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Heart of the Lost Pines / Est. 1832

City of Bastrop

Transportation Master Plan

This Plan was prepared for the City of Bastrop

This Plan was prepared by Alliance Transportation Group, Inc.

This Plan was adopted by the City of Bastrop City Council on:

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Table of Contents

Figures

Maps

BASTROPTX

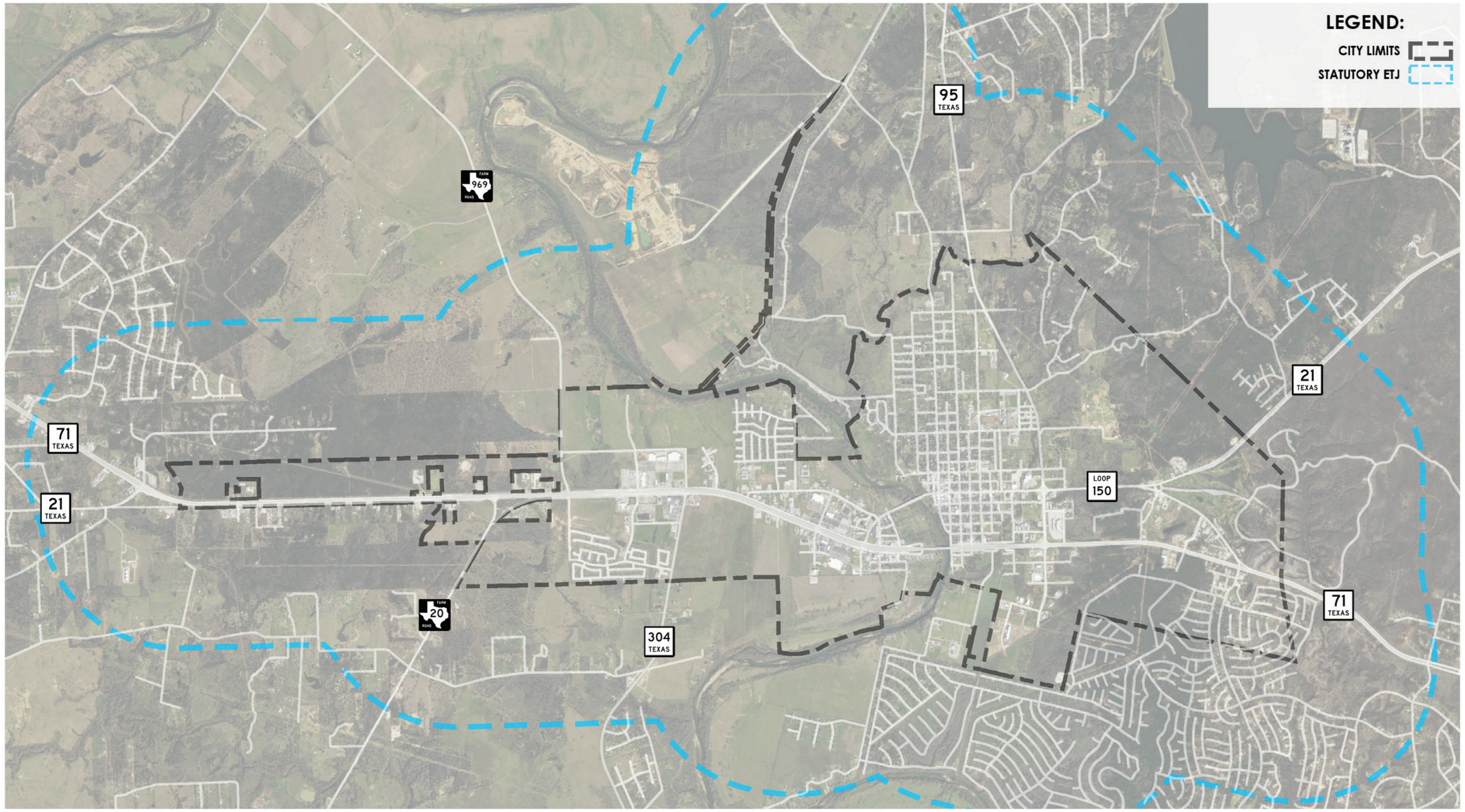
Heart of the Lost Pines / Est. 1832

1

Introduction

Purpose, Planning Process, and Goals

Map 1.1: Study Area, City of Bastrop TMP



This 2016 Transportation Master Plan (TMP) for the City of Bastrop provides a guideline for managing investment in the transportation system within the City and its statutory Extraterritorial Jurisdiction (ETJ). The TMP was authorized by City of Bastrop City Council as a companion document to the City Comprehensive Plan. The TMP was funded through an advanced funding agreement with the Texas Department of Transportation (TxDOT) in a collaborative sponsorship agreement with the Capital Area Metropolitan Planning Organization (CAMPO).

The TMP was developed using the CAMPO Platinum Planning Principles, and follows the planning guidelines established by TxDOT and the Federal transportation funding legislation, the Fixing America's Surface Transportation Act (FAST Act). The alignment with these regional, state and national planning and funding regulations will allow the projects contained in this TMP to qualify for funding from these sources, wherever possible.

PURPOSE

A Transportation Master Plan is a long-range planning document used to guide the development of a community's transportation system. The purpose of the plan is to ensure the future transportation network meets the travel needs of the growing region for all modes of travel, including walking, bicycling, driving, and public transportation. A transportation master plan does not represent a short-term list of construction projects, nor are the precise alignments of proposed roadways intended to be fixed. Instead, the plan serves as a general guidance document intended to help city officials plan the future of the transportation system, while weighing a variety of other factors, many of which may evolve over time.

It is recommended that the City of Bastrop periodically review and update the plan to ensure the plan reflects the most up-to-date information regarding growth and development trends, as well as community goals.

STUDY AREA

The City of Bastrop Transportation Master Plan focuses on transportation facilities within the existing city limits and the city's statutory ETJ, the same study area as the Comprehensive Plan. The study area for the TMP is shown in Map 1.1.

PLANNING PROCESS

The planning process to update the City of Bastrop Transportation Master Plan builds upon previous planning efforts in the region, technical analyses, and feedback from the public and local stakeholders. The 2016 Transportation Master Plan network closely reflects the community's vision for the region as articulated through the 2016 Comprehensive Plan.

Coordinated Planning Approach

The Transportation Master Plan was developed concurrently with two other planning documents. The TMP was developed in close coordination with the 2016 Bastrop County Transportation Plan to help put the City's transportation system in proper context within the County and to ensure consistent policies and plans within the ETJ. The TMP was also developed as a companion document to the City of Bastrop Comprehensive Plan to align the two plans.

The Transportation Chapter of the Comprehensive Plan provides the broad framework for making transportation decisions that support a unified and comprehensive approach to the development of the City, including support of desired land use growth patterns and economic development. This TMP provides a more detailed analysis of the City of Bastrop's transportation system, and contains a prioritized list of the transportation investments for maintaining, enhancing and expanding the City's future transportation system.

Developing the Transportation Master Plan concurrently with the Bastrop Comprehensive Plan provides the City with a unique opportunity to develop a robust vision for the future transportation system while at the same time identifying opportunities to support and coordinate with non-transportation-related goals articulated by the community.

Other Planning Documents

The 2016 Transportation Master Plan exists in tandem with several other local and regional planning documents. These documents were reviewed to ensure the 2016 Transportation Master Plan supports and augments the goals and objectives of these other guidance documents. Plans consulted in the development of the 2016 Transportation Master Plan include, but were not limited to:

- CAMPO 2040 Regional Transportation Plan (Capital Area Metropolitan Planning Organization- CAMPO);
- CAMPO Fiscal Year 2017-2020 Transportation Improvement Program;
- TxDOT Unified Transportation Plan (UTP);
- TxDOT State Transportation Improvement Program (STIP);
- City of Bastrop Form Based Code;
- City of Bastrop Downtown Plan; and
- City of Bastrop Economic Development Plan.

Transportation Partners

In addition to a vigorous input process from stakeholders within the City of Bastrop, the development of this TMP relied on consultation with and participation by key regional transportation planning partners, including the Capital Area Metropolitan Planning Organization (CAMPO), Texas Department of Transportation (TxDOT), Bastrop County and the Capital Area Rural Transportation System (CARTS). Engaging with these partners not only helped ensure that the analysis of the City of Bastrop's current and future transportation system was carried out with the most up-to-date data and analytical tools, but this consultation also provided assurance that the strategies recommended in the plan are compatible with regional transportation planning processes and implementation timelines.

PROJECT INITIATION

This TMP was developed with significant input from and coordination with local and regional stakeholders and the public. The TMP was also developed concurrently with the City of Bastrop's Comprehensive Plan and the Bastrop County Transportation Plan. The TMP also honors previous planning efforts that have taken place in the City and the County, expanding upon these previous efforts to incorporate changing conditions and public needs.

Kickoff Meeting

The initial kickoff meeting for the Transportation Master Plan was held in April 2015 with the City staff and the planning team. During the kickoff meeting, the project team discussed with city officials previous plans and studies; local goals and objectives; projects that are currently underway in the City of Bastrop; and data needs. The project team then participated in a field review with City staff and planning partners to view critical components of the transportation system and some of the previously identified problem locations. A plan for additional stakeholder engagement was also developed.

Steering Committee

To help foster the stakeholder dialogue, a steering committee composed of local stakeholders was established by the City at the beginning of the planning process to provide local knowledge and expertise and to guide the development of both the Comprehensive Plan and the Transportation Master Plan.

From the beginning of the process, the public and the steering committee were involved in the establishment of the goals and objectives for the TMP and the Transportation Section of the Comprehensive Plan to ensure that the two documents were designed to support the same goals and objectives. The steering committee was also instrumental in the selection and weighting of performance measures to be used in project evaluation and in the final ranking of project priorities.

PUBLIC PARTICIPATION

Local stakeholders and residents were consulted throughout the planning process via a series of Open House meetings, stakeholder meetings, steering committee meetings, and online input opportunities through the City's website. This public input was aimed at collecting and incorporating local knowledge and expertise into the plan. These meetings were designed to allow City staff, policy makers, local stakeholders, and the public to cooperatively identify transportation issues, prioritize goals, prioritize projects, and comment on the proposed plan.

The public participation process for this TMP was conducted concurrently with the public participation process for the 2016 City of Bastrop Comprehensive Plan so that the two documents would address the same set of goals and identified needs in a coordinated manner. Conducting the Transportation Master Plan public participation and stakeholder engagement concurrently with the Comprehensive Plan public outreach and workshops provided an opportunity to integrate the vision and goals of a broad range of other topics including land use, housing, economic development, utilities, parks, recreation and environmental issues into the Transportation Master Plan process. The final plan incorporates the feedback received from the public and key stakeholders throughout the planning process.

Public Meetings and Stakeholder Engagement

The Transportation Master Plan public participation process began as a part of the overall Comprehensive Plan public engagement process including a series of 11 "kickoff" stakeholder meetings that were held over four (4) days in August and September, 2015. Representatives of multiple interest groups, including transportation focus groups, provided their perspectives on Bastrop's most pressing needs, and potential opportunities or initiatives that the City should champion or support. This preliminary feedback assisted in developing initial Plan themes, and ultimate Plan goals and objectives.

Initial Open House Meetings

The kickoff stakeholder engagement culminated in a public open house held on September 3rd, 2015 at the Bastrop City Hall. At the open house the project team presented formal exhibits explaining the purpose of the Transportation Master Plan; how the Comprehensive Plan and the Transportation Master Plan would work in tandem to create integrated solutions; and an overview of current and anticipated future transportation system performance including location, magnitude and frequency of crashes and peak period current and anticipated future levels of AM and PM congestion in Bastrop and its ETJ.

During the discussion, participants commented on issues related to transportation levels of service, congestion and roadway safety. Participants also identified specific transportation investments they would prefer in Bastrop, ranging from expansion of the bicycle and trail network to funding for a regional passenger/commuter rail system.

As an additional part of the meeting, an exercise was conducted where residents were asked to prioritize where they would spend "transportation dollars" in the future. Choices included: increasing transit service; construction of new roads and roadway expansion; funding of a regional passenger/commuter rail; improvements to pedestrian network; maintaining and preserving existing system; or expansion and enhancement of the bicycle and trail system. The Table 1.1 illustrates the results of that exercise.

Table 1.1: Transportation Investment Exercise Results

RESULTS	
TRANSPORTATION INVESTMENT	NUMBER OF DOTS
Funding for a regional passenger/commuter rail system	55
New road construction and road expansion	39
Expand and enhance bicycle network and trail system	37
Maintenance and preservation of existing system	34
Improve pedestrian experience and expand sidewalk network	29
Increased frequency and coverage of local and regional transit bus service	16

Visioning Workshops

A visioning workshop was also held at the Bastrop Library on October 7, 2015 in conjunction with the Bastrop County Transportation Plan. This facilitated workshop conducted a directed dialogue with small groups of participating members of the public through a series of question and answer exercises that explored community values, issues, concerns and aspirations. The results of these exercises helped to frame the vision for the Transportation Master Plan and to formulate TMP goals and objectives.

Open House Meetings

Following completion of the preliminary technical analysis a transportation open house was held on September 29, 2015 at the Bastrop Public Library to allow the public to view the results of the technical analysis conducted by the project team, including crash hot spots, roadway volumes, and roadway level of service for 2010 and as projected for 2040. The people who attended the public meeting were also given an opportunity to comment on the results and to identify areas of need related to all transportation modes.

On May 25, 2016, a transportation open house was held, again in coordination with the Bastrop County Transportation Plan, to unveil the results of the public outreach process and provided community members with an opportunity to provide input on transportation goals, performance measures and program of candidate projects.

A final Transportation Master Plan open house was conducted in early October 2016 to present the Transportation Chapter of the Comprehensive Plan to the public along with prioritized goals, objectives and action items. The public was also provided with an opportunity to review and provide feedback on the TMP performance measures and prioritized list of candidate projects as depicted in Figure 1.1.

Figure 1.1: July 2016 Open House

The July Open House was held at the City of Bastrop Public Library and was well attended. Participants were able to review current and future traffic conditions, crash hot spots, the proposed thoroughfare plan and select their Top 5 transportation projects.

Online Stakeholder Engagement

Public input on the Transportation Master Plan was also collected through an online survey. Participants responded to questions ranging from typical commute patterns and use of public transportation to sidewalk connectivity and road maintenance. In addition to the online survey, an online forum using the MySidewalk online platform was used to identify key transportation, land use and urban design opinions in conjunction with the Comprehensive Plan process. Over 950 Bastrop residents posted over 2500 comments to the forum, many of which related to transportation issues and the Transportation Master Plan.

PLANNING PRINCIPLES

The 2016 Transportation Master Plan adheres to several state of the practice planning principles designed to provide the City with the highest possible return on its transportation investment as well as to keep City policies and transportation programs in step with current regional, state and federal transportation programs and policies.

Complete Streets

The 2016 Transportation Master Plan emphasizes the consideration of "complete streets" principles and context sensitive solutions in the development of the future roadway network. Historically, engineers designed roadways primarily to move motorists through the network as quickly and efficiently as possible. As a result, many existing roadways do not address the needs of other modes and users, and therefore, are underutilized. Complete streets principles encourage planners and engineers to consider all transportation modes and users of a roadway when designing streets, including bicyclists, transit riders, pedestrians, motorists, the young, the elderly, the disabled, and the able-bodied.

Polls completed by the National Complete Streets Coalition indicate that 73 percent of Americans feel they have no option but to drive to their intended destination, and 66 percent of Americans desire more transportation options for their community. Moreover, the poll found that a quarter of pedestrian trips are made along roadways where at least part of the route does not contain sidewalks or shoulders, and only 5 percent of bike trips are made in dedicated bike lanes. Designing infrastructure that makes alternative forms of travel more convenient, attractive, and safe for Bastrop's residents is essential to maintaining a strong, livable community.

It is important to note that a complete streets approach to roadway design also takes into consideration the appropriateness of various modes and users based on roadway function and context. For example, pedestrian sidewalks and bike lanes may not be appropriate along urban principal arterials, given their intended function of serving long range regional trips and accommodating motor vehicles at high volumes and speeds. However, consideration should still be given to the appropriateness of parallel facilities for accommodating other modes and users. Moreover, while an urban principal arterial may not be an appropriate context for bicycle or pedestrian facilities, a rural highway may offer opportunities to accommodate these modes, as traffic volumes are often lower. "Complete streets" principles emphasize the importance of flexibility in applying design standards and guidelines.

In addition to complete streets considerations, the 2016 Transportation Master Plan incorporates a context sensitive approach to roadway planning and design that encourages the integration of aesthetic, historical, and environmental considerations along with safety and mobility goals. In essence, context sensitive solutions go beyond only serving transportation mobility objectives and work towards achieving a variety of community goals that influence quality of life. Figures 1.2 and 1.3 show two different complete streets principles.

Common standards for context sensitive thoroughfare design from the Institute for Transportation Engineers (ITE) include:

- Balance between safety, mobility, community, and environmental goals in all projects;
- Involvement of the public and stakeholders early in the process and throughout planning and project development phases;
- Use of a multidisciplinary team tailored to project needs;
- Inclusion of all modes of travel including pedestrians, transit/paratransit, bicycles, private motor vehicles, and freight;
- Accommodation of all types of travelers including young, old, and disabled, as well as able bodied adults safely, conveniently, and comfortably on all thoroughfares;
- Application of flexibility inherent in design guidelines and standards; and
- Incorporation of aesthetics as an integral part of good design.

Through the coordination with the Comprehensive Plan and Bastrop County Transportation Plan, this TMP used Complete Streets principles to ensure the vision of the community was incorporated into the TMP projects.

Figure 1.2: Complete Streets Principle - Roundabouts

Roundabouts are a relatively low-cost improvement that increase safety by reducing traffic conflicts that are frequent causes of crashes at traditional intersections. (Source: Wiki- media Commons)

Figure 1.3: Road Diets

Smaller roadway widths, parallel parking that acts as a buffer between pedestrians and traffic, and wide sidewalks are examples of context sensitive design standards appropriate for urban activity centers. (Source: Jeffrey Beal; Wikimedia Commonshttp; creativecommons.org/licenses/by-sa/3.0/legalcode)

Performance Management

Performance-based transportation planning uses data on the performance of the transportation system to identify, evaluate, and prioritize strategies to achieve desired outcomes and track progress over time. The primary rationale behind this approach to transportation planning is that transportation investment decisions should be closely tied to achieving specific outcomes.

Performance management, outcome based planning, is a key feature of the federal surface transportation statute Funding Americas Surface Transportation System (FAST) Act. The process of planning, evaluating, monitoring outcomes and improving processes is not only used to achieve national goals to improve safety, reduce congestion and expedite project delivery, but is also part of the federal funding program supported by the legislation.

The TMP applies, in a modified form customized to City circumstances, these best practice performance management principles to evaluate the anticipated outcomes of the Plan in achieving the community vision articulated in the Comprehensive Plan and Transportation Master Plan. This application of best practice performance management principles will promote consistency with federal, state and regional funding programs; position City projects to be competitive in these programs; and ensure that the City optimizes the return on its transportation investments, not just in monetary value, but also in safety, ease of travel, economic vitality and quality of life.

CAMPO Platinum Planning Principles

The Transportation Master Plan is coordinated with regional planning efforts to ensure connectivity to the transportation systems outside of the City. In addition, coordination with CAMPO transportation planning efforts, especially CAMPO's 'Platinum Planning' principles, will make possible the financial support of regional, state, and federal transportation funding programs for regionally significant projects contained in the Plan. CAMPO's Platinum Planning Principles are a set of best practice concepts designed to seamlessly integrate transportation planning, land use and other elements of the planning process into a comprehensive vision for the regional community.

This holistic look at market forces acting on the transportation system inherent in the Platinum Planning Principles allows transportation investments to be identified and prioritized using performance measures and criteria based on a broad spectrum of community values and objectives that integrate transportation, land use, and economic development planning efforts.

The concurrent development of the Transportation Master Plan and the Comprehensive Plan as companion documents is specifically Intended to support these Platinum Planning objectives and to also help the City achieve its vision providing a complete multimodal transportation system that moves people and goods safely and in comfort on modes the people prefer to use and for travel purposes they choose.

Figure 1.4: CAMPO Platinum Planning Principles

CAMPO's Platinum Planning Program is a comprehensive, detailed, multi-modal transportation planning process for CAMPO's six- county region. 'Platinum Planning' is a progressive, integrated, and inclusive process that examines transportation, land use, and other planning areas. Recommendations from plans completed through the Platinum Planning Program will be used in CAMPO's 2045 Regional Transportation Plan and certain projects may be eligible for future CAMPO-allocated Federal funding. 'Platinum Planning' Elements include:

- Multi-modal and Mixed-Use – Create connections to housing, jobs, and services through the establishment of dynamic mixed-use environments, well-connected street grids, high quality transit options, as well as safe and useful pedestrian/bicycle accommodations
- Housing – Develop a mix of housing types and price points appropriate for the study area context that provides living options that can accommodate a variety of incomes, abilities, and familial types.
- Environment – Create a healthy environment that proactively protects and enhances air, water, land, and people.
- Economic Development – Promote the economic competitiveness of the study area to yield positive impacts on the local tax base, high-quality jobs, and community services.
- Equity – Create positive social, economic, and environmental outcomes for all

TRANSPORTATION MASTER PLAN GOALS

Setting clear goals provides a strong foundation for any successful planning effort. The goals for the 2016 Transportation Master Plan were developed after reviewing other local and regional planning documents, and gathering input from the steering committee and the public. The final set of goals, which was carefully integrated with the other comprehensive plan goals, was reviewed and approved by city staff and the steering committee.

Goal 1: Manage traffic congestion and improve system reliability.

Reducing congestion and decreasing travel times contributes to a more mobile community, where people and goods can reach their destinations quickly and with ease. Reliability relates to prioritize improvements that reduce or manage incidents to provide consistency or dependability of travel times.

Goal 2: Enhance transportation system connectivity.

Connectivity refers to the density of connections in path or road network and the directness of links. As connectivity increases, travel distances decrease and route options increase, allowing more direct travel between destinations.

Goal 3: Preserve and maintain existing transportation assets.

The City transportation system is a valuable asset that, if properly maintained, contributes to economic development and quality of life, and maximizes the efficiency of the existing transportation system.

Goal 4: Improve the safety of the Bastrop transportation system for all users.

Providing safe and convenient travel options means prioritizing improvements that will reduce the number or rate of vehicular or pedestrian/bicycle crashes.

Goal 5: Improve active transportation options.

Creating a well-connected network of on-street bicycle and pedestrian facilities for all ages and abilities will enhance both transportation options and community active lifestyle opportunities.

Goal 6: Expand and enhance transit services.

As a large portion of the residents of the City of Bastrop work in the City of Austin, expanding and enhancing commuter transit services would provide expanded opportunities for commuters and reduce the number of vehicles congesting the roadways. Within the City, enhancing bus stops and increasing local transit options will make transit more enticing as a transportation option.

Goal 7: Enhance multi-modal freight capacity

Because freight movement and routing is a regional issue, the City has little influence over the routing and magnitude of freight flows. However, one aspect of freight activity that the City can address is operational and geometric improvements to reduce conflicts and improve system functionality within the City.

Goal 8: Build a network of complete streets and preserve quality of place

By incorporating Complete Streets principles in the design and construction of roadway projects, both new and retrofit, wherever possible the City will enhance and preserve the quality of place that is so important to City residents.

Goal 9: Support City's land use, economic development and urban design goals.

Transportation projects that support land use goals take into account where growth is expected to occur, and what types of land uses (residential, commercial, or industrial) are anticipated within the various areas of the City.

THOROUGHFARE PLAN GOALS AT A GLANCE

1. Reduce **Congestion**
2. Promote System **Connectivity**
3. Promote **Reliability**
4. Provide **Safe** Travel Options
5. Improve **Active Transportation**
6. Enhance **Transit Service**
7. Enhance **Freight** Efficiency
8. Build **Complete Streets**
9. Support **Land Use** and **Economy**

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2

Existing Conditions

Land Use and Transportation Facilities

To better understand the transportation system within the study area, the study team, working with City staff, stakeholders and the public, performed a collaborative assessment of transportation conditions within the City and its ETJ to prioritize critical locations for further technical analysis. This chapter provides an analysis of current traffic capacity and operational deficiencies; a discussion of current conditions related to non-auto modes including transit, bicycles, pedestrians; and an analysis of safety and high crash locations.

In addition to technical analysis, the study team relied heavily on local stakeholder and public input to understand transportation system conditions and identify critical locations. A selection of relevant stakeholder comments is included throughout the chapter.

Figure 2.1: Hasler Boulevard Traffic

Hasler Boulevard traffic conditions at SH 71 on a weekday off-peak period

EXISTING TRAFFIC CONDITIONS

The following section discusses existing traffic conditions in the Bastrop area, including traffic patterns, capacity deficiencies, and operational deficiencies. Travel patterns and capacity deficiencies were identified through travel demand modeling to obtain total daily traffic flows and approximations of AM and PM peak period conditions, while preliminary operational deficiencies were identified through an analysis of publicly available real-time traffic data. In addition to the technical analysis performed by the project team, comments from local stakeholders and the public informed the identification of critical locations in the area.

Travel Patterns

Estimates of daily traffic volumes on state highways and major arterials were derived by applying the approved 2040 CAMPO Regional Travel Demand Model (TDM), which uses 2010 as the base year. Daily traffic flows, which are shown in Map 2.1 help the study team better understand macro level travel patterns in the study area.

These results show that SH 71 and SH 21 are the most heavily used roadways in the study area (see example in Figure 2.1), which is to be expected as these roadways serve as major linkages between the population centers of Austin and Houston, and San Marcos and Bryan College Station, respectively. Other heavily traveled roadways in the area include SH 95 between Bastrop and Elgin; FM 969, which links Bastrop to Austin; and SH 304 just south of the Bastrop study area.

2010 US Census estimates that over 55% of all workers age 16 and over who reside in Bastrop work in areas outside of the city, and more than 46% alone work in Austin. This underscores the importance of SH 71 for the local economy as it acts a as a crucial corridor for Bastrop residents who commute to and from the Austin metro for work. Table 2.1 shows the top cites where Bastrop residents work.

Map 2.1: 2010 Daily Traffic Flows

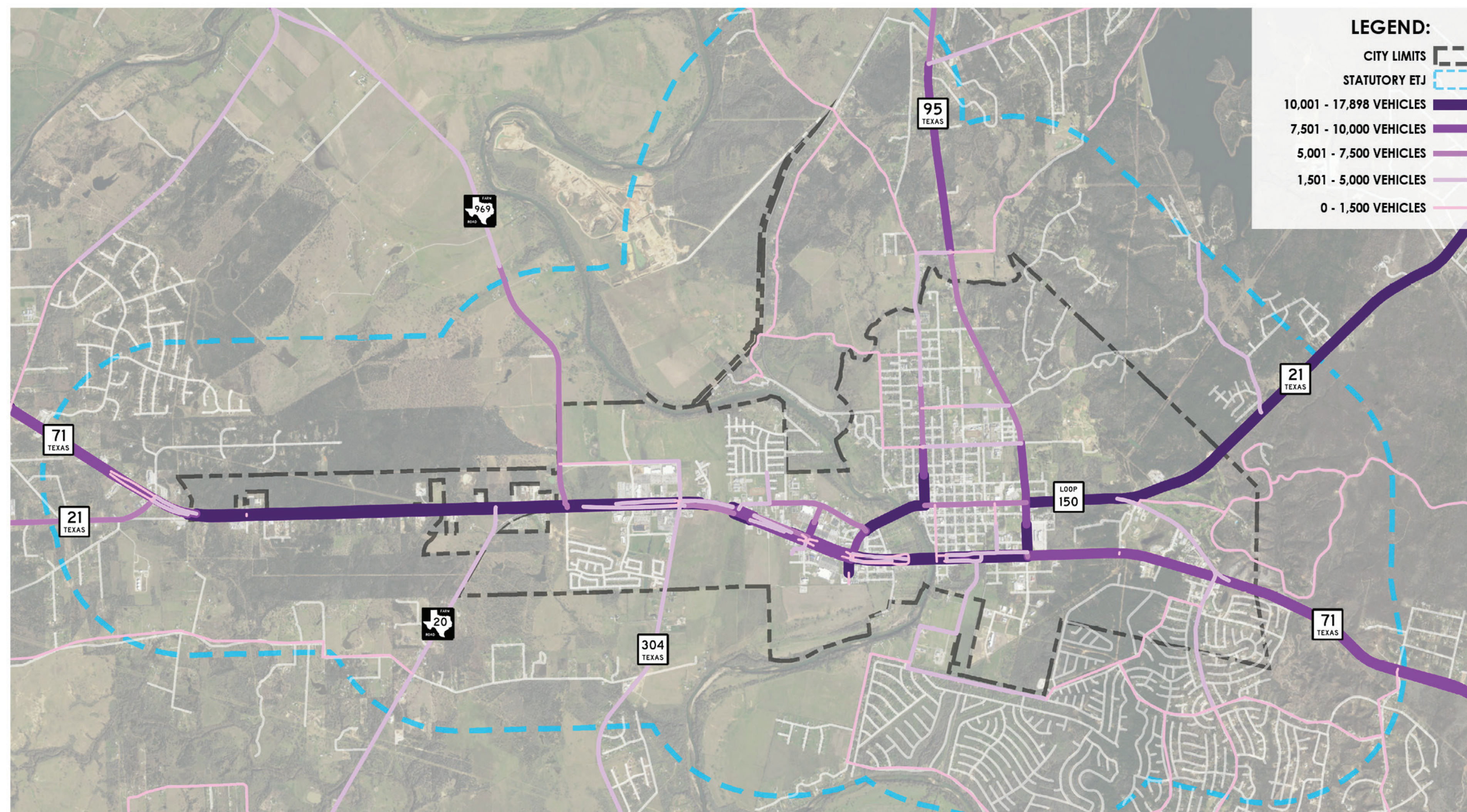


Table 2.1: Workplace of Bastrop Residents Age 16 and Over, 2010

COMMUNITY INPUT	
WORKPLACE	ESTIMATED WORKERS
Austin, Texas	1,275
Bastrop, Texas	1,210
Manor, Texas	45
Smithville, Texas	45
Round Rock, Texas	35
Camp Swift, Texas	25
Elgin, Texas	20
Giddings, Texas	20
Wimberly, Texas	15
Wyldwood, Texas	15

Existing Capacity Deficiencies

The CAMPO TDM was used to identify roadway capacity deficiencies in the Bastrop study area by calculating roadway Level of Service (LOS), which is a qualitative measure that characterizes conditions within a traffic stream and how those conditions are perceived by users of the facility. Level of Service is measured on an A to F scale, and is calculated as the ratio of traffic volume to roadway capacity, with a ratio above 1.0 generally signifying congestion on a particular roadway. Level of Service A describes free flow conditions with low volumes and high speeds, while LOS F describes severe congestion with stop-and-go traffic. Typically planning agencies strive to achieve between a LOS C and D when planning for future roadway capacity, striking a balance between throughput and acceptable travel times.

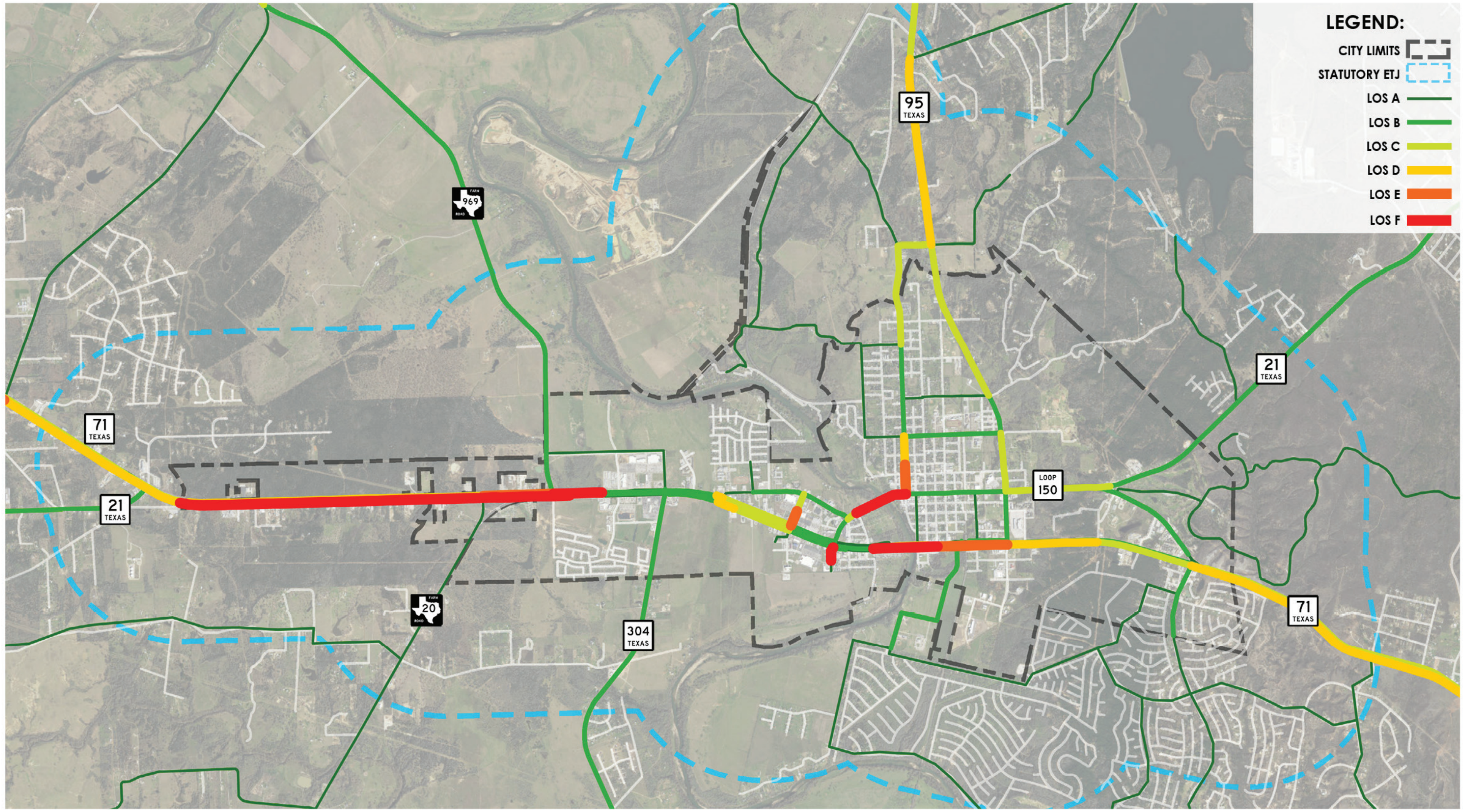
Maps 2.2 and 2.3 show the 2010 roadway LOS for state highways and principal arterials in the Bastrop area during the AM and PM peak periods, respectively.

Preliminary Operation Assessment

The study team undertook a preliminary assessment of operational conditions in the study area by analyzing real-time traffic conditions through the Google Traffic application in Google Maps . The application's traffic algorithm calculates average travel speeds along certain roadways using GPS location data collected anonymously from users of Android smartphones who opt in to sharing their location data. By comparing observed travel times to historical data, the algorithm identifies road segments where vehicles travel slower than expected and applies a color to those segments indicating traffic conditions. Green, for example, indicates free-flow conditions, while red signifies heavy congestion. A discussion of a few locations with potential operational deficiencies identified through this analysis is presented below.

Map 2.2: 2010 AM Level of Service

Map 2.3: 2010 PM Level of Service



Operational Assessment Results

The intersection of SH 95/21 and SH 71, along with SH 95/21 and Chestnut Street, were the most frequently mentioned locations by stakeholders and the public as areas with operational issues. Analysis of the traffic data confirmed congestion at these locations, which is particularly pronounced in the AM and PM peak periods (see Figure 2.2). Drivers turning left from SH 71 onto SH 95/21 frequently experience intersection delay, often for multiple signal cycles, as do drivers turning left onto SH 71 from SH 95/21. Other likely causes of delay in this area are ingress/access issues associated with the Bucee's on the east side of SH 95/21, as well as traffic entering/exiting Emile Elementary on the west side of the road. It should be noted that an overpass at SH 71 is programmed to begin in December 2015, which should benefit through traffic. Figure 2.2 shows typical traffic on SH 95 and the surrounding roadways.

Congestion on Chestnut Street through downtown Bastrop was a frequent concern raised by stakeholders and the public, and confirmed through the traffic data. In field reviews the project team noticed that delays are often caused by drivers trying to make left turns from Chestnut, which causes long backups for other drivers. Delays may also be caused by signal timing issues. Figure 2.3 shows congested segments on Chestnut Street.

Delay along Old Austin Highway was frequently observed during peak periods, as well as in the midafternoon, which is presumably due to the end of the school day at nearby Bastrop Intermediate School and Bastrop Middle School (see Figure 2.4). Delays were also seen at the Loop 150 Interchange, which could be due to operational deficiencies.

Figure 2.2: SH 95 and Vicinity (Typical Traffic, Mondays at 5:50 PM)

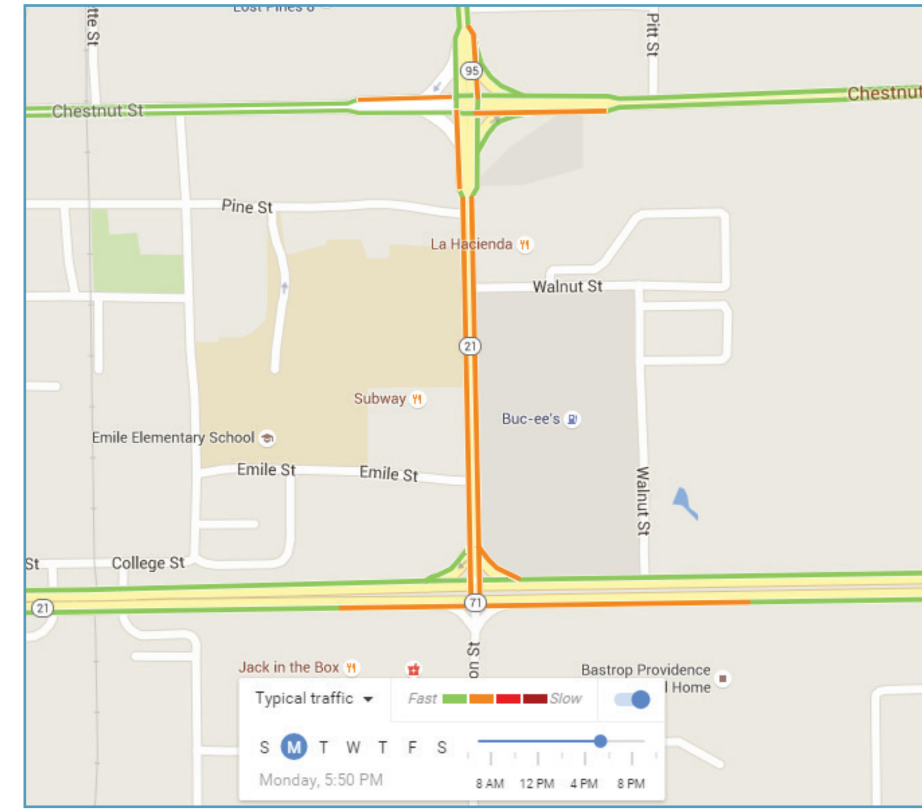


Figure 2.3: Chestnut Street (Live Traffic, Tuesday 10/27/2015, 3:15PM)

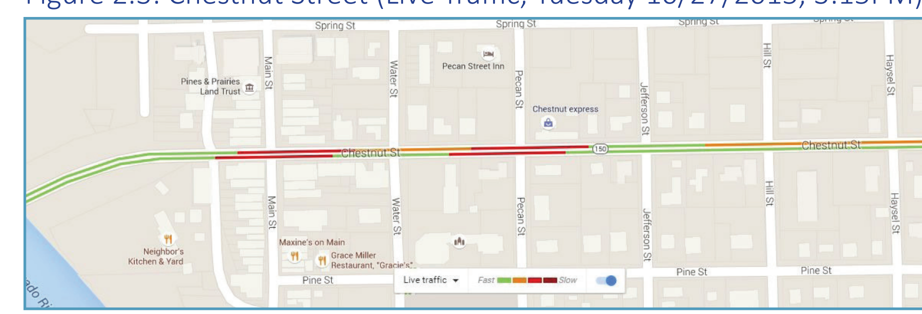
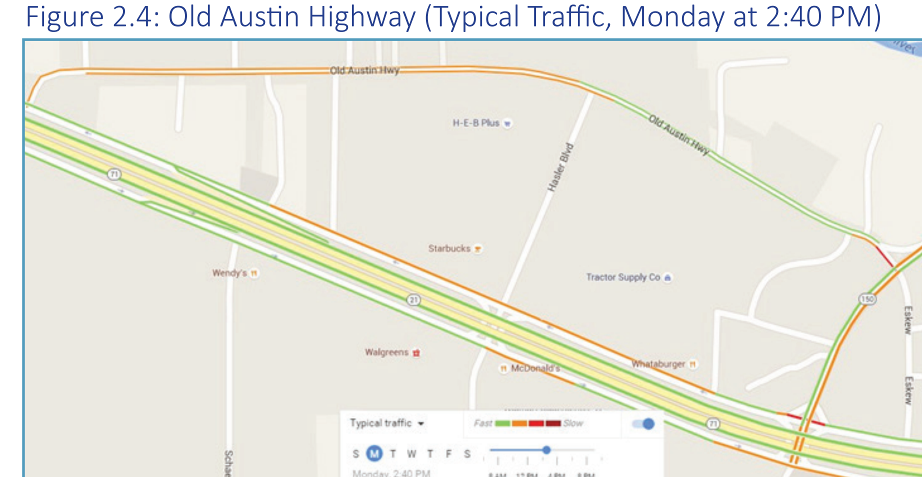
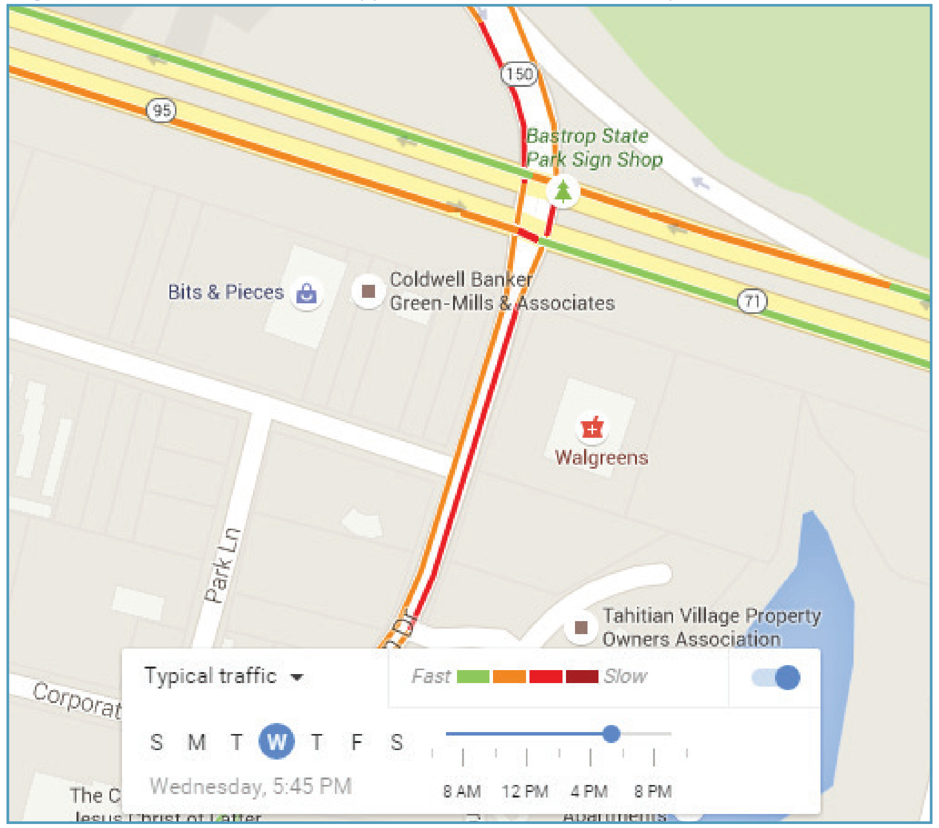


Figure 2.4: Old Austin Highway (Typical Traffic, Monday at 2:40 PM)



Congestion at Tahitian Drive and SH 71 is seen at various times during the day, and is especially pronounced during peak periods (see Figure 2.5 below). Stakeholders and the public frequently mention this intersection as having operational problems, including signal timing issues.

Figure 2.5: Tahitian Drive (Typical Traffic, Wednesday at 5:45 PM)

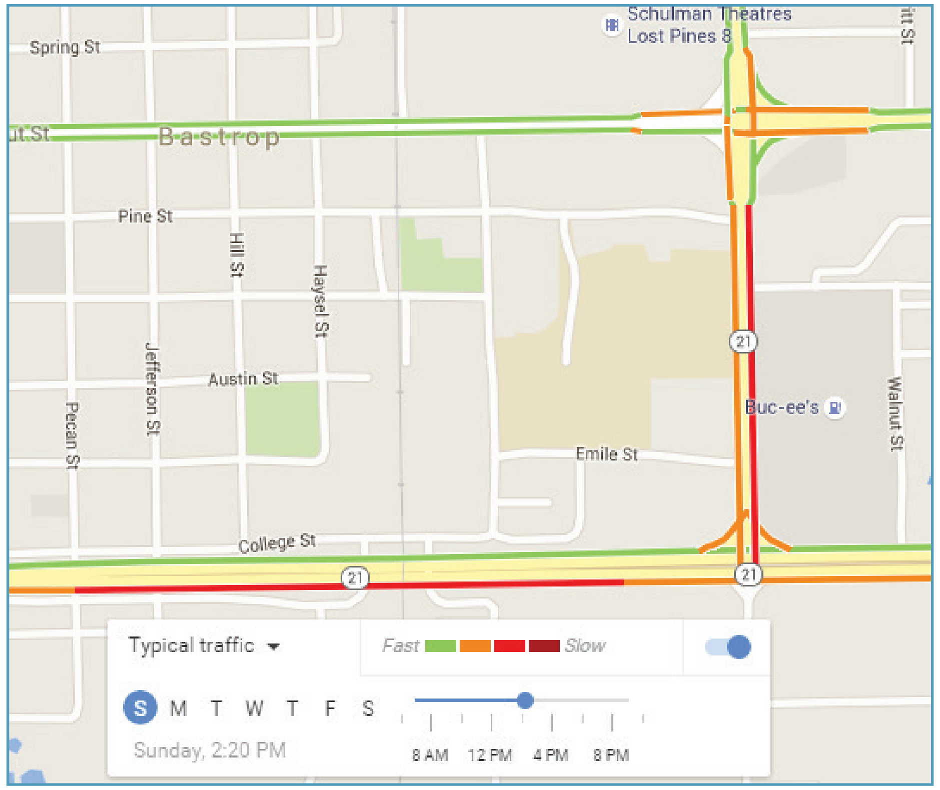


Many stakeholders made comments about the considerable amount of weekend traffic in the area of Bastrop State Park associated with tourists and special events. Traffic on Friday evening and Sunday afternoons were specifically mentioned as time periods where congestion can be an issue. Figure 2.6 shows typical traffic for Sunday afternoons at the SH 71/21 intersection with SH21/95.

From the traffic data analysis and stakeholder input, the following intersections represent the project team's preliminary list of intersections that warrant more detailed operational analysis.

- Chestnut Street Corridor From Colorado River to SH 21/SH 95
- SH 21/SH 95 Corridor from SH 71 to Chestnut Street
- SH 21 at Loop 150 Intersection near Bastrop State Park
- Tahitian Drive at SH 71 Intersection
- Edward Burleson at SH 71 Service Road Intersections
- Old Austin Highway at SH 71 Service Road Intersection (Right-Turn Only)

Figure 2.6: Weekend Traffic at SH 71 and SH 21 (Typical Traffic, Sunday at 2:20 PM)



- Old Austin Highway at Eskew and Loop 150 Intersection
- Childers Drive at SH 71 Service Road Intersections

The locations identified through this analysis represent a preliminary list of critical locations used as the starting point for further analysis throughout the planning process. As part of the technical analysis of current and future conditions, problem locations identified in this Chapter were investigated more fully using microsimulation and dynamic traffic assignment tools. The results of this effort are described in the Operational Analysis section of Chapter 4 Needs Assessment.

CONNECTIVITY AND EMERGENCY ACCESS

In addition to roadway capacity and operational characteristics, connectivity between and accessibility to destinations are crucial factors for the ability of the transportation system to serve the needs of area residents and businesses. This section discusses current conditions of the Bastrop transportation system related to connectivity and emergency access. Connectivity refers to the directness of links and the density of connections in the transportation system, while emergency access refers to the ability of emergency responders to reach all areas of the city in a reasonable amount of time under emergency conditions.

Connectivity

A frequent concern raised by local stakeholders and members of the public is the lack of connectivity in the Bastrop street network. Residents have expressed a strong desire for increased sidewalk connectivity between key destinations. Residents have also indicated that the street network needs additional east/west corridors to provide relief from the frequent bottlenecks that occur on Loop 150 and SH 71 at the Colorado River. These two corridors currently represent the only two crossing points for vehicles over the river, although an additional bridge is planned near the XS Ranch development just north of Bastrop. Residents of Tahitian Village have expressed a desire for a bridge to connect their neighborhood to the west side of the Colorado River.

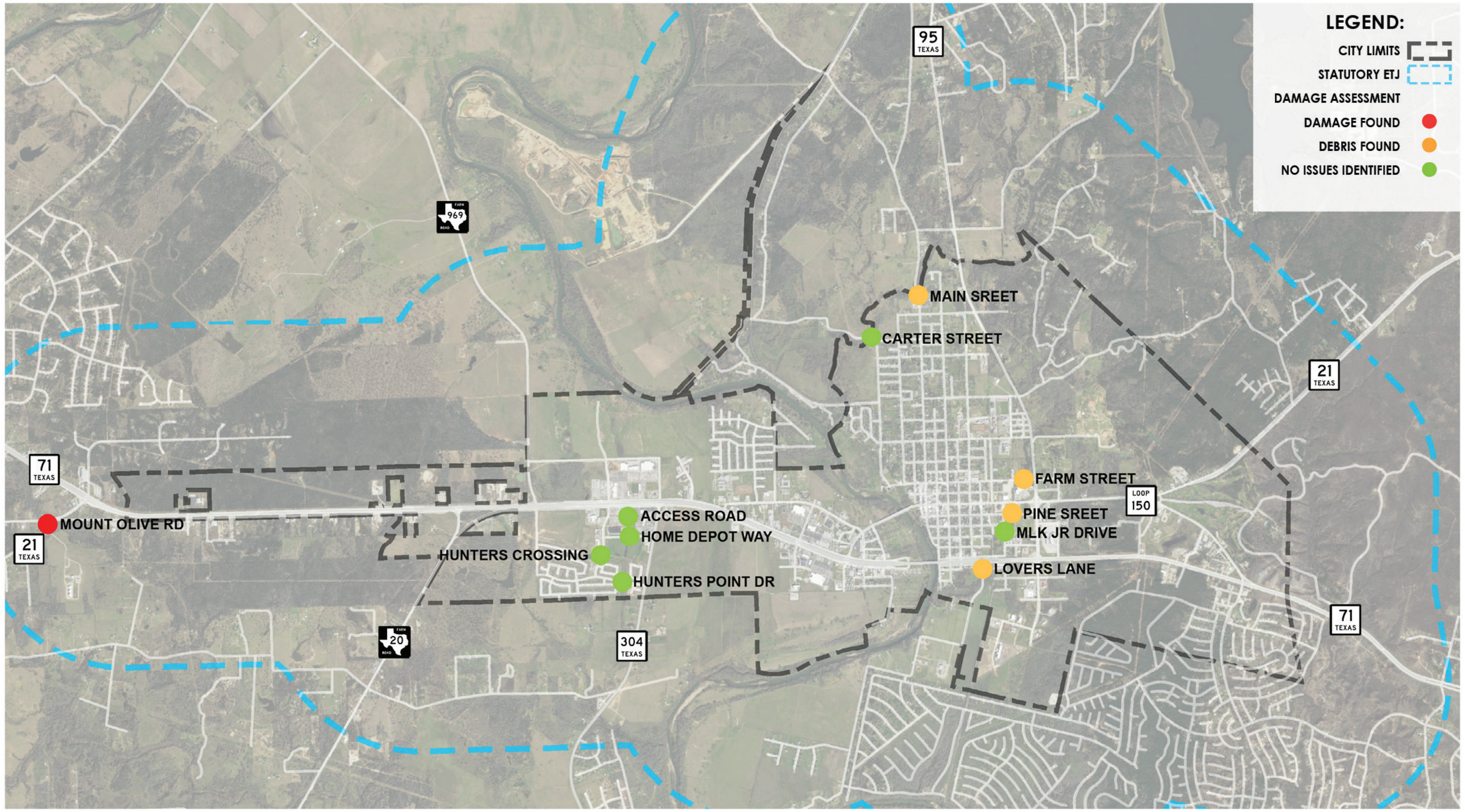
Stakeholders also expressed frustration over the fact that they are forced to use the SH 71 frontage roads to access commercial establishments located along the SH 71 corridor, which include many key destinations for residents, such as the HEB, Wal-Mart, and Home Depot.

Emergency Access

In stakeholder meetings with emergency response representatives, the lack of Colorado River crossings was mentioned as a chief impediment to ensuring rapid emergency response times and providing effective evacuation routes for area residents. Congestion or other incidents that cause delay at Bastrop's two Colorado River crossings are a cause for concern for area emergency response personnel.

In addition to the Colorado River bridges, other smaller bridges and low water crossings represent a potential impediment for emergency access in certain areas of the city during flooding events. The Texas Department of Transportation recently conducted a damage assessment of bridges in the Bastrop area following the May 2015 flooding events in Central Texas. A map showing bridge damage associated with this flooding is presented

Map 2.4: Bastrop Bridge Damage Assessment, June 2015



Source: Texas Department of Transportation, 2015

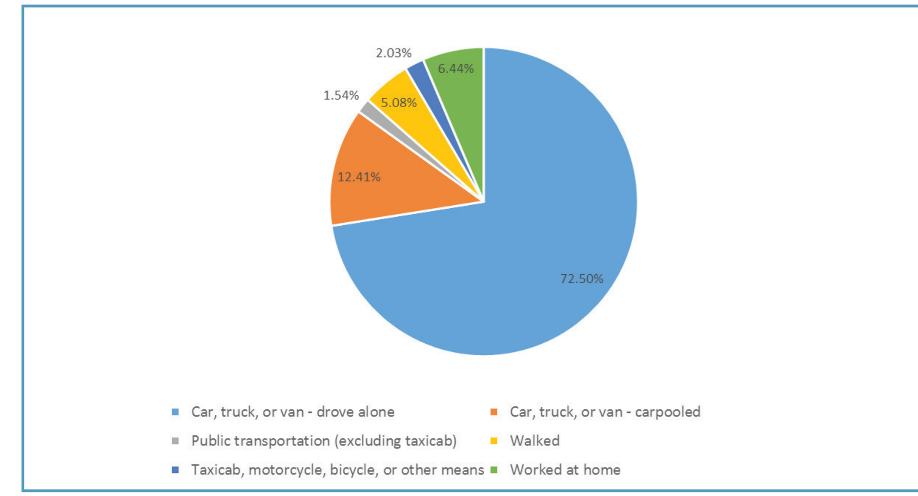
in Figure 2.4. While there were no major access impediments caused by this event, low water crossings and bridges do represent a potential concern for emergency response teams.

In addition to low water crossings and bridges, State Highway 71 was identified as a crucial corridor for emergency response. The only Trauma (Level IV) facility in the area, Seton Smithville Regional Hospital, is located over 12 miles from Bastrop on SH 71. While there are other emergency facilities in the area, none have in-patient services; if a patient were to require admittance to a hospital they would be transferred to an Austin facility. Congestion on SH 71 is, therefore, a potential obstacle to the timely transfer of individuals to Austin area facilities. Emergency response representatives also expressed a desire to improve SH 71 as it is a designated a Hurricane Evacuation Route from the Gulf Coast region.

NON-AUTOMOBILE OPTIONS

While the majority of Bastrop residents either drive alone or carpool to work (see Figure 2.7 below), local stakeholders and the public have expressed a growing desire for additional transportation options in the area. This section describes existing conditions and stakeholder comments related to non-automobile options in Bastrop.

Figure 2.7: Means of Transportation to Work for Bastrop Residents



Source: U.S. Census Bureau, 2009-2013 5-Year American Community Survey Estimates

Bicycle and Pedestrian Conditions

Bastrop residents expressed to the study team a desire for expanded active transportation options in the community, including bicycling and walking. While there are currently low levels of bicycle commuting, Bastrop has a growing recreational cycling community, particularly on weekends. Park Road 1C between Bastrop State Park and Buescher State Park is an especially popular route for cyclists and is part of the annual MS-150 bicycle race from Houston to Austin. The Pedal through the Pines race is also a popular bicycling event in the community. On the pedestrian side, stakeholders want better sidewalk connectivity in neighborhoods and between key destinations.

A recent Surface Transportation Metropolitan Mobility (STP MM) grant was awarded to Bastrop to enhance pedestrian connectivity between the city and Bastrop State Park. The recently-adopted Downtown Bastrop Form-Based Code requires or recommends sidewalks and/or trails for all new development along priority streets and corridors.

PUBLIC TRANSPORTATION

Public transportation in the study area is provided by Capital Area Rural Transportation System (CARTS), which provides a variety of fixed route and on-call transit services. Below is a brief overview of CARTS services available in Bastrop. Map 2.5 shows current transit coverage within Bastrop.

EXISTING PUBLIC TRANSPORTATION SERVICES

The **Interurban Coach** route is a scheduled service with routes in all six CAMPO counties. The City of Bastrop is served by the 1518 Purple Route and 1519 Blue Route. The 1518 Purple Route offers weekday service between Bastrop and Austin, providing connections to a number of Capital Metro routes, other CARTS connections, and the ACC Riverside Campus. The trip from Bastrop to CARTS Headquarters in downtown Austin is scheduled to take 45 minutes during off peak hours and 1 hour and 15 minutes during peak times. The 1519 Blue Route offers scheduled service from La Grange to Bastrop, with stops in Smithville, on Mondays, Wednesdays, and Fridays. The Blue Route offers connection to the Purple Route in Bastrop for passengers to continue their trip into Austin. The service runs between 7:18 AM and 4:47 PM, offering 4 trips in each direction. The trip between La Grange and Bastrop is estimated to be 47 minutes, regardless of the time of day.

The **Country Bus** is a curb-to-curb service in Bastrop County that can be reserved by phone. The service is for disabled individuals or others requiring additional assistance. Bastrop has local service (within city limits) and county connector service, which provides rides to and from nearby cities and towns within Bastrop County and neighboring counties.

A **Municipal Bus** service offers daily, fixed route, intracity service within Bastrop. The Bastrop service has three lines offering service between 7:30 AM until 5:30 PM with a midday service break between 11:30 AM and 12:30 PM. Each bus is equipped with bicycle racks and ADA accessible ramps. The flat fare is $1.00, and with some eligible rider's fare being reduced to $0.50.

Weekday **Commuter** service is provided from Bastrop into downtown Austin Monday through Friday. In order to ride the commuter bus, users must purchase a monthly subscription that costs $120.00.

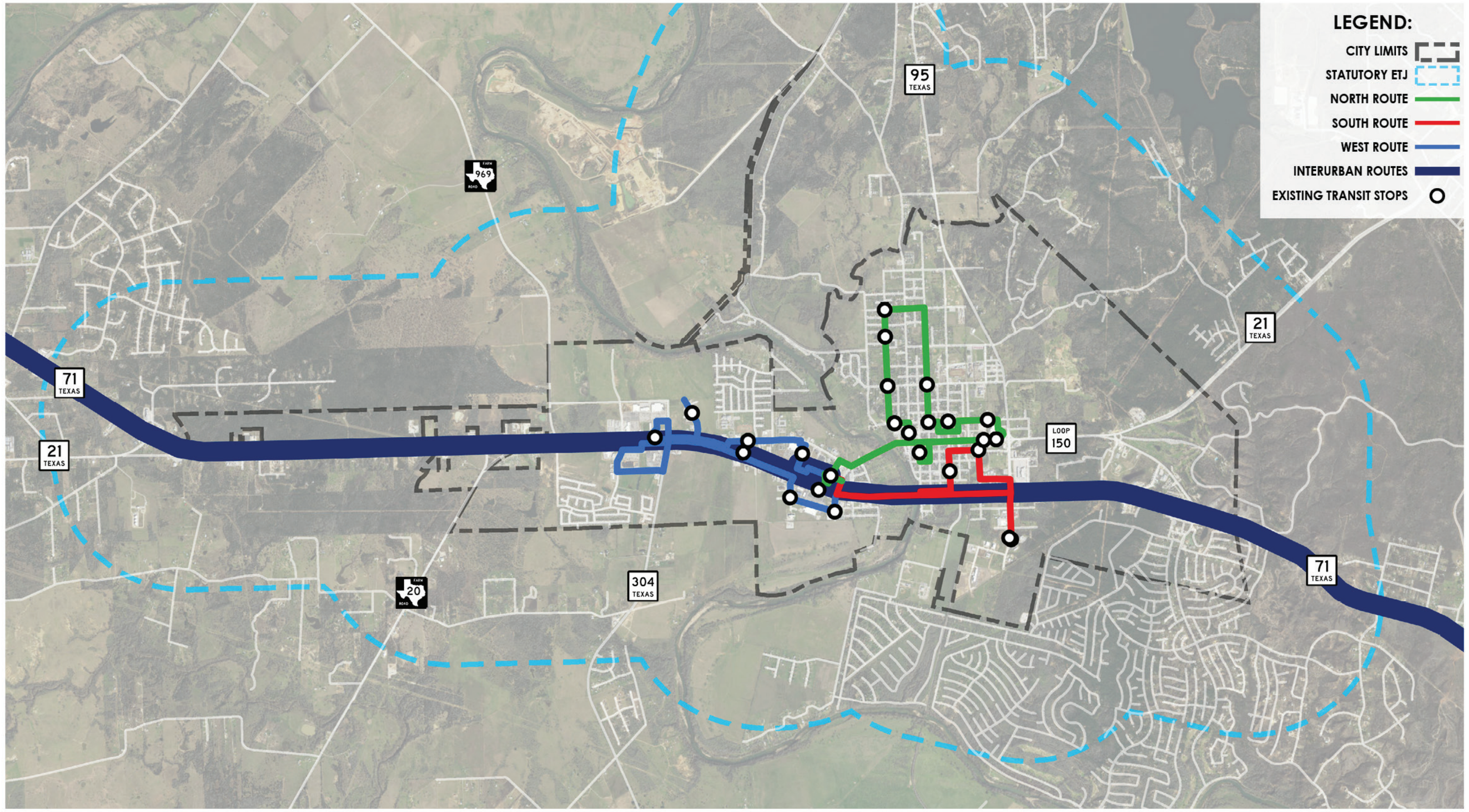
A **Grasshopper** service for Interurban Coach users to provide a connecting ride between Austin CARTS Headquarters and medical appointments or other nearby business in Austin. Grasshopper service must be booked in advance and passengers must meet certain eligibility requirements.

Lastly, CARTS offers door-to-door **medical transportation** for appointments and other non-emergency medical services for the Texas Department of Health and Human Services (HHSC). This service is free for eligible users but must be arranged by the HHSC call centers.

Stakeholder Comments on Public Transportation

Stakeholders in Bastrop have indicated a strong desire for expanded public transportation options to provide connections both within the city and to areas outside of the city. Potential riders have suggested that the lack of flexibility in terms of departure and arrival times of existing services deters them from using the bus. Multiple stakeholders expressed a desire for better intercity bus service and park and ride locations, along with a service linking Bastrop to Elgin and the ACC campus. Within the city, a number of stakeholders believe that low income and elderly residents would benefit from expanded public transportation coverage, especially if the service provided connections to critical locations such as the HEB, Wal-Mart and doctors' offices on SH 71.

Map 2.5: Existing Transit Service, City of Bastrop TMP Study Area



SAFETY

Analysis conducted as part of the CAMPO 2040 Regional Transportation Plan revealed that Bastrop County, of which Bastrop is the County Seat, has a higher fatality rate per vehicle mile traveled than the rest of the counties in the CAMPO region. Indeed, safety concerns related to the transportation system were frequently mentioned in conversations with Bastrop area stakeholders and members of the public. In order to better understand safety conditions of the Bastrop transportation system, the study team focused on two main areas: 1.) an analysis of crash locations in the city to look for crash patterns and trends, and 2.) stakeholder and public input to provide additional information on particular safety-related concerns that may otherwise not be revealed by the crash analysis. This section presents the results of this analysis.

Crash Analysis

To gain a better understanding of crash patterns and causes in the Bastrop study area, the project team analyzed crash information from the Texas Department of Transportation's (TxDOT) automated, statewide Crash Records Information System (CRIS). The CRIS database compiles information from the Texas Peace Officer's Crash Reports, which law enforcement agencies are required to complete whenever a crash occurs. Bastrop crash data from between 2010 and 2015 was reviewed for this analysis.

Total Crashes, School Bus Crashes, and Resulting Injuries

Table 2.2 presents a summary of the total number of crashes, including school bus crashes, occurring in Bastrop and its ETJ between 2010 and 2015, broken out by injuries, incapacitating injuries and fatalities. TxDOT defines an incapacitating injury as, "any injury, other than a fatal injury, which prevents the injured person from walking, driving or normally continuing the activities he was capable of performing before the injury occurred."

Map 2.6 shows the location of non-injury crashes, incapacitating injury crashes, and fatal crashes within the Bastrop ETJ during 2010 through 2015.

Table 2.2: Crashes and Resulting Injuries by Type; Bastrop & ETJ (2010-2015)

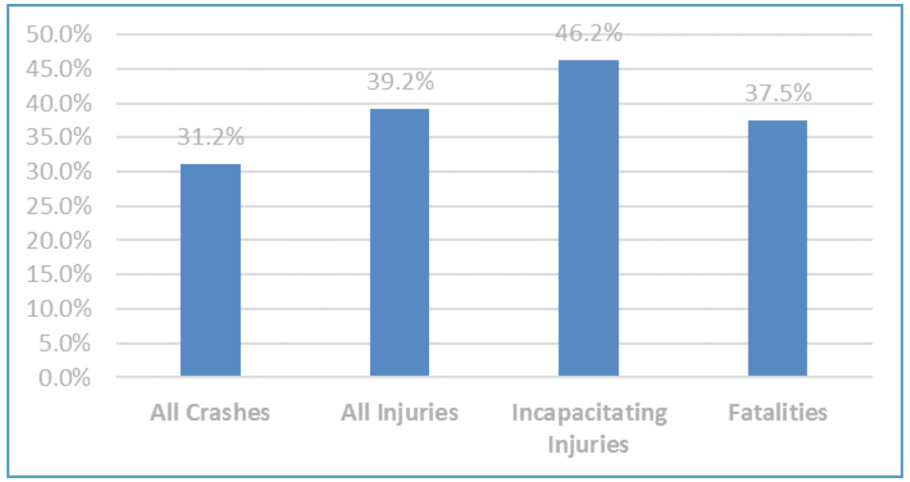
TYPE OF CRASHES AND RESULTING INJURIES				
	TOTAL CRASHES	ALL INJURIES	INCAPACITATING INJURIES	FATALITIES
Involving School Bus	19	7	0	0
Total	2660	976	93	16

Source: TxDOT CRIS Database

Crashes at Intersections

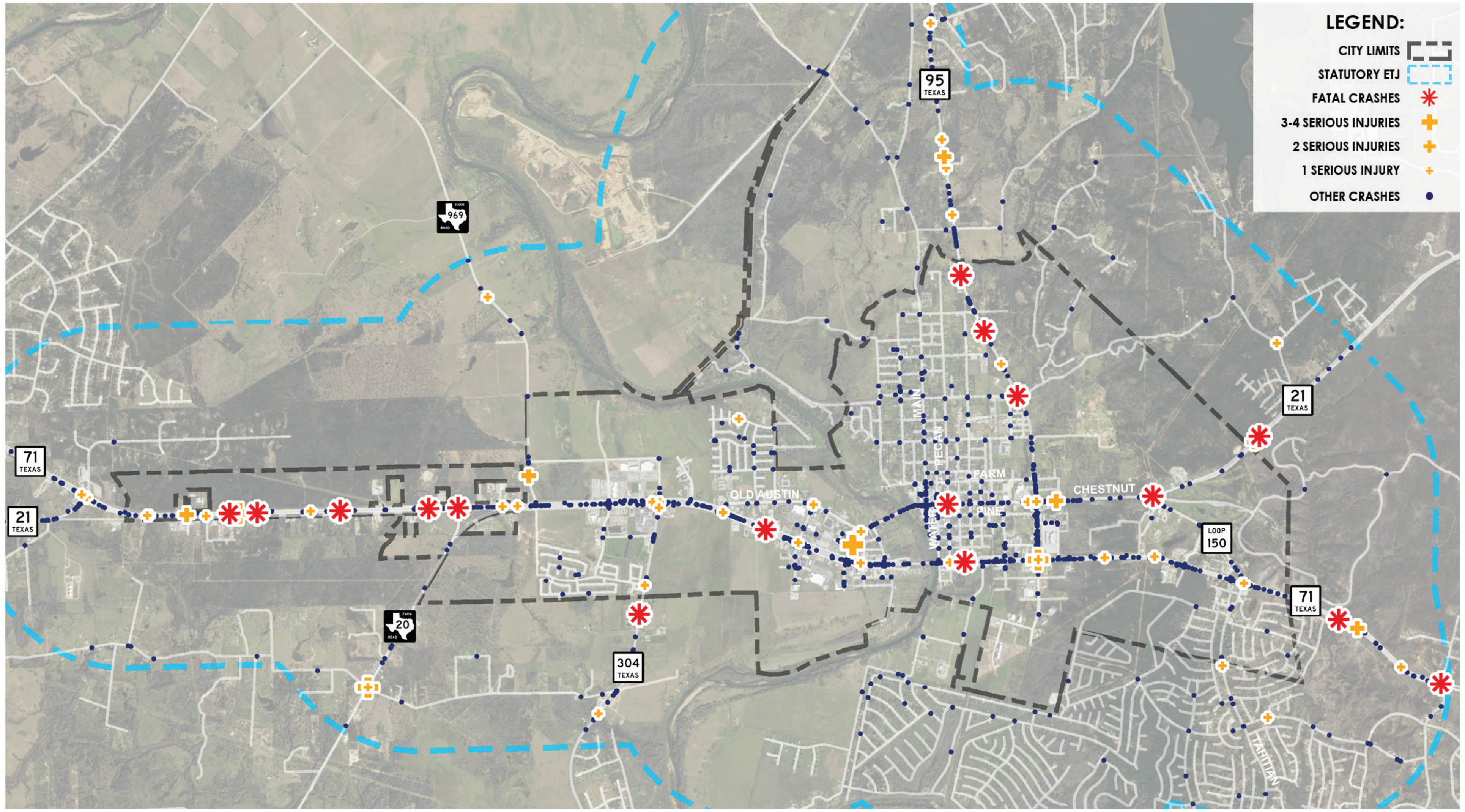
CRIS data contains a flag indicating whether the crash occurred at an intersection. This information was used to determine the percentage of crashes, injuries, and fatalities that occurred at intersections in Bastrop and the surrounding ETJ. The data shows that while only 31.2% of all crashes occur at intersections, 39.2% of all injuries and 37.5% of fatalities occur at intersections, suggesting that crashes occurring at intersections are more likely to result in injury or death than non-intersection crashes. Figure 2.8 shows the percentage of crashes at intersections.

Figure 2.8: Percent of Crashes and Injuries Occuring at Intersections; Bastrop & ETJ (2010- 2015)



Source: TxDOT CRIS Database

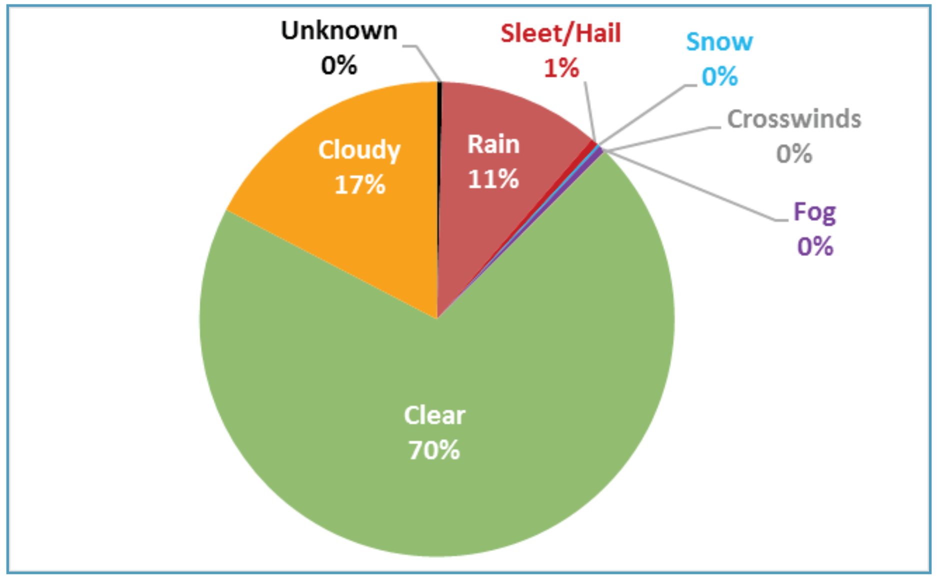
Map 2.6: Crash Locations by Injurty Type, Bastrop & ETJ (2010 - 2015)



Weather Related Crashes

Approximately 87% of crashes occurred during clear or cloudy conditions, while 13% occurred during weather events. Rain was the most common weather condition during crashes (11%). Figure 2.9 shows weather conditions during crashes from 2010-2015.

Figure 2.9: Weather Conditions during Crashes; Bastrop & ETJ (2010-2015)

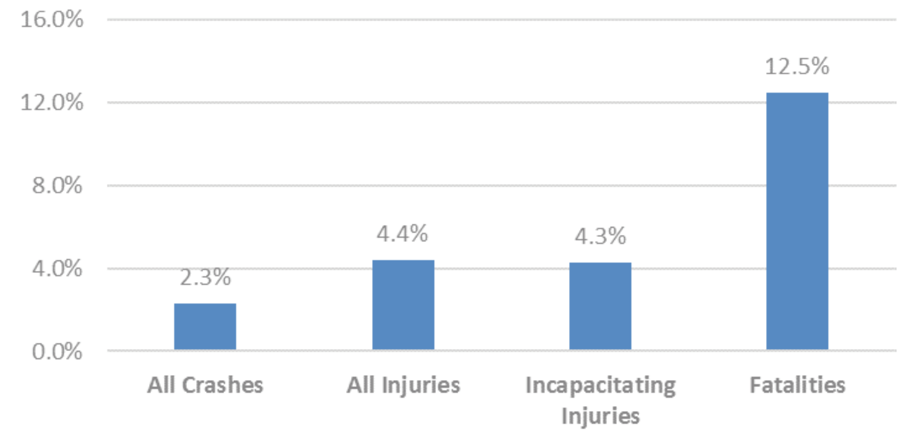


Source: TxDOT CRIS Database

Influence of Drugs and Alcohol

Alcohol and drug impairment make up a disproportionate number of fatalities in Bastrop. While crashes for which the primary cause is alcohol or drug impairment account for less than 3% of all crashes, they account for over 12% of fatalities in the area. Figure 2.10 shows the percentage of crashes and injuries primarily caused by alcohol.

Figure 2.10: Percent of Crashes and Injuries Primarily Caused by Alcohol/Drug Use; Bastrop & ETJ (2010-2015)



Source: TxDOT CRIS Database

Time of Day

Crashes were divided into five times of day to analyze the effect of that variable on crash rates. Table 2.3 below shows the hourly rates for crashes, injuries, incapacitating injuries, and fatalities. This table shows that the PM peak period has the highest number of crashes, injuries, and incapacitating injuries per hour. The AM peak period and Evening period have the highest number of fatalities per hour.

Table 2.3: Hourly Crash Data by Time of Day; Bastrop & ETJ (2010-2015)

TYPE OF CRASHES AND RESULTING INJURIES				
TIME OF DAY	TOTAL CRASHES	ALL INJURIES	INCAPACITATING INJURIES	FATALITIES
AM Peak 6am-9am	92.7	27.3	2.0	1.0
Midday 9am-4pm	166.4	59.3	6.0	0.7
PM Peak 4pm-7pm	217.3	85.3	7.3	0.7
Evening 7pm-9pm	104.5	37.5	5.0	1.0
Overnight 9pm-6am	39.6	16.4	1.4	0.4
Average Rate	**124.1**	**45.2**	**4.4**	**0.8**

Source: TxDOT CRIS Database

Stakeholder Comments

Safety has been a main topic of conversation in all discussions with local stakeholders and the public. The following points provide a summary of the main safety concerns identified through the project team's outreach efforts.

- School bus safety is a major concern for multiple stakeholders. The main concerns are a lack of pedestrian access to bus stops along major roads and the dangerous situation created by motorists passing stopped buses. School bus safety is a concern at the bottom of the hill on Chestnut Street (Loop 150) just east of SH 95, along with the intersection of SH 95 and SH 21.
- A big concern for the transportation system raised by some stakeholders is the proliferation of subdivisions being developed on SH 71. This development creates more intersections and conflict points.
- A number of stakeholders raised concerns about blind corners and high-speed turns. The stakeholders indicated that there have been multiple overturned vehicles at SH 95 and Chestnut Street due to drivers making turns at high speeds.
- One stakeholder thought that there were safety concerns caused by poor pavement conditions over the bridges/overpasses on SH 71.
- Multiple stakeholders identified McAllister Drive and SH 71 as an especially dangerous intersection. They brought up the poor visibility when pulling out of McAllister Drive onto Highway 71 due to overgrown grass and weeds.
- Overgrown grass and trees were also identified as a safety issue at College Road and SH 71. One member of the public expressed a desire for better enforcement of plantings in private yards, as they obstruct the view at stop signs. Trees contribute to poor visibility at intersection of SH 21 and South Shore as well.
- Many residents indicated that SH 95 is becoming a safety problem and that it needs wider shoulders. Safety concerns are mainly due to high speeds and frequent driveways. Drivers often drive on the shoulder of SH 95 and put cyclists at risk.
- Access/egress near commercial areas was identified as a likely cause of crashes by a few individuals.
- One stakeholder identified FM 1209 and SH 71 as a dangerous intersection.

Summary

This chapter presents the results of the study team's existing conditions analysis of Bastrop's transportation system. This analysis represents a collaborative assessment of transportation conditions within the City and extraterritorial jurisdiction (ETJ) and helps to prioritize critical locations for further analysis described in subsequent chapters.

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3

Growth Patterns

Demographic Projections and Planned Growth

LAND USE AND ECONOMIC GROWTH ASSUMPTIONS

The City of Bastrop has grown steadily since the 1990's and has grown from just over 4,000 residents at that time to over 7200 residents today. The future land use growth assumptions and anticipated development patterns used to perform the technical analysis of the transportation system for the Transportation Master Plan are based upon the stakeholder engagement performed, community vision defined, and technical forecasts developed in the Land Use, Housing and Economic Development elements of the Comprehensive Plan. The Comprehensive Plan vision for growth is that the more than two decades of steady growth will continue for the foreseeable future.

By developing the TMP and Comprehensive Plan as parallel companion documents with a common steering committee, joint public meetings and shared assumptions, the City can integrate these diverse elements into a coherent whole that supports the CAMPO Platinum Planning Principles. This parallel planning process promotes a best practice approach to transportation planning by treating the transportation system as part of a community marketplace that only succeeds if its parts seamlessly contribute to the whole of the community vision.

Incorporating the Comprehensive Plan concepts of character areas and other urban design and urban form concepts also provides a foundation for the TMP to incorporate Complete Streets, context sensitive design and active transportation elements into the vision for the transportation system. And because the character areas include locations of intense industrial development, the TMP can also support improved freight movement and access to key industrial and commercial sites to promote economic vitality and an expanding role for the City in the regional marketplace.

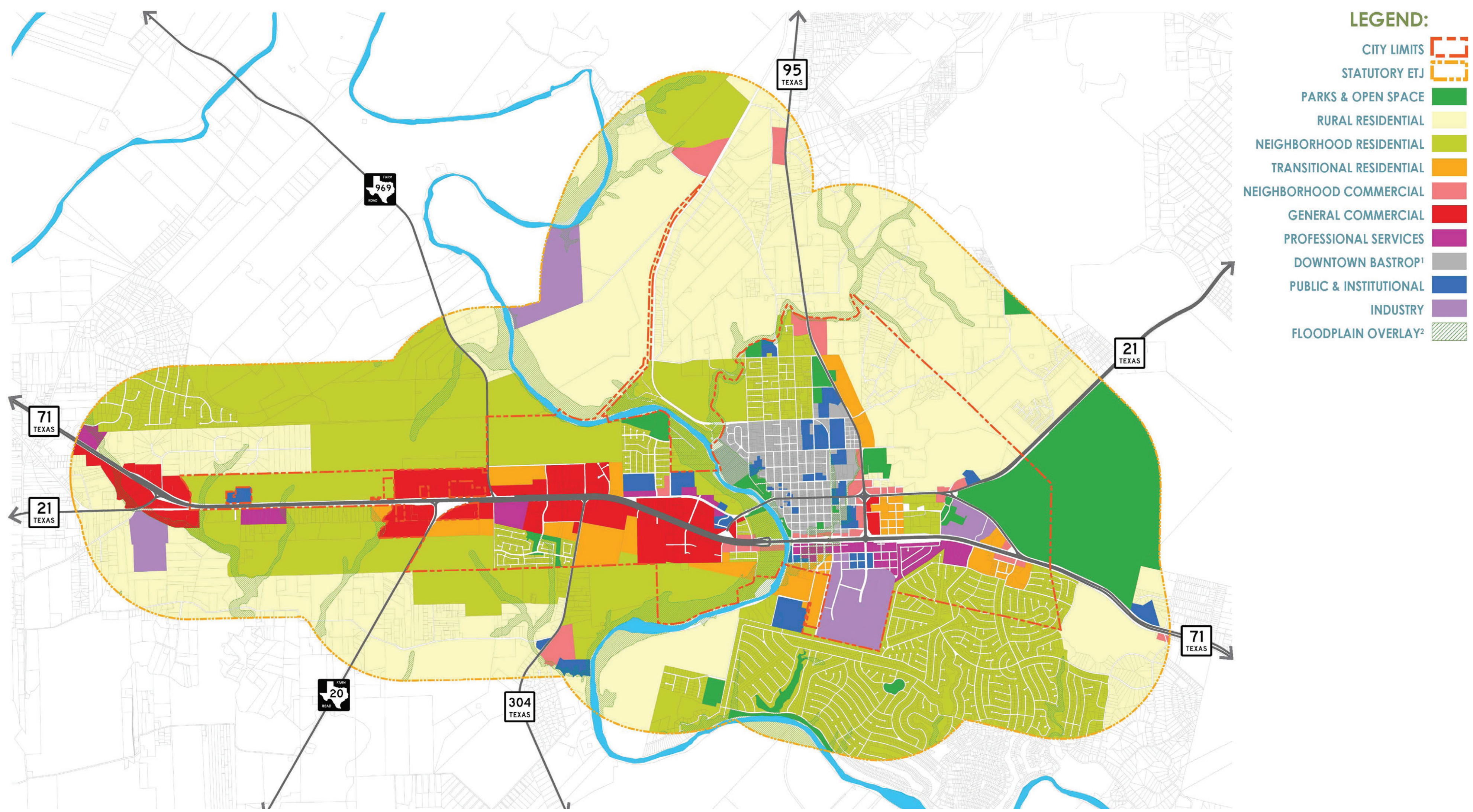
TDM Demographic Refinements

To perform the mobility analysis of the City transportation system described in the next chapter, the study team used the 2040 CAMPO Regional Travel Demand Model (TDM). Among the primary inputs to this travel forecasting model are anticipated future year number and size of households, the number of workers in households and the size and type of employment at the workplace.

Using the anticipated growth patterns and proposed land uses defined in the Comprehensive Plan, the study team was able to refine the distribution of 2040 population and employment data for Traffic Analysis Zones (TAZs) within the City of Bastrop ETJ to provide more detailed resolution for analysis of the City transportation system. As the first step in the analysis, the study team identified TAZs within the ETJ that, based on the Comprehensive Plan, could reasonably be expected to experience limited growth and TAZs where major developments were expected to be completed by 2040. In addition to the material provided by the Comp Plan and supporting analysis, the study team relied on supplemental feedback from stakeholders, local development studies, project location maps, and subdivision plats for guidance on anticipated development patterns.

The next step in the analysis process was to compare the forecasted 2040 population and employment numbers to the original 2010 numbers and determine whether the forecasted growth for specific TAZs reflected the patterns identified in the first step. That is, if the study team identified a TAZ as one that would likely not experience much growth, as suggested

Map 3.1: Future Land Use Map, Bastrop & ETJ (2010 - 2015)



Source: City of Bastrop Comprehensive Plan by stakeholders or another source, that TAZ should not display a high total or percent increase in either population or employment. TAZs with data that did not reflect the growth patterns identified in the first step of the process were considered candidates for refinement (i.e. increasing or decreasing the 2040 population or employment).

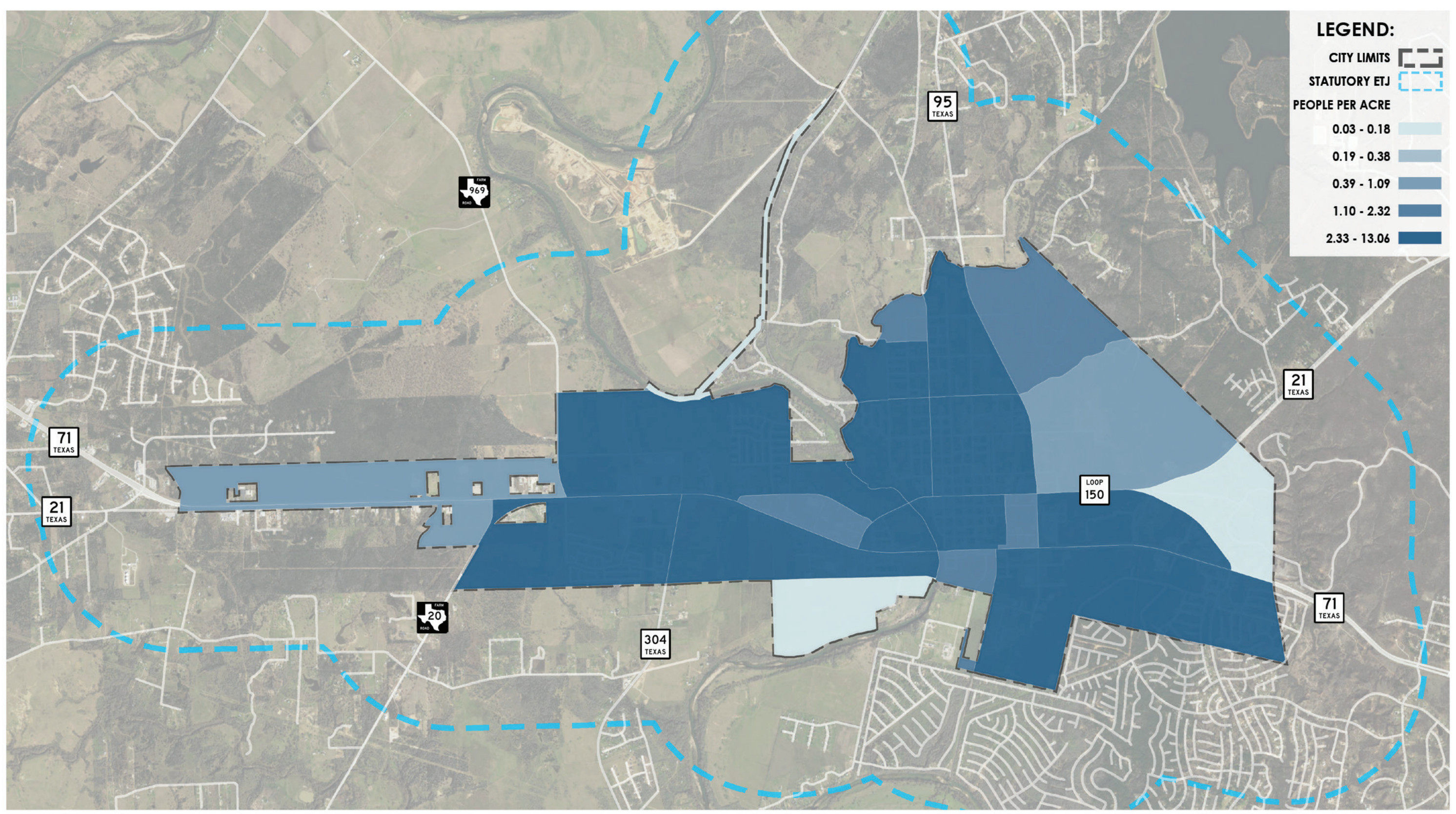
The study team then adjusted the population and employment in TAZs upward or downward as appropriate. Particular attention was given to TAZs linked to new developments (e.g. XS Ranch and Pecan Park) and stakeholder interviews with developers were conducted to verify the reasonableness of the growth assumptions.

TAZ Attribute Data

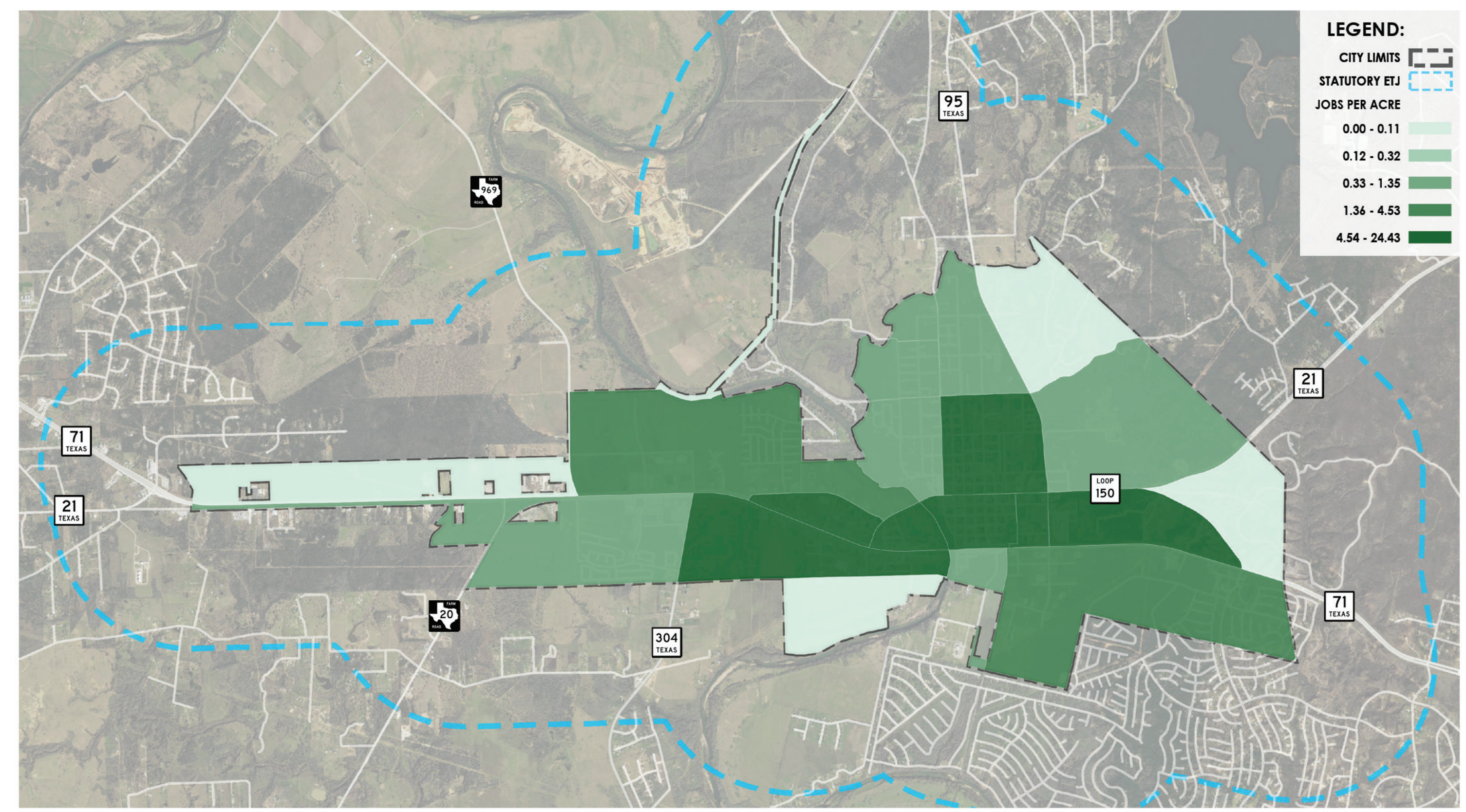
The study team developed a revised set of population, household and employment data inputs for the 2040 CAMPO TDM based upon the foregoing analysis, informed by the Comprehensive Plan Land Use, Economic Development, Housing and Character Area elements. To maintain consistency with CAMPO's regional demographic and socioeconomic forecasting assumptions adopted for the 2040 Regional Transportation Plan, increases and decreases in households and employment by TAZ were balanced to maintain the adopted Bastrop County control totals.

The resulting distribution of anticipated 2040 population and employment density for the City of Bastrop and the ETJ are shown in Maps 3.2 and 3.3.

Map 3.2: 2040 Population in Households Density, City of Bastrop



Map 3.3: 2040 Employment Density, City of Bastrop



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4

Needs Assessment

System Capacity Deficiencies, Operational Deficiencies, Transit Needs and Active Transportation Assessment

MOBILITY (NEEDS) ASSESSMENT

To perform a comprehensive assessment of the City's mobility needs, it was necessary to consider a combination of the existing conditions described in Chapter 2 and the growth patterns described in Chapter 3 to analyze how residential and economic growth is anticipated to affect future transportation system performance. To this end, the 2040 CAMPO travel demand model, refined to show additional detail within the City of Bastrop and its ETJ, was used to perform future year traffic forecasts. These forecasts were then used to identify locations anticipated to experience unsatisfactory or failing levels of service due to capacity deficiencies in the transportation system as the City experiences both residential and economic growth.

Capacity Deficiencies

Travel patterns within and through the City are to a large degree determined by the distribution of population and employment centers, both within the City and throughout the region. One available tool for interpreting the interactions of land use and the transportation system is a regional travel demand model (TDM).

Travel Demand Model Description

A travel demand model (TDM) is a computerized representation of a community's or region's transportation system. Using roadway network data and demographic data broken down into traffic analysis zones (TAZs) as inputs, a TDM simulates the movement of roadway users across the transportation network under various conditions. Ultimately, the results of a TDM help to forecast transportation network performance and likely future traffic conditions throughout the area.

In order to forecast future traffic conditions and identify potential future roadway deficiencies in the City of Bastrop, the study team employed the current version of the CAMPO Regional TDM. This model is a traditional four-step model with roadway networks, transit route systems and demographic forecasts for a forecast year of 2040.

Traffic Conditions

Using the refined 2040 demographic data, the 2040 CAMPO Regional TDM was used to forecast future daily traffic volumes. The resulting traffic volumes, shown in Maps 4.1 and 4.2, reflect the general, macro-level travel patterns within the study area. The results reveal that:

- SH 71 improvements in some sections where grade separations are being put in place improved performance in some areas while degraded performance in others
- Congestion at Colorado River crossings become bottlenecks due to limited number of routes

These results resemble those from the 2010 base year model run except that the expected traffic volumes are much higher.

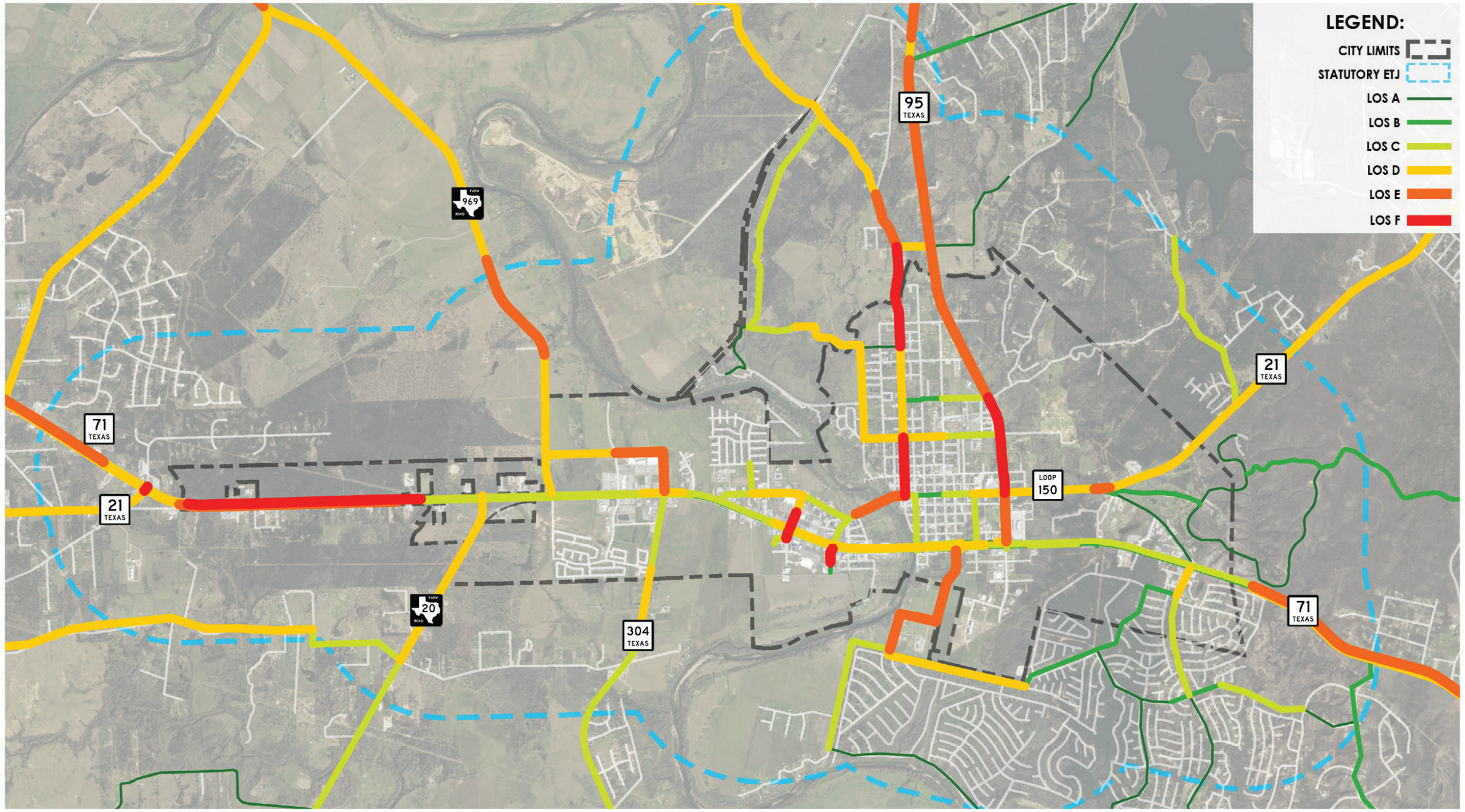
Other roadways serving the City that are expected to be heavily traveled are:

- SH 95 which connects Bastrop and Elgin;
- FM 969, which links Bastrop to Austin;
- Loop 150, which provides connectivity into and through central Bastrop.

Most of the roadways that are anticipated to experience significant capacity deficiencies and degraded level of service due to increased demand are arterial roadways under the control and maintenance of TxDOT. Bastrop has little direct control over improvements to these roadways. The City does, however have two effective strategies for addressing challenges to these roadways, namely:

1. With regard to the roadways themselves, Bastrop can collaborate with regional planning partners such as CAMPO and TxDOT Austin District on short and long-term improvements to ease congestion and support both local and regional mobility. In several cases, such as SH-71, this collaboration is already underway and has resulted in several current or planned corridor improvements such as grade separations at major intersections (e.g. SH 95). The TMP contains several proposed improvements that can be added to this collaboration process and proposed for inclusion in the CAMPO Regional Transportation Plan.

Map 4.1: 2040 AM Level of Service, Bastrop & ETJ



2. Bastrop can develop improvements and extensions of the local street system that separate local trips from through trips by providing additional connectivity between neighborhoods and activity centers. These new circulator routes allow short local trips to reach their destination without having to enter congested major thoroughfares.

3. Bastrop can use the operational analysis model developed as a part of the TMP to identify problem locations and devise operational solutions that can help optimize the roadway capacity that already exists. Operational analysis of this type is described in the next section on operational deficiencies.

OPERATIONAL DEFICIENCIES

While the travel demand model provides a robust interpretation of anticipated future demand and the potential capacity deficiencies that may occur on the roadway network, the TDM is less adept at identifying congestion associated with operational conditions such as traffic signals, turning movements and driveway access points. In addition, the model does not capture non-recurring congestion such as that associated with construction projects or special events.

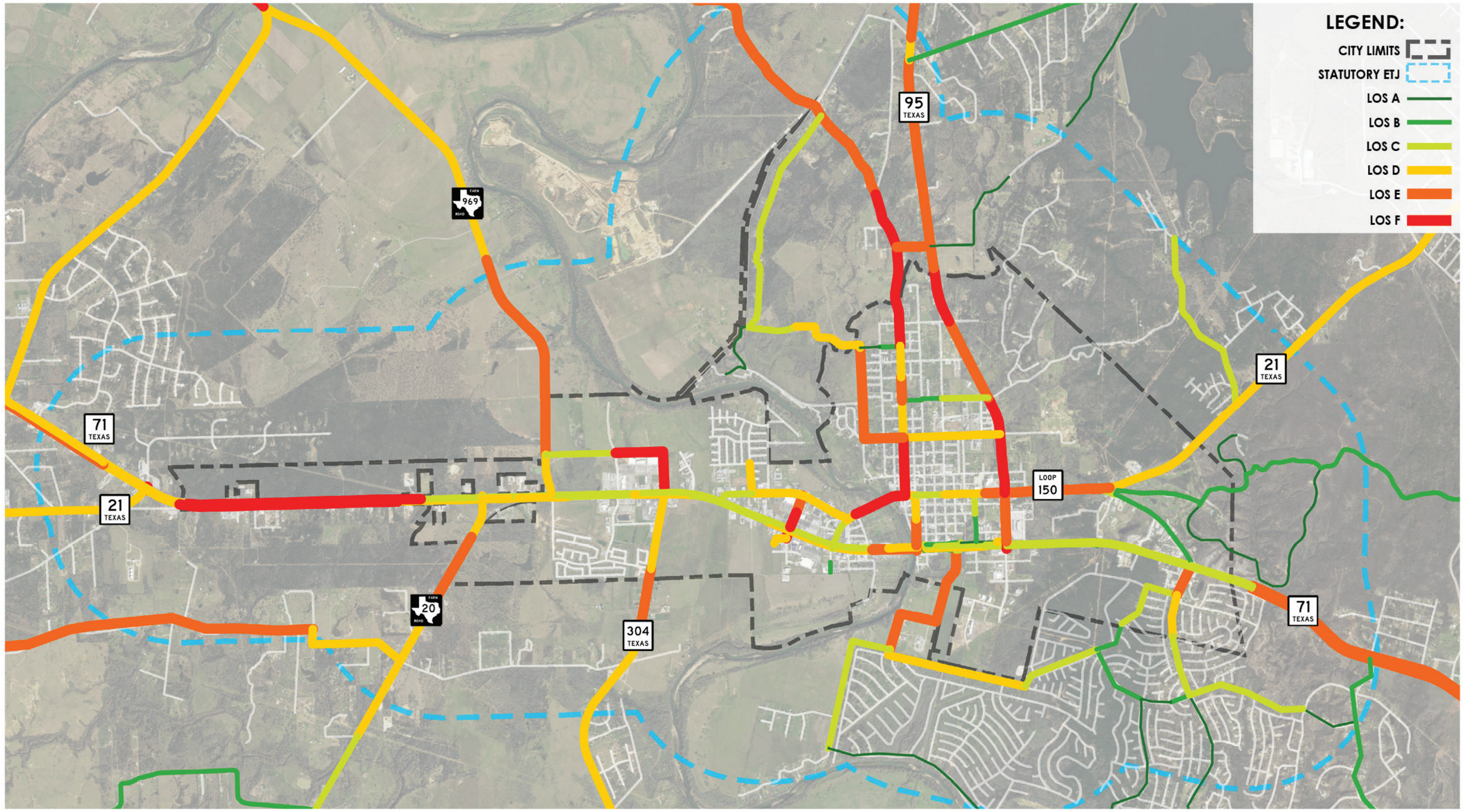
Because these dynamic issues are of particular importance to a growing City's ability to manage its peak traffic operations, the study team developed for the City an operational analysis model based on the PTV Vision Vistro® dynamic traffic assignment (DTA) software, which is an industry standard product used widely in conducting traffic impact analyses for new development.

The Vistro model network serves as a powerful tool to analyze future operations and predict operational deficiencies. Utilizing the PTV Vision Vistro® software and local knowledge, a flexible transportation network was developed that spans the current Bastrop ETJ and includes some intersections and points of interests outside the ETJ, such as FM 1209 and SH 21 south of SH 71. The current network includes the planned improvements along SH 71 near Tahitian Village Drive and SH 95.

In order to populate the background volumes in the Vistro network, the CAMPO 2040 TDM, with additional network detail added to better depict access from major subdivisions and activity centers, was used to forecast the existing volume flows at key intersections across the network. These AM and PM peak volumes were imported into the Vistro network and act as background volumes for analysis of the magnitude and location of additional demand generated by future developments.

When analyzing future developments, the City can utilize the Vistro model network to predict the operational impacts of the new site. After determining the expected trip generation of a given site, Vistro can help route trips to and from the new development. With the forecasted traffic, the Vistro model software will display the intersection level of service and delays throughout the intersection.

Map 4.2: 2040 PM Level of Service, Bastrop & ETJ



The flexible design of the network will allow the City Engineer to update the existing volumes and geometries as developments are completed. This tool, with proper maintenance and upkeep, should be an invaluable asset for the City of Bastrop in its transportation and development goals for many years to come.

With these results, the City of Bastrop can identify operational deficiencies within the network and manipulate both signal timings and operational geometries at these locations to improve the system. In addition, the Vistro model has the ability to perform signal warrants. This tool may be useful as the City of Bastrop continues to grow and develop and can identify when an intersection should warrant a signal.

By maintaining a standing baseline network, the City will be able to perform in-house preliminary assessments of developments to determine whether a TIA is appropriate; and do what-if scenario testing to provide data to support informed decision making on permit applications for special events.

In addition, and perhaps more significantly, the Vistro software will allow the City to take a more strategic approach to operational improvements and management of the transportation system. By using the baseline network as a starting point for traffic impact analyses, the City can assess the cumulative impacts of all approved and proposed development to understand how new developments interact, and perform quality control checks on submitted TIAs. Figures 4.1- 4.3 show the Vistro Interface and illustrate the different functions available to City Staff.

Figure 4.1: Model Interface - AM Volumes at Loop 150 and SH 71

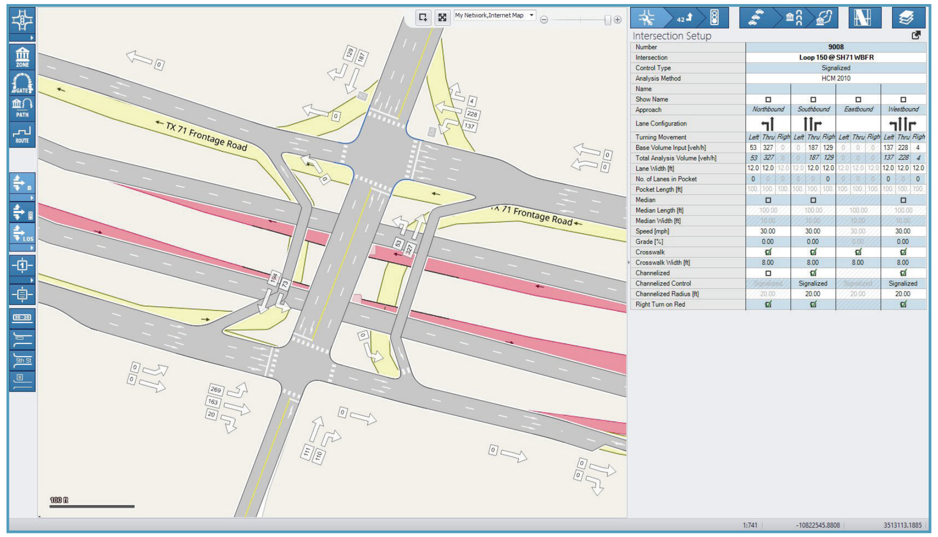


Figure 4.2: Model Interface - Level of Service at Childers and SH 71

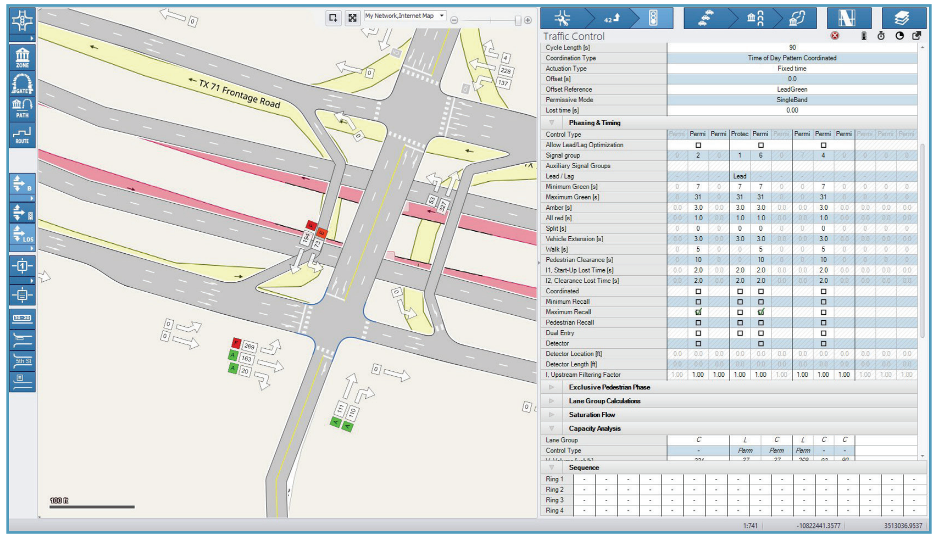
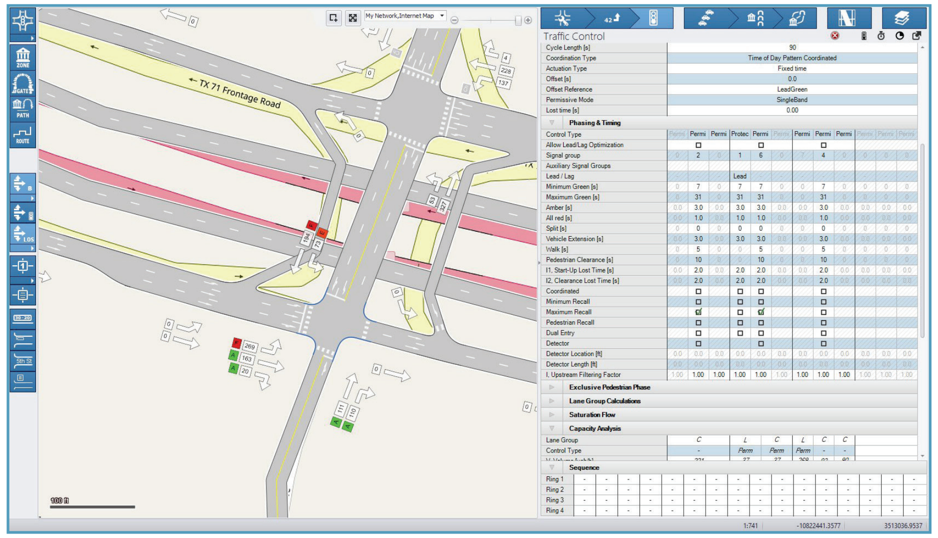


Figure 4.3: Model Interface - New Site Trips



Operating Conditions

Using the Vistro DTA model, review of available travel time data and feedback from stakeholders, the study team identified peak period operational deficiencies at a number of locations within the City.

The results of the analysis was used to assist the study team in developing the data for input into the project evaluation and prioritization process described in Chapter 6.

The City of Bastrop is poised to grow in the coming years. Using the current Vistro Model as a tool to help predict and address future operational deficiencies combined with professional engineering judgement and local knowledge, the following intersections are potential hotspots that may emerge or worsen due to future growth, and may warrant an acute analysis as the City continues to manage the transportation system.

1. The intersection of SH 71 and SH 21/SH 95 and the intersection of SH 21/SH 95 and Loop 150/Chestnut street: These roadways currently have high daily volumes. With the completion of the grade separated SH 71 and SH 21/SH 95 intersection, there will be an opportunity to coordinate and optimize the two intersections to increase capacity and improve operations. The signals are roughly 2,000 feet (0.4 miles) apart and within the FHWA recommended maximum distance of 0.75 miles between coordinated signals. It will also be imperative to use the Vistro DTA model to evaluate construction phase traffic control plans (TCP) to verify that the TCP can provide successful maintenance of traffic.

2. The Loop 150 signals (SH 71 at Loop 150, Eskew at Loop 150, Main St at Loop 150/Chestnut, and SH 21/SH 95 at Loop 150/Chestnut): The Loop 150 signals create a corridor with no more than 0.6 miles between signalized intersections. With growth expected along the fringes of ETJ, this corridor will remain essential to the city core. Loop 150 contains one of two existing bridges crossing the Colorado River within the city and is important for emergency access. The bridge and historic Chestnut Street have limited right of way and building additional capacity could be a challenge. Pecan Park is currently under construction and will feature both commercial and residential development that will generate additional traffic along Loop 150/Childers Drive. An optimized, coordinated signalized corridor could result in a new signal timing plan that favors peak flows and maximizes the current capacity and throughput.

3. The intersection of SH 71 and FM 969 and the intersection of SH 71 and FM 1209: With the impending construction in XS Ranch, an additional bridge is planned across the Colorado River. This will provide access to both FM 969 and FM 1208 for site traffic. A close analysis of the SH 71 and FM 969 and the SH 71 and FM 1209 is recommended as the XS ranch site plans become finalized.

4. The intersection of SH 71 and Loop 304 (Edward Burleson Lane): Lastly, the TX Loop 304 corridor is poised for additional commercial and residential growth. The Hunter's Crossing Subdivision has planned future residential lots, and with the success of current commercial properties, it is likely more development will occur along this corridor. As a result of this potential growth, the intersection of SH 71 and Loop 304 should be carefully watched and tested as development proposals are received.

Figure 4.4: Edward Burleson Lane and SH 71

Source: Google Street View

TRANSIT NEEDS

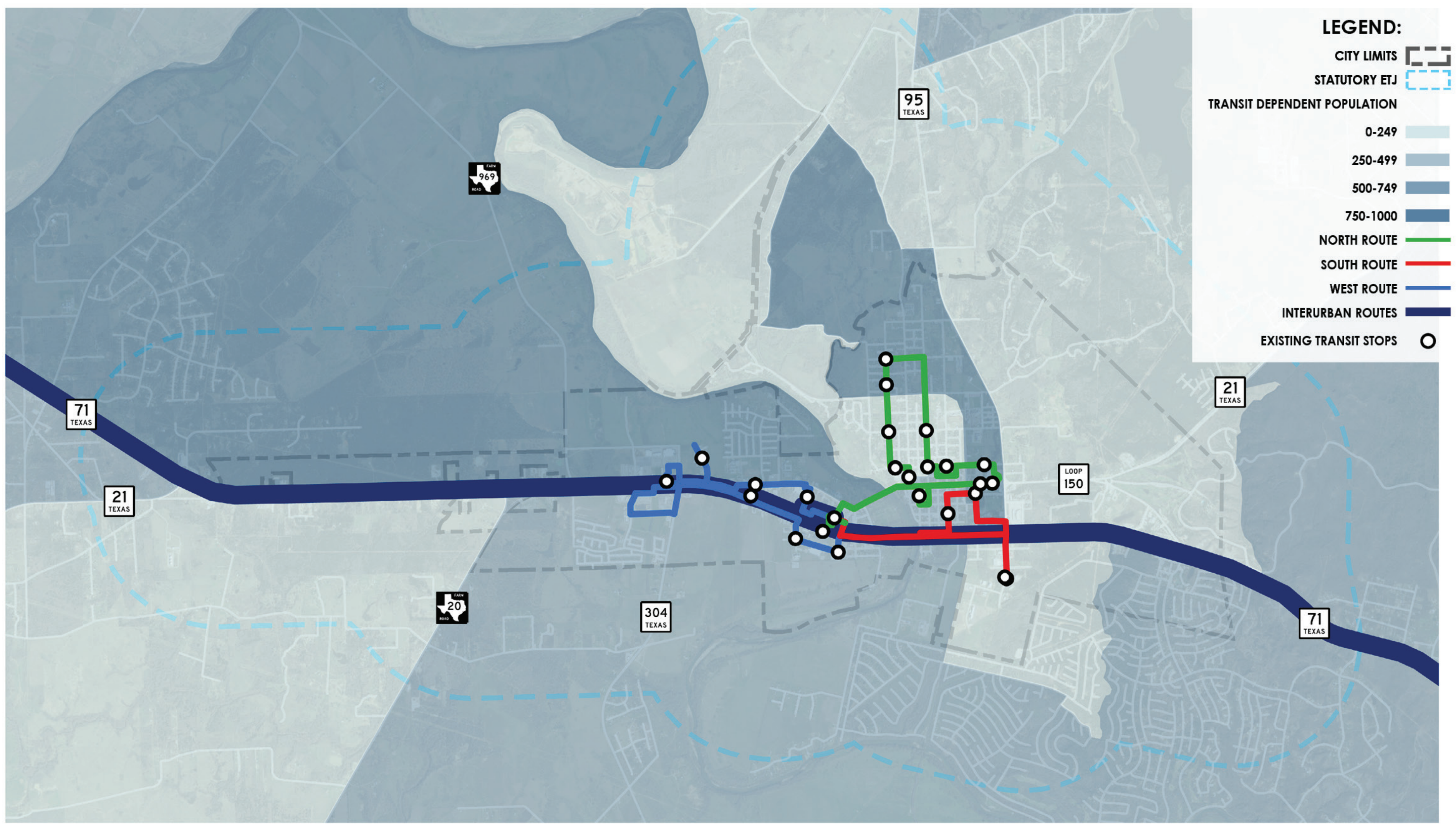
Capital Area Rural Transit System (CARTS) provides fixed route transit service within the City of Bastrop for the general public, curb to curb demand response service to disabled individuals or others requiring assistance in surrounding rural area, and daily commuter transit service from Bastrop to Austin.

To assess transit needs not addressed by current transit services, the study team performed an analysis of existing routes and the residential location of potential transit users in the City and ETJ.

To assess potential transit service needs, the project team identified key demographics that indicate a higher likelihood of transit use including residents over 65, residents under 18 and residents living in poverty.

Map 4.3 has existing fixed route services overlaid to illustrate the current gap between transit dependence and existing fixed route service. Although curb-to-curb service does provide assistance to a certain subsets of the population within the Bastrop ETJ, its effectiveness has limitations. As the population continues to grows, the City will require additional fixed route transit options and expanded coverage to address service gaps. The outcome of this analysis closely aligns with and supports public sentiment expressed through the public involvement process that a more comprehensive transit system will be needed in the future. Stakeholder feedback included a particularly strong focus on commuter service to Austin and other regional employment centers.

Map 4.3: Transit Dependent Population, Bastrop & ETJ



ACTIVE TRANSPORTATION

Bicycling Suitability Analysis

A systematic evaluation of bicycling conditions in the area was undertaken to better understand the physical condition of the bicycling environment in the Bastrop area. The project team utilized evaluation criteria adopted from the Bicycle Environmental Quality Index (BEQI), a planning tool developed by the San Francisco Department of Public Health that allows planners to assign a bicycling suitability score to locations on the street network based on environmental variables that either enhance or detract from favorable bicycling conditions.

The BEQI utilizes a combination of qualitative and quantitative indicators related to street and intersection design, safety, traffic, and adjacent land use to assign an overall BEQI score to the chosen locations. These locations are then categorized by the quality of bicycling conditions as either highest, high, and average, below average or poor quality. The rating system was applied to 50 randomly chosen locations throughout the Bastrop area in order to acquire a high-level characterization of bicycling conditions in the area. Map 4.4 shows the results of the bicycling assessment, including the geographic distribution of BEQI scores for the chosen locations.

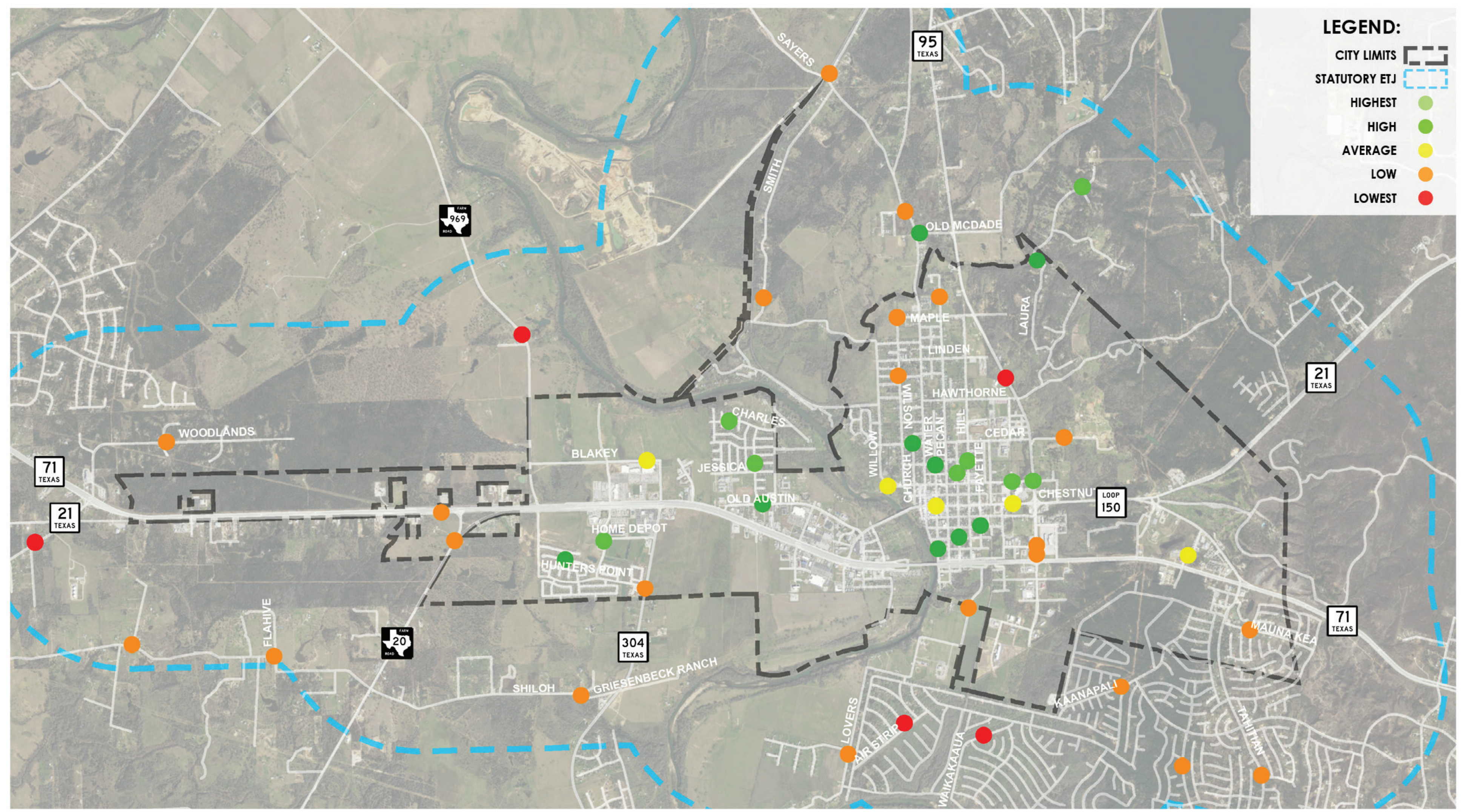
Bicycling Suitability Analysis Results

Results from the bicycling assessment indicate that overall the Bastrop transportation network offers below average bicycling conditions, with 24 of the 50 locations returning a “Low Quality” quality rating. A “Low Quality” rating signifies that there are “minimal bicycling conditions” present at a given location, while a “Lowest Quality” rating indicates that “bicycling conditions (are) absent”.

Observed conditions that detract from the Bastrop bicycling environment include a lack of bike lanes or other dedicated facilities, narrow two-lane roadways with little room to safely pass, and high speed limits. Conversely, observed conditions that promote the bicycling environment include public lighting in many parts of the network, a lack of significant elevation changes, with the exception of parts of Tahitian Village, smooth pavement and good tree cover. Locations that received a “High Quality” or “Highest Quality” rating were generally located in the more urbanized locations of the study area and newer residential subdivisions, though poor conditions were also observed in many residential areas.

While this assessment includes a relatively small sample size of roads in the area, the results suggest that there are a number of deficiencies in the Bastrop transportation system that result in below average bicycling conditions. A lack of dedicated bicycling facilities and high posted speeds, especially on narrow roads without shoulders, creates a real and perceived safety hazard at some locations and likely discourages many potential bicyclists from riding on Bastrop roads. Stakeholders have expressed a desire for more bicycle infrastructure, including bike lanes to address what are currently perceived as challenging conditions.

Map 4.4: Bicycling Suitability Analysis, Bastrop & ETJ



Pedestrian Suitability Analysis

Pedestrian conditions were assessed using evaluation criteria adopted from the Pedestrian Environmental Quality Index (PEQI), which was also developed by the San Francisco Department of Public Health. Similar to the BEQI, the PEQI utilizes a combination of qualitative and quantitative indicators to assign an overall score representing the quality of the pedestrian environment for individual locations. Factors that are included in the rating system include the quality/completeness of sidewalks, presence or absence of traffic calming features or crosswalks, and presence of other pedestrian amenities such as public seating and lighting, among others.

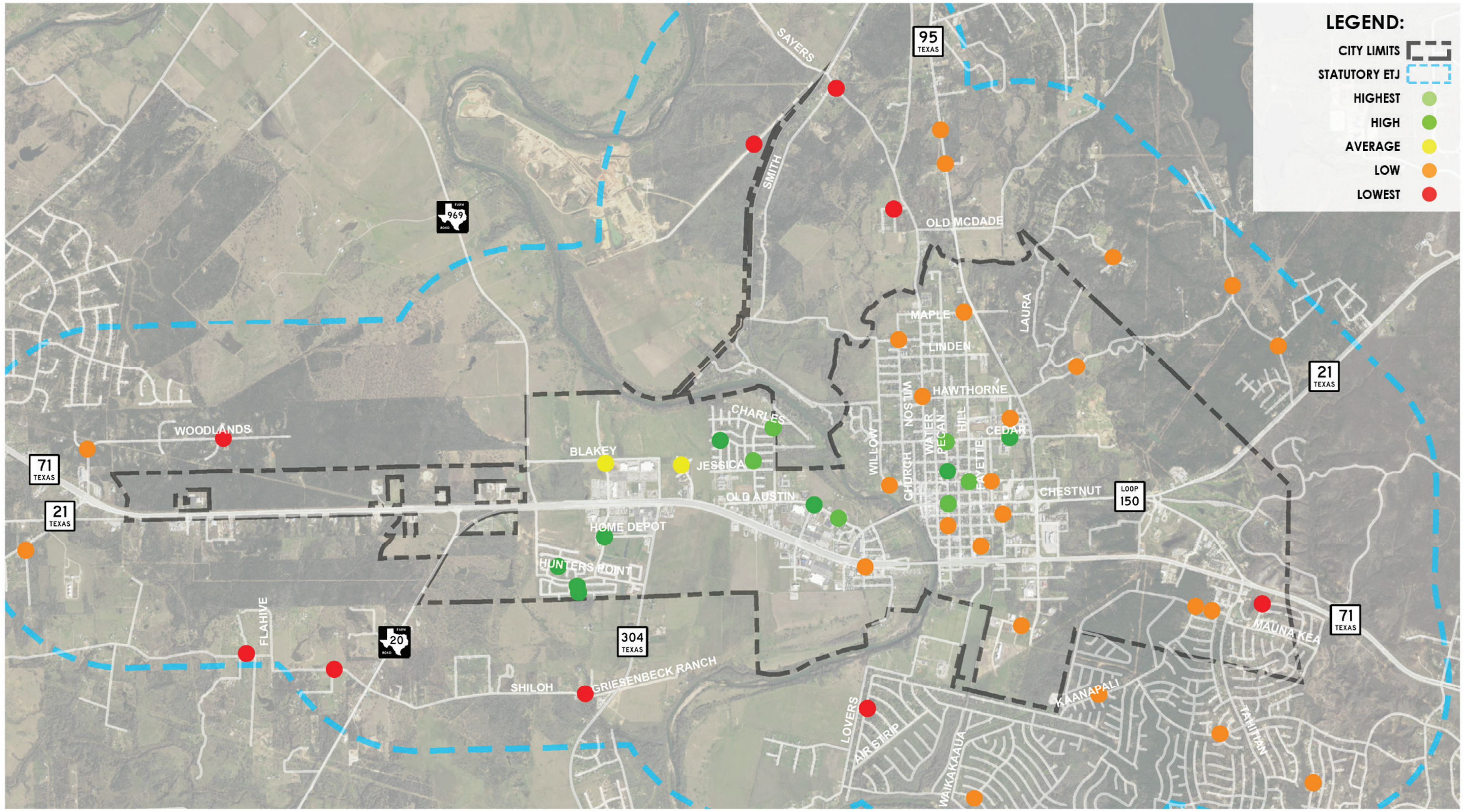
Pedestrian Suitability Analysis Results

The PEQI rating system was applied to 50 randomly chosen locations throughout the Bastrop area in order to acquire a high-level characterization of pedestrian conditions. Map 4.5 shows the results of the pedestrian assessment, including the geographic distribution of PEQI scores for the chosen locations.

Results from the pedestrian assessment suggest that, in general, the Bastrop transportation system provides below average conditions for pedestrians. In fact, 25 of the 50 observed locations returned a rating of “Low Quality”, defined by the PEQI methodology as, “low quality, minimal pedestrian conditions”. Conditions that detract from the pedestrian environment that were frequently observed include a lack of crosswalks and signage to alert drivers of crossing pedestrians, along with high posted speeds. Conditions that were observed that enhance the quality of the pedestrian environment include adequate lighting throughout neighborhoods and abundant tree coverage. Pedestrian conditions characterized as “High Quality” or “Highest Quality” tended to appear more frequently in the residential environments of the urbanized areas, which were more likely to include features such as sidewalks and curbs.

Stakeholders have voiced concerned about the high speeds and dangerous roads on the Bastrop street network and a desire more pedestrian facilities. Current conditions leave stakeholders feeling unsafe and they therefore do not walk often. To address these concerns the study team developed an active transportation framework which is discussed in Chapter 8: Conclusion

Map 4.5: Pedestrian Suitability Results, Bastrop & ETJ



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5

Thoroughfare Plan

Thoroughfare Network, Functional Classification, and Cross-Sections

An important element of the Transportation Master Plan is a Thoroughfare Plan that establishes a long-range vision for the City of Bastrop major street network. The plan is designed to meet the future travel needs of the City by classifying the streets and roadways within the City and the ETJ based on access to adjacent land use, mobility, and context within the surrounding area.

This Thoroughfare Plan addresses both existing and proposed streets and roadways. This plan also provides conceptual standards by thoroughfare type for use in the implementation of future roadways or the reconstruction of existing roadways. The plan provides a guide for use by City officials and staff, developers, business owners, and residents to better understand the City's vision for its street and roadway system.

FUNCTIONAL CLASSIFICATION SYSTEM

In addition to defining a thoroughfare network, a classification system was assigned to area roadways based on thoroughfare type. Functional classification is the process by which local and regional roadways are grouped into hierarchal categories according to the transportation objectives the roadways are intended to provide. This process identifies the role each roadway serves in the context of the larger transportation system, and facilitates planning for logical and efficient routing of traffic through the roadway network. Functional classification was mandated by the Federal-Aid Highway Act of 1973 and remains in effect today.

The Thoroughfare Plan provides guidance only for those streets and roadways that are under the legal control of the City of Bastrop. Attributes, proposed improvements and functional classifications for state maintained roadways of regional significance and county roadways in the ETJ were defined based on their definitions in the CAMPO 2040 Regional Transportation Plan and the 2016 Bastrop County Transportation Plan, respectively, which were incorporated into this City of Bastrop Thoroughfare network by reference.

Purpose

Transportation systems are designed to serve a diverse range of travel needs, from long-distance travel between cities to local trips between home and the grocery store. Assigning a functional class to each roadway in the system helps ensure that the transportation system can serve the diverse travel needs of users in a logical and efficient manner. Functional classifications provide a basis for selecting appropriate speed and geometric design criteria for a given roadway. However, this does not mean that the functional classification for a given roadway prescribes specific design criteria.

Instead, the actual configuration of streets and roadways is subject to review and adjustment through detailed engineering studies to ensure facility design is coordinated with adjacent development, and takes into account other community goals and objectives. A context sensitive approach that takes into account the compatibility of thoroughfare types with surrounding land uses, in addition to the efficient movement of traffic, was used for designating functional classifications for the City of Bastrop Thoroughfare Network. The proposed functional classifications were determined by weighing mobility versus access needs, the surrounding land uses, and the facility characteristics of existing roadways.

Mobility vs. Access

The two primary travel needs served by roadways are mobility, or the ability to move people or goods efficiently between locations, and access, or the ability to reach numerous desired destinations. While all roadways serve these two needs to at least some degree, by design certain types of roadways serve one need better than the other. Highways, for example, provide a high degree of mobility, facilitating long-distance travel between destinations by providing minimal traffic conflicts and few opportunities to enter/exit the roadway. Such roadways are classified as Principal Arterials under the City of Bastrop classification system (described in more detail in the next section). Neighborhood streets, on the other hand, provide a high degree of access (to homes, shopping centers, etc.), but offer lower mobility due to the presence traffic signals, lower speed limits and other design characteristics. These roadways are classified as local streets under the City of Bastrop functional classification system. Figure 5.1 shows the relationship between mobility and access.

Map 5.1: 2040 Major Thoroughfare Map, City of Bastrop TMP

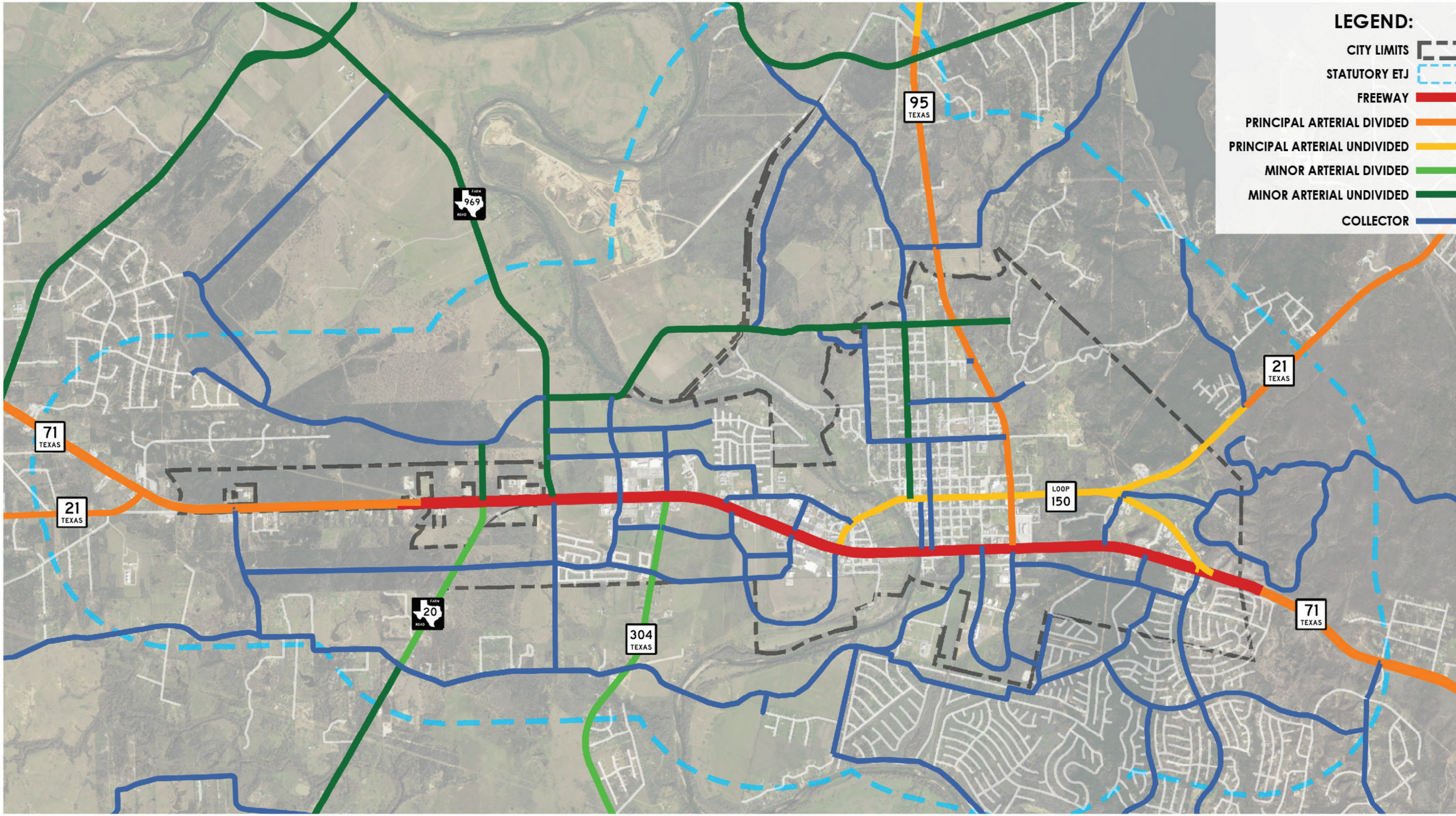
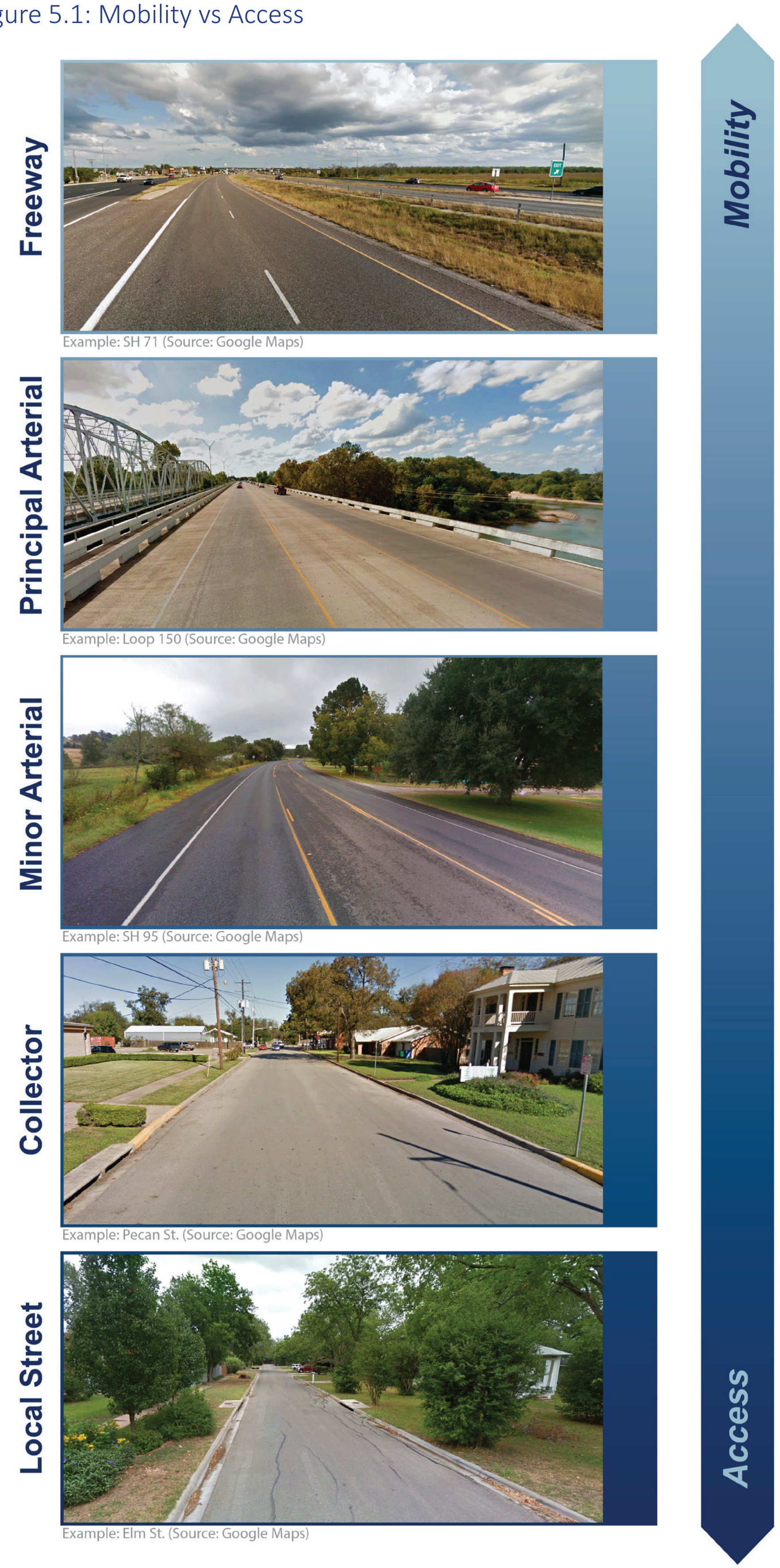


Figure 5.1: Mobility vs Access



Functional Classifications

This Thoroughfare Plan uses the following classifications as defined below. Note that in the context of the mobility versus access continuum, higher functional classes (e.g. principal arterials) serve mobility while lower classes (local streets) prioritize access.

Freeways

Freeways provide maximum mobility and do not directly serve land uses. Freeways are generally separated by physical barriers and their access and egress points are limited to on- and off- ramps. Freeways are typically two lanes in each direction.

Principal Arterials

Principal arterials provide a high degree of mobility by serving travel between major destinations or activity centers, as well as long-distance traffic that goes through or bypasses an area. They are designed to minimize travel time by providing high posted speed limits, offering physical separation from other roadways (e.g. few at-grade intersections) and providing a limited number of access/egress points (e.g. on- and off- ramps).

Minor Arterials

Minor arterials are intended to connect traffic into and between the principal Arterial system. They can serve trips of moderate length by connecting smaller geographic areas. While minor arterials provide slightly less mobility benefit than principal arterials, overall they are characterized by relatively high travel speeds and low interference from cross traffic.

Collectors

Collectors provide a balance between mobility and access, primarily serving to “collect” traffic from local streets and provide connections to arterials. In urban areas, collectors provide traffic circulation in residential areas or commercial districts, while in rural areas they primarily serve travel within the City (i.e. trips shorter than those served by arterials). Due to the large number of col- lector roadways and the diversity of adjacent land uses, appropriate context subcategories were defined for collector roadways.   These categories include residential, commercial, and mixed-use collectors.

Local Streets

Local streets offer lower mobility than other functional classes but provide the highest degree of access to adjacent land. They discourage through traffic with low posted speed limits and the use of traffic calming features. Local streets make up the bulk of the transportation system in terms of mileage.

Typical Roadway Cross Sections

For each of the functional classes defined in the thoroughfare plan, a typical cross section was developed for use in the planning and conceptual engineering of new roadways or in the potential upgrade of existing roadways as they are reconstructed or expanded. The following typical cross sections are intended as conceptual frameworks to facilitate the planning process. Specific engineering requirements and design guidelines for implementation of roadways are contained in the City subdivision regulations and other capital improvement program guidelines. The engineering and design of specific facilities must be carried out in collaboration with and under the review of the City Engineer.

Figure 5.2: Neighborhood Collector Constrained ROW- Extreme Case

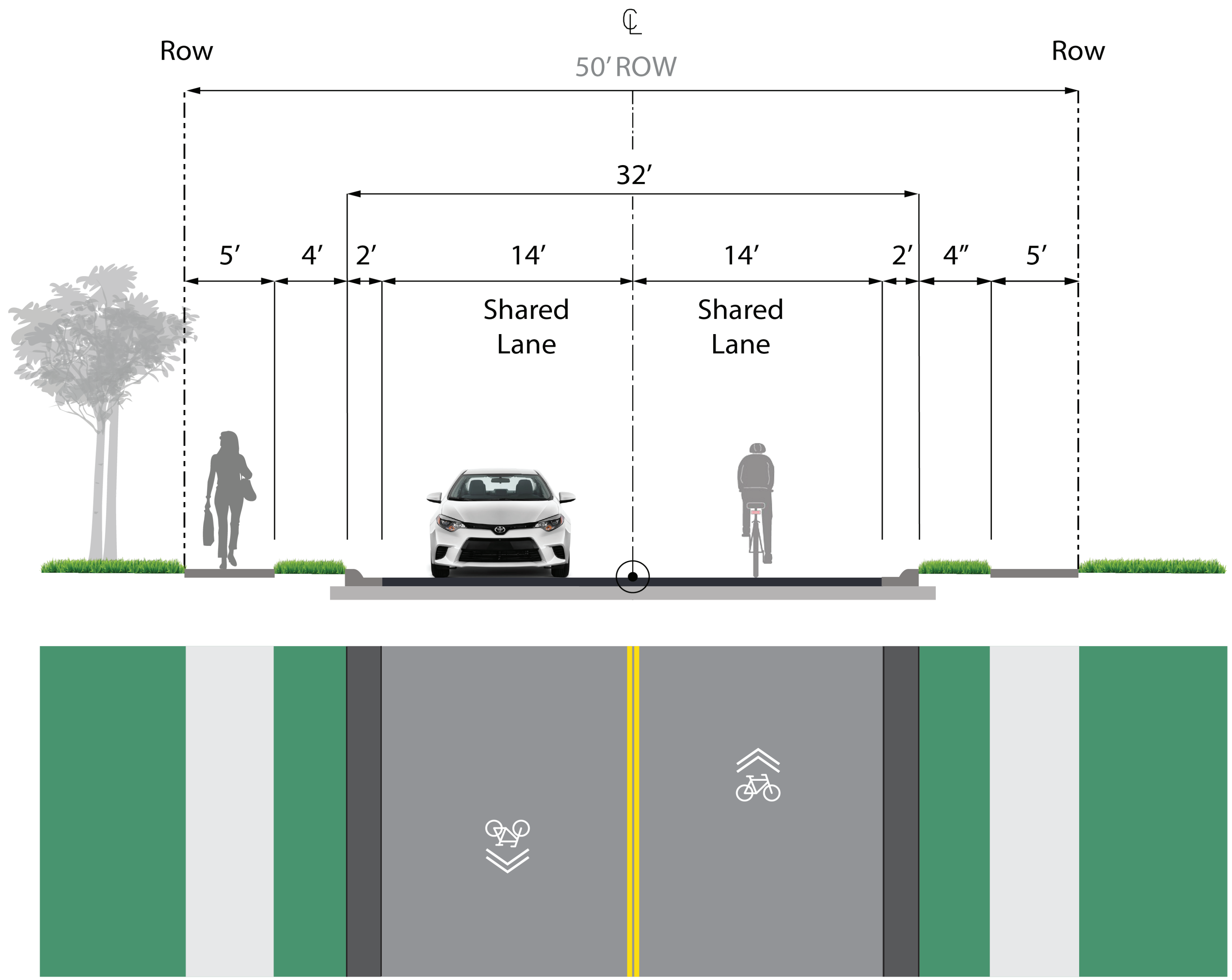


Figure 5.3: Principal Arterial/Divided Minor Arterial- Typical Urban Section

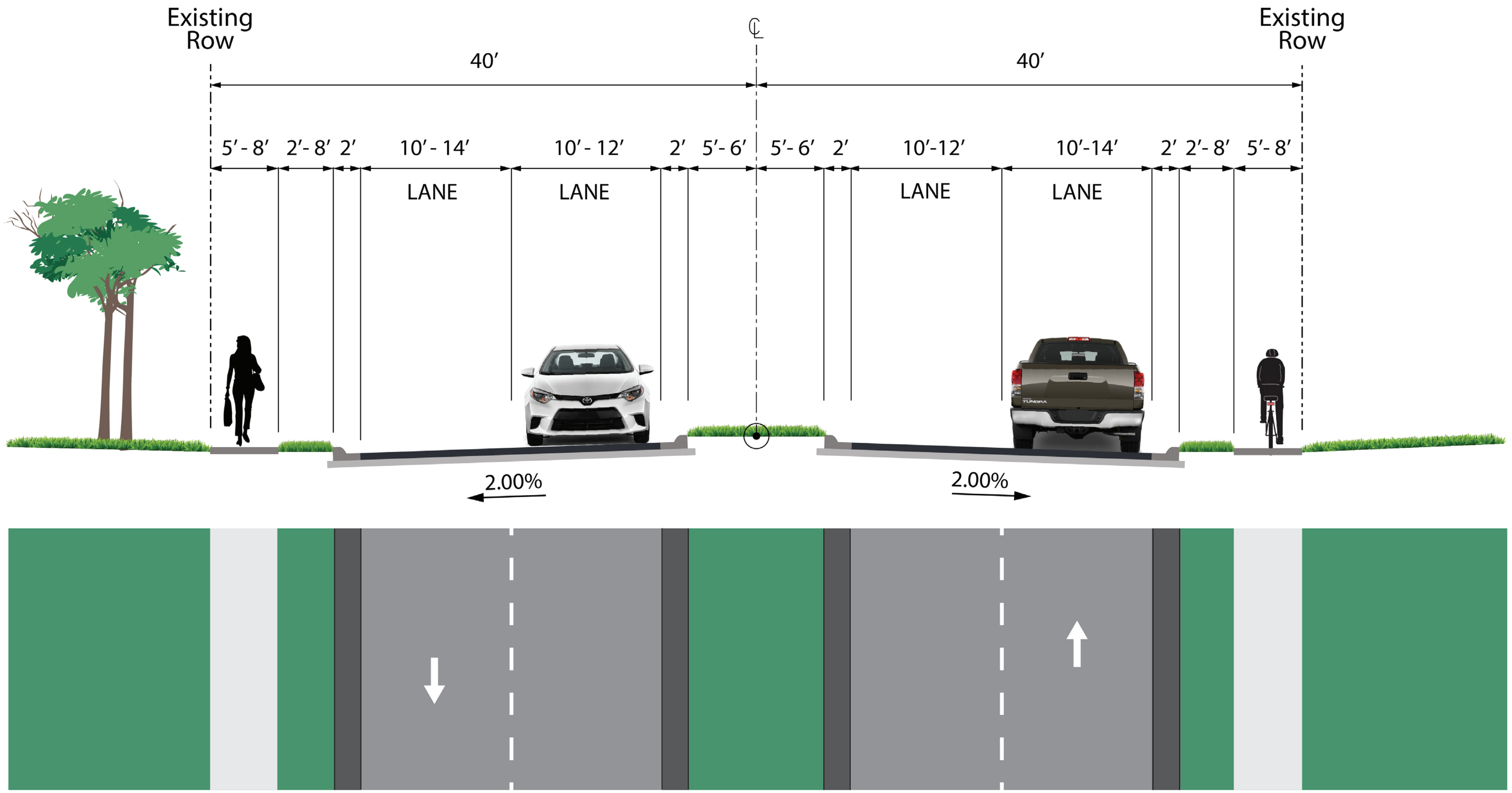


Figure 5.4: Example Downtown Cross Section

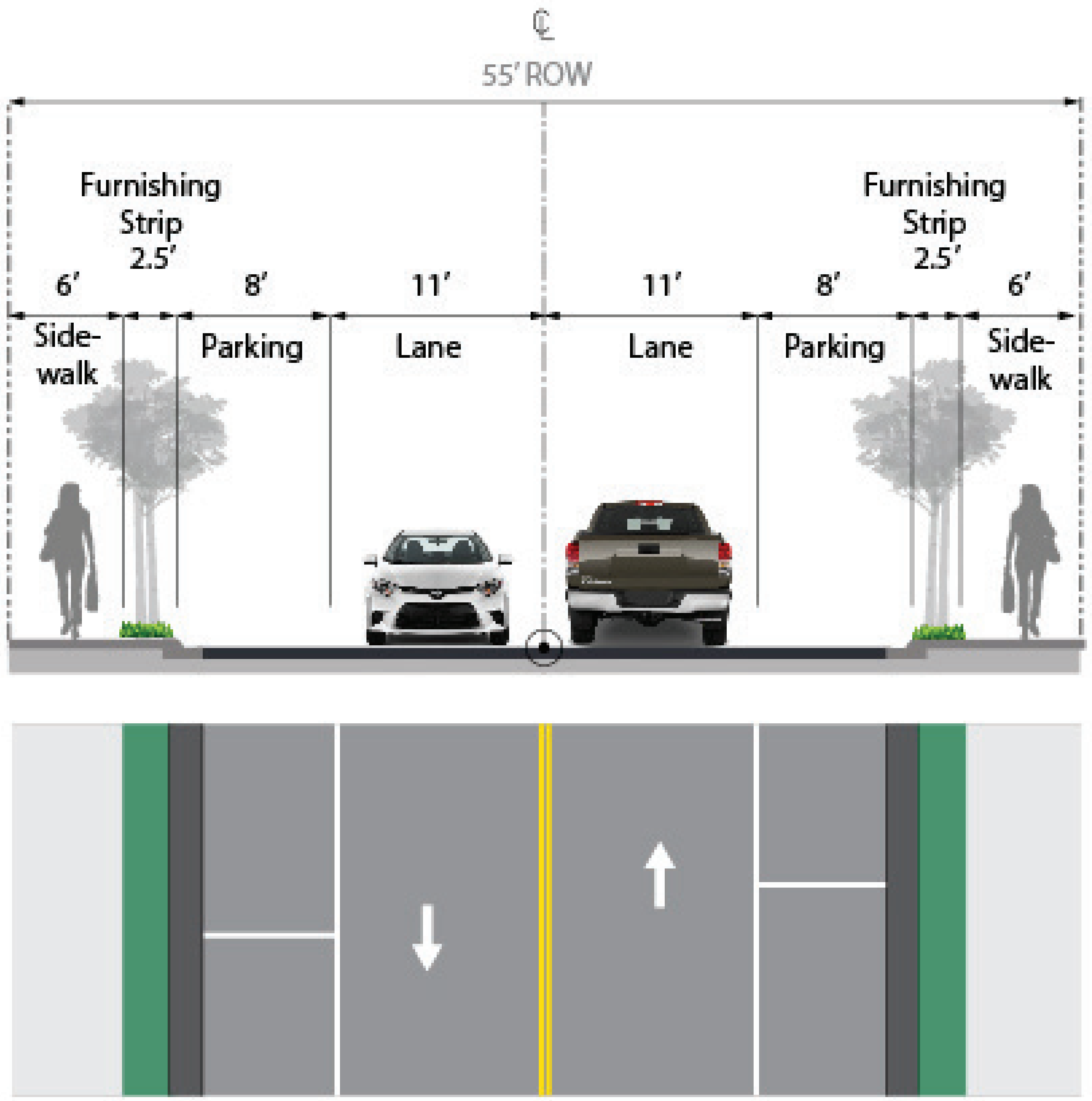
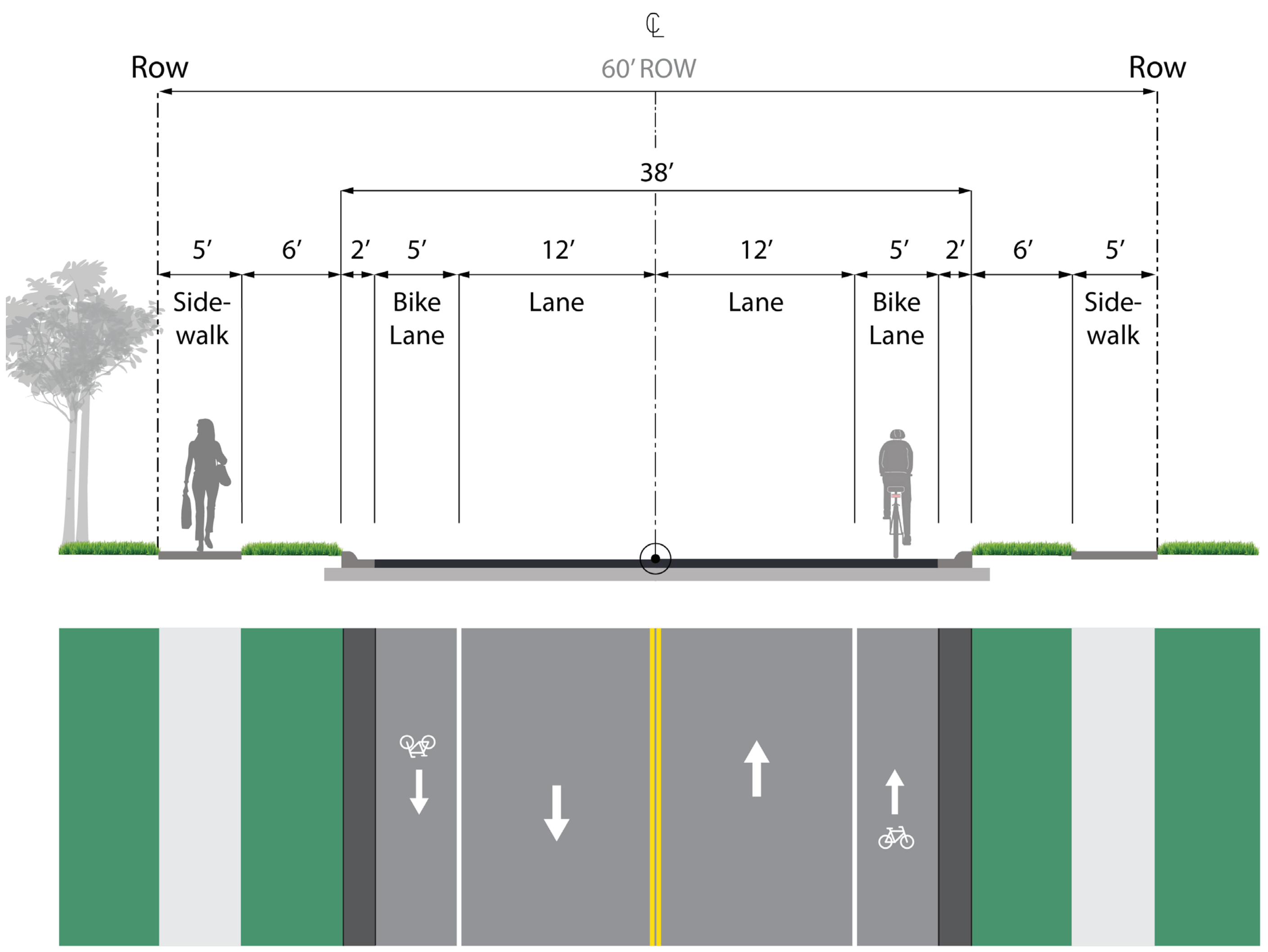


Figure 5.5: Minor Arterial/Collector- Typical Section



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6

Project Selection and Prioritization

Identification of Projects, Performance Measures, Project Scoring Process, List of Candidate Projects

EVALUATION AND SELECTION OF PROJECTS

Key findings from the Needs Assessment included a desire among residents for increased safety; concerns over congestion on the State-maintained system; a need for greater connectivity between neighborhoods and other key destinations; and a desire for more transportation options, particularly commuter solutions to regional employment centers. To address these needs, a systematic approach for identifying and prioritizing transportation projects was undertaken as part of the planning process.

This approach involved analyzing anticipated future growth in population, households and employment reflected in the Land Use and Economic Development elements of the Comprehensive Plan and identifying, as presented in Chapter 4, potential traffic capacity deficiencies, operational issues and safety concerns based on that growth. Using that information and the results of the Needs Assessment, the project team consulted with City staff, key stakeholders and elected officials to identify potential transportation projects within the study area for further analysis and development.

Finally, public feedback on these projects was presented to the Steering Committee, who then prioritized the projects using objective and subjective evaluation criteria that support the Transportation Master Plan goals. Transportation projects were scored and ranked based on their impact on future mobility and congestion, as assessed using the CAMPO TDM, as well as their perceived impacts on the other TMP and Comprehensive Plan goals. These goals included:

TRANSPORTATION MASTER PLAN GOALS

- Reduce Congestion and Promote System Reliability
- Promote System Connectivity
- Preserve Transportation Assets
- Provide Safe Travel Options
- Improve Active Transportation
- Enhance Transit Service
- Enhance Freight Efficiency
- Build Complete Streets
- Support Land Use Goals and Economic Vitality

Performance Measures

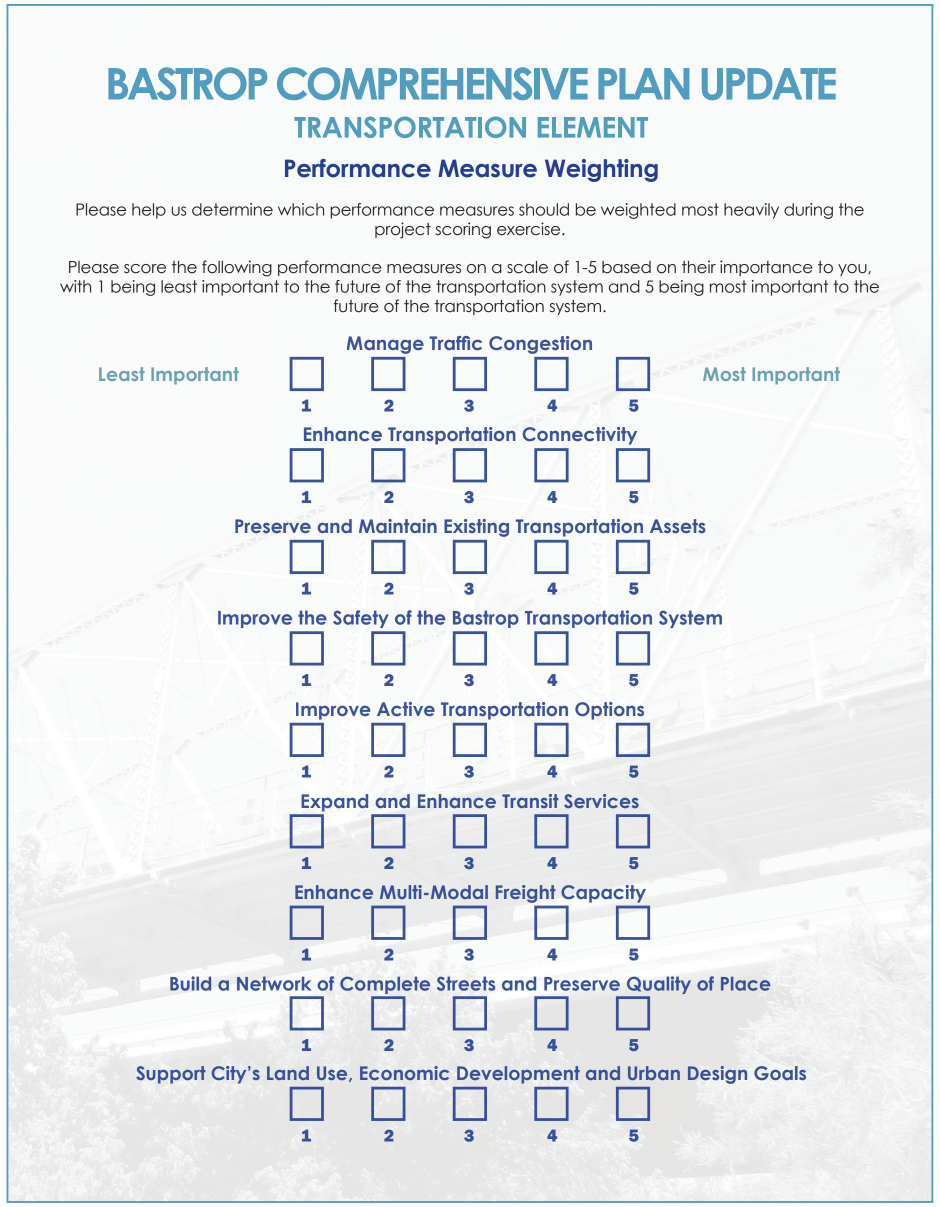
To evaluate how each project impacted the defined TMP goals, evaluation criteria and performance measures were selected and weighted based on feedback from the public, City staff, key stakeholders. planning partners, and the Comprehensive Plan steering committee. A performance-management based approach to transportation planning uses data on the performance of the transportation system to identify, evaluate, and prioritize strategies to achieve desired outcomes and track progress over time. The primary rationale behind this approach to transportation planning is that transportation investment decisions should be closely tied to achieving specific outcomes. The Transportation Master Plan applies, in a modified form customized to City circumstances, these best practice performance management principles to evaluate the anticipated outcomes of the Plan in achieving the City vision defined in the Comprehensive Plan.

To carry out this process, a set of quantitative and qualitative performance measures was developed to evaluate how well a project addresses and supports each TMP goal. Using a set of preliminary performance measures for each goal, a stakeholder workshop was held in which City staff and key stakeholders were asked to select the respective evaluation criteria to be used in the project prioritization process. As a part of this selection, participants were asked to review and revise or confirm the weights that would be applied to each goal in performing the comparative evaluation and prioritization of projects.

Once a preliminary set of measures and weights were assigned, the Comprehensive Plan steering committee was asked to perform the same selection and weighting of performance measures to be used in the project scoring process.

The preliminary set of weighted performance measures was then presented to the public at an open house for review and comment. The instrument used by the stakeholders and steering committee to select measures and apply weighting factors is shown in Figure 6.1. The final set of measures and weights, as well as how they were applied in the evaluation process, is shown in Table 6.1.

Figure 6.1: Performance Measure Weighting Worksheet



BASTROP COMPREHENSIVE PLAN UPDATE

TRANSPORTATION ELEMENT

Performance Measure Weighting

Please help us determine which performance measures should be weighted most heavily during the project scoring exercise.

Please score the following performance measures on a scale of 1-5 based on their importance to you, with 1 being least important to the future of the transportation system and 5 being most important to the future of the transportation system.

Manage Traffic Congestion

Least Important ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 Most Important

Enhance Transportation Connectivity

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Preserve and Maintain Existing Transportation Assets

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Improve the Safety of the Bastrop Transportation System

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Improve Active Transportation Options

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Expand and Enhance Transit Services

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Enhance Multi-Modal Freight Capacity

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Build a Network of Complete Streets and Preserve Quality of Place

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Support City's Land Use, Economic Development and Urban Design Goals

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

Table 6.1: Performance Measure Weights

PERFORMANCE MEASURE WEIGHTS	
PERFORMANCE MEASURE	ASSIGNED WEIGHT
Enhance Multi-Modal Freight Capacity	1
Improve Active Transportation Options	2
Expand and Enhance Transit Services	3
Improve Safety of the Bastrop Transportation System	4
Preserve and Maintain Existing Transportation Assets	6
Build a Network of Complete Streets and Preserve Quality of Place	6
Support City's Land Use, Economic Development and Urban Design Goals	6
Manage Traffic Congestion	8
Enhance Transportation Connectivity	9

Project Scoring Process

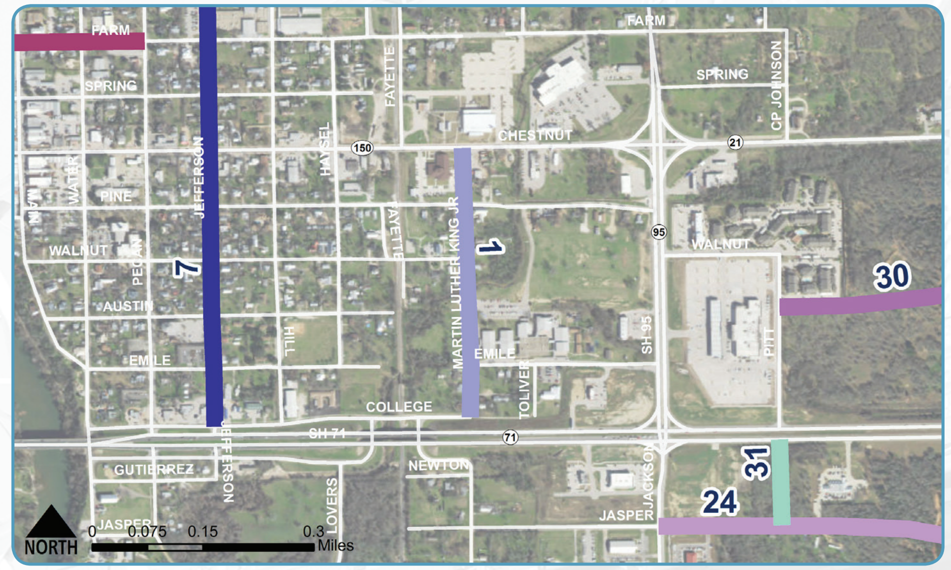
Once the set of preliminary performance measures and weights was evaluated and a final set of measures selected, the next iteration of the process was another workshop with the City staff and stakeholders using the measures to evaluate and rank the candidate projects. This ranking process was then repeated by the entire Comprehensive Plan steering committee. The instrument that these two groups used to score the candidate projects is shown in Figure 6.2.

Once the scoring process was complete, the study team applied the final weights to the cumulative scores for each performance measure as determined by the input from the public, participating stakeholders and the steering committee. A final priority rank was then assigned to each project using the project scoring matrix shown in Figure 6.3.

The final ranking of projects was reviewed for reasonableness by City staff, stakeholders and the steering committee to ensure consistency with TMP goals. This performance management based approach to project prioritization provides a transparent, replicable, and defensible process for evaluating and prioritizing projects for inclusion in the TMP that is consistent with and meets the requirements of federal, state and regional funding programs thereby optimizing cost sharing opportunities.

Figure 6.2: Project Scoring Sheet

Project 1: MLK Drive



Project Description
Reconstruct MLK Drive from Chestnut Street to College Street; construct sidewalks on MLK. Project identified in the City Capital Improvement Program.

Functional Classification
Local

2010 - 2015 Crashes
8 (22.25 per mile)

Daily Traffic Flow
2010: 1,460 vehicles
Projected 2040: 3,437 vehicles

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion					
Enhance Transportation Connectivity					
Preserve and Maintain Existing Transportation Assets					
Improve the Safety of the Bastrop Transportation System					
Improve Active Transportation Options					
Expand and Enhance Transit Services					
Enhance Multi-Modal Freight Capacity					
Build a Network of Complete Streets and Preserve Quality of Place					
Support City's Land Use, Economic Development and Urban Design Goals					

Comments

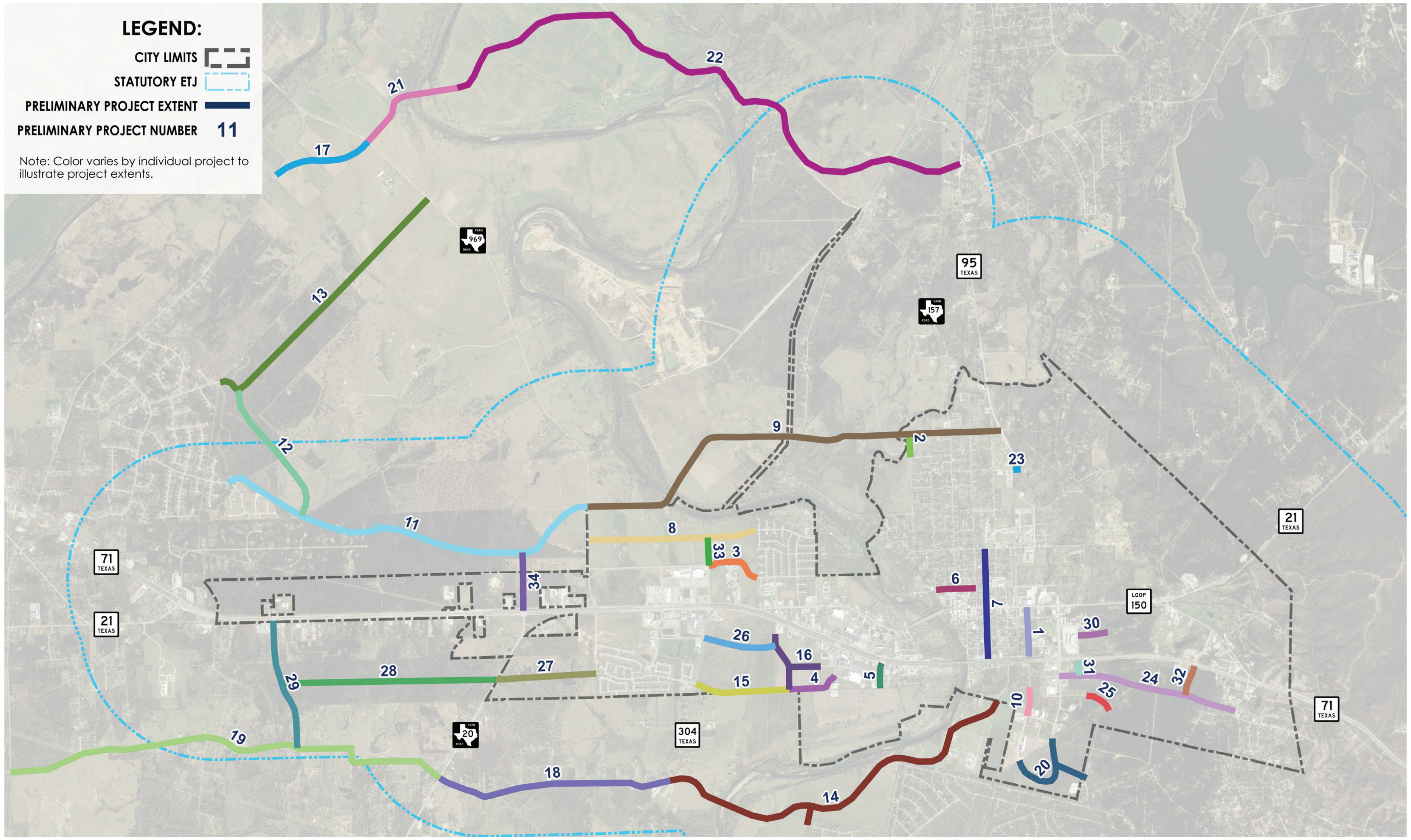
Figure 6.3: Project Scoring Matrix

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion					
Enhance Transportation Connectivity					
Preserve and Maintain Existing Transportation Assets					
Improve the Safety of the Bastrop Transportation System					
Improve Active Transportation Options					
Expand and Enhance Transit Services					
Enhance Multi-Modal Freight Capacity					
Build a Network of Complete Streets and Preserve Quality of Place					
Support City's Land Use, Economic Development and Urban Design Goals					

List of Candidate Projects

The Transportation Master Plan proposes a program of projects consisting of new street and roadway segments and improvements to existing streets and roadways combined with other non-roadway projects and initiatives. The program of projects for the TMP was developed by first compiling an initial program of candidate transportation improvements with potential to address the TMP goals. The projects originated from a variety of sources, including previous plans; the results of the technical analysis performed during TMP development to evaluate current and anticipated future transportation system performance; the Capital Area Metropolitan Planning Organization's (CAMPO) 2040 Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP); feedback from the public and other key stakeholders including elected officials; and meetings with the Comprehensive Plan steering committee. A list of projects that were selected as candidate projects is on the next page surrounding Map 7.1. Each project was individually scored using the performance measure criteria. Map 7.1 shows a geographic overview for the locations of all the TMP candidate projects within the City.

Map 6.1: Mobility Projects, City of Bastrop TMP



Project 1: MLK Drive

Project 2: Carter Street Extension

Project 3: Blakey Lane Extension

Project 4: Hasler Boulevard (1)

Project 5: Childers Drive

Project 6: Farm Street

Project 7: Jefferson Street

Project 8: Charles Boulevard

Project 9: Future Arterial

Project 10: MLK Extension

Project 11: Sam Houston Extension

Project 12: Future Collector

Project 13: Eight Oaks Extension

Project 14: Future Collector

Project 15: Hasler Boulevard (2)

Project 16: Orchard Parkway

Project 17: FM 1209

Project 18: Shiloh Road (1)

Project 19: Shiloh Road (2)

Project 20: Jackson Street Extension

Project 21: XS Ranch Bridge

Project 22: XS Ranch Road

Project 23: Linden Street Extension

Project 24: Jasper Street Extension

Project 25: South Street Extension

Project 26: Future Collector

Project 27: Future Collector

Project 28: Future Collector

Project 29: Future Collector

Project 30: Lost Pines Extension

Project 31: Future Pitt Street

Project 32: Pine Hollow Drive

Project 33: Burleson Extension

Project 34: Future Arterial

Table 6.2: Projects in order of Rank

PROJECT RANKING				
PROJECT RANK	PROJECT NAME	PROJECT #	PROJECT SCORE	PROJECT OVERALL ESTIMATED COST
1	Future Arterial	9	51.34	$16,311,000
2	Hasler Boulevard (2)	15	50.42	$1,611,000
3	Blakey Lane Extension	3	49.40	$1,250,000
4	XS Ranch Bridge	21	49.03	$4,752,000
5	XS Ranch Road	22	48.84	$7,968,000
6	Future Collector	14	46.22	$8,368,000
7	Childers Drive	5	45.87	$600,000
8	Hasler Boulevard (1)	4	44.96	$873,000
9	Future Collector	26	43.81	$1,280,000
10	Orchard Parkway	16	42.75	$1,735,000
11	Sam Houston Extension	11	41.51	$6,965,000
12	Charles Boulevard	8	41.37	$2,818,000
13	Carter Street Extension	2	41.36	$696,000
14	Future Collector	27	41.24	$1,634,000
15	MLK Drive	1	40.36	$2,308,000
16	MLK Extension	10	39.61	$494,000
17	FM 1209	17	39.47	$527,000

PROJECT RANKING				
PROJECT RANK	PROJECT NAME	PROJECT #	PROJECT SCORE	PROJECT OVERALL ESTIMATED COST
18	South Street Extension	25	39.43	$565,000
19	Future Collector	29	39.07	$2,009,000
20	Jackson Street Extension	20	38.88	$1,936,000
21	Farm Street	6	38.87	$750,000
22	Shiloh Road (1)	18	38.81	$1,382,000
23	Future Arterial	34	38.80	$4,701,000
24	Pine Hollow Drive	32	37.69	$197,000
25	Lost Pines Extension	30	37.60	$514,000
26	Burleson Extension	33	37.05	$443,000
027	Future Collector	28	36.98	$3,671,000
28	Jasper Street Extension	24	36.86	$2,135,000
29	Jefferson Street	7	36.04	$1,261,000
30	Shiloh Road (2)	19	35.77	$3,553,000
31	Eight Oaks Extension	13	34.11	$5,417,000
32	Linden Street Extension	23	32.89	$142,000
33	Future Collector	12	32.86	$2,405,000
34	Future Pitt Street	31	31.64	$270,000

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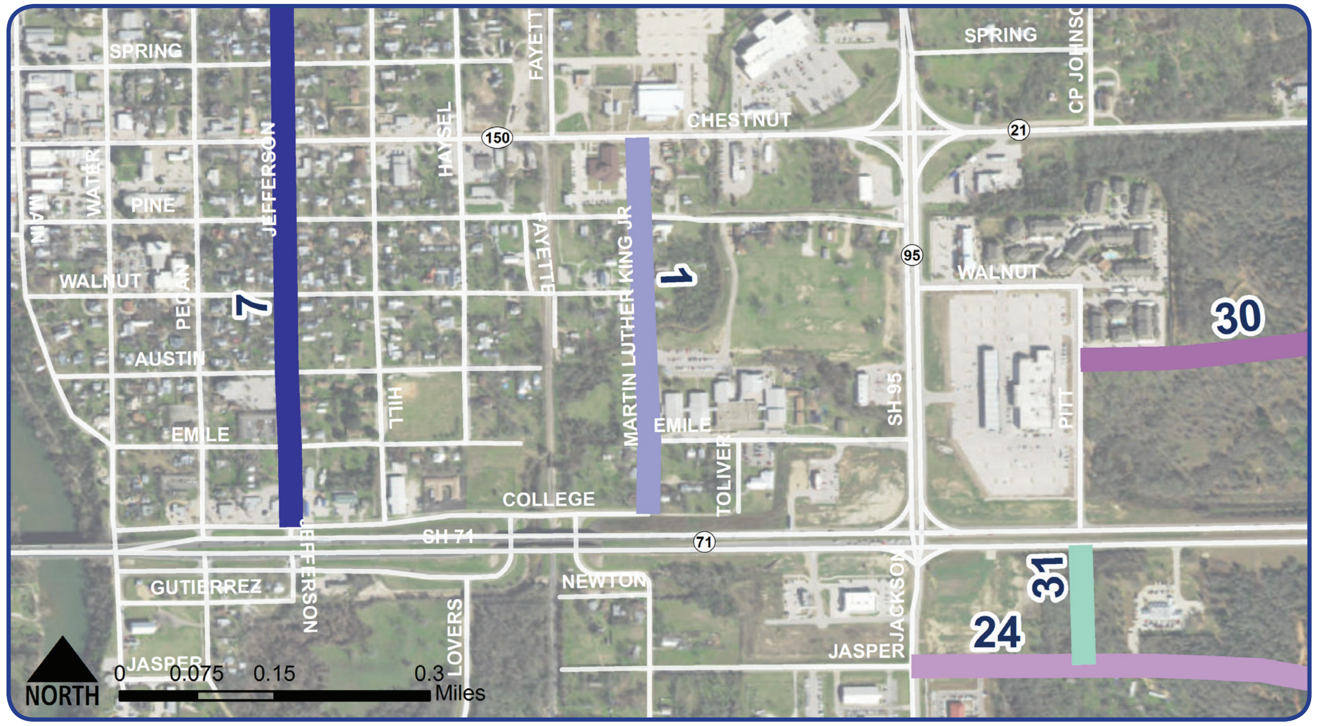
7

Prioritized Program of Projects

Project Descriptions, Project Locations, Cost Estimation

Project 1: MLK Drive



Project Description

Reconstruct MLK Drive from Chestnut Street to College Street; construct sidewalks on MLK. Project identified in the City Capital Improvement Program. Purpose of the project is system preservation and promotion of a state of good repair combined with creating opportunities for active transportation in the corridor by adding sidewalks and pedestrian amenities.

Functional Classification

Local

2010 - 2015 Crashes

8 (22.25 per mile)

Daily Traffic Flow

2010: 1,460 vehicles
Projected 2040: 3,437 vehicles

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion				✓	
Enhance Transportation Connectivity			✓		
Preserve and Maintain Existing Transportation Assets			✓		
Improve the Safety of the Bastrop Transportation System			✓		
Improve Active Transportation Options			✓		
Expand and Enhance Transit Services		✓			
Enhance Multi-Modal Freight Capacity		✓			
Build a Network of Complete Streets and Preserve Quality of Place			✓		
Support City's Land Use, Economic Development and Urban Design Goals			✓		

Lower Impact — *Higher Impact*

Weighted Score

40.36

Project Ranking

Ranked 15 of 34

Project Costs

Total Cost: $2,308,000
Construction: $1,661,760
Pre-Construction/Engineering: $230,800
Right-of-way Acquisition: $276,960
Indirect Costs: $138,480

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 2: Carter Street

Project Description

Extend Carter Street from Magnolia Street to Mesquite Street. Additionally, this project intersects with Project #9. Project identified in the City Capital Improvement Program. Purpose of the project is to provide more direct, convenient access from neighborhoods to the major thoroughfare network.

Functional Classification

Collector

2010 - 2015 Crashes

n/a

Daily Traffic Flow

n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion			✓		
Enhance Transportation Connectivity				✓	
Preserve and Maintain Existing Transportation Assets			✓		
Improve the Safety of the Bastrop Transportation System			✓		
Improve Active Transportation Options			✓		
Expand and Enhance Transit Services		✓			
Enhance Multi-Modal Freight Capacity		✓			
Build a Network of Complete Streets and Pre-serve Quality of Place				✓	
Support City's Land Use, Economic Development and Urban Design Goals			✓		

Lower Impact *Higher Impact*

Weighted Score

41.36

Project Ranking

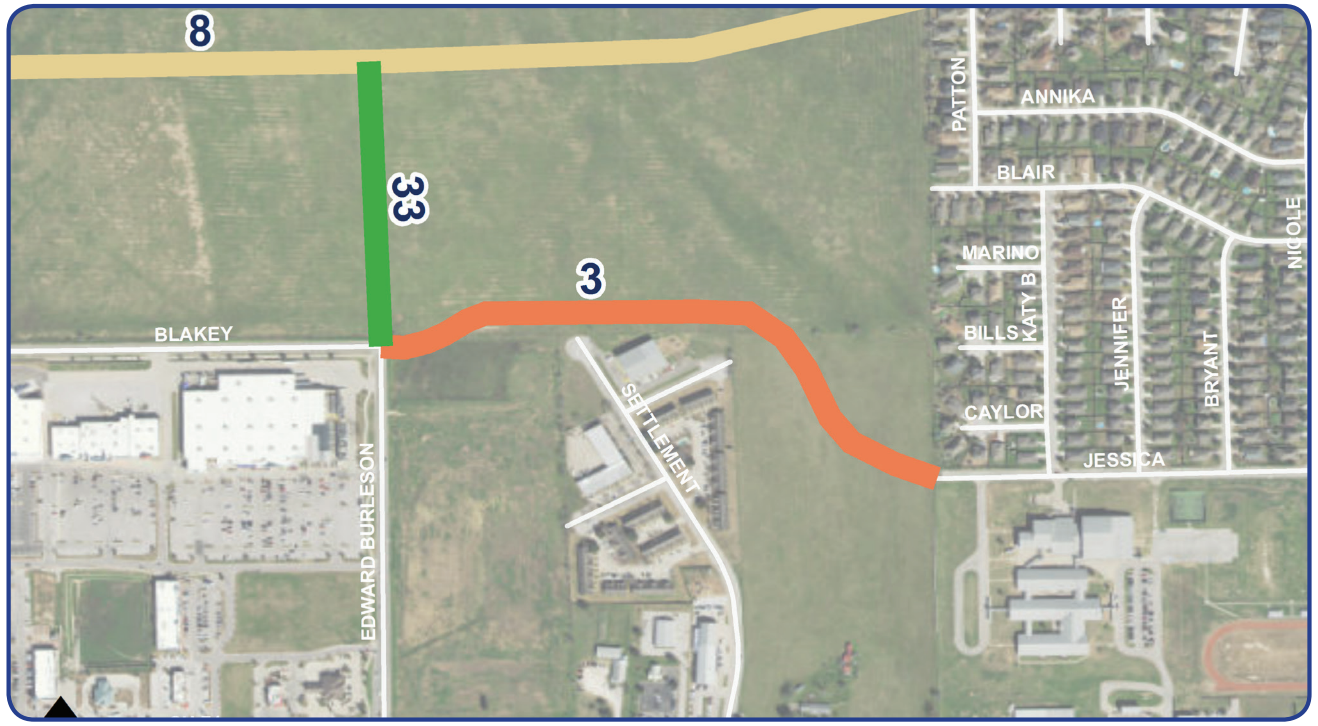
Ranked 13 of 34

Project Costs

Total Cost: $696,000
Construction: $410,640
Pre-Construction/Engineering: $69,600
Right-of-way Acquisition: $174,000
Indirect Costs: $41,760

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 3: Blakey Lane Extension



Project Description

Extend Blakey Lane to connect to Jessica Place. This project aims to improve system connectivity. Project was identified in the City Capital Improvement Program. Purpose of the project is to improve connectivity between and improve access to activity centers. The project is expected to reduce congestion and enhance safety by letting travelers make connections without traveling on heavily congested major thoroughfares.

Functional Classification

Collector

2010 - 2015 Crashes

n/a

Daily Traffic Flow

n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion				✓	
Enhance Transportation Connectivity				✓	
Preserve and Maintain Existing Transportation Assets				✓	
Improve the Safety of the Bastrop Transportation System				✓	
Improve Active Transportation Options				✓	
Expand and Enhance Transit Services			✓		
Enhance Multi-Modal Freight Capacity			✓		
Build a Network of Complete Streets and Preserve Quality of Place				✓	
Support City's Land Use, Economic Development and Urban Design Goals				✓	

Lower Impact → *Higher Impact*

Weighted Score

49.40

Project Ranking

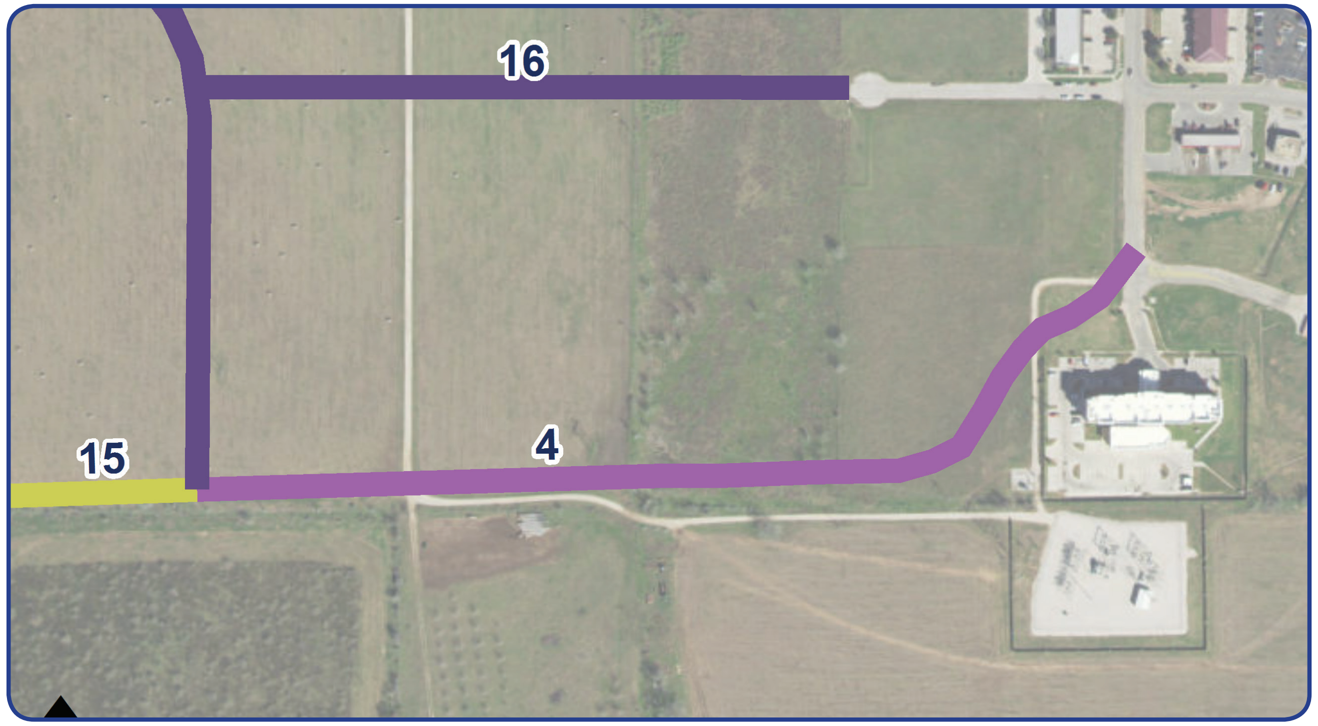
Ranked 3 of 34

Project Costs

Total Cost: $1,250,000
Construction: $737,500
Pre-Construction/Engineering: $125,000
Right-of-way Acquisition: $312,500
Indirect Costs: $75,000

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 4: Hasler Boulevard (1)



Project Description
Extend Hasler Boulevard from Hasler Boulevard to Pecan Park subdivision. Project identified in the City Capital Improvement Program. Purpose of the project is to reduce congestion and conflicts by providing alternative access to anticipated growth areas.

Functional Classification
Collector

2010 - 2015 Crashes
n/a

Daily Traffic Flow
n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion				✓	
Enhance Transportation Connectivity				✓	
Preserve and Maintain Existing Transportation Assets			✓		
Improve the Safety of the Bastrop Transportation System			✓		
Improve Active Transportation Options			✓		
Expand and Enhance Transit Services			✓		
Enhance Multi-Modal Freight Capacity		✓			
Build a Network of Complete Streets and Preserve Quality of Place			✓		
Support City's Land Use, Economic Development and Urban Design Goals			✓		

Lower Impact ⟷ *Higher Impact*

Weighted Score

44.96

Project Ranking

Ranked 8 of 34

Project Costs

Total Cost: $873,000
Construction: $515,070
Pre-Construction/Engineering: $87,300
Right-of-way Acquisition: $218,250
Indirect Costs: $52,380

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 5: Childers Drive

Project Description

Increase roadway capacity from SH 71 to south of Agnes Street. Project identified in the City Capital Improvement Program. Street Widening and upgrade. Purpose of the project is to add capacity to serve neighboring growth area and eliminate a potential bottleneck.

Functional Classification

Local

2010 - 2015 Crashes

9 (48.91 per mile)

Daily Traffic Flow

2010: 6,793 vehicles
Projected 2040: 10,997 vehicles

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion				✓	
Enhance Transportation Connectivity				✓	
Preserve and Maintain Existing Transportation Assets				✓	
Improve the Safety of the Bastrop Transportation System				✓	
Improve Active Transportation Options			✓		
Expand and Enhance Transit Services		✓			
Enhance Multi-Modal Freight Capacity			✓		
Build a Network of Complete Streets and Pre-serve Quality of Place			✓		
Support City's Land Use, Economic Development and Urban Design Goals			✓		

Lower Impact *Higher Impact*

Weighted Score

45.87

Project Ranking

Ranked 7 of 34

Project Costs

Total Cost: $600,000
Construction: $432,000
Pre-Construction/Engineering: $60,000
Right-of-way Acquisition: $72,000
Indirect Costs: $36,000

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 6: Farm Street

Project Description

Increase roadway capacity. Project identified in the City Capital Improvement Program. Purpose of the project is system preservation and maintaining a state of good repair combined with some limited capacity gains.

Functional Classification

Local

2010 - 2015 Crashes

6 (27.27 per mile)

Daily Traffic Flow

n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion			✓		
Enhance Transportation Connectivity			✓		
Preserve and Maintain Existing Transportation Assets				✓	
Improve the Safety of the Bastrop Transportation System			✓		
Improve Active Transportation Options			✓		
Expand and Enhance Transit Services		✓			
Enhance Multi-Modal Freight Capacity		✓			
Build a Network of Complete Streets and Preserve Quality of Place			✓		
Support City's Land Use, Economic Development and Urban Design Goals			✓		

Lower Impact *Higher Impact*

Weighted Score

38.87

Project Ranking

Ranked 21 of 34

Project Costs

Total Cost: $750,000
Construction: $540,000
Pre-Construction/Engineering: $75,000
Right-of-way Acquisition: $90,000
Indirect Costs: $45,000

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 7: Jefferson Street

Project Description
Increase roadway capacity. Project identified in the City Capital Improvement Program. Purpose of the project is system preservation and maintaining a state of good repair combined with some limited capacity gains.

Functional Classification
Local

2010 - 2015 Crashes
2 (2.5 per mile)

Daily Traffic Flow
n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion			✓		
Enhance Transportation Connectivity			✓		
Preserve and Maintain Existing Transportation Assets				✓	
Improve the Safety of the Bastrop Transportation System			✓		
Improve Active Transportation Options			✓		
Expand and Enhance Transit Services		✓			
Enhance Multi-Modal Freight Capacity		✓			
Build a Network of Complete Streets and Preserve Quality of Place			✓		
Support City's Land Use, Economic Development and Urban Design Goals		✓			

Lower Impact → *Higher Impact*

Weighted Score

36.04

Project Ranking

Ranked 29 of 34

Project Costs

Total Cost: $1,261,000
Construction: $907,920
Pre-Construction/Engineering: $126,100
Right-of-way Acquisition: $151,320
Indirect Costs: $75,660

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 8: Charles Boulevard

Project Description
Extend Charles Boulevard from Patton Lane to FM 969. Precedes Project #33. Project was identified through workshops with City Staff, stakeholders and the public. Purpose of the project is to provide improved connectivity to the major thoroughfare network and provide improved emergency access to surrounding growth areas.

Functional Classification
Collector

2010 - 2015 Crashes
n/a

Daily Traffic Flow
n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion				✓	
Enhance Transportation Connectivity				✓	
Preserve and Maintain Existing Transportation Assets		✓			
Improve the Safety of the Bastrop Transportation System			✓		
Improve Active Transportation Options			✓		
Expand and Enhance Transit Services			✓		
Enhance Multi-Modal Freight Capacity		✓			
Build a Network of Complete Streets and Preserve Quality of Place			✓		
Support City's Land Use, Economic Development and Urban Design Goals				✓	

Lower Impact — *Higher Impact*

Weighted Score

41.37

Project Ranking

Ranked 12 of 34

Project Costs

Total Cost: $2,818,000
Construction: $1,662,620
Pre-Construction/Engineering: $281,800
Right-of-way Acquisition: $704,500
Indirect Costs: $169,080

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 9: Future Arterial

Project Description

A newly constructed divided arterial connecting SH 95 to FM 969; including a bridge across the Colorado River. Project was identified through workshops with City Staff, stakeholders and the public. Purpose of the project is to improve both local area and regional mobility by adding additional Colorado River crossing opportunities. The Project should provide major congestion relief for local trips that would be able avoid SH 71. It also addresses emergency response improvement objectives by providing an alternative route for public safety and emergency response vehicles to avoid choke points at river crossings when responding to calls.

Functional Classification

Arterial

2010 - 2015 Crashes

n/a

Daily Traffic Flow

n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion				✓	
Enhance Transportation Connectivity					✓
Preserve and Maintain Existing Transportation Assets				✓	
Improve the Safety of the Bastrop Transportation System				✓	
Improve Active Transportation Options			✓		
Expand and Enhance Transit Services			✓		
Enhance Multi-Modal Freight Capacity			✓		
Build a Network of Complete Streets and Preserve Quality of Place				✓	
Support City's Land Use, Economic Development and Urban Design Goals				✓	

Lower Impact — *Higher Impact*

Weighted Score

51.34

Project Ranking

Ranked 1 of 34

Project Costs

Total Cost: $16,311,000
Construction: $9,809,260
Pre-Construction/Engineering: $1,631,100
Right-of-way Acquisition: $3,891,980
Indirect Costs: $978,660

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 10: MLK Extension

Project Description
Extend Martin Luther King Drive from Mill Street to Business Park Drive. Project was identified by City Staff. Purpose of the project is to provide a logical connection to complete the existing transportation system and provide alternative access to existing and future activity centers.

Functional Classification
Collector

2010 - 2015 Crashes
n/a

Daily Traffic Flow
n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion			✓		
Enhance Transportation Connectivity				✓	
Preserve and Maintain Existing Transportation Assets		✓			
Improve the Safety of the Bastrop Transportation System			✓		
Improve Active Transportation Options		✓			
Expand and Enhance Transit Services		✓			
Enhance Multi-Modal Freight Capacity			✓		
Build a Network of Complete Streets and Preserve Quality of Place			✓		
Support City's Land Use, Economic Development and Urban Design Goals			✓		

Lower Impact ← → *Higher Impact*

Weighted Score

39.61

Project Ranking

Ranked 16 of 34

Project Costs

Total Cost: $494,000
Construction: $291,460
Pre-Construction/Engineering: $49,400
Right-of-way Acquisition: $123,500
Indirect Costs: $29,640

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 11: Sam Houston Extension

Project Description
Extend Sam Houston Drive to FM 969. Extension creates an alternative route to FM 969. Project was identified by the 2008 Thoroughfare Plan. Purpose of the project is to provide connectivity and an alternative to accessing SH 969.

Functional Classification
Collector

2010 - 2015 Crashes
n/a

Daily Traffic Flow
n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion			✓		
Enhance Transportation Connectivity				✓	
Preserve and Maintain Existing Transportation Assets			✓		
Improve the Safety of the Bastrop Transportation System			✓		
Improve Active Transportation Options			✓		
Expand and Enhance Transit Services		✓			
Enhance Multi-Modal Freight Capacity		✓			
Build a Network of Complete Streets and Preserve Quality of Place			✓		
Support City's Land Use, Economic Development and Urban Design Goals				✓	

Lower Impact ← → *Higher Impact*

Weighted Score

41.51

Project Ranking

Ranked 11 of 34

Project Costs

Total Cost: $6,965,000
Construction: $4,109,350
Pre-Construction/Engineering: $696,500
Right-of-way Acquisition: $1,741,250
Indirect Costs: $417,900

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 12: Future Collector

Project Description
Construct new Collector connecting Eight Oaks Drive extension (Project #13) and Sam Houston Drive Extension (Project #11). Project was identified through workshops with City Staff, stakeholders and the public.

Functional Classification
Collector

2010 - 2015 Crashes
n/a

Daily Traffic Flow
n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion			✓		
Enhance Transportation Connectivity			✓		
Preserve and Maintain Existing Transportation Assets		✓			
Improve the Safety of the Bastrop Transportation System		✓			
Improve Active Transportation Options		✓			
Expand and Enhance Transit Services		✓			
Enhance Multi-Modal Freight Capacity		✓			
Build a Network of Complete Streets and Preserve Quality of Place			✓		
Support City's Land Use, Economic Development and Urban Design Goals			✓		

Lower Impact *Higher Impact*

Weighted Score

32.86

Project Ranking

Ranked 33 of 34

Project Costs

Total Cost: $2,405,000
Construction: $1,418,950
Pre-Construction/Engineering: $240,500
Right-of-way Acquisition: $601,250
Indirect Costs: $144,300

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 13: Eight Oaks Extension

Project Description

Extension of Eight Oaks Drive to FM 969. Project was identified through workshops with City Staff, stakeholders and the public. Purpose of the project is to provide additional connectivity to improve ingress and egress to growth areas as well as to improve emergency access options.

Functional Classification

Collector

2010 - 2015 Crashes

n/a

Daily Traffic Flow

n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion			✓		
Enhance Transportation Connectivity			✓		
Preserve and Maintain Existing Transportation Assets		✓			
Improve the Safety of the Bastrop Transportation System		✓			
Improve Active Transportation Options		✓			
Expand and Enhance Transit Services		✓			
Enhance Multi-Modal Freight Capacity		✓			
Build a Network of Complete Streets and Preserve Quality of Place			✓		
Support City's Land Use, Economic Development and Urban Design Goals			✓		

Lower Impact *Higher Impact*

Weighted Score

34.11

Project Ranking

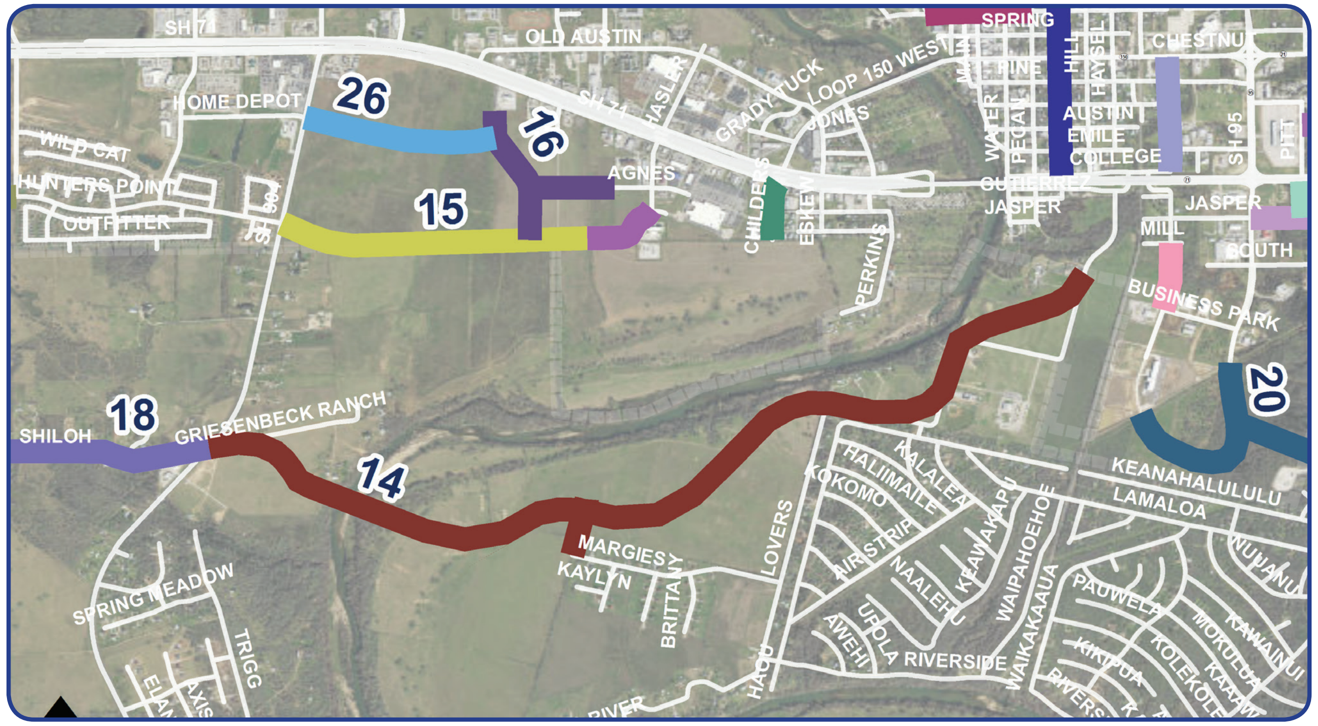
Ranked 31 of 34

Project Costs

Total Cost: $5,417,000
Construction: $3,196,030
Pre-Construction/Engineering: $541,700
Right-of-way Acquisition: $1,354,250
Indirect Costs: $325,020

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 14: Future Collector



Project Description

A new road connecting SH 304/Shiloh Road intersection with Lovers Lane via a new bridge across the Colorado River. Additional segment connects Margies Way. Project is meant to provide additional ingress/egress point to Tahitian Village due to safety concerns. Project was identified during an analysis of safety concerns.

Functional Classification

Collector

2010 - 2015 Crashes

n/a

Daily Traffic Flow

n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion				✓	
Enhance Transportation Connectivity				✓	
Preserve and Maintain Existing Transportation Assets			✓		
Improve the Safety of the Bastrop Transportation System				✓	
Improve Active Transportation Options			✓		
Expand and Enhance Transit Services		✓			
Enhance Multi-Modal Freight Capacity		✓			
Build a Network of Complete Streets and Preserve Quality of Place			✓		
Support City's Land Use, Economic Development and Urban Design Goals				✓	

Lower Impact — *Higher Impact*

Weighted Score

46.22

Project Ranking

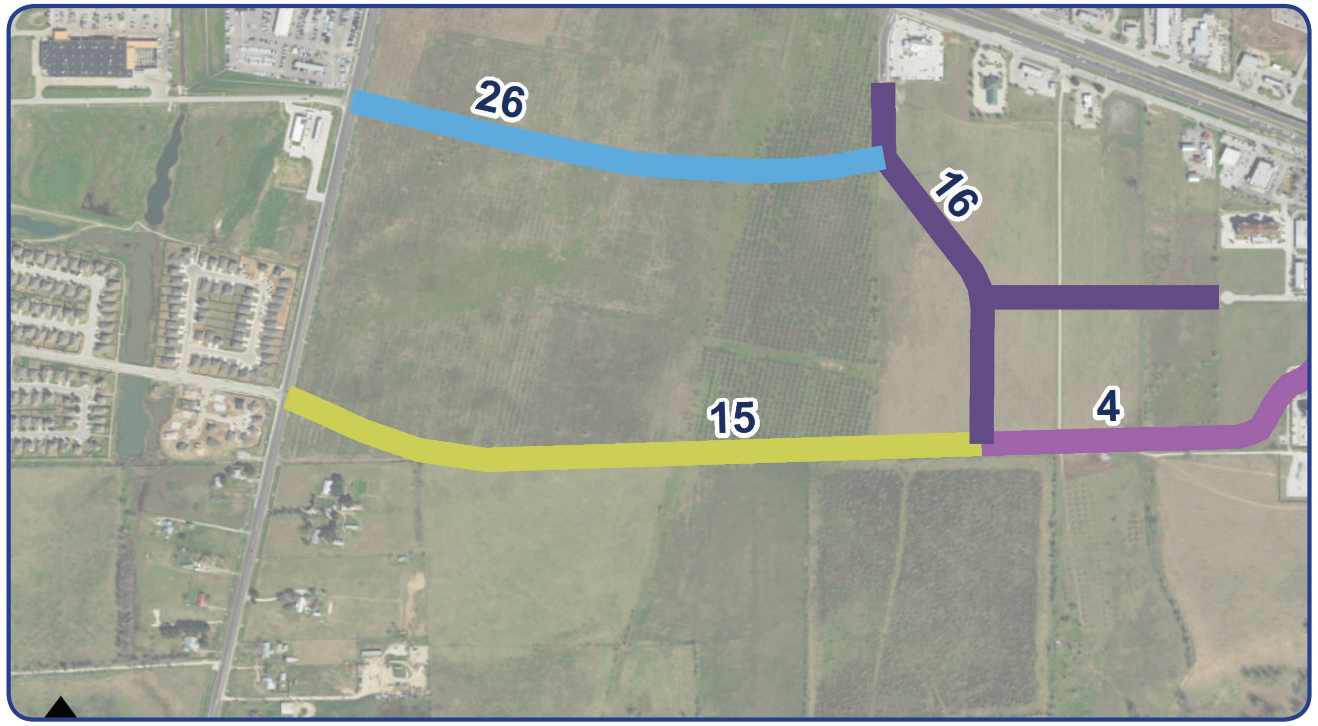
Ranked 6 of 34

Project Costs

Total Cost: $8,368,000
Construction: $4,937,120
Pre-Construction/Engineering: $836,800
Right-of-way Acquisition: $2,092,000
Indirect Costs: $502,080

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 15: Hasler Boulevard (2)



Project Description

Extend Hasler Boulevard (Project #4) to SH 304 at intersection of Hunters Point. Includes connection to future Project #16. Project was identified by the 2008 Thoroughfare Plan. Purpose of the project is to provide additional connectivity to improve ingress and egress to growth areas as well as to improve emergency access options.

Functional Classification

Collector

2010 - 2015 Crashes

n/a

Daily Traffic Flow

n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion				✓	
Enhance Transportation Connectivity				✓	
Preserve and Maintain Existing Transportation Assets			✓		
Improve the Safety of the Bastrop Transportation System			✓		
Improve Active Transportation Options			✓		
Expand and Enhance Transit Services			✓		
Enhance Multi-Modal Freight Capacity			✓		
Build a Network of Complete Streets and Preserve Quality of Place				✓	
Support City's Land Use, Economic Development and Urban Design Goals				✓	

Lower Impact ↔ *Higher Impact*

Weighted Score

50.42

Project Ranking

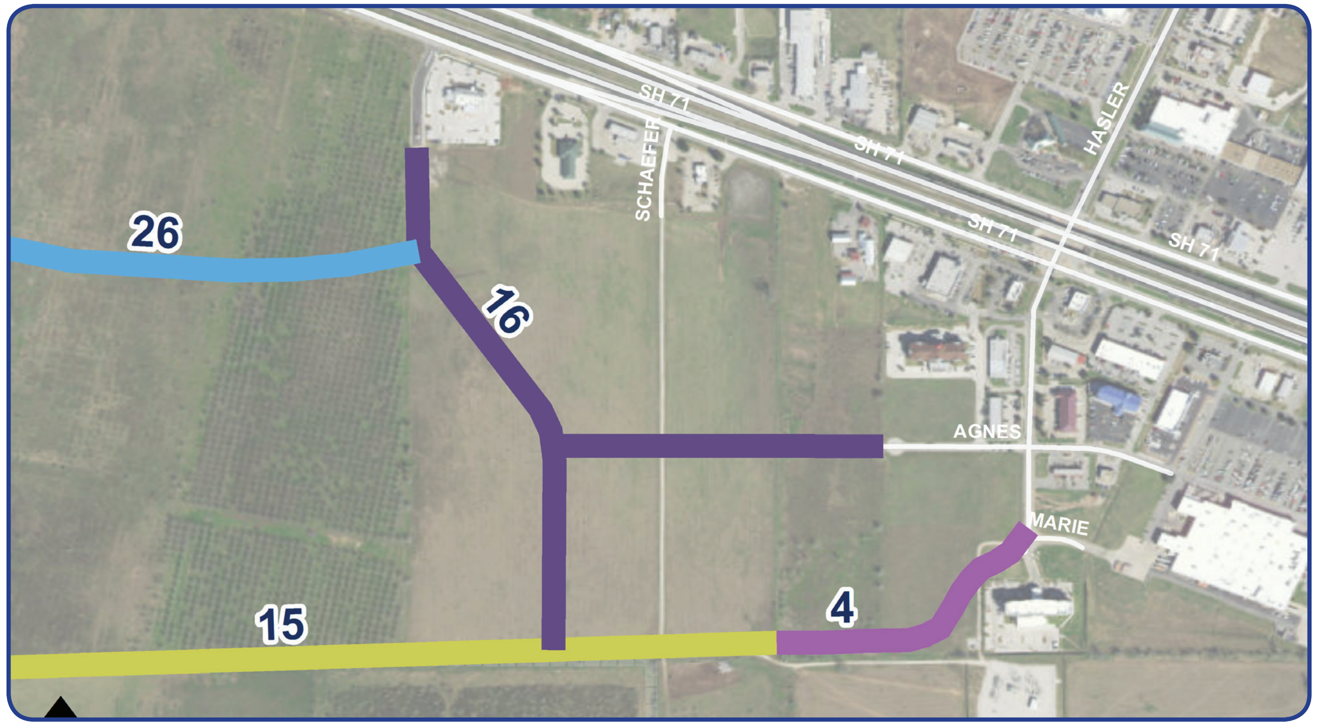
Ranked 2 of 34

Project Costs

Total Cost: $1,611,000
Construction: $950,490
Pre-Construction/Engineering: $161,100
Right-of-way Acquisition: $402,750
Indirect Costs: $96,660

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 16: Orchard Parkway



Project Description

Construct future Orchard Parkway. Project includes an extension of Agnes Street. Project was identified through a technical analysis of site plans and other proposed future land uses. Purpose of the project is to provide needed concurrent capacity to serve proposed growth areas and new activity centers.

Functional Classification

Collector

2010 - 2015 Crashes

n/a

Daily Traffic Flow

n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion				✓	
Enhance Transportation Connectivity				✓	
Preserve and Maintain Existing Transportation Assets		✓			
Improve the Safety of the Bastrop Transportation System			✓		
Improve Active Transportation Options			✓		
Expand and Enhance Transit Services			✓		
Enhance Multi-Modal Freight Capacity		✓			
Build a Network of Complete Streets and Pre-serve Quality of Place				✓	
Support City's Land Use, Economic Development and Urban Design Goals				✓	

Lower Impact *Higher Impact*

Weighted Score

42.75

Project Ranking

Ranked 10 of 34

Project Costs

Total Cost: $1,735,000
Construction: $1,023,650
Pre-Construction/Engineering: $173,500
Right-of-way Acquisition: $433,750
Indirect Costs: $104,100

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 17: FM 1209

Project Description

Realign FM 1209 to form "T" intersection with FM 969; connect with XS Ranch Bridge (Project #21) at FM 969. Project is meant to address safety concerns at the current intersection of FM 1209 and FM 969. Project was identified through an analysis of safety concerns.

Functional Classification

Arterial

2010 - 2015 Crashes

n/a

Daily Traffic Flow

n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion			✓		
Enhance Transportation Connectivity				✓	
Preserve and Maintain Existing Transportation Assets			✓		
Improve the Safety of the Bastrop Transportation System				✓	
Improve Active Transportation Options			✓		
Expand and Enhance Transit Services		✓			
Enhance Multi-Modal Freight Capacity		✓			
Build a Network of Complete Streets and Pre-serve Quality of Place			✓		
Support City's Land Use, Economic Development and Urban Design Goals			✓		

Lower Impact ⟷ *Higher Impact*

Weighted Score

39.47

Project Ranking

Ranked 17 of 34

Project Costs

Total Cost: $527,000
Construction: $310,930
Pre-Construction/Engineering: $52,700
Right-of-way Acquisition: $131,750
Indirect Costs: $31,620

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 18: Shiloh Road (1)

Project Description
Upgrade Shiloh Road to Collector between SH 304 and FM 20. Project is in anticipation of increased future traffic volumes. Project was identified in the 2008 Thoroughfare Plan.

Functional Classification
Collector

2010 - 2015 Crashes
9 (5.14 per mile)

Daily Traffic Flow
n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion			✓		
Enhance Transportation Connectivity				✓	
Preserve and Maintain Existing Transportation Assets			✓		
Improve the Safety of the Bastrop Transportation System			✓		
Improve Active Transportation Options		✓			
Expand and Enhance Transit Services		✓			
Enhance Multi-Modal Freight Capacity			✓		
Build a Network of Complete Streets and Preserve Quality of Place			✓		
Support City's Land Use, Economic Development and Urban Design Goals			✓		

Lower Impact *Higher Impact*

Weighted Score

38.81

Project Ranking

Ranked 22 of 34

Project Costs

Total Cost: $1,382,000
Construction: $995,040
Pre-Construction/Engineering: $138,200
Right-of-way Acquisition: $165,840
Indirect Costs: $82,920

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 19: Shiloh Road (2)

Project Description
Upgrade Shiloh Road to Collector between FM 20 and Gaines Road. Project was identified in the 2008 Thoroughfare Plan. Purpose of the project is to provide needed concurrent capacity to serve anticipated growth areas and new activity centers.

Functional Classification
Collector

2010 - 2015 Crashes
9 (2.67 per mile)

Daily Traffic Flow
2010: 255 vehicles
Projected 2040: 4,776 vehicles

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion			✓		
Enhance Transportation Connectivity			✓		
Preserve and Maintain Existing Transportation Assets			✓		
Improve the Safety of the Bastrop Transportation System			✓		
Improve Active Transportation Options		✓			
Expand and Enhance Transit Services		✓			
Enhance Multi-Modal Freight Capacity		✓			
Build a Network of Complete Streets and Preserve Quality of Place			✓		
Support City's Land Use, Economic Development and Urban Design Goals			✓		

Lower Impact — *Higher Impact*

Weighted Score

35.77

Project Ranking

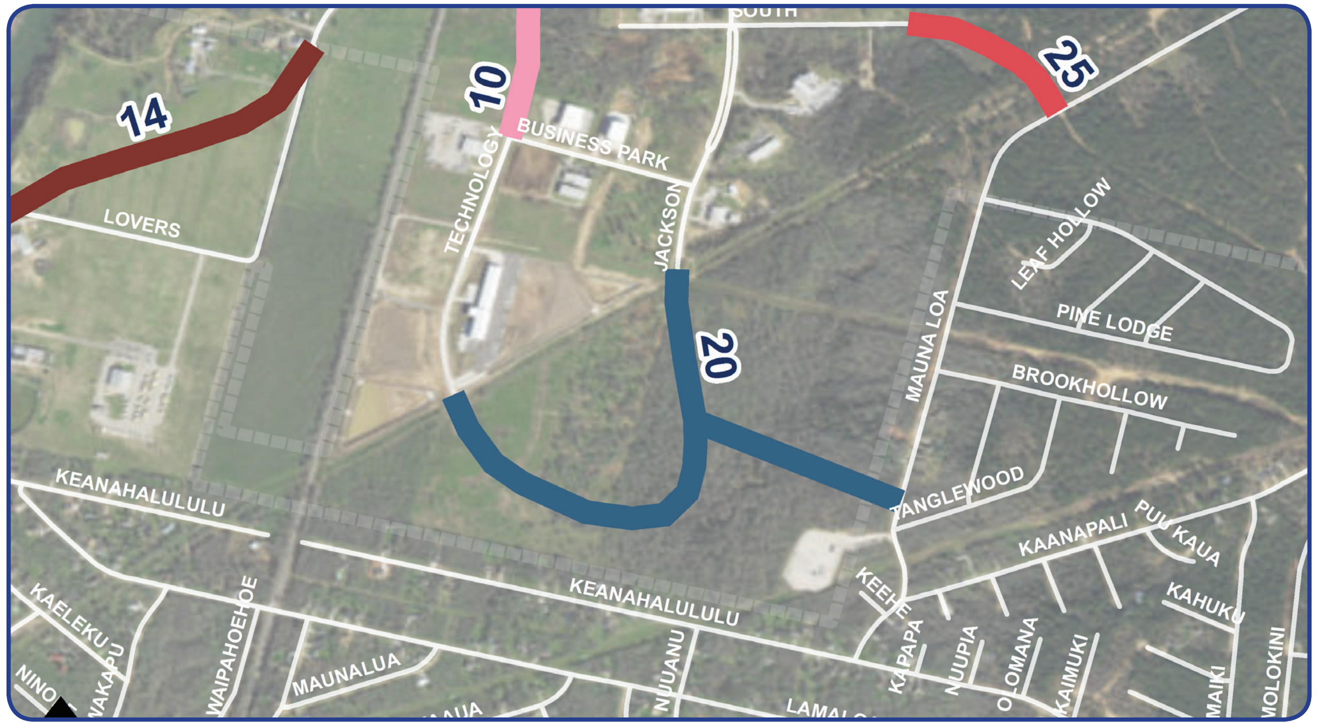
Ranked 30 of 34

Project Costs

Total Cost: $3,553,000
Construction: $2,558,160
Pre-Construction/Engineering: $355,300
Right-of-way Acquisition: $426,360
Indirect Costs: $213,180

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 20: Jackson Street Extension



Project Description
Extend Jackson Street south, creating a loop and connecting with Mauna Loa Lane in Tahitian Village. Project was identified in the 2008 Thoroughfare Plan. Project is designed to improve internal circulation and facilitate emergency access.

Functional Classification
Collector

2010 - 2015 Crashes
n/a

Daily Traffic Flow
n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion			✓		
Enhance Transportation Connectivity				✓	
Preserve and Maintain Existing Transportation Assets		✓			
Improve the Safety of the Bastrop Transportation System			✓		
Improve Active Transportation Options		✓			
Expand and Enhance Transit Services		✓			
Enhance Multi-Modal Freight Capacity		✓			
Build a Network of Complete Streets and Preserve Quality of Place			✓		
Support City's Land Use, Economic Development and Urban Design Goals				✓	

Lower Impact — *Higher Impact*

Weighted Score

38.88

Project Ranking

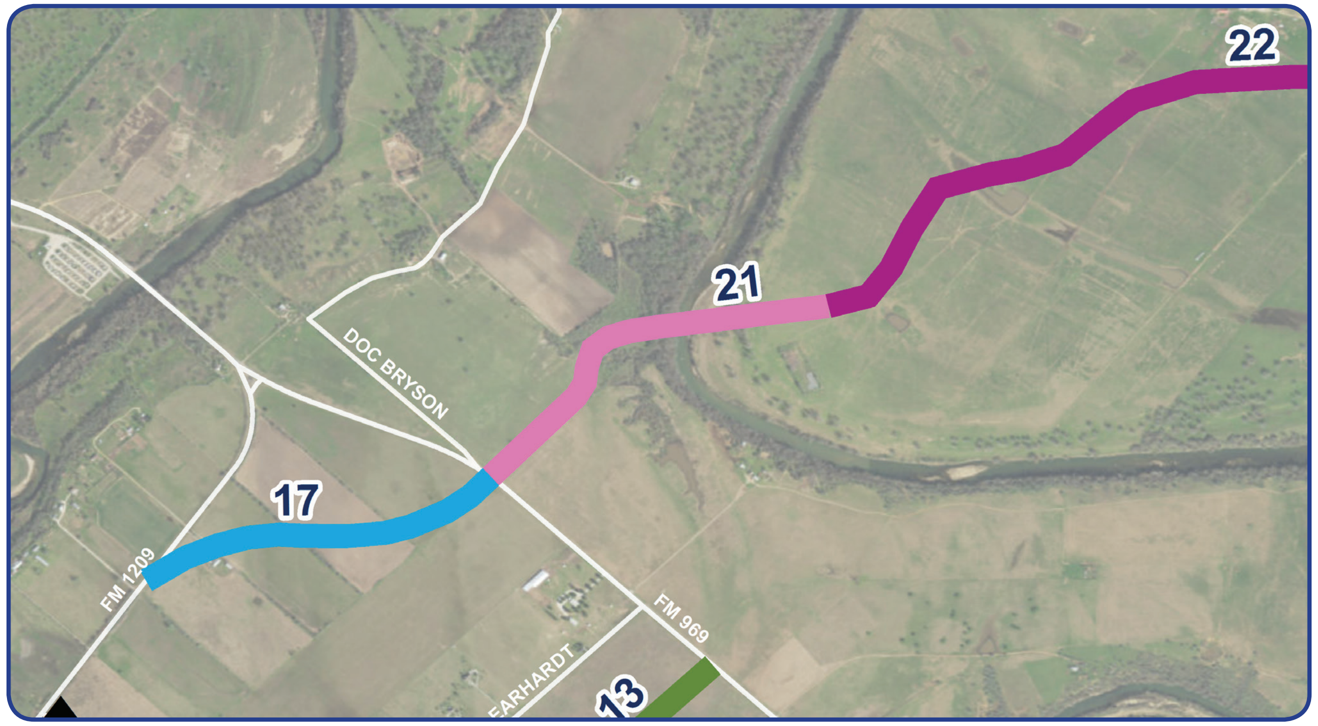
Ranked 20 of 34

Project Costs

Total Cost: $1,936,000
Construction: $1,142,240
Pre-Construction/Engineering: $193,600
Right-of-way Acquisition: $484,000
Indirect Costs: $116,160

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 21: XS Ranch Bridge



Project Description

New roadway and bridge over Colorado River to provide access to future XS Ranch development. Connects future XS Ranch Road (Project #22) with FM 969. Project is in anticipation of future traffic due to XS Ranch development and is included in the subdivision site plan.

Functional Classification

Arterial

2010 - 2015 Crashes

n/a

Daily Traffic Flow

n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion				✓	
Enhance Transportation Connectivity				✓	
Preserve and Maintain Existing Transportation Assets			✓		
Improve the Safety of the Bastrop Transportation System				✓	
Improve Active Transportation Options				✓	
Expand and Enhance Transit Services			✓		
Enhance Multi-Modal Freight Capacity		✓			
Build a Network of Complete Streets and Preserve Quality of Place				✓	
Support City's Land Use, Economic Development and Urban Design Goals				✓	

Lower Impact ← → *Higher Impact*

Weighted Score

49.03

Project Ranking

Ranked 4 of 34

Project Costs

Total Cost: $4,752,000
Construction: $2,803,680
Pre-Construction/Engineering: $475,200
Right-of-way Acquisition: $1,188,000
Indirect Costs: $285,120

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 22: XS Ranch Road

Project Description
Construct two-lane arterial between FM 969 and SH 95; widen to four lanes when ADT exceeds 20,000 vehicles/day. Project is in anticipation of future traffic due to XS Ranch development and is included in the subdivision site plan.

Functional Classification
Arterial

2010 - 2015 Crashes
2 (.93 per mile)*

Daily Traffic Flow
2010: 386 vehicles*
Projected 2040: 6,846 vehicles*
*Sayers Road portion

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion				✓	
Enhance Transportation Connectivity				✓	
Preserve and Maintain Existing Transportation Assets			✓		
Improve the Safety of the Bastrop Transportation System				✓	
Improve Active Transportation Options			✓		
Expand and Enhance Transit Services			✓		
Enhance Multi-Modal Freight Capacity			✓		
Build a Network of Complete Streets and Preserve Quality of Place				✓	
Support City's Land Use, Economic Development and Urban Design Goals				✓	

Lower Impact *Higher Impact*

Weighted Score

48.84

Project Ranking

Ranked 5 of 34

Project Costs

Total Cost: $7,968,000
Construction: $4,920,430
Pre-Construction/Engineering: $796,800
Right-of-way Acquisition: $1,772,690
Indirect Costs: $478,080

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 23: Linden Street Extension

Project Description

Extend Linden Street east to SH 95; upgrade to collector. Improves connectivity and delivery of municipal services to SH 95. Project was identified by City Staff.

Functional Classification

Collector

2010 - 2015 Crashes

n/a

Daily Traffic Flow

n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion			✓		
Enhance Transportation Connectivity			✓		
Preserve and Maintain Existing Transportation Assets			✓		
Improve the Safety of the Bastrop Transportation System		✓			
Improve Active Transportation Options		✓			
Expand and Enhance Transit Services		✓			
Enhance Multi-Modal Freight Capacity		✓			
Build a Network of Complete Streets and Preserve Quality of Place		✓			
Support City's Land Use, Economic Development and Urban Design Goals		✓			

Lower Impact ← → *Higher Impact*

Weighted Score

32.89

Project Ranking

Ranked 32 of 34

Project Costs

Total Cost: $142,000
Construction: $83,780
Pre-Construction/Engineering: $14,200
Right-of-way Acquisition: $35,500
Indirect Costs: $8,520

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 24: Jasper Street Extension

Project Description
Extend Jasper Street east to Mauna Loa Lane at Tahitian Drive. Project is meant to improve connectivity within Tahitian Village. Project was identified through workshops with City Staff, stakeholders and the public.

Functional Classification
Collector

2010 - 2015 Crashes
n/a

Daily Traffic Flow
n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion			✓		
Enhance Transportation Connectivity				✓	
Preserve and Maintain Existing Transportation Assets			✓		
Improve the Safety of the Bastrop Transportation System			✓		
Improve Active Transportation Options			✓		
Expand and Enhance Transit Services		✓			
Enhance Multi-Modal Freight Capacity		✓			
Build a Network of Complete Streets and Pre-serve Quality of Place			✓		
Support City's Land Use, Economic Development and Urban Design Goals			✓		

Lower Impact *Higher Impact*

Weighted Score

36.86

Project Ranking

Ranked 28 of 34

Project Costs

Total Cost: $2,135,000
Construction: $1,259,650
Pre-Construction/Engineering: $213,500
Right-of-way Acquisition: $533,750
Indirect Costs: $128,100

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 25: South Street Extension

Project Description

Extend South Street east to connect to Mauna Loa Lane. Project is meant to improve system connectivity. Project was identified by City Staff.

Functional Classification

Local

2010 - 2015 Crashes

n/a

Daily Traffic Flow

n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion			✓		
Enhance Transportation Connectivity				✓	
Preserve and Maintain Existing Transportation Assets			✓		
Improve the Safety of the Bastrop Transportation System			✓		
Improve Active Transportation Options			✓		
Expand and Enhance Transit Services		✓			
Enhance Multi-Modal Freight Capacity		✓			
Build a Network of Complete Streets and Preserve Quality of Place			✓		
Support City's Land Use, Economic Development and Urban Design Goals			✓		

Lower Impact *Higher Impact*

Weighted Score

39.43

Project Ranking

Ranked 18 of 34

Project Costs

Total Cost: $565,000
Construction: $333,350
Pre-Construction/Engineering: $56,500
Right-of-way Acquisition: $141,250
Indirect Costs: $33,900

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 26: Future Collector

Project Description
Construct Collector connecting Home Depot Way with future Orchard Parkway (Project #16). Project is meant to improve system connectivity to support expected growth and was identified through a technical analysis of site plans and other proposed future land uses.

Functional Classification
Collector

2010 - 2015 Crashes
n/a

Daily Traffic Flow
n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion				✓	
Enhance Transportation Connectivity				✓	
Preserve and Maintain Existing Transportation Assets			✓		
Improve the Safety of the Bastrop Transportation System			✓		
Improve Active Transportation Options		✓			
Expand and Enhance Transit Services			✓		
Enhance Multi-Modal Freight Capacity		✓			
Build a Network of Complete Streets and Preserve Quality of Place			✓		
Support City's Land Use, Economic Development and Urban Design Goals				✓	

Lower Impact — *Higher Impact*

Weighted Score

43.81

Project Ranking

Ranked 9 of 34

Project Costs

Total Cost: $1,280,000
Construction: $755,200
Pre-Construction/Engineering: $128,000
Right-of-way Acquisition: $320,000
Indirect Costs: $76,800

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 27: Future Collector

Project Description
Construct Collector connecting FM 20 to the intersection of Hunters Point Drive and Bear Hunter Drive. Project was identified in the 2008 Thoroughfare Plan. Purpose of the project is to improve connectivity between and improve access to activity centers. The project is expected to reduce congestion and enhance safety by letting travelers make connections without traveling on heavily congested major thoroughfares.

Functional Classification
Collector

2010 - 2015 Crashes
n/a

Daily Traffic Flow
n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion				✓	
Enhance Transportation Connectivity				✓	
Preserve and Maintain Existing Transportation Assets			✓		
Improve the Safety of the Bastrop Transportation System			✓		
Improve Active Transportation Options		✓			
Expand and Enhance Transit Services			✓		
Enhance Multi-Modal Freight Capacity		✓			
Build a Network of Complete Streets and Preserve Quality of Place			✓		
Support City's Land Use, Economic Development and Urban Design Goals				✓	

Lower Impact — *Higher Impact*

Weighted Score

41.24

Project Ranking

Ranked 14 of 34

Project Costs

Total Cost: $1,634,000
Construction: $964,060
Pre-Construction/Engineering: $163,400
Right-of-way Acquisition: $408,500
Indirect Costs: $98,040

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 28: Future Collector

Project Description

Construct Collector connecting FM 20 west to Project #29. Project was identified in the 2008 Thoroughfare Plan. Purpose of the project is to improve connectivity between and improve access to activity centers. The project is expected to reduce congestion and enhance safety by letting travelers make connections without traveling on heavily congested major thoroughfares.

Functional Classification

Collector

2010 - 2015 Crashes

n/a

Daily Traffic Flow

n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion			✓		
Enhance Transportation Connectivity			✓		
Preserve and Maintain Existing Transportation Assets			✓		
Improve the Safety of the Bastrop Transportation System		✓			
Improve Active Transportation Options		✓			
Expand and Enhance Transit Services		✓			
Enhance Multi-Modal Freight Capacity		✓			
Build a Network of Complete Streets and Preserve Quality of Place			✓		
Support City's Land Use, Economic Development and Urban Design Goals				✓	

Lower Impact *Higher Impact*

Weighted Score

36.98

Project Ranking

Ranked 27 of 34

Project Costs

Total Cost: $3,671,000
Construction: $2,165,890
Pre-Construction/Engineering: $367,100
Right-of-way Acquisition: $917,750
Indirect Costs: $220,260

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 29: Future Collector

Project Description
Construct Collector connecting SH 71 frontage road with Shiloh Road. Project is meant to increase access to SH 71. Project was identified in the 2008 Thoroughfare Plan.

Functional Classification
Collector

2010 - 2015 Crashes
n/a

Daily Traffic Flow
n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion			✓		
Enhance Transportation Connectivity				✓	
Preserve and Maintain Existing Transportation Assets			✓		
Improve the Safety of the Bastrop Transportation System			✓		
Improve Active Transportation Options		✓			
Expand and Enhance Transit Services		✓			
Enhance Multi-Modal Freight Capacity			✓		
Build a Network of Complete Streets and Preserve Quality of Place			✓		
Support City's Land Use, Economic Development and Urban Design Goals			✓		

Lower Impact *Higher Impact*

Weighted Score

39.07

Project Ranking

Ranked 19 of 34

Project Costs

Total Cost: $2,009,000
Construction: $1,185,310
Pre-Construction/Engineering: $200,900
Right-of-way Acquisition: $502,250
Indirect Costs: $120,540

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 30: Lost Pines Extension

Project Description

Extend Lost Pines Avenue to Pitt Street. Project was identified by City Staff as an option to improve system connectivity. The project is expected to reduce congestion and enhance safety by letting travelers make connections without traveling on heavily congested major thoroughfares.

Functional Classification

Local

2010 - 2015 Crashes

n/a

Daily Traffic Flow

n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion			✓		
Enhance Transportation Connectivity				✓	
Preserve and Maintain Existing Transportation Assets			✓		
Improve the Safety of the Bastrop Transportation System			✓		
Improve Active Transportation Options			✓		
Expand and Enhance Transit Services		✓			
Enhance Multi-Modal Freight Capacity		✓			
Build a Network of Complete Streets and Preserve Quality of Place			✓		
Support City's Land Use, Economic Development and Urban Design Goals			✓		

Lower Impact → *Higher Impact*

Weighted Score

37.60

Project Ranking

Ranked 25 of 34

Project Costs

Total Cost: $514,000
Construction: $303,260
Pre-Construction/Engineering: $51,400
Right-of-way Acquisition: $128,500
Indirect Costs: $30,840

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 31: Future Pitt Street

Project Description
Construct new street, Pitt Street, from Jasper Street to SH 71. Project improves connectivity to SH 71 and was identified through workshops with City Staff, stakeholders and the public.

Functional Classification
Local

2010 - 2015 Crashes
n/a

Daily Traffic Flow
n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion			✓		
Enhance Transportation Connectivity			✓		
Preserve and Maintain Existing Transportation Assets		✓			
Improve the Safety of the Bastrop Transportation System		✓			
Improve Active Transportation Options		✓			
Expand and Enhance Transit Services		✓			
Enhance Multi-Modal Freight Capacity	✓				
Build a Network of Complete Streets and Pre-serve Quality of Place		✓			
Support City's Land Use, Economic Development and Urban Design Goals			✓		

Lower Impact *Higher Impact*

Weighted Score

31.64

Project Ranking

Ranked 34 of 34

Project Costs

Total Cost: $270,000
Construction: $159,300
Pre-Construction/Engineering: $27,000
Right-of-way Acquisition: $67,500
Indirect Costs: $16,200

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 32: Pine Hollow Drive

Project Description
Extend Pine Hollow Drive to Mauna Loa Lane to connect with Pine Oak Drive. Project was identified in the 2008 Thoroughfare Plan. Purpose of the project is to improve connectivity and emergency access.

Functional Classification
Collector

2010 - 2015 Crashes
n/a

Daily Traffic Flow
n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion			✓		
Enhance Transportation Connectivity				✓	
Preserve and Maintain Existing Transportation Assets			✓		
Improve the Safety of the Bastrop Transportation System			✓		
Improve Active Transportation Options		✓			
Expand and Enhance Transit Services		✓			
Enhance Multi-Modal Freight Capacity		✓			
Build a Network of Complete Streets and Pre-serve Quality of Place			✓		
Support City's Land Use, Economic Development and Urban Design Goals			✓		

Lower Impact *Higher Impact*

Weighted Score

37.69

Project Ranking

Ranked 24 of 34

Project Costs

Total Cost: $197,000
Construction: $116,230
Pre-Construction/Engineering: $19,700
Right-of-way Acquisition: $49,250
Indirect Costs: $11,820

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 33: Burleson Extension

Project Description

Extend Edward Burleson Lane to Charles Boulevard (Project #8). Preceded by Project #8. Project is meant to improve system connectivity and is identified in the 2008 Thoroughfare Plan. Purpose of the project is to add capacity and access to serve large activity centers and traffic generators.

Functional Classification

Collector

2010 - 2015 Crashes

n/a

Daily Traffic Flow

n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion			✓		
Enhance Transportation Connectivity				✓	
Preserve and Maintain Existing Transportation Assets			✓		
Improve the Safety of the Bastrop Transportation System		✓			
Improve Active Transportation Options		✓			
Expand and Enhance Transit Services		✓			
Enhance Multi-Modal Freight Capacity		✓			
Build a Network of Complete Streets and Preserve Quality of Place		✓			
Support City's Land Use, Economic Development and Urban Design Goals			✓		

Lower Impact ← → *Higher Impact*

Weighted Score

37.05

Project Ranking

Ranked 26 of 34

Project Costs

Total Cost: $443,000
Construction: $261,370
Pre-Construction/Engineering: $44,300
Right-of-way Acquisition: $110,750
Indirect Costs: $26,580

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

Project 34: Future Arterial

Project Description
The final segment of the new divided arterial (Project #9 and Project #11) from SH 95 to FM 969. Segment connects divided arterial to SH 71. Project was identified through workshops with City Staff, stakeholders and the public.

Functional Classification
Arterial

2010 - 2015 Crashes
n/a

Daily Traffic Flow
n/a

Project Scoring

Level of Impact on Goal	Zero Impact	Very Little Impact	Some Impact	Positive Impact	Substantial Positive Impact
Manage Traffic Congestion			✓		
Enhance Transportation Connectivity				✓	
Preserve and Maintain Existing Transportation Assets			✓		
Improve the Safety of the Bastrop Transportation System			✓		
Improve Active Transportation Options		✓			
Expand and Enhance Transit Services		✓			
Enhance Multi-Modal Freight Capacity			✓		
Build a Network of Complete Streets and Pre-serve Quality of Place			✓		
Support City's Land Use, Economic Development and Urban Design Goals			✓		

Lower Impact ⟷ *Higher Impact*

Weighted Score

38.80

Project Ranking

Ranked 23 of 34

Project Costs

Total Cost: $4,701,000
Construction: $2,773,590
Pre-Construction/Engineering: $470,100
Right-of-way Acquisition: $1,175,250
Indirect Costs: $282,060

*The cost estimates for each project represent program-level costs and are generated for budgeting purposes only. Actual project costs depend on market conditions, and will not be finalized until the time of design and construction.

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8

Conclusion

The 2016 Bastrop Transportation Master Plan (TMP) provides the City with a guideline for managing investment in the transportation system within the City and its statutory ETJ. The TMP was developed using the CAMPO Platinum Planning Principles and follows the planning guidelines established by TxDOT and the Federal transportation funding legislation, the Fixing America's Surface Transportation Act (FAST Act). The alignment with these regional, state and national planning and funding regulations will allow the prioritized projects contained in this TMP to qualify for funding from these sources, wherever possible.

The projects selected were also evaluated for their contribution to complete streets principles that support context sensitive multimodal project design. The Plan promotes a transportation system that provides safe and efficient travel carried out in a sense of relative comfort.

The prioritized project list proposed for inclusion in the City Capital Improvement Program or recommended for submittal to CAMPO for possible inclusion in the Regional Transportation Plan address, to one degree or another, the key goals of the 2016 Bastrop Transportation Master Plan.

However, despite the value the projects provide to support the Comprehensive Plan Goals and objectives, the program of projects is still dominated by street and roadway projects. For this reason, it is recommended that the City continue to work with its local stakeholders and regional planning partners to address some additional, non-automobile related policies and programs, including but not limited to, the following:

EXPANDED TRANSIT SERVICE

The City of Bastrop has a reasonably robust transit system for a community of its size, but as the City continues to grow in population and continues to expand in geographic area, consideration must be given to expanding local transit service. There was strong stakeholder interest expressed in expanding local transit service coverage and times. In addition, stakeholders articulated a critical need for more commuter options for travel to work in employment centers throughout the region. The views expressed in the public dialogue were reinforced by the results of the analysis of transit dependence and potential ridership outlined in the transit section of the Needs Assessment (Chapter 4).

Current transit service, both within the City and to regional destinations outside the City, is provided by Capital Area Rural Transportation System (CARTS). To begin the process of better understanding the transit needs of Bastrop residents, it is recommended that the City undertake, in collaboration with CARTS and other planning partners, development of a transit service plan. A transit service plan would provide additional insight into the transit needs of City residents and the various service strategies that could be employed to address current and future needs.

The City should also stay active in regional transit planning activities that may provide transportation solutions for Bastrop commuters. CAMPO recently considered conducting regional transit studies of areas outside of the urban core. By collaborating with it's regional planning partners, the City may be able to leverage its own transit planning efforts to expand the range of transit options and transportation solutions as the City continues to grow and travel demand continues to increase.

ACTIVE TRANSPORTATION

Active transportation is always part of every trip. Even auto trips begin and end with people walking, or wheeling, to and from their autos as they leave one place and enter another. The Comprehensive Plan and its related public dialogue expressed strong support for complete streets concepts that included opportunities for non-motorized active transportation. As part of the analysis process conducted in the needs assessment, the study team developed an active transportation framework of priority routes that could be eventually connected into an active transportation network. This framework is shown in Map 8.1.

It is recommended that the City consider undertaking efforts to refine and implement the example active transportation frameworks through a variety of initiatives including, but not limited to:

- Support active transportation education that markets active transportation and informs both drivers and active transportation users on Share the Road safety principles.
- Participate in the national Safe Routes to Schools (SRTS) program that encourages elementary and middle school children to use active transportation to get to and from school.

- Continue to participate and perhaps increase participation in regional initiatives sponsored by CAMPO and other regional planning partners. Current opportunities for regional collaboration on active transportation include:

    - The TxDOT Austin District Bicycle Commission's forthcoming plan to unify practices for bicycle planning on TxDOT roads; and
    - The CAMPO Active Transportation Plan to inventory active transportation facilities in the region, assess active transportation needs, and propose solutions. In conjunction with these activities, as City streets are constructed or reconstructed, wider shoulders, sidewalks or other considerations for active transportation users (such as the sidewalk improvements to MLK Drive included in the TMP program of projects) should be included in project designs.

CONCLUSION

The City of Bastrop Transportation Master Plan would not have been possible without the input and vision provided by City residents and business owners, stakeholders, the Bastrop Comprehensive Plan Steering Committee, City Council, Planning and Zoning Commission, City staff, and all others who participated in the various public workshops, stakeholder interviews, and open houses. The combined efforts of the Bastrop community has culminated in a Transportation Master Plan that can effectively guide transportation investments in the City of Bastrop and its ETJ over the next 25 years. The projects and programs highlighted in this plan provide safer, more connected, and accessible transportation for the Bastrop community.

Map 8.1: Active Transportation Framework, City of Bastrop TMP