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2016 MOBILITY BOND



**WILLIAM CANNON DRIVE
CORRIDOR MOBILITY PLAN**

NOVEMBER 2018

FINAL REPORT

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EXECUTIVE SUMMARY

PROJECT GOALS & PURPOSE

The goals of the William Cannon Drive Corridor Mobility Plan (CMP) are to make recommendations that enhance mobility, connectivity, and safety for all users—including people who drive, walk, bike, and take transit. These goals are an extension of the goals and vision of *Imagine Austin* and other City of Austin plans and policies.

For the purposes of this study, each project goal is related to a set of desired outcomes. Recommended improvements developed as part of the William Cannon Drive CMP were evaluated based on their effectiveness toward achieving those desired outcomes using the quantifiable performance metrics shown in **Table E-1**.

Table E-1: Project Goals, Outcomes, and Metrics

Mode	Desired Outcome	Metric	William Cannon Drive CMP Goal		
			Enhance Mobility	Enhance Connectivity	Enhance Safety
Auto	Reduce Congestion/Delay	Level of Service (LOS)	X		
	Reduce Crashes (All Types)	Total Crashes			X
Bike	Provide a connected network of protected bike facilities	% of Corridor with Protected Bike Facilities	X	X	X
Pedestrian	Provide a connected network of ADA-compliant sidewalks	% of Corridor with Adjacent Sidewalks	X	X	X
Transit	Increase transit effectiveness	% Transit Stops with Bike/Ped Access	X	X	X
	Reduce Congestion/Delay	Level of Service (LOS)	X		

**This study focused on multimodal connectivity and did not include a measure of connectivity for the auto mode.*

The purpose of this study is to identify existing and future transportation needs of the corridor and recommend improvements that, 1) achieve the project goal and desired outcomes, 2) support implementation of the *Imagine Austin Comprehensive Plan*, and 3) meet the needs of the community.

In addition to the *Imagine Austin Comprehensive Plan*, recommended improvements align with the most recent regional and city-adopted transportation plans, policies, and standards for transportation infrastructure design.

PROJECT BACKGROUND

In November 2016, Austin voters approved \$720 million in bonds for transportation and mobility improvements throughout the city. The largest portion of this funding was earmarked for the Corridor Mobility Program, which included funding for the development of a Corridor Mobility Plan for William Cannon Drive.

PLAN DEVELOPMENT PROCESS

Development of the William Cannon Drive Corridor Mobility Plan began in spring 2017, utilizing a project framework similar to previous corridor mobility plans successfully completed for the City of Austin. Project activities included:

- Conducting a public outreach/engagement process,
- Collection and analysis of existing traffic, land use, and infrastructure conditions data,
- Conducting site visits to gather data and observe how the public is currently using the corridor,
- Review of current and forthcoming plans and policies from the City of Austin and other agencies,
- Review of existing land uses along the corridor and future developments planned along the corridors,
- Development of traffic models to analyze existing and future traffic conditions,
- Coordination with internal and external utility and service providers,
- Development of recommended improvements for inclusion in the final Corridor Mobility Plans.

A timeline of the project development process is summarized in **Figure E-1**, below.

Figure E-1: Project Development Process Timeline



PUBLIC OUTREACH/ENGAGEMENT

Public engagement processes were implemented to share information and gather feedback from the community in order to inform development of the William Cannon Drive and Slaughter Lane Corridor Mobility Plans. Many efforts for both corridors were combined due to the geographic proximity (and stakeholder overlap) of the William Cannon Drive and Slaughter Lane corridors, and the concurrent

development of the plans. Outreach for development of the Brodie Lane Preliminary Engineering Report was also combined with these efforts for the same reasons.

Outreach was conducted to individuals and groups of stakeholders in close proximity to these corridors, such as property owners, area neighborhood groups, businesses, schools, places of worship, and roadway users. Interested stakeholders were updated regularly with project information. Stakeholders were notified and invited to participate in development of the William Cannon Drive and Slaughter Lane Corridor Mobility Plans through a variety of means, including direct mail, social media, a webpage, public open house meetings, pop-in meetings, roadway signage, and more. Table E-2, below, summarizes participation in the combined public involvement processes for William Cannon Drive and Slaughter Lane.

Table E-2: Public Involvement Participation

Input Opportunity	Participants
Public Meetings	86*
Survey Participants	558
Mapped Comments	492
General Comments	124

* Includes public open houses and pop-in meetings

Comments received from 558 survey participants were grouped into the following categories (listed in order from highest quantity to lowest quantity):

- Driving Conditions
- Bicycle Accommodations
- Pedestrian Accommodations
- Public Transit
- Miscellaneous

The feedback received reflects community support for multimodal corridors that improve mobility, safety, and connectivity for all users. Following are just a few of the many important feedback themes that were considered when developing the Corridor Mobility Plan recommendations:

- Desire for reliable and efficient transit service
- Desire for safer pedestrian crossings at intersections and other locations near schools
- Desire for safe bike facilities along the corridor
- Concern regarding congested intersections
- Desire for improved turning options

DATA COLLECTION

The project team considered current policies, plans, and guidelines produced by the City in recent years to develop a long-term vision for each corridor, including the *Imagine Austin Comprehensive Plan, 2016 Sidewalk*

Master Plan/ADA Transition Plan Update, 2014 City of Austin Bicycle Master Plan, and 2014 Urban Trails Master Plan, among others. Relevant regional transportation plans developed by other agencies such as CapMetro and CAMPO were reviewed and taken into consideration.

Existing conditions traffic data were collected and analyzed including 2017 intersection movement counts, historical crash data for years 2012 to 2016, and existing signal timing plans. The project team also collected and reviewed data on existing land uses along each corridor as well as future developments which have been planned but not constructed. This information was used to inform the development of context-sensitive recommendations for William Cannon Drive.

EXISTING CORRIDOR CONDITIONS

The William Cannon Drive Corridor is approximately 12 miles long and has 63 intersections, 26 of which are signalized intersections. Since the corridor varies greatly from east to west, the roadway was divided into five distinct character zones for the purposes of developing the Corridor Mobility Plan.

- Zone 1: McKinney Falls Parkway to South Pleasant Valley Road
- Zone 2: South Pleasant Valley Road to IH 35
- Zone 3: IH 35 to MoPac (Loop 1)
- Zone 4: MoPac (Loop 1) to US 290
- Zone 5: US 290 to Southwest Parkway

Table E-3 summarizes the character zones, existing roadway cross-sections, and amenities along the corridor. **Table E-4** provides a summary of the existing bicycle facilities along William Cannon Drive.

Table E-2: William Cannon Drive - Existing Roadway Cross Sections

Roadway Section	Character Zone	No. of Lanes	Roadway Type	Bike Lanes	Sidewalks	Transit Service
McKinney Falls Pkwy to Salt Springs Dr.	1	2	Undivided	Unprotected	Continuous	None
Salt Springs Dr. to Dixie Dr.	1	3	Divided	Unprotected	Continuous	Yes
Dixie Dr. to S. Pleasant Valley Rd	1	6	Divided	Unprotected	Continuous	Yes
S. Pleasant Valley Rd to Bluff Springs Rd	2	6	Divided	Unprotected	Continuous	Yes
Bluff Springs Rd to IH 35	2	6	Divided	None	Continuous	Yes
IH 35 to Manchaca Rd	3	6	Divided	None	Continuous	Yes
Manchaca Rd to Brodie Ln	3	4	Divided	None	Continuous	Yes
Brodie Ln to MoPac (Loop 1)	3	6	Divided	None	Continuous	None
MoPac (Loop 1) to McCarty Ln	4	6	Divided	Unprotected	Continuous	Yes ¹
McCarty Ln to US 290	4	6	Divided	None	Continuous	None
US 290 to Southwest Pkwy	5	6	Divided	None	Continuous	Yes ²

1 Transit service Ends at Brush Country Road

2 Transit service Begins at Escarpment Boulevard

Table E-4: Existing Bike Facilities along William Cannon Drive

From	To	Existing Facility	Comfort
Southwest Pkwy	Vega Blvd	Shared Lane	Medium
Vega Blvd	McCarty Ln	Shared Lane	Low
McCarty Ln	MoPac	Bike Lane	Medium
MoPac	Brodie Ln	Shared Lane	Low
Brodie Ln	IH 35	Shared Lane	Helpful Sidewalks (Limited Bike Access)
IH 35	McKinney Falls Pkwy	Bike Lane	Low

Table E-5 shows locations of absent sidewalks along the existing corridor. There are also several cross-streets where absent sidewalks have been identified as “High” and “Very High” priority, including Brush Ridge Dr, Vougeot Dr, Elm Creek Dr, Circle S Rd, Starstreak Dr, and US 290.

Table E-5: Absent Sidewalks

Location	Side of Street (North or South)	Absent Sidewalk Priority	Approx. Length of Absent Sidewalk
Southwest Pkwy to US 290	South	Low/Medium	820 feet
Dixie Dr to Jane’s Ranch Rd	South	High	3,500 feet
Jane’s Ranch Rd to McKinney Falls Pkwy	South	Medium	1,600 feet

TRAFFIC ANALYSIS & MODELING

Another important aspect of the plan development process was the identification of existing mobility and safety issues within each corridor based on the collection and analysis of existing traffic data. Public input received during the public outreach process was used to supplement (and in some cases guide) intensive technical evaluations of existing and future traffic conditions, in order to identify corridor-specific mobility and safety issues which are existing today or expected in the future if improvements are not implemented. Recommended improvements included in the William Cannon Drive CMP were developed with a focus on reducing traffic congestion/delay at intersections, improving intersection Level of Service (LOS), reducing crashes at top crash locations, providing fully-connected bicycle and pedestrian networks, and providing multimodal access to all transit stops.

Intersection traffic operations were evaluated, using *Synchro 9* traffic modeling software, for **Existing (2017)**, **Future (2040) No-Build**, and **Future (2040) Build** scenarios with the goal of minimizing congestion/delay and maximizing intersection Level of Service (LOS).

LOS is a qualitative measure of intersection performance based on *average control delay*, which is the average increase in travel time (in seconds) experienced by vehicles due to traffic signal control. LOS can also serve as a surrogate measure for driver discomfort and fuel consumption. LOS is communicated using letter grades “A” through “F”, where LOS A indicates the lowest delay condition (Best Case) and LOS F indicates the highest delay condition (Worst Case). The City of Austin sets the threshold for “acceptable” Level of Service at LOS D, while LOS E and LOS F are considered “unacceptable”. Use of LOS D as a minimum threshold is common practice in denser urban environments where prohibitive costs and undesirable societal impacts would be required to obtain LOS C. In some cases, such as locations where demand is exceptionally high, or constraints prevent adequate capacity increases, even obtaining LOS D is not a feasible outcome.

When analyzing how the existing roadway network would handle anticipated future traffic (Future 2040 No-Build scenario), traffic reached what is often termed “breakdown conditions”, where all major intersections are experiencing unacceptable levels of delay and LOS. These results were compared against analysis results for the Future 2040 Build scenario, which evaluated future traffic on a network that includes the recommended improvements. Those results, shown in **Chapter 6**, indicate a substantial improvement over No-Build conditions, even though some intersections are still expected to operate at unacceptable level of service.

A traffic safety analysis was conducted to identify crash “hot spots” (locations with relatively high crash frequency). These locations, along with locations identified as “unsafe” through public comments, were then further evaluated to identify any causal factors contributing to the high crash frequency, and proven safety counter-measures (e.g., improvements such as additional turn lanes, adjustments to signal phasing, etc.) which address those factors were considered for inclusion in the recommended improvements.

Recommended typical sections and recommended intersection improvements were then developed to address the mobility, safety, and connectivity issues identified through site observations, public input, and the analysis of existing and future traffic conditions.

RECOMMENDED IMPROVEMENTS

Recommended improvements, summarized below and presented in **Chapter 6**, were developed to address the mobility, safety, and connectivity issues identified through site observations, public input, and the analysis of existing and future traffic conditions. **Implementation of these recommended improvements will provide continuous bicycle and sidewalk networks along the entire length of the William Cannon Drive corridor, address identified safety issues, and reduce delay/congestion (improve level of service), to the extent possible, at major intersections.**

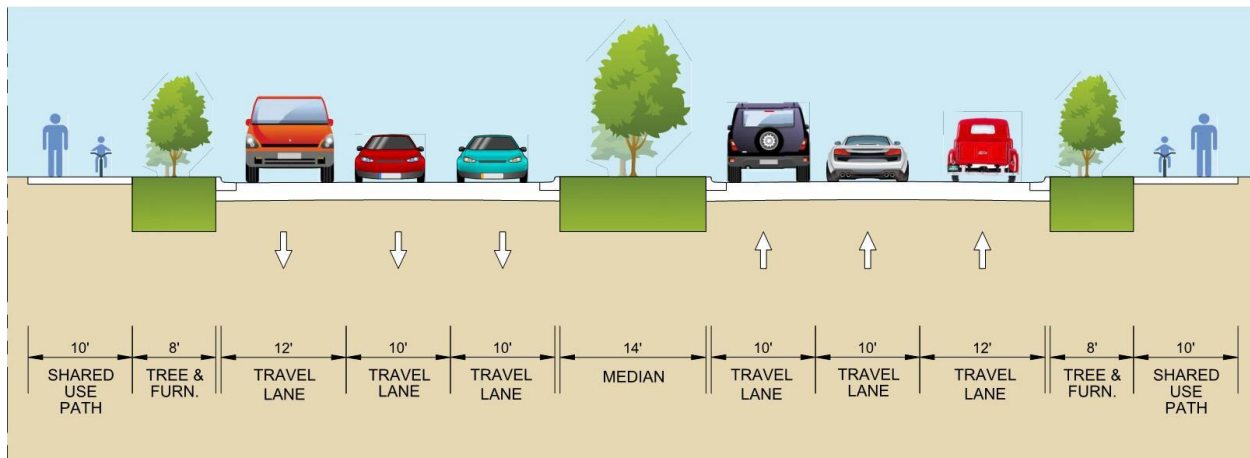
OVERVIEW OF RECOMMENDATIONS

- Improve up to seven (7) traffic signals, including enhanced technology to promote vehicular and transit efficiency, reduce delay, and improve pedestrian and bicyclist safety. These improvements would help address existing and future unacceptable LOS.
- Install up to 18 miles of new or rehabilitated sidewalks to create continuous ADA-compliant sidewalks along the full length of the corridor. The need for these improvements were identified through field evaluation and corroborated by stakeholder input.
- Add up to five (5) miles of dedicated and/or protected bike lanes to improve safety and mobility for bicyclists and drivers. A protected bike lane will be added in each direction between US 290 and Southwest Parkway by repurposing one vehicular travel lane in each direction. The need for these improvements was identified through field evaluation and reinforced by stakeholder input. Traffic analysis confirmed the feasibility of these improvements in the near-term.
- Up to two miles of pavement rehab to repair spot damage, restore surface, and improve rideability.
- Between McKinney Falls Parkway and Running Water Drive, upgrade the existing 2-lane undivided roadway to a 4-lane divided roadway. Acquire adequate right-of-way for further expansion to a 6-lane divided section, as future conditions necessitate. In conjunction with these improvements, a new bridge would be added over Marble Creek, enhanced landscaping would be incorporated, and the drainage system would be upgraded. This improvement would help address existing and anticipated traffic demand as revealed through traffic analysis.
- Improve intersection operations with the addition and/or modification of turn lanes to enhance vehicular and transit efficiency, and pedestrian and bicyclist safety at up to 17 intersections, including: Beckett Road, Bluff Springs Road, Brodie lane, Brush Country Road, Circle S Road, Emerald Forest Drive, Escarpment Boulevard, Manchaca Road, McKinney Falls Parkway, MoPac Expressway, Salt Springs drive, South Congress Avenue, South First Street, South Pleasant Valley Road, Southwest Parkway, and West Gate Boulevard. A need for these improvements was shown through traffic and crash analysis and was reinforced by public input.
- Evaluate and possibly construct new mid-block Pedestrian Hybrid Beacons (PHBs) with crosswalks, countdown signals, and ADA-compliant ramps to improve safety for bicycles and pedestrians in the vicinity of: McCarty Lane, Lost Valley, Stephenson Nature Preserve, Elm Creek Drive, Rockridge Drive, and Onion Creek Soccer Complex. A need for these improvements was shown through an evaluation of existing crossings and reinforced by public input.
- Install six (6) new traffic signals to improve intersection safety and operations at: Rialto Boulevard, Vega Avenue, Bannockburn Drive, Lunar Drive, Janes Ranch Road, and Running Water Drive.
- Improve transit facilities in coordination with CapMetro to:
 - Relocate bus stops to far side of intersection to enhance safety and transit operations.
 - Add bus shelters and benches at various locations.
 - Add bus pull outs at transfer centers and/or re-locate transit centers.

RECOMMENDED LONG-TERM TYPICAL SECTION

A corridor vision was developed through application of the street design process outlined in the *Austin Street Design Guide* (**Chapter 5**) with respect to the context and character of William Cannon Drive. The resulting long-term corridor vision for William Cannon Drive is to develop a 6-lane divided arterial that provides safety and mobility for all modes of travel – vehicles, bicycles, pedestrians, and transit.

Figure E-2: Recommended Long-Term Section - 6-Lane Divided with Protected Bike Lane or Shared Use Path



VALUE ENGINEERING & CONTEXT-SENSITIVE DESIGN

The existing sidewalk and roadway infrastructure will be incorporated into the future cross-sections to the maximum extent possible. Over time, as this infrastructure needs replacement, properties redevelop, and/or additional funding is identified, the width and location of bicycle, pedestrian, and landscape infrastructure may be adjusted.

The City will take a context-sensitive approach to design and construction of final improvements to account for location-specific constraints such as available right-of-way, existing trees and utilities, etc. These recommendations may be modified during final design to accommodate context-specific elements. Features that may vary include, but are not limited to, the width and location of the recommended bicycle, pedestrian and landscaping infrastructure needs.

ESTIMATED COST AND PROJECT IMPLEMENTATION

Cost estimates were developed for the recommended improvements identified in **Chapter 6** based on approximate unit costs and construction quantities. These cost estimates were “planning-level” estimates that did not include right-of-way acquisition costs but did include engineering, materials, traffic control, construction, inflation, and contingency costs. Total project cost (in 2021 dollars) is estimated to be \$137,900,000.

FUNDING AND NEXT STEPS

Development of the William Cannon Drive Corridor Mobility Plan was funded by the 2016 Mobility Bond. This roadway was also identified for possible construction funding as part of the \$482 million dedicated for corridor improvement projects through the 2016 Mobility Bond. Because there is more need on the nine construction-eligible corridors throughout the city than available funding, City Council's Contract with Voters (Resolution No. 20160818-074), approved in 2016, required the City Manager to develop recommendations for a proposed Corridor Construction Program that prioritizes improvements to be constructed using 2016 Mobility Bond funds.

Recommended improvements presented in this report were included in a prioritization model along with recommended improvements for the other eight construction-eligible corridors to determine which improvements would receive initial funding for final design and construction through the Corridor Construction Program. More information on those efforts can be found on the City of Austin's Corridor Mobility Program website, www.AustinTexas.gov/CorridorMobility.

For the above stated reasons, some (but not all) of the improvements recommended in this William Cannon Drive CMP are currently funded for final design and construction through the Corridor Construction Program that Austin City Council approved in spring 2018. Additional funding strategies will be sought for all recommended improvements not initially funded as part of the Corridor Construction Program. The City of Austin has a range of funding sources that may be used to construct mobility improvements that are not identified for funding through the 2016 Mobility Bond. These funding sources include, but are not limited to, future voter-approved bond dollars, other public improvement bond funding, grants (state/federal funding), private investment, and the City's operating funds.

CHAPTER 1 - INTRODUCTION

William Cannon Drive is a major arterial providing east-west connectivity in South Austin between Southwest Parkway and McKinney Falls Parkway. The existing corridor includes residential, commercial, and public land uses with changing character and context along its 11.75 -mile length.

The City is addressing transportation and mobility concerns holistically through its Corridor Mobility Program, which is funded by the 2016 Mobility Bond. William Cannon Drive is one such corridor where the city is creating a plan to address short-term and long-term safety, mobility and connectivity concerns, to which rapid growth in the region is contributing.

The growing awareness and understanding of the effects of the built environment on public health has been reflected in several recent City of Austin and Travis County strategic plans. Like many arterial connectors in Austin, William Cannon Drive is currently an auto-dominated roadway. However, William Cannon Drive has been identified in the *Imagine Austin Comprehensive Plan (Imagine Austin)* as an “activity corridor” connecting future “activity centers” at intersections with MoPac and US 183. Additionally, William Cannon Drive intersects three other north-south activity corridors identified by *Imagine Austin*—Manchaca Road, South Congress Avenue, and South Pleasant Valley Road.

Improving connections from area neighborhoods and natural resources to the corridor is critical to implementing the health goals of *Imagine Austin*. According to *Imagine Austin*, activity centers and corridors are pedestrian-friendly, walkable, and bikable areas. By improving bicycle and pedestrian networks, the City of Austin can address many of the challenges facing Austin, including motor vehicle congestion, commute times, air quality, transportation costs, lack of connectivity, bicycle safety, and recreational access.

Due to projected growth along William Cannon Drive (and Austin generally) there is an increasing need for multimodal accommodations and access to public transit services. In addition to enhancing mobility, safety and connectivity along the roadway, improvements to the William Cannon Drive corridor in the form of pedestrian and bicycle facilities, roadway, and public green spaces have substantial potential to impact health of the neighboring communities.

This report presents the findings of the William Cannon Drive Corridor Mobility Plan which included data collection and review, public engagement, existing and future conditions analysis, and development of preliminary recommended improvements for the William Cannon Drive corridor.

In recent years the City of Austin has experienced some of the most rapid growth in the country. It has been ranked near the top of lists of the “most desirable places to live” for several years because of what Austin and the surrounding area have to offer. However, this rapid growth has also led to increased traffic congestion, placing strain on existing infrastructure and quickly exceeding capacity of the city’s most important corridors during peak rush hours.

PROJECT PURPOSE AND GOAL

The goal of the William Cannon Drive Corridor Mobility Plan (CMP) is to make recommendations that enhance mobility, connectivity, and safety for all users—including people who drive, walk, bike, and take transit. These goals are an extension of the goals and vision of *Imagine Austin* and other City of Austin plans and policies. **Table 1-1** shows a few examples of the link between the goals of the William Cannon Drive CMP and other City-adopted plans and policies.

Table 1-1: Examples of Supporting Guidance

CMP Goal	Related Goals from other City of Austin Plans & Policies
Enhance Mobility	<i>“provide for the maximum mobility for the people of the Greater Austin Metropolitan Area” (Austin Metropolitan Area Transportation Plan, 1995)</i>
	<i>“reduce traffic congestion, increase transit use, and encourage alternative transportation modes” (Imagine Austin, 2016)</i>
Enhance Safety	<i>“promote safe, comfortable and convenient access and travel for people of all ages and abilities” (Complete Streets Policy, 2014)</i>
	<i>“Vision Zero’s goal is simple: Zero traffic deaths and serious injuries in Austin by 2025” (Vision Zero Action Plan, 2016)</i>
Enhance Connectivity	<i>“Complete Streets require connected travel networks.” (Complete Streets Policy, 2014)</i>
	<i>“Incorporate provisions for bicycles and pedestrians into all roads such as freeways, toll roads, arterial roadways, and to and from transit stations and stops, and major activity centers” (Imagine Austin, 2016)</i>

For the purposes of this study, each project goal is related to a set of desired outcomes. Recommended improvements developed as part of the William Cannon Drive CMP were evaluated based on their effectiveness toward achieving those desired outcomes using the quantifiable performance metrics shown in **Table 1-2**.

Table 1-2: Project Goals, Outcomes, & Metrics

Mode	Desired Outcome	Metric	William Cannon Drive CMP Goal		
			Enhance Mobility	Enhance Connectivity	Enhance Safety
Auto	Reduce Congestion/Delay	Level of Service (LOS)	X		
	Reduce Crashes (All Types)	Total Crashes			X
Bike	Provide a connected network of protected bike facilities	% of Corridor with Protected Bike Facilities	X	X	X
Pedestrian	Provide a connected network of ADA-compliant sidewalks	% of Corridor with Adjacent Sidewalks	X	X	X
Transit	Increase transit effectiveness	% Transit Stops with Bike/Ped Access	X	X	X
	Reduce Congestion/Delay	Level of Service (LOS)	X		

**This study focused on multimodal connectivity and did not include a measure of connectivity for the auto mode.*

The purpose of this study is to identify existing and future transportation needs of the corridor and recommend improvements that, 1) achieve the project goal and desired outcomes, 2) support implementation of the *Imagine Austin Comprehensive Plan*, and 3) meet the needs of the community.

In addition to the *Imagine Austin Comprehensive Plan*, recommended improvements align with the most recent regional and city-adopted transportation plans, policies, and standards for transportation infrastructure design. These plans are listed below in the Project Process section and their recommendations for William Cannon Drive are summarized in **Chapter 4**.

PROJECT BACKGROUND

This initiative is a result of the City of Austin’s 2012 Bond Development Process. The City of Austin’s 2012 Bond Election included Proposition 12, which allowed the City to address urban mobility issues by providing funding for designing, constructing, and improving streets, sidewalks, bridges, and bikeways. Since the 2012 Bond Development Process, the City of Austin has initiated a series of corridor improvement programs to ensure Austin roadways keep up with the region’s growth and can handle current and future demands. A framework has been developed for these corridor programs to provide a common approach while ensuring the specific character and needs of the different roadways and communities are assessed.

In November 2016, Austin voters approved \$720 million for mobility improvements throughout the city. The largest portion of that funding—\$482 million—is earmarked for corridor improvement projects. Corridors are primary roadways that affect Austin’s overall transportation network. These roadways are used for getting around, are destinations for residents and visitors, and are home to businesses as well as many neighborhoods. The Corridor Mobility Program includes the development, design, and construction of projects along key Austin corridors that enhance mobility, safety, and connectivity for all users—whether you drive, bike, walk, or take transit.

The Corridor Mobility Program includes nine construction-eligible corridors, five corridors that are receiving Corridor Mobility Plan development, and three corridors that are receiving some preliminary engineering and design (**Figure 1-1**). William Cannon Drive is one of the nine construction-eligible corridors. Seven of those nine construction-eligible corridors had corridor plans completed since 2012. Because Slaughter Lane and William

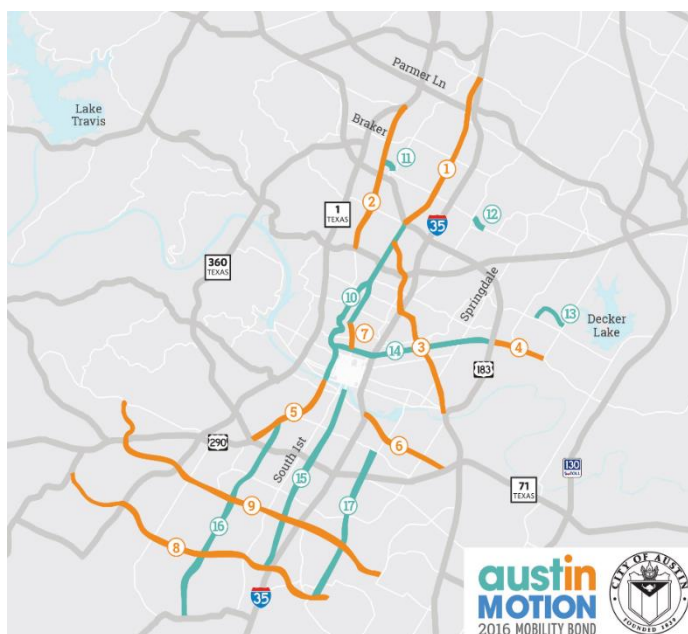


Figure 1-1: 2016 Mobility Bond Corridors

Cannon Drive did not have already-existing corridor plans, the 2016 Mobility Bond also included funding for development of corridor mobility plans (CMP) for both roadways.

NEXT STEPS

Recommended improvements presented in this report were included in a prioritization model along with recommended improvements for the other eight construction-eligible corridors to determine which improvements would receive initial funding for construction through the Corridor Construction Program. More information on those efforts can be found on the City of Austin's Corridor Mobility Program website, AustinTexas.gov/CorridorMobility.

PROJECT PARTNERS & STAKEHOLDERS

The City of Austin is funding the William Cannon Corridor Mobility Plan through funds approved by the community during the 2016 Mobility Bond. Partners and stakeholders on this project include community members, businesses, neighborhood groups, including:

- Austin Independent School District (AISD) and Del Valle Independent School District (DVISD)
- Major Employers (e.g., H-E-B, NXP Semiconductors, AMD, Smith & Nephew)
- Several shopping centers and strip malls, commercial, retail, and professional businesses.
- Neighborhood Associations, religious and non-religious organizations, and other community groups.
- The citizens of Austin, particularly locals who live, work, play, and use the corridor.

Additional stakeholders include other public agencies, such as the Texas Department of Transportation (TxDOT), Travis County, Capital Metropolitan Transportation Authority (CapMetro), Capital Area Metropolitan Planning Organization (CAMPO), and Central Texas Regional Mobility Authority (CTRMA).

PROJECT DEVELOPMENT PROCESS

Development of the William Cannon Drive CMP began in spring 2017, utilizing a project framework similar to previous corridor mobility plans successfully completed for the City of Austin. Project activities included:

- Conducting a public outreach/engagement process;
- Collection and analysis of existing traffic, land use, and infrastructure conditions data;
- Conducting site visits to collect/verify data and observe how the public utilizes the corridor;
- Review of recently adopted plans and policies from the City of Austin and outside agencies;
- Review of planned transportation projects and future site developments planned along the corridor;
- Development of traffic models to analyze existing and future traffic conditions;
- Coordination with internal and external utility and service providers; and
- Development of recommended improvements for inclusion in the final Corridor Mobility Plans.

The project team began the project by developing a public involvement plan and reaching out to community stakeholders and neighborhood/homeowner associations. Involvement from these groups was a vital component of the William Cannon Drive corridor’s planning process. Public outreach initiatives were implemented throughout the duration of the program to help guide the process.

In addition to traditional traffic data, the adjoining land uses, character, and the condition of existing infrastructure was collected and considered in the analysis of existing corridor conditions. Existing traffic operations and crash patterns were analyzed to determine current Level of Service (LOS) at study intersections and identify the type and location of safety concerns.

Intersection Level of Service (LOS) is a delay-based measure of intersection performance that is widely-used by the transportation engineering community to determine the impacts of transportation improvements at intersections by comparing existing conditions to future conditions with and without improvements. LOS is affected by several factors, including roadway geometry, traffic signal control parameters, traffic volume fluctuations, and others. The City of Austin sets the threshold for “acceptable” Level of Service at LOS D through its Traffic Impact Analysis (TIA) guidelines, while LOS E and LOS F are considered unacceptable. Use of LOS D as a minimum threshold is common practice in denser urban environments where prohibitive costs and undesirable societal impacts are often required to obtain LOS C.

The William Cannon Drive CMP also considered the most recently adopted plans and policies influencing the future William Cannon Drive corridor. These plans define the history, context, and future layout of the corridor with regards to several aspects of the built environment, including neighborhood character, long-range and system-level plans, mode-specific plans, and others. The following plans and policies were considered in the development of recommendations for the William Cannon Drive CMP:

- Imagine Austin Comprehensive Plan
- City of Austin Complete Streets Policy;
- City of Austin Transit Priority Policy;
- 2025 Austin Metropolitan Area Transportation Plan;
- City of Austin Strategic Mobility Plan;
- Austin Street Design Guide;
- City of Austin Land Development Code (Subchapter E);
- Critical Arterials List
- Top Crash Location Intersection Priorities List
- City of Austin Watershed Protection Master Plan;
- City of Austin Sidewalk Master Plan;
- City of Austin Bicycle Master Plan;
- City of Austin Urban Trails Master Plan;
- Vision Zero Plan;

- CAMPO 2040 Regional Transportation Plan;
- Capital Metro Connections 2025;
- Capital Metro Service Guidelines and Standards;
- Project Connect Regional High Capacity Transit Plan; and
- applicable National Association of City Transportation Officials (NACTO) standards;

The William Cannon Drive CMP considered existing conditions, planned transportation improvements, future site development plans, projected traffic growth, and results of the future conditions traffic analysis, along with the vision and goals of the *Imagine Austin Comprehensive Plan*, to develop recommended improvements for the William Cannon Drive corridor.

To understand the health-related impact of recommended improvements, a Health Impact Assessment (HIA) was performed. The HIA assessed potential impacts of policies, projects or programs that affect the public’s health and identified opportunities to maximize positive health outcomes while also minimizing potential negative outcomes.

The final step in the project process was to consider the project implementation and future land use strategies for the corridor. Planning-level cost estimates were developed for recommended improvements that do not include right-of-way acquisition or utility relocation costs, but do include costs for engineering, materials, traffic control, construction, and contingency.

PROJECT AREA

CORRIDOR HISTORY

William Cannon Drive was named after a veteran of the 1836 Battle of San Jacinto (Texas’ fight for Independence) who owned land and lived in the area. The roadway was developed in sections as the town expanded and people started moving south of Austin. The Austin City Council realized this and developed the concept of William Cannon Drive being an arterial loop south of Ben White Boulevard between IH 35 and US 290 in June 1961 when it was included in the Austin Development Plan. Eventually William Cannon Drive was referred to as the South Loop (or Outer Loop) in the “Expressway and Major Arterial Plan” adopted by Austin City Council in April 1969.

In January 1974, the Austin Engineering Department commissioned a study to prepare plans, specification, estimates, and construction of William Cannon Drive from Manchaca Drive to IH 35. This was completed and opened to the public in November 1975. Subsequently, Motorola was planned to build a production plant in town and purchased the land northwest of Brodie Lane and the future section of William Cannon Drive (currently H-E-B). Motorola received commitments from the Austin City Council to build a road to access the future plant. This portion of the roadway was to begin at Manchaca Road heading to 2400 feet west of Brodie

Lane (November 1976). Future expansion to US 290 was also planned on William Cannon Drive, in the report “Manchaca Road to US 290,” created by the Urban Transportation Department in August 1976.

Since then, William Cannon Drive has expanded in both east and west directions and new neighborhoods were constructed. It continues to be a dynamic, growing corridor. Recent activity toward the east has expanded William Cannon Drive past McKinney Falls Parkway to serve the Easton Park development. Additionally, Travis County recently passed bond funding (November 2017) to extend the roadway from where the developer stops their improvements to US 183 in the near future. In recent years, William Cannon Drive has also expanded west of Southwest Parkway, where the roadway name changes to Tecoma Circle. This portion of the roadway was built to accommodate development in the Barton Hills area.

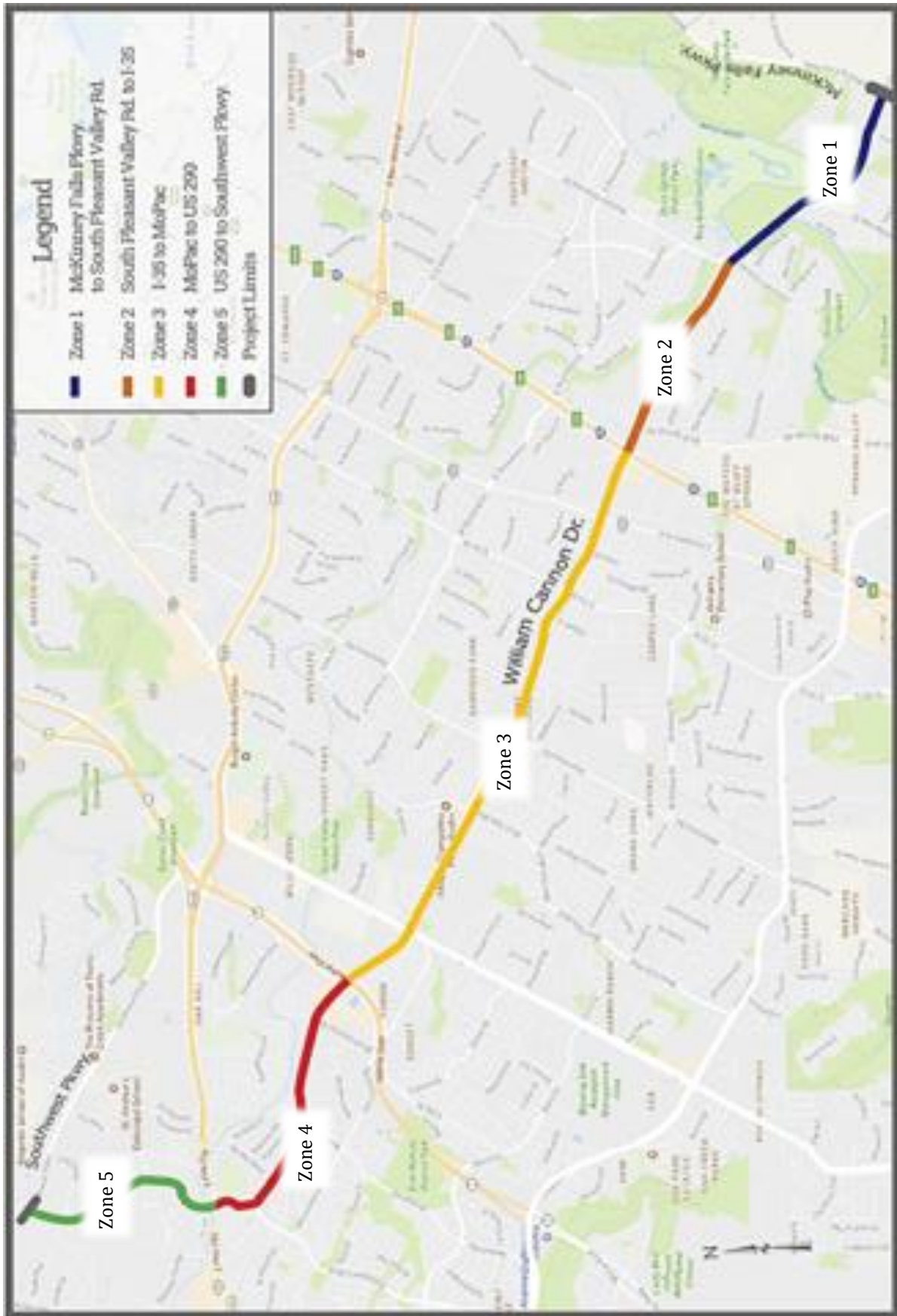
STUDY AREA

The project study area includes 11.75 miles of William Cannon Drive from McKinney Falls Parkway in the east to Southwest Parkway in the west, as shown in **Figure 1-2**. William Cannon Drive is a major east-west arterial that provides connectivity with many north-south corridors connecting south Austin with downtown, including IH 35, Mopac (Loop 1), US 290, Southwest Parkway, South Pleasant Valley Road, Congress Avenue, South 1st Street, Manchaca Road, West Gate Boulevard, and Brodie Lane.

The project study area was categorized into five (5) distinct character zones based on existing infrastructure and land-use, and potential for future development. The middle zones (Zone 3, Zone 4, and Zone 5) are generally more developed than the outside zones (Zone 1 and Zone 5), and therefore less likely to experience major growth. Discussion of character zones is provided in Chapter 3.

Zone 1 at the east end of the corridor has the highest potential for future development of any character zone. Construction is currently underway for the Easton Park development, which includes 10,000 housing units, shopping center, hospital, school, parks, and connection to Austin-Bergstrom International Airport. Additionally, Travis County has plans to extend William Cannon Drive east of McKinney Falls Parkway to connect with US 183 (bond funding approved by Travis County voters in November 2017).

Figure 1-2: Study Area



CHAPTER 2 - PUBLIC INVOLVEMENT

The City of Austin is committed to open and transparent processes as well as engaging the community to ensure that the public's priorities and opinions are heard. To achieve this goal, the project team implemented a public engagement process to provide information and gather community feedback for development of the William Cannon Drive Corridor Mobility Plan. The Project Team used feedback provided by the community to develop recommendations to improve mobility, safety, and connectivity for all roadway users.

As part of the 2016 Mobility Bond, the City of Austin also developed a Corridor Mobility Plan for Slaughter Lane and a Preliminary Engineering Report for Brodie Lane. The Project Team conducted public involvement efforts for the three roadways together due to the proximity of the corridors, timing of the projects, and convenience for public participants. The recommendations for improvements on those roadways are available as separate documents.

The goals of the public engagement process were to:

- Create public awareness about the development and purpose of the Corridor Mobility Plans;
- Conduct deliberative outreach to engage the public;
- Provide an open and transparent process throughout the planning effort;
- Provide a variety of accessible opportunities and options so that stakeholders could be involved and share input at their convenience;
- Engage a diverse set of participants;
- Provide engaging interactions that result in valuable input;
- Collect input on an overall vision for the corridor and specific mobility needs to inform the preliminary recommendations for improvements to mobility, safety, and connectivity; and
- Collect public input and comments that will be included as the Corridor Mobility Plan is refined.

KEY THEMES

Several key themes and issues arose throughout the public engagement process. The mobility recommendations in this Corridor Mobility Plan specifically address the issues and themes surrounding proposed infrastructure improvements. The outcome of survey responses and mapped comments collected in spring 2017 are provided in **Figure 2-1**. All feedback provided by the public can be viewed in **Appendix A**.

Theme 1: Managing congestion

Managing vehicular congestion arose as a primary need through the stakeholder engagement process. Managing congestion was the highest-ranked issue in a survey used to identify resident and roadway user concerns. The most common comment from stakeholders was the identification of congested areas on the interactive and printed maps used to collect input (see "Stakeholder Activities" for details). For drivers, the

primary concerns were improved signal timing, having more turning options, and safer intersections. Public input of this type help to identify locations for improvements such as adding turn lanes at intersections. In a survey responding to the preliminary recommendations, 54% responded that the proposed improvements would save them time driving.

Theme 2: Improving safety

Stakeholders identified improved safety as a high-priority need along the corridor. Creating a safer, more supportive environment for walking and calming traffic in residential neighborhoods ranked third and fourth, respectively, in a survey used to identify resident and roadway user concerns. Taken together, these priorities call for increased safety within neighborhoods and along the corridor. While the William Cannon Drive Corridor Mobility Plan does not make recommendations for neighborhood improvements, it does consider the impact recommendations on the corridor may have on neighborhoods.

Participants in the engagement process identified continuous sidewalks to improve the corridor for pedestrians. Following that, survey participants ranked safer pedestrian crossings and sidewalks with separation from traffic as the second- and third-highest priorities, respectively, as it relates to improving safety. Upon review of the preliminary recommendations, nearly 70% of participants said they supported the recommendations related to pedestrian infrastructure, which include continuous sidewalks or shared-use paths, additional mid-block signalized pedestrian crossings (pedestrian hybrid beacons), and improved intersections. In general, about 55% of respondents supported the recommendations related to improving safety along the William Cannon Drive Corridor.

Theme 3: Improving accessibility (to destinations and neighborhoods)

Getting to and from destinations and neighborhoods surrounding the corridor ranked as the second most important mobility issue to be addressed on William Cannon Drive. Accessibility is mode-agnostic: it is the desire to be connected to a destination, whether that is a home, business, restaurant, doctor’s office, grocery store, or other daily need. The mobility recommendations in this Corridor Mobility Plan collectively aim to improve transportation options, including the option to drive, walk, bicycle, or to access transit stops. In the areas of safety and mobility, respondents said the City “got it right” for each of the modes considered (driving, walking, biking, and taking transit) at a rate of approximately 43% to nearly 69%. Additionally, a majority of respondents ranked their support for the recommendations higher than three out of five.

Figure 2-1: Phase 1 Survey Response Summary



Driving Improvements:

- Improved signal timing
- Improved turning options
- Safer intersections



Transit Improvements:

- Efficient transit operations
- Upgraded bus stops (shelters, benches)



Walking Improvements:

- Continuous sidewalks
- Safer pedestrian crossings
- Sidewalks with separation from traffic



Biking Improvements:

- Separated or protected bike lanes
- Wider bike lanes
- Intersection and signal enhancements

PARTICIPANTS

Public engagement efforts aimed to reach a wide variety of stakeholders, including residents, property owners and businesses along the corridor, as well as neighborhood groups, business associations, schools, churches, and regular users of the roadway. Overall, the Project Team received 378 surveys, 302 mapped comments, 124 comments and questions, garnering more than 800 inputs for William Cannon Drive.

Participant Demographics

City Council District	% of Total
District 1	1%
District 2	3%
District 3	2%
District 4	<1%
District 5	20%
District 6	0%
District 7	1%
District 8	41%
District 9	1%
District 10	1%
I don't know	16%
I prefer not to answer	14%

ZIP Code	% of Total
78745	29%
78749	18%
78744	14%
78748	11%
78747	5%
78735	5%
78704	2%
78739, 78736, 78741	2%
78702	1%
78737, 78751	1%
78757, 78727, 78746	1%
78759, 78652, 78754, 78758, 78756, 78752, 78734, 78734, 78734, 78734, 78734, 78731, 78729, 78722, 78719, 89640, 78617, 78610	<1%

Race/Ethnicity	% of Total
Caucasian	65%
African American	1%
American Indian	1%
Asian/Pacific Islander	1%
Hispanic	16%
Other	3%
Prefer not to answer	13%

Age	% of Total
18-34	26%
35-44	25%
45-54	21%
55-64	12%
65+	13%
Prefer not to answer	3%

STAKEHOLDER ACTIVITIES

The Project Team conducted two phases of outreach to collect input from the community. During both phases, the public provided feedback both in person and online. Stakeholders were identified based on proximity to the corridor using public data from the Travis Central Appraisal District, the City of Austin Community Registry, and the 2016 Mobility Bond email listserv.

PHASE 1 - IDENTIFYING A VISION

The first phase of engagement took place in spring 2017. Goals included:

- Introducing and explaining the Corridor Mobility Plan development process and purpose
- Describing the public engagement process
- Sharing existing conditions and constraints, traffic information, and health impact considerations
- Creating a dialogue to identify values and vision important to stakeholders
- Gathering input on:
 - Specific transportation and mobility-related desires and priorities
 - How to improve community health and quality of life along the roadway

PHASE 1 INPUT OPPORTUNITIES

During the first phase of public outreach and engagement, stakeholders could learn about the project and share input at public open houses and “pop-in” meeting as well as online at AustinTexas.gov/BSWCorridors. The project webpage contained an online survey and interactive map for users to input their comments and recommendations. The results of the first phase of outreach and engagement informed the preliminary recommendations.

Table 2-1: Phase 1 Participation

Input Opportunity	Participants
Public Meetings*	86
Survey	323
Mapped Comments	302
General Comments	124

* Includes public open houses and pop-in meetings

Public Meetings: The Project Team invited the community to four public meeting opportunities during phase one of public outreach. At the public open houses, attendees viewed large maps of the corridors on which they were invited to write comments. A survey was also made available on laptops, tablets, and paper. Materials shared at the public meetings can be viewed in Appendix A.

Open House and Pop-up Meeting Details:

- May 18, 2017
Langford Elementary, 2206 Blue Meadow Drive
4:30-7:30 p.m.
- May 22, 2017
Covington Middle School, 3700 Convict Hill Road
4:30-7:30 p.m.
- May 23, 2017
Bethany Lutheran Church, 3701 West Slaughter Lane
4:30-7:30 p.m.
- June 15, 2017
Pleasant Hill Branch Library, 211 E. William Cannon Drive
4:30-7:30 p.m.

Interactive Map: The community provided feedback on specific needs using an interactive, online map that allowed them to place dots or draw lines to indicate areas in need of improvement. The public was able to share input through this interactive tool on the following categories: Driving Conditions (Congested Areas, Safety and Road Conditions), Bicycle Accommodations, Pedestrian Accommodations, Public Transit, and Miscellaneous comments including "What I Like" and "What I Need." Users had the opportunity to mark routes or points on and around the corridor, add written comments, as well as see and respond to input from other users.

Survey: A survey was provided in English and Spanish to collect community feedback on William Cannon Drive both at public meetings and online. See Appendix A1 for the survey and its results.

General Comments: The Project Team received comments through written comment cards, phone calls, in open-ended survey questions, and via email.

PHASE 2 - CONFIRMING THE VISION

The second phase of engagement took place in fall 2017. Goals included:

- Providing an overview of the process to-date, including feedback already collected
- Sharing what we heard from the community and how it was considered
- Presenting preliminary mobility recommendations
- Collecting feedback on the preliminary mobility recommendations

During Phase 2 of public outreach and engagement, the Project Team took a more targeted approach by offering briefings to civic associations, such as HOAs and neighborhood associations, in addition to hosting public meetings, a pop-in and an expanded project website.

PHASE 2 INPUT OPPORTUNITIES

During the second phase of public outreach and engagement, the Project Team took a more targeted approach by offering briefings to civic associations, such as HOAs and neighborhood associations, in addition to hosting public meetings, a pop-in and an expanded project website.

Table 2-2: Phase 2 Participation

Input Opportunity	Participants
Public Meetings*	65
Pop-in	40
Survey – Slaughter Lane	55
Small-group presentations	43

Pop-in: On October 17th, members of the Project Team set up a table outside of Big Lots (801 E. William Cannon Drive) to provide information to passersby about the Corridor Mobility Program and development of the Slaughter Lane, William Cannon Drive, and Brodie Lane Corridor mobility plans. Information was available in English and Spanish, and a Spanish-speaking Project Team member was available.

Public Meetings: The Project Team hosted two public open houses to present preliminary mobility recommendations to the community as well as provide an opportunity for attendees to ask questions and provide feedback directly to a member of the Project Team or through a survey. The information provided and the survey were available in both English and Spanish, and a Spanish-speaking Project Team member was available. The primary tool for conveying the recommendations were “flip books” of the roadways. The flip books included maps of the roadway with the recommendations, such as a new sidewalk, bicycle lane, or intersection improvement, overlaid in different colors on the map. Additionally, the flip books contained the proposed preliminary cross-sections.

Public Meeting Details:

- Nov. 1, 2017
Williams Elementary, 500 Mario Street
4:30-7:30 p.m.
- Nov. 2, 2017
Hampton Branch Library at Oak Hill, 5125 Convict Hill Road
4:30-7:30 p.m.

Small-Group Presentations: The Project Team coordinated with area community groups, neighborhood organizations, and other area stakeholder groups to gather input. The team met with groups including the River City Youth Foundation, Go Austin Vamos Austin (GAVA), Southpark Meadows, Onion Creek Neighborhood Association, and Circle C Neighborhood Association.

Website: All information provided at the public meetings, were made available on an expanded project website, AustinTexas.gov/WilliamCannon, which was accessible from AustinTexas.gov/BSWCorridors.

OUTREACH METHODS

The Project Team used a variety of methods to promote input opportunities during the development of the William Cannon Drive Corridor Mobility Plan. The Project Team regularly measured and evaluated participation and adjusted the public engagement strategy as necessary to provide comprehensive and inclusive opportunities for public input.

For example, feedback collected during the Phase 2 Pop-in at Big Lots on William Cannon Drive included a request to host another feedback opportunity for residents of the Dove Springs area. The Project Team also coordinated with stakeholders and co-hosted a meeting at River City Youth Foundation.

Promotion and outreach methods included:

Direct Mail: Postcards in English and Spanish were mailed to property owners and residents in the plan area using EDDM routes.

Signage: Signs promoting the public meetings were placed along the corridor.

Online Calendars: Announcements were made in community calendars as well as the City of Austin's digital community calendar at AustinTexas.gov.

Social Media: NextDoor, Twitter, and Facebook were used to promote the public engagement process, to encourage participation, and to distribute the survey.

Media: The Project Team distributed media releases and kept the media updated and engaged throughout the public engagement process.

Newsletter: Information was sent to stakeholders via email to share information about the project, public meetings, webpage, and opportunities to get involved.

Neighborhood and Homeowner Associations: The project team coordinated with Neighborhood and Homeowner Associations in the plan area through email and phone calls.

Business and Business Group Outreach: The project team engaged businesses and business groups along the corridor by coordinating with property managers, owners, and tenants to share information.

Coordination with Elected Officials: The team coordinated with City Council Members and County Commissioners to notify them of the public meetings and provide them with corridor materials for further distribution.

CHAPTER 3 - EXISTING CORRIDOR CONDITIONS

An analysis of existing corridor conditions was conducted to document and evaluate the existing land use patterns, roadway network, traffic conditions, drainage infrastructure, bicycle and pedestrian facilities, and transit facilities along William Cannon Drive. This analysis provided an understanding of the existing operating conditions within the corridor for all modes of transportation. This assessment helped the project team identify safety issues, operational deficiencies, gaps in connectivity and accessibility, placemaking, and other opportunities for improvements within the project area.

LAND USE & CHARACTER ZONES

Existing land use along the corridor is generally characterized by commercial developments near major intersections with primarily single-family residential development between intersections. Other types of development present include retail/commercial development, multi-family residential, office building, and public park land.

The character of William Cannon Drive changes as one travels west from McKinney Falls Parkway to Southwest Parkway. As such, William Cannon Drive was categorized into five (5) character zones. The five character zones identified are:

- Zone 1: McKinney Falls Parkway to South Pleasant Valley Road
- Zone 2: South Pleasant Valley Road to IH 35
- Zone 3: IH 35 to Mopac
- Zone 4: Mopac to US 290
- Zone 5: US 290 to Southwest Parkway

Within each character zone, sub-zones were also identified based on changes in land use and infrastructure characteristics. These character zones are shown in **Figure 3-1** and summarized in **Table 3-1**, followed by a detailed description of each.

Figure 3-1: Map of William Cannon Drive Character Zones

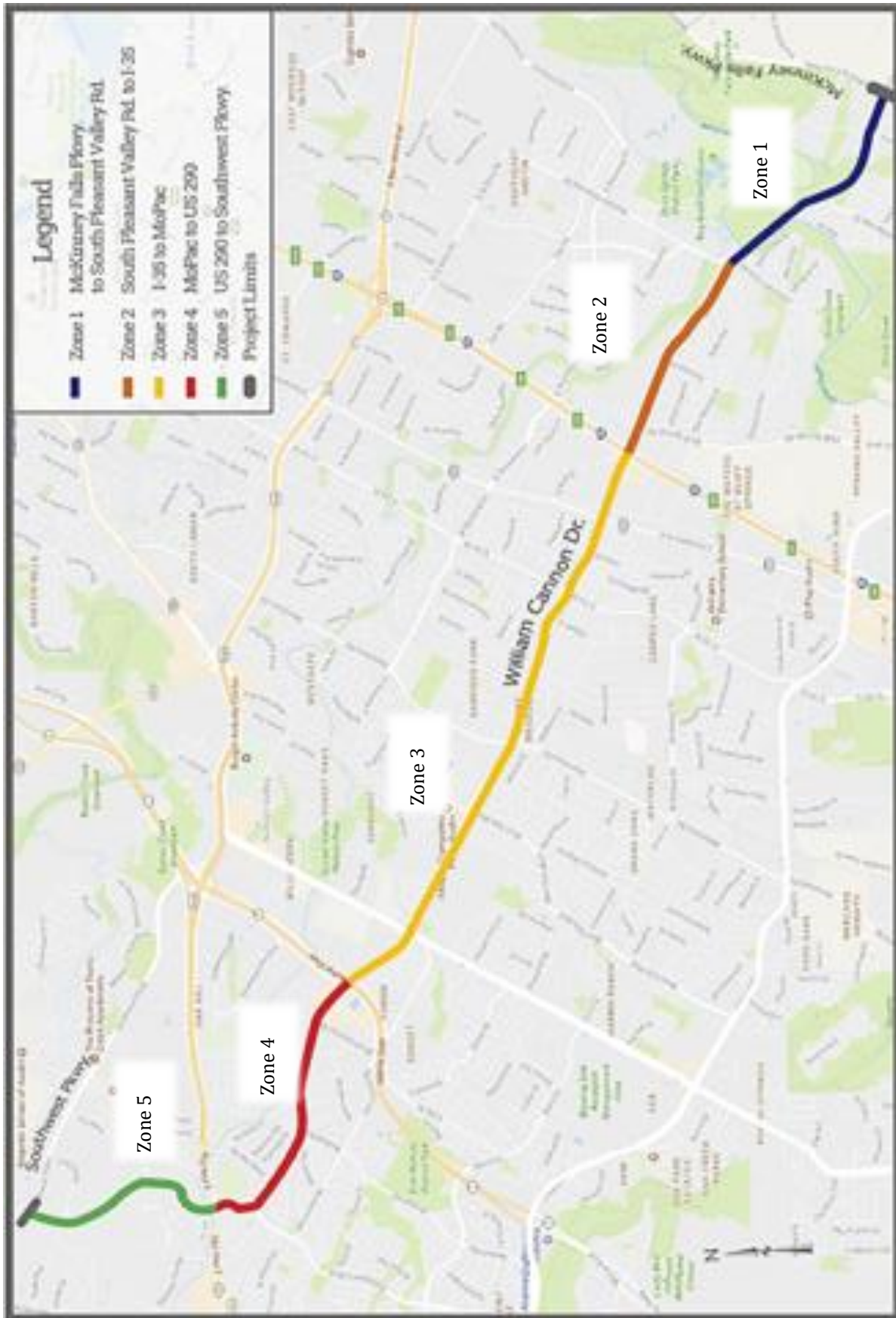


Table 3-1: Summary of William Cannon Drive Character Zones

Existing Land uses	Signalized Intersections	Roadway Characteristics	Watersheds
ZONE 1 - MCKINNEY FALLS PARKWAY TO SOUTH PLEASANT VALLEY ROAD			
<ul style="list-style-type: none"> • Single-family housing, • Hillcrest Elementary School, • Undeveloped flood plain, • Residential flood buyouts, • Onion Creek Soccer Fields, • Onion Creek Park & Trailhead 	<ul style="list-style-type: none"> • McKinney Falls Pkwy. • Salt Springs Dr. • S. Pleasant Valley Rd. 	<ul style="list-style-type: none"> • Major 2-Lane Undivided Arterial • Major 6-Lane Divided Arterial 	<ul style="list-style-type: none"> • Cottonmouth Creek • Marble Creek • Onion Creek
ZONE 2 - SOUTH PLEASANT VALLEY ROAD TO IH 35			
<ul style="list-style-type: none"> • Commercial shopping centers, • Single-family housing, • Auto Repair Shops, • Apartment complexes, • Mobile Home Park, • Neighborhood Corner Stores, • Major Grocer, Shopping Center • Restaurants • Convenient stores & gas Stations 	<ul style="list-style-type: none"> • S. Pleasant Valley Rd. • Meadowlake Dr. • Stonleigh Pl. • Bluff Springs Rd. • IH-35 Northbound Rd. • IH-35 Southbound Rd. 	<ul style="list-style-type: none"> • Major 6-Lane Divided Arterial 	<ul style="list-style-type: none"> • Williamson Creek
ZONE 3 - IH 35 TO MOPAC EXPRESSWAY			
<ul style="list-style-type: none"> • Major shopping centers, • Restaurants, Banks, • Convenient stores & gas Stations • Apartment complexes, • Single-family housing, • Auto Repair Shops, • Professional Office Park, • Churches • Pleasant Hill Branch Library • Bedichek Middle School • Retirement Living Centers • Stephenson Natural Preserve, • Neighborhood Corner Stores, • Major Grocer, Shopping Center • Emergency Clinics • Recreation & Fitness Centers 	<ul style="list-style-type: none"> • IH-35 Southbound Rd. • Century South Shopping Center • Circle C Rd. • South Congress Ave. • Bill Hughes Dr. • So. 1st St. • Cooper Ln. • Emerald Forrest Dr. • Woodhue Dr. • Manchaca Rd. • West Gate Blvd. • Brodie Ln. • Mopac Northbound • Mopac Southbound 	<ul style="list-style-type: none"> • Major 6-Lane Divided Arterial • Major 4-Lane Divided Arterial 	<ul style="list-style-type: none"> • Williamson Creek • South Boggy Creek
ZONE 4 - MOPAC EXPRESSWAY TO US 290			
<ul style="list-style-type: none"> • Major shopping centers, • Restaurants, Banks, • Convenient stores & gas Stations • Apartment complexes, • Single-family housing, • Auto Repair Shops, • Professional Office Park, • Churches • Funeral Home 	<ul style="list-style-type: none"> • Mopac Southbound • Arbor Trails Shopping Center • Brush Country Rd. • Beckett Rd. • Escarpment Blvd. • US 290 	<ul style="list-style-type: none"> • Major 6-Lane Divided Arterial 	<ul style="list-style-type: none"> • Williamson Creek
ZONE 5 - US 290 TO SOUTHWEST PARKWAY			
<ul style="list-style-type: none"> • NXP Semiconductors • Apartment complexes, • Smith & Nephew, • AMD Semiconductors • Major Shopping Center & Office park (under construction) 	<ul style="list-style-type: none"> • US 290 • Southwest Pkwy. 	<ul style="list-style-type: none"> • Major 6-Lane Divided Arterial 	<ul style="list-style-type: none"> • Williamson Creek • Barton Creek

CHARACTER ZONE 1: MCKINNEY FALLS PARKWAY TO SOUTH PLEASANT VALLEY ROAD

OVERALL

Character Zone 1 begins at McKinney Falls Parkway, on the east end of the corridor, and extends west to South Pleasant Valley Road. This is an area in transition, with multiple single-family subdivisions under construction near Hillcrest Elementary School. Issues with the flooding of Onion Creek and Williamson Creek and the resulting flood buyouts create an area with little activity. There are long-term plans for an expansion of Onion Creek Park in this location.

EAST OF MCKINNEY FALLS PARKWAY

Existing William Cannon Drive runs a short distance to the east of McKinney Falls Parkway.

Easton Park, shown in **Figure 3-2**, is a new master planned development under construction in this area that includes 10,000 housing units, Newton Collins Elementary School (Del Valle ISD), and Experience Park.



Figure 3-2: Easton Park Development

The 4-lane divided roadway has a central planted boulevard, bike lanes, sidewalks set back from the roadway with lawn strips, and underground utilities.

MCKINNEY FALLS PARKWAY TO MARBLE CREEK BRIDGE

McKinney Falls Parkway provides a connection with McKinney Falls State Park and US 183 to the north.

Significant land use includes Hillcrest Elementary School (Del Valle ISD), the Reserve of McKinney Falls (new single-family residential neighborhood under construction to the north of Hillcrest Elementary), and Vista Point Homes (new single-family residential neighborhood to the south).



Figure 3-3: Two-lane section of William Cannon Drive

The existing roadway, shown in **Figure 3-3**, is a two-lane undivided arterial roadway. No street lighting is present but overhead utilities run parallel to William Cannon Drive on the north side. Continuous sidewalks located at the back-of-curb are present on the north side, however no sidewalk is provided on the south side from McKinney Falls Parkway to east of Dixie Drive. The landscape of tall grasses adjacent to the sidewalk impedes pedestrian traffic, similar to the overgrowth shown in **Figure 3-4**.

The existing Marble Creek Bridge has two lanes of traffic and two bicycle lanes (one each side). Sidewalks crossing the bridge are at least 5-foot wide.

MARBLE CREEK BRIDGE TO SOUTH PLEASANT VALLEY ROAD

Salt Springs Drive provides a connection to Palm Elementary School and is currently the eastern terminus for Capital Metro transit service.

Land use in this sub-zone is dominated by park land, flood plain, flood dissipaters, and flood buyouts in the Plantation Homes Subdivision. Significant features include Onion Creek Park and Trailhead, and Onion Creek Soccer Complex.

This section of William Cannon Drive begins as a 2-lane undivided roadway at Marble Creek Bridge but quickly transitions to a 6-lane divided roadway just west of Salt Springs Drive. The MAD6 section has raised concrete medians, unprotected bike lanes, and sidewalks at the back-of-the-curb. There are no shade trees, and the area suffers from poor maintenance. Overhead power lines are present, but no street lighting is provided.

This area contains the Onion Creek Bridge, shown in **Figure 3-5**, which consists of two structures that are three lanes each, with 7-foot sidewalks in each direction. This is the area where recent flooding occurred, with Onion Creek overflowing its banks and flooding the area between the Marble Creek Bridge and Dixie Drive.



Figure 3-4: Overgrown vegetation between Dixie Drive and Onion Creek Soccer



Figure 3-5: Onion Creek Bridge

SOUTH PLEASANT VALLEY ROAD INTERSECTION

South Pleasant Valley Road provides connections (via Nuckols Crossing) to Dove Springs Recreation Center, Mendez Middle School, Widen Elementary, Dove Springs Branch Library, Roy Kizer Golf Course, and Fire Station .No FS0024 to the north, and Perez Elementary School to the south.

The intersection is not in the flood zone. A one-story retail shopping center and two gas stations provide a community hub.

The six-lane roadway has a concrete raised-median, unprotected bike lanes, and sidewalks at the back-of-the-curb. There are no shade trees, and the area is in need of maintenance. Overhead utilities lines and street lighting are present on the north side of the street.

CHARACTER ZONE 2: SOUTH PLEASANT VALLEY ROAD TO IH 35

OVERALL

Character Zone 2 has existing land use that is more typical of the corridor as a whole. Single-family and multi-family residential housing is abutting the roadway from South Pleasant Valley Road to Bluff Springs Road. Commercial/retail developments are the primary land use Bluff Springs Road to IH 35.

SOUTH PLEASANT VALLEY ROAD TO BLUFF SPRINGS ROAD

There are older single-family residential homes and the North Bluff Estates manufactured home park along the south side of the street, and both single-family homes and multi-family apartment complexes along the north side.



Figure 3-6: William Cannon Drive and Bluff Springs Road

Four (4) Capital Metro bus stops (unsheltered) signify an important transit hub at the Meadow Lake Boulevard intersection. Buses connect southward to Blue Meadow Drive, Langford Elementary School, and Kendra Page Park.

The six-lane divided roadway has a raised concrete median in need of maintenance, unprotected bike lanes, sidewalks with small lawn strips, no shade trees, overhead power lines, and roadway cobra lighting.

Bluff Springs Road provides a connection to Langford Elementary School on the south and Wayside Charter School on the north. The Bluff Springs Bus Transfer Center provides multiple shelters and benches designed to encourage use.

BLUFF SPRINGS ROAD TO IH 35

Commercial shopping centers are the dominant land use, with an H-E-B grocery on the south side and one-story retail on the north side. There are wide curb cuts at driveways from Bluff Springs Road to IH 35.

The six-lane divided roadway has a raised concrete median and sidewalks with a small lawn strip on the north side. There are no bike lanes or shade trees. A narrow sidewalk at the back-of-the-curb is on the south side. Overhead utility lines and roadway street lighting are present.

The IH 35 intersection provides access to/from the major north-south corridor in the region and an overpass for eastbound/westbound traffic on William Cannon Drive. The intersection experiences significant congestion during the peak hours and is currently being reconstructed by TxDOT.

CHARACTER ZONE 3: IH 35 TO MOPAC

OVERALL

Existing land use is consistent in Character Zone 3 with commercial shopping centers at intersections, and single-story office buildings and single-family residential developments adjacent to the roadway between intersections. New developments on cross-streets north and south of the corridor are putting pressure on major intersections.

IH 35 TO SOUTH CONGRESS AVENUE

One-story retail shopping centers and fast food restaurants are the dominant land use at intersections.

North Bluff Drive provides a cut-through route to South Congress Avenue for drivers and bicyclists that want to avoid the intersection of William Cannon Drive and South Congress Avenue.

Two-lane Circle S Road provides a connection across Williamson Creek to Pleasant Hill Elementary on the north; and to Pleasant Hill Library, a new residential affordable housing development, and American Achievement Corporation on the south side.

The six-lane divided roadway has a raised concrete median and sidewalks from the back of curb to small lawn strips. There are no bike lanes or shade trees. Overhead power lines and roadway cobra lighting line the roadway.

The South Congress Avenue intersection has been recently improved and expanded. Route 801 MetroRapid bus stops with shelters are present along South Congress Avenue. Route 801 connects to North Lamar Boulevard and south to Slaughter Lane. A separate study of the South Congress Corridor will be conducted under the Mobility Bond Program.

SOUTH CONGRESS AVENUE TO MANCHACA ROAD

Existing land use is dominated by one-story single-family homes and three-story apartments on both sides, from South Congress Avenue to Manchaca Road. Other significant features include Foundation Communities Garden Terrace Apartments to the south and Armadillo Neighborhood Park to the north.

Bedichek Middle School is located on the south side of the South 1st Street intersection, and an H-E-B grocery with one-story retail is on the north.

The Woodhue Drive intersection, shown in **Figure 3-6**, provides access to El Buen Samaritano Mission on the south side.



Figure 3-6: Intersection of William Cannon Drive & Woodhue Drive

The six-lane divided roadway has a raised concrete median with sidewalks buffered by a lawn strip on the north side and at back-of-the-curb on the south side. There are no shade trees or no bike lanes in this segment. This sub-zone has no overhead power lines and cobra roadway lighting.

The Union Pacific Railroad overpass with narrow sidewalks and outdated guardrails will be reviewed under a separate engineering study.

MANCHACA ROAD TO WEST GATE BOULEVARD

One-story medical office buildings with connected parking lots are the dominant land use from Manchaca Road to West Gate Boulevard.

West of Manchaca Road, William Cannon Drive reduces back to a 4-lane divided arterial (MAD4) with wide raised medians planted with grass and trees. Sidewalks are set back from the curb, buffered with lawn strips and provided shade from trees on private property. There are no overhead power lines. Street lighting is provided by dual-fixture Cobra assemblies located in the median. Bus stops with shelters offer an upgraded pedestrian experience.

West Gate Bowling Lanes and Trampoline Park offer private recreational opportunities in a retail setting at the West Gate Boulevard intersection. Gateway Church is another significant land use at this intersection. West Gate Boulevard is the only intersection along William Cannon Drive with best-practice continental (ladder-style) crosswalk markings.

WEST GATE BOULEVARD TO BRODIE LANE

A view of the Hill Country emerges from West Gate Boulevard to Brodie Lane. Significant land use include Jubilee Christian Center, Stephenson Nature Preserve, and Longview Park on the south side of the street, and The Highlands Hill County three-story apartments and single-family residential homes on the north.

The four-lane divided roadway has a wide raised-median planted with grass and unevenly spaced shade trees. Continuous sidewalks are located at either the back-of-the-curb or buffered with lawn strips. Unmaintained sidewalk vegetation is overgrown and undeveloped drainage areas existing on both sides.

There are limited shade trees and no bike lanes in this segment. Overhead utility lines on the south side run parallel to William Cannon Drive between Lost Valley and Brodie Lane. Street lighting is provided by dual-fixture Cobra assemblies located in the median.

The Brodie Lane intersection, shown in **Figure 3-7**, provides another neighborhood hub, with an H-E-B grocery on the north side, and Bannockburn Baptist Church and Cannon Oaks one-story retail on the south side. Brodie Lane provides a connection to Lowe's Home Improvement to the north and Covington Middle School to the south.

BRODIE LANE TO MOPAC

Traveling from Brodie Lane to Mopac, one-story retail shopping centers and wooded, undeveloped areas transition to one-story shopping centers.

The MAD6 roadway has curb slots into depressed gravel medians for drainage, and sidewalks at the back-of-the-curb. Existing trees, located near the right-of-way line and separated from the sidewalk with wide lawn strips, provide little shade to pedestrians. No overhead utility lines or bike lanes are present.



Figure 3-7: Intersection of William Cannon Drive & Brodie Lane

Approaching Mopac, the roadway transitions to include a grassy raised-median, overhead power lines, and street lighting from cobra-head fixtures located on the sides.

There is a significant culvert crossing between Brodie Lane and Mopac. The Mopac intersection provides a major regional connection via the access roads on the north and south. Near the interchange Mopac access roads provide access to one-story retail on the north, and Violet Crown Trail and Life Time Fitness to the south, via the pedestrian/bicycle path and underpass.

CHARACTER ZONE 4: MOPAC TO US 290

OVERALL

Land use in Character Zone 4 is consistent with that of Zone 3, with commercial shopping centers at intersections and single-family residential housing in-between. The middle of the zone presents a semi-rural setting, with homes built on larger, sometimes unfenced lots. On the western end, the Circle C development offers higher-end single-family homes. The US 290 area is in transition with the TxDOT-proposed Oak Hill Parkway project.

MOPAC TO BRUSH COUNTRY ROAD

Arbor Trails, an upscale one-story retail shopping centers including a Costco and a Whole Foods grocery store, on the south side is the most prominent development in this area. On the north side, a single-family neighborhood, accessed via Brush County Road, is located behind Gold's Gym and other retail abutting the roadway. Capital Metro transit service terminates at Brush Country Road.

The six-lane divided roadway has a median that is raised/curbed in some locations and depressed/non-curbed with gravel drainage areas in others. Unprotected on-street bike lanes are present on both sides of the roadway. On the north side overhead utility lines run parallel to the roadway and a sidewalk is provided

at the back-of-curb. On the south side, a wider sidewalk is provided with a substantial grass buffer separating the sidewalk and roadway. Street lighting is provided by single-fixture cobra assemblies located on each side of the street.

BRUSH COUNTRY ROAD TO RIDGE OAK ROAD

Land uses in this segment include Shepherd of the Hills Presbyterian Church, one-story office and retail, and undeveloped wooded areas. Semi-rural, single-family neighborhoods run along the north side with access the corridor via Beckett Road. North of the corridor Fire Station No. FS 0027 is located at the intersection of McCarty Lane and Beckett Road.

The six-lane divided roadway has a depressed-median with gravel drainage areas and sidewalks located at the back-of-curb on both sides of the road. Unprotected on-street bike lanes exist between Brush country and McCarty Lane. No bike lanes are present between McCarty Lane and Ridge Oak Road. Street lighting is provided by single-fixture cobra assemblies located on each side of the street. Overhead utility lines are present along the south side of the road from Brush Country Road to McCarty Lane.

RIDGE OAK ROAD TO US 290

Land use abutting the roadway is primarily one-story office and retail from Ridge Oak Road to US 290. Escarpment Boulevard provides access for the Circle C single-family residential development. Significant land use includes Cook Walden Forest Oaks Memorial Park.

The six-lane divided roadway has a median that varies between raised/curbed in some locations and depressed/non-curbed with gravel drainage areas in others. Sidewalks located at the back-of-the-curb, and single-fixture cobra street lights exist on both sides of the street. There are no shade trees, no overhead utility lines, and no bike lanes present in this segment.

West of Escarpment the roadway curves northward. The Oak Hill Centre provides one-story retail shopping to the west and the Capitol Metro Oak Hill Park and Ride is located to the east along US 290.

The recently constructed continuous flow intersection at US 290 offers striped crosswalks between a series of raised pedestrian refuge islands. US 290 provides regional connectivity inbound to downtown Austin via Mopac, and outbound through the "Y" at Oak Hill to destinations along SH 71 and US 290.



Figure 3-8: Intersection of William Cannon Drive & Escarpment Blvd.

CHARACTER ZONE 5: US 290 TO SOUTHWEST PARKWAY

OVERALL

A definite Hill Country character emerges from US 290 to Southwest Parkway. The curving roadway, with wide central medians and clusters of existing trees, provide a distinctive image from the rest of the corridor. Corporate manufacturing campuses have wide setbacks from the roadway. The segment from Rialto Boulevard to Southwest Parkway is in transition, with new apartment complexes and the Lantana Place mixed-use development in construction.

US 290 TO RIALTO BLVD.

Significant land use from US 290 to Rialto Boulevard includes NXP Manufacturing, Lantana Ridge Apartments, and Smith & Nephew Manufacturing. Vega Lane provides a connection to Southwest Medical Village, with three-story apartments behind.

Just north of US 290, a 4-lane bridge crosses Williamson Creek with sidewalks on both sides. The curving roadway widens beyond the bridge to a six-lane divided roadway with a grassy raised-median, sidewalks at the back-of-the-curb transitioning to curving sidewalks with wide setbacks, underground utilities, and upscale street lighting assemblies located both in the median and outside the roadway. There are no bike lanes or shade trees along this segment. The character of the natural environment is dominant with clusters of existing trees and native grasses.

RIALTO BOULEVARD TO SOUTHWEST PARKWAY

Rialto Boulevard to Southwest Parkway is an area in transition. Rialto Boulevard provides a connection to Advanced Micro Devices (AMD) and multi-family apartment complexes on the east, and office buildings and three-story apartments on the west. Lantana Place mixed-use development is in construction to the west (See Chapter 4 for a listed of planned developments along the corridor).

The six-lane divided roadway has a grassy raised-median, sidewalks at the back-of-the-curb, underground utilities, and upscale street lighting from the median. There are no bike lanes or shade trees in this area.

At the western limit of the study area, Southwest Parkway provides regional connectivity inbound to downtown Austin via Mopac and outbound to the western Hill Country, where it intersects with SH 71.

DRAINAGE CHARACTERISTICS & ISSUES

The William Cannon Drive Corridor crosses six watersheds and several drainage channels (see **Table 3-2**). A majority of the corridor lies within the Williamson Creek Watershed. Most of the watersheds are draining from the west to the east, downstream from the Hill Country terrain to the eastern, more flat terrain. These watersheds also help provide water to the underground aquifer through fissures in their streambeds. Most of the William Cannon Drive Corridor lies within the Williamson Creek Watershed, which is especially important

because this creek enters the Edwards Aquifer underground and discharges from springs at Barton Springs Pool.

Water quality from the watersheds along the William Cannon Drive Corridor is generally very good. However, with the rapid growth of this area and others just outside Austin city limits, care must be taken to follow guidelines in drainage design, as recommended by the City of Austin and Texas Commission on Environmental Quality (TCEQ). On the east side at Onion Creek, there has been several times when subdivisions were flooded along with homes in this area. The City has a house buy-back program in place for homes that have suffered flood damage several times over the last 10 years.

Table 3-2: Zones/Watersheds relative to William Cannon Drive Corridor

Character Zone	Watershed
Zone 1 - McKinney Falls Parkway to S. Pleasant Valley Road	Cottonmouth Creek/Marble Creek/Onion Creek
Zone 2 - South Pleasant Valley Road to IH 35	Williamson Creek
Zone 3 - IH 35 to Mopac Expressway	Williamson Creek/South Boggy Creek
Zone 4 - Mopac Expressway to US 290	Williamson Creek
Zone 5 - US 290 to Southwest Parkway	Williamson Creek/Barton Creek

BICYCLE & PEDESTRIAN FACILITIES

BIKE LANES

The safety and comfort of bicyclists is a major concern across the corridor. According to the City of Austin Bicycle Master Plan, the comfort of the user experience is maximized by “providing adequate separation from traffic, minimizing flow interruptions, and providing smooth surfaces, shade and comprehensibility, along routes”. Characteristics of the existing bike facilities along the corridor are summarized in **Table 3-3**.

Table 3-3: Existing Bike Facilities along William Cannon Drive

From	To	Existing Facility	Comfort
Southwest Pkwy	Vega Blvd	Shared Lane	Medium
Vega Blvd	McCarty Ln	Shared Lane	Low
McCarty Ln	MoPac	Bike Lane	Medium
MoPac	Brodie Ln	Shared Lane	Low
Brodie Ln	IH 35	Shared Lane	Helpful Sidewalks (Limited Bike Access)
IH 35	McKinney Falls Pkwy	Bike Lane	Low

SIDEWALKS

William Cannon Drive has existing sidewalks on both sides of the road throughout most of the corridor with a few exceptions. The City of Austin Sidewalk Master Plan has identified gaps in the existing sidewalk network and developed a priority ranking for addressing those gaps. **Table 3-4** shows locations of absent sidewalks along the existing corridor.

Table 3-4: Absent Sidewalks

Location	Side of Street <i>(North or South)</i>	Absent Sidewalk Priority	Approx. Length of Absent Sidewalk
Southwest Pkwy to US 290	South	Low/Medium	820 feet
Dixie Dr to Jane's Ranch Rd	South	High	3,500 feet
Jane's Ranch Rd to McKinney Falls Pkwy	South	Medium	1,600 feet

There are also several cross-streets, shown in **Table 3-5**, where absent sidewalks have been identified as "High" and "Very High" priority.

Table 3-5: Absent Sidewalks – Off-Corridor

Location	Side of Street <i>(North or South)</i>	Absent Sidewalk Priority
Brush Ridge Dr	North	High
Vougeot Dr	South	High
Elm Creek Dr	South	Very High
Circle S Rd	North/South	Very High
Starstreak Dr	North	Very High
US 290	North/South	High/Medium

The existing sidewalks along William Cannon Drive are generally adjacent to the roadway while some areas have a small green space between the curb and sidewalk. Signalized intersections provide pedestrian crossings with ramps, crosswalks, and push buttons.

TRANSIT SERVICE

CapMetro operates several Local, Frequent Local, Flyer and MetroRapid bus routes within the William Cannon Drive corridor. Existing transit routes running along or crossing the corridor are listed in **Table 3-6**.

MetroBus

Route 3, **Route 201**, and **Route 318** are Local routes typically provide 30-minute frequencies, 7 days a week, and have frequent stops. **Route 7**, **Route 10**, and **Route 333** are part of the high-frequency network providing 15-minute frequencies, 7 days a week, for greater travel time reliability for riders by reducing the time

between arrivals. **Route 103, Route 171, and Route 110** are Flyer routes providing less stops and directional service during peak periods. Flyer routes provide service toward downtown in the AM rush hour and away from downtown during the PM rush hour.

MetroRapid

MetroRapid **Route 801** travels along South Congress Avenue and North Lamar Boulevard, connecting Southpark Meadows with Tech Ridge in north Austin via downtown and the UT-Austin campus. All MetroRapid routes provide service every 10 minutes on weekdays, every 15 minutes on Saturday and Sunday, and late-night service until 2:30 a.m. Thursday through Saturday. MetroRapid buses also offer free Wi-Fi and feature transit-priority technology that changes red lights to green as they approach signals.

Table 3-6: Existing Transit Routes

Route #	Route Name	Service Type	Frequency (Weekdays)
1	North Lamar/South Congress	Local	30 Minute
3	Burnet/Manchaca	Local	30 Minute
7	Duval/Dove Springs	Frequent Local	15 Minute
10	South 1st/Red River	Frequent Local	15 Minute
103	Manchaca Flyer	Flyer	30 Minute
111	South MoPac Flyer	Flyer	30 Minute
171	Oak Hill Flyer	Flyer	20 Minute
201	Southpark Meadows	Local	30 Minute
315	Ben White	Crosstown	30 Minute
318	Westgate/Slaughter	Crosstown	30 Minute
333	William Cannon	Frequent Crosstown	15 Minute

TRAFFIC OPERATIONS ANALYSIS

An analysis of current overall traffic operations along William Cannon Drive was conducted to understand existing traffic conditions along the corridor and identify specific improvements needed to accommodate future growth. Input received during the public outreach process was used to supplement, and in some cases guide, an intensive technical analyses of intersection traffic operations.

METHODOLOGY

Traffic operations were assessed for the Existing (2017) conditions scenario with *Synchro 9*, a traffic analysis software, using methodologies defined in the *Highway Capacity Manual (HCM)* to determine intersection Level of Service (LOS) and network metrics for fuel consumption and emissions. Traffic counts were collected to determine existing (2017) volumes and a *Synchro* model of the corridor including existing signal timings was developed for the traffic operations analysis. Existing (2017) conditions were verified and calibrated in

the *Synchro* model based on observations and intersection geometries to reflect real-world conditions. *Synchro* model outputs are located in **Appendix C**.

INTERSECTION LEVEL OF SERVICE

Intersection Level of Service (LOS) is a measure of intersection performance based on average control delay. Delay quantifies the increase in travel time that a vehicle experiences due to traffic signal control but can also serve as a surrogate measure for driver discomfort and fuel consumption. Signalized intersection LOS is stated in terms of average delay per vehicle (seconds per vehicle) during a specified time period (e.g., weekday PM peak hour). LOS and Delay are influenced by many factors, including signal phasing and coordination, signal cycle length, and traffic volumes with respect to intersection capacity and resulting vehicle queues.

The City of Austin sets the threshold for “acceptable” Level of Service at LOS D through its Traffic Impact Analysis (TIA) guidelines, while LOS E and LOS F are considered unacceptable. Use of LOS D as a minimum threshold is common practice in denser urban environments where prohibitive costs and undesirable societal impacts would be required to obtain LOS C.

For signalized intersections, LOS criteria are based on the ranges of control delay shown in **Table 3-7**, as defined in the *Highway Capacity Manual (HCM)*.

Table 3-7: Level of Service Definitions for Signalized Intersections

LOS	Control Delay	Description
A	< 10	<i>Very low vehicle delays, free traffic flow, signal progression extremely favorable, most vehicles arrive during given signal phase.</i>
B	> 10 and < 20	<i>Good signal progression, more vehicles stop and experience higher delays than for LOS A.</i>
C	> 20 and < 35	<i>Stable traffic flow, fair signal progression, significant number of vehicles stop at signals.</i>
D	> 35 and < 55	<i>Noticeable traffic congestion, longer delays and unfavorable signal progression, many vehicles stop at signals.</i>
E	> 55 and < 80	<i>Limit of acceptable vehicle delay, unstable traffic flow, poor signal progression, traffic near roadway capacity, frequent cycle failures.</i>
F	> 80	<i>Unacceptable delay, extremely unstable flow, heavy congestion, traffic exceeds roadway capacity, stop-and-go conditions.</i>

Source: Highway Capacity Manual, Transportation Research Board, 2000.

Table 3-8 summarizes the existing (2017) LOS and delay (sec/veh) at signalized intersections during the AM and PM peak hours. A complete set of *Synchro* model outputs are located in **Appendix C**. As shown, intersections currently operating at an unacceptable Level of Service (LOS E or LOS F) during one or more peak period include: US 290, MoPac, Brodie Lane, West Gate Boulevard, Manchaca Road, South 1st Street, and IH 35.

Table 3-8: Intersection Level of Service at Study Intersections – AM and PM Peak Hour

William Cannon Drive Intersection	AM Peak		PM Peak	
	LOS	Avg. Delay (sec/veh)	LOS	Avg. Delay (sec/veh)
Southwest Parkway	C	26.7	C	29.3
US 290	D	53.3	F	156.1
Escarpment Boulevard	D	39.5	C	34.8
Beckett Road	B	13.9	B	14.9
Brush Country Road	C	28.4	C	31.4
Arbor Trails Shopping Center	B	12.9	B	16.4
Mopac Southbound Frontage Road	C	30.4	F	105.7
Mopac Northbound Frontage Road	E	80	F	69.9
Brodie Lane	F	85.5	D	54.3
West Gate Boulevard	D	46.5	F	36.9
Manchaca Road	D	54	E	68.7
Woodhue Drive	C	20.3	B	11
Emerald Forrest Drive	A	6.4	D	13.5
Cooper Lane	B	11.2	B	13.6
1st Street	D	47.4	E	61.3
Bill Hughes Drive	C	20.7	B	11.3
South Congress Avenue	D	40.7	D	39.7
Circle S Road	C	25.1	C	21.7
Century South Shopping Center	A	7.2	B	16.7
I-35 Southbound Frontage Road	D	54.2	E	64.7
I-35 Northbound Frontage Road	E	58.6	D	53.1
Bluff Springs Road	D	44.8	C	29.9
Stoneleigh Place	B	12.8	B	12.6
Pleasant Valley Road	E	63.4	F	106
Salt Springs Drive	C	34.9	B	10.4
McKinney Falls Parkway	C	29.1	F	88.9

NETWORK FUEL CONSUMPTION AND EMISSIONS

Synchro model outputs also included calculations for fuel consumption and emissions. The fuel consumption model, which produces the level of emissions, is based on delays, stops, speed, distance traveled, and travel time. **Table 3-9** shows the total fuel consumption and emissions at all signalized intersections during the AM and PM peak hours.

Table 3-9: Fuel Consumption and Emissions – AM and PM Peak Hour

MOE	AM Peak	PM Peak
Fuel Consumed (gal)	2,111	2,671
CO Emissions (kg)	150	186
NOx Emissions (kg)	29	36
VOC Emissions (kg)	34	43

CRASH ANALYSIS

Historical crash data for years 2012 to 2016 were analyzed to identify the type/location of crashes along the corridor and make recommendations which improve safety throughout the corridor. The data shows there were a total of 1281 accidents in the corridor over the five-year period. **Table 3-10** provides a ranking of the Top 10 intersection crash locations along the corridor. **Table 3-11** summarize the frequency of crash types at the Top 5 intersection crash locations.

Table 3-10: Total Crashes by Location

Rank	Intersection	Total Crashes
1	US 290W	103
2	Manchaca Road	81
3	Brodie Lane	72
4	South Congress Avenue	71
5	IH 35 SB Frontage Road	70
6	Bluff Springs Road	66
7	South First Street	59
8	West Gate Boulevard	41
9	Circle C Road	37
10	Beckett Road	36

Table 3-11: Crash Types at Top Five Crash Intersection Locations

Crash Type	US 290	Manchaca Road	Brodie Lane	S. Congress Ave.	IH 35 SBFR
Rear End	31	20	23	30	29
Angle – One Straight, One Left Turn	19	18	11	12	10
Angle – One Straight, One Right Turn	6	3	3	1	8
Sideswipe	19	19	19	20	15
One Motor Vehicle – Going Straight	20	10	7	5	7
One Motor Vehicle – Turning Left	3	6	3	1	0
One Motor Vehicle – Turning Right	2	2	1	0	0
Motor Vehicle/Pedestrian	2	2	4	1	0
Motor Vehicle/Bicycle	1	1	0	0	0
Total Crashes	103	81	71	70	69

The most frequently observed crash types were rear-end crashes, sideswipes, and left-turn angle crashes. Common causes for these crash types include general congestion, inadequate storage length of turn lanes, unexpected turns conflicting, and lack of proper signal control. Common countermeasures to reduce the frequency of rear-end collisions is the installation of turn lanes or increasing the storage capacity of an existing turn lane. A common countermeasure for reducing Angle – One Straight, One Left-Turn crashes is to adjust the traffic signal phasing that eliminates permissive left-turn phases and allows only protected left-turns.

Table 3-12 summarizes the severity of observed crashes (fatalities, injuries and property damage).

Table 3-12: Total Crashes by Severity Level

Year	Fatal	Injury	Property Damage Only	Total
2012	0	147	100	247
2013	1	151	115	267
2014	0	123	107	230
2015	1	132	118	251
2016	3	149	134	286
Total	5	702	574	1,281

Table 3-13 summarizes the mode types involved in crashes (vehicle, motorcycle, bicycles, or pedestrian).

Table 3-13: Total Crashes by Vehicle/Mode Type

Year	Vehicle Type				Total
	Motor Vehicle	Motorcycle	Pedestrian	Bike	
2012	229	6	7	5	247
2013	241	6	16	4	267
2014	206	7	14	3	230
2015	232	8	8	3	251
2016	260	12	10	4	286
Total	1168	39	55	19	1,281

CHAPTER 4 - FUTURE CORRIDOR CHARACTERISTICS

In addition to addressing the existing needs identified in **Chapter 3**, the development of recommendations that enhance mobility, safety, and connectivity for all users must also consider the future land use and travel demand along the William Cannon corridor. This chapter begins with an overview of recommendations from plans and policies developed by the City of Austin and other regional transportation agencies affecting the corridor. Recommendations from Neighborhood Plans abutting the corridor are summarized. Future land use and planned site developments are also considered along with planned improvements to the transportation system. This chapter concludes with a discussion of future travel demand within the corridor.

CITY OF AUSTIN PLANS & POLICIES

In addition to achieving the project goals of enhancing mobility, safety, and connectivity for all users, recommendations for William Cannon Drive should also align with the vision and goals of Imagine Austin and other city-adopted plans and policies. The following sections describe relevant plans and policies, and their specific recommendations for the future William Cannon Drive corridor.

IMAGINE AUSTIN COMPREHENSIVE PLAN

The *Imagine Austin Comprehensive Plan (Imagine Austin)*, adopted in 2012, is the comprehensive planning guiding document for the future of the City of Austin. The Comprehensive Plan provides broad guidance, as well as specific criteria that can be included as part of the William Cannon CMP. Improvements to the William Cannon Drive corridor will seek to implement the vision, goals, and objectives of *Imagine Austin*.

Imagine Austin provides a **“Vision for Austin’s Future”** where **“...Austin is a beacon of sustainability, social equity, and economic opportunity; where diversity and creativity are celebrated; where community needs and values are recognized; where leadership comes from its citizens and where the necessities of life are affordable and accessible to all.”**

Several “Key Challenges and Opportunities” are posited by *Imagine Austin* – for example, **“Preserving Our Livability and Expanding Transportation Choices”** – are directly applicable to the William Cannon Drive CMP. *Imagine Austin* outlines several Core Principles for Action, most relevant to the William Cannon Drive corridor is the call to **“Grow as a compact and connected city”** and **“Develop as an affordable and healthy community.”** The robust transportation section in *Imagine Austin* outlines that the ever-increasing traffic congestion and transportation costs has led to **“a**



renewed interest in creating a system incorporating all transportation choices.” While *Imagine Austin* envisions a long-term shift toward transit, walking, and biking, an expanded and improved roadway network must also be considered.

The culmination of *Imagine Austin* outreach and findings related to land use and transportation is a series of policy recommendations. The policies that are applicable to the William Cannon Drive corridor are included below. in **Table 4-1**.

Table 4-1: Imagine Austin Comprehensive Plan – Land use & Transportation Policies

ID	Description
LUT P1	Align land use and transportation planning and decision-making to achieve a compact and connected city in line with the Growth Concept Map.
LUT P3	Promote development in compact centers, communities, or along corridors that are connected by roads and transit, are designed to encourage walking and bicycling, and reduce healthcare, housing and transportation costs.
LUT P5	Create healthy and family-friendly communities through development that includes a mix of land uses and housing types, affords realistic opportunities for transit, bicycle, and pedestrian travel, and provides community gathering spaces, neighborhood gardens and family farms, parks, and safe outdoor play areas for children.
LUT P7	Encourage infill and redevelopment opportunities that place residential, work, and retail land uses in proximity to each other to maximize walking, bicycling, and transit opportunities.
LUT P11	Promote complete street design that includes features such as traffic calming elements, street trees, wide sidewalks, and pedestrian, bicycle, and transit access throughout Austin, considering the safety needs of people of all ages and abilities.
LUT P12	Achieve the goals of area transit plans through effective planning, sufficient funding, and continued partnerships between the City of Austin, Capital Metro, and other area transportation providers.
LUT P14	Promote safer routes to schools for students of all ages.
LUT P15	Incorporate provisions for bicycles and pedestrians into all roads such as freeways, toll roads, arterial roadways, and to and from transit stations and stops, and major activity centers.
LUT P16	Educate the public on the long-range need for commitment to a community fully served by a range of transportation options and the benefits of each one.
LUT P17	Develop intermediate transit solutions that allow the City to reach the ultimate goal of a complete transit network over the long-term.
LUT P19	Reduce traffic congestion, increase transit use, and encourage alternative transportation modes through such practices as Transportation Demand Management which includes carpooling, flex time work schedules and subsidizing transit costs for employees.
LUT P32	Assure that new development is walkable and bikable and preserves the positive characteristics of existing pedestrian friendly environments.
LUT P33	Apply high standards of urban design to ensure that “complete streets” are safe and accessible for all users. Encourage people to use alternative forms of transportation that are sensitive to the demands of the Central Texas climate.
LUT P34	Integrate green infrastructure elements such as the urban forest, gardens, green buildings, stormwater treatment and infiltration facilities, and green streets into the urban design of the city through “green” development practices and regulations.
LUT P36	Transform all major streets into vibrant, multi-functional, pedestrian-friendly corridors.

Complete streets are such a vital tool for the transportation vision provided in *Imagine Austin* that a special sub section is dedicated to explaining that concept. The plan explains ***“In a complete street network, short, local trips can be taken without burdening the big arterial roadways with more cars. By helping to reduce vehicle miles traveled, complete streets and street networks (linked to a complete regional transportation system) support a sustainable future and Imagine Austin’s goals for reducing our environmental and carbon footprints.”*** (*Imagine Austin*). Furthermore, relevant to the **William Cannon Drive** corridor that has several distinct character areas, the plan goes on to suggest that guidelines for context sensitive streets should be ***“adaptable to different areas of Austin and the different scales of neighborhoods and other districts. For example, complete street standards and elements will be different for a downtown street versus a small residential street.”*** (*Imagine Austin*)

COMPLETE STREETS POLICY

The *City of Austin Complete Streets Policy* was adopted by the Austin City Council in 2014 to advance multiple long-term community goals defined by the vision and policies of the *Imagine Austin Comprehensive Plan*. Completion of a Complete Streets review is anticipated for project scoping and all major milestones.

To build on the vision provided by the *Imagine Austin Comprehensive Plan*, City Council adopted the *Complete Streets Resolution* in 2014 which provided a detailed

vision for a healthy, green, vibrant, compact and connected community. Austin’s *Complete Streets Policy (Ordinance 20140612-119)* commits the City to ***“design, operate and maintain the community’s streets and right-of-way so as to promote safe, comfortable and convenient access and travel for people of all ages and abilities”*** by all travel modes. The policy establishes an approach to our streets that simultaneously advances three community goals: multimodal mobility, creating appealing people places, and integrating nature/sustainability. Other design guidelines referenced in the policy include:

- *Urban Street Design Guide (NACTO)*
- *Urban Bikeway Design Guide (NACTO)*
- *Designing Walkable Urban Thoroughfares: A Context-Sensitive Approach (ITE/CNU)*
- *2014 Bicycle Master Plan*
- *Urban Design Guidelines for Austin*

In 2016, this policy was expanded into a *Complete Streets Guide* to encourage cross department resources for good street design. This guide explains, not only the “why”, but also the “how” to create complete street design across the City.



AUSTIN METROPOLITAN AREA TRANSPORTATION PLAN

The 2025 Austin Metropolitan Area Transportation Plan (AMATP) guides planning for the future of transportation in Austin. The documents released as part of the 2025 AMATP include the 1995 Ordinance adopting the AMATP, Adopted Roadway Table, 2025 AMATP map adopted by Austin City Council and Section Maps for Central, Northeast, Southeast, Southwest and Northwest. Based on roadway function specified on the AMATP map, William Cannon Drive is classified as a Major Arterial Divided.

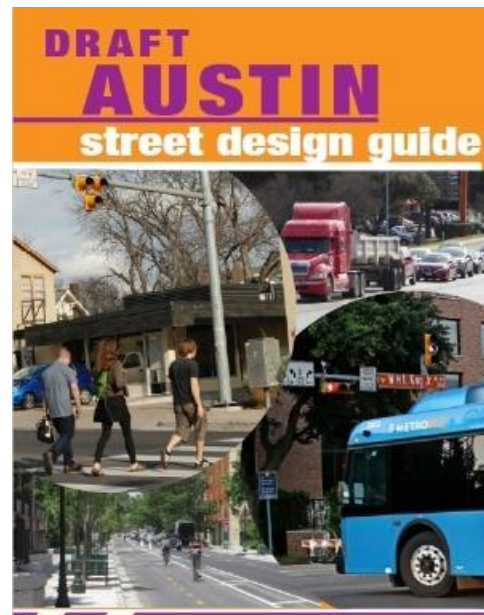
AUSTIN STRATEGIC MOBILITY PLAN

The City is currently developing the Austin Strategic Mobility Plan (ASMP), which will become an update to the *Austin Metropolitan Area Transportation Plan* (AMATP) discussed above. This plan will tie together many of the City's past transportation plans, including the *Sidewalk Master Plan*, *Bicycle Master Plan*, several Corridor Mobility Plans, and *Connections 2025*, to expand the vision of the *Imagine Austin Comprehensive Plan* into actionable mobility-related goals and objectives to guide Austin's near- and long-term transportation investments for the next decade.

AUSTIN STREET DESIGN GUIDE

The Austin Street Design Guide (ASDG) was adopted in 2016 as a tool to *“assist City staff and private sector street design professionals in applying a consistent approach to street design particularly for right-of-way planning and new streets”*. The Street Design Guide will be included in the ASMP to update street design practices that includes modern street typing.

The guide is helpful in ensuring context-sensitive design and accommodating a variety of users in a constrained right-of-way. Released as a pilot, the design guide will help inform amendments to the Transportation Criteria Manual for an updated approach to street design and new cross sections that were developed during the pilot phase. **Chapter 5** provides an overview of the street design process as it applies to William Cannon Drive.



CITY OF AUSTIN BICYCLE MASTER PLAN

Adopted by Austin City Council in November 2014, the *City of Austin Bicycle Master Plan* provides guidance and strategies for “the implementation of bicycle infrastructure, policies and programs for all City departments, partner public agencies and the private development community”. The *Bicycle Master Plan* supports the vision and goals of *Imagine Austin* by proposing the creation of a connected and protected active transportation network that will provide additional transportation alternatives for Austin residents and visitors. Goals identified by the *Bicycle Master Plan* are shown in **Table 4-2**.

Table 4-2: COA Bicycle Master Plan Goals

Bicycle Master Plan Goals	Goal Description
Connectivity	Create a bicycle network that serves people of all ages and abilities, providing direct and comfortable connections to where people live, work and play
Increase Ridership	Achieve a significant increase in ridership, especially transportation cycling, and a corollary reduction in motor vehicle miles traveled and/or prevented traffic congestion
Improve Safety	Reduce bicycle deaths and injuries by implementing safety measures for all roadway users, including bicyclists.
Equity	Provide equal bicycling access for all; through public engagement, program delivery, and capital investment.
Support Imagine Austin	Realize the potential of bicycling to support and achieve multiple goals of the Imagine Austin Comprehensive Plan

Benefits associated with achieving these goals include reduced traffic congestion, improved public health, economic development, affordability, sustainability and quality of life.

BICYCLE RECOMMENDATIONS FOR WILLIAM CANNON DRIVE

Recommended improvements for William Cannon Drive (presented in **Chapter 6**) align with those of the *City of Austin Bicycle Master Plan*, which calls for protected bike facilities along the entire length of William Cannon Drive and designates the segments from Southwest Parkway to US 290 and Brush Country to Mopac as part of a “Short-term All Ages and Abilities” network that calls for protected bike lanes or cycle track.

CITY OF AUSTIN URBAN TRAILS MASTER PLAN

The purpose of the Urban Trails Master Plan is to evaluate trails opportunities and policy changes to support a city-wide network of Urban Trails. The Bicycle Master Plan and Urban Trails Master Plan together set forth a connected and protected “All Ages and All Abilities” Bicycle Network, active transportation network of connected trails and on-street bikeways throughout Austin.

CITY OF AUSTIN SIDEWALK MASTER PLAN

The *City of Austin Sidewalk Master Plan/ADA Transition Plan Update*, adopted in June 2016, identifies missing and deficient sidewalks throughout the city. The priority rankings of existing and absent sidewalks (shown in **Chapter 3**) are an important aspect of the City’s Sidewalk Program, however they are not the sole determinant of which sidewalks will be constructed. From the City’s Sidewalk Master Plan: “... just because a particular section of sidewalk is ranked as a lower priority does not mean it is not a necessary component of a complete pedestrian network. Consistent with City of Austin Complete Streets policies all private and public development, redevelopment, and capital improvement projects should include ADA-compliant sidewalks (or urban trails where appropriate) along the full length of every road frontage.”

SIDEWALK RECOMMENDATIONS FOR WILLIAM CANNON DRIVE

Improvements recommended by the William Cannon CMP (presented in **Chapter 6**) align with those of the *Sidewalk Master Plan*, which calls for eliminating all gaps in the existing sidewalk network and reconstructing any existing sidewalks that are not ADA-compliant.

CONNECTIONS 2025

Capital Metro's 2025 long-range transit plan, Connections 2025, is the agency's vision for a more frequent, more reliable, and better-connected transit system. Connections 2025 will guide Capital Metro route and service changes for the next five years and includes long-range opportunities for implementation in the next ten years. Connections 2025 has been adopted by the Capital Metro Board, and the agency began implementation in July 2018 under the name Cap Remap. In addition to those changes, full implantation of Connections 2025 will also include the following changes to transit service along the William Cannon corridor:

- Increasing frequency of Route 333 along William Cannon to 15 minute service.
- Extension of MetroRapid Route 803 down Manchaca Road, to Slaughter Lane.
- Extension of Route 111 south of William Cannon Drive to Slaughter Lane.
- Provide Bus Rapid Transit along IH-35 between Slaughter Lane and Schofield Ridge Parkway.
- Development of two Mobility Innovation Zones – Convict Hill/Maple Run and Pilot Knob – near the intersections of William Cannon Drive with Mopac and US 183. The location of these Mobility Innovation Zones coincide geographically with the two activity centers identified by Imagine Austin.

PROJECT CONNECT

Project Connect is the proposal for Central Texas' high-capacity transit system. This multi-agency planning effort began in 2012 to analyze several key regional transportation corridors to identify those of highest priority and to recommend alignments and technologies for such high-capacity transit.

In December 2018, the Capital Metro Board voted unanimously to approve the Project Connect Long-Term Vision Plan. Through approval of the Long-Term Vision Plan, the board authorized staff to pursue next phases including preliminary engineering, further community engagement and environmental review.

Some of the corridors included in the Project Connect vision are also corridors included in the Corridor Construction Program, as well as the ASMP. Capital Metro and the City of Austin are working closely together to ensure that the Corridor Construction Program, ASMP and Project Connect will be aligned as all efforts move forward.

CAMPO 2040 PLAN

The Capital Area Metropolitan Planning Organization (CAMPO) is the Metropolitan Planning Organization (MPO) for Bastrop, Burnet, Caldwell, Hays, Travis and Williamson Counties. MPOs are federally required throughout the country in areas with a population of 50,000 or more and are required to produce a 20+ year transportation plan, called a Regional Transportation Plan (RTP), and a four-year planning document called the Transportation Improvement Program (TIP). CAMPO coordinates regional transportation planning with counties, cities, Capital Metropolitan Transportation Authority (CMTA), Capital Area Rural Transportation System (CARTS), Central Texas Regional Mobility Authority (CTRMA), and TxDOT.

The *CAMPO 2040 Plan*, adopted by CAMPO in May 2015, is the active long-range regional transportation plan (RTP) for the greater Austin area. It establishes a vision, plan and implementation strategy for developing a comprehensive multi-modal transportation system by 2040. The *CAMPO 2040 Plan* identifies projects to be funded over the next 20 years based on current and anticipated land uses and development. The CAMPO 2040 Plan is designed to assess future transportation needs across the five-county Capital Area region, and guide development of a comprehensive, multi-modal regional transportation system by:

- Advising member jurisdictions on work that can be done at the local level,
- Providing information about emerging regional trends that impact transportation,
- Providing direction to various agencies about initiating or continuing transportation actions and programs,
- Providing parameters for allocating federal transportation dollars during the Transportation Improvement Program project selection process,
- Providing a status report on work that has been completed since the 2040 Plan,

Based on the projected growth pattern identified in the plan, the following infrastructure improvements are planned along the William Cannon corridor over the next 20 years:

- MoPac South – Add express lanes from Slaughter Lane to Cesar Chavez Street;
- IH 35 Improvements - Add express lanes at Slaughter Lane;
- Bluff Springs Road - Widen to 4-lane divided roadway;

The CAMPO 2040 Plan recommends the following policy changes for William Cannon Drive:

- Identify future Right-of-Way (ROW) needs along the corridor and implement policy to obtain parcels from property owners as new development or redevelopment occurs.
- Require burial of overhead transmission lines as projects are developed that impact those facilities.
- Do not guarantee full-purpose driveway access to businesses within the corridor.
- Permit one primary site driveway for frontage less than 400 ft. Permit secondary driveway, if greater.
- Set maximum primary driveway width to 30-ft. Set maximum secondary driveway width to 24-ft.
- Do not permit driveways within 100-feet of an intersection.
- Facilitate cooperation between City and businesses where private parking extends into public ROW.

- Require compliance with building setback requirements.
- Facilitate Accessory Parking Agreements, Joint Access Agreements, and Parking Agreements with private developers and owners to minimize the number of driveways.
- Require developers who construct on previously developed property to accommodate future roadway, bicycle, and pedestrian improvements.
- Develop centralized parking facilities and localized transportation services to reduce the traffic between retail and commercial areas.
- Encourage use of combined parking areas between private businesses.
- Promote storm water capture and infiltration over surface runoff to storm water drains.

AUSTIN STRATEGIC MOBILITY PLAN (ASMP)

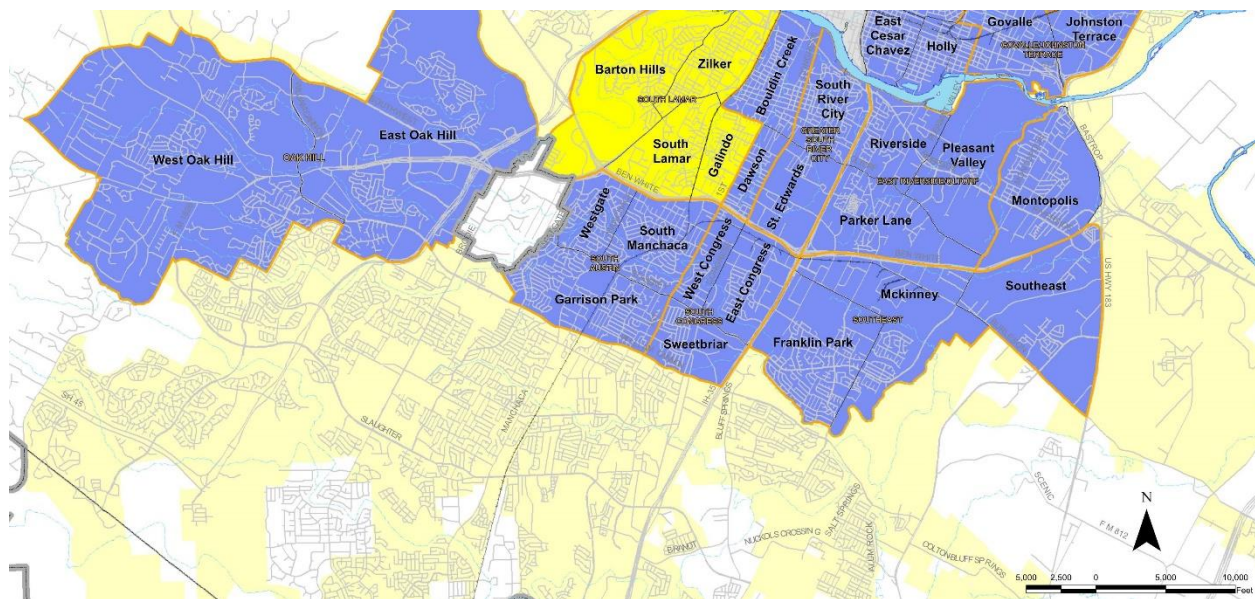
The ASMP is Austin's new city-wide transportation plan. Draft policies and maps reflect Austin's transportation vision for the next 20+ years and show both current and potential mobility projects. The ASMP is anticipated to go before City Council in spring 2019.

The Corridor Program Office is and will continue to coordinate with ASMP's plans and policies to ensure alignment between both efforts as they move forward.

NEIGHBORHOOD PLANS

Neighborhood plans were carefully considered during the process of the urban planning. These plans provide insight and guidance to the values, goals, and objectives of businesses, residents, and the community as a whole. There are three neighborhood plans touching the William Cannon Drive Corridor – the South Congress Combined Neighborhood Plan, the South Austin Combined Neighborhood Plan, and the Oak Hill Combined Neighborhood Plan. Notably, there are no existing neighborhood plans on the segment of William Cannon Drive east of IH 35. Existing Neighborhood Planning Areas within the project study area are shown in **Figure 4-1**, followed by a synthesis of key goals from current Neighborhood plans.

Figure 4-1: City of Austin Neighborhood Planning Areas



SOUTH CONGRESS COMBINED NEIGHBORHOOD PLAN

This South Congress Combined Neighborhood Planning Area (SCCNPA) is located in south Austin, bounded by Ben White Boulevard on the north, IH 35 on the east, William Cannon Drive on the south, and South 1st Street on the west. The combined planning area is comprised of three neighborhood planning areas: West Congress Neighborhood Planning Area, East Congress Neighborhood Planning Area (from Ben White Boulevard to Stassney Lane), and Sweetbriar Neighborhood Planning Area (north of William Cannon Drive between IH 35 and South 1st Street). Williamson Creek runs east-west through the boundaries of the planning area. The South Congress Combined Neighborhood Plan (SCCNP) was adopted in August 2005. Key elements of the plan are provided below.

VISION:

“The neighborhoods of the South Congress Combined Neighborhood Planning Area should be quiet and safe communities. Tree-lined neighborhood streets should allow residents to safely travel by foot, bicycle, or car. Commercial streets, especially South Congress Avenue, should become more pedestrian-friendly and safely

accessible from nearby neighborhoods. South Congress Avenue should become a mixed-use corridor serving local and regional needs. Parks should be places where people can play, relax, or simply enjoy the outdoors. Public open spaces and natural areas should be preserved as places for wildlife and where people can enjoy nature in the middle of the city. “

GOALS:

- Goal 1: Preserve, enhance, and retain affordability of existing single-family neighborhoods.
- Goal 2: Make South Congress Avenue a more vibrant, accessible mixed-use corridor and destination for all of Austin.
- Goal 3: Focus mixed-use development and commercial uses on major commercial corridors and special districts.
- Goal 4: Improve accessibility, convenience, and safety for all transportation modes.
- Goal 5: Preserve and enhance public open spaces.

SCCNPA - IMPLEMENTATION TRACKING CHART - RECOMMENDED ACTION ITEMS:

- Continuous sidewalks along IH 35 SB FR between Stassney Lane and William Cannon Drive
- North Bluff Drive intersection safety and pedestrian and bicycle facilities
- Sidewalk network from Williamson Creek to William Cannon Drive
- Planned trail along Williamson Creek
- Striped bicycle lanes from Williamson Creek to William Cannon Drive
- Continuous bike route along William Cannon Drive from South 1st Street to South Congress Avenue
- Add covered bus shelters, where appropriate
- Southbound bus pull-out bay just north of William Cannon Drive

SOUTH AUSTIN COMBINED NEIGHBORHOOD PLAN

The South Austin Combined Neighborhood Planning Area (SACNPA) is located in south Austin, bounded by Ben White Boulevard on the north, South 1st Street on the east, William Cannon Drive on the south, and West Gate Boulevard and Sunset Valley City Limits on the west. The SACNPA is comprised of three neighborhood areas: West Gate (from Ben White Boulevard to William Cannon Drive), South Manchaca Road (from Ben White Boulevard to Stassney Lane), and Garrison Park (from Stassney Lane to William Cannon Drive). Williamson Creek runs east-west through the planning area. The Union Pacific Railroad runs north-south between Manchaca Road and South 1st Street. The South Austin Combined Neighborhood Plan (SACNP) was adopted in November 2014, following adoption of the Imagine Austin Comprehensive Plan. Key elements of the plan are provided below.

VISION:

“Create a complete community that is mobile and interconnected; compact, accessible, and affordable; natural and sustainable; healthy, safe, creative, and engaged.”

GOALS:

- Encouraging walking, bicycling, and transit use through design and education.
- Maintaining residential character of the neighborhood core by creating walkable destinations in neighborhood nodes, mixed-use activity hubs and districts as well as expanding housing options.
- Encourage a diverse, intergenerational, family-friendly community by maintaining household affordability.
- Protect, enhance, and expand the neighborhood's green infrastructure.
- Promote environmentally sustainable practices.
- Increase the overall health of the SACNPA.
- Improve the community's safety and upkeep.
- Increase creativity and collaboration in the SACNPA to promote a sense of community and unique sense of place.

SACNPA - IMPLEMENTATION TRACKING CHART - RECOMMENDED ACTION ITEMS:

- Install bus shelters and benches to improve ridership experience.
- Expand bicycle network and install wayfinding to direct riders to less busy streets.
- Complete sidewalk network on Armadillo Road from Emerald Forest Drive to Cooper Lane.
- Repair existing sidewalks and ensure ADA compliance at Manchaca Road and West Gate Boulevard.
- Improve William Cannon Drive and the West Gate Boulevard, Manchaca Road, South 1st Street intersections with landscaping, lighting, public art, bike boxes, and green lanes (partial).
- Install protected crossings on Manchaca Road between Berkeley Avenue and William Cannon Drive and on S. 1st Street between Eberhart Lane and William Cannon Drive.
- Prioritize street lighting near bus stops and commercial centers.
- Install a new pocket park to address the gap analysis of 0.75 mile walking distance from residences.
- Create a path/green belt along Williamson Creek.
- Incorporate rain gardens in to the right-of- way.
- Incorporate public art into street furniture and traffic calming projects.
- Create identifiable entrances to the neighborhood.
- Increase the frequency of transit.
- Install bicycle parking at Manchaca Road and William Cannon Drive.
- Identify locations for sidewalk repair.
- Provide traffic calming at Emerald Forest Drive, Woodhue Drive, and Cannonleague Drive.
- Work with Safe Routes to School.
- Plant more trees along the public right-of-way, median islands, bus stops, and shopping centers.
- Organize cultural celebrations.
- Complete sidewalk network at West Gate Boulevard and William Cannon Drive.
- Install bicycle parking and trails at Armadillo Park.

OAK HILL COMBINED NEIGHBORHOOD PLAN

The Oak Hill Combined Neighborhood Planning Area (OHCNPA) is located in southwest Austin, and bounded by Travis Country neighborhood on the north, Mopac (Loop1) on the east, Convict Hill, Davis Lane, and Granada Hills Neighborhood on the south, and Thomas Springs Road and Circle Drive on the west. The OHCNP is comprised of East Oak Hill and West Oak Hill neighborhoods. William Cannon Drive is located in the southern portion of East Oak Hill and forms the boundary between East Oak Hill and West Oak Hill, as it turns northward. Southwest Parkway and US290 bisect the planning area. Williamson Creek runs east-west just north of US290. The Oak Hill Combined Neighborhood Plan (OHCNP) was adopted in December 2008. Key elements of the plan are provided below.

VISION:

“As a unique yet integral part of Austin and Travis County, the Oak Hill Area will support measured, sustainable growth in residential and commercial development while maintaining the existence and integrity of its environmental resources, and that of the community and its neighborhoods.”

GOALS:

- Preserving and enhancing environmental resources, including watersheds, air quality, and wildlife corridors.
- Providing opportunities for high-quality development and redevelopment
- Balancing development and environmental protection by maintaining a vibrant residential and commercial community that demonstrates caring stewardship of the environment
- Providing safe access across major thoroughfares while alleviating cut-through neighborhood traffic
- Providing inter-connectivity among parks, public services, and other destinations
- Requiring landscaping along roadways, sidewalks, bike paths, and around bus stops to provide shade in order to encourage pedestrian usage, bicycling, and mass transportation
- Incorporating pedestrian-friendly design standards to create a safe pedestrian environment
- Considering the application of Hill Country Roadway Ordinance to control signage
- Providing managed connectivity between various neighborhoods
- Establishing a network of greenspaces and trails connecting neighborhoods
- Creating safe and secure greenbelts and nature trails along Williamson Creek
- Expanding and enhancing the existing trail system

OHCNPA - IMPLEMENTATION TRACKING CHART - RECOMMENDED ACTION ITEMS:

- Install YBC (Y to Barton Creek Trail), which is approximately five miles of trail and will connect to AMD, NXP, schools, and residences
- Provide safe continuous sidewalks and bicycle lanes along US290 to the "Y"
- Improve commuter bike routes along Mopac (Loop1)
- Provide separated bike lanes on Southwest Parkway
- Construct a sidewalk along Southwest Parkway from Mopac (Loop1) to William Cannon Drive
- Construct a bike lane along William Cannon Drive from Southwest Parkway to US290
- Perform a traffic calming study for McCarty Lane
- Provide pedestrian and bike connections from adjacent park land and/or residential areas
- Create trail connection from intersection of William Cannon Drive and Brush Country Road to Williamson Creek
- Create a town center at the "Y" with more frequent bus service along US290
- Limit curb cuts by sharing driveways and parking areas
- Provide landscaping in medians to create scenery at interchanges
- Preserve the older oak trees along William Cannon Drive
- Provide safe crosswalks where US290 intersects William Cannon Drive (complete)
- Identify locations of major employment centers, including AMD and NXP, and ensure circulators service these destinations

PLANNED DEVELOPMENTS

In the coming years, the majority of new development is expected to occur at the east and west ends of the corridor. Several new development projects are either newly constructed or under review by the City of Austin. New and planned developments along the corridor are listed in Table 4-3. Notably, there are roughly 10,000 new single-family homes planned near McKinney Falls Parkway. The land use types and sizes are those submitted to the City as part of the site plan application and could differ upon build-out.

Table 4-3: Planned Land Development Projects along William Cannon Drive

Project Name	Nearest Cross Street	Land Use Type(s)	Size
Pilot Knob	McKinney Falls Parkway	Single-Family	5,660 DU
		Townhouses	2,320 DU
		Multi-Family	6,370 DU
		Commercial	3,800,000 SF
		Hospital	40 Beds
		Hotel	850 Rooms
		Newton Collins Elementary School	99,000 SF
Springfield 7,8,9	Springfield	Single-Family	337 DU
Springfield 2-5,10,11	Janes Ranch Road	Multi-Family	504 DU
Pleasant Valley	S. Pleasant Valley Road	Commercial	3.63 acres
Oporta	Branchwood Drive	Retail	12,000 SF
WM Cannon Senior Housing	Branchwood Drive	Multi-Family	259 DU
Las Maderas Sect. 2	Branchwood Drive	Single-Family	28 DU
La Mexicana Supermercado	Elm Creek Drive	Retail	165,600 SF
NorthBluff 2	North Bluff Drive	Single-Family	52 DU
North Bluff Apts.	North Bluff Drive	Condominiums	118 DU
Starpark Village	Circle S Drive	Multi-Family	184 DU
Garden Terrace Ph. 3	Emerald Forest Drive	Multi-Family	TBD
Windrift Way Condominiums	Windrift Way	Condominiums	32 DU
6800 Manchaca Rd	Manchaca Road	Multi-Family	46 DU
La Vid Urban Homes	Manchaca Road	Duplex Condominiums	37 DU
Samdorosa Communities	Manchaca Road	Mixed-Use	TBD
6500 Manchaca	Manchaca Road	Townhouses	134 DU
		Retail	9,000 SF
		Office Space	4,000 SF
		Restaurants	5,000 SF
Vistas of Western Hills	Deaton Hill Drive	Multi-Family	TBD
Rancho Garza	Mopac North	Multi-Family	TBD
		Mixed-Use	TBD
Western Oaks Retail	Brush Country Road	Office Space	TBD
Vega Office	Vega Avenue	Office Space	34,000 SF
Lantana Tract 32	Rialto Boulevard	Multi-Family	428 DU
Lantana Place	Southwest Parkway	Retail	99,663 SF
		Theater	38,000 SF
Lantana Place Ph. 2	Southwest Parkway	Office Space	140,000 SF

Source: Data obtained from City of Austin development website in October 2017.

PLANNED MULTIMODEL IMPROVEMENTS

The following transportation projects are planned or currently underway within the study area. These projects will impact future travel patterns and traffic demand along the corridor and were included in the analysis of future traffic operations presented in **Chapter 6**.

IH 35 IMPROVEMENTS (TXDOT)

Ongoing construction by TxDOT at the IH 35 and William Cannon Drive interchange, includes:

- Reconstruction of frontage road bridges over Williamson Creek;
- Reconstruction of bridge structures at Stassney Lane and William Cannon Drive;
- Construction of new U-turns at Stassney Lane and William Cannon Drive;
- Improved bicycle and pedestrian accommodations across William Cannon overpass;
- New safety and high-mast lighting along IH 35;
- Widening of IH 35 mainlanes to incorporate shoulders; and
- Extended entrance/exit lanes and reconfigured ramps.

Construction Start: July 2016

Anticipated Construction Completion: Winter 2019/2020 (weather permitting)

OAK HILL PARKWAY (TXDOT/CTRMA)

Two proposed alternatives are currently being evaluated for full reconstruction of the “Y” intersection in Oak Hill. Both alternatives under consideration include a bridge allowing vehicles on eastbound/westbound US 290 to bypass William Cannon Drive but propose different configurations for the at-grade intersection with William Cannon Drive. For more information visit: <http://www.oakhillparkway.com/>.

FUTURE TRAVEL DEMAND

METHODOLOGY

Year 2040 AM peak and PM peak hour projected traffic volumes were developed to analyze future traffic conditions along William Cannon Drive. Traffic volume forecasting drew upon available data about past traffic conditions, future land development, and traffic volumes along the corridor. Future growth of corridor traffic was based on the average annual daily traffic counts collected by TxDOT and future year daily traffic volume projections by TxDOT and CAMPO. Land development planning information from the City of Austin's Development Services Department provided the basis for trip generation estimates, based on projected land use type and development size.

The projected growth in traffic on William Cannon Drive was thus based on a combination of an annual growth rate applied to existing AM peak and PM peak hour turning movement volumes, and trips generated by major future developments along the Corridor. Additional guidance was provided by a City consultant to provide compatibility with the other corridor plans.

- Utilized 2.5% annual growth rate from Southwest Parkway to Mopac Expressway.
- Utilized 1.0% annual growth rate from Mopac Expressway to IH 35. A lower growth rate was utilized because the maturity of residential development and relative lack of developable land relative to areas on the east and west ends of the corridor.
- Utilized 2.0% growth rate, plus additional background traffic from future planned developments at east end of corridor, particularly the Easton Park residential development. Future traffic from these background developments was routed along William Cannon Drive and distributed to north-south routes at IH 35, South Pleasant Valley Road, and McKinney Falls Parkway.

Synchro traffic models were updated to analyze intersection traffic operations and LOS for three (3) future scenarios:

- Future (2040) No-Build
- Future (2040) Build with Short-term Improvements
- Future (2040) Build with Long-term Improvements

The methodology and results for future (2040) traffic analysis is located in **Chapter 6**.

CHAPTER 5 - IMPROVEMENTS TOOLBOX

As the City and surrounding area continue to grow and intensify, especially South Austin, William Cannon Drive will continue to see an increase in travel demand. Austin's regional transportation and mobility challenges will continue to impact quality of life and modal choices residents make. In this context, it is important to consider the entire range of tools available to enhance mobility, safety, and connectivity for all travel modes, not just driving. Capacity improvements to all other modes (biking, walking, and transit) can better accommodate more compact growth in a sustainable manner.

There are many improvement tools and guidelines already in place that can help to improve safety, mobility, connectivity along the William Cannon Drive corridor. As recommended by the *Imagine Austin Comprehensive Plan*, the City of Austin has adopted the *Complete Streets Policy* as a way to create public roads that are safe and inviting for all users. Complete Streets accommodate and encourage people to use alternate modes of transportation. In addition to following guidelines of Complete Streets, there are many nationally accepted standards that have been created to help improve transportation infrastructure. These standards seek to achieve safety, multi-modal accessibility and operational efficiency. The following improvements toolbox provides a range of solutions that can be used to help improve safety, mobility, and connectivity along William Cannon Drive.

COMPREHENSIVE, MASTER, & CORRIDOR PLANNING

Comprehensive, master, and corridor planning is a process that defines and articulates community vision and goals in terms of a City's physical growth and infrastructure development. Cities and communities engage in the planning process to help create and align public policies on land use, housing, recreation, environment, economy, and infrastructure with the market demand for growth.

The City of Austin, working with planners and members of the community, has developed several master plans to help serve as guides for improvements, and to ensure that community goals and vision remain in focus. City council adopted the *Imagine Austin Comprehensive Plan* in June 2012. Other plans include the *Bicycle Master Plan*, the *Sidewalk Master Plan*, and the *Urban Trails Maser Plan*. Many of these plans provide mode-specific recommendations for creating connected multimodal networks throughout the city.

Incremental progress is required in order to achieve the long-term vision and goals set forth by *Imagine Austin* and mode-specific plans. The *Austin Street Design Guide*, released in 2017, provides a framework for implementing the recommendations of each mode-specific plan in a content-sensitive manner at the project level.

STREET DESIGN PROCESS

The *Austin Street Design Guide (ASDG)* is a modern guide for street design that considers street function, context, and all transportation modes. Released in 2017, the guide contains street cross-sections and serves as a precursor to updates to the City's *Transportation Criteria Manual*. Its purpose is to assist street design professionals in applying a consistent approach to street design and right-of-way planning. Application of the **street design process** presented in the ASDG to an individual corridor (e.g., William Cannon Drive) will result in recommended improvements that are context-sensitive, meet the needs of the community, and aligned with implementation of the *Imagine Austin Comprehensive Plan* and the City's *Complete Streets Policy*.

The street design process takes in consideration the following elements:

Community Context is derived from urban planning principles and nomenclature describing a setting or area based on land use and community characteristics (e.g., Urban, Suburban, Industrial, Downtown, or Alternative). William Cannon Drive has a “Suburban” context, based on the following characteristics:

- Developed with auto-dependent patterns.
- Single-family neighborhoods physically separated from destinations (e.g. retail, office parks).
- Streets are more hierarchical and less connected.

Street Level is a modernization of the street functional classification naming and indicates the role the street plays in the network. William Cannon Drive fits the description and function of a “Level 4” corridor.

According to the ASDG, *“Level 4 streets accommodate travel into and out of the City from the surrounding area. They are often multi-lane thoroughfares that sometimes include a landscaped median. These can also include freeway and interstate frontage roads. They provide strong commuter linkages and tend to prioritize vehicular capacity. As a result, they must provide a clearly defined pedestrian realm and separated bike facilities”*.

Right-Of-Way (existing or future) for each segment of the street network determines the limitations of street design by defining the width of the street. The ASDG presents guidance for determining ROW needs and several approaches for dealing with right-of-way constraints that are beyond the scope of this report.

Mode-Specific Plans & Design Considerations such as the Bicycle Master Plan, Urban Trails Master Plan, Sidewalk Master Plan, Capital Metro Service Plan, Project Connect, and the CAMPO Regional Transportation Plan should be used to identify recommendations and aspirational goals for each travel mode and allow for an integrated strategy of implementation. Goals and recommendations from these plans as they relate to the William Cannon Drive corridor are summarized in Chapter 4 and reflected in the recommended improvements presented in Chapter 6.

Number of Lanes (existing or planned) ensures that adequate capacity is accounted for vehicles, while balancing the need of other travel modes on streets.

Street Design is the culmination of these elements to determine the cross-sections of these roadways. The ultimate design of the corridor will also include an analysis of street operations at the intersections to determine appropriate traffic control based on performance measures and community context.

Based on the context, street level, and average daily traffic volumes the ASDG provides detailed facility recommendations for each travel mode. For a Suburban Level 4 carrying the ADT of William Cannon Drive, The ASDG recommends raised bicycle lanes, sidewalks with buffers, and a safe crossing density of ¼-mile (distance between signalized crossings).

RECOMMENDED TYPICAL CROSS-SECTION

Based on the results of the ASDG Street Design Process, The ASDG specifies one or more recommended typical cross-sections and a design matrix specifying “recommended” and “constrained” widths for each roadway element (e.g., sidewalk, travel lane, bike lane, etc.). The constrained width should be considered only when there is not enough available right-of-way to provide the recommended width for all street elements.

As a **Suburban Level 4** roadway, the recommended typical cross-sections and design matrix for William Cannon Drive are shown in **Figure 5-1** and **Figure 5-2**, respectively.

Figure 5-1: Recommended Typical Sections for “Suburban Level 4” Street

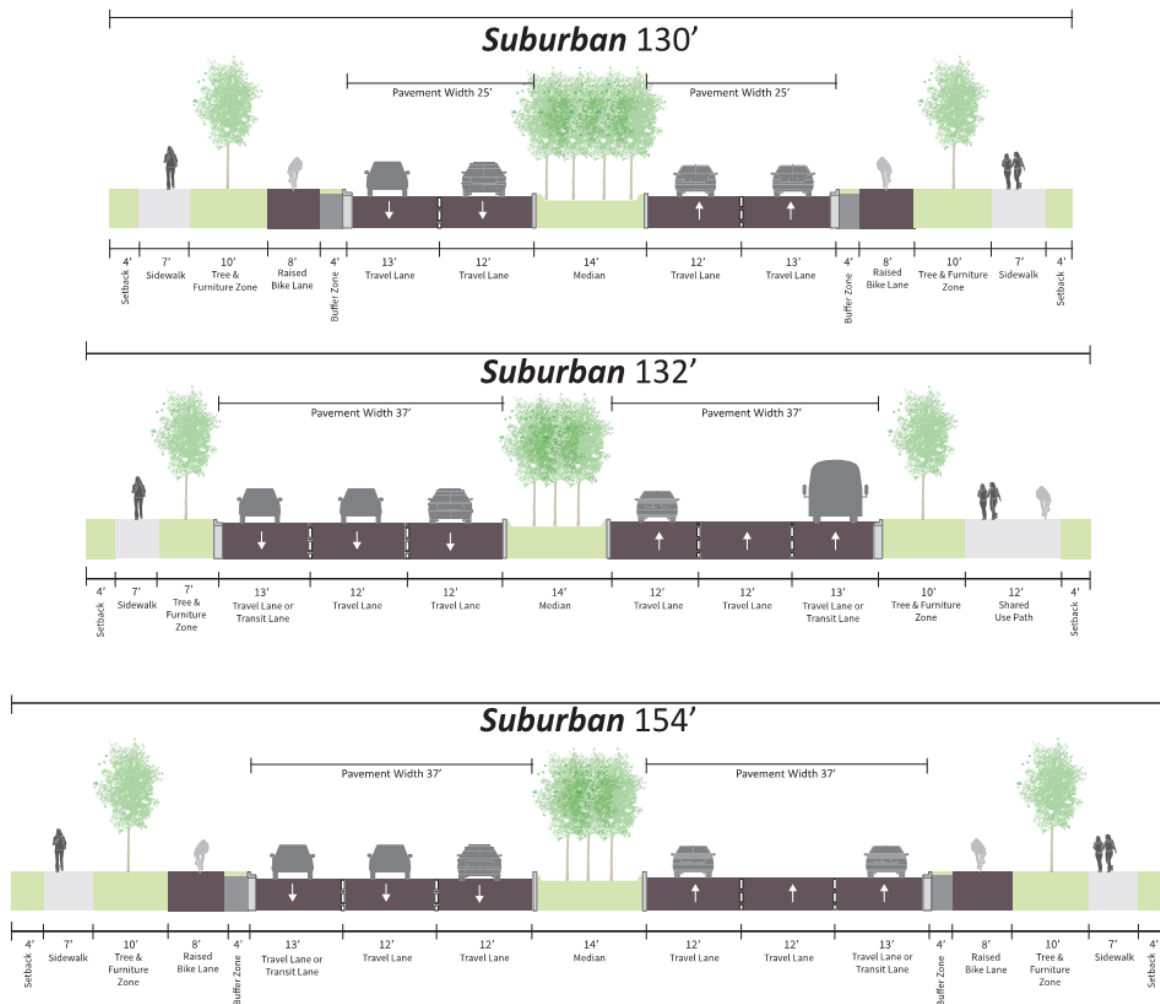


Figure 5-2: Suburban Context – Design Matrix

Suburban Context - Design Matrix

	Level 2		Level 3		Level 4	
	Desired Range		Desired Range		Desired Range	
ROW	78'		96'-120'		130'-154'	
Additional ROW/Easement Dedication for Parking (By Owner)	0'-16'		n/a		n/a	
Pedestrian Zone						
Subsection Width	10'-15'		10'-16'		14'-21'	
Toolbox:	RECOMMENDED	CONSTRAINED	RECOMMENDED	CONSTRAINED	RECOMMENDED	CONSTRAINED
<i>Sidewalk/Shared Use Path (SUP)</i>	6'	5'	7'	5'	7' (12')	5' (8')
<i>Tree & Furniture Zone</i>	8'	5'	8'	5'	10'	7'
<i>Setback</i>	1'	0	1'	0	4'	2'
Bicycle and Street Edge Zone						
Subsection Width (Excludes Parking)	8'-11'		8'-12'		8'-12'	
Toolbox:	RECOMMENDED	CONSTRAINED	RECOMMENDED	CONSTRAINED	RECOMMENDED	CONSTRAINED
Bicycle Facility						
<i>Protected Bike Lanes (One of Two-Sided) Preferred</i>	7' Clear 4' Buffer	7' Clear 3' Buffer	8' Clear 4' Buffer	7' Clear 3' Buffer	8' Clear 4' Buffer	7' Clear 3' Buffer
<i>On-Street Separated Bike Lanes Alternative</i>	n/a	6' Clear 2' Separation	n/a	6' Clear 2' Separation	n/a	6' Clear 2' Separation
Other Facilities						
<i>Parking†</i>	8'	7'	n/a	n/a	n/a	n/a
Motor Vehicle and Transit Zone						
Subsection Width (Excludes Parking)³	25'-37'		34'-64'		58'-88'	
Travel Lanes (# of Lanes)	2-3 ²		3-5 (Divided)		4 (Divided) - 6 (Divided)	
Transit Only Lanes	n/a	n/a	13'	12'	13'	12'
	RECOMMENDED	CONSTRAINED	RECOMMENDED	CONSTRAINED	RECOMMENDED	CONSTRAINED
<i>Outside Travel Lane Width¹</i>	13'	12.5'	13'	12'	13'	12'
<i>Travel Lanes Width</i>	11'	10'	12'	10'	12'	10'
<i>Center Turn Lane Width</i>	n/a	n/a	14'	12'	n/a	n/a
<i>Median</i>	n/a	n/a	14'	12'	14' ⁴	14'

IMPROVEMENT TOOLBOX

The following toolbox provides a range of solutions for improving safety and mobility along the William Cannon Drive Corridor. These strategies have been adapted from the FHWA Congestion Management Process Guidebook for use in this report based on the character and context of William Cannon Drive.

TRAVEL DEMAND MANAGEMENT STRATEGIES

Travel demand management (TDM) is the use of any policies and strategies which help reduce the travel demand for trips made by single-occupant vehicle during the peak period. TDM strategies include promoting or improving non-motorized travel modes that provide travelers with more options. This also includes strategies that substitute communication for travel, such as telecommuting and flexible work hour programs.

ROADWAY STRATEGIES

Safe Turning Lanes

Dedicated left-turn, right-turn and U-turns keep through-traffic flowing by providing space outside of the through lanes for turning vehicles.

Increasing Number of Lanes without Roadway Widening

This strategy provides additional capacity by taking advantage of "excess" width in the roadway cross section used for breakdown lanes or median.

Adding Lanes by Roadway Widening

This is the traditional way to increase vehicular capacity.

Geometric Design Improvements

These strategies include grade separations, additional turn lanes at intersections, extension of existing turn bays, improved sight lines, and auxiliary lanes to improve merging and diverging,

Traffic Signal Operations

Traffic signal operations can be optimized to achieve optimal flow and reduced emissions along a facility. Signal timing can be adjusted to maximize green time, and to increase efficiency for left-turns against conflicting traffic. Traffic lights can be interconnected to provide improved coordination of green time, especially where intersections are closely spaced, such as the area near the IH 35 and South Congress Avenue intersections. Adaptive signal control is another technology that can help to ease congestion. Adaptive signals can use real-time traffic information to adjust to changing traffic patterns.

Lane Reconfiguration

This strategy improves intersection operations by reconfiguring lane assignments through restriping at one or more intersection approaches to redistribute unused capacity to congested movements.

BICYCLE & PEDESTRIAN STRATEGIES

Sidewalks

The *Imagine Austin Comprehensive Plan* promotes designing for people, not just cars. The goal of the Sidewalk Master Plan is to provide an unbiased system to help prioritize sidewalk construction projects to complete a City-wide ADA-compliant sidewalk network. Improved crossings and 'filling in the gaps' helps to build connectivity in neighborhoods, and to places such as business, parks and schools. Complete connectivity also upholds ADA standards and provides access to users of all ages and abilities. Sidewalks along William Cannon Drive should provide continuous connectivity, wide enough to accommodate pedestrians passing each other, and built to ADA standards.

Protected Bicycle Facilities

Protected bicycle lanes provide an exclusive bike facility within the transportation network. These types of facilities are physically separated from motorized traffic. Protected bike lanes are protected from the travel lanes by a curb or raised median, bollards or other physical barriers. They are separate from parking lanes and sidewalks. Different color pavement or texture is typically used to differentiate a protected bike facility from sidewalks. Protected bike lanes offer a higher level of security overall and appeal to a broader spectrum of the community.

Protected bicycle lanes require more right-of-way than paint-defined lanes. More room is needed to provide capacity for passing within the bicycle lane and for the physical barrier. Protected bicycle lanes should be considered on busy streets where streets or right-of-way can accommodate protected bike lanes and other competing interests.

The recommended bike facility along William Cannon Drive is a protected bike lane or shared use path along the entire length of the corridor. Striping across intersections indicating a path designated to bike traffic is also recommended to help cyclists cross intersections without being encroached upon by motorist traffic.

Bicycle Lane, Buffered Bicycle Lane

A bicycle lane is different from a protected bicycle lane because it does not have the physical barrier separating cyclists from motorized traffic. It is an on-road facility designated by striping, signage and pavement markings for the 'preferential or exclusive use of cyclists'. Defined by paint and discernible to motorists, a bike lane allows cyclists to maintain a comfortable speed without interference from traffic. The bike lane also helps to promote predictable behavior and interactions between modes.

Bike lanes may be distinguished using color, lane markings, signage, and intersection treatments (NACTO Urban Bikeway Design Guide, 2014). When considering a bike lane, existing traffic volumes on the roadway should be considered, along with driver and motor vehicle behavior. An ideal bike lane should also prohibit encroachment of motorized traffic in the bike lane.

Pedestrian Hybrid Beacons (PHBs)

As defined by the U.S. Department of Transportation Federal Highway Administration, a PHB is a pedestrian-activated warning device located over midblock pedestrian crossings. When ready to cross a roadway, a pedestrian can push an easy-to-reach button that activates the beacon. The beacon briefly flashes yellow warning lights to signal to motorists that a pedestrian is about to cross. The device then displays a steady red indication to drivers, indicating they should stop, and a "WALK" indication to pedestrians, allowing them to cross a major roadway while traffic is stopped.

Pedestrian hybrid beacons are especially effective in areas with high pedestrian traffic volumes such as nearby transit stops, schools, neighborhoods or major retail establishments. The Federal Highway

Administration reports that installation of the pedestrian hybrid beacon has been shown to provide up to a 69 percent reduction in pedestrian crashes; and up to a 29 percent reduction in total roadway crashes. PHBs provide a safer crossing opportunity for people who walk, with little impact to through traffic, allowing vehicles to proceed once the pedestrian has cleared their side of the travel lane.

Improved Safety of Existing Bicycle and Pedestrian Facilities

This broad group of strategies increase safety by maintaining lighting, signing, striping, traffic control devices, pavement quality; installing curb cuts and extensions, median refuges, and raised crosswalks. All crosswalks in the corridor are recommended to be converted to continental crosswalks which have distinct, visible markings. The continental striping along with pedestrian signals and crossing frequency will allow pedestrians to cross conveniently and safely throughout the area. Pedestrian refuge medians are recommended where appropriate to provide safety for those crossings.

Exclusive Non-Motorized Rights-of-Way

This strategy includes the use of existing parkland for medium- to long-distance bike trails, improving safety and reducing travel times.

Improved Wayfinding

This strategy encourages trips by walking and biking, especially for elderly and children, by providing signs and markers directing travelers to their intended destination.

TRANSIT STRATEGIES

Overall, the goal of the Corridor Mobility Program is to enhance mobility, safety, and connectivity for all users—whether you drive, bike, walk, or take transit. These strategies will enhance some transit signal priority, create better connections to transit stops and optimize bus stop locations in some areas along the corridor. These improvements have either been suggested or confirmed by Capital Metro through coordination efforts. Additional coordination is planned between the Corridor Program Office and CapMetro as ongoing planning efforts move forward.

Realigned Transit Service Schedules and Stop Locations

This strategy includes service adjustments to better align transit service with ridership markets. This is one of the goals behind Capital Metro's Cap Remap and Connections 2025 plans.

Bus Stop Relocation and Consolidation

This strategy improves transit efficiency and reduces traffic delays by locating bus stops near intersections on the far side of the intersection. This strategy may also include consolidation of local and rapid routes as well as an increase in safe pedestrian crossings.

Transit Signal Priority

The use of transit queue jumps has been employed at some intersections along the MetroRapid routes to allow buses to merge back into traffic easier.

Increasing Transit Frequencies or Hours of Service

Increased frequency makes transit more attractive to use. This is one of the goals behind Capital Metro's Cap Remap and Connections 2025 plans.

Expanding Bus Route Coverage

This strategy provides better transit accessibility to a greater share of the population. Existing transit service could potentially be extended on both the east and west ends of the corridor as growth occurs.

Improved Connections between Public Transport Systems

This strategy includes improvements to the experience of travelers using several modes of transportation on a single trip, including bus transit, pedestrian facilities, bicycle facilities, and park and ride facilities.

Improved Bicycle and Pedestrian Facilities at Transit Stations

This strategy includes improvements to facilities that provide access to transit stops as well as provisions for bicycles on transit vehicles and at transit stops. Some examples would include installation of bicycle racks, pedestrian hybrid beacons for safe crossings, shelters at bus stops, etc.

ACCESS MANAGEMENT STRATEGIES

Driveway Restrictions

This strategy limits turning vehicles that impede traffic flow and are more likely to be involved in crashes.

Minimum Intersection Spacing

This strategy decreases the number of conflict points along the corridor, which decreases incidents and delays, by maintaining a minimum distance between intersections.

Access Control to Available Development Sites

This tactic includes coordination of access points of active construction sites to reduce impacts on traffic flow.

Incident Management

As defined by the Federal Highway Administration, "Traffic Incident Management (TIM) consists of a planned and coordinated multi-disciplinary process to detect, respond to, and clear traffic incidents so that traffic flow may be restored as safely and quickly as possible. Effective TIM reduces the

duration and impacts of traffic incidents and improves the safety of motorists, crash victims and emergency responders.”

CHAPTER 6 - RECOMMENDATIONS

Recommendations for the William Cannon Drive corridor were selected based on their effectiveness for achieving the project goals and desired outcomes of reduced congestion, reduce , and improved multimodal connectivity. This chapter presents the methodology used to develop, evaluate, and select improvements, then presents the final recommended improvements, presents the results of the future (2040) conditions traffic analysis, and discusses the finding of the Health Impact Assessment (HIA). Recommended improvements are illustrated in concept drawings found in Appendix F.

METHODOLOGY

Recommended improvements were developed based on input received at public meetings (Chapter 2), the analysis of existing conditions (Chapter 3), projected future growth and background projects along the corridor (Chapter 4), cost of implementation, and relative benefit toward achieving project goals of enhancing mobility, safety, and connectivity for all travel modes.

The first step in developing proposed improvements that meet the project goals is understanding existing conditions, context, and constraints. The next step is researching the guiding plans and policies that govern and inform proposed development and infrastructure improvements. As improvements are developed in accordance with *Imagine Austin* and other plans and policies, important consideration must also be given to the feasibility and cost of recommended improvements given the existing context and constraints. Finally, if there are conflicting recommendations in the guidance documents, prioritization may be necessary to ensure that the proposed improvements maximize community benefit and fulfillment of project goals.

The project team identified improvements to reduce congestion by reviewing the relevant transportation plans outlined in previous chapters – including the Austin Metropolitan Area Transportation Plan, CAMPO 2040 Plan, and the draft Austin Street Design Guide. All these guidance documents classify William Cannon Drive as a major arterial roadway with two to three through lanes in each direction plus a median or center turn lane.

A review of the traffic simulation models confirms that the addition of left-turn lanes dramatically improves metrics to determine congestion reduction. Left-turn lanes and medians also serve to enhance vehicle safety, another stated goal of the mobility bond program.

To address multimodal transportation options (a congestion-reduction strategy directed by *Imagine Austin*), the team researched the *Austin Street Design Guide*, *Sidewalk Plan* and *Bicycle Plan*. All these guiding documents place a high emphasis on dedicated pedestrian and bicycle facilities along major corridors. The existing bicycle lanes do not meet the recommendations of the *Street Design Guide* or the *Bicycle Plan*. Each of

these plans recommends protected bicycle facilities or shared use path on a corridor with the traffic speeds and volume of William Cannon Drive.

The *Street Design Guide* and *Sidewalk Plan* both recommend continuous pedestrian sidewalks along both sides of all major arterial roadways. The bicycle and pedestrian facilities not only reduce congestion by providing alternate means of transportation, they also enhance safety for the most vulnerable roadway users that may be too young or old to drive a vehicle. New buffered or protected bicycle facilities and sidewalks are another top priority to include in the recommended improvements.

SHORT-TERM & LONG-TERM IMPROVEMENTS

Short-Term and Long-Term recommended improvements were developed to address both current needs within the corridor while also planning for future needs. ***Short-Term Improvements*** address existing and near-term projected travel needs for all modes along the corridor, are cost-effective, and take advantage of existing infrastructure. ***Long-Term Improvements*** are supportive of the long-term cross-section but may be implemented over time as traffic volumes, transit, and multimodal demands necessitate.

CONTEXT-SENSITIVE DESIGN & VALUE ENGINEERING

The location of bicycle, pedestrian, and landscape elements shown in these typical cross-sections may vary from what is eventually constructed. The City will take a context-sensitive approach to designing and constructing final improvements to account for location-specific constraints such as available right-of-way, existing trees and utilities, etc.

The existing sidewalk and roadway infrastructure will be incorporated into the future cross-sections to the maximum extent possible. Over time, as this infrastructure needs replacement, properties redevelop, and/or additional funding is identified, the width and location of bicycle, pedestrian, and landscape infrastructure may be adjusted.

Maximizing the use of existing infrastructure was an important consideration in the development of these recommendations. Reuse of existing infrastructure, where feasible, is a practical and cost-effective approach to reducing the cost of individual improvements, increasing the total number of improvements that may be implemented, and maximizing the total benefit to all users of all modes.

CORRIDOR VISION

The vision for William Cannon Drive is to develop a Suburban Level 4 corridor that will provide mobility for vehicles, bicycles, pedestrians, and transit users in accordance to the latest Austin Street Design Guide discussed in Chapter 5. The first step in tailoring the recommended street cross-section to meet the existing constraints is “Compact Design.” Each roadway element has maximum, recommended, and minimum widths.

Figure 6-1 shows the long-term recommended section for William Cannon Drive. This is a generic cross section showing two types of acceptable bicycle and pedestrian facilities – protected bike lane or shared use path. The Street Design Guide provides options to combine Bike Lanes and Sidewalks into a single “Shared Use Path.” A shared use path provides protection from vehicular traffic and can be striped to designate specific zones for bicycle and pedestrian traffic.

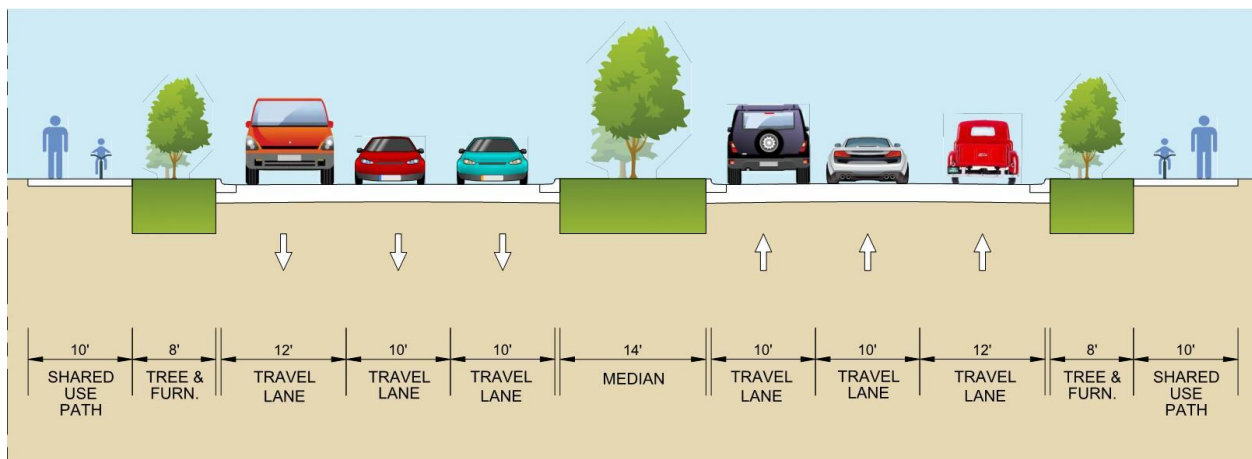
Shared use paths are recommended as 12-foot wide but may be reduced to 8-foot wide in constrained sections. Similarly, buffer zones, tree and furniture zones, and setback can all be reduced to create a more compact cross-section. A shared use path meets both the Sidewalk Plan and Bicycle Plan recommendations and allows for maximizing travel lanes for vehicles and transit.

Travel lanes and medians may be reduced in width to optimize available right-of-way and obtain the desired number of travel lanes. Travel lanes may be reduced to 10-foot wide in a constrained cross-section. Medians may be reduced to 4-foot or less if needed. Center turn lanes are recommended to have a 12-foot minimum width.

Applying the compact cross-sectional elements, the design team developed an alternate compact cross-section that meets the context, goals and intent of the Street Design Guide and the project. Each element was analyzed to maximize functionality, while delivering the reduced congestion and enhanced safety goals of the project. Individual cross-section elements may be further tailored during design phase to meet specific site constraints.

After modifying cross-sections for location constraints, alternative intersection improvements were developed and analyzed using *Synchro 9* traffic modeling software. Recommended intersection improvements were selected based on modeling results and their relative effectiveness for improving identified safety concerns, reducing congestion/delay at intersections and improving Level of Service (LOS).

Figure 6-1: Recommended Long-Term Section - 6-Lane Divided with Protected Bike Lane or Shared Use Path



Conceptual drawings of both existing and recommended future typical sections along the corridor are included in **Appendix F**.

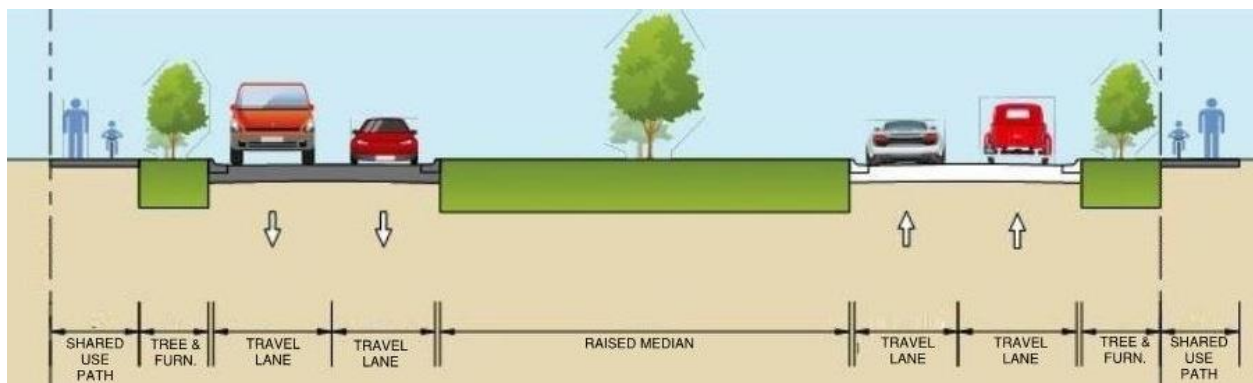
RECOMMENDED CROSS-SECTIONS & IMPROVEMENTS BY SEGMENT

MCKINNEY FALLS PARKWAY TO RUNNING WATER DRIVE

Short-Term Improvements

- Convert 2-lane undivided roadway to 4-lane divided roadway with wide median.
- Add new pavement and reconstruct curb and gutter.
- Add shared-use path on both sides of street.
- Add landscaping at back-of-curb from McKinney Falls Parkway to Janes Ranch Road.
- Acquire ROW necessary for future expansion to 6-lane divided roadway.
- Provide safer pedestrian environment near Hillcrest Elementary School.
- Upgrade roadway drainage system into Marble Creek.
- Expand Marble Creek Bridge to 4-lane section with shoulders and shared-use path.

Figure 6-2: Recommended (Short-Term) Cross-Section - McKinney Falls Parkway to Running Water Drive



Long-Term Improvements

- Convert 4-lane divided roadway to 6-lane divided roadway by taking necessary space from median to construct an additional travel lane in each direction.

RUNNING WATER DRIVE TO SALT SPRINGS DRIVE

Short-Term Improvements

- Upgrade bike lanes from on-street unprotected to on-street protected bike lanes.
- Convert 2-lane roadway to 4-lane divided roadway.
- Acquire right-of-way necessary for long-term future expansion to 6-lane roadway.
- Add pavement and reconstruct curb/gutter.
- Add sidewalk connections to provide continuous sidewalks on both sides of street.

Long-Term Improvements

- Convert 4-lane divided roadway to 6-lane divided roadway by restriping
- Reconfigure curb and gutter to provide shared-use path and tree zone on both sides of the street to replace on-street protected bike lanes.

SALT SPRINGS DRIVE TO SOUTH PLEASANT VALLEY ROAD

Short-Term Improvements

- Maintain existing 6-lane divided roadway
- Upgrade bike lanes from on-street unprotected to on-street protected bicycle lanes.

Long-Term Improvements

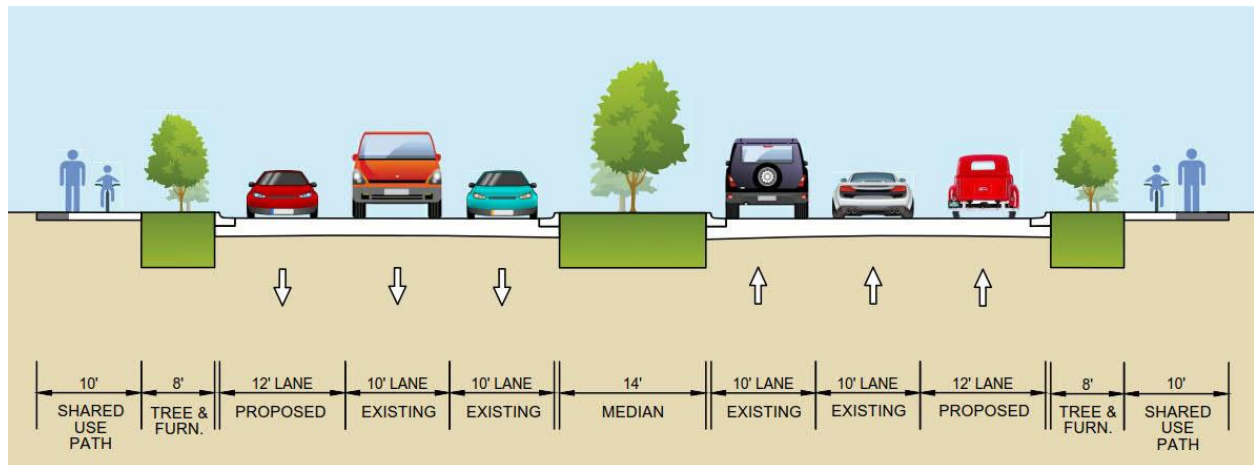
- Add 5-foot wide sidewalk and 7-foot wide landscape zone on south side.
- Add placemaking elements at entrance to Onion Creek Soccer Complex.

SOUTH PLEASANT VALLEY ROAD TO IH 35

Short-Term Improvements

- Replace non-compliant ADA ramps (Refer to the summary Table 4 of the Appendix F).
- Construct shared-use path on both sides of the corridor to IH 35 to replace the on-street unprotected bike lanes.
- Move the outside curb and gutters in on both sides to eliminate the on-street bicycle lanes.
- Improve street lighting.
- Move bus stops to the far-side of the intersection for safety and functionality.
- Install bus shelters and benches at all bus stops.
- Add trees to medians.
- Potential future connection to Williamson Creek East Greenbelt from the neighborhood to William Cannon Drive. Install a PHB in this location if a greenbelt connection is made.
- Consider engineering study to lower the speed limit between Bluff Springs Road and IH 35.

Figure 6-3: Recommended Section between South Pleasant Valley and Bluff Springs Road



IH 35 TO MANCHACA ROAD

Short-Term Improvements

- Maintain 6-lane divided roadway
- Add a shared-use path on the north side of William Cannon Drive. Maintain existing sidewalk on the south side.
- Upgrade pedestrian crossings.
- Add sidewalk connections on cross-streets to improve pedestrian connectivity.
- Install bus shelters and benches at all bus stops.
- Consider engineering study to lower the speed limit in this section.

MANCHACA ROAD TO BRODIE LANE

Short-Term Improvements

- Maintain 4-lane divided roadway in short-term.
- Add a shared-use path on the north side of William Cannon Drive. Maintain existing sidewalk on the south side.
- Upgrade pedestrian crossings.
- Add sidewalk connections on cross-streets to improve pedestrian connectivity.
- Install bus shelters and benches at all bus stops.
- Consider engineering study to lower the speed limit in this section.

Long-term Improvements

- Convert 4-lane divided roadway to 6-lane divided roadway by taking necessary space from median to construct an additional travel lane in each direction.

BRODIE LANE TO MOPAC

Short-Term Improvements

- Maintain 6-lane divided roadway
- Add a shared-use path on the north side of William Cannon Drive. Maintain existing sidewalk on the south side.
- Upgrade pedestrian crossings.
- Add sidewalk connections on cross-streets to improve pedestrian connectivity.
- Install bus shelters and benches at all bus stops.
- Consider engineering study to lower the speed limit in this section.

MOPAC TO US 290

Short-Term Improvements

- Construct shared-use paths on both sides of the William Cannon Drive to replace existing on-street bike lanes.
- Move the outside curb and gutters in on both sides to eliminate the on-street bike lanes.
- Add sidewalk connections at cross-streets to improve connectivity for pedestrians.
- Install bus shelters and benches at all bus stops to Brush Country Road.
- Revise medians to improve elevation and drainage issues, and to add new trees.
- Consider possible future trail connection to Williamson Creek Greenbelt West.

US 290 TO SOUTHWEST PARKWAY

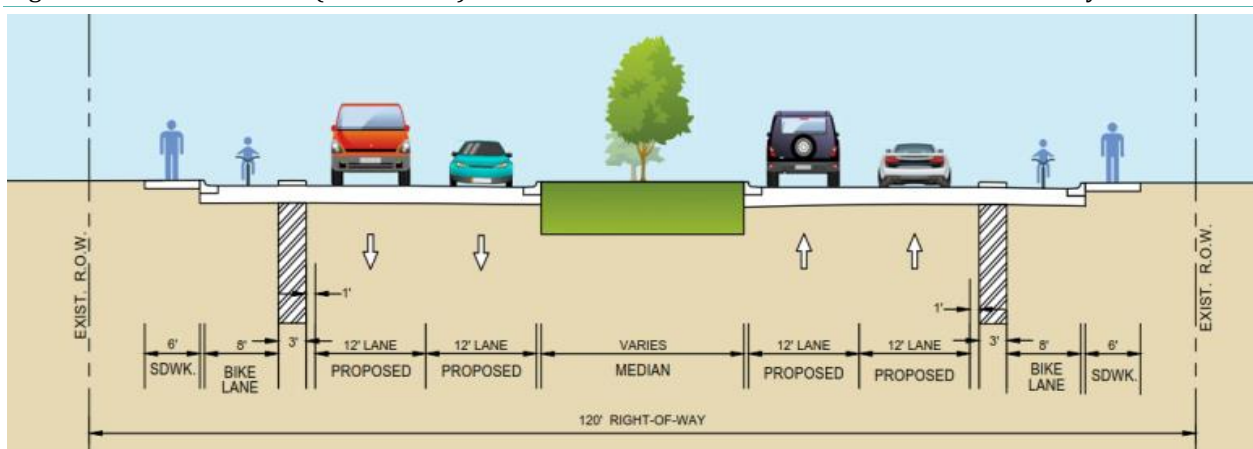
Short-Term Improvements

- Convert existing 6-lane roadway to 4-lane roadway with protected bike lanes on both sides.
- Potential connection to Lantana Greenbelt with nature trail on west side.
- Move the bus stop to the far-side of the intersection and add bus shelters and benches.

Long-Term Improvements

- Convert 4-lane roadway to 6-lane roadway by utilizing existing pavement width.
- Construct shared-use path on both sides of street.
- Additional ROW will be required.

Figure 6-4: Recommended (Short-Term) Cross-Section between US 290 and Southwest Parkway



RECOMMENDED INTERSECTION IMPROVEMENTS

The following intersection improvements are recommended as part of the William Cannon Drive Corridor Mobility Plan. Additional ROW may be needed at intersections. In addition to specific recommendations in this section, signal system improvements based on current signal technology is recommended for implementation throughout the entire corridor.

WILLIAM CANNON DRIVE AT MCKINNEY FALLS PARKWAY

Short-Term Improvements

- Construct additional eastbound and westbound through-lanes on William Cannon Drive to align with the current 4-lane divided roadway east of McKinney Falls Parkway.
- Construct an additional eastbound left-turn lane to provide dual left-turn lanes.
- Construct an eastbound right-turn lane.
- Upgrade signal timing, pedestrian crosswalks, countdown signals, and ADA ramps.
- Acquire necessary ROW for future expansion to 6-lane divided roadway.

Long-Term Improvements

- Add a southbound right-turn lane with at least 650' of storage.
- Add a northbound left-turn lane to provide dual left-turn lanes.

WILLIAM CANNON DRIVE AT JANES RANCH ROAD

Short-Term Improvements

- Install traffic signal, pedestrian crosswalks, and ADA-compliant ramps.

Long-Term Improvements

- Future trail connection from north of McKinney Falls Parkway (behind Hillcrest Elementary School) to Janes Ranch Road when development occurs.

WILLIAM CANNON DRIVE AT SALT SPRINGS DRIVE

Short-Term Improvements

- Add eastbound right-turn lane on William Cannon Drive.
- Perform signal modification to provide a protected eastbound U-turn phase.
- Restripe northbound approach as one left-turn and one left/right shared lane and perform signal modifications.
- Add sidewalks on south side of intersection with ADA-compliant ramps.

WILLIAM CANNON DRIVE AT ONION CREEK SOCCER COMPLEX

Short-Term Improvements

- Install PHB signal, pedestrian crosswalks, countdown signals, and ADA-compliant ramps.

WILLIAM CANNON DRIVE AT SOUTH PLEASANT VALLEY ROAD

Short-Term Improvements

- Convert northbound and southbound channelized right-turn lanes on South Pleasant Valley Road to "smart" channelized turn lanes with smaller radii and raised channelizing islands.
- Provide 'free-flowing' westbound right-turn movement by restriping northbound South Pleasant Valley Road.
- Provide raised pedestrian islands, restripe crosswalks, and add pedestrian countdown signals for safety.

Additional right-of-way will be required for these improvements which may be needed as development occurs in this area and/or South Pleasant Valley Road is extended south to connect with Slaughter Lane.

- Acquire additional ROW on north and south of William Cannon Drive, and west of South Pleasant Valley Road.
- Re-align roadway on the south side to reduce skew.
- Construct additional southbound left-turn lane to provide dual southbound left-turn lanes.
- Restripe northbound approach as one left-turn lane, one through-lane, and one shared through/right-turn lane.
- Add acceleration lane for westbound right-turn lane (maintain free-flowing right-turn).
- Identify locations for placemaking elements.
- Accommodate future segment of Onion Creek Trail that will connect to intersection at southeast corner.

WILLIAM CANNON DRIVE AT MEADOW LAKE BOULEVARD

Short-Term Improvements

- Install traffic signal, pedestrian crosswalks, countdown signals, and ADA-compliant ramps (already in progress).
- Relocate eastbound bus stop to far side of the intersection.

WILLIAM CANNON DRIVE AT ROCKRIDGE DRIVE

Short-Term Improvements

- Install PHB signal, pedestrian crosswalks, countdown signals, and ADA-compliant ramps.

WILLIAM CANNON DRIVE AT ELM CREEK

Short-Term Improvements

- Install PHB signal, pedestrian crosswalks, countdown signals, and ADA-compliant ramps.

WILLIAM CANNON DRIVE AT STONLEIGH PLACE

Short-Term Improvements

- Relocate eastbound bus stop to far side of the intersection.
- Relocate westbound bus stop to far side of the intersection.

WILLIAM CANNON DRIVE AT BLUFF SPRINGS ROAD

Short-Term Improvements

- Add upgraded pedestrian crossings.
- Create a transit plaza with location for placemaking elements at the Bluff Springs Transfer Center.
- Relocate Capital Metro bus transfer center north to improve use of the existing right turn lane.
- Construct an eastbound right-turn lane.

WILLIAM CANNON DRIVE AT IH 35

Short-Term Improvements

- TXDOT Improvements (under construction) to add northbound and southbound U-turn lanes, second southbound left-turn lane and northbound left-turn lane, pedestrian refuge in eastside median, and upgraded pedestrian crossings. Existing 8-foot sidewalk to remain on north side and existing 5-foot sidewalk to remain on south side. (my35.org/)

Long-Term Improvements

- Construct an eastbound right-turn lane on William Cannon Drive.

WILLIAM CANNON DRIVE AT CIRCLE S ROAD

Short-Term Improvements

- Lower northbound approach to prevent vehicles from bottoming out at the intersection on Circle S Road from the Pleasant Hill Library entrance drive, on the south side.
- Construct a northbound right-turn lane.
- Identify location for placemaking elements on southeast corner, next to Pleasant Hill Library.

WILLIAM CANNON DRIVE AT SOUTH CONGRESS AVENUE

Short-Term Improvements

- Upgrade pedestrian crossings and install pedestrian refuges in medians.
- Construct additional eastbound left-turn lane to provide dual left-turns.
- Construct additional westbound left-turn lane to provide dual left-turn lanes.

WILLIAM CANNON DRIVE AT LUNAR DRIVE/SUNSTRIP DRIVE

Short-Term Improvements

- Install traffic signal, pedestrian crosswalks, countdown signals, and ADA-compliant ramps.

WILLIAM CANNON DRIVE AT SOUTH FIRST STREET

Short-Term Improvements

- Perform signal modifications to implement permitted/protected left-turn phasing with flashing yellow arrows for eastbound and westbound approaches.
- Extend eastbound left-turn lane on William Cannon Drive.
- Extend southbound left-turn lane on South First Street.
- Relocate eastbound bus stop to the far side of the intersection.
- Construct pedestrian refuge in the medians of William Cannon Drive.
- Identify location for placemaking elements, per the approved neighborhood association plan.

WILLIAM CANNON DRIVE AT EMERALD FOREST DRIVE

Short-Term Improvements

- Extend the southbound right-turn lane on Emerald Forest Drive by restriping.

WILLIAM CANNON DRIVE AT MANCHACA ROAD

Short-Term Improvements

- Perform signal modifications to implement permitted/protected left-turn phases with flashing yellow arrows for eastbound and westbound approaches.
- Construct an additional northbound left-turn lane on Manchaca Road to provide dual left-turn lanes.
- Identify location for placemaking elements per the approved neighborhood plan.

Long-Term Improvements

- Construct additional westbound through-lane with widening of William Cannon Drive to 6-lanes between Manchaca Road and Brodie Lane, to be accomplished by taking space from the median.
- Maintain existing westbound left-turn lane on William Cannon Drive.
- Construct an eastbound right-turn lane on William Cannon Drive (ROW acquisition may be required).

WILLIAM CANNON DRIVE AT WEST GATE BOULEVARD

Short-Term Improvements

- Extend the eastbound left-turn lane on William Cannon Drive.
- Extend southbound left-turn lane on West Gate Boulevard.
- Identify location for placemaking elements per the approved neighborhood plan.

Long-Term Improvements

- Construct an additional westbound through-lane with widening of William Cannon Drive to a 6-lane divided roadway between Manchaca Road and Brodie Lane, to be accomplished by taking space from the median.
- Construct a westbound right-turn lane on William Cannon Drive (ROW acquisition may be required).

WILLIAM CANNON DRIVE AT LOST VALLEY DRIVE

Short-Term Improvements

- Install PHB signal, pedestrian crosswalks, countdown signals, and ADA-compliant ramps.
- Install pedestrian refuge in the medians of William Cannon Drive.

WILLIAM CANNON DRIVE AT BRODIE LANE

Short-Term Improvements

- Construct additional northbound left-turn lane to provide dual left-turn lanes.
- Construct additional southbound left-turn lane to provide dual left-turn lanes.
- Consolidate bike lane and sidewalk on Brodie Lane into a shared-use path for 300-feet to the north and south.
- Provide minimum 10-foot lane widths at northbound and southbound approach.
- Extend southbound right-turn lane on William Cannon Drive.
- Extend westbound left-turn lane by closing median-opening east of Brodie Lane.

Long-Term Improvements

- Construct eastbound and westbound right-turn lanes on William Cannon Drive (future improvement if property redevelopment occurs in the future).

WILLIAM CANNON DRIVE AT BANNOCKBURN DRIVE

Short-Term Improvements

- Install traffic signal, pedestrian crosswalks, countdown signals, and ADA-compliant ramps.

WILLIAM CANNON DRIVE AT MOPAC

TxDOT coordination will be required for both short-term and long-term improvements. Additional considerations should be given to the proposed Mopac South Express Lane.

Short-Term Improvements

- Construct a northbound right-turn lane on Mopac frontage road, by shifting northbound through-lanes west.
- Construct a southbound right-turn lane on Mopac frontage road.
- Construct an additional southbound left-turn lane to provide dual left-turn lanes.
- Restripe and perform signal modification to convert existing southbound shared left-turn/through lane on the Mopac frontage road to an exclusive through-lane.
- Convert channelized southbound right-turn lane to a free-flowing channelized right-turn lane by extending the channelizing island and restriping to remove outside westbound through-lane.
- Restripe and perform signal modification to convert westbound shared through/right-turn lane to an exclusive through-lane.
- Add raised pedestrian crossing to the channelized island to improve pedestrian safety.
- Convert the westbound right-turn lane on William Cannon Drive to a channelized, free-flowing right-turn lane by shifting northbound through-lanes to the west.
- Add improvements to accommodate Violet Crown Trail under the bridge on the south side of the intersection.
- Construct pedestrian refuges in medians of William Cannon Drive to improve safety.

Short-Term Improvements

These additional future improvements, recommended as conditions necessitate, may require ROW acquisition.

- Construct an additional westbound through-lane on William Cannon Drive to provide three westbound through-lanes through the diamond interchange.
- Maintain the existing westbound right-turn lane by constructing a turn bay.
- Construct an acceleration lane on Mopac for the southbound right-turn to maintain the free-flowing right-turn lane recommended in the short-term.

WILLIAM CANNON DRIVE AT BRUSH COUNTRY ROAD

Short-Term Improvements

- Extend the westbound left-turn lane on William Cannon Drive.
- Extend the southbound left-turn lane on Brush Country Road by restriping.
- Construct bicycle ramps to transition from shared-use paths to on-street bicycle lanes.

WILLIAM CANNON DRIVE AT McCARTY LANE

Short-Term Improvements

- Install PHB signal, pedestrian crosswalks, countdown signals, and ADA-compliant ramps.

WILLIAM CANNON DRIVE AT BECKETT ROAD

Short-Term Improvements

- Extend westbound left-turn lane on William Cannon Drive.
- Prohibit southbound right-turn-on-red on Beckett Road due to major blind curve coming from east.
- Relocate traffic controller cabinet on southwest corner further back to clear the field of view.

WILLIAM CANNON DRIVE AT ESCARPMENT BOULEVARD

Short-Term Improvements

- Add westbound left-turn lane on William Cannon to provide dual left-turn lanes and increase storage length.
- Construct shared-use path on both sides with a landscaping buffer.

WILLIAM CANNON DRIVE AT US 290

Improvements By Others

- The Oak Hill Parkway Project (by TxDOT/CTRMA) is currently evaluating two proposed alternatives for full reconstruction of this intersection. Both alternatives under consideration include a bridge allowing vehicles on eastbound/westbound US 290 to bypass William Cannon Drive but propose different configurations for the at-grade intersection. (<http://www.oakhillparkway.com/>)

Short-Term Improvements

- Install transit plaza at Capital Metro Park and Ride and identify locations for placemaking elements.

WILLIAM CANNON DRIVE AT VEGA LANE

Short-Term Improvements

- Install PHB signal, pedestrian crosswalks, countdown signals, and ADA-compliant ramps.

WILLIAM CANNON DRIVE AT RIALTO BOULEVARD

Short-Term Improvements

- Install new traffic signal, pedestrian crosswalks, countdown signals, and ADA-compliant ramps.
- Restripe northbound and southbound approaches of William Cannon Drive to provide one left-turn lane, one through-lane, one shared through/right-turn lane, and one dedicated bicycle lane.
- Extend eastbound right-turn lane on Rialto Boulevard.
- Extend westbound left-turn lane on Rialto Boulevard.
- Relocate bus stop on southbound William Cannon Drive to far side of intersection.

Long-Term Improvements

- Add southbound right-turn lane on William Cannon Drive.

WILLIAM CANNON DRIVE AT SOUTHWEST PARKWAY

Short-Term Improvements

- Restripe westbound approach to provide one left-turn lane, two through-lanes, and one right-turn lane to accommodate the addition of a dedicated bike lane between Southwest Parkway and US 290 (William Cannon Drive traveling toward US 290).
- Perform signal modifications to provide a protected westbound left-turn phase (in addition to the existing permitted phase).
- Extend eastbound left-turn lane (William Cannon Drive traveling away from US 290).
- Restripe eastbound approach and perform signal modifications to provide two left-turn lanes, one through-lane, and one shared through/right-turn lane.
- Add southbound right-turn lane (Southwest Parkway traveling towards downtown).
- Add northbound right-turn lane (Southwest Parkway traveling away from downtown).

LOCATION SPECIFIC IMPROVEMENTS

WILLIAM CANNON DRIVE AT BRUSH COUNTRY ROAD TRANSFER CENTER

Short-Term Improvements

- Create transit plaza east of Brush Country Road on south side of William Cannon Drive, with location for placemaking elements. Right of way acquisition will be required south of William Cannon Drive.

WILLIAM CANNON DRIVE AT STEPHENSON NATURE PRESERVE

Short-Term Improvements

- Locate the entrance approximately 250-feet west of Lost Valley.
- Install PHB signal, pedestrian crosswalks, countdown signals, and ADA-compliant ramps.

HEALTH IMPACT ASSESSMENT

A Health Impact Assessment (HIA) is defined by the Centers for Disease Control and Prevention (CDC) as a tool that can help communities, decision-makers, and practitioners make choices that improve public health through community design. The goal of an HIA is to provide recommendations during the decision-making process that will improve health and promote a healthier lifestyle.

The William Cannon Drive Corridor Health Impact Assessment (HIA) was performed in conjunction with the overall mobility plan. The HIA team worked together with the planners and transportation engineers to review the data and make recommendations to help improve health along the corridor for users. The overall goal of the HIA is to identify and recommend projects that help promote a healthier user and corridor. The complete HIA for the William Cannon Drive Corridor Mobility Plan can be found in **Appendix D**.

FUTURE TRAFFIC OPERATIONS ANALYSIS

The Synchro models were updated to reflect the recommended improvements along the William Cannon Drive corridor. The following scenarios were analyzed with projected traffic volumes for the year 2040:

- Future (2040) No-Build (recommended improvements **not** implemented)
- Future (2040) Build with Short-term Improvements
- Future (2040) Build with Long-term Improvements

BACKGROUND PROJECTS

The following planned improvements (discussed in **Chapter 4**) are expected to be complete by 2040. These improvements were included in the 2040 No-Build and 2040 Build models:

- IH 35 – Updated to match proposed Mobility 35 schematic (my35.org/)
- US 290 – Updated to match Oak Hill Parkway Alternative C schematic (oakhillparkway.com/)

2040 NO-BUILD SCENARIO

The 2040 No-Build scenario analyzed the forecasted 2040 traffic volumes with only minimal improvements made to the existing roadway network. Those minimal improvements include changes related to background projects and a corridor-wide traffic signal optimization to reduce delay and utilize the optimal cycle lengths and splits for the AM and PM peak periods under 2040 traffic conditions.

2040 BUILD SCENARIO

The 2040 Build scenarios incorporated the forecasted 2040 traffic volumes along with the recommended short-term and long-term improvements. The “2040 Build with Short-term Improvements” scenario assumed a 4-lane divided roadway from Southwest Parkway to US 290, a 6-lane divided roadway from US 290 to Salt Springs Drive, and a 4-lane divided roadway to east of McKinney Falls Parkway. The “2040 Build with Long-term Improvements” scenario assumed that William Cannon Drive will be a 6-lane divided roadway for its entire length.

The Level of Service (LOS) at study intersection along William Cannon Drive is shown in **Table 6-1** for the Existing, No-Build, and Build scenarios. Results show that by 2040 roughly half of the study intersections along William Cannon Drive will be failing (LOS E or LOS F) by 2040 if no improvements are made to the existing roadway network (2040 No-Build). Results show that implementing the recommended improvements would substantially benefit traffic operations along the corridor. Some intersections are projected to experience LOS E or F even with the recommended improvements due to high projected traffic demand, however these locations still show substantial improvement over No-Build conditions. For example, at South Pleasant Valley Road, there is a substantial difference in the driver experience between LOS F with 91 seconds of delay (AM Build condition) versus LOS F with 241 seconds of delay (AM No-Build condition).

Table 6-1 - Intersection LOS for Existing (2017) vs. Future (2040)

William Cannon Drive Intersection at	Existing (2017)		No-Build (2040)		Short-Term Improvements (2040)		Long-Term Improvements (2040) LOS		Existing (2017)		No-Build (2040)		Short-Term Improvements (2040)		Long-Term Improvements (2040)	
	AM Peak Hour		AM Peak Hour		AM Peak Hour		AM Peak Hour		PM Peak Hour		PM Peak Hour		PM Peak Hour		PM Peak Hour	
	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Southwest Parkway	C	26.7	F	114.8	E	55.8	E	55.6	C	29.3	F	146.7	E	63.1	E	62.9
Rialto Blvd	-	-	-	-	C	24.1	C	23.8	-	-	-	-	C	22.4	C	21.7
US 290	D	53.3	D	38.0	D	36.8	D	36.9	F	156.1	D	50.6	D	52.1	D	51.1
Escarpment Boulevard	D	39.5	D	49.1	D	40.2	D	40.4	C	34.8	F	80.6	D	42.0	D	42.2
Beckett Rd.	B	13.9	B	17.5	B	17.7	B	17.0	B	14.7	B	14.7	B	14.8	B	14.8
Brush Country Rd.	C	28.4	C	32.1	C	33.2	C	31.4	C	31.4	D	40.2	D	39.7	D	39.5
Arbor Trails Shopping Center	B	12.9	A	9.1	A	8.0	A	8.5	B	16.4	B	19.2	C	20.6	C	20.7
Mopac South Bound	C	30.4	E	77.6	D	38.0	D	35.7	F	105.7	F	195.6	E	70.9	E	53.6
Mopac North Bound	E	80.0	F	105.5	D	41.1	D	37.4	E	69.9	F	130.7	E	68.2	E	59.0
Brodie Lane	F	85.5	E	55.8	E	57.3	D	52.1	D	54.3	F	94.6	E	68.4	E	56.3
West Gate Boulevard	D	46.5	F	94.7	D	54.1	D	41.0	D	36.9	F	80.3	F	55.4	D	51.9
Manchaca Road	D	54.0	F	95.4	E	67.0	E	64.1	E	68.7	F	102.0	F	90.5	E	67.7
Woodhue Drive	C	20.3	B	12.3	B	11.8	B	11.7	B	11.0	B	12.2	B	12.2	B	13.1
Emerald Forest Drive	A	6.4	A	7.8	A	7.8	A	7.8	B	13.5	B	13.3	B	13.3	B	13.1
Cooper Lane	B	11.2	B	10.9	B	11.2	B	11.0	B	13.6	A	8.4	A	8.4	A	8.4
1st Street	D	47.4	E	61.6	E	56.5	E	61.2	E	61.3	F	87.0	F	83.3	E	78.6
Bill Hughes Drive	C	20.7	A	8.4	A	8.4	A	8.4	B	11.3	B	10.5	B	10.6	A	9.5
South Congress Avenue	D	40.7	D	40.8	D	42.6	D	40.6	D	39.7	D	48.7	D	50.1	D	48.2
Circle S Road	C	25.1	C	29.3	C	22.0	C	21.9	C	21.7	C	25.5	B	19.1	B	18.4
Century South Shopping Center	A	7.2	B	13.5	B	12.3	B	12.2	B	16.7	B	17.0	B	17.1	B	16.4
IH 35 Southbound Frontage Road	D	54.2	E	61.0	E	61.0	E	57.0	E	64.7	F	89.2	F	89.3	E	73.1
IH 35 Northbound Frontage Road	E	58.6	E	64.7	E	61.6	D	52.4	D	53.1	E	67.2	E	74.8	E	60.1
Bluff Springs Road	D	44.8	E	77.3	E	77.3	E	77.9	C	29.9	E	56.3	E	56.2	D	40.8
Stonleigh Place	B	12.8	B	13.1	B	15.7	B	14.0	B	12.6	B	17.6	B	17.3	B	17.8
Pleasant Valley Road	E	63.4	F	240.7	F	180.6	F	91.4	F	106.0	F	149.8	F	144.3	D	40.2
Salt Springs Drive	C	34.9	F	305.7	E	56.6	C	23.1	B	10.4	D	54.9	B	11.2	B	16.1
Janes Ranch Road	-	-	-	-	B	19.0	A	7.7	-	-	-	-	A	8.2	A	2.8
Springfield Drive	-	-	-	-	C	18.6	B	13.8	-	-	-	-	A	0.6	A	0.6
McKinney Falls Parkway	C	29.1	F	136.2	E	55.5	D	52.6	F	88.9	F	204.4	F	129.4	D	53.8

CHAPTER 7 - PROJECT IMPLEMENTATION

Implementation of the recommended improvements will require a multi-step process. This chapter describes the costs of the transportation improvements and highlights those necessary steps, funding and implementation partners, and other considerations that affect project implementation.

COST ESTIMATES

Cost estimates were developed by grouping the recommended improvements presented in **Chapter 6** into “projects” and “sub-projects” based on location and a logical division of the work to be performed. For example, all of the recommended improvements between McKinney Falls Parkway and east of South Pleasant Valley Road were grouped as one project that included upgrading the existing roadway from 2-lanes to 4-lanes and construction of a new bridge over Marble Creek Bridge. The division of work into projects was done for cost estimation purposes only and may vary from actual project implementation.

Project cost estimates were then developed using approximate unit costs and construction quantities for build-out years of 2017 and 2021 with an assumed 4% annual inflation factor. It is important to note these are “planning-level” estimates that do not include right-of-way acquisition costs but do include costs associated with engineering, materials, traffic control, construction, inflation, and contingency costs.

Project cost estimates for 2017 build-out and 2021 build-out are shown in **Table 7-1** and **Table 7-2**, respectively. Detailed cost estimates are located in **Appendix E**.

Table 7-1: Planning-Level Cost Estimate for Implementation of Short-Term Improvements

ID	From Limit	To Limit	Length (Miles)	2017 Cost (2017 dollars)	2021 Cost (2021 dollars)
A	McKinney Falls Pkwy	Springfield Drive	0.2	\$ 3.4 M	\$ 3.9 M
B	Springfield Drive	Janes Ranch Road	0.2	\$ 2.7 M	\$ 3.1 M
C	Janes Ranch Road	Running Water Drive	0.4	\$ 6.5 M	\$ 7.6 M
D	Marble Creek Bridge		0.1	\$ 2.4 M	\$ 2.8 M
E	Running Water Drive	Salt Springs Drive	0.2	\$ 1.1 M	\$ 1.2 M
F	Salt Springs Drive	S. Pleasant Valley Rd	0.9	\$ 2.2 M	\$ 2.5 M
G	S. Pleasant Valley Rd	Bluff Springs Road	1.4	\$ 16.3 M	\$ 18.9 M
H	Bluff Springs Road	IH 35	0.2	\$ 1.1 M	\$ 1.3 M
I	IH 35	Circle S Road	0.5	\$ 1.2 M	\$ 1.4 M
J	Circle S Road	Sunstrip/Lunar Drive	0.4	\$ 1.1 M	\$ 1.2 M
L	Sunstrip/Lunar Drive	South 1st Street	0.3	\$ 2.2 M	\$ 2.6 M
M	South 1st Street	Manchaca Road	1.2	\$ 4.5 M	\$ 5.2 M
N	Manchaca Road	Lost Valley	1.4	\$ 4.6 M	\$ 5.3 M
O	Lost Valley	Brodie Lane	0.2	\$ 2 M	\$ 2.4 M
P	Brodie Lane	S. Mopac Expressway	0.5	\$ 5.4 M	\$ 6.2 M
Q	S. Mopac Expressway	Mccarty Lane	0.9	\$ 8.7 M	\$ 10.1 M
R	McCarty Lane	US 290	1.2	\$ 11.8 M	\$ 13.7 M
S	US 290	Southwest Parkway	1.6	\$ 3.4 M	\$ 3.9 M

TOTAL ESTIMATED COST OF SHORT-TERM IMPROVEMENT: \$ 80.4 M \$ 93.2 M

Table 7-2: Planning-Level Cost Estimate for Implementation of Long-Term Improvements

ID	Project Limits	Length (Miles)	2017 Cost (2017 dollars)	2021 Cost (2021 dollars)
T	McKinney Falls Pkwy to Salt Springs Dr	0.9	\$ 3.2 M	\$ 4.2 M
U	South Pleasant Valley Road Intersection	1.0	\$ 2 M	\$ 2.7 M
V	Bluff Springs Road Intersection	1.7	\$ 1 M	\$ 1.3 M
W	IH 35 and several intersections	1.0	\$ 19.1 M	\$ 25.2 M
X	Brodie Lane intersections to MoPac (Loop 1)	1.0	\$ 0.7 M	\$ 0.9 M
Y	US 290 to Southwest Parkway	1.6	\$ 7.8 M	\$ 10.3 M

TOTAL ESTIMATED COST OF LONG-TERM IMPROVEMENT: \$ 33.8 M \$ 44.7 M

2016 MOBILITY BOND

Development of this William Cannon Drive Corridor Mobility Plan was funded by the 2016 Mobility Bond. This roadway was also identified for possible construction funding as part of the \$482 million dedicated for corridor improvement projects through the 2016 Mobility Bond. Because there is more need on the nine construction-eligible corridors throughout the city than available funding, City Council's Contract with Voters (Resolution No. 20160818-074), approved in 2016, required the City Manager to develop recommendations for a proposed Corridor Construction Program that prioritized improvements to be constructed using 2016 Mobility Bond funds.

Recommended improvements presented in this CMP report were included in the prioritization model along with recommended improvements for the other eight construction-eligible corridors to determine which improvements receive initial funding for construction through the Corridor Construction Program (CCP). More information on those efforts can be found on the City of Austin's Corridor Mobility Program website, AustinTexas.gov/CorridorMobility.

Design and construction of some, but not all, of the improvements recommended in **Chapter 6** are included in the Proposed Corridor Construction Program that Austin City Council approved in spring 2018. The City of Austin is investing approximately \$48 million from the 2016 Mobility Bond into the Slaughter Lane corridor. The corridor will receive Corridor-wide Mobility Improvements, as well as Enhanced Multimodal Improvements between MoPac and Brodie Lane as envisioned in the Corridor Mobility Plan.

The Enhanced Multimodal Improvements are made possible as a result of up to \$11.75 million in CAMPO grant funding that has been awarded to the corridor. Improvements that are funded by the CAMPO grant are anticipated to include adding a travel lane in each direction, adding a Shared Use Path on both sides of the roadway, landscaping enhancements, on-corridor stormwater drainage upgrades to support mobility improvements, and utility relocations and upgrades between Running Water Drive and McKinney Falls Parkway.

Additional funding strategies will be sought for all recommendations in the Corridor Plan not initially funded as part of the Corridor Construction Program. The City of Austin has a range of funding sources that may be used to construct mobility improvements that are not identified for funding through the 2016 Mobility Bond. These funding sources include, but are not limited to: future bond dollars, grants (state/federal funding), private investment, and the City's operating funds.

Plans like this one are often stepped investments over multiple years and leverage multiple funding sources. Options for future funding sources will be considered as they become available.

CHAPTER 8 - FUTURE LAND USE STRATEGIES

This chapter provides a review of existing policies and plans that currently guide transportation improvements, new development, environmental conservation and cultural enrichment within the William Cannon Drive corridor study area. The intent of the chapter is to summarize relevant policies, plans and recommendations that may influence the vision and implementation of strategies for improving transportation, economic development and quality of life within this corridor.

CORRIDOR-WIDE DEVELOPMENT PRINCIPLES

PRESERVE INTERSECTION FUNCTIONAL AREA

Functional area is the space beyond the physical intersection within which vehicles are stored and within which drivers make decisions and maneuvers to stop, proceed through the intersection or turn. Additional conflicts are caused by cars entering and exiting driveways and increase safety risk and reduce mobility. As redevelopment occurs driveway permits should be carefully considered with these factors and risks in mind.

CAPITAL IMPROVEMENTS AND MAINTENANCE

A sufficient financial investment will be needed to implement both the short-term and long-term improvements recommended for William Cannon Drive. The City of Austin should include maintenance of William Cannon Drive in their Transportation Fund to ensure the corridor continues to operate under current conditions.

ACCESS MANAGEMENT/MINIMIZE DRIVEWAY ACCESS

Promoting and following smart access management can improve safety and mobility along a major arterial roadway like William Cannon Drive. Carefully managing the location, spacing, design, and operation of driveways, median openings, and street connection is a valuable strategy in urban planning. Careful access management can increase public safety, encourage alternate modes of travel, extend the life of roadways, reduce traffic congestion, and improve the appearance and character of the built environment.

ACCOMMODATE NON-MOTORIZED ROAD USERS

City of Austin Land Use and Transportation Policies state that development should be designed to encourage walking and bicycling. Communities should have realistic opportunities for bicycle and walking travel. Planning for improved infrastructure on William Cannon Drive that provides continuous, connected, protected and safe conditions for those wishing to travel by non-motorized means will provide an increased sense of space and will meet the goals of the *Imagine Austin Comprehensive Plan*.

ACCOMMODATE BUS AND TRANSIT CORRIDOR USERS

A system of well-connected sidewalks and bike lanes will also contribute to improving access to transit stops. Transit stops should accommodate people on foot and people on bikes, and should meet guidelines for providing adequate shelter, shade and amenities to transit rider. Amenities at transit stops that increase the usability, convenience, safety and comfort of riders contribute to the overall appeal of public transportation. Waiting pads, shelters, seating, lighting, route information, bike racks and trash bins are some examples of amenities that will help to accommodate bus and transit users.



Figure 8-1: Bus Service at Stonleigh Drive

PROMOTE SUSTAINABLE WATER AND STORM WATER PRACTICES

The *Imagine Austin Comprehensive Plan* promotes environmental awareness to ensure the long-term health and quality of the community. This goal will require extensive involvement in regional efforts and close coordination across all aspects of Austin’s water resources. Coordinating existing efforts allows the City of Austin to implement integrated strategies that address the range of water resources issues, such as supply, quality, conservation, public health, and recreation.

Growth and infrastructure systems should be well-managed to respect the limitations of our natural resources. Integrating stormwater management systems into buildings and site development can help to reduce the threat of flooding to public safety and private property. Stormwater management systems can also help to reduce pollution in creeks from runoff, overflow and other non-point sources. Implementing sustainable landscaping with native plants will reduce water consumption, reduce or prevent pollution and erosion, and maintain ecological balance, as well as enhance the built environment.



Figure 8-2: Drainage System near Hillcrest Elementary School

ENVIRONMENTAL-RELATED PLANS & POLICIES

In additions to the transportation-related plans and policies discussed in Chapter 4. Below are two environmental-related documents that will influence future development along William Cannon Drive.

LONG-RANGE PLAN FOR LAND, FACILITIES, AND PROGRAMS

The City of Austin Parks and Recreation Department (PARC) Long-Range Plan for Land, Facilities, and Programs (LRP) functions as a guide for the future growth and development of Austin’s parks and recreation system. The LRP provides recommendations for greenway and parkland acquisition, park development, park renovations, and master planning. In addition, PARC also has long-range plans for the Urban Trail system and how to provide a safe and efficient way for the users from South Austin to get to the center of town. On the east side of the William Cannon Drive Corridor the Corp of Engineers is working on plans for a trail system that will tie into the home buy-backs from the flood prone Onion Creek area. PARC is also reviewing policy on the Urban Trail system for providing additional trail access as a part of the mobility bond package.

WATERSHED PROTECTION MASTER PLAN

The Watershed Protection Master Plan is the City of Austin’s strategic plan to manage erosion, flood, and water quality problems. One of the most relevant programs to the William Cannon Drive Corridor is the buy-back of flood prone homes along the Onion Creek Greenbelt and repurposing the land for public use. Medians on the western end of the William Cannon Drive Corridor will need to be upgraded with attentiveness for the location of the Edwards Aquifer recharge and contributing zones. Several features in this area are protected to maintain the environmental quality of the aquifer. As the city continues to grow a delicate balance must be struck between the need for impervious cover (e.g., roadways, shared-use paths, bicycle lanes, sidewalks, parking lots, etc.) that comes with development and urban sprawl, and our stewardship toward the vulnerable environmental features of Central Texas.

CONCLUSION

The recommended improvements presented in this report achieve the project goals of enhancing mobility, safety, and connectivity for all travel modes. These recommended improvements will result in the desired outcomes of creating fully-connected bicycle and pedestrian networks and providing multimodal accessibility to all transit stops along the corridor. These recommended improvements, in conjunction with other projects planned and underway by the City, address existing safety issues at intersections throughout the corridor. Additionally, these recommended improvements will provide immediate relief from traffic congestion experienced at major intersections and, in the long-term, provide substantial benefits over the traffic congestion that will be experienced if these recommended improvements are not implemented.