus, and trailer taxes; tire taxes; heavy vehicle usage fees; and taxes on alternative fuels. Texas is considered a donor state, meaning more money is deposited to the Federal Highway Trust Fund from the collection of federal taxes and fees in Texas than is returned to the state in Federal Funds for highways. All Federal Funds allocated to Texas for transportation are statutorily required to be administered by TxDOT. The federal share allocated to a specific project ranges from 80 to 100 percent depending on the program.

a. Transportation Equity Bonus

The Transportation Equity Bonus ensures that Texas does not receive less than 92 percent of the federal fuel tax dollars collected from the state. The amount of federal contributions to the SHF in FY 2010 was \$1.2 billion.

b. Surface Transportation Program

The Surface Transportation Program (STP) is a flexible program that provides funding to state and local entities for projects on any federal-aid highway, bridge project, transit capital project, and intra-city or intercity bus terminal or facilities. Funds are apportioned to the states based on a formula similar to the one described above.

STP funds may be used for a variety of projects, including but not limited to construction, reconstruction, rehabilitation, resurfacing, restoration, and operational improvements for

highways (including Interstate highways) and bridges (including bridges on public roads of all functional classifications); various types of transit projects, carpool projects, corridor parking facilities and programs that benefit bicyclists and pedestrians, particularly modifications to comply with the Americans with Disabilities Act of 1990 (ADA); and traffic monitoring and management systems.

States are required to set aside funds for transportation enhancement programs. These programs are aimed at strengthening the cultural, aesthetic and environmental aspects of the nation's roadways. In FY 2010, STP contributed approximately \$597 million to the SHF.

c. The National Highway System

The National Highway System (NHS) is a 163,000-mile system of roads that serves major population centers, international border crossings and intermodal transportation facilities. The NHS program provides funding for improvements to the system of rural and urban roads. States may transfer up to 50 percent of their NHS funds to their Interstate Maintenance (IM) Program, STP, Congestion Mitigation and Air Quality Improvement (CMAQ) Program, Highway Bridge Replacement and Rehabilitation Program, or Recreational Trails Program. In FY 2010, NHS contributed \$562 million to SHF.

d. Interstate Maintenance

This program provides funding for resurfacing, restoring, rehabilitating and reconstructing routes on the 46,000-mile Interstate Highway System. Funds are apportioned to the states based on formulas that take into account lane miles, total vehicle miles traveled and numbers of commercial vehicles. Any project on the Interstate Highway System, with the exception of those adding lanes for single-occupancy vehicles, is eligible to receive IM funds. In FY 2010, IM contributed nearly \$446 Million to SHF.

e. Metropolitan Planning

When a city reaches a population of 50,000, a metropolitan planning organization is created in accordance with the Federal-Aid Highway Act of 1962 as well as from subsequent legislation over the last 45 years. The MPO's role is to oversee the coordinated, comprehensive and cooperative planning of transportation projects as a condition for federal transportation financial assistance. The MPOs are currently responsible for coordinating and cooperating with state and other transportation providers in carrying out the metropolitan transportation planning requirements of federal highway and transit legislation.

Cities and counties within the jurisdiction of an MPO face additional requirements in the planning and financing of transportation projects since MPOs are required to develop long-range metropolitan transportation plans and transportation improvement plans (TIPs) subject to requirements established in Title 23, Chapter 1, Section 134 of the U.S. Code (USC). The MTP has a planning horizon of 25 years and must be financially constrained to realistically anticipate funding. The MTP is updated every 5 years. The TIP must be updated at least every 4 years and must identify transportation facilities serving as an integrated metropolitan transportation system, discuss potential environmental mitigation strategies, demonstrate how the adopted plan is to be implemented financially, discuss operational and management strategies, establish capital investment strategies, and propose transportation and transit improvements.

A total of \$22.3 million Metropolitan Planning funds were available to the SHF in FY 2010.

f. Congestion Mitigation and Air Quality Improvement

The Congestion Mitigation and Air Quality (CMAQ) Program provides a flexible source of funding for state and local governments in areas that do not meet National Ambient Air Quality Standards for ozone, carbon monoxide and particulate matter (non-attainment) to use on projects to help meet Clean Air Act requirements. Funds are apportioned to the states based on a formula that takes into account population and the severity of ozone and carbon monoxide pollution.

CMAQ funds may be used on congestion mitigation and air quality improvement programs such as those that reduce vehicle miles traveled, improve traffic flow or reduce fuel consumption. Projects that increase single-occupancy vehicle capacity may not receive CMAQ funds with the exception of high-occupancy toll (HOT) lane facilities. States may transfer up to 50 percent of CMAQ funds to surface transportation, National Highway System, interstate maintenance, bridge, highway safety improvement and/or recreational trails programs. In FY 2010, the CMAQ program contributed \$113 Million to the SHF.

g. Bridge Rehabilitation and Replacement Program

This program provides funding for states, counties and cities to improve the condition of highway bridges through replacement, rehabilitation and preventative maintenance. Each state's apportionment is based on the relative share of the total cost to replace or repair deficient highway bridges. In FY 2010, the SHF received \$146.2 million from this program.

h. Highway Safety Improvement Program

The Highway Safety Improvement Program (HSIP) is aimed at reducing highway fatalities. The program requires strategic highway safety planning at the state level that is oriented toward results. Funds for this program are set aside from the STP. Prior to the apportionment of HSIP funds, a portion is set aside for the Railway-Highway Crossing Program. The remaining funds are then apportioned among the states based on several factors, such as lane miles, vehicle miles traveled and fatalities on federal highways.

States with adopted Strategic Highway Safety Plans (SHSPs) that conform to the requirements of 23 USC 148, like Texas, may obligate HSIP funds for the purposes listed in Section 148. These purposes include but are not limited to intersection safety improvements, pavement and shoulder widening, improvements for pedestrian or bicyclist safety or safety of the disabled, and construction of projects at railway/highway crossings. A total of \$93.5 million was received from this program in FY 2010.

i. Safe Routes to School

The Safe Routes to School Program was developed with the aim of encouraging children and children with disabilities to walk and/or bicycle to school. The program funds activities that make walking and bicycling safer and more appealing, and aids in the planning, development and implementation of projects that improve safety, reduce traffic, reduce fuel consumption and reduce air pollution around schools. States are also required to set aside between 10 to 30 percent of program funds for non-infrastructure-related projects such as public awareness campaigns, outreach and traffic education, and enforcement in the vicinity of schools. Funds are apportioned to the states based on each state's share of total enrollment of primary and

middle school students. Each state is guaranteed to receive \$1 million. The SHF received a total of \$15.2 million in FY 2010.

j. High Priority Transportation Projects

The High Priority Projects Program provides designated funding for specific projects identified in SAFETEA-LU. A total of 5,091 projects were identified nationwide, each with a specified amount of funding over the life of SAFETEA-LU. A total of \$136 million was earmarked for major projects of national significance in Texas for FY 2010.

k. Coordinated Border Infrastructure Program

Monies from this program are intended to fund improvements on roadways that move motor vehicles across the border of the United States and Mexico. The SHF received \$55.8 Million in FY 2010.

l. State and Community Highway Safety Grants

Funds from this program must be used for highway safety purposes. State agencies other than TxDOT are eligible to receive these funds. A total of \$18 million was received in FY 2010 in the SHF.

m. Rail-Highway Crossings Program

Funds from this program must be used to install and upgrade protective devices at railroad grade crossings. The federal share for this program is 90 percent and SHF received \$17 million in FY 2010.

7.2.1.3. State Highway Fund Revenue Bonds

In 2003, both the Texas Constitution and the Texas Transportation Code (TTC) were amended to allow issuance of bonds, public securities, and credit agreements if secured by pledge and payable from SHF revenues. The Texas Transportation Code was amended again in 2007 to set the maximum aggregate principal amount of State Highway Fund Revenue Bonds that may be issued at \$6.0 billion. Of this \$6.0 billion, \$1.2 billion of the principal amount of State Highway Fund Revenue Bonds is set aside for projects that reduce accidents or improve hazardous locations on the state highway system; and the principal amount of State Highway Fund Revenue Bonds that may be issued is limited to \$1.5 billion per fiscal year.

7.2.1.4. Motor Vehicle Registration Fees

Motor vehicle registration fees were established by the Thirty-fifth Legislature, 1917, at the rate of \$0.35 per horsepower with a minimum fee of \$7.50. Numerous rate and base changes have occurred since 1917. The Eighty-first Legislature, Regular Session, 2009, passed House Bill 2553 to amend motor vehicle registration fees, effective September 1, 2011. Motor vehicle registration fee rates are currently based on the type, age, or weight of a motor vehicle. The fee for passenger cars weighing less than 6,000 pounds is based on a vehicle's age and ranges from \$40.50 to \$58.50. Additional fees apply for specialty plates and souvenir plates. Under House Bill 2553 the fee for passenger vehicles will be \$50.75 as of September 1, 2011.

Most fees from non-personalized license plates are deposited into SHF. State residents are required to register their vehicles and pay the motor vehicle registration fee on an annual basis. Prior to 1992, counties retained 5 percent of the motor vehicle sales taxes they collected. Beginning in 1992, counties no longer retained motor vehicle sales tax. Instead, they retained an additional amount of motor vehicle registration fees equal to 5 percent of the motor vehicle sales tax collected by the county. The Seventy-eighth Legislature, 2003, enacted legislation that phased in a reversal of this revenue exchange. The reversal started in 2004 and will be completed in 2015, when the counties will again retain 5 percent of the motor vehicle sales tax they collect.

County tax assessor-collectors are statutorily authorized to deposit all motor vehicle registration fees collected into an interest-bearing account or certificate in the county depository for approximately one month upon collection. County tax assessor-collectors are then required to remit the fees to TxDOT but may retain the interest earned on these fees while they are in the county depository. TTC and TxDOT are required to deposit all revenue received from motor vehicle registration fees to the State Highway Fund under Texas Transportation Code, Section 502.051.

In 1946 the Texas Constitution was amended to add Article VIII, Section 7-a. This requires that motor vehicle registration fees may not be less than the maximum amount counties are allowed to retain under the legal rate during 1945. It also requires net revenues collected from motor vehicle registration fees to be used solely for acquiring rights-of-way, constructing, maintaining, and policing public roadways, and administration of traffic and safety laws on public roadways.

In addition, motor vehicle registration fees for special vehicles are applied to oversized and overweight motor vehicles and manufactured housing. These funds are also deposited into the SHF.

7.2.1.5. Sales Tax on Lubricants

The state's first sales tax was passed by the Fifty-seventh Legislature, 1961, and included motor fuel lubricants among taxable items. The sales tax on motor fuel lubricants is regulated by Texas Tax Code, Section 151.801. All revenues generated from the sale, storage, or use of lubricating and motor oils used for motor vehicles on public roadways are statutorily required to be deposited to the State Highway Fund. The State Comptroller of Public Accounts is required to use available statistical data to estimate the consumption or sales of motor fuel lubricants and determine the amount of the state sales tax that should be deposited to the SHF from motor fuel lubricants based on this estimation.

Article VIII, Section 7-a of the Texas Constitution requires that all revenues generated from taxes on motor fuel lubricants used to propel motor vehicles over public roadways be used solely for acquiring rights-of-way; constructing, maintaining, and policing public roadways; and the administration of traffic and safety on public roadways.

7.2.1.6. Toll Revenues

The Texas Turnpike Authority was created by the Fifty-third Legislature, 1953, to plan, finance, build, and operate toll facilities. In 1997, the Authority was merged with TxDOT. The Harris County Toll Road Authority was created in 1983, and the North Texas Tollway Authority was created in 1997 when the Texas Turnpike Authority was abolished as an independent agency. These entities operate toll roads within the Dallas/Fort Worth and Houston metropolitan regions.

Toll facilities are regulated in Texas Transportation Code, Chapter 222, Subchapter E. TxDOT is authorized to expend funds from any source for the construction, maintenance, and operation of the toll facility of a public or private entity. TxDOT is prohibited from providing grants for the cost of a toll facility in amounts greater than an annual average of \$2 billion over a period of five fiscal years. The calculation of these expenditures does not include funds that are required to be repaid, including those subject to a legally binding agreement with a public entity.

Law now allows certain Texas counties and local toll project entities to have the first option for development, finance, construction, and operation of a toll project. If a county or local toll project entity chooses to develop a toll project, TxDOT and the local entity conduct a market valuation project, and the local entity then has six months to elect to develop the project. The local entity is also required to enter into a contract for the financing, construction, and operation of the project within two years of the completion of environmental and legal reviews. At this time the local entity must make a payment equal to the value of the toll project as agreed upon during the market valuation process or agree to construct other transportation projects in the local region that have an estimated value equal to the agreed upon value of the toll project. If a local entity chooses not to pursue the project, TxDOT is then authorized to pursue the project itself. If TxDOT undertakes the toll project, it is required to either make a payment equal to the agreed upon market value of the project into a regional sub-account or construct transportation projects of equal value in the region.

a. Pass-Through Tolling

The Pass-Through Tolling Program, also commonly known as the Pass-Through Financing Program, was authorized in 2005. TxDOT may enter into an agreement with a public or private entity for design, development, financing, construction, maintenance, or operation of a facility on the state highway system and is then reimbursed for a portion of the project by TxDOT. The reimbursement is known as a pass-through toll and is a periodic payment made by TxDOT to the developer based on the number of vehicles using or vehicle miles traveled on a highway. All funds available to TxDOT, except for funds generated by Texas Mobility Fund bonds, are authorized for the purpose of making a pass-through toll payment.

The first pass-through toll agreement was executed between TxDOT and Montgomery County. This was approved in 2005 and allowed for transportation improvements to certain farm roads and state highways in Montgomery County.

Between 2005 and the end of FY 2010, a total of 18 pass-through financing agreements were executed, valued at approximately \$1.4 billion.

7.2.2. Texas Mobility Fund

The Texas Mobility Fund (TMF) was created in 2001. It is administered by the TTC as a revolving fund. The TMF may be used to finance the acquisition, construction, maintenance, reconstruction, and expansion of state highways, including costs of design and right-of-way acquisition.

The fund may also be used to finance public toll roads and public transportation projects. TTC can use the TMF as leverage for the issuance of bonds to be repaid from the Fund. These bonds can be used for refunding obligations and related credit agreements, creating reserves, paying issuance costs and interest on bonds issued from the TMF.

The Texas Constitution prohibits the Legislature from devoting revenue from the collection of motor vehicle registration fees and taxes on motor fuels and lubricants that is constitutionally dedicated for acquiring rights-of-way and constructing, maintaining, and policing public roadways to the TMF.

With the creation of the, TTC is authorized to create Regional Mobility Authorities (RMAs) to build and oversee turnpike projects. Surplus revenue from any turnpike projects could be transferred by RMAs to the TMF. More detail on RMAs can be found in Section 5.0 of this Technical Memorandum.

7.2.3. General Revenue Fund

During the past 10 fiscal years, TxDOT has received appropriations from the General Revenue Fund and two General Revenue–Dedicated Fund accounts—the Texas Department of Transportation Turnpike Authority Account (previously discussed) and the Texas Highway Beautification Account. Appropriations from the General Revenue Fund can be expended by TxDOT for any purpose authorized by statute. Little of the revenue appropriated from the General Revenue Fund to TxDOT is used for highway construction and maintenance. Beginning fiscal year 2010, TxDOT received additional General Revenue to pay debt service associated with Proposition 12 bonds.

7.2.3.1. Highway Beautification Fees

Highway Beautification Fees were created by the Sixty-second Legislature, 1972, and the Texas Highway Beautification Account was established as a dedicated account in the General Revenue Fund by the Seventy-fifth Legislature, 1997. These fees are statutorily required to be used for compliance with the Highway Beautification Act of 1965 to regulate the erection and maintenance of outdoor advertising and develop right-of-way and other lands within view of highways. Persons erecting or maintaining signs or advertising within 660 feet of an interstate highway are required to pay Highway Beautification Fees. The Texas Transportation Commission sets the fees at an amount that is reasonable to cover administration. Persons applying for a license to erect or maintain signs for advertising are also required to pay a surety bond of \$2,500 for each county in which outdoor advertising will be maintained, up to \$10,000. This bond is used to reimburse the costs of removing

unlawfully erected or maintained signs. Nonprofit organizations that erect and maintain a sign in a municipality or its extra territorial jurisdiction cannot be charged a fee exceeding \$10 for the combined cost of licenses and permits to comply with Highway Beautification Fees.

The Texas Highway Beautification Account is used to monitor and control the use of outdoor advertising adjacent to interstate and primary highways. The majority of these funds are used in conjunction with maintenance and construction of the state highway system. Since fiscal year 2001, \$5.65 million of the \$6.81 million deposited to the fund was for routine maintenance and operation of the state highway or transportation system.

7.3. Transit Programs

SAFETEA-LU authorizes the Federal Transit Administration to support locally planned and operated public mass transit systems. According to FTA, farebox revenues account for only about 40 percent of public transit system operating costs, so transit systems must generally rely on additional funding from federal, state and local sources as well as private investment. Federal funding for transit comes from fuel tax revenues and general fund appropriations. Since 1997, \$0.0286 on every gallon of federal fuel taxes collected has been dedicated to the Mass Transit Account (MTA). Funding from state and local authorities may come from numerous sources including sales taxes, property taxes, income taxes and direct transit system taxing authority.

TxDOT's role in transit programs is limited to rural and small urban systems. TxDOT transit programs receive a large percentage of funding from federal sources. This funding is in turn awarded in the form of grants that typically require matching funds depending on the type of program to individual transit systems by formulas that may vary from year to year. TxDOT itself does not own capital equipment and does not provide direct transit services. State and federal funds are disbursed on a reimbursement basis, so expenses must be incurred by the provider prior to disbursement by the state or by FTA. State funds may be used by providers to meet the matching requirements of federal grants.

The following transit programs provide potential funding:

7.3.1. Section 5303 and 5304 Planning Programs

The Section 5303 Metropolitan Planning and Research Program provides planning funds for MPOs based on budget worksheets submitted with annual Unified Planning Work Programs. These funds are comingled with FHWA planning funds and are distributed directly to the MPO by formula. Section 5304 Statewide Planning and Research funds are received by TxDOT and are used internally for administration and for planning and development of public transportation programs. Funds can be provided by MPOs to transit agencies, per mutual agreement, for assistance in preparing Short Range Transit Plans.

7.3.2. Section 5307 Urbanized Area Formula Program

Section 5309 makes federal funding available directly to urbanized areas over 200,000 and to Governors (to sub-allocated to areas under 200,000 people) for transit capital and operating assistance in urbanized areas and for transportation related planning. Funding can only be directed to Governors and entities that are recognized by FTA as eligible recipients. Funds can be used for planning, evaluation engineering, and design of transit projects, capital projects such

as bus acquisition and rehabilitation, safety and security, and fixed guideway improvements. A minimum of one percent of allocated funds must be allocated to Transit Enhancements, which can include historic preservation, passenger amenities such as shelters, landscaping, public art, pedestrian and bicycle access, signage, and enhanced access for persons with disabilities.

7.3.3. Section 5308 Clean Fuels Grant Program

Eligible recipients of Section 5307 funding, and that are located in maintenance or non-attainment areas for ozone or CO are eligible to apply for Section 5308 funding, on a competitive basis. The program will fund capital expenses such as clean fuel buses (not including clean diesel buses) and support facilities such as fuel and charging stations.

7.3.4. Section 5309 Major Capital Investments

Section 5309 is a competitive program with rigorous evaluation requirements. It has three components:

- The Bus and Bus Facilities program funds the replacement of buses and the construction of new or reconstruction of existing bus facilities and such maintenance facilities and transit transfer centers.
- The Fixed Guideway Modernization program funds upgrades to existing rail and other fixed guideway lines in large urbanized areas only.
- The New Starts and Small Starts program provides funds for capital assistance for the construction of new fixed guideway systems or the extension of existing fixed guideway systems such as light rail, heavy rail, commuter rail, monorail, automated fixed guideway systems (such as a “people mover”) or an HOV facility for transit use. Projects seeking New Starts funding must clear various capital investment planning and project development processes. The Small Starts program refers to grants awarded under New Starts that are less than \$75 million with a total project cost of less than \$250 million. These types of projects are sponsored by transit systems in large cities outside of TxDOT’s purview.

7.3.5. Section 5310 Elderly/Persons with Disabilities Transportation Program

TxDOT is the designated recipient of Section 5310 funds and distributes them to public transportation providers to meet the needs of the elderly and persons with disabilities. Roughly 160 providers in the state benefited from this program. The state utilizes local planning processes to assist in determining how money should be used by recipient agencies.

7.3.6. Section 5311 Rural/Non-urbanized Program

This program funds capital, operating and administrative expenses for the state’s 39 rural transit agencies. Federal law requires that at least 15 percent of rural program funds be used to support intercity bus services, unless it has been certified that such needs are already being met. TxDOT has therefore developed an annual RFP process for the solicitation of proposals to develop, promote and support intercity bus mobility. The Section 5311 Program also includes the Rural Transit Assistance Program, which provides technical training services and materials on transit-related subjects such as driver education, operations, maintenance and management.

7.3.7. Section 5316 Job Access and Reverse Commute (JARC) Program

This program is targeted at developing new and/or expanded transportation services for low-income persons, such as shuttles, vanpools, bus routes, mass transit connector services and guaranteed ride home programs. The Reverse Commute Program provides transportation services to suburban centers from urban, suburban and rural areas. TMAs in MPO areas decide which projects will be selected in their area, and TxDOT selects projects for the remainder of the state.

7.3.8. Section 5317 New Freedom

These projects provide transit services to individuals with disabilities above and beyond the requirements of the Americans with Disabilities Act.

7.3.9. Section 5320 Transit in Parks

This program is jointly administered by FTA and the Department of the Interior to improve public transportation to and within national park units and other federal lands. It funds capital projects such as shuttle buses and rail but operating assistance is not eligible. National park units include those located within urbanized areas.

7.3.10. Medical Transportation Program (MTP)

This program is operated by TxDOT to fulfill federal requirements that all Medicaid-eligible individuals be provided with transportation to allowable services if they have no means of transportation. The Children with Special Health Care Needs (CSHCN) and Transportation for Indigent Cancer Patients (TICP) programs also fall under the MTP. A network of statewide transportation providers, including both public and private providers, operates under contract with TxDOT to provide these services. The MTP also reimburses eligible individuals' mileage expenses for approved medical services and can provide bus tickets from transit authorities.

7.3.11. Human Service and Workforce Transportation

TxDOT contracts with both the Texas Health and Human Services Commission (HHSC) and the Texas Workforce Commission (TWC) to provide funding for transportation for clients in various eligible programs. TWC distributes its funding to local workforce development boards, while HHSC contracts with agency programs under the HHSC umbrella for the distribution of transportation-related funds.

7.3.12. Non-Unified Transportation Plan (UTP) Transit Funding Programs

Transit providers are also eligible for federal funding for projects not included in the state UTP and therefore not under the control of TxDOT. These include the Section 5307 Urbanized Program, Section 5309 Capital Investment Grant Program and the Section 5311 Tribal Program.

7.3.13. Congestion Mitigation/Air Quality (CMAQ)

CMAQ funds are Federal Highway Administration (FHWA) funds that are allocated by formula both to states and MPOs that can, at the determination of TxDOT and the MPOs, respectively, be "flexed" for transit projects based on state and regional determinations of their positive impacts on air quality. Urbanized areas in maintenance or non-attainment for CO are eligible.

CMAQ fund capital projects can also be used to provide operating assistance of a project for up to three years.

7.3.14. Surface Transportation Program (STP)

STP funds are Federal Highway Administration (FHWA) funds that are allocated by formula both to states and MPOs that can, at the determination of TxDOT and the MPOs, be “flexed” for transit capital projects based on state and regional determinations of their positive impacts on traffic congestion.

7.4. Airport and Aviation Funding

The purpose of this section is to present airport funding and finance mechanisms that are being used at airports. Airport capital improvement projects have traditionally been funded from the Federal Aviation Administration’s (FAA) Airport Improvement Program (AIP), Passenger Facility Charges (PFCs) or local funds (State Grants, municipal allocations, as well as the airport funds).

7.4.1. FAA Airport Improvement Program

The objective of the AIP is to assist airports in the development of a nationwide system of public-use airports adequate to meet the projected growth of civil aviation. The AIP provides funding for planning, development, and noise-related projects at airports included in the National Plan of Integrated Airport Systems. The program is funded through a Federal appropriation of funds received from taxes and user charges collected from various segments of the aviation community (tax on airline tickets, tax on freight waybills, tax on fuel, etc.). The AIP was extended through Federal fiscal year 2015 (September 2015) with the FAA Modernization and Safety Improvement Act of 2012 (FAA Reauthorization Act 2012), which was signed into law in February 2012.

This program requires grant sponsors to participate by providing a local funding match. The amount of Federal participation for AIP entitlement grants is largely determined by an airport’s hub size.

Table 7-1 presents the division between the Federal and local participation in total project costs by airport hub size based on current AIP legislation.

Table 7-1. Federal and Local Participation in AIP Grants

Hub Size	Federal Share	Local Share
Large Hub	75 percent	25 percent
Medium Hub	75 percent	25 percent
Small Hub	90 percent	10 percent
Non-Hub Primary	90 percent	10 percent

Source: FAA, FAA Reauthorization Act 2012.

7.4.1.1. Entitlement Grants

AIP funding is available to airport operators in two forms. One form is entitlement grants. These are Federal grants-in-aid classified as entitlement grants are apportioned annually to airports based upon the amount of activity at an airport. Passenger entitlements grants are distributed based on the number of passengers. Cargo entitlement grants are distributed based upon an airport’s share of the total amount of landed weight of all cargo aircraft at

qualifying airports. The formula for calculating the annual amount of passenger entitlement grants is as follows:

- \$7.80 for each of the first 50,000 passenger boarded
- \$5.20 for each of the next 50,000 passenger boarded
- \$2.60 for each of the next 400,000 passenger boarded
- \$0.65 for each of the next 500,000 passenger boarded
- \$0.50 for each additional passenger boarded

Under the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (AIR-21), which was enacted in April 2000, the amount of entitlement grants awarded was doubled for all airports. Therefore, the annual amount of entitlements for any airport is determined by using the formula above and doubling the result.

7.4.1.2. Discretionary Grants

AIP funding is also distributed in the form of Discretionary Grants. These grants are distributed by the FAA by ranking eligible airport projects deemed most critical to the improvement of the national air transportation system. Under current AIP legislation, a portion of the funds available for discretionary grants are set aside specifically for noise mitigation projects; however, the funding share for these projects is 80 percent Federal with 20 percent local for all airports, regardless of hub size. In addition to noise projects, a portion of discretionary appropriations are set aside specifically for security projects.

7.4.2. Passenger Facility Charges

In 1990, the U.S. Congress passed the Aviation System Capacity Act (Act). This Act permitted public agencies controlling commercial service airports to apply to the FAA for approval to collect a PFC at levels of \$1.00, \$2.00, or \$3.00 per enplaned passenger. In 2000, the Act was amended under AIR-21. Public agencies are currently permitted to apply to impose a PFC at the previously approved levels, as well as \$4.00 or \$4.50 as a result of the enactment of AIR-21. With the new PFC levels, no passenger can be charged more than \$18.00 per round trip. As a trade-off for imposing a PFC, there is a reduction in the amount of AIP entitlement grants at large and medium hub airports. This reduction is 50 percent for airports imposing a \$1.00, \$2.00, or \$3.00 PFC and 75 percent for airports imposing a \$4.00 or \$4.50 PFC.

The proceeds from PFCs can be used to finance airport projects that meet PFC eligibility criteria. In order for a public agency to receive approval to impose a PFC at any level, it must demonstrate that the projects intended to be funded with PFCs will preserve or enhance safety, capacity, or security of the national air transportation system; reduce noise or mitigate noise impacts resulting from an airport; or furnish opportunities for enhanced competition between or among air carriers. Noise projects contained in a FAR Part 150 Noise Compatibility Program are also PFC-eligible, with the exception of projects related to the development of new flight procedures, operation and administrative costs of an airport for ongoing noise mitigation programs, and demonstration programs to test the effectiveness of new noise mitigation technology.

If the public agency wishes to receive approval to impose a PFC at the \$4.00 or \$4.50 level, the project(s) must meet additional criteria. Department of Transportation Order 5500.1 (Order

5500.1) sets forth the guidance and procedures used by FAA personnel to administer the PFC program. These criteria are as follows:

- The project cannot be paid for from funds reasonably expected to be available from the AIP;
- If the project is an eligible surface transportation or terminal project, the public agency must make adequate provision for financing the airside needs of the airport, including runways, taxiways, aprons, and aircraft gates;
- In the case of a large or medium hub airport seeking the higher PFC, the project must make a significant contribution to improving air safety and security, increasing competition among air carriers, reducing current or anticipated congestion, or reducing the impact of aviation noise on people living near the airport; and
- In the case of a large or medium hub airport at which one or two air carriers control more than 50 percent of the enplaned passengers at an airport, the public agency must submit a competition plan acceptable to the Secretary of the Department of Transportation.

7.4.3. State Airport and Aviation Funding

TxDOT issues federal and state financial assistance grants to publicly-owned general aviation and reliever airports included in the Texas Airport System Plan (TASP). These Aviation Facilities Development Grants are provided for capital improvements for items such as pavement improvements, land acquisition, runway extension or relocation, terminal buildings, and new facilities. These grants require a 10 percent local match except for terminal building grants that require a 50 percent local match. Eligible local governments are required to request funding through a letter of interest that details the proposed scope of services for the grant.

Additionally, TxDOT provides financial assistance to publicly owned TASP general aviation, reliever and non-hub commercial service airports through the Routine Airport Maintenance Program (RAMP). All eligible airports can receive up to \$50,000 annually in state funds for airport maintenance. The RAMP grants require at least a 50 percent local fund match.

7.4.3.1. Aviation Capital Improvement Program

Included in the Statewide Preservation Plan are details of the Aviation Capital Improvement Program (CIP), which is aimed at developing general aviation airports within the state. The program is funded by the Federal Aviation Administration's (FAA's) Airport Improvement Program and the Texas Aviation Facilities Development Program.

TxDOT is responsible for applying for, receiving and disbursing federal funds for general aviation projects within the state, and the agency works with airport sponsors and the FAA in developing the Aviation CIP. TxDOT therefore takes on a predominant role in the implementation of state and federal projects and may act as an agent for airport sponsors by assisting with, reviewing, advertising, approving and inspecting projects.

The Aviation CIP is a tentative schedule of airport development projects, but projects included in the CIP are not guaranteed to be funded. Requests for funding are categorized by the needs of the airport facility and the objectives those needs address.

7.4.3.2. Routine Airport Maintenance Program (RAMP) Grants

State funding is a \$50,000 match per airport for each fiscal year. The State fiscal year begins September 1st. The local government match is 50 percent of actual costs plus any excess of \$100,000 total costs.

The program includes “lower cost” airside and landside airport improvements. These items can be more than just maintenance and may be new or additional items of work. Examples are: construction of airport entrance roads; pavement of airport public parking lots; installation of security fencing, replacement of rotating beacon, etc. TxDOT will determine the eligibility of specific items.

Local governments are allowed to issue their own contracts for scope of services, or TxDOT local districts can perform services within their capabilities. TxDOT will not participate in contracts for any ineligible scope items or for costs that are unreasonable for the type of service. Local government force account work is not eligible, but purchase of materials for construction with sponsor labor is eligible.

A RAMP Grant must be executed each state fiscal year, prior to work being performed, and before June 30th of the grant fiscal year. To initiate the grant the City or County should contact Aviation Division with a description of the project for which the grant is being requested and the estimated cost of the project, if available. The contact may be in the form of a written letter, electronic mail, facsimile, by telephone, or personal contact with staff.

7.4.3.3. Airport Pavement Management Program

As part of the FAA’s AIP funds, Congress has mandated that facilities receiving federal monies for replacement or reconstruction of paved surfaces must create a pavement maintenance / management program.

Historically, the FAA and TxDOT have assisted sponsors in improving runways, taxiways, and aprons by contributing 90 percent of the project cost. Appropriate and timely maintenance will prolong pavement life, maintain a high level of ride quality, and reduce the lifetime cost of the pavement. Unfortunately, in the past, the pavement often did not receive any preventive or remedial maintenance after it was constructed.

Since January 1, 1995 airport sponsors that accept AIP funds for pavement replacement or reconstruction are required to commit to a grant assurance which stipulates that an effective pavement maintenance / management program will remain in effect throughout the useful life of the constructed pavement. Such a program will have four basic components:

- A pavement inventory which shows the dimensions, locations, and maintenance history of all paved surfaces.
- A prescribed inspection schedule, which will minimally involve detailed annual assessments, and monthly drive-by observations.
- Record keeping which documents inspection dates, findings, locations of distress, and remedial actions scheduled and performed.
- A method of data retrieval which would permit a comprehensive presentation to the FAA if they request one.

7.5. Local Funding Programs

The primary local revenue sources for Hays County transportation projects are the county's Road Bond Program, for larger scale improvements and its Road and Bridge Fund, which provides for most routine maintenance items.

This section also covers additional local transportation funding options that are available in the State of Texas.

7.5.1. County Road and Bridge Fund

The Hays County Road and Bridge Fund is part of the county's General Fund. In FY 2011, the County Road and Bridge fund contributed more than \$8 million to the transportation system, including routine maintenance and minor repair work on the county's roadway system. Funding from this program also covers Transportation Department operations.

7.5.2. County Road Bond Program

In November 2008, Hays County voters approved a proposition to issue \$207 million in Hays County road bonds for roadway safety and mobility improvements across the county.

In order to be eligible for funding through this program, the project must either be eligible for the TxDOT Pass-Through Financing program or be identified as a priority project in one of the county's four precincts.

In addition to the \$207 million in taxpayer-financed road bonds, the Hays County priority project package includes contribution from a number of municipalities. The City of Kyle will contribute \$11 million. A total of \$7 million will come from the City of San Marcos and \$3 million from federal grants.

More than \$110 million for eligible projects is included in the FY 2012 budget for this program.

7.5.3. State Infrastructure Banks

State Infrastructure Banks (SIB) were authorized in 1995 by Federal legislation to help accelerate needed mobility improvements through a variety of financial assistance options made to local entities through state transportation departments.

At that time, Texas was chosen as one of the ten states to test the pilot program. TxDOT began its SIB program in 1997. The overall program goal is to provide innovative financing methods that will add to the list of options available to communities to assist them in meeting their infrastructure needs.

The SIB program allows borrowers to access capital funds at or lower-than-market interest rates. To date, more than 90 loans totaling more than \$382 million have been approved through the SIB program. The loans have helped leverage more than \$3.5 billion in transportation projects in Texas.

The SIB operates as a revolving loan fund, where the account balance grows through the monthly interest earned and repaid principal and interest payments. Financial assistance can be granted to any public or private entity authorized to construct, maintain or finance an eligible transportation project.

Projects must be eligible for funding under the existing federal highway rules (Title 23) to comply with SIB requirements. This usually requires a project to be on a state's highway system and included in the statewide Transportation Improvement Plan.

Work eligible for the program's funding in Texas includes planning and preliminary studies; feasibility, economical and environmental studies; right of way acquisition; surveying; appraisal and testing; utility relocation; engineering and design; construction; inspection and construction engineering.

7.5.4. Regional Mobility Authorities

Proposition 15, a constitutional amendment approved by Texas voters in 2001, allows for the creation of regional mobility authorities (RMAs) for the purpose of constructing, maintaining and operating toll facilities. As political subdivisions formed by one or more counties, RMAs allow for more transportation development to occur at the local level. Formation of an RMA can be requested by one or more counties with the submission of a resolution by the requesting parties' county commissioners' court and a statement on how the RMA will improve mobility in the region.

Each request must also identify proposed transportation projects, contain an agreement to obtain necessary environmental permits, list any other RMA projects being considered, and establish criteria for determining the geographic makeup and appointment processes for board members. RMA formation requests must be approved by the Texas Transportation Commission (TTC).

In general, RMAs possess the same powers as the Turnpike Authority Division of TxDOT, but they operate at the local level. This provides local governments with more control over transportation planning, provides additional funding for transportation projects and allows for projects to be developed faster. Their scope of influence includes a broad range of transportation facilities in addition to turnpikes and roadways. An RMA may develop passenger and freight rail systems, ferries, airports, pedestrian and bicycle facilities, intermodal hubs, and even automated conveyors for freight movement. They possess bonding authority and are authorized to maintain a revolving fund, acquire and/or condemn property, enter into contracts with other states and with Mexico, borrow money, apply for grants and loans, and seek other sources of revenue with

the exception that funds from the State General Revenue Fund or State Highway Fund may only be used on turnpikes and road projects. RMAs may also enter into comprehensive development agreements (CDAs).

The closest RMA to Hays County is the Central Texas Regional Mobility Authority in Travis and Williamson Counties. One tool that is particularly useful for RMAs in developing transportation projects is the ability to issue revenue bonds. Title 43, Section 370 of the Texas Administrative Code grants RMAs the authority to issue tax-exempt revenue bonds for a term not to exceed 40 years. These bonds may be repaid from any financial source available to the RMA with the exception that they may not be repaid with revenues from a project that is not a part of the system that the bonds were originally issued for. Bonds issued by RMAs are not the debt of the state or counties within the RMA's jurisdiction.

RMAs may also seek funding from the Texas Mobility Fund, a funding source supported by transportation-related fees. The Texas Transportation Commission is authorized to issue up to \$3 billion in bonds from the fund, which may be used to finance construction or improvements to state highways, publicly owned toll roads and other transportation projects. Funding from the State SIB is also available to RMAs.

7.5.5. Rural Improvement Districts and Special Assessment Districts

Special Assessment Districts are often employed in areas that stand to realize a substantial increase in property values because of various improvements in the area. These districts work particularly well if the group receiving benefits from the new program is clearly defined. Generally, the costs associated with the district are paid for by residents within the district. Most Special Assessment District levies are placed on the value of the property, usually per \$100 valuation.

7.5.6. Local Sales Tax

Local sales taxes are widely used in other parts of the country for the funding of transportation projects. In addition to the fact that revenues are fairly consistent and predictable from year to year, they have the added advantage of being inflation sensitive when applied as a percentage of the cost of the goods being purchased. They are relatively easy to administer, especially in situations where they can be "piggy backed" on a state sales tax. The major drawback to these types of taxes as a revenue source for transportation projects is that it is not possible to link the use of the transportation network with payment of the tax.

In Texas, the state imposes a sales tax of 6.25 percent per purchase and allows local taxing jurisdictions, such as cities and counties, to impose an additional 2 percent combined minimum on top of the state rate for a maximum sales tax of 8.25 percent. Hays County receives approximately \$10 Million annually from county sales tax receipts.

7.5.7. Vehicle Registration Fees

Vehicle registration fees are an important part of transportation financing in the state, accounting for an estimated 14.8 percent of revenue to be deposited into the State Highway Fund in the 2008/2009 biennium. County and municipal governments are free to impose such fees for the

funding of transportation and other programs within their jurisdictions. Such fees are stable revenue generators from year to year and require minimal additional administrative expense. They are generally perceived as a user-based tax, even though the assessment is not made on a trip-by-trip basis.

The Texas comptroller of public accounts estimates that the state will take in \$2.1 billion in motor vehicle registrations for the 2008/2009 biennium, not counting deductions from county governments. These fees are collected at the county level, and each county retains the first \$60,000 collected and receives an additional \$350 for each mile of county road maintained by the county, up to a maximum of 500 miles. The Texas Constitution prohibits revenues from vehicle registration fees being used except for acquiring right-of-way; constructing, maintaining and policing public roadways; and administering laws pertaining to the supervision of traffic and safety on public roadways.

7.5.8. Property Taxes

In Texas, local governments, such as counties, school districts, cities and special purpose districts, are authorized to levy property taxes. The value of appraised property is determined by each county's appraisal district. Property taxes are among the most common in the state, accounting for 46.4 percent of all taxes collected within the state in 2006 according to the Texas state comptroller of public accounts.

In Hays County, 4.4 cents of the total property tax rate of 46.91 cents are contributed into the county's Road and Bridge Fund. This equates to more than \$4.7 million for FY 2012.



Hays County Transportation Plan

Hays County
111 East San Antonio Street
San Marcos, Texas 78666