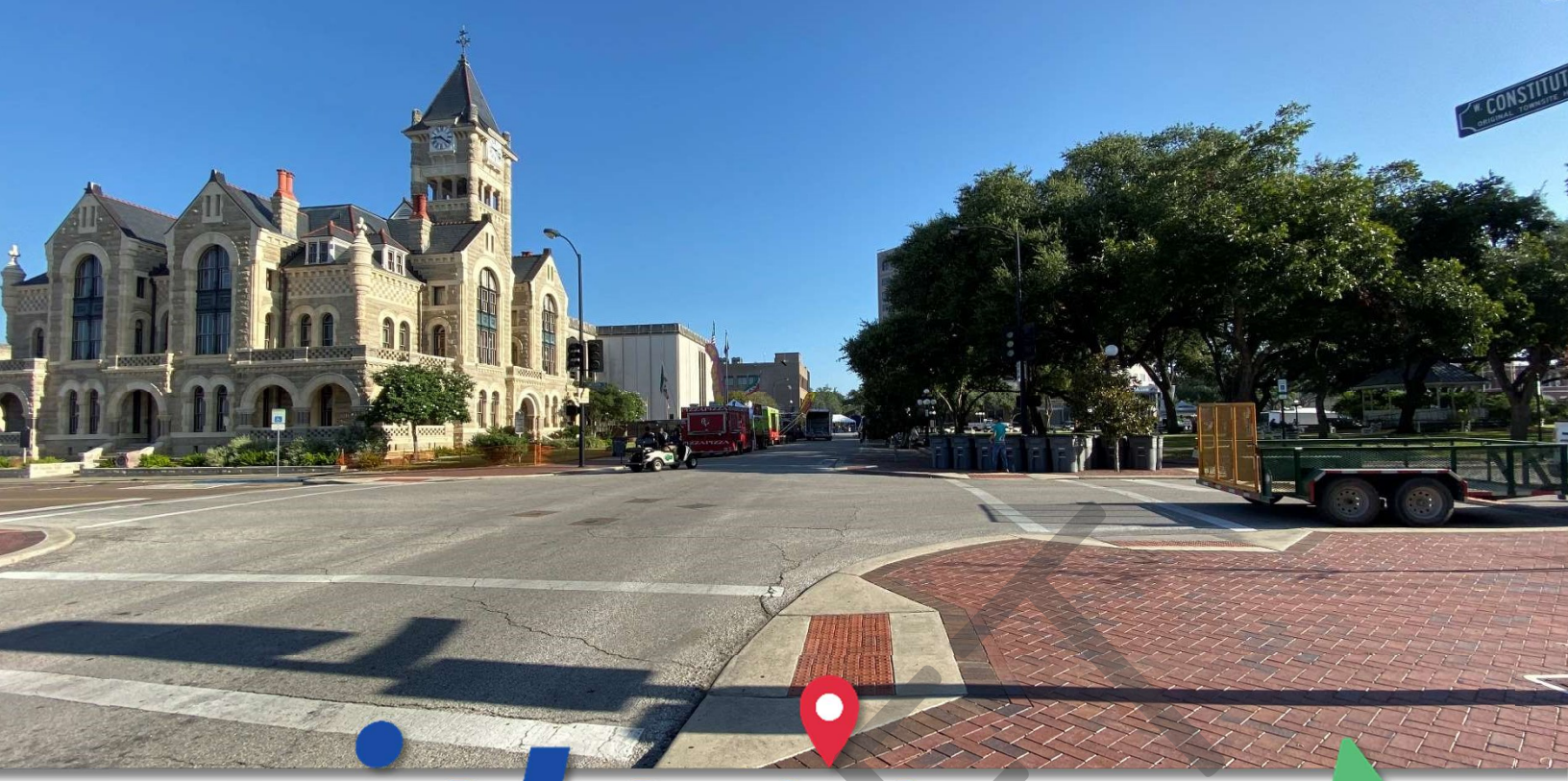
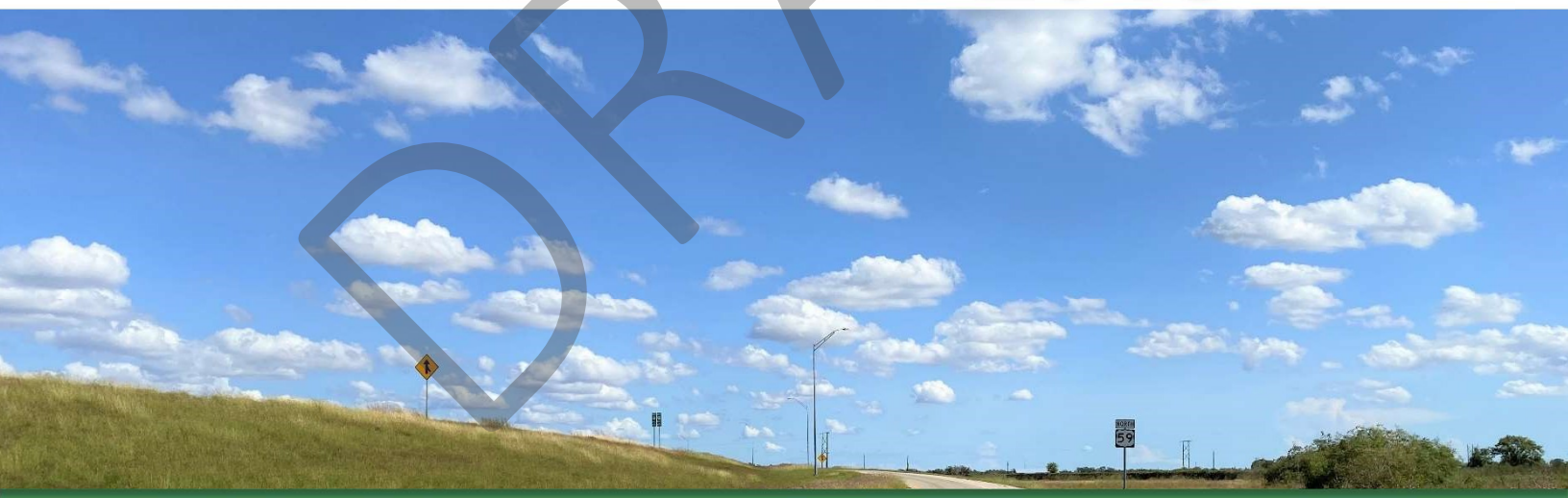


# victoria TX 2045





## Metropolitan Transportation Plan - *April 14, 2020*

ATG ALLIANCE TRANSPORTATION GROUP

## This document was prepared in cooperation with:

The Victoria Metropolitan Planning Organization

Temporary Technical Advisory Committee;

Policy Advisory Committee; and

The Texas Department of Transportation.

This plan covers a 25-year planning horizon for the Victoria Metropolitan Planning Area, encompassing all of Victoria County.

This document was reviewed and adopted by the Victoria Metropolitan Planning Organization's Policy Advisory Committee on November 21, 2019, with an effective date of December 4, 2019.

### *Victoria Metropolitan Planning Organization Notice of Non-Discrimination*

**Title VI of the Civil Rights Act of 1964**, as amended (42 U.S.C. 2000d-1) and 49 CRF part 21; The Older Americans Act, as amended (42 U.S.C. 6101), prohibiting discrimination on the basis of age in programs or activities receiving Federal financial assistance; and Section 324 of title 23 U.S.C. regarding the prohibition of discrimination based on gender;

The Victoria MPO is committed throughout the development of its plans and programs to ensure that no person on the grounds of age, gender, race, color or national origin is excluded from participation in, denied the benefits of, or subjected to discrimination under any program receiving federal financial assistance. The Victoria MPO plans continue to work on improving the accessibility of employment within the MPO study area.

Complaints of alleged discrimination and inquiries regarding the MPO's nondiscrimination policies may be directed to Maggie Bergeron, M.S. Planning Administrator,

700 N Main St Ste 115, Victoria, TX 77901

Or by phone (361) 485 – 3360 or by email at mbergeron@victoriatx.org

### *Funding and Credit Disclaimer Statement*

The preparation of this report has been financed in part through grant[s] from the Federal Highway Administration and Federal Transit Administration, U.S. Department of Transportation, under the State Planning and Research Program, Section 503 [or Metropolitan Planning Program, Section 104(f)] of Title 23, U.S.C. The contents of this report do not necessarily reflect the official views or policy of the U.S. Department of Transportation.

## Policy Advisory Committee Members

Danny Garcia, Chair
Janis L. Scott, Vice-Chair
Michael Brzozowski, P.E.
Jesús Garza
Ken Gill, P.E.
Clint Ives
Vinicio Llerena
Paul Reitz, P.E.
Sean Stibich
Josephine Soliz

## Temporary Technical Advisory Committee Members

Lisa Blundell
Lisa Cortinas
Dale Fowler
Ken Gill, P.E.
David Gonzales
Randy Insley
Robin Knipling
Denise McCue
Angie Sherman
Ashlie Thomas
Faye Turner
Jeff Vinklarek, P.E.

## Metropolitan Planning Organization Staff

Maggie Bergeron, Planning Administrator (Project Manager)
Julie Fulgham, AICP, Director of Development Services

## Consultant Team

ATG ALLIANCE TRANSPORTATION GROUP

## Table of Contents

## Table of Figures

## Table of Tables

**TABLE 1: RECORD OF CHANGES**

| Administrative Modification or Amendment | Date of Change (Policy Adoption if Amendment) | Reason for Change | Chapters & Pages Affected |
|---|---|---|---|
| | | | |
| | | | |

# Chapter 1: Overview

# 1 OVERVIEW


Metropolitan transportation planning is a cooperative, comprehensive, and continuous ("3-C") process. This process is conducted by the Metropolitan Planning Organization (MPO), in coordination with the Texas Department of Transportation (TxDOT), transit operators, numerous stakeholders from throughout the region, and the public to create a vision for the future of the community.

This 3-C process, which is prescribed by federal regulations, is designed to assist the MPO in prioritizing short- and long-term investments in the regional transportation system over the next 25 years through a proactive public participation process that involves all users of the transportation system. This document is an update to the current Metropolitan Transportation Plan (MTP) for the years 2020 -2045. The Victoria Metropolitan Planning Organization initiated this update in December 2018.

This MTP was developed over a 12-month period, during which time several rounds of public and stakeholder meetings were conducted, technical data was analyzed, existing plans and studies were compiled and reviewed, and potential projects were evaluated according to community goals and performance-based criteria. The resulting product is a comprehensive blueprint for the future of the transportation system that considers all modes and the needs of all users.

The planning area for the Victoria 2045 MTP encompasses all of Victoria County, Texas. Figure 1-1 shows the boundary of the MPO study area, as well as the location of population centers, major transportation facilities, and major environmental features within the MPO study area. These facilities and features are discussed in greater detail in chapter 3 of this MTP.

# METROPOLITAN PLANNING ORGANIZATIONS

With the passage of the Federal Highway Act of 1962, all major cities within the United States were required to adopt an MTP to guide the long-term development of the transportation system. The Act established specific rules and regulations for carrying out the long-range transportation planning process and required the formation of MPOs for any urbanized area (UZA) with a population greater than 50,000. Under federal regulations, MPOs are responsible for carrying out a continuing, cooperative, and comprehensive (3-C) planning process, in cooperation with the State and local governments, to develop the MTP and determine how best to invest federal transportation funding in the region.

## LEGISLATIVE AUTHORITY FOR THE MTP

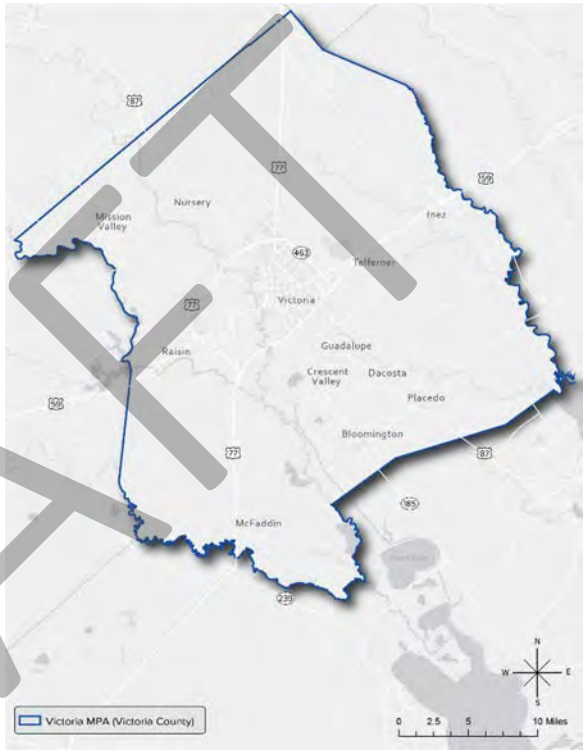
Following passage of the Federal Highway Act of 1962, Congress has passed a series of surface transportation bills that have continued to require MPOs to develop a metropolitan transportation plan to be eligible for federal funding. The most recent surface transportation legislation was the Fixing America's Surface Transportation Act (FAST Act), which was passed in 2015. The Victoria 2045 MTP was developed in compliance with this legislation.

## VICTORIA MPO

The Victoria Metropolitan Planning Organization (MPO) is the organization designated by the Governor of Texas in 1982 as being responsible, together with the State, for carrying out the provisions of 23 USC §134, 59 USC §5303 (Metropolitan Transportation Planning) and 23 CFR 450.300 et seq. (Metropolitan Transportation Planning and Programming) and is established pursuant to those same US Codes.

The MPO is the forum for cooperative decision making by principal elected and appointed officials of general-purpose local governments, in the Victoria Metropolitan Planning Area (MPA).

**FIGURE 1-1: MPO STUDY AREA**




## POLICY ADVISORY COMMITTEE

Elected and appointed officials comprise the Policy Advisory Committee (PAC), which is responsible for approving and adopting all the transportation planning activities and programs of the MPO. The PAC was established to meet federal requirements and ensure a regional voice in policy and decision making in the Metropolitan Transportation Planning Process. Membership of the PAC is governed by agreement between the affected local governments and the Governor of Texas and is reviewed periodically to ensure adequate representation of all parties. Membership consists of 10 voting members, with representatives from the following member agencies as detailed in Table 1-1.

**TABLE 1-1: POLICY ADVISORY COMMITTEE**

| TITLE/REPRESENTATION | CURRENT REPRESENTATION BY |
|---|---|
| Chair - County Commissioner | Danny Garcia |
| Vice-Chair - City Council Member | Janis L. Scott |
| Board Member - TxDOT Victoria Area Engineer | Michael Brzozowski |
| Board Member - City Manager | Jesùs Garza |
| Board Member - County Commissioner | Clint Ives |
| Board Member - Victoria Regional Airport | Vinicio "Lenny" Llerena |
| Board Member - City Council Member | Josephine Soliz |
| Board Member - Port of Victoria | Sean Stibich |
| Board Member - Director of Public Works | Donald Reese |
| Board Member - TxDOT Yoakum District Engineer | Paul Reitz |

### TEMPORARY TECHNICAL ADVISORY COMMITTEE

The Temporary Technical Advisory Committee (TTAC) was formed to serve in a technical advisory role to the PAC and was responsible for professional and technical review of work programs, policy recommendations, and transportation planning activities as well as reviewing the development of this MTP update. The TTAC was represented by members who are local and state technical and professional personnel knowledgeable in the transportation field and lent their invaluable regional knowledge to the scoring methodology and ranking of proposed projects for this plan.

## MTP PLANNING PROCESS

The planning process used for the creation of the Victoria 2045 MTP is prescribed by state and federal regulations, but the vision that drives the process is developed locally.

This MTP visioning process focused on gathering locally generated plans and information, as well as the knowledge and wisdom of the local community, while following the state and federal guidelines that direct the general planning process. The Victoria MPO is responsible for programming regional transportation projects for implementation using federal transportation funding. The MTP provides a framework for analyzing the current and future regional travel demand and creating a blueprint for addressing the future transportation needs within the Victoria Urbanized Area.

### VISIONING PROCESS

The purpose of the MTP is to identify the transportation needs of the community over the next 25 years, establish priorities for funding those improvements, and chart a course for meeting the community's identified transportation needs. Establishing a community vision for the future of the transportation system and related goals to assist in the prioritization of transportation improvements is key to ensuring the plan reflects community values. Input from key stakeholders and members of the public was solicited early and continuously throughout the development of the plan.

The process for updating the Victoria Area MTP was initiated by a series of meetings with the public, professional planners, and engineers from the MPO and its member agencies, as well as State and local agencies, and other community stakeholders. The purpose of these meetings was to gather data and input on community needs and values, to establish a framework for MTP development. Using this information, the MPO drafted a recommended vision, set of goals, and a list of evaluation criteria to assist in prioritizing transportation improvements for inclusion in the MTP.

## NEEDS ASSESSMENT

To develop feasible and beneficial transportation solutions, it is imperative to assess the current state of the transportation system, as well as community growth trends. For the update to the Victoria Urbanized Area MTP, the needs assessment included an inventory of the existing transportation system; a review of local plans; a demographic analysis to determine existing transportation demand based on current population levels; and, projections of future population and employment and the associated future travel demand.

## SYSTEMS LEVEL ANALYSIS

System level analyses examined how the candidate projects impact community issues that are of system and region-wide concern. The study team incorporated this planning approach into the development of the MTP, which allowed for prioritization of transportation investments based on broader community issues in accordance with the community's vision.

## COORDINATION WITH LOCAL PLANS AND PROGRAMS

Ensuring that proposed improvements are consistent with local programs, plans, and their goals and objectives, as well as supporting local values and preserving existing community resources is of vital importance to the MTP development. A review of local programs and plans was therefore conducted to ensure consistency between the metropolitan transportation planning effort and local community initiatives.



## FINANCIAL ANALYSIS AND CONSTRAINT

Fiscal feasibility is a significant priority in determining the final list of improvements. Not only does Federal Legislation mandate that the MTP be fiscally constrained and only include projects that can reasonably be expected to have adequate funding, but certain projects also require that area communities contribute local matching funds to receive federal funding. The process for establishing both estimated costs and revenues is critical for the creation of a viable MTP.

### Revenue Projection

A revenue projection was developed that identified the anticipated revenue stream for local, State and Federal funds. This revenue stream was factored to account for inflation at the anticipated year-of receipt.

### Project Costs

Cost is defined as the total project cost, which includes planning elements (e.g. environmental studies and functional studies); engineering costs (e.g. preliminary engineering and design); preconstruction activities (e.g. line and grade studies, right-of-way acquisition and corridor preservation); construction activities; and contingencies. Project costs were calculated based on historical expenditures for similar improvements. The resulting cost estimates also included an inflation factor to account for the anticipated year-of-expenditure.

### Fiscal Constraint Analysis

A fiscal constraint analysis was performed that compared the anticipated year-of-expenditure costs to the anticipated year-of-receipt revenues to determine if sufficient and timely financial resources were likely to exist to fund the proposed program of projects.

## SELECTION OF A PROPOSED PACKAGE OF PROJECTS

Based on the cost and revenue projections, the package of fiscally constrained projects anticipated to best accomplish community-defined goals and objectives, was selected by the TTAC and then submitted to the Policy Advisory Committee (PAC) for review and approval. The PAC was then able to review these recommendations and make measured and fiscally constrained choices.

### Adoption Process

The program of projects was approved by the Policy Committee on April 14, 2020. The preliminary transportation recommendations and associated list of proposed projects resulting from the project selection and fiscal constraint analysis, along with the results of the technical analysis and public input, were included in the draft MTP document.

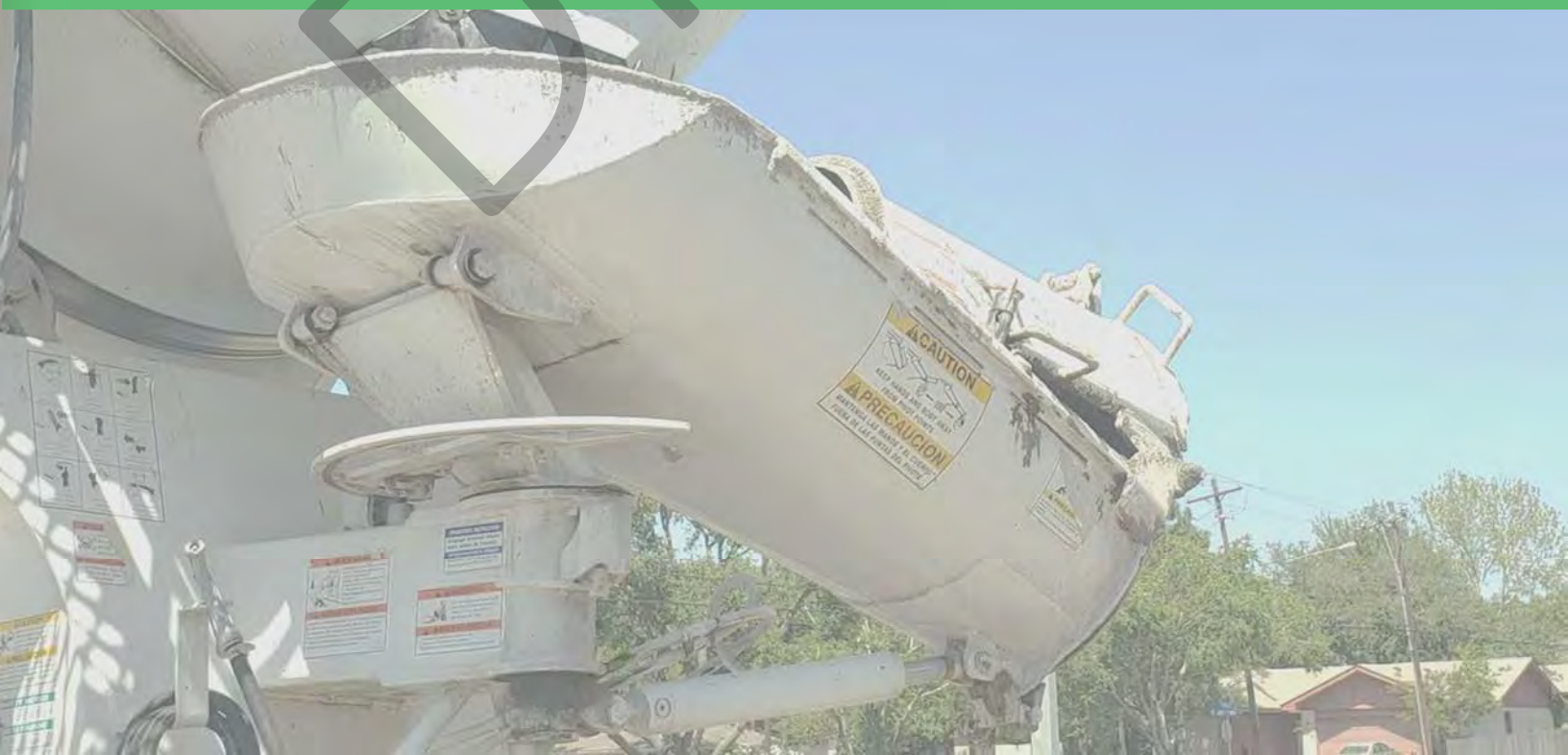
#### *Public Review of the Draft Victoria 2045 MTP*

On March 5, 2020, the draft plan was presented to the public and their feedback was solicited throughout the 30-day public review period as outlined in the MPO's adopted Public Participation Plan (PPP).

#### *Adoption of the Final Victoria 2045 MTP*

The final MTP, which incorporated comments received during the 30-day public comment period, was presented to the Policy Board for adoption on April 14, 2020. The approved MTP has an effective date of April 14, 2020.

# Chapter 2: Guiding Principles



# 2 GUIDING PRINCIPLES

This chapter describes the process by which the vision and goals of the planning process were established. It also describes the process by which the set of performance measures – used to gauge whether the recommended program of transportation projects supports the established vision and goals – were developed. Together the vision, goals, objectives, and performance measures comprise the Victoria 2045 MTP's guiding principles. The planning process used for the creation of the Victoria 2045 MTP is prescribed by state and federal regulations, but the vision that drives the process is developed locally.

As mentioned in Chapter 1, this MTP visioning process is focused on gathering locally generated plans and information, as well as the knowledge and wisdom of the local community, while following the state and federal guidelines that direct the general planning process. Development of the MTP includes extensive public input and requires the collaboration of regional stakeholders, including local, state, and federal agencies and governing bodies, public and private transportation providers, and the business community. All these stakeholders must work together so that the community's visions and goals coalesce into defined principles that will guide transportation policy and investment decisions within the Metropolitan Planning Area (MPA). The resulting recommendations and proposed improvements will impact all users of the transportation system.

## FUTURE I-69 CORRIDOR

The recommendations included in this plan not only encompass thematic priorities such as improving system safety, reducing congestion, and improving state of good repair, but also locational specific priorities, primarily developing projects to upgrade specific routes through the MPA to ready them for designation to interstate standards and to become part of I-69.

The MPO PAC, TTAC, staff, and the TxDOT Yoakum district, as community planning partners and decision makers recognize the economic impacts and value inherent in investments contributing to this priority. Projects specifically contributing to this priority are highlighted in Chapter 8.

## FEDERAL GUIDELINES

In 2015, the Fixing America's Surface Transportation (FAST) Act became the fifth intermodal surface transportation bill passed by Congress since 1991, the previous four being the Intermodal Surface Transportation Efficiency Act (ISTEA), the Transportation Equity Act for the 21st Century (TEA-21), the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), and the Moving Ahead for Progress in the 21st Century Act (MAP-21). The FAST Act and its predecessors have served as a means to provide funding to states and local governments for surface transportation planning and investment. The FAST Act authorized $305 billion for projects related to highways, highway and motor vehicle safety, public transportation, motor carrier safety, hazardous materials safety, rail, and research, technology, and statistics programs over five fiscal years (2016 – 2020).

The FAST Act retains the eight federal planning factors established under ISTEA and expanded under SAFETEA-LU, while adding two additional factors for consideration in the planning process. The following ten factors must be considered during the planning process:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness;
2. Increase the safety of the transportation system for motorized and nonmotorized users;
3. Increase the security of the transportation system for motorized and nonmotorized users;
4. Increase accessibility and mobility of people and freight;
5. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
7. Promote efficient system management and operation;
8. Emphasize the preservation of the existing transportation system;
9. Improve resiliency and reliability of the transportation system and reduce or mitigate storm water impacts of surface transportation*; and
10. Enhance travel and tourism*.

*New factors introduced by the FAST Act



The FAST Act also maintains the requirement for a continuing, cooperative, and comprehensive long-range transportation planning process for making transportation decisions in metropolitan areas, while continuing and further defining requirements set forward in MAP-21 for state DOTs and Metropolitan Planning Organizations (MPOs) to set performance measures and goals.

## REGIONAL VISIONING PROCESS

To support the development of the Victoria 2045 MTP, the project team developed a series of public visioning outreach methods as a part of the robust public engagement effort associated with this plan. This involved an online interactive mapping and visioning exercise and printed out visioning surveys. These visioning tools were designed to:

- Gather information regarding transportation needs in the region;
- Identify deficiencies in the current transportation system;
- Develop a community vision for future growth within the region; and
- Identify appropriate modes and infrastructure for supporting future growth.

The visioning process for the Victoria 2045 MTP consisted of an online tool that was custom developed for Victoria's MTP development process as well as extensive tabling and community engagement at a variety of community events. The online tool consisted of modules that both educated the public about the plan development process and requested input about community values and existing conditions in the region.

These modules included a survey that gathered basic information about the participants and their transportation usage; an exercise where participants were asked to distribute hypothetical and constrained monetary values to the various planning factors involved in the plan development process; and, an interactive map of the region where participants could place comments in exact locations regarding specific needs or issues related to transportation at those locations.

The online tool was opened on April 11th and closed on August 9th. During this time the tool received a total of 176 survey responses, 180 submissions on the transportation values exercise, and 177 comments on the interactive map. In addition to the online engagement MPO staff diligently researched and attended multiple public events and engagement opportunities (tabling) to further leverage public engagement for the MTP visioning process. By the closing of the public visioning process, a total of 310 survey responses were collected.

The Victoria MPO hosted two public open houses during the development of the 2045 MTP. The first was held on August 5th, 2019 with the purpose of presenting the work done to-date on the development of the plan, which included educational aspects about what an MTP is and why the MPO needs to develop one, as well as the results of the Current Conditions Analysis discussed in the Current Conditions Needs analysis memos. The first public open house consisted of a set of exhibit boards that displayed information about the plan and the analyses using text, graphics, and maps. Figure 2-1 shows an example of one of the boards displayed at the open house.

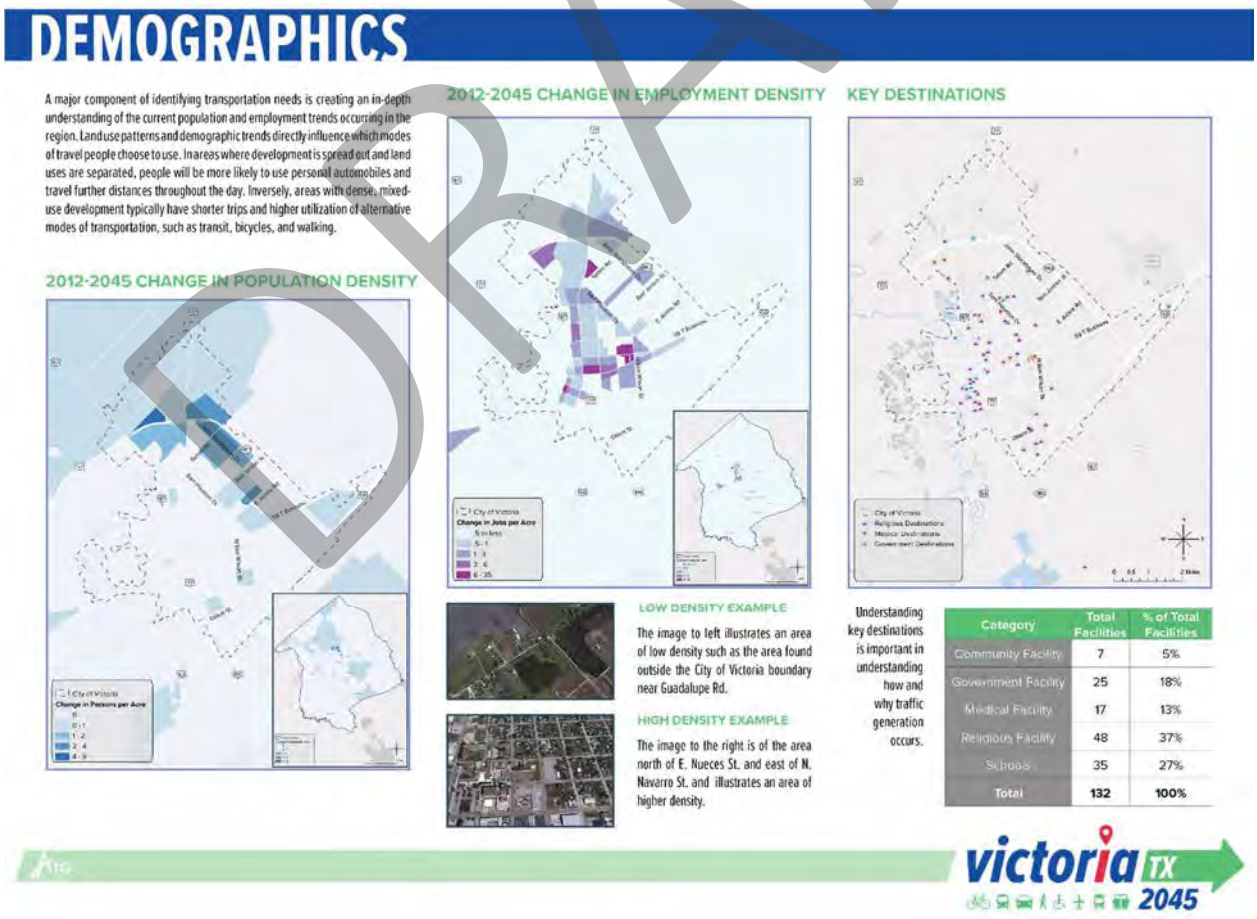
The second and final public open house was held on March 05, 2020. The purpose of the second open house was to provide the public with an overview of the draft 2045 MTP, including the proposed program of projects, and solicit public feedback. Like the first open house, the second open house included a set of exhibit boards to convey information about the draft plan and the proposed projects using text, graphics, and maps. Figure 2-1 shows one of the boards used to illustrate the MTP projects.

During the public visioning process, participants identified several deficiencies with the existing transportation system, including congested roadways, connectivity and transit cooperation throughout the region, mobility and accessibility barriers for older adults and individuals with disabilities, safety and security concerns, and a shortage of bicycle and pedestrian infrastructure. In addition to identifying transportation system deficiencies, participants completed activities to determine the most important focus areas for prioritizing projects in the MTP. These factors included increasing multimodal options, improving safety and quality of life, connecting modes of travel, and improving access.

## VISIONING RESULTS

The public visioning results were essential to identifying a community vision, and participants provided valuable comments on the current state of the transportation system and identified specific needs and desires for the future transportation system. This public input was utilized by the Victoria MPO during the development of 2045 MTP. For example, participants' ranking of the evaluation criteria for future transportation projects helped the MPO develop performance measures to guide the evaluation of transportation system alternatives in the MTP.

**FIGURE 2-1: INTERACTIVE OPEN HOUSE BOARD EXAMPLE**



# OVERVIEW OF EXISTING PLANNING DOCUMENTS

This sections reviews and summarizes state, regional, and local transportation and land use documents as part of the development process for the Victoria 2045 Metropolitan Transportation Plan (MTP) update to ensure consistency with regional planning efforts and ongoing state and local planning activities.

## VICTORIA MPO

The Victoria MPO, in coordination with the City of Victoria, have been the primary authors of the following documents.

### 2040 Metropolitan Transportation Plan

Adopted in April of 2015, the Victoria 2040 MTP updated community goals and assumptions, reassessed growing populations and economic trends, and signaled the need to include a more diverse transportation system to better serve area residents and businesses into the future. The plan acknowledged the link in between transportation systems and their effects on the listed issues below:

- Air quality
- Economic development
- Environmental resource consumption
- Fiscal effectiveness and budget constraints
- Land use and development patterns
- Quality of life and aesthetics
- Safety and security
- Social equity
- Support for all transportation modes

Though Victoria County has consistently grown at a lower rate than the state, particularly noticeable between 2000-2010 updating the long-range plan is still important. According the 2040 TDMT, the County was projected to grow at approximately 3.22% for 2040; whereas, the statewide growth model showed a 20.59% between 2000-2010.

An importance on public outreach was evident with the Voice of Victoria program, which can be used as a model for future outreach programs. The public outreach noted concerns with pavement quality and signal timing. Future projects that were of public importance included, street maintenance, economic development, traffic safety, and pedestrian facilities. Major funding priorities for roadway projects identified in the 2040 plan are categorized into the following five categories: Bridge Preservation, Capacity, Connectivity, Safety and System Preservation. The fiscally constrained total for each category is listed below:

- Capacity: $25,000,000
- Safety: $14,081,348
- Connectivity: $17,077,864
- System Preservation: $10,376,265
- Bridge Preservation: $6,161,577

The total costs for roadway projects for this plan came out to $72,697,054. On the transit side, project costs totaled $92,322,257. The Victoria MPO and its planning partners also identified 14 unfunded projects for a total of $190,016,246, leaving a gap of $117,319,192 in project costs between fiscally constrained and unfunded projects.

## 2019-2022 Transportation Improvement Program

Updated every two years and covering a period of four years, the 2019 Transportation Improvement Program (TIP) provides the guide to Federal Highway Administration, Federal Transit Administration (FHWA), Texas Department of Transportation (TxDOT), and local officials for coordinating the programmatic details of planned projects within available funding levels. The programing of projects includes details such as design, engineering, and construction of transportation and transit improvements for the near future.

In collaboration with local planning partners, projects included in the TIP have been allocated funds for implementation, accounting for approximately $10.9 million in transit and $16 million in roadway improvements. The TIP was adopted in June 2018.

## 2017-2021 Regional Coordinated Transportation Plan

A coordinated transportation plan aims to account for all transportation related service providers in a region, especially those that provide service to rural populations or those experiencing disabilities, and improve the efficiency, effectiveness, and ease of use for clients. This plan thoroughly discusses funding sources, and what is available within the MPA. It also lists all public and private transportation service providers or associated programs that are operating within the MPA. In conclusion, this plan concludes with long-term and short-term goals to improve transportation within the MPA. The short-term goals and their status at time of the report's publishing, Table 2-1.

**TABLE 2-1: SHORT TERM GOALS**

| Goal | Status |
|---|---|
| Improve Fare Collection Processes | Reach out to other transit regions that incorporate alternative options for fare collection. Funding for additional staff to further explore as needed. |
| Transportation for Children | Parents and Head Start need to discuss what is needed and potential costs. A feasibility study is needed; however, it will be based on the availability of funds. GCRPC will consider school locations when modifying or adding bus stops. |
| Transportation for Veterans | Follow-up with agencies that work with veterans and discuss whether further need for outreach regarding transportation needs. |

## Ben Wilson Corridor Study

Published in March of 2016, the Ben Wilson Corridor study addresses the safety of active transportation modes, aesthetics of the built environment, and the adequate flow of traffic on a corridor that bisects residential, commercial and university land uses, also taking into consideration the future expansion of the University of Houston-Victoria. Six alternatives are presented, with the preferred alternative being a three-lane road diet, excluding the southern end of Ben Wilson which retains five lanes to accommodate emergency vehicles at the nearby Citizen's Medical Center. Ongoing conversations with stakeholders on preferred alternative specifics are continuing.

## Public Participation Plan

The Public Participation Plan (PPP), adopted in 2018, details the protocols and processes the Victoria MPO uses to engage the public and include citizens' input in the transportation planning activities and decisions made for the benefit of the community.

Victoria MPO meets the federal guidelines to provide a Continuous, Cooperative and Comprehensive process in transportation planning for the community. The MPO engages the underserved population in the community through its events, meetings, and workshops with special care given to:

- Title VI of the Civil Rights Act
- Limited English Proficiency

### Unified Planning Work Program

The Unified Planning Work Program (UPWP) is updated yearly to provide an annual account of the activities taken by the MPO, and the resources used to accomplish each activity. This provides a series of tasks, which will be accomplished during the fiscal year, regarding MTP projects, special studies, planning efforts, etc. within the community. For 2019, the UPWP allocated approximately $333,000 in funds across four tasks.

## CITY OF VICTORIA

### Comprehensive Plan

Adopted in April of 2016, The City of Victoria's Comprehensive Plan is separated into two reports; Existing City and Future City. The former refers to the City as it stands today, seeking an in-depth look at current land use, transportation, economic, recreation, and demographic factors that make up the City of Victoria. The latter focuses on the city Victoria intends to become in the next twenty years, as related to the previously listed topics. The Comprehensive Plan provides Victoria with guidance related to future growth and development, and a definition of associated goals and objectives for all areas of planning.

#### *Existing City*

After an analysis of current conditions were done regarding Land Use & Development, Mobility, Growth & Capacity, Economic Opportunity, and Recreation & Amenities, key opportunities and challenges were listed for the City of Victoria to consider.

#### *Future City*

After an 18-month planning process and public involvement campaign, the Future City Report builds on the current status of Victoria and the issues and opportunities it found for each planning focus area. This plan sets a vision, goals, and actions to improve the quality of life for current and future residents.

### Paseo de Victoria

Developed by the City of Victoria Parks and Recreation department, "Paseo de Victoria" is a bicycle and pedestrian master plan, which acts as a component of the older 2025 Comprehensive Plan, along with the current 2025 Parks Master Plan. The plan discusses different types of trails or bicycle lanes, along with the variety of users that projects will be designed for.

The plan concludes with five goals, with corresponding objectives. The five goals of the Paseo de Victoria are:

- Supply a connected system of trails and bike lanes for pedestrians and bicyclists in order to provide recreational opportunities and viable alternate modes of transportation, therefore enhancing the quality of life of all residents.
- Create and utilize a public participation process to involve members of the community in developing the trails.

- Maintain and promote a safe and secure environment along the hike and bike trails
- Develop a functional and aesthetically pleasing trail system by considering the following amenities: rest areas, maps and signage, directional signage, exercise stations, interpretive installations, lighting, and art installations.
- Actively encourage the community to utilize the developed trail system by promoting the positive health, social, and environmental benefits of the trail system.

### Thoroughfare Master Plan

First adopted in 1998, and most recently amended in March 2018, the Thoroughfare Master Plan is a map which accounts for the major streets that provide connectivity throughout the City of Victoria. The map showcases the proposed addition of roadway facilities, in relation to major existing highway corridors, railroads, city limits, and the 100/500-year flood plains.

### Street Improvement Plan

The City of Victoria's street improvement plan assesses the condition of municipal streets, and ranks them on a 0-100 scale, 100 being perfect condition, and 0 being complete rebuild required. The purpose of the assessment is to prioritize which streets need to be allocated funding for maintenance or repair, as well as maintaining a watchful eye on the status of street condition. In 2013 at the time of this report, the average street condition was 86.72 based on square footage and 84.25 based on length.

### Historic Preservation

The City of Victoria hosts five separate historic districts near its urban core and protects more than 100 registered historic structures. Though no specific plan or program is active, maintaining the character and aesthetic of historic structures remains important to the community. The city has a varied approach to historic preservation through several organizations and agencies including:

- City of Victoria Development Services
- Victoria Main Street Program
- Victoria Preservation, Inc.
- Victoria Convention and Visitors Bureau
- Victoria County Historical Commission
- Victoria Regional History Center
- Museum of the Coastal Bend

In addition to the efforts at the city level, the Victoria Preservation Inc. (VPI) advocates for the preservation and protection of Victoria County's historic resources. VPI is a non-profit organization founded in 1980 and hosts annual programs to celebrate Victoria's unique cultural and architectural heritage. "VPI has spearheaded a number of initiatives including the designation of historic districts and landmarks, the restoration of the 1892 Victoria County Courthouse and awarded restoration grants to owners of historic properties."

## STATE OF TEXAS

### Unified Transportation Program

Updated every year with a ten-year horizon, the Unified Transportation Program (UTP) provides an objective way to evaluate statewide and regional system performance and prioritize resources to programs and projects to improve performance. The data driven process of developing the UTP helps bridge short-term and long-range goals by identifying areas that need improvements and areas that support system performance measures and targets. $77 billion in planned infrastructure improvements are identified

over the next ten-year period in the 2020 UTP. These projects address TxDOT's strategic goals in key areas of system performance.

### Freight Mobility Plan

The 2017 Texas Freight Mobility Plan gives a blueprint for increasing economic growth in Texas through a plan for addressing freight and transportation needs in all parts of the state. The plan took a comprehensive approach building on the 2016 Mobility Plan and used an outreach process with the Texas Freight Advisory Committee along with stakeholder workshops and webinars with MPOs. The plan concludes with an implementation strategy for meeting TxDOT freight transportation needs, along with a list of projects and considerations regarding funding and performance measures.

### 2040 Transportation Plan

The 2040 Transportation Plan is Texas's first long range transportation plan and provides a path forward for meeting the growing needs for all modes of travel in the state. As the population of Texas is expected to increase between 17 and 45 million people by 2040, its imperative that the transportation system evolves to serve the needs of the growing population and economy. The plan sets goal areas in correlation with federal standards set by MAP-21 and aligns specific TxDOT goals to them.

## GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

Area stakeholders and citizens shared their thoughts, comments, and opinions with the Victoria MPO through a variety of meetings, workshops, and surveys during the information-gathering phase of the MTP update.

Based on the input received from these interactions, Victoria MPO created the following sets of goals and objectives designed to promote the regional vision.

In order to track progress towards the goals, the MPO developed realistic and attainable performance measures for each objective as prescribed under the guidance of MAP-21 legislation.

### GOALS AND OBJECTIVES

The goals and objectives outlined below were used to guide the implementation of the Victoria 2045 MTP over the next 25 years and were developed using a combination of the federal planning factors, national performance goals, regional goals, as outlined in the reviewed planning documents, and community input gathered through the visioning process. As a result, the goals developed for the 2045 MTP include those listed in Table 2-2 on the following page.

**TABLE 2-2: MTP GOALS & OBJECTIVES**

| Goal | Objective |
|---|---|
| Work Towards Future I-69 Corridor Designation | Develop projects improving regional mobility by upgrading strategic corridors contributing to implementing the future I-69 Corridor through Victoria County. |
| Improve Safety & Security | Make traveling safer for all transportation system users and protect the transportation system from intentional harm or sabotage; |
| Increase Connections & Access | Provide a seamless transportation network for local and regional travel, ensuring east-west connectivity and access to jobs; |
| Reduce Congestion | Minimize time in which people traveling on roadways are delayed due to congested roadways; |
| Support Land Use Goals | Use transportation investments to shape how the community plans to grow and develop; |
| Encourage Environmental Stewardship & Resilience | Ensure transportation investments minimize negative impacts to the natural and human environment and ensure the region can bounce back from natural disasters and economic hardships; |
| Preserve Existing System | Maintain our existing transportation infrastructure and promote high-tech, cost effective investments to manage the system; |
| Improve Public Transportation | Improve the existing public transportation system; |
| Encourage Cycling | Invest in transportation facilities that encourage the use of bicycles; |
| Encourage Walking | Invest in transportation facilities that encourage walking; |
| Enhance Economic Development | Make transportation investments that help move freight around the region and connect our region to other markets; |
| Guarantee Equitable Transportation Improvements | Make sure transportation investments are fair by both minimizing harm to and maximizing economic opportunity for traditionally underserved communities; |
| Promote Efficient System Management and Operation | Efficiency is promoted by improved system management, the preservation of the existing system, and the reduction in costs. |



## PERFORMANCE MEASURES

The goals, objectives, plans, and programs contained in Victoria 2045 MTP are intended to be outcome-based. The success of the program can ideally be measured in terms of what the program achieves, and the Victoria 2045 MTP process has included provisions and tools for measuring that expected achievement.

The Victoria 2045 MTP performance measures are described in this section and are intended to be quantifiable indicators of whether the policies and proposed program of projects in the Victoria 2045 MTP help the region achieve the desired outcomes articulated in the goals and objectives. This approach provides decision makers with the ability to objectively set policies and prioritize projects based on the project's anticipated outcomes and whether those outcomes truly address the region's transportation challenges by achieving the local, State, and national goals and objectives.

The use of an outcome-based process using objective measures in the planning process also allows the MPO to track transportation system performance. The Victoria 2045 MTP is implemented by tracking project performance after projects are constructed. This tracking of project performance will help the MPO determine whether the project's actual, real-world performance matches the results expected during the planning process. This approach also allows the Victoria MPO to meet its federal mandate for a process of continuous improvement of both the transportation system and the planning process itself.

For its 2045 MTP, the Victoria MPO intends to support and adopt the performance measures and targets set at the state level by TxDOT. The MPO will work to plan and program projects to contribute to the meeting of the state targets. Table 2-3 through Table 2-6.show the various performance targets established by TxDOT within the timeframes dictated by federal legislation and availability of corresponding data, while Table 2-7 shows national goals and associated metrics. Further analysis of current condition system performance for the MPA is described in the following chapter.

### TABLE 2-3: TXDOT SAFETY PERFORMANCE TARGETS FOR FY 2019

| Safety Performance Measures | Targets |
|---|---|
| Number of Fatalities | 3,791 |
| Rate of Fatalities | 1.414/100 million VMT |
| Number of Serious Injuries | 17,751 |
| Rate of Serious Injuries | 6.55 per million VMT |
| Total Number of Non-Motorized Fatalities & Serious Injuries | 2,237.6 |

### TABLE 2-4: TXDOT BRIDGE & PAVEMENT CONDITION PERFORMANCE TARGETS FOR 2020

| NHS Bridge Condition Targets by Deck Area Performance Measures | Targets |
|---|---|
| % of NHS bridges by deck area classified as Poor Condition | 0.8% |
| % of NHS bridges by deck area classified as Good Condition | 1.414/100 million VMT |
| **NHS Bridge Condition Targets by Deck Area Performance Measures** | **Targets** |
| % of Interstate pavements in Good Condition | -- |
| % of Interstate pavements in Poor Condition | -- |
| % of Non-Interstate NHS pavement in Good Condition | 52% |
| % of Non-Interstate NHS pavement in Poor Condition | 14.3% |

### TABLE 2-5: SYSTEM PERFORMANCE TARGETS FOR 2020

| NHS System Performance Targets by Level of Travel Time Reliability (LOTTR) Performance Measures | Targets |
|---|---|
| IH Level of Travel Time Reliability | 61.2% |
| Non-IH Level of Travel Time Reliability | -- |
| **Interstate Freight Performance Targets by Truck Travel Time Reliability Performance Measures** | **Targets** |
| Truck Travel Time Reliability on the Interstate System | 1.7 |

### TABLE 2-6: TRANSIT ASSET MANAGEMENT PERFORMANCE TARGETS FOR 2022

| Transit Asset Management Performance Measures | Targets |
|---|---|
| % of revenue vehicles at or exceeding useful life benchmark | <15% |
| % of service vehicles (non-revenue) at or exceeding useful life benchmark | <15% |
| % of facilities rated below 3 on condition scale (TERM) | <15% |
| % of track segments with performance restrictions | N/A |



**TABLE 2-7: NATIONAL GOALS & METRICS**

| Goal | Performance Measure |
|---|---|
| Safety | Number of Fatalities |
| | Rate of Fatalities per 100 million Vehicle Miles Traveled (VMT) |
| | Number of Serious Injuries |
| | Rate of Serious Injuries per 100 million VMT |
| | Number of Non-motorized Fatalities and Non-motorized Serious Injuries |
| | *Transit: Total number of reportable fatalities and rate per total vehicle revenue miles by mode. |
| | *Transit: Total number of reportable8 injuries and rate per total vehicle revenue miles by mode. |
| | *Transit: Total number of reportable events and rate per total vehicle revenue miles by mode. |
| Infrastructure Condition | Percentage of pavements of the Interstate System in Good condition |
| | Percentage of pavements of the Interstate System in Poor condition |
| | Percentage of pavements of the non-Interstate NHS in Good condition |
| | Percentage of pavements of the non-Interstate NHS in Poor condition |
| | Percentage of NHS bridges classified as in Good condition |
| | Percentage of NHS bridges classified as in Poor condition |
| | Transit % revenue vehicles (by type) that exceed useful life benchmark (ULB) |
| | Transit % non-revenue service vehicles (by type) that exceed ULB |
| | Transit % facilities (by group) rated less than 3.0 on Transit Economic Requirements Model (TERM) scale |
| Congestion Reduction | No required measures for small MPOs and/or areas in attainment for air quality |
| System Reliability | Percentage of person-miles traveled on the Interstate that are reliable |
| | Percentage of person-miles traveled on the non-Interstate NHS that are reliable |
| | *Transit: Mean distance between major mechanical failures by mode |
| Freight Movement & Economic Vitality | Truck Travel Time Reliability Index (TTTRI) |
| Environmental Sustainability | No required measures for small MPOs and/or areas in attainment for air quality |
| Reduced Project Delivery Delays | No established performance measures |


# Chapter 3: Evaluation of Current Conditions



# 3 EVALUATION OF CURRENT CONDITIONS

A multimodal needs assessment for the Victoria 2045 MTP has been performed to ensure that the investments recommended by the plan are able to address the needs of the region to the extent feasible within budgetary constraints. One of the first stages in the development of this plan used public and stakeholder input to reaffirm a statement of vision for the region supported by broad goal statements each with specific objectives and is discussed at greater length in Chapter 6.

A set of possible objectives based on the FAST Act planning factors discussed in Chapter 2 were presented as plan values and were discussed with stakeholders and presented to the public through the visioning process. Quantifiable and measurable system performance measures were defined for each of the objectives. These performance measures were used to identify the transportation needs within the region. This process of defining a vision statement with corresponding goals, objectives, and performance measures is essential to a data-driven and outcomes-based decision-making process for the 2045 MTP.

Transportation system needs that are identified in this chapter, through analysis of system performance as well as infrastructure or service gaps, helped drive the transportation strategies and recommendations discussed in Chapter 4.

As part of the multimodal needs assessment for the 2045 MTP update, the needs of the region were analyzed for existing conditions (typically using 2018 and newer data) and, where possible, for the conditions that are likely to exist in 2045.

Conditions for 2045 were projected using a statistical forecasting tool known as a Travel Demand Model (TDM). Consistent with the statement of vision, the goals, and the objectives of Victoria 2045 MTP, the current conditions analysis was performed within six main categories:

- **Regional Growth Patterns** – travel demand model reviewing projected growth and travel patterns
- **Roadway** – Congestion, Interregional Passenger Travel, and Maintenance and Operations
- **Safety** – Crash data
- **Transit** – Personal travel by fixed-route bus or demand-response transit
- **Interregional Passenger Transportation –** Transportation outside of MPO study area.
- **Active Transportation** – Personal travel by bicycling or walking
- **Freight** – Commercial travel by truck, rail, or air

The project team utilized existing data provided by the Victoria MPO and its planning partners and collected additional data as necessary. In particular, the project team reviewed the Victoria Regional TDM inputs that were developed before the development of this MTP. The project team used this TDM along with national and TxDOT provided data sets to review roadway and freight characteristics.

## METHODOLOGY & DATA SOURCES

An important step in identifying transportation needs in the Victoria MPA is to create an in-depth understanding of the existing population and employment trends occurring in the area. Land use patterns and demographic trends directly influence which modes of travel people use. In areas where development is spread out and land uses are separated, people are more likely to use personal automobiles and travel further distances throughout the day. In contrast, areas with dense, mixed-use development typically have shorter trips and higher utilization of alternative modes of transportation, such as transit, bicycles, and walking. The roadway analysis in this chapter is largely based on traffic forecasts provided by the Victoria Metropolitan Planning Organization's TDM. A TDM is a tool that forecasts travel patterns throughout a network based on roadway characteristics and transportation demand. This is predominantly determined by land use and demographic information. The TDM produces performance metrics for segments of a roadway network that indicate estimated traffic volume and average vehicle speeds for each roadway segment. The metrics provided by the TDM can be used to calculate various measures of congestion that inform the evaluation of potential deficiencies on the roadway network. The growth trends occurring in the region have an impact on the performance of the transportation system and how users will interact with the system both now and in the future, and considering these trends will help inform what types of transportation improvements are needed for the Victoria MPA over the next 25 years.

The analysis of needs for the existing transportation system and for 2045 was supplemented where necessary and/or appropriate with public or stakeholder input derived from outreach events or surveys of transportation system users. Table 3-1 summarizes the results of the analysis for the existing performance measures. As discussed in Chapter 2, national performance goals serve as a base structure for transportation system performance measurements; TxDOT uses these national goals to create state-specific measures and targets. This evaluation of current conditions serves as a baseline comparison between the Victoria MPA's system performance and the system expectations set at the state level by the State of Texas. This in turn helps create a gauge for assessing the MPA's transportation system performance. The following table of metrics establishes a baseline for performance on the required federal measures. In the next MTP update, the Victoria MPO will be able to apply performance management principles to compare the baseline metrics against the conditions for the 2025-2050 MTP to gauge the level of impact from transportation investments, and where these investments have contributed to regional and statewide goals as gauged by these metrics.

## TABLE 3-1: MPA METRICS AND STATEWIDE TARGETS

| National Goal | Measure(s) | Victoria MPA Performance | *TXDOT Targets |
|---|---|---|---|
| *Safety | Number of fatalities; | 61 | 3,840 |
| | Rate of fatalities per 100 million Vehicle Miles Traveled (VMT). | 1.4 | 1.406 |
| | Number of serious injuries; | 249 | 17,394 |
| | Rate of serious injuries per 100 million VMT. | 5.5 | 6.286 |
| | Number of non-motorized fatalities | 12 | **2,285 |
| | Number of non-motorized serious injuries. | 21 | |
| | ***Transit: Total number of reportable fatalities and rate per total vehicle revenue miles by mode. | - | - |
| | ***Transit: Total number of reportable injuries and rate per total vehicle revenue miles by mode. | - | - |
| | ***Transit: Total number of reportable events and rate per total vehicle revenue miles by mode. | - | - |
| Infrastructure Condition | Percentage of pavements of the Interstate System in Good condition | 77% | -- |
| | Percentage of pavements of the Interstate System in Poor condition | 5% | -- |
| | Percentage of pavements of the non-Interstate NHS in Good condition | 47% | 52% |
| | Percentage of pavements of the non-Interstate NHS in Poor condition | 5% | 14.3% |
| | Percentage of NHS bridges classified as in Good condition | 52.6% | 50.58% |
| | Percentage of NHS bridges classified as in Poor condition | 4.2% | 0.8% |
| | Transit % revenue vehicles (by type) that exceed useful life benchmark (ULB) | | <15% |
| | Transit % non-revenue service vehicles (by type) that exceed ULB | | <15% |
| | Transit % facilities (by group) rated less than 3.0 on Transit Economic Requirements Model (TERM) scale | | <15% |
| Congestion Reduction | No required measures for small MPOs and/or areas in attainment for air quality | - | - |
| System Reliability | Percentage of person-miles traveled on the Interstate that are reliable | - | 61.2% |
| | Percentage of person-miles traveled on the non-Interstate NHS that are reliable | 99% | -- |
| | ***Transit: Mean distance between major mechanical failures by mode | - | - |
| Freight Movement & Economic Vitality | Truck Travel Time Reliability Index (TTTRI) | N/A | 1.7 |
| Environmental Sustainability | No required measures for small MPOs and/or areas in attainment for air quality | - | - |

**TxDOT Targets indicated for various years; 2020 Roadway Safety, 2020 Bridge and Pavement Conditions (--no targets indicated for interstate), 2020 System Reliability, 2022 Transit Asset Management (TAM). Roadway Safety target expressed as 5-year average.*

Victoria Transit participated in the TxDOT sponsored statewide group TAM Plan. Performance Measures and targets are developed in coordination with the state as mentioned in Chapter 2.

**National Goal Performance Measures for Safety are based on a 5-year period of data.*

***Target represents combined Non-Motorized Fatalities & Serious Injuries*

****Public Transportation Agency Safety Plans (PTASPs) and associated transit safety performance measures are not required to be in place until July 2020. These measures have been included here as reference to the coordinated planning process and further consideration will be applied as targets are established by relevant transit agencies.*

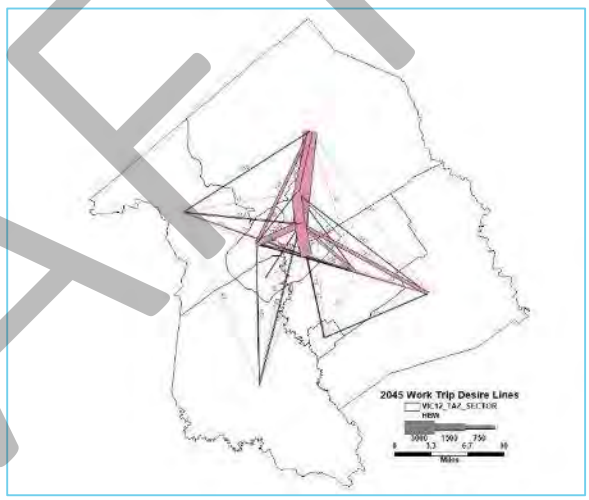
## REGIONAL GROWTH PATTERNS

The growth projected in the regional TDM over the next 25 years represents growth in industry and population and affects the demands on the multi-modal transportation system. Mode choices, freight, maintenance needs, and possibilities for increase in capacity are all affected by how and where this growth happens. The transportation analysis zones (TAZ) used to group current and projected demographics are used to generate trip origins and trip destinations. Review of the regional growth patterns illustrated by the TDM is useful in understanding where and why traffic happens within a region. The Victoria TDM shows an estimated 15 percent increase in population in the MPA, from the 2012 base year (87,542) to 2045 (100,348) and an estimated 25 percent increase in employment over the same years from 39,492 to 49,545 jobs.

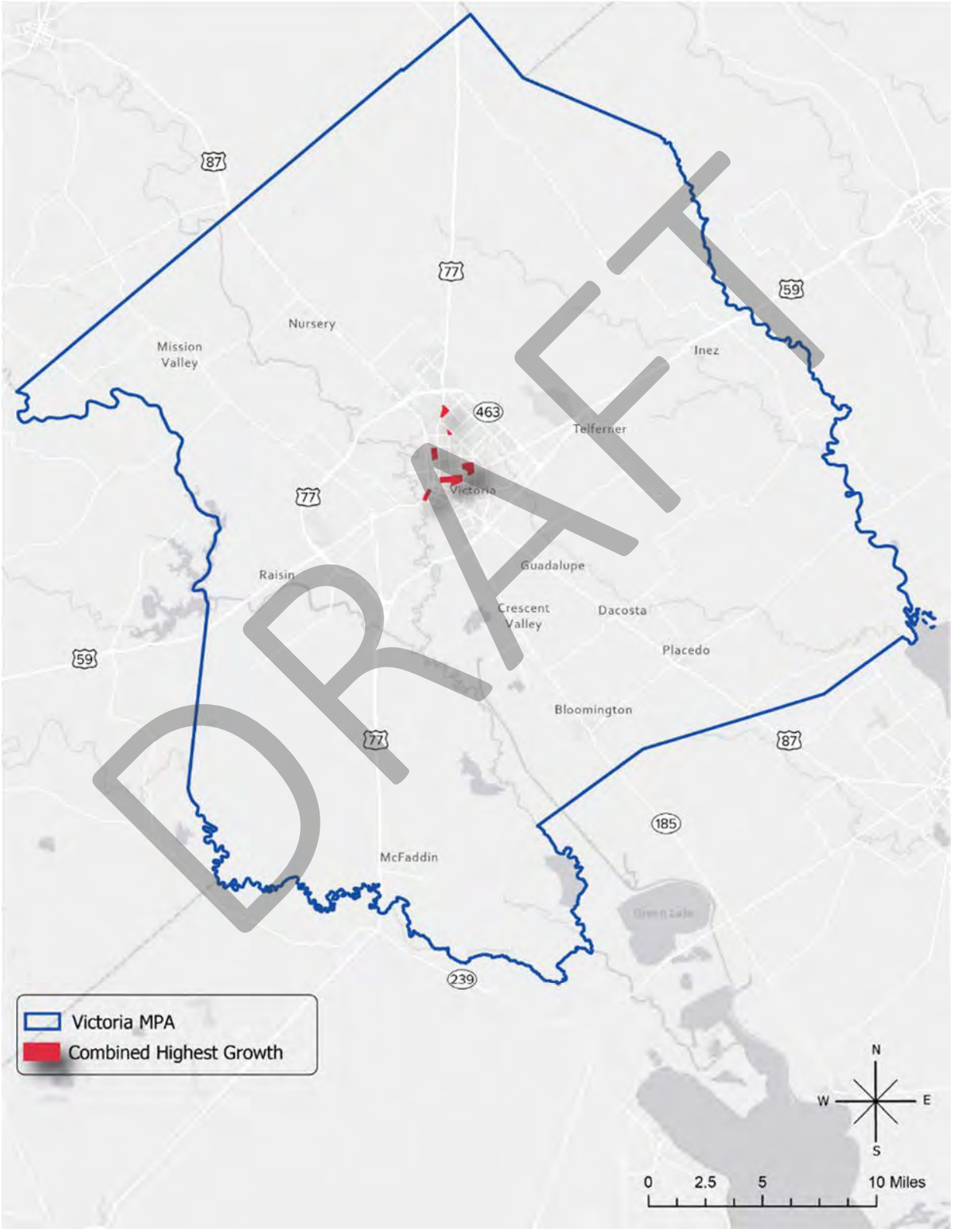
Analysis of the TDM helps analyze to a certain extent how trips are generated and the general directions these trips take. Analyzing regional travel patterns is critical in identifying critical segments in the transportation infrastructure as well as the capacity for these segments to support the anticipated trip volumes for a given year. Figure 3-1 illustrates the work trip "desire lines." These can be understood at high level as the trends and "weights" in direction for these modeled trips.

Figure 3-2 on the following page shows the areas with the highest combined population and employment projected growth by TAZ between the base year and the 2045 horizon year.

**FIGURE 3-1: WORK TRIP DESIRE LINES**




## FIGURE 3-2: VICTORIA MPA HIGHEST COMBINED GROWTH AREAS 2012-2045



# ROADWAYS

The foundation of the Victoria MPA transportation system is its roadways. A majority of commuters traveling to work in the planning area do so by driving or riding in an automobile along the region's roadway network; this roadway infrastructure also supports other modes of transportation such as public transit. This dependence on the roadway necessitates identifying issues with the roadway network and determining where there are needs for improvement. The analysis and discussion in this section focuses on commuter roadway travel, as well as using congestion and accessibility as key indicators of potential deficiencies. This assessment is intended to serve as a tool to pinpoint corridors experiencing high congestion throughout a typical weekday, highlight locations with accessibility concerns, and provide a baseline for evaluating roadway improvement projects.

## EXISTING CONGESTION ANALYSIS

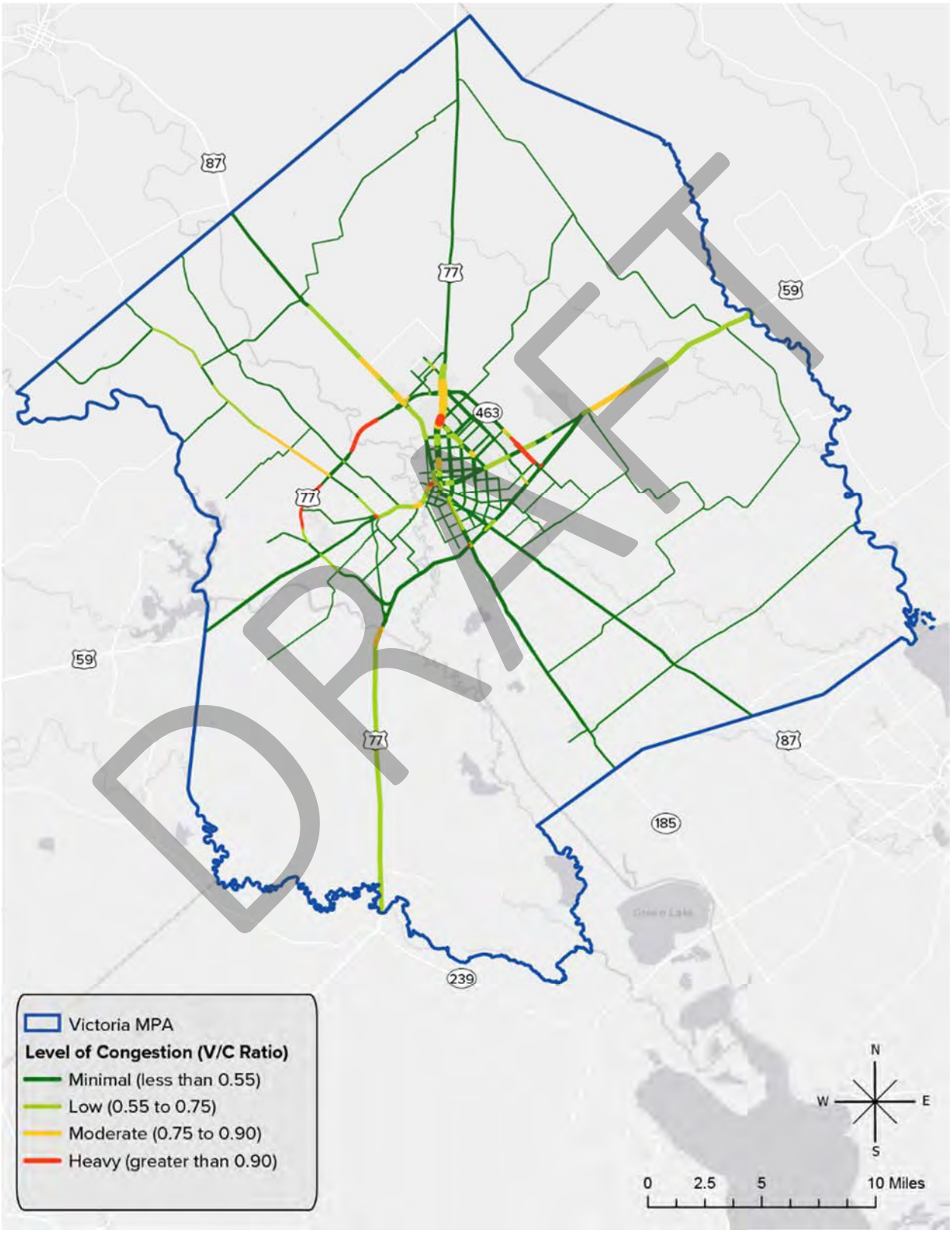
The Base Year Existing Conditions scenario network (see Figure 3-3) shows high levels of congestion occurring along US 77 and on SH 463 where the roadway connects to US 59T Business. Further, moderate congestion appears on highway/arterial segments extending from the City of Victoria to peripheral cities and highway junctions (e.g. US Hwy 77 S, FM 236, Nursery Dr, and Hwy 59). moderate to heavy congestion is also shown to occur within the City of Victoria along key arterials (e.g. N Navarro St, Zac Lentz Parkway, and US 59T Business). Table 3-2 below lists and provides congestion performance measures for the most congested road corridors in the MPA.



**TABLE 3-2: TOP CONGESTED CORRIDORS – 2012 EXISTING CONDITIONS SCENARIO**

| Roadway | To | From | VMT | Avg. V/C Ratio | Weighted Avg. TTI | Annual Weekday Vehicle Hours of Delay |
|---|---|---|---|---|---|---|
| Zac Lentz Parkway | Lone Tree Rd | .75 mi N of US 59T Bus | 21,942 | 1.15 | 1.23 | 28,549 |
| Hwy 77 | .6 mi N of FM 1685 | 1.4 mi S of Hwy 87 | 24,781 | 0.95 | 1.12 | 16,145 |
| Hwy 77 | Bob White Rd | .5 mi S of FM 236 | 17,196 | 0.93 | 1.11 | 10,214 |
| FM 236 | Hwy 77 | Weber Rd | 24,983 | 0.85 | 1.08 | 14,156 |
| N Navarro St | E Magruder Dr | E Larkspur St | 47,289 | 0.81 | 1.07 | 26,305 |
| Nursery Dr/Hwy 87 | Hwy 77 | Leeper Ln | 30,865 | 0.81 | 1.06 | 11,341 |
| Hwy 59 | .3 mi N of FM 1686 | Beck Rd | 60,734 | 0.76 | 1.05 | 12,978 |

## FIGURE 3-3: TDM ROADWAY CONGESTION - BASE YEAR



## FUTURE CONGESTION ANALYSIS

The 2045 "No-Build" TDM scenario network (Figure 3-4) simulates no new investments past what is currently under construction or committed for construction. This "No-Build" scenario is not intended to imply a lack of future investment, rather it is intended to serve as a tool to highlight possible future network deficiencies. The 2045 "No-Build" forecasts high levels of congestion along highways/arterials extending from the City of Victoria and connecting with outlying destinations, such as Nursery to the north and McFaddin to the southwest. The most noticeable increases in congestion occur along US Hwy 77 S (nearly the entire segment is forecasted to experience heavy congestion), US 59T Business, Nursery Dr north of Hwy 77, Hwy 77, and Zac Lentz Parkway. Congestion is also forecasted to increase along arterial roadways in and near the City of Victoria. This includes US 59T Business as it runs through Victoria, N Navarro St near downtown and approaching the US 77 junction, and N Main St north of W Mockingbird Ln.

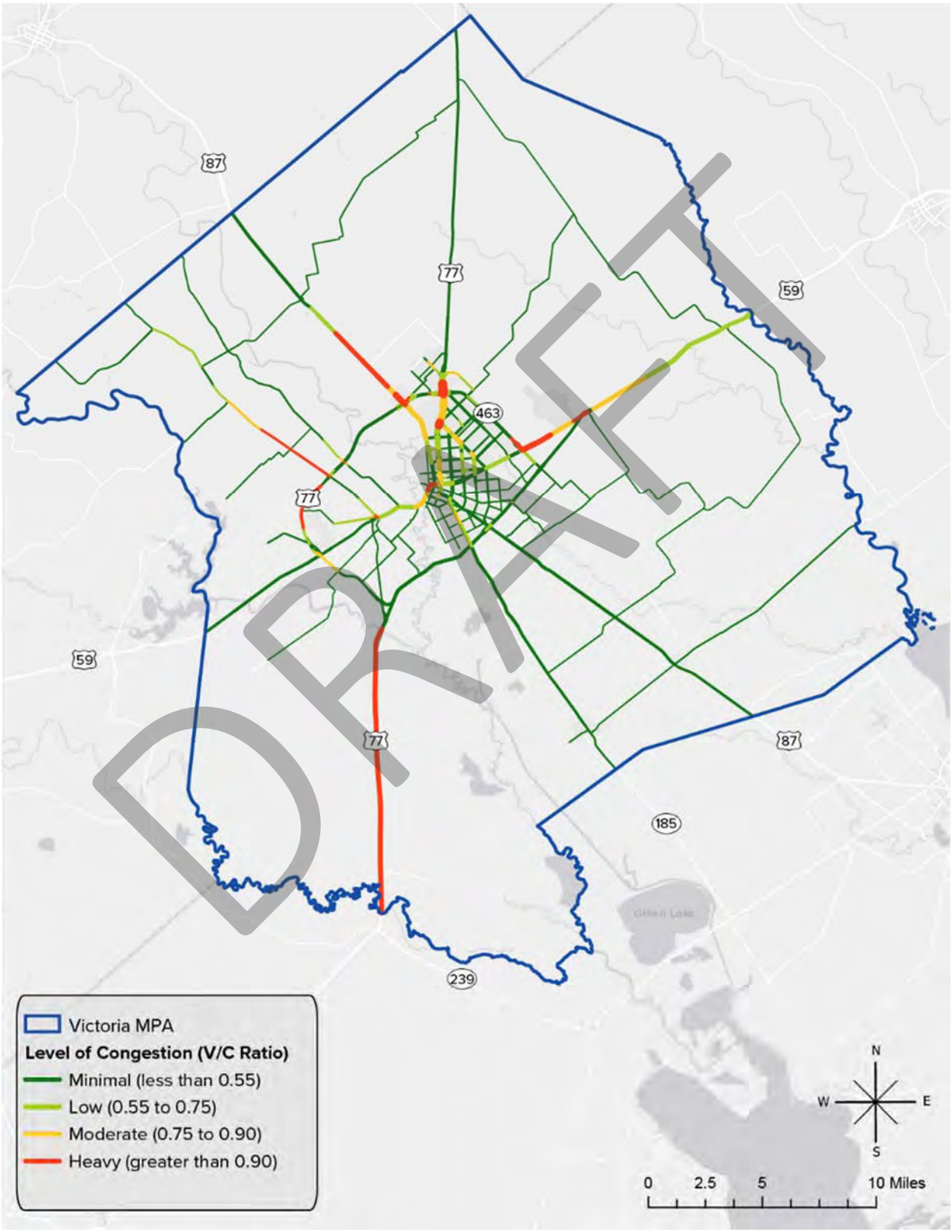
Table 3-3 presents a comparison of regional performance measures between the 2012 Existing Conditions scenario and the 2045 No Build scenario. This table is meant to quantify the anticipated changes in traffic and potential changes in congestion over time in the MPA in the E+C "No Build" Scenario.



**TABLE 3-3: REGIONAL TRAFFIC & CONGESTION PERFORMANCE MEASURES**

| | 2012 – Existing Conditions | | | 2045 – Future No Build | | | |
|---|---|---|---|---|---|---|---|
| | Interstate | Arterials | Total | Interstate | Arterials | Total | % Change for Totals |
| **Daily VMT** | 713,209 | 1,766,448 | 2,479,657 | 734,377 | 2,196,354 | 2,930,730 | 18% |
| **Daily VHT** | 13,029 | 48,062 | 61,091 | 12,958 | 61,079 | 74,037 | 21% |
| **Annual Weekday Vehicle Hours of Delay** | 105,935 | 230,575 | 336,510 | 99,880 | 655,880 | 755,760 | 125% |
| **Avg. V/C Ratio** | 0.46 | 0.30 | 0.32 | 0.45 | 0.33 | 0.35 | 8% |
| **Weighted Avg. TTI** | 1.03 | 1.02 | 1.02 | 0.85 | 0.82 | 1.04 | 2% |

## FIGURE 3-4: TDM ROADWAY CONGESTION - 2045 E + C



## OPERATIONS AND MAINTENANCE

Operational improvements and maintaining the current transportation system in state of good repair can be critical and effective, lower cost strategies for improving transportation and safety throughout the region. The operations and maintenance (O&M) analysis for the Victoria 2045 MTP determines the condition of pavement and bridges in the Victoria MPA and aims to identify any facilities that may require rehabilitation/maintenance. Figure 3-5 and Figure 3-6 show the locations of pavement or bridges in poor condition within at the county level, and at the city level.

### Pavement

The pavement analysis incorporated 2017 pavement condition data from FHWA's Highway Performance Monitoring System (HPMS). HPMS data provided a condition rating based on the International Roughness Index (IRI) for all National Highway System (NHS) roadways in Victoria County. The roadway segment data was filtered further to only include segments that were within the Victoria MPA. Based on guidance from the Code of Federal Regulations (23 C.F.R. §490.313), the IRI ratings for each roadway segment were classified into condition descriptions:

- Poor (IRI >170),
- Fair (IRI >=95 and <=170),
- Good (IRI <95).

The analysis then totaled the number of lane miles for each of the three conditions and calculated the percentage of interstate and non-interstate NHS lane miles by condition. Since there is no Interstate currently within the Victoria MPA no interstate road conditions are included. However, with plans of IH 69 continuing through Victoria County, these performance measures will be included in future planning efforts. Additionally, some non-NHS system roads had a condition rating and have been included here for planning purposes. It is important to note that the non-NHS portion only includes those with data to actually evaluate condition. A portion of the non-NHS roadways do not have this data and the shown percentages exclude those links.

### Bridges

The bridge condition analysis incorporated data from TxDOT's Open GIS Data Portal, [1] and followed guidance provided in FHWA's *Computation Procedure for the Bridge Condition Measures*, [2] and the Code of Federal Regulations (23 C.F.R. §490.409). First, the data was sorted to only include overpassing bridges in the Victoria MPA that were open to vehicle traffic with a length greater than 20 feet. Next, a minimum condition rating (zero through nine) was assigned to each bridge based on the lowest condition rating (also zero through nine) among each bridges' four components (i.e. substructure, superstructure, deck, and culverts). Each bridge was then classified as follows based on its minimum condition rating:

- four or less is poor condition,
- four and five are fair condition, and
- seven or greater is good condition.

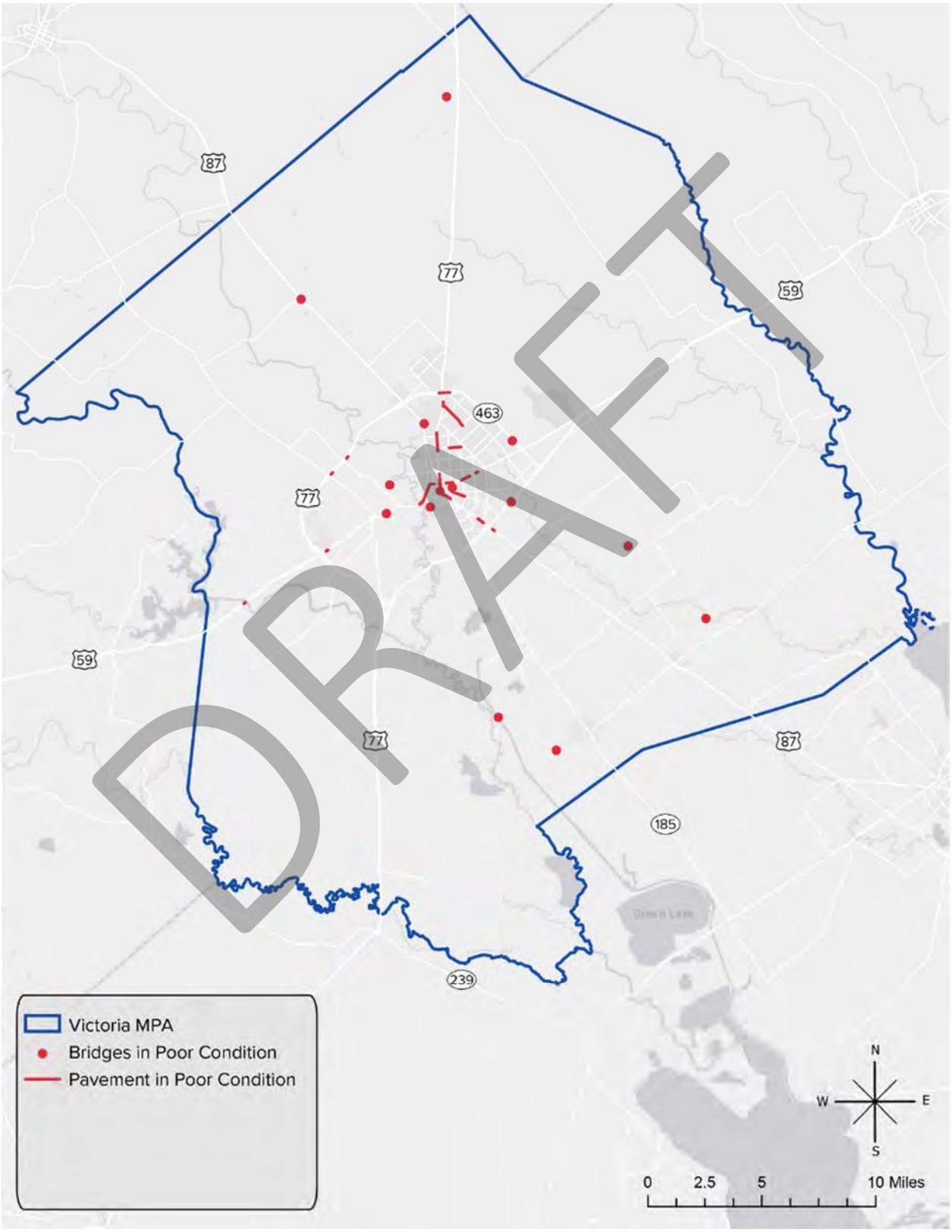
Any bridge identified as being in poor condition was also considered to be structurally deficient.

Of the 342 bridges included in the analysis, only 14 were identified as being in poor condition (Figure 3-5 and Figure 3-6).

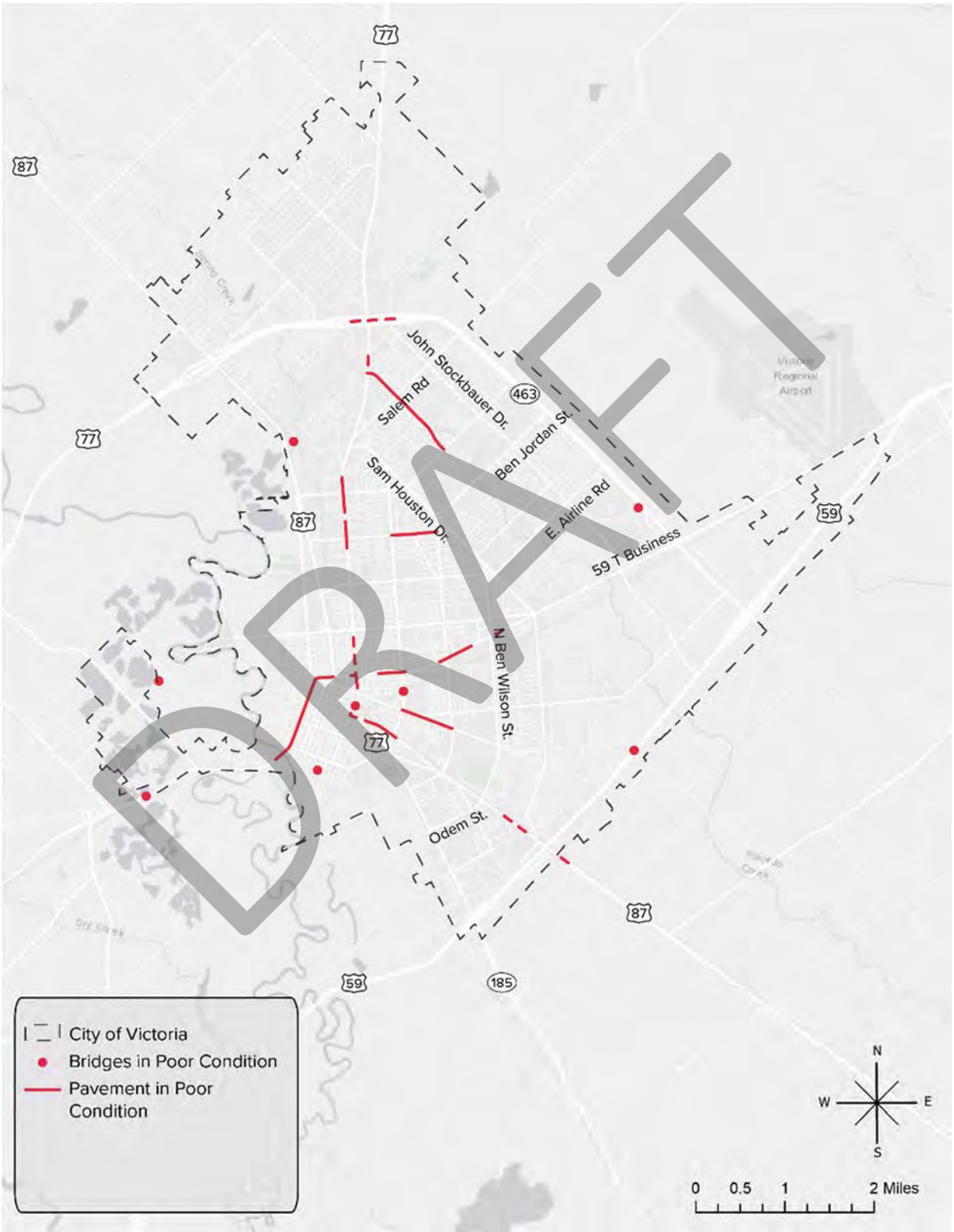
[1] [1] *Data was collected in January 2019. All recorded bridge inspections occurred in 2017.*

[2] https://www.fhwa.dot.gov/tpm/guidance/hif18023.pdf

## FIGURE 3-5: BRIDGES AND ROADWAY CONDITIONS - VICTORIA MPA



## FIGURE 3-6: BRIDGES AND ROADWAY CONDITIONS - CITY OF VICTORIA



# SAFETY NEEDS ANALYSIS

A safety analysis for the Victoria MPA examined the needs of the region through the analysis of traffic crashes, injuries, and the resiliency of the transportation system. Safety performance goals, measures, and targets were determined through gathering public feedback, understanding federal, state, and local safety goals, and completing a data-driven crash analysis process. Moving Ahead for Progress in the 21st Century (MAP-21) set national performance goals including the safety goal, "to achieve a significant reduction in traffic fatalities and serious injuries on all public roads." FAST Act continues this goal and the United States Department of Transportation also states a safety goal to "Reduce Transportation-Related Fatalities and Serious Injuries Across the Transportation System" in the 2018-2022 strategic plan. The State of Texas also indicates safety as an important goal for all transportation users stating the need to "improve multimodal transportation safety."

To gain a more complete understanding of the safety needs of the transportation system over the next 25 years, the safety analysis was based on patterns and characteristics of current and historical vehicle crashes on roadways. The base data was obtained from TxDOT's Crash Records Information System (CRIS) data system for the years of 2013 – 2017. This process aids in the identification of opportunities for safety improvements for the region and specific intersections and roadways within the Victoria MPA. As it is difficult to attain the necessary tools to predict future crashes for the transportation system in 2045, the safety needs assessment does not consider where crashes might occur in the future. It considers observed trends and hotspots for prioritizing safety improvements for the future.

## REGIONAL TRENDS

According to the CRIS data during the five-year period (2013-2017), a total of 4,199 crashes occurred in the Victoria MPA, with the annual total of crashes gradually increasing over time. The average annual total for 2013 to 2017 is 840 crashes per year. As shown in Table 1, 64% of the total crashes that occurred in the Victoria MPA over the five-year period were within Victoria's city limits. Figure 3-7 below shows the gradual growth in crashes in the Victoria MPA for the five-year period from 2013 to 2017. It is worth noting that the increase is also tied to a statistical increase in vehicle miles traveled on the roadways for the same period of time.

**FIGURE 3-7: TOTAL CRASHES OVER TIME (2013-2017)**


In contrast, Table 3-4 below shows a comparison between regional crashes and the statewide crashes for Texas, specifically noting where fatal and severe injury crashes in the Victoria planning area for both motorists and non-motorists comprise a minor portion of crashes in comparison to the statewide data set for the same period.

**TABLE 3-4: REGIONAL AND STATEWIDE CRASH COMPARISON (2013-2017)**

| Crash Type | Victoria MPA | State of Texas | MPO's % of State Crashes |
|---|---|---|---|
| All Crashes | 4,199 | 2,930,777 | 0.14% |
| Resulting in Fatality | 61 | 16,423 | 0.37% |
| Resulting in Serious Injury | 249 | 70,969 | 0.35% |
| Resulting in Ped/Bike Fatality | 12 | 3,217 | 0.37% |
| Resulting in Ped/Bike Serious Injury | 21 | 8,043 | 0.26% |

Through this safety analysis, the densities of crash locations throughout the region were mapped to reveal where higher concentrations of crashes, or crash "hot spots," occurred over the period from 2013 to 2017. The results of mapping all crashes over the five-year period show that crashes occurred most frequently around the vicinity of intersections of major roadways in the region.

Some of the largest hot spots exist near the following intersections, in no particular order:

- E. Rio Grande St./US 59T Business at N. Navarro St./US 77 Business
- Zac Lentz Parkway/Loop 463 at N. Navarro St./US Business 77
- E. Rio Grande St./US 59T Business at N Laurent St.
- Zac Lentz Parkway/Loop 463 at US 87

In addition, many of the moderate crash hot spots exist at intersections along the following roadways:

- Zac Lentz Parkway/Loop 463
- US 59
- US 77 Business
- US 59T Business
- Sam Houston Dr.
- N. Ben Jordan St.
- N. Ben Wilson St.
- John Stockbauer Dr.

Figure 3-8 and Figure 3-9 show heat maps illustrating the density of all crashes over the five-year period within the regional and city, respectively.

## FIGURE 3-8: CRASH DENSITY HEAT MAP FOR ALL CRASHES (2013-2017) – VICTORIA MPA

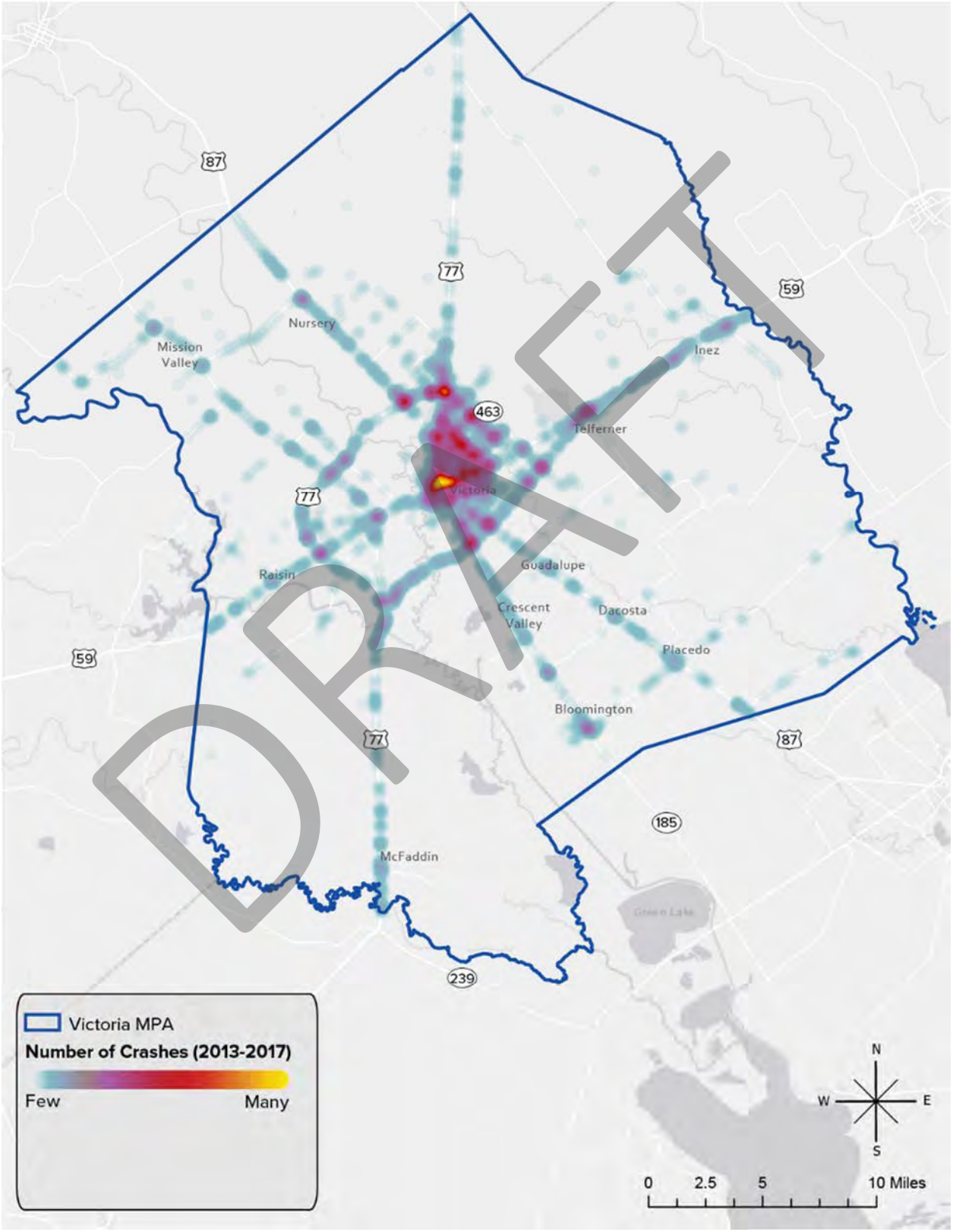
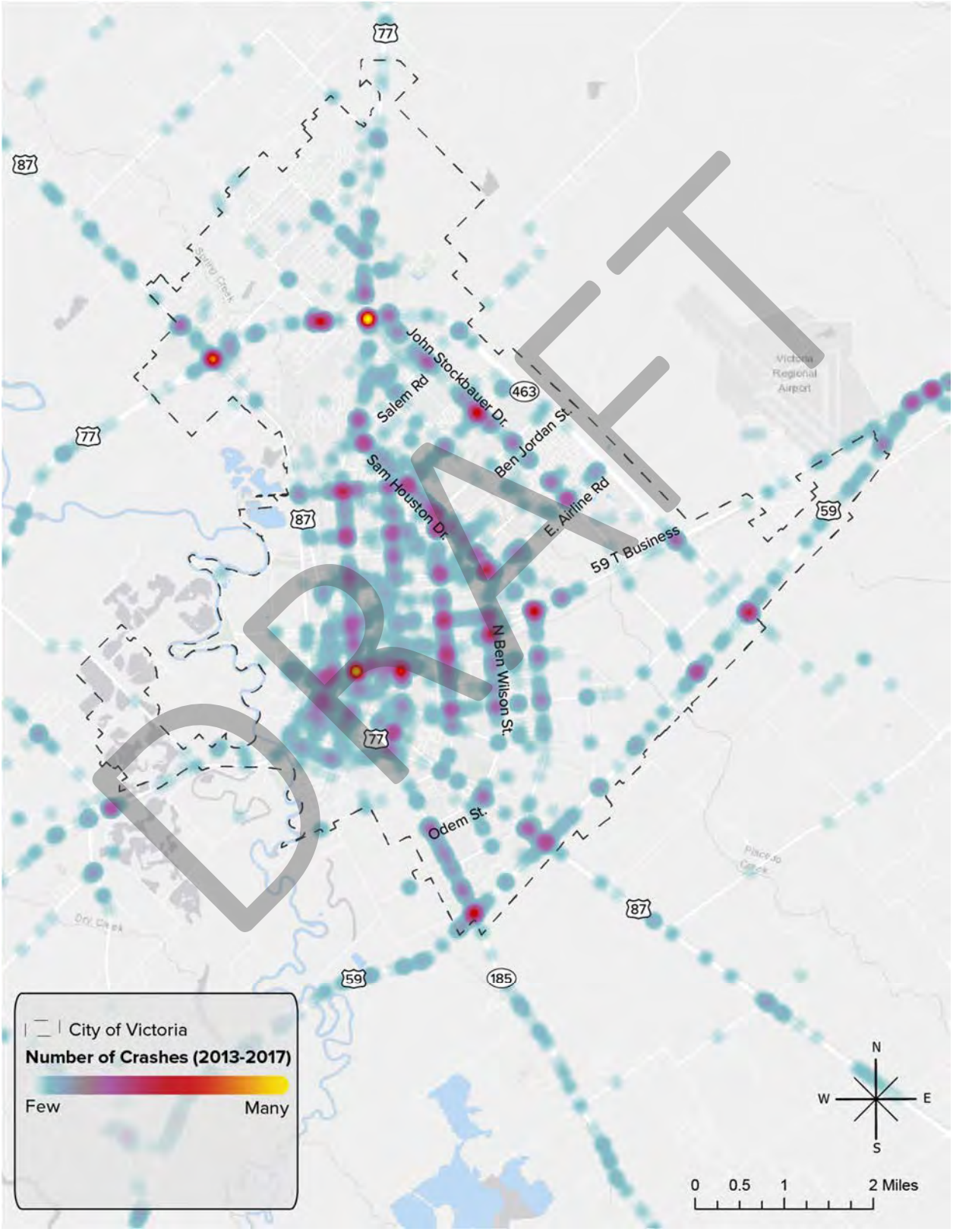


FIGURE 3-9: CRASH DESNITY HEAT MAP FOR ALL CRASHES (2013-2017) – CITY OF VICTORIA

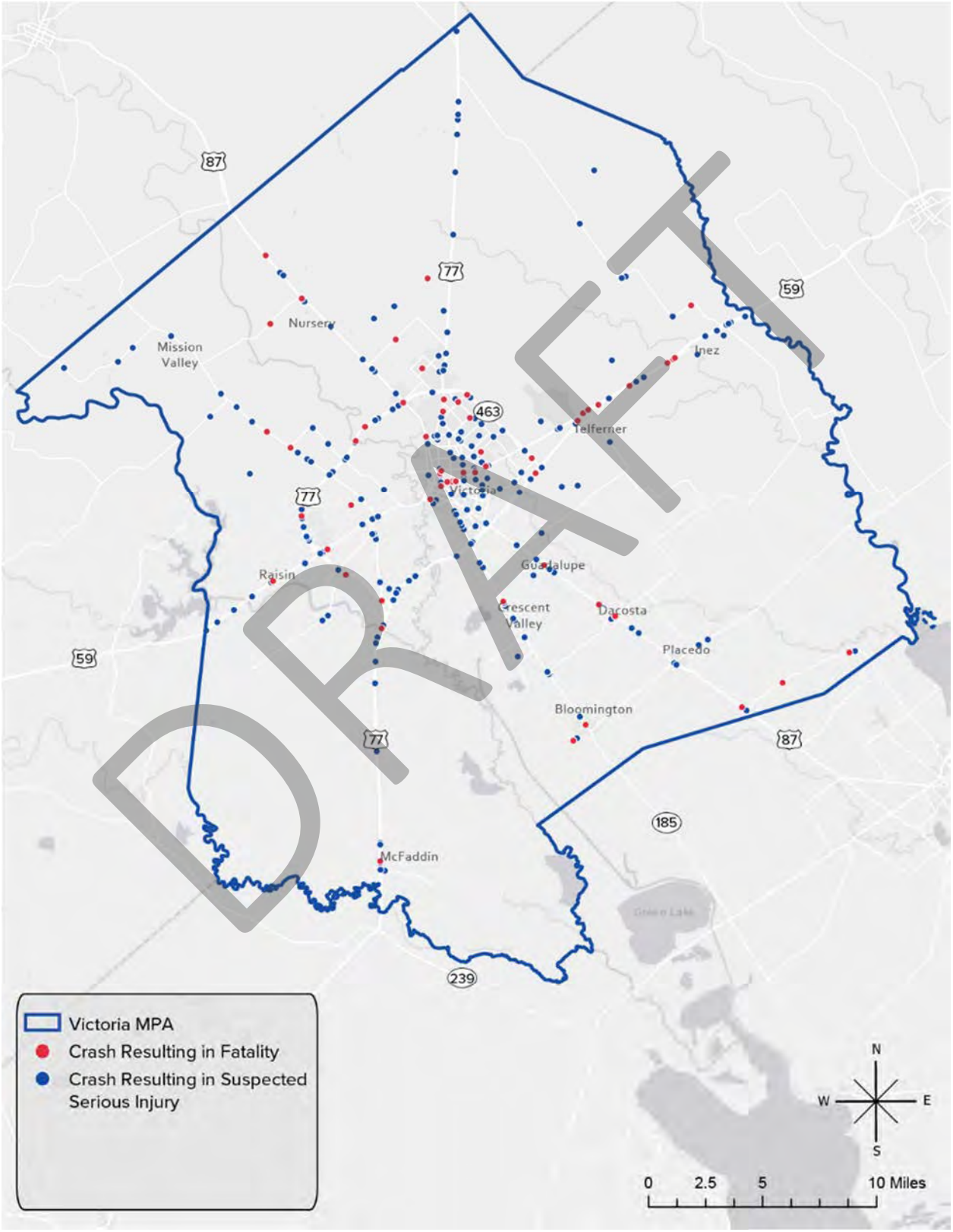


## CRASHES BY SEVERITY

Severity characteristics of crash data represent the level of impact on the people involved. The data obtained from CRIS breaks severity down into the following categories: Killed, Suspected Serious Injury, Non-Incapacitating Injury, Not Injured, Possible Injury, and Unknown. These categories represent the most severe impact experienced in a given crash, but do not necessarily account for all of the different impacts that may have resulted from the same crash. For example, a crash may be assigned a severity of "Killed," but this only means that the crash resulted in at least one death, despite the possibility that other people involved in the crash may have experienced serious or minor injuries or may not have been injured at all. Over the five-year period, a majority of the reported crashes resulted in no injuries (about 54%). In the 61 crashes that were marked with a severity of "Killed," a total of 70 fatalities occurred. Although 249 crashes were marked with a severity of "Suspected Serious Injury", they resulted in a total of 325 people suspected to have experienced a serious injury. Overall, crashes that resulted in a severity of "Killed" or "Suspected Serious Injury" made up approximately 7% of the total crashes in the region from 2013 to 2017. Figure 3-10 shows the locations of crashes that resulted either fatality or suspected serious injury. The following locations were identified as recurring locations for this type of crash, in no particular order:

- E. Rio Grande St./US 59T Business at N Laurent St.
- NW Zac Lentz Parkway/US 77 at E. Coletoville Rd.
- US 87 at FM 447/Castillo St.
- US 59 and US 59T Business near where they merge northeast of the Victoria City limits
- US 87
- US 59
- US 77
- US 59T Business
- US 77 Business
- State Highway 185

FIGURE 3-10: FATAL OR SEVERE CRASHES (2013-2017) – VICTORIA MPA



## CRASHES INVOLVING PEDESTRIANS OR BICYCLISTS

In the Victoria MPA, there were 63 crashes involving either pedestrians or bicyclists from 2013 to 2017, which equals 2% of the total crashes that occurred in the region over that period (as illustrated in Figure 3-11). Of the 63 crashes, 41 (65%) involved pedestrians and 22 (35%) involved bicyclists. In addition, 61% of crashes involving pedestrians resulted in either fatality or suspected serious injury for the pedestrians, and 37% of crashes involving bicyclists resulted in either fatality or suspected serious injury for the bicyclists. Table 5 provides a more detailed breakdown of the severity of crashes involving pedestrians or bicyclists.

**TABLE 3-5: FATALITY OR SERIOUS INJURY OF PEDESTRIANS OR BICYCLISTS (2013 – 2017)**

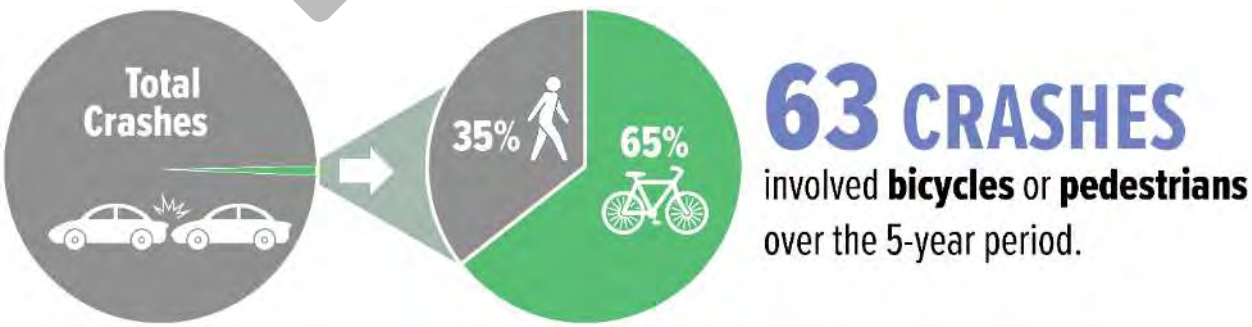
| Crash Severity | Crashes Involving Pedestrians | | Crashes Involving Bicyclists | |
|---|---|---|---|---|
| Killed | 11 | 27% | 1 | 5% |
| Suspected Serious Injury | 14 | 34% | 7 | 32% |
| All Crashes Involving Ped/Bike | 41 | 100% | 22 | 100% |

The predominant recurring location for fatal or severe crashes for non-motorized users between 2013 to 2017 was the intersection of US 59T Business at Sam Houston Dr./Delmar Dr.

Other locations where a recurrence for fatal or severe crashes involving pedestrians or bicyclists exist along the following roadways in no particular order:

- Katribe St. (in Bloomington)
- US 59T Business
- US 77 Business
- US 87 near Zac Lentz Parkway/Loop 463
- John Stockbauer Dr.
- N. Ben Wilson St.

**FIGURE 3-11: TOTAL BICYCLE OR PEDESTRIAN CRASH COUNT COMPARISON (2013-2017)**



# TRANSIT ANALYSIS

The following section provides an analysis of the existing transit system/services, the transit needs of the Victoria MPA, and possible opportunities for improvement to guide the Victoria MPO and its planning partners in prioritizing public transportation investments.

## TRANSIT PROVIDERS

The analysis contains an inventory of existing services, an in-depth look at how the system serves existing population and employment, and a gap analysis based on transit supply/demand and key destinations found within the region. The transit needs analysis uses information gathered from the Victoria MPO, US Census, Golden Crescent Regional Planning Commission (GCRPC) and is supported by a Geographical Information Systems (GIS) analysis. Generating an understanding of the region's existing transit system helps identify the strengths of the system, as well as where deficiencies in service occur. This detailed understanding is used to identify potential public transportation deficiencies in light of the current and future regional population.

### Victoria Transit

Victoria Transit has been operated by the Golden Crescent Regional Planning Commission (GCRPC) since 1986. Victoria Transit operates in the urban area of the City of Victoria and provides service to the general public, elderly, and persons experiencing disabilities. The service is provided through a combination of Fixed-Route and demand response paratransit service. According to 2017 National Transit Database (NTD) data, the service area for Victoria Transit totaled thirty square miles serving the urbanized area's population of 60,603.

#### *Fixed-Route*

Victoria Transit operates four Fixed-Route bus lines from 7:00am to 6:00pm, Monday through Friday. Fixed-route service operates on a predetermined route, and transit users must board at designated bus stops along the route. Routes Red, Blue, Green and Gold are fixed-route services in the City of Victoria.

#### *Flex-Route Job Access*

Victoria Transit operates three Flex-Route bus lines, which serve primarily as fixed routes, and provide complementary ADA paratransit service, from 6:00pm to 10:00pm Monday through Friday and from 11:00am to 10:00pm on Saturday. These routes serve as Hybrid fixed route/flex-route and provide important job access.

#### *Paratransit*

Victoria Transit operates a Demand Response Paratransit service for qualified individuals through two different services. The first service operates during Fixed-Route service, Monday through Friday from 7:00am to 6:00pm. Paratransit service during these hours serves individuals within city limits. The second service operates during Flex-Route service from 6:00pm to 10:00pm Monday through Friday, and from 11:00am to 10:00pm on Saturdays. Service during these times will only accommodate qualified individual's trip origin and destination within three quarters of a mile from a Flex-Route stop.

### RTransit

RTransit is a service of the GCRPC to serve rural residents in the Golden Crescent Region. Operating in the rural areas of Victoria County, it provides Demand Response and curb-to-curb services.

### Medical Transportation Management

Medical Transportation Management (MTM) is under contract with GCRPC to provide non-emergency medical transportation to rural Victoria County. They offer a variety of services dependent upon customer needs. MTM won the contract in 2014 from the GCRPC.

## TRANSIT GAP ANALYSIS

To understand how well the current transit system serves the Victoria MPA, a transit gap analysis was conducted based on existing service and a GIS based spatial analysis was conducted to generate measures which show transit demand and supply throughout the region. With regards to transit service, both measures were analyzed separately to identify specific areas where supply is currently lacking, and demand is high. In other words, the intent of the analysis was to find areas that could potentially benefit from improved service.

### Existing Transit Demand

Understanding where transit demand exists is critical to determining which transit projects could have the largest impact on those who depend on transit and those who may choose to use transit as a mode of transportation over the next 25 years.

The project team explored existing transit demand by using 2017 American Community Survey (ACS) data at the block group level to identify concentrations of people most likely to use alternative modes of transportation. For purposes of this analysis, transit demand was represented by Transit Dependent Population (census block group data of those too old/young to drive or those unable to obtain/drive a personal automobile) and At-Risk Population (ARP), being those who experience other possible barriers to mobility or being able to drive a personal automobile.

A Transit Need Index (TNI) was then developed as a combination of both TDP and ARP factors. Figure 3-12 represents the TNI scores within the MPA and Figure 3-13 details the TNI scores within the City of Victoria. Populations outside the Fixed-Route walkshed that have a high TNI score are highlighted.



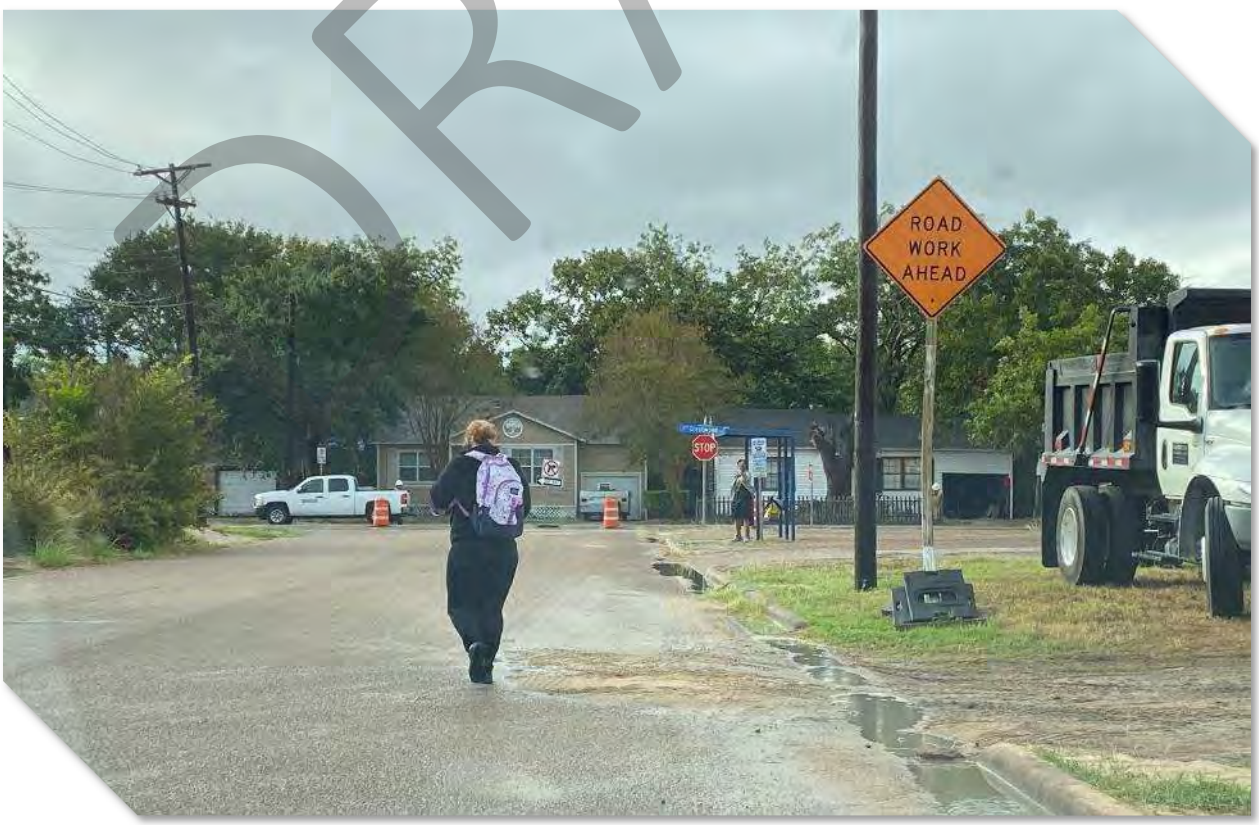
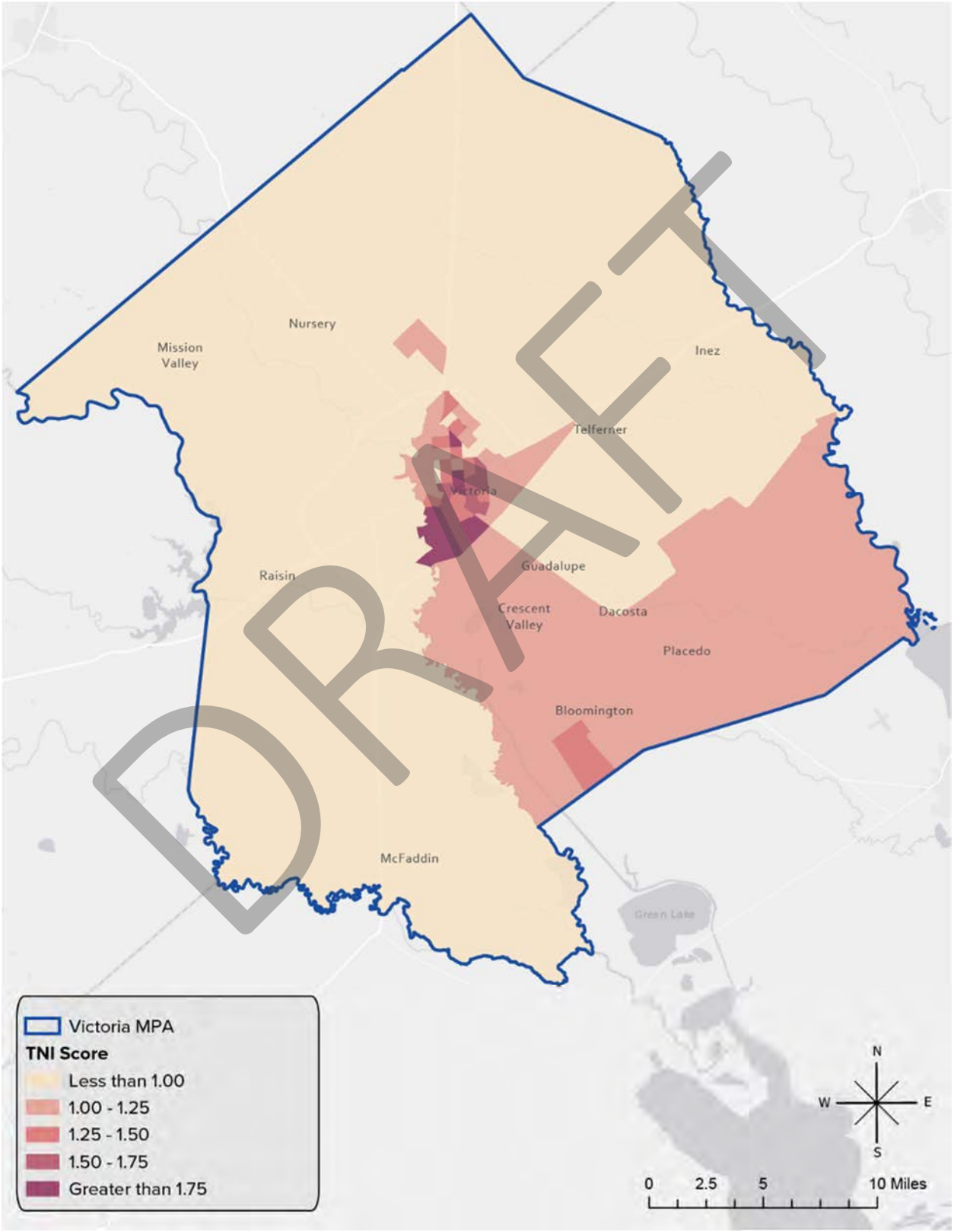
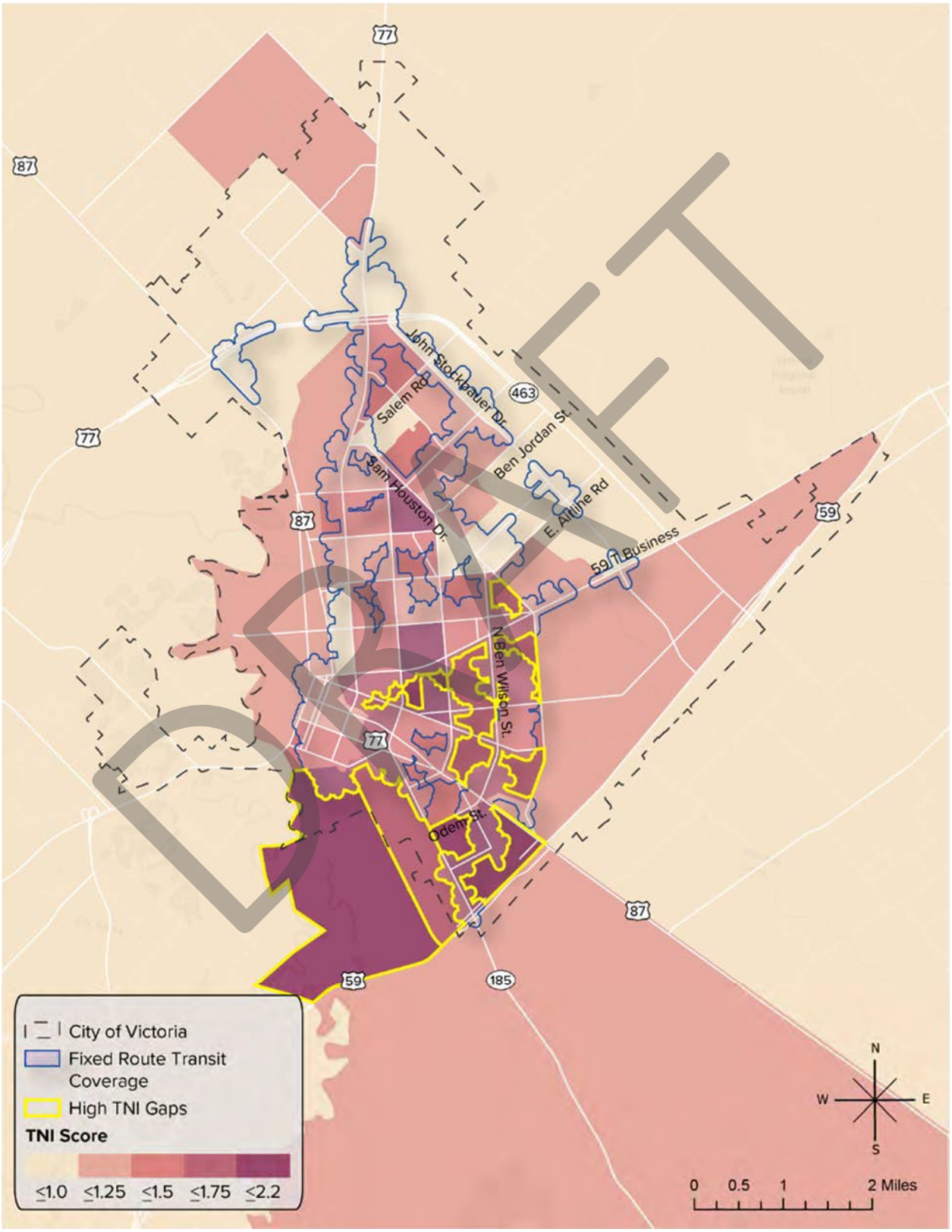


FIGURE 3-12: TRANSIT NEED INDEX SCORES BY BLOCK GROUP IN MPA



## FIGURE 3-13: TRANSIT NEED INDEX SCORES AND FIXED-ROUTE SERVICE IN CITY OF VICTORIA



## Transit Supply

Transit supply is represented by the quality of service (e.g. route frequency, span of service, weekend/night coverage, etc.) and amenities (e.g. shelters, real time updates, etc.) provided to the general public through existing transit coverage. Detailed span of service information for Victoria Transit can be found under the *Existing Service* section. Because of the lack of disparity in existing supply conditions, an analysis on coverage regarding key destinations within the MPA was conducted to display how well the current Fixed-Route system is serving important points of interest (POI) in the area. Key POI considered in this analysis include:

- Schools (K-12)
- Higher Education (Universities, Community College)[3]
- Community Destinations (Libraries, Community Centers, Grocery Stores)
- Government Facilities (Local, State, Federal)
- Hospital or Medical Facilities
- Religious Institutions
- Retail Centers

As shown in Table 3-6, more than half of the POIs in the MPA are covered by Fixed-Route service (66%). Medical destinations (94%) are provided high coverage as well as community destinations (86%). Schools and colleges have the lower coverage (51%), though K-12 Schools tend to rely more on parent drop-offs than transit.

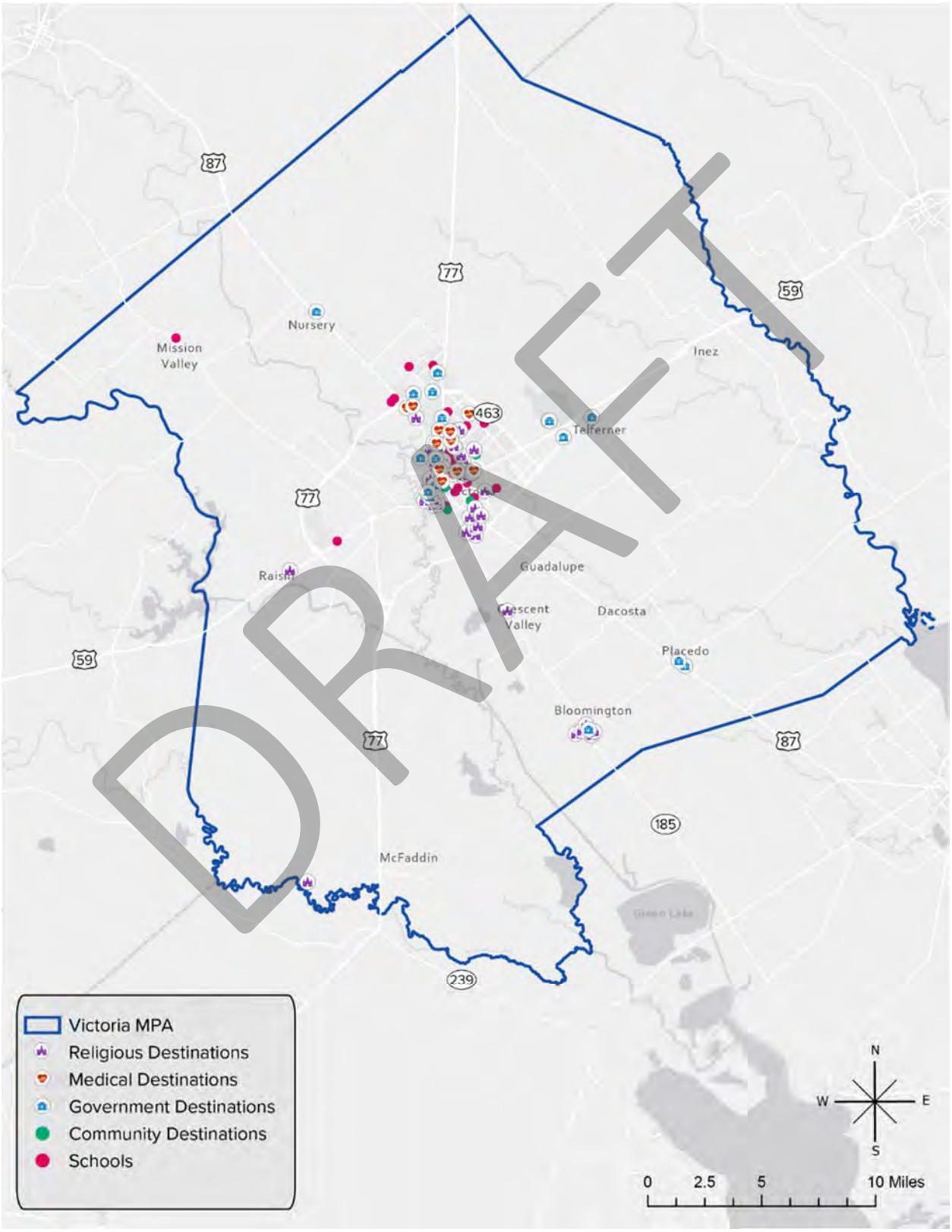
**TABLE 3-6: POINTS OF INTEREST SERVED BY TRANSIT IN THE MPA**

| Destination | Total | Served | Not Served | % of Total |
|---|---|---|---|---|
| Schools | 35 | 18 | 17 | 51% |
| Community | 7 | 6 | 1 | 86% |
| Government | 25 | 14 | 11 | 56% |
| Medical | 17 | 16 | 1 | 94% |
| Religious | 48 | 33 | 15 | 69% |
| Total | 132 | 87 | 45 | 66% |

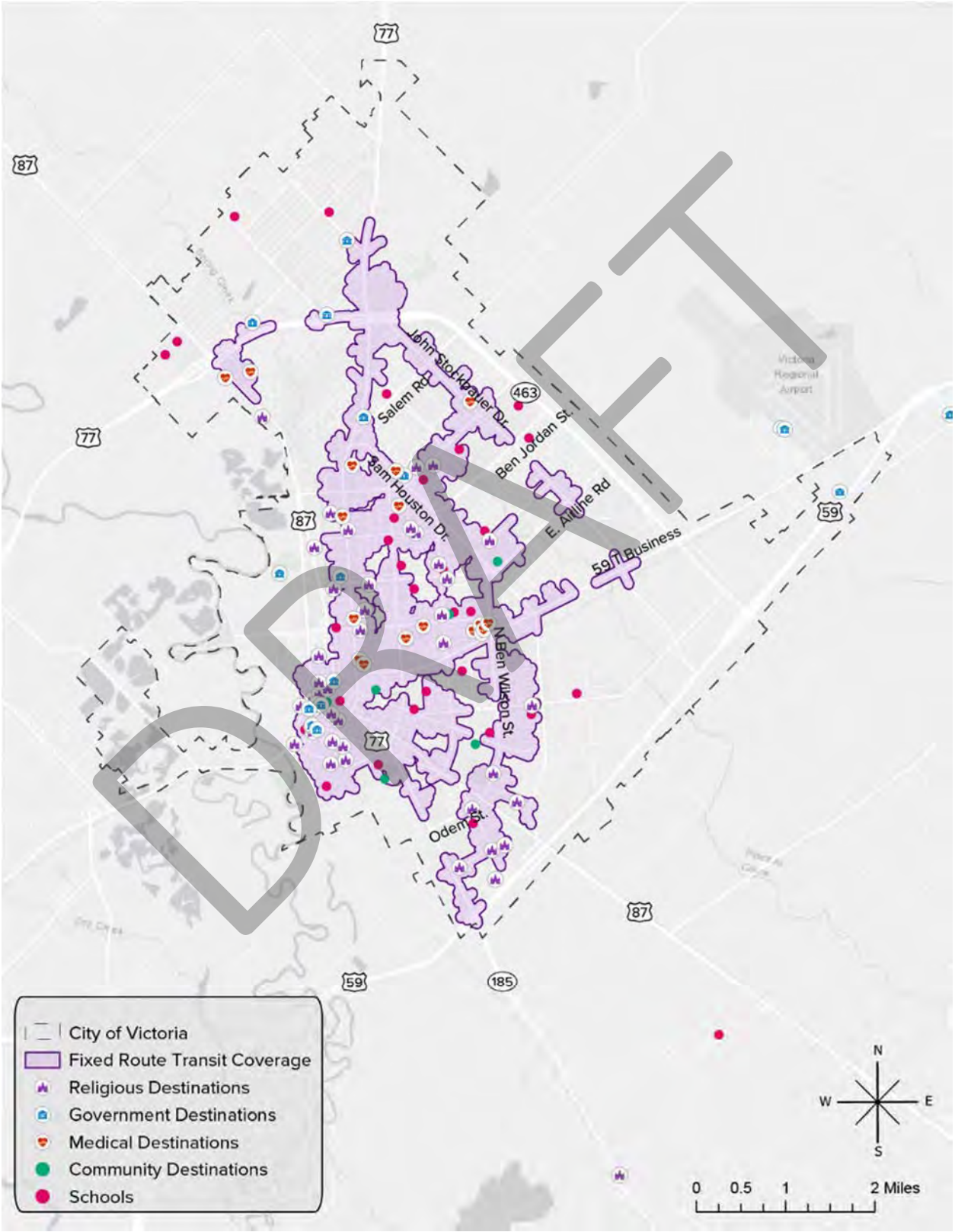
Figure 3-14 shows the geographic distribution of POIs in the MPA, and Figure 3-15 highlights those destinations within Fixed-Route service in the MPA.

[3] *School location data was provided for 2018 and does not take into account the construction or closure of any schools beyond that year. Updated school data will be included when made available.*

## FIGURE 3-14: GROUPED POINTS OF INTEREST IN MPA



## FIGURE 3-15: KEY DESTINATIONS SERVED BY FIXED-ROUTE TRANSIT



### *Employment Coverage*

Victoria county is anchored by several large employers from the petrochemical industry based upon its proximity to the gulf coast, where the industry has a large footprint. Other major employers include regional hospitals, government and public education, and Caterpillar, a heavy machinery manufacturer as shown in Table 3-7.

These factors along with an analysis using ACS employment data at the block group level helped inform the analysis of transit coverage to employment centers. Traveling to and from work often comprises a major trip purpose for using transit. This type of analysis provides the percentage of area reached by a ¼ mile walk shed from each transit stop, which can then be applied to the number of jobs within a block group (i.e. ¼ mile from a bus stop reaches 25% of the area of a block group, thus reaching 25% of the jobs in a block group) and gives us an estimate of how many jobs may be captured in that buffer. Utilizing the walkshed analysis Figure 3-16 on the following page illustrates the number of jobs captured per block group by the fixed route transit service in the Victoria MPA.

In addition to the possible employment capture with current transit service, it is worth noting that some of the largest employers for the County are located in adjacent counties. This is important when considering regional coordination in transit between Victoria Transit and GCRPC rural transit services as well as impacts on interregional travel.

**TABLE 3-7: TOP 10 VICTORIA COUNTY EMPLOYERS**

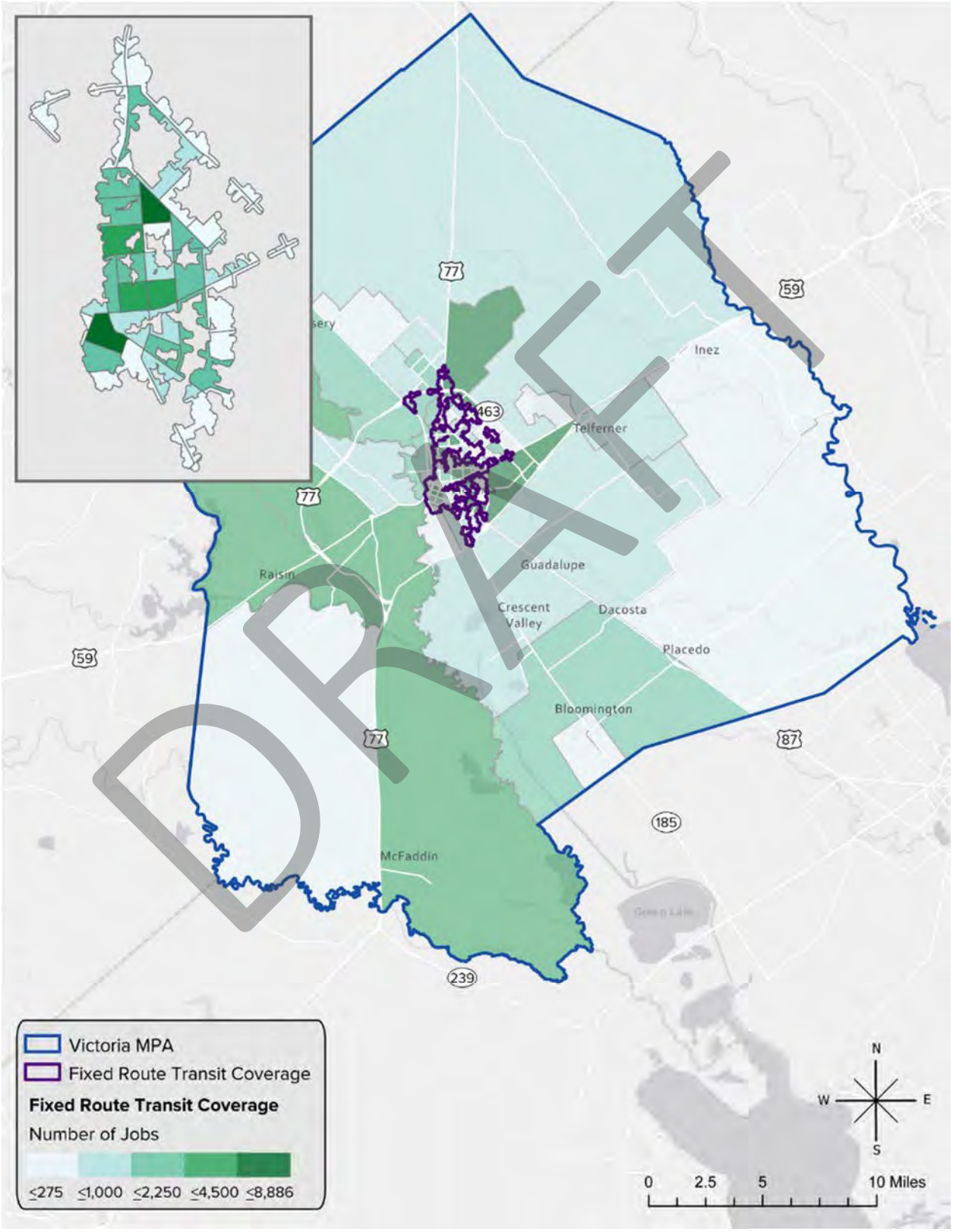
| Employer | Total Employees | Industry |
|---|---|---|
| Formosa Plastics | 3048 | Petrochemical/Plastics |
| Victoria ISD | 2005 | Public Education |
| The Inteplast Group | 1179 | Plastic Products |
| DeTar Healthcare System | 950 | Hospital |
| Citizens Medical Center | 936 | Hospital |
| DOW- Seadrift Operations | 611 | Petrochemical |
| Regency Post-Acute Healthcare System | 609 | Healthcare |
| INVISTA | 600 | Petrochemical |
| City of Victoria | 591 | Municipal Government & Services |
| Caterpillar – NAHEX Victoria | 575 | Heavy Excavators |
| Calhoun ISD | 572 | Public Education |
| Victoria County* | 547 | Municipal Government & Services |

***Sources:*** *Victoria Economic Development Corporation. [4] City of Victoria, & Victoria County Administrative Services*

**In addition to the 547 employees listed above (535 full time, 12 part time), Victoria County currently employs 355 temporary part time employees which includes election workers as seasonal positions.*

[4] http://www.victoriaedc.com/major-employers

FIGURE 3-16: FIXED-ROUTE TRANSIT SERVICE 2015 EMPLOYMENT COVERAGE



## TRANSIT COORDINATION AND PLANNING

Coordination between providers and stakeholders in public transportation is a critical step in leveraging existing resources to safely and effectively provide mobility services. These coordination efforts when performed in tandem with long and short-range planning can have real impacts on improving choice and quality of transit services.

### Coordinated Human Services Transportation Planning

The Coordinated Human Service Transportation Plans (CHST) exist to coordinate multiple rural or paratransit services within a region and to ensure that an adequate level of service is met for rural or disabled populations. The gaps and needs of the MPA regarding rural and paratransit service will be summarized from the following documents:

- GCRPC 2017-2021 Regionally Coordinated Transportation plan
- Victoria MPO 2040 Metropolitan Transportation Plan

This coordinated effort also provides a platform for peer review and best practices sharing amongst small rural providers.

### Golden Crescent Regional Planning Commission

The GCRPC conducted a survey within all counties in the GCRPC region to garner public feedback on how to improve the public transportation system. In total, 456 surveys were received, of which 278 responses came from Victoria County, the same geographical boundary as the MPA. Sentiments from Victoria County respondents included:

- Limited operating hours
- Limited rural access
- Lack of information (advertisement and website)
- Long commute times

A survey was also distributed to businesses in the GCRPC region, with 20 respondents. Of those respondents nearly half (47.8%) were from Victoria County. 70% of businesses indicated that public transportation services in their county did not meet the needs of the community, while 45% of businesses indicated they would not participate in a cost-share program for employee transportation if the program existed. 30% of respondents indicated they would participate.

### Victoria Metropolitan Planning Organization

As part of the previous 2040 MTP update the Victoria MPO also launched a public outreach campaign, titled “Voice of Victoria.” 314 responses were received 127 of which were from a targeted transit survey. The transit related feedback received from the outreach effort included:

- Transit users indicated a higher satisfaction with transit service across four questions, compared with non-transit users
- Bus Stop placement and route timing were areas of concern
- Desire for additional stops and routes and improving route performance was indicated
- Overall, there was a positive view of the Victoria Transit system by residents, and comments were in light of improving current services to make using transit easier.

### Transit Asset Management Planning

The Transit Asset Management Plan (TAM) is mandated by the FTA for all transit agencies that own, operate, or mange capital assets used to provide public transportation services and receive funds from the FTA. The plan must be updated every four years, and though it does not need to be submitted to the FTA, each agency completing a TAM plan must submit data to the National Transit Database (NTD). The TAM plan is a systematic tool that helps manage

maintenance, inspection, replacement, and deterioration of assets. It is the basis for moving the transit system towards a state of good repair. The local transit agency works in coordination with the MPO and State government to set performance targets to ensure consistent, safe, and fiscally responsible actions are taken to move towards a state of good repair.

As of 2017, the Golden Crescent Regional Planning Commission operate 5 commuter buses, 15 demand response buses, and 10 city buses through Victoria Transit and RTransit. GCRPC has identified unfunded project needs for both small-urban projects and rural projects through the 2017-2020 Transportation Improvement Program (TIP). For small-urban projects, GCRPC has identified $2,846,894 for unfunded small-urban capital needs and $4,421,610 for rural project needs. These unfunded needs have been prioritized so that if additional funding becomes available, projects can be funded accordingly.

## Public Transportation Agency Safety Planning

In addition to the TAM plan, a Public Transportation Agency Safety Plan (PTASP) is being developed for adoption prior to July of 2020, based on FTA mandates. This plan includes many aspects of the current TAM plan to ensure a systematic and company-wide approach to safety and risk management is undergone, and similar levels of coordination will occur between Victoria Transit, the MPO, and TxDOT in establishing performance targets according to FTA's final rule on PTASPs.

# ACTIVE TRANSPORTATION ANALYSIS

A component of a balanced transportation system that supports mobility is often the active transportation infrastructure. This infrastructure helps provide residents safe and accessible facilities for choosing non-motorized travel throughout the region and often provide key accessibility connections to people with mobility challenges. This type of travel includes but is not limited to travel by walking; bicycling; wheelchairs and mobility devices; skateboards; and scooters. An active transportation network primarily consists of bicycle and pedestrian facilities including but not limited to sidewalks, curb cuts, pedestrian actuated signals, on-street bicycle lanes, and off-street multi-use trails. These facilities are critical infrastructure that ensures the transportation network supports transportation choice, accessibility, and safety for all roadway users.

Benefits of a connected active transportation network also extends to transit users and the transit system as it provides "last mile" infrastructure to help move people to and from transit stops.

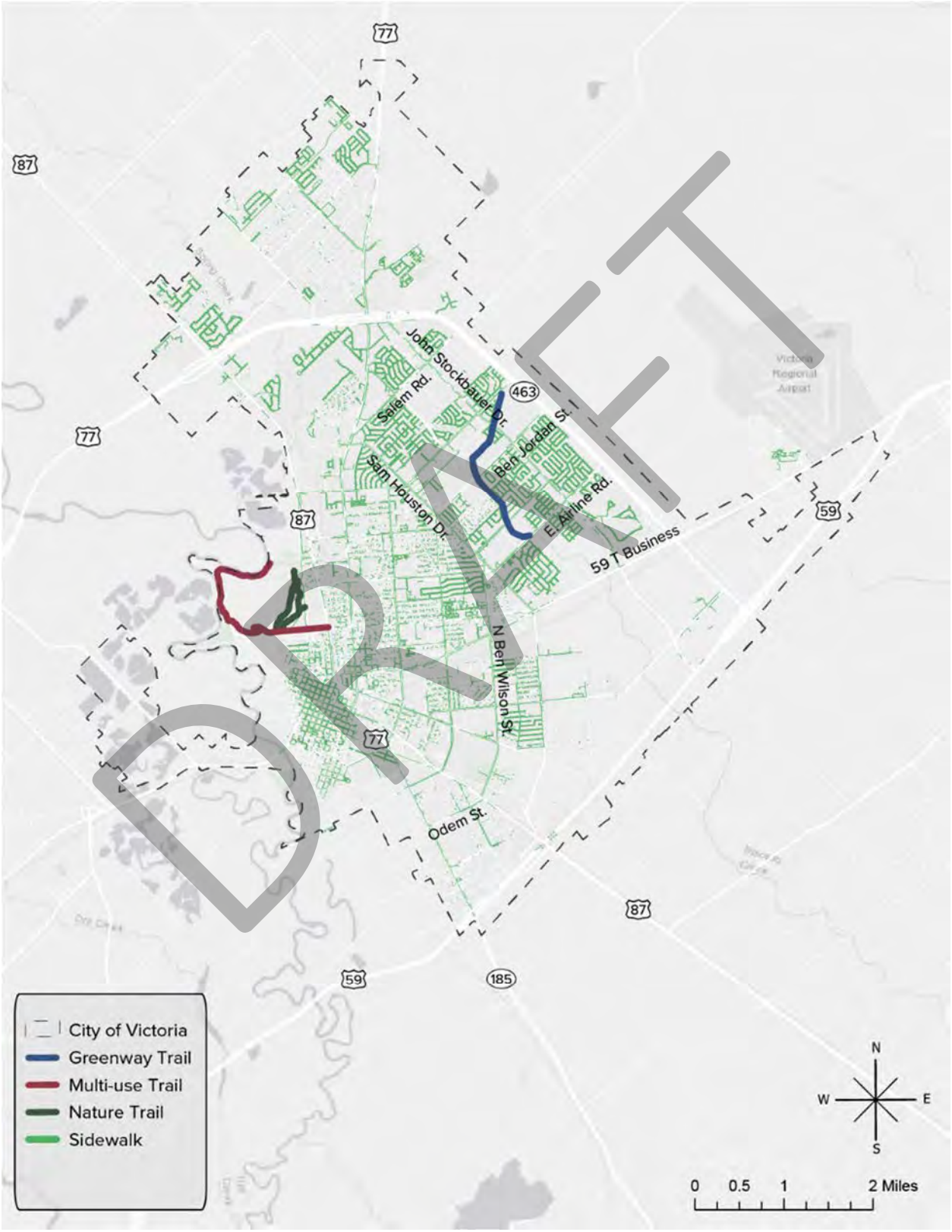
The following analysis explores where existing pedestrian and bicycle facilities are in relation to where they are most needed in the Victoria MPA. Additionally, this section identifies gaps in the active transportation network as well as level of stress and environmental quality indices for those using this system.

## EXISTING FACILITIES

Though the planning efforts enacted through the MTP process cover the entirety of the MPA, this analysis predominantly focuses on the existing bicycle and pedestrian facilities which are limited to the Victoria urbanized area mapped in Figure 3-17. These facilities include sidewalks, a nature trail, a greenway trail, and a multi-use trail:

- **Sidewalks** – Sidewalks are a critical component to building a continuous and connected pedestrian network. The existing sidewalk network shown in Figure 3-17 is limited to the available data and may not fully represent the current network. However, it provides a good representation of existing facilities.
- **Lone Creek Hike and Bike Trail** – This trail is a 2.1-mile-long, off-street, paved greenway trail for people walking, biking, scooting, or using a wheelchair. It connects to Victoria East High School to the north and runs to East Airline Road to the south.
- **Riverside Park Hike and Bike Trail** – This paved, multi-use trail runs a little longer than a mile along the western side of Riverside Park, connecting to the golf course, the Guadalupe River, and Riverside Stadium.
- **Tonkawa Nature Trail** – This one-mile, natural-surface trail is located within the Athey Nature Area and gives visitors the opportunity to walk through nature.

## FIGURE 3-17: CURRENT BIKE AND PEDESTRIAN FACILITIES

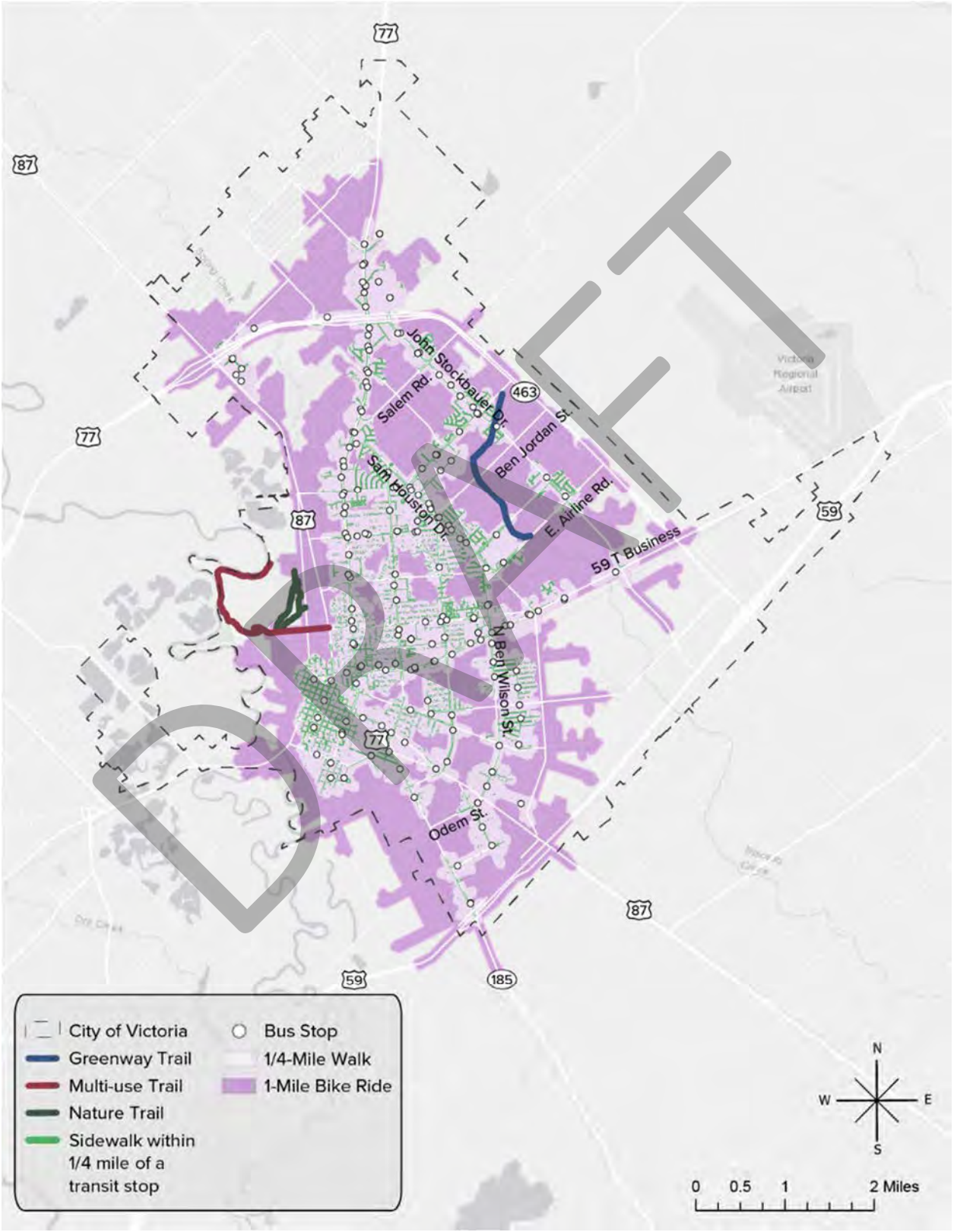


## CONNECTIONS TO TRANSIT

Active transportation networks also provide important connections to transit and are an integral component of any transit system. As all transit trips begin and end by getting to and from the bus stop, the infrastructure that supports accessing the bus stop by wheelchair, foot, or bike is integral. The pedestrian and bicycle networks are critical to providing residents with safe and comfortable transit access. When these networks are robust, they work together to provide better access for those living and working within the region.

Figure 3-18 highlights where transit stops are located in relation to existing sidewalks and trails. Given that most people will walk up to a quarter mile or bike up to one mile to a transit stop, quarter mile and one-mile buffers along roadways at each existing transit stop help show the active transportation coverage for transit in the City of Victoria area. While sidewalks exist within the buffer of many transit stops, the strength of the network relies on its continuous nature. Filling these gaps is key for making walking to transit stops safer and more appealing. Additionally, sidewalks are less prevalent around transit stops located in the far north and south sections of Victoria, making access to transit more difficult. Given that most of the transit stops within the City of Victoria are within a one-mile bike ride, on-street bicycle facilities provide a great opportunity to connect with these stops to further strengthen both networks.

FIGURE 3-18: CURRENT BIKE AND PEDESTRIAN FACILITIES IN RELATION TO TRANSIT STOPS



## BICYCLE AND PEDESTRIAN NETWORK CONDITIONS

The built environment greatly impacts the experience of a walking and biking trip. Facilities such as bike lanes and sidewalks as well as softer elements including trees and lighting are all built environment features that affect the walking and biking experience.

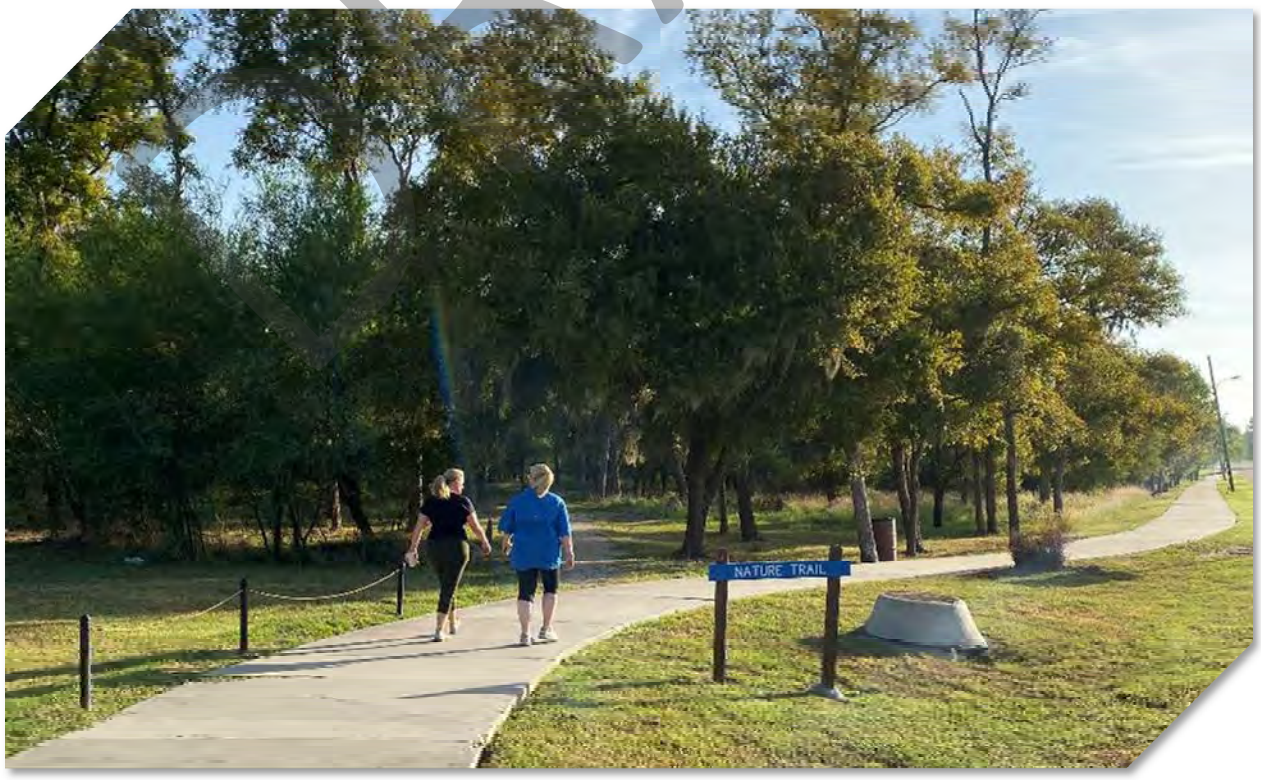
### Bicycle and Pedestrian Environment Quality Index

The Bicycle and Pedestrian Environmental Quality Index (BEQI and PEQI) analysis, first developed by the San Francisco Department of Public Health, evaluates roadways for specific elements known to influence walking and biking trips. A BEQI and PEQI for the City of Victoria was developed and implemented to gain a general understanding of what current environmental conditions are present for walking and biking in the area. A sample of roadways were selected by their proximity to higher density areas, schools, and community destinations given these locations are more likely to support walking and biking trips. Table 3-8 displays the ten roadway segments that were analyzed using the PEQI and BEQI.

**TABLE 3-8: ROADWAY SEGMENTS ANALYZED USING BEQI/PEQI**

| Roadway Segment | Limits |
|---|---|
| N Ben Jordan St | E Red River to Loma Vista Ave |
| Red River St | Ben Jordan St to Ben Wilson St |
| Main St | Constitution to North St |
| Water St | Main St to Navarro |
| Juan Linn St | Main St to Navarro |
| North St | Laurent St to Lone Tree Rd |
| Lone Tree Rd | Delmar Dr to Anthony Rd |
| E Red River St | Main St to Laurent St |
| Laurent St | Airline Rd to Mesquite Ln |
| Mockingbird Ln | Sam Houston to John Stockbauer |





### *Pedestrian Environment Quality Index (PEQI)*

The ten roadway segments were analyzed for their pedestrian-oriented features including the following:

- Number of travel lanes
- Speed Limit
- Presence of traffic calming features
- Sidewalk width
- Sidewalk impediments and obstructions
- Presence of a curb
- Trees
- Planters
- Public seating
- Sidewalk buffers
- Retail
- Pedestrian lighting

Figure 3-19 displays the resulting roadway segment scores. Six of the ten roadways were scored as having reasonable pedestrian conditions. Two were scored as having basic pedestrian conditions. Only one, the Main Street segment, was scored as having ideal pedestrian conditions.

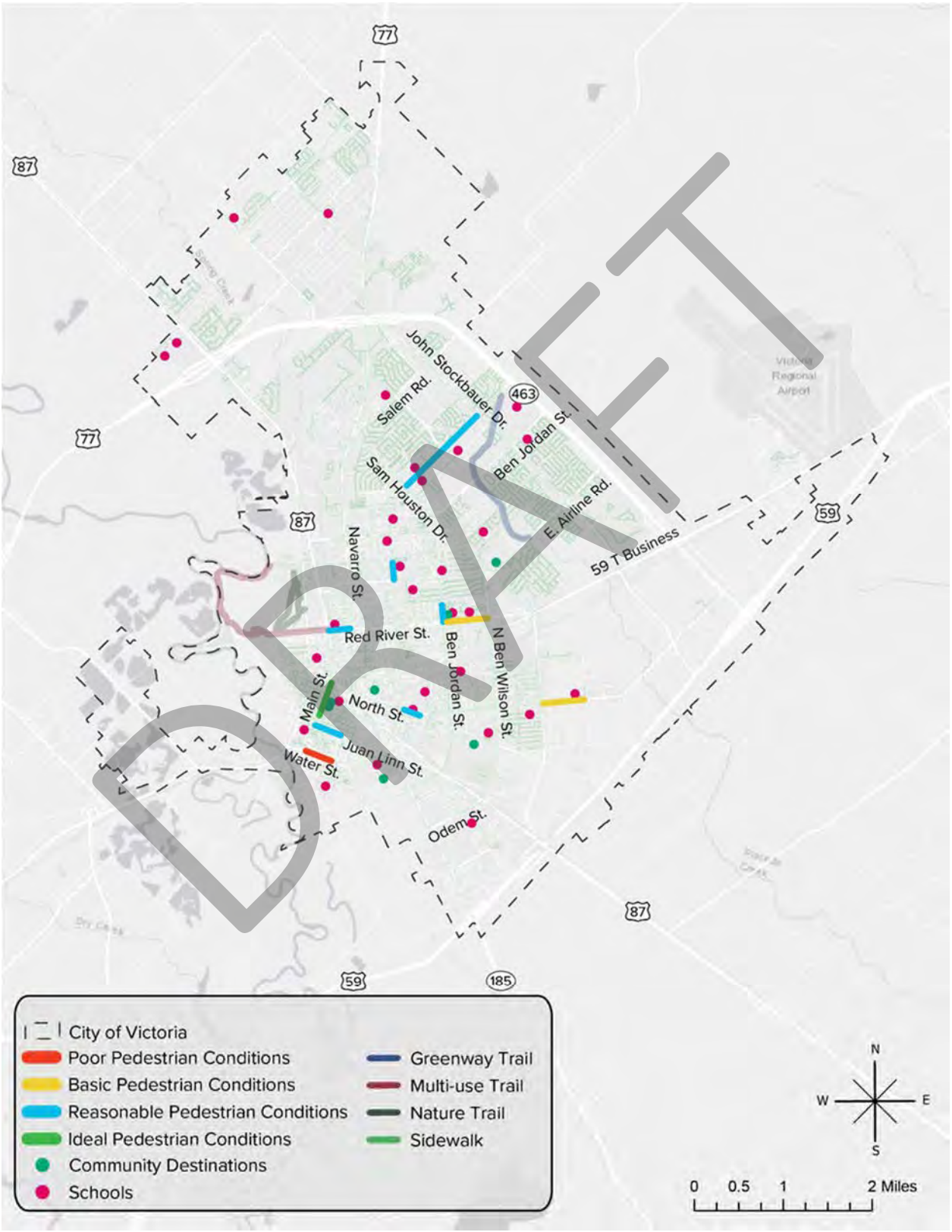
### *Bicycle Environment Quality Index (BEQI)*

The ten roadway segments were analyzed for their pedestrian-oriented features including the following:

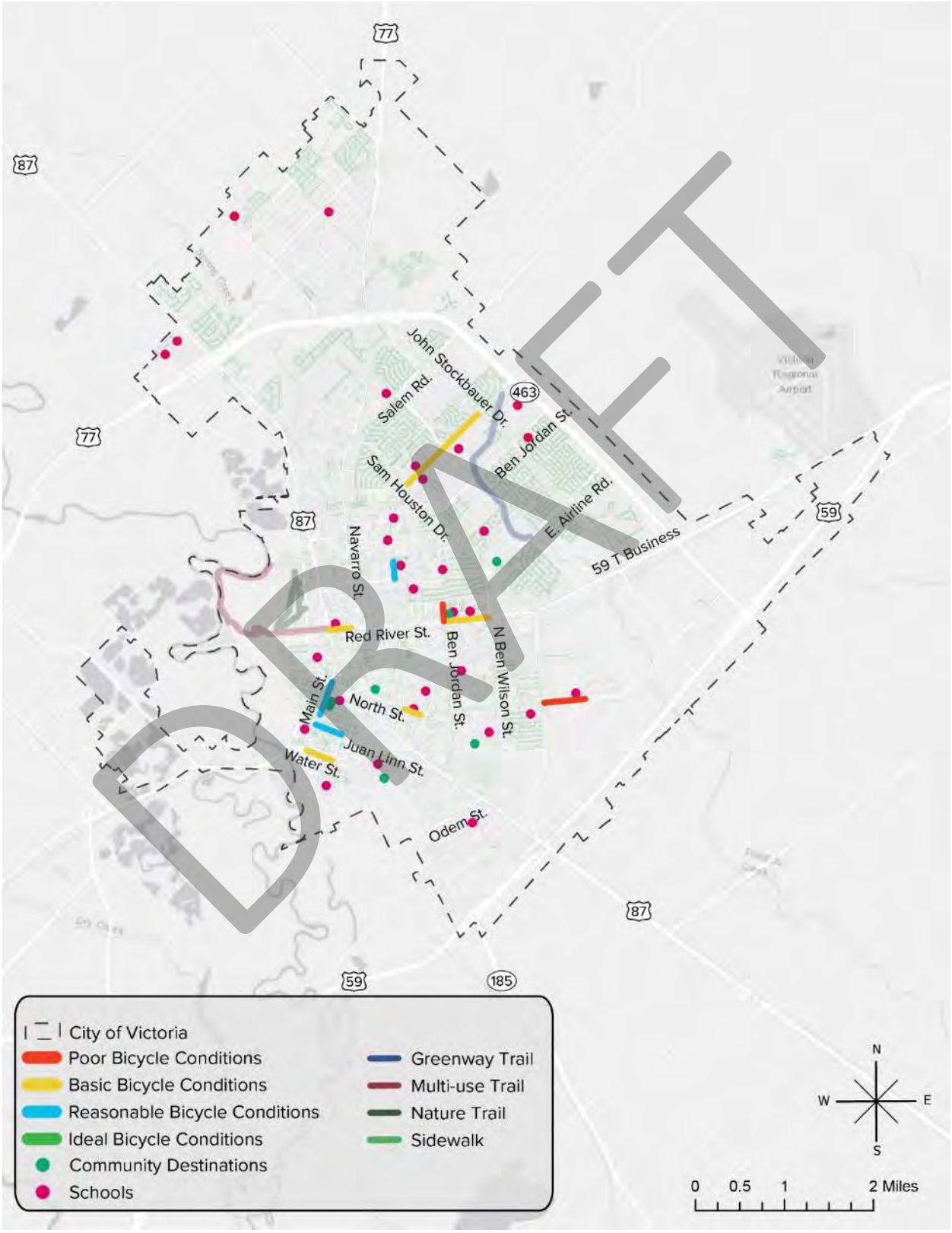
- Number of travel lanes
- Speed limit
- Traffic calming features
- Trees
- Retail
- The presence of on-street bicycle facilities
- Pedestrian lighting
- Pavement condition
- Street slope
- The presence of bike parking

Figure 3-20 displays the resulting roadway segment scores for their bicycle environment quality. Three roadways were scored as having reasonable bicycle conditions. The majority of roadways (5) were scored as having basic bicycle conditions. Two were scored as having poor bicycle conditions.

## FIGURE 3-19: PEDESTRIAN ENVIRONMENT QUALITY INDEX

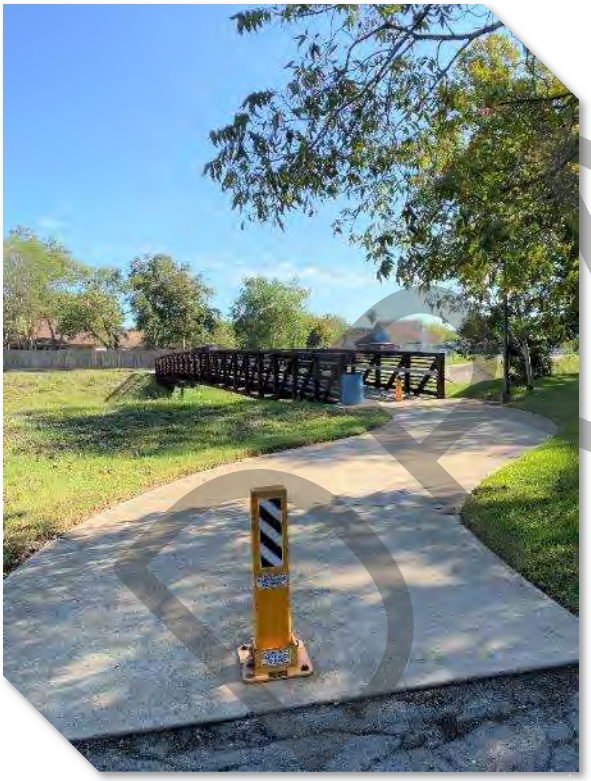


## FIGURE 3-20: BICYCLE ENVIRONMENT QUALITY INDEX



## BICYCLE LEVEL OF SERVICE

While the existing trail network provides spaces for recreational biking and some connectivity to key areas within the City of Victoria, on-street bicycle facilities provide an opportunity to build a more connected network across the Victoria MPO area. A well-connected regional bicycle network can encourage more recreational riding as well as provide a more comfortable and safe experience for those who ride for transportation.

A Bicycle Level of Stress (BLOS) analysis better defines which roadways are considered comfortable for bicycling. As determined by multiple studies, certain roadway factors can influence a person's level of comfort when riding in traffic and their willingness to ride.[5,6,7,8] Different riders have varying levels of tolerance for traffic stress, but the majority of people have a low tolerance for riding in traffic. In other words, most people tend to fall into the riding category "Interested but Concerned" and have a lower tolerance for riding in traffic than do the "Strong and Fearless" and "Enthused and Confident" riders. The following BLOS analysis identifies where high, medium, and low stress roadways are located and can serve as a tool for future bicycle route planning.



[5] *Callister, Daniel, and Michael Lowry. Tools and Strategies for Wide-Scale Bicycle Level-of-Service Analysis. Journal of Urban Planning and Development 139, no. 4 (2013): 250-57. doi:10.1061/(asce)up.1943-5444.0000159.*

[6] *Mekuria, Maaza C., Peter G. Furth, and Hilary Nixon. "Low-stress bicycling and network connectivity." (2012).*

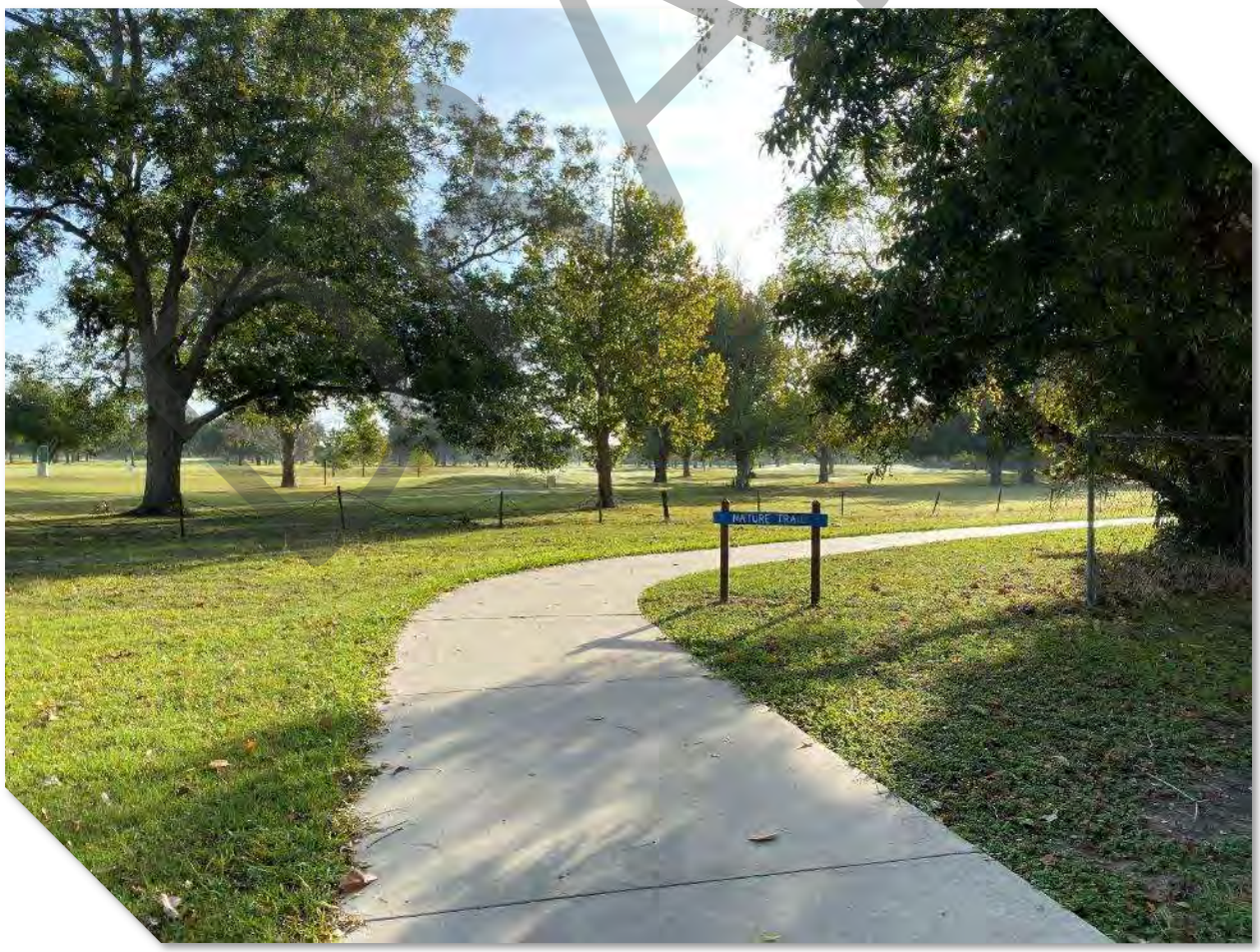
[7] *Furth, Peter G. "On-road bicycle facilities for children and other 'easy riders': Stress mechanisms and design criteria." 87th Annual Meeting of the Transportation Research Board, Washington, DC. 2008.*

[8] *Dill, J., and N. McNeil. Four Types of Cyclists? Examination of Typology for Better Understanding of Bicycling Behavior and Potential. In Transportation Research Record: Journal of the Transportation Research Board, No. 2387, Transportation Research Board of the National Academies, Washington, D.C., 2013, pp. 129–138.*

For the purposes of this analysis, stress tolerance levels are determined by speed of vehicles (determined by the existing year travel demand model) and average daily traffic along each roadway. As speeds and traffic increase, the higher the level of stress for cyclists riding along the roadway. All off-street facilities are considered low stress but not considered as a roadway in this analysis. Speed and average daily traffic scores were added together to create a BLOS score for roadways with the available data in the MPA (Figure 3-21) The BLOS analysis is intended as a tool to help identify opportunities where low to medium stress roadways can serve as bicycle route connectors and help build a continuous regional bicycle network. Figure 3-21 shows where low to medium stress roadways can be used to build a regional system.

When considering the BLOS within the City of Victoria (Figure 3-22), many local roadways are low to medium stress and therefore ideal candidates for implementing on-street bicycle facilities such as bike lanes to fill gaps mentioned above. High to medium stress roadways should not always be considered as unacceptable bicycle route roadways, rather the BLOS designation may serve as a guide for what type of bicycle facilities are compatible with higher stress roadways and therefore more accessible to cyclists. Additionally, road and pavement condition, drainage, and connectivity to and from desired origins and destinations are important factors for consideration in the planning process.





## FIGURE 3-21: BICYCLE LEVEL OF STRESS- MPA

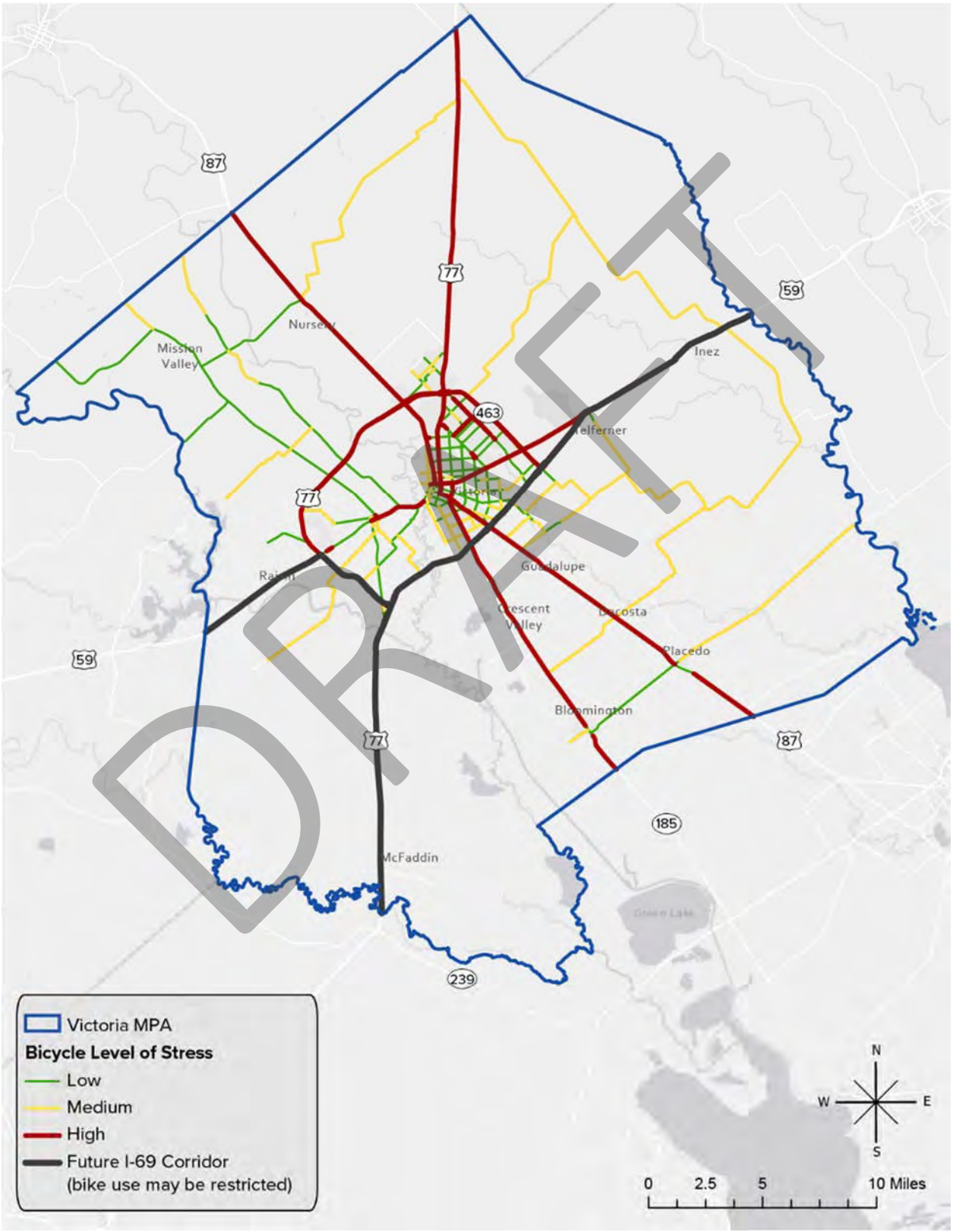
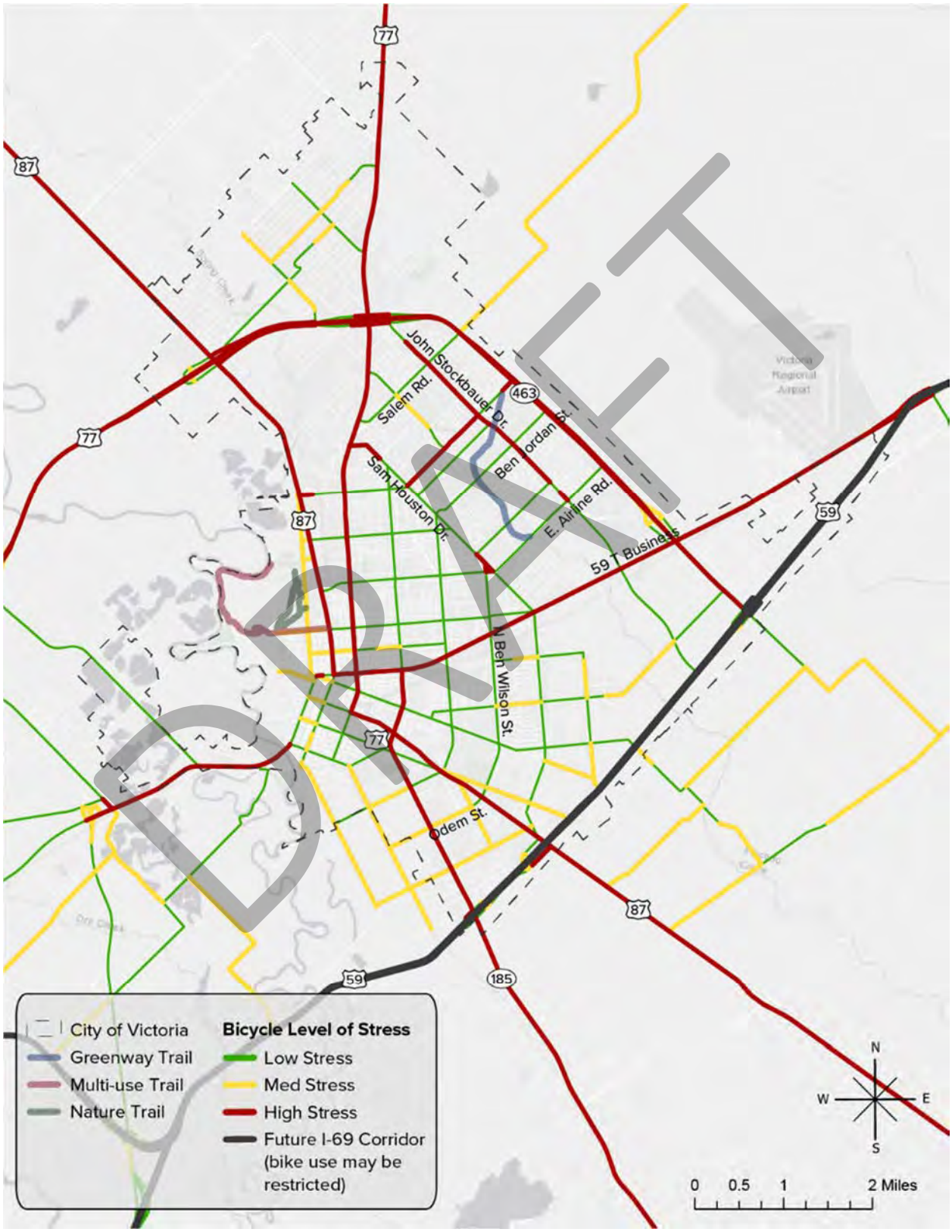


FIGURE 3-22: BICYCLE LEVEL OF STRESS AND CURRENT BIKE FACILITIES - CITY OF VICTORIA



# FREIGHT ANALYSIS

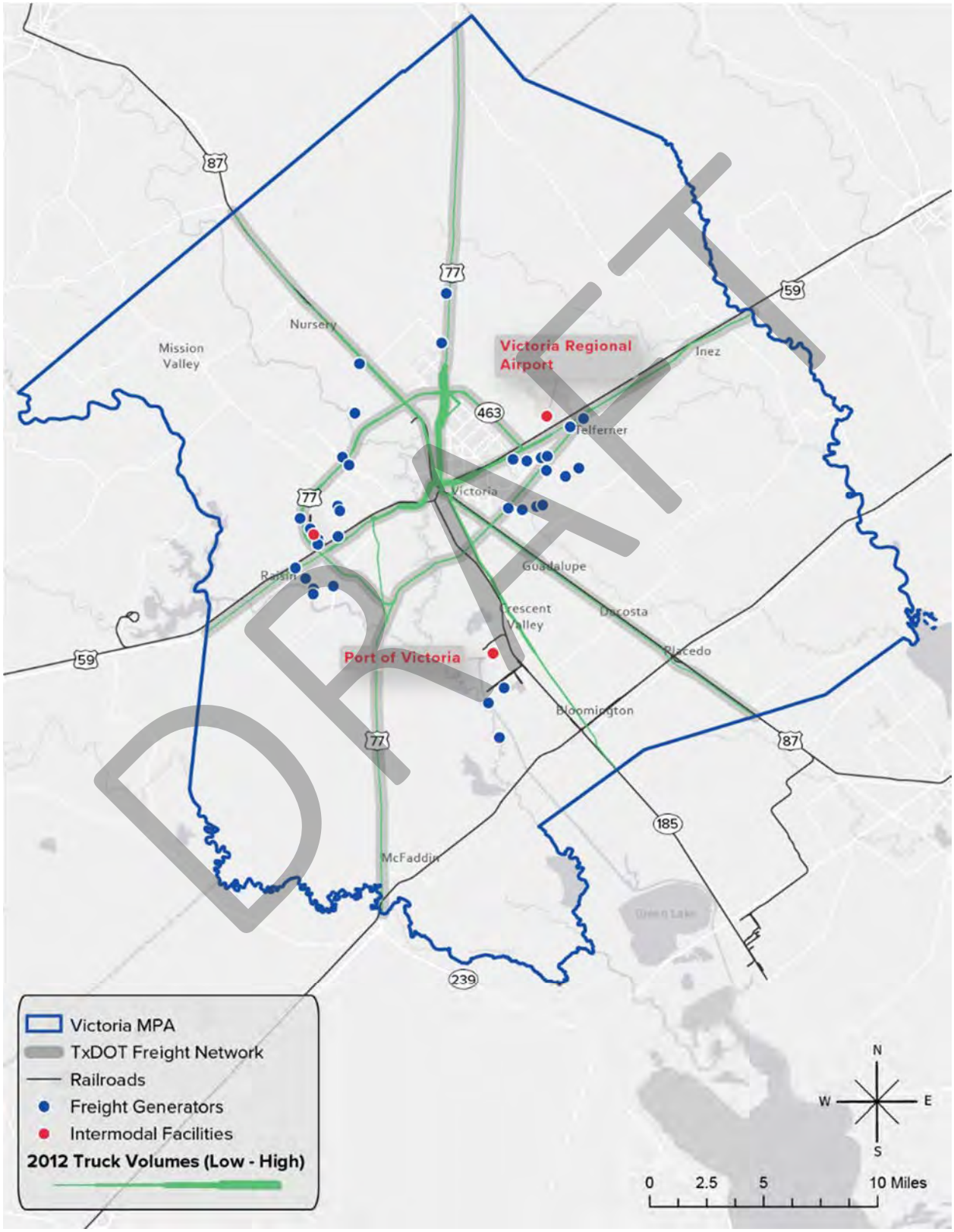
In addition to considering the movement of people, the Victoria 2045 MTP also considers how goods (i.e. freight) are transported within and through the region. Local, state-level, and national economies depend on freight transportation systems to function reliably. Supply chains and the movement of goods are supported by freight systems. Dependable and safe freight requires a minimization of delays along the transportation system, including a predictable traffic pattern. A reliable and safe freight system ensures successful, on-time deliveries that are vital for the shipping/freight industries, and thus the economy. This section identifies the location of important freight system assets, general freight activity, and potential issues along the freight network in the Victoria MPA.

## FREIGHT SYSTEM – ASSETS AND ACTIVITY

Figure 3-23 identifies the location of freight generators and intermodal facilities in the Victoria MPA in relation to 2012 Travel Demand Model (TDM) base year truck volumes, as well as the TxDOT Freight Network. Freight generators are represented by concentrations of jobs in the following industries: natural resources extraction, utilities, construction, manufacturing, wholesale trade, and transportation/ warehousing.

Freight generators in the MPA are generally concentrated near intermodal facilities. Figure 3-23 also reveals that the state highways in the region play an important role in providing connectivity to major facilities such as the Victoria Regional Airport and Port of Victoria. There are also connections to these important facilities via rail. US 77 near Loop 463 and US 59 in downtown Victoria appear to be the corridors with the highest levels of truck traffic.

FIGURE 3-23: BASE YEAR FREIGHT VOLUMES AND MAJOR FREIGHT GENERATORS



## FREIGHT NETWORK CONGESTION

Congestion is heavily concentrated on links leading into the urbanized area as well as a few select segments within city limits, as indicated in Figure 3-24. The top congested links in the 2012 base year are located on Highway 77 in the western region of the MPA as well as Zac Lentz Pkwy near the Victoria Regional Airport. Table 3-8 displays 2012 (i.e. existing) peak hours of delay on the most congested segments in the MPA. Congestion is focused on the major arterials.

**TABLE 3-9: AVERAGE DELAY ON MOST CONGESTED FREIGHT SEGMENTS IN 2012**

| Roadway | To | From | Freight % of Traffic Volume | VMT | Avg. V/C Ratio | Weighted Avg. TTI | Annual Weekday Vehicle Hours of Delay |
|---|---|---|---|---|---|---|---|
| Zac Lentz Pkwy | Lone Tree Rd | .75 mi N of US 59T Bus | 4.31% | 21,942 | 1.15 | 1.23 | 28,549 |
| Hwy 77 | .6 mi N of FM 1685 | 1.4 mi S of Hwy 87 | 8.96% | 24,781 | 0.95 | 1.12 | 16,145 |
| Hwy 77 | Bob White Rd | .5 mi S of FM 236 | 9.72% | 17,196 | 0.93 | 1.11 | 10,214 |
| N Navarro St | E Magruder Dr | E Larkspur St | 6.93% | 47,289 | 0.81 | 1.07 | 26,305 |
| Nursery Dr/Hwy 87 | Hwy 77 | Leeper Ln | 4.31% | 30,865 | 0.81 | 1.06 | 11,341 |
| Hwy 59 | .3 mi N of FM 1686 | Beck Rd | 1.37% | 60,734 | 0.76 | 1.05 | 12,978 |

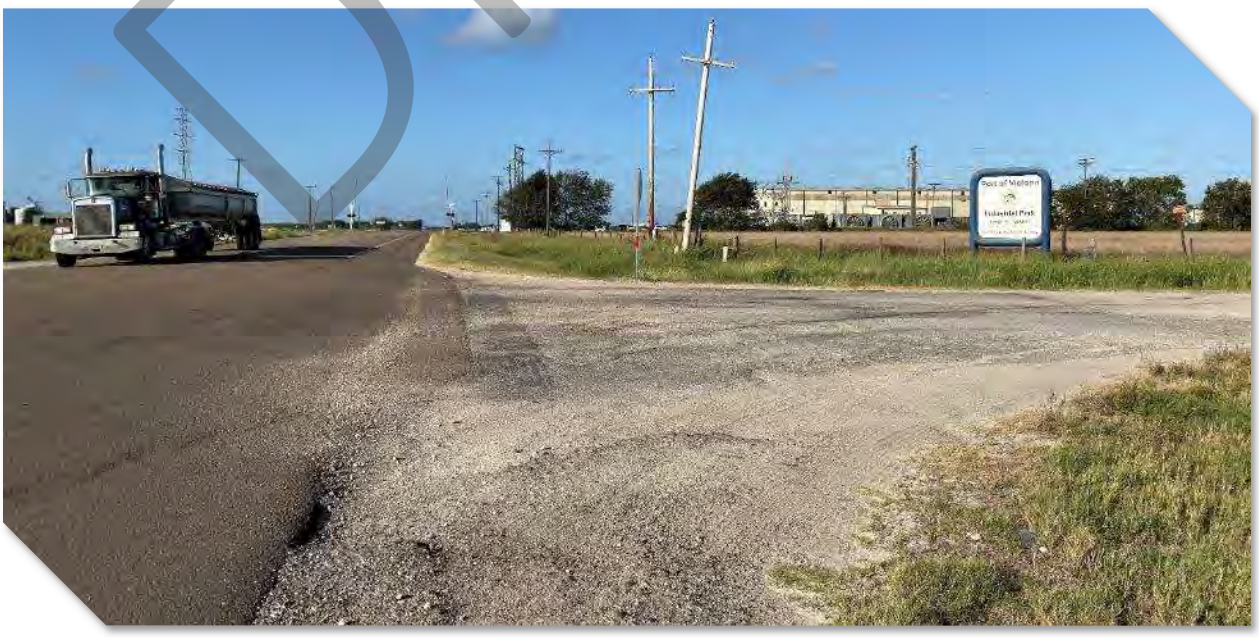
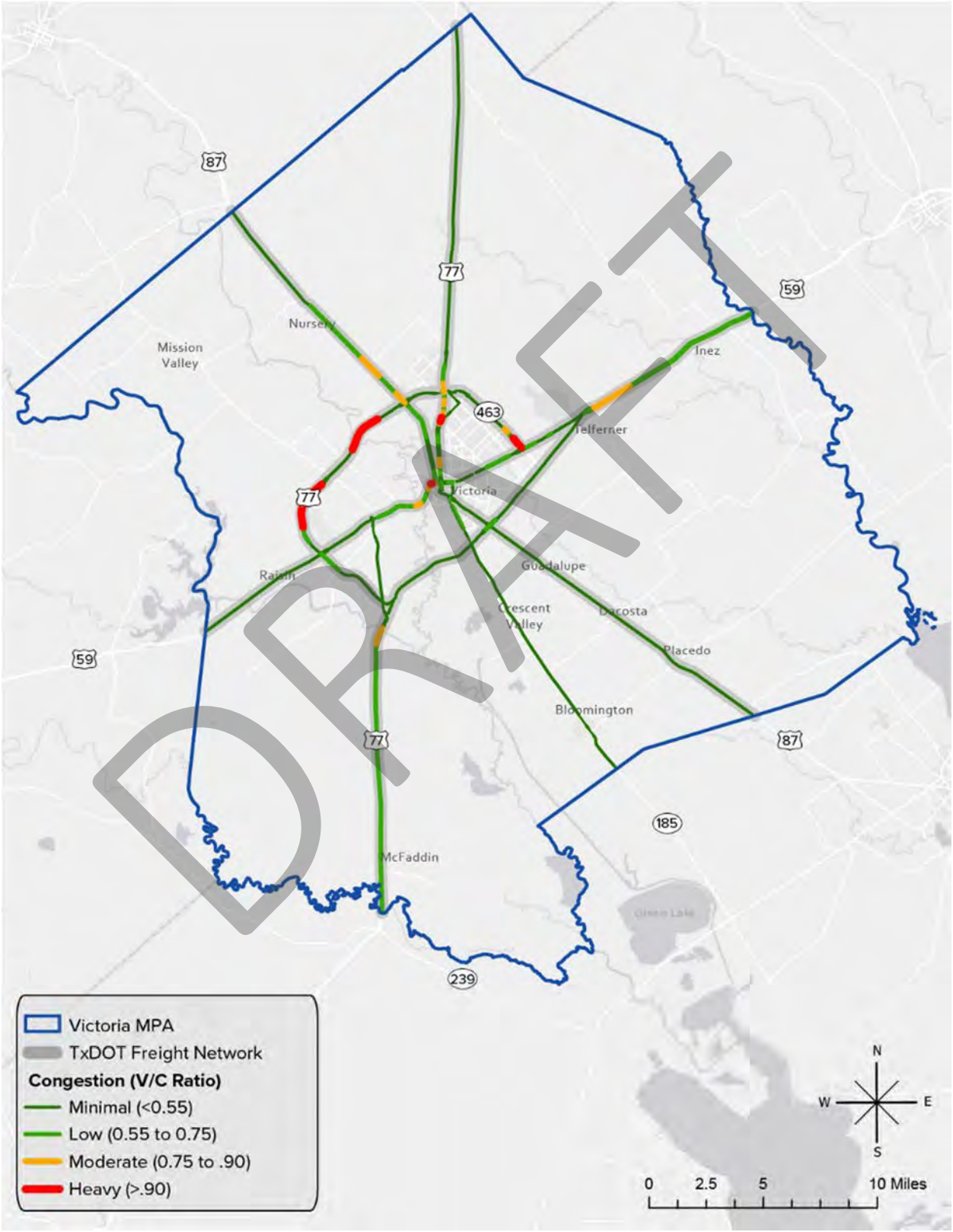


FIGURE 3-24: BASE YEAR TDM FREIGHT NETWORK CONGESTION



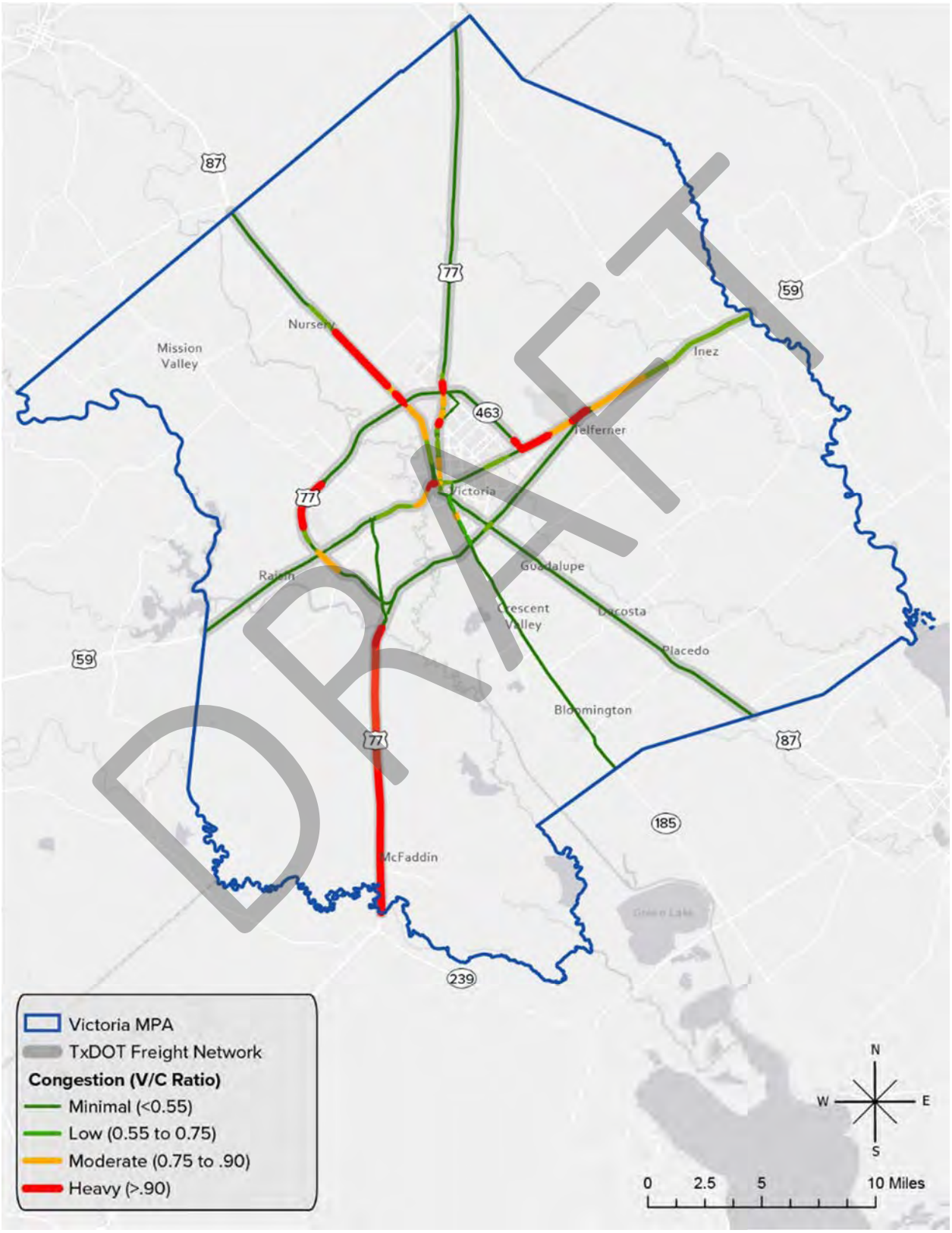
## FUTURE FREIGHT NETWORK CONGESTION

The top congested links in the 2045 No Build Scenario (E+C), shown in Figure 3-24, are clustered along US Hwy 77 S (where nearly the entire segment is forecasted to experience maximum congestion levels), and US 59T Business, Nursery Dr north of Hwy 77, Hwy 77, and Zac Lentz Parkway. Congestion is also forecasted to increase along arterial roadways in and near the City of Victoria. This includes US 59T Business as it runs through Victoria, N Navarro St near downtown and approaching the US 77 junction. Table 3-10 displays 2045 peak hours of delay on the most congested segments in the MPA.

**TABLE 3-10: TOP CONGESTED ROADWAYS FOR FREIGHT - 2045 CONDITIONS**

| Roadway | Limits | Freight % of Traffic Volume | VMT | Avg. V/C Ratio | Weighted Avg. TTI | Annual Weekday Vehicle Hours of Delay |
|---|---|---|---|---|---|---|
| Hwy 87 | FM 477 to Spring Creek Rd | 1.08% | 136,284 | 0.90 | 1.11 | 103,020 |
| Hwy 77 | FM 455 to Hwy 91 | 2.86% | 273,847 | 0.93 | 1.11 | 170,425 |
| Hwy 77 | Beck Rd to Bob White Rd | 4.45% | 25,251 | 1.24 | 1.37 | 52,314 |
| N Navarro St | Lasalle Crossing to Sam Houston Dr | 9.03% | 74,331 | 0.89 | 1.10 | 63,236 |
| Hwy 59 Business | Siegfried St to N Navarro St | 6.82% | 35,067 | 0.91 | 1.10 | 31,508 |
| Zac Lentz Pkwy | E Airline Rd to Hwy 59 Business | 9.05% | 13,425 | 1.39 | 1.57 | 41,636 |
| Hwy59 Business | Wood St to Zac Lentz Pkwy | 3.26% | 75,021 | 1.00 | 1.13 | 61,285 |
| Hwy 59 | Beck Rd to Wood St | 4.73% | 86,132 | 0.76 | 1.05 | 19,362 |

FIGURE 3-25: 2045 TDM FREIGHT NETWORK CONGESTION



## TRAVEL TIME RELIABILITY

Travel time reliability is a measure of "the consistency or dependability of travel times from day to day or across different times of day" for a given roadway[9]. While congestion typically focuses on the average roadway conditions in terms of delay, travel time reliability indicates the level to which traffic or roadway conditions can be anticipated in order for travelers to plan around expected delays. Reliability of the roadway network is important because it allows travelers to reach their destinations at their planned time. This is particularly important for those who rely heavily on freight trucks for shipments, where additional delay in travel time can result in increased costs.

Level of Travel Time Reliability (LOTTR) is calculated using a ratio of the 50th and 80th percentile travel time for all vehicles traveling a given roadway segment. Travel time data is provided as part of FHWA's National Performance Management Research Data Set (NPMRDS). For the Victoria MPA, 2018 travel time data was used for the defined freight network. Using LOTTR data for the 2018 travel time data, the study team identified six unreliable segments (i.e. LOTTR ratio greater than 1.5), shown in Figure 3-26. In this case, unreliable means that travelers of a particular roadway segment cannot reasonably predict the time it would take to travel the roadway during certain time periods.

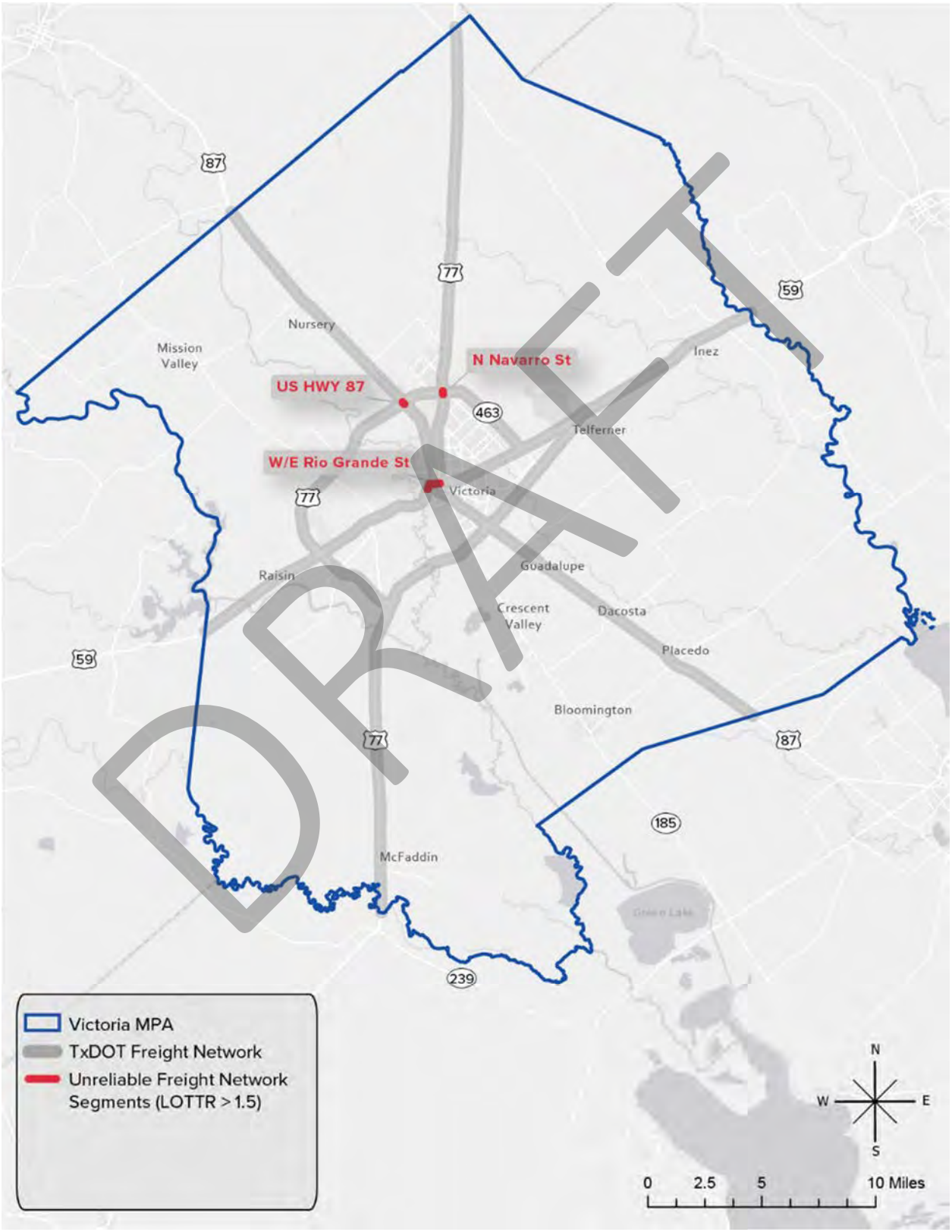
Table 3-11 lists the six unreliable segments and their respective LOTTR values by time period.

**TABLE 3-11: UNRELIABLE FREIGHT SEGMENTS (LOTTR RATIO GREATER THAN 1.5)**

| Roadway (From-To) | Direction of Travel | 6-10 AM | 10AM-4PM | 4-8PM | Weekend 6AM-8PM |
|---|---|---|---|---|---|
| US HWY 87N (S US 77 Frontage – N US 77 Frontage) | Northbound | 1.51 | 1.58 | 1.61 | 1.55 |
| US HWY 87N (S US 77 Frontage – N US 77 Frontage) | Southbound | 1.66 | 1.60 | 1.67 | 1.60 |
| N Navarro St (S Zac Lentz Pkwy – N Zac Lentz Pkwy) | Northbound | 1.67 | 1.54 | 1.58 | 1.64 |
| N Navarro St (S Zac Lentz Pkwy – N Zac Lentz Pkwy) | Southbound | 1.58 | 1.56 | 1.63 | 1.57 |
| W Rio Grande St (W Goodwin Ave – W North St) | Southbound | 1.71 | 1.71 | 1.71 | 1.57 |
| E Rio Grande St (W North St – N Navarro St) | Southbound | 1.46 | 1.56 | 1.55 | 1.47 |

[9]*Source: FHWA;* National Performance Measures for Congestion, Reliability, and Freight, and CMAQ Traffic Congestion – General Guidance and Step-by-Step Metric Calculation Procedures; *https://fhwa.dot.gov/tpm/guidance/hif18040.pdf*

FIGURE 3-26: UNRELIABLE FREIGHT SEGMENTS



# INTERREGIONAL PASSENGER TRAVEL


While the main focus of the Victoria 2045 MTP is understanding travel within the MPA, it is also crucial to understand the area's role in transportation at both the state and national level. Interregional passenger travel consists of any mode of transportation connecting users to destinations outside of the MPA; this includes fixed passenger rail, air travel, and long-distance charter bus services. The following section details available modes of interregional travel found within the Victoria MPA. While there are only a few interregional passenger services currently running through Victoria, the future IH 69 corridor will likely generate an increase in interregional travel.

## GREYHOUND

Greyhound serves as the main private charter bus provider for Victoria MPO residents. The Greyhound station is in south Victoria, at the junction of US-59 and Texas State Highway 185.

## VALLEY TRANSIT COMPANY

Valley Transit Company is a private subsidiary of Greyhound Lines. It operates Fixed-Route intercity services, airport shuttles, and charter services. VTC provides transit options to Austin, San Antonio, and Houston.

## VICTORIA REGIONAL AIRPORT

The Victoria MPA contains one regional/commercial airport, the Victoria Regional Airport which is located in northeast Victoria, adjacent to US 59 or Business 59-T. Victoria Regional Airport offers commercial and general aviation services to the MPA. Regarding commercial flights, the facility is currently served by one airline which provides direct flights to the Dallas-Fort Worth and Houston areas. The airport provides ground transportation in the form of rental cars, taxi services, and ride share services (e.g. Uber).

# Chapter 4: Transportation Strategies



# 4 TRANSPORTATION STATEGIES

The practice of adding lanes to increase capacity to the transportation system cannot, by itself, address the mobility needs of the region. While funding is the primary constraint, certain transportation needs can be addressed through the adoption of "non-capacity transportation" strategies. These strategies do not always require the expansion of existing facilities or the construction of new roadway facilities in the transportation network. This chapter discusses strategies such as Travel Demand Management (TDM) and Transportation System Management and Operations (TSM&O), as well as capital projects as strategies (e.g. facility construction projects).

This chapter also provides a description of the process used to prioritize projects to address the transportation needs of the community. Given the limited availability of funding to meet regional mobility needs as discussed in Chapter 3, combinations of major capital projects and other strategies as discussed in the following sections can better serve to leverage available funding for greater impacts on regional mobility.

## STRATEGIES TO ADDRESS TRANSPORTATION NEEDS

Building new roads and adding capacity to existing roadways is not only expensive, but often takes years to complete, as projects must go through the planning, environmental, design, and construction phases. Given the limited availability of funding for transportation projects and rising congestion levels, state, regional, and local agencies are increasingly relying on TDM, TSM&O, and "Complete Streets" strategies to improve the performance of existing roadways. These strategies do not require the construction of new roadways or additional lanes for capacity, and therefore are often referred to as "no-build" or "alternative transportation" strategies. While there is a "build" component to some of these, the investment required is generally far less significant than constructing new or expanding roadway facilities.

The following sections provide recommendations for incorporating best practices in TDM, TSM&O, Complete Streets, and other no-build strategies into the transportation planning process for the Victoria MPA.

While the Victoria MPO is not directly responsible for implementing transportation projects, it works closely with local member jurisdictions to explore and evaluate the regional significance and appropriateness of these strategies for reducing congestion and improving the performance of the existing transportation system.

## TRAVEL DEMAND MANAGEMENT

TDM strategies seek to reduce congestion on existing roadways by reducing the overall number of cars using roads or by redistributing cars away from congested areas and peak periods of travel. Encouraging the use of alternative modes of transportation (such as transit, biking, or walking) and increasing the number of travelers in each vehicle are the primary ways in which TDM strategies reduce single-occupant vehicle demand on existing roadways. Simply put, transportation demand can be managed by providing travelers with a wide range of efficient and accessible choices for reaching their destination.

With limited funding available to address congestion through increasing roadway capacity, TDM is a cost-effective means to improve use of the transportation system. TDM strategies are designed to accomplish the following:

- Improve mobility and accessibility by expanding and enhancing the range and quality of available travel choices;
- Reduce congestion and improve system reliability by decreasing the number of vehicles using the roadway;
- Increase safety by addressing congestion, which is generally related to higher occurrences of traffic incidents; and
- Improve air quality by reducing the number of vehicle miles traveled, thereby saving energy, and decreasing the number of short trips that are largely responsible for the proportion of emissions generated from cold starts.

## BEST PRACTICES

### Strategies to Increase Vehicle Occupancy

Carpool, vanpool, and school-pool programs encourage travelers with common destinations, particularly employment and school destinations, to share vehicles. These can be based on informal arrangements between individuals or formally arranged through ride-matching services. Available research indicates that improving awareness, trust, and willingness to ride with strangers, as well as flexibility in scheduling, may help to increase carpool use. Incentives are another effective tool for encouraging ride sharing.

#### *Encourage Employers to Incentivize Ride Sharing*

Ride sharing encourages users to share their rides through carpooling, vanpooling and/or school-pooling. The Victoria MPO can play a valuable role in working with area employers and schools to develop employer-based incentives to encourage ride sharing, such as tax incentives and preferential parking. A variety of employer-based incentives for carpooling are discussed in greater detail later in this section. In addition, the use of Transportation Network Companies (TNCs), such as Uber and Lyft, which operate in the MPA, can encourage shared rides.

### *Ride Sharing Resources*

Resources that may help to increase the use of ride sharing include "Frequently Asked Questions" (FAQs) that address the benefits of carpooling, tips for finding other carpoolers, advice on how to organize pick-ups and drop-offs, carpooling etiquette, and safety concerns, among others.

### *Employer-Based Tools & Incentives*

The commute to and from work is a significant contributor to traffic congestion along area roadways, particularly during peak travel times. TDM strategies that focus on employer-based tools and incentives can be an effective way to reduce travel by single-occupant vehicles by coordinating ride-sharing among employees, encouraging the use of alternative modes for work trips, shifting work trips away from peak hours, and reducing work travel times and the number of overall trips.

Employer-based TDM strategies fall into four separate categories:

- Encouraging employees to travel by alternative modes or offer telecommuting options for employees to help counteract congestion;
- Shifting trips away from peak periods of travel and reducing the total number of trips;
- Providing route information to divert commuters from congested routes; and
- Using location-specific solutions - such as locating in developments with a mix of employment, residential, and service uses - to shorten the work commute and reduce the need for midday trips.



Regional transportation planning entities can actively work with area employers to reduce congestion by expanding the transportation options available to their employees (e.g. van service providing rides from Guadalupe to a Victoria office). Educating area employers regarding options available and their benefits to employers, employees, and the community as a whole can go a long way towards increasing the number who travel via alternative modes or during non-peak hours.

## Strategies to Increase Travel by Transit, Bicycle, or Walking

In order to reduce the number of trips by private automobile, strategies to increase travel by transit, bicycle, or walking in the Victoria MPA focus on the following objectives:

- Expanding the service area of the transit system and increase the number of connections to infrastructure, which can reach more people and connect them to a greater number of destinations within the region;
- Improve the quality of service, which increases the convenience, comfort, ease of access, and affordability of the mode and makes people more willing to choose it; and
- Educate the public on the availability of the various non-automobile transportation options and services and provide resources to help travelers navigate the region.

The following sections detail mode-specific strategies that could be considered for implementation in the Victoria MPA.

### *Transit Strategies*

Improving the quality of transit services (i.e. RTransit and Victoria Transit) involves strategies that shorten the overall travel times, increase traveler's comfort both while waiting for the bus and when on-board, and provide added flexibility with travel time and destinations.

Transit can also provide a less expensive means of travel compared to personal automobiles. National statistics have shown that commuters that switch from driving to transit for their daily commute can save more than $9,000 annually. However, providing new routes or increased levels of transit service must always be balanced against funding availability.

As discussed in Chapter 3, the existing transit services in the MPA include Victoria Transit, which provides fixed-route services. Additionally, Victoria Transit, RTransit, and Medical Transportation Management provide paratransit demand response services. Valley Transit provides a regional intercity bus service. Additional improvements in the transit system with real impacts on mobility can be achieved through occasional reassessment and analysis of service and route alignment, both of which can be achieved through relatively low-cost studies.

## *Active Transportation Strategies*

Active transportation refers to non-motorized modes of travel, such as walking, bicycling, or using a wheelchair. Because these modes provide some of the most fundamental means of mobility and accessibility available to individuals, it is crucial for the metropolitan planning process to consider the needs of active transportation users. In addition, active transportation can provide communities with opportunities for enhanced recreation, leisure, and tourism by creating pedestrian and bicycle networks that allow people to spend time outdoors and encourage economic development.

The active transportation strategies considered for the Victoria 2045 MTP are sourced from Paseo de Victoria, which was part of the previous 2025 Comprehensive Plan. The development of Paseo de Victoria and the Comprehensive Plan consisted of a current condition and needs assessment, design guidelines for active transportation facilities, a public outreach process, a project identification and prioritization process, and guidelines for implementation and funding.

The strategies and policies included in the plan aim to create a safe, accessible, and connected network for active transportation users of all ages, abilities, and comfort levels. The plan also included a Complete Streets policy approved by the MPO that individual member jurisdictions could adopt or use as a template to create their own policies.

## *Bicycle & Hiking Strategies*

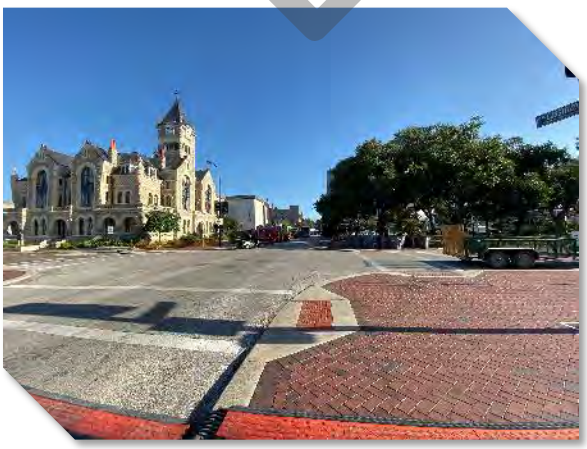
During the development of Paseo de Victoria the existing bicycle facilities in the region included off-road paths/trails and bike lanes. The existing off-road trails and paths in the region include a handful of facilities that are not well connected to one another, though many of them connect to other active transportation facilities. Therefore, the plan recommended the expansion of the bicycle network and improvements to hiking facilities using strategies such as:

- Supply a connected system of trails and bike lanes for pedestrians and bicyclists in order to provide recreational opportunities and viable alternate modes of transportation, therefore enhancing the quality of life of all residents;
- Create and utilize a public participation process to involve members of the community in developing the trails;
- Maintain and promote a safe and secure environment along the hike and bike trails;
- Develop a functional and aesthetically pleasing trail system by considering the following amenities: rest areas, maps and signage, directional signage, exercise stations, interpretive installations, lighting, and art installations; and
- Actively encourage the community to utilize the developed trail system by promoting the positive health, social, and environmental benefits of the trail system.

### *Pedestrian Strategies*

Existing pedestrian facilities along Navarro and Business US 59 were reviewed in 2015. This inventory analyzed 23 different intersections along these two corridors for painted crosswalks and pedestrian signals in all four cardinal directions. The inventory found that there were 30 segments of intersections that needed crosswalk improvements and 41 segments needed signalization improvements. The plan recommends expanding the pedestrian infrastructure network and increasing connectivity using the following strategies:

- Creating priority pedestrian corridors along major roadways in the urban areas to improve regional mobility and create connections. This also includes creating linked corridors that further increase connections within the expanded network by creating links to priority corridors from major destinations and neighborhoods;
- Installing pedestrian crossings/crosswalks in appropriate locations that tie into existing or proposed sidewalks throughout the urban areas of the region; and
- Ensuring that new pedestrian infrastructure and amenities are compliant with the Americans with Disabilities Act of 1990.



## LAND USE CONSIDERATIONS

Typical development patterns have generally encouraged a separation of land uses. Additionally, there has been an overall trend toward less dense development, particularly in the planning and design of suburban neighborhoods. These land use factors significantly impact travel, requiring more trips to be made by automobile due to the increased distances between origins and destinations. Victoria can work with local planning partners to encourage land use policies that facilitate the use of alternative modes of transportation and reduce the number of automobile trips.

## SMART GROWTH

"Smart Growth" generally refers to the protection and preservation of valuable natural and cultural resources through encouraging more compact development patterns that optimize use of existing transportation infrastructure. Smart Growth development is characterized by higher population and employment densities and a mix of land uses, which increases the viability of public transportation, walking, and biking as transportation modes. Since Smart Growth principles encourage redevelopment and infill development within existing developed areas, investment in the transportation system is focused on the maintenance and operation of existing roadway infrastructure and providing safe opportunities to travel by bike or foot, rather than on building costly new roadways in previously undeveloped areas. It is important to note that Smart Growth does not mean building dense high-rise structure or pitting modes against one another, but instead is a context-sensitive approach to encouraging a better mixture of land uses specific to the MPA.

## COMPLETE STREETS

The concept of "Complete Streets" is rooted in the idea that roads should be built with all users in mind, not just the private automobile. While Complete Streets principles include many TDM and TSM&O strategies, the concept focuses less on improving traffic conditions and more on the livability of places. Complete Streets strategies address the needs of all users of the transportation system, including the young and the old, the disabled, and users of transit or non-motorized forms of transportation. They yield a wide range of benefits related to safety, equity, access, economic development, air quality, health, and livability. While policies adopted by local governments represent most Complete Streets policies adopted nationwide, MPOs can be integral partners in promoting and implementing Complete Streets strategies.

## TRANSPORTATION SYSTEM MANAGEMENT & OPERATIONS

Transportation System Management and Operations (TSM&O) strategies seek to improve the performance of existing roadways through increased efficiency and throughput of people on current infrastructure. TSM&O strategies not only rely on traffic engineering solutions (such as signal synchronization and access management) to optimize the existing system but also rely on resource utilization, infrastructure, personnel, and data management strategies to extend the useful life of the existing transportation system and improve its reliability.

### Maintenance

Infrastructure maintenance is a critical aspect of transportation system management and operations. Most infrastructure management agencies prefer to schedule routine repairs and inspections instead of embarking on ad-hoc patching and repairing. Schedule management for inspection and street repairs will enable city and county personnel to efficiently use limited resources. Regularly scheduled roadway resurfacing is necessary to provide uniform improvements to the existing roadways and to extend their useful life. Older roads, especially those built according to discontinued standards, should be reviewed in order to upgrade deficient sections based on modern design standards.

In the MPA, the cities, county, and TxDOT have maintenance plans and schedules for transportation infrastructure in their jurisdictions.



## Electronic Infrastructure

Transportation infrastructure is no longer limited to concrete pavement and asphalt. Recent improvements in operations and data collection methods have led to digital controls and integrated computer networks that require maintenance and management. Older technologies are being systematically replaced with newer options. Some of the opportunities for advancing the MPA's electronic infrastructure come in the form of Intelligent Transportation Systems (ITS), which includes technologies that improve transportation safety and mobility by integrating advanced communications into infrastructure and vehicles. The following electronic infrastructure have the potential to provide the MPA with improved safety and mobility for the transportation network:

- **Traveler Information Systems (TIS) on Dynamic Message Signs:** TIS is a strategy that involves sharing information about trip departures, routes, and travel time with travelers to inform them about existing and expected conditions and help them make better decisions about when, where, and how they travel. This can be accomplished via websites, telephone hotlines, television, and radio, and particularly with dynamic messaging signs, which are digital signs that are installed along roadways and are updated with real-time travel information. The region is actively working on corridor timing/ITS regional infrastructure implementation. This information can be provided for a variety of transportation modes.
- **Signal Preemption for Emergency Vehicles:** Signal preemption is a technology that allows emergency vehicles to change signal cycles, allowing them to advance through traffic lights efficiently and safely. A preemption device is located on mast arms and detects/alters signal cycles when emergency vehicles approach the intersection. This technology is most effective along roadways in which emergency vehicles will typically need to travel longer distances, or intersections where minor arterials/roads connect to larger road classifications. The end goal for signal preemption is to reduce overall response rates for emergency vehicles.
- **Video Detection (or other types of non-pavement invasive detection) at Signalized Intersections:** Also known as a traffic detector, video detection as well as non-pavement invasive detection allow for the collection of traffic information, such as vehicle presence, volume, speed, and occupancy.

Partner agencies in Victoria County can continue to explore opportunities to improve the electronic infrastructure of the region as technologies continue to improve and become more cost effective. **Note:** *While red light cameras are considered to be a form of ITS, on June 1, 2019 the State of Texas enacted House Bill 1631 banning the use of this infrastructure with an effective date of September 1, 2019.*

## Traffic Signal & Intersection Improvements

Roadway users encounter traffic control signage and intersection signals on nearly every route they travel. While the primary function of intersection traffic control is to improve safety at intersections, it is also often a significant source of delay. Improper signage and poor signal timing results in unnecessarily long queues and impacts the reliability of the transportation system. Improving signage, signal timing, and equipment is a cost-effective way to facilitate traffic flow along a corridor.

Currently, projects for signal upgrades on TxDOT "on-system" roadways are programmed by the DOT. Upgrades on the local network are also programmed by the Yoakum District and coordinated with Victoria. Victoria can continue to work with its planning partners to identify corridors which would benefit from traffic signal improvements and to prioritize projects.

## Traffic Signal Optimization

The timing and phasing of signalized intersections should be reviewed periodically, especially in areas of the MPA experiencing rapid development or increased commercial activity. In locations with significant wind and severe weather concerns, mast arm and pole dimensions should be designed appropriately. Traffic signals can also be coordinated along a corridor or throughout an entire system. As traffic volumes increase, signal coordination can be used to optimize high priority traffic corridors and increase the throughput of critical thoroughfares.

Adaptive signal control, which adjusts the timing of traffic lights based on real-time travel conditions, can also provide significant relief to congested corridors and cut costs associated with traffic signal timing data collection and computation.

The Victoria MPO is actively coordinating efforts to work towards implementing corridor timing/ITS regional infrastructure. When implemented, traffic signal progression and timing can be coordinated within the MPA, and real-time travel conditions will be used to adjust where necessary.

## Access Management

Access management refers to the regulation of the number of access points between a development and the adjacent roadway network. Many access management solutions involve installation of roadway medians, where feasible, to guide turning movements to the appropriate locations and improve traffic flow and safety.

## Targeted Traffic Enforcement

Consistent and reliable enforcement of traffic laws helps address public concerns about traffic issues. Focused speed studies (using radar trailers and traffic counters) and enforcement can be employed in the MPA to discourage speeding on residential streets.

## Traffic Calming

Because there are many instances where the number of aggressive drivers is greater than human resources can address, many cities and counties have implemented various "self-enforcing" speed and volume control devices. Most of these measures are referred to as "traffic calming." These physical devices can assist law enforcement in influencing driver behavior.

Most traffic calming measures are applied to residential streets; though, certain measures can be applied to higher volume roadways as well. Broadly defined, the goals of traffic calming measures are:

- To slow down the average vehicle speeds for a particular roadway;
- To address excessive volumes for a particular roadway; and
- To make drivers aware of the context and surroundings of specific roadways.

Traffic calming measures can sometimes impact access and response time for emergency personnel. Representatives of fire, police, and emergency services departments should be involved in the review of proposed traffic calming devices. Victoria can work with its planning partners and emergency response agencies to identify locations suitable for traffic calming implementation.

## Traffic Incident Management

Traffic Incident Management (TIM) consists of a planned and coordinated process to detect, respond to, and quickly clear traffic incidents so that traffic flow may be restored as safely and quickly as possible. Effective TIM strategies reduce the duration and impacts of traffic incidents and improve the safety of motorists, crash victims, and emergency responders. Traffic incident management involves coordination among a number of public and private sector partners, including:

- Law enforcement
- Emergency management and preparedness
- Fire and rescue
- EMS
- Towing and recovery
- Transportation departments
- Hazardous materials contractors
- Public safety communications
- Traffic information media

## Traffic Data Collection

As transportation technology grows increasingly sophisticated, obtaining the amount of data required by new traffic optimization interfaces presents significant challenges to Victoria due to fiscal constraints. Automated traffic data collection creates an opportunity for transportation management agencies to receive a continuous supply of traffic data at a low cost. Because automated traffic data collection gathers data in real-time, it facilitates many of the demand responsive TSM&O strategies discussed earlier in this chapter (such as traffic signal optimization). New types of traffic data collection, such as Bluetooth and Wi-Fi detectors, are particularly appealing due to their lower operational and maintenance costs compared to in-road loop detectors. These types of detectors have the added benefit of being able to gather traveler information beyond traditional roadway vehicles to include bicycle and pedestrian roadway users.

Currently, the Victoria MPO and its local member jurisdictions use data collected by TxDOT, including traffic counts, Vehicle Miles Traveled (VMT), vehicle classification, etc. The MPO uses this data and coordinates with TxDOT and local member jurisdictions on a regular basis. The MPO and its member jurisdictions do not currently have the resources or funding to collect or purchase much of this data, so the MPO utilizes data made available by its state and federal partners.



## LEVERAGING EMERGING TECHNOLOGIES

In addition to the implementation of one or more of the ITS mentioned above, the emergence of new technologies and the adoption of policies and legislation will provide future decision makers with a whole new tool kit of strategies to implement.

### Connected & Autonomous Vehicles

Connected and autonomous vehicles (CAV) can be integrated into existing ITS architecture and could potentially improve mobility, traffic operations, and safety. Automated public transportation could help reduce congestion and the space needed to accommodate single-occupant vehicles, while also potentially improving efficiency and reducing fatalities and severe injuries due to fewer drivers on the road. This technology could also benefit freight and economic growth, since improved travel times and traffic operations could have positive impacts on the economic vitality of rural and urbanized areas within the region. The National Association of City Transportation Officials (NACTO) provides some advice and guidance about CAV in their "Blueprint for Autonomous Urbanism," found at nacto.org/blueprint; additionally, the Society of Automotive Engineers (SAE) and the National Highway Traffic Safety Administration (NHTSA) are working to provide guidance for safety and programming levels of automation. Victoria staff can help the development and deployment of these technologies throughout the region by beginning discussions on policy and land use, as well as keeping its planning partners informed about developments in autonomous vehicle technology.


### Smartphone Applications

As previously mentioned, TNCs and rideshare applications for smartphones are already influencing how people are choosing to commute. Uber's "Express Pool" service utilizes traffic analytics and routing software to reduce backtracking and rerouting to pick up multiple passengers, as was the case with their "UberPool" service. In exchange for significant discounts and more direct routing, riders are picked up within two blocks of their origins, and dropped off within two blocks of their destinations, which entails passengers walking more at the beginning and end of their trips. Smartphones are also already being used to improve transit service and user experience with route information apps as well as instant payment and rider subscription services. Victoria can continue to work with its planning partners to enhance the functionality of smartphone transit applications to further encourage travelers to use transit.

## ALTERNATIVE TRANSPORTATION STRATEGY RECOMMENDATIONS

The no-build strategies discussed in this chapter are cost-effective and efficient methods for improving the transportation system and can be implemented or expanded upon independent of or in conjunction with build strategies (discussed in the following section).

The following list provides a summary of the no-build recommendations for Victoria MPO that will help improve transportation options and efficiency in the region:

- Encourage continued coordination of the metropolitan transportation planning process with the development of local transportation and comprehensive plans to promote the inclusion of facilities and systems related to transit, biking, and walking;
- Encourage transportation planning partners to consider cost-effective, no-build strategies, such as TDM, TSM&O, and Complete Streets design prior to investing in roadway capacity improvements;
- Work with large area employers to explore and implement employer based TDM tools and incentives;
- Consider giving funding preference to projects that incorporate TDM and TSM&O strategies, reflect Complete Streets design principles, or set regional multi-modal transportation goals and objectives through a robust public involvement process;
- Victoria Main Street Program is driven by the mission to restore and revitalize downtown Victoria and a commitment to creating high-quality places and building stronger communities through preservation-based economic development. Any proposed transportation improvements that impact the downtown area should be coordinated with the Victoria Main Street Program so that efforts and resources can be aligned.

# PROJECT PRIORITIZATION & SELECTION

This section builds upon the work completed as part of the Needs Assessment discussed in Chapter 3 to identify deficiencies in the MPA's transportation network. This section outlines the project call and prioritization process used in this MTP using FAST Act planning factors and community values gathered during the visioning process.

## TRANSPORTATION PROJECT IDENTIFICATION

Projects were identified by reviewing existing MPO planning documents (such as the Paseo de Victoria Plan) and ongoing planning efforts (such as 2019-2022 Transportation Improvement Program). In addition, MPO planning partners and member jurisdictions (such as the City of Victoria, Victoria County, and TxDOT) were invited to either submit new projects through the 2045 Call for Projects, or update or maintain previously submitted projects considered in the 2040 MTP. MPO staff received feedback from partner agencies in the MPA and submitted projects on behalf of the MPO, which were then incorporated into a project list. This project list moved on to an initial technical review by MPO and project staff prior to being advanced to the project prioritization and selection process.

Each project included in the preliminary 2045 MTP Project List for scoring included detailed project descriptions and was compared through GIS analysis to conditions illustrated in the needs analysis discussed in Chapter 3, such as crash hotspots and congestion hotspots.

The Temporary Technical Advisory Committee scored projects on a set of criteria that incorporated the federal planning factors and public feedback received during the visioning process to help determine regional priorities and develop the ranked project list.

## Planning Factors & Project Evaluation Criteria

As discussed in Chapter 2, the FAST Act requires the transportation planning process for metropolitan areas to consider strategies and projects that address ten planning factors.

Based on these planning factors, a specific set of project evaluation criteria was developed specific to the Victoria MPA to ensure each aspect of the factors was taken into consideration in assessing the merits of the proposed projects.

To assist the ranking process ATG created an online project prioritization tool that described each project by type and visualized the project boundaries (Figure 4-1).

Using an online GIS project and data map, TTAC members were asked to consider the projects and provide a score (0-4) for each criteria as defined:

**0** – Project has no relevance or impact on the criterion

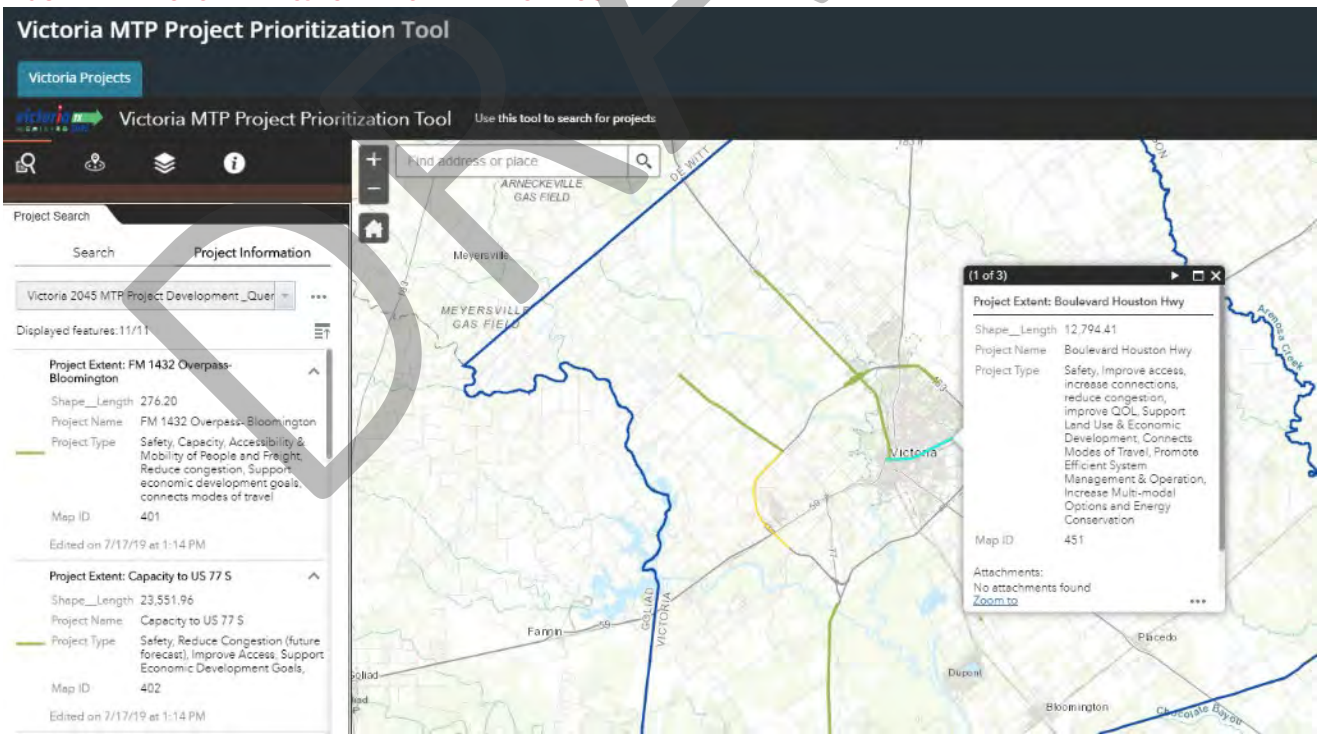
**1** – Project has a small potential impact on the criterion

**2** – Project has an association with the criterion or has a medium potential impact on the criterion

**3** – Project has an above average positive impact on the criterion

**4** – Project has a significant or high positive impact on the criterion

**FIGURE 4-1: VICTORIA PROJECT PRIORITIZATION TOOL**



The criteria considered for each project were as follows

1. **Improve Safety and Security**. Does the implementation of this project impact improvements for safety and/or security? *Examples of improved safety and security include the following:*

    - *Reduction in the number of automobile crashes;*
    - *Reduction in the number of crashes involving non-motorized users.*
    - *Reduction of the risk of individual acts of criminal behavior on a transit line; or*
    - *Improvement in emergency response capabilities in case of an act of terrorism.*

2. **Improve Quality of Life**. Does the implementation of this project have positive impacts on Quality of Life? *Examples of ways that a transportation system could have a positive impact on the quality of life are:*

    - *A reduction in mobility gaps experienced by low-income communities; or,*
    - *A reduction in the time that families spend commuting to school and work.*

    *Examples of ways that the transportation system can have a negative impact on the quality of life in a community are:*

    - *Addition of access points to a neighborhood that encourages through traffic that endangers children at play; or*
    - *Widening of roadways to improve port access that also encourages truck traffic carrying hazardous materials through residential neighborhoods.*

3. **Reduce Congestion**. Does the implementation of this project impact improvements or reductions in congestion or improve level of service? *Examples of ways in which congestion could be reduced are:*

    - *The addition of turning lanes; or*
    - *Improvements to signalization.*

4. **Improve Access**. Does the implementation of this project improve access and promote balance between the number of access points and the efficient movement of traffic through the transportation facility?

*Examples of ways in which access could be improved are:*

- *A reduction in the number of driveways that enter a major arterial; or,*
- *Development of a hierarchical master street plan that includes roadway design based on use.*

5. **Increase Connections**. Does the implementation of this project improve the connectivity of the transportation network and/or connect to external destinations – regional, national, and international? *Examples of ways in which connections could be increased are:*
   - *Increasing network connectivity, such as new or improved north/south and east/west regional connections; or*
   - *Adding bike and pedestrian paths from neighborhoods to schools that do not necessitate crossing a major arterial.*
6. **Support Land Use and Economic Development Goals**. Does the implementation of this project support land use and economic development goals? *Examples of ways in which the Land Use and Economic Development Goals of the community could be met include:*
   - *Not building new roads into areas prone to flooding;*
   - *Providing routes for non-motorized travel;*
   - *Providing pedestrian amenities along a business corridor; or*
   - *Improving the efficiency of freight movement to and from a port.*
7. **Preserves Right of Way (ROW):** Does this project preserve of rights-of-way? *Examples of ways in which rights-of-way could be preserved include:*
   - *The purchase of enough land to build a four-lane highway even though the current plans only call for the construction of a two-lane facility, when appropriate; or*
   - *The purchase of land at points along an interstate where future entrances are planned but where no development currently exists.*
8. **Connects Modes of Travel**: Does this project connect modes of travel? *Some examples of connecting modes of travel are:*

- *Improved connection to intermodal freight transfer facilities for freight;*
- *Connecting sidewalks and bicycle facilities to transit stops.*

9. **Promote Efficient System Management and Operation**. Does this project promote efficient system management and operation?
*Examples of the promotion of efficiency in the transportation system include:*
   - *Improvement in the operations and management of the system;*
   - *Institution of a regular repair and maintenance program; or*
   - *Implementation of traffic signalization coordination and intelligent transportation system (ITS) infrastructure.*

10. **Protect the Environment**. Does this project protect or reduce impacts to the environment?
*Examples of ways to protect the environment are:*
   - *Not building roads in environmentally sensitive areas; or*
   - *Building projects that reduce idling time for large trucks.*

11. **Increase Multi-Modal Options and Energy Conservation**. Does the implementation of this project increase multi-modal options and/or promote energy conservation?
*Examples of ways this could be achieved include:*
   - *A reduction in the use of single occupancy vehicles;*
   - *Expansion of the fixed route transit system into previously unserved areas;*
   - *An increase in the number of streets with sidewalks; or*
   - *An increase in intermodal freight transfer facilities.*

12. **Improves System Resiliency and Reliability**: Does the implementation of this project improve system resiliency and reliability?
*Examples of improved to system resiliency and reliability include the following:*
   - *Increasing connections, especially for evacuation and recovery;*
   - *Improvements in system condition (state of good repair).*

13. **Reduces or Mitigates Stormwater Impacts**: Does this project reduce or mitigate stormwater impacts?
*Examples of ways to reduce storm water impacts include:*

    - *Projects with drainage design extending and incorporating outfall beyond the immediate right of way;*
    - *Leveraging existing drainage infrastructure and discouraging growth into areas necessitating intensive drainage design.*

14. **Enhances Travel and Tourism**: Does this project enhance travel and tourism?
*Examples may include:*

    - *Connecting trails to existing Tourist destinations;*
    - *Improvements in transit service to areas of interest;*
    - *Decreasing peak loading conditions in and around events.*

15. **Cost Sharing.** Does this project have a greater than 20% local share?

16. **Project Readiness**. This criterion determines the year in which a project or phase of a project will be programmed in the TIP. It is recommended that this criterion be used to assess the project timeliness only and not for the project prioritization process. *The following factors determines the project readiness:*

    - *Design Delays*
    - *Right of Way (ROW) Acquisition*
    - *Environmental Problems*
    - *Funding Availability*

## Project Scoring and Score Weighting

During the visioning process, the public and stakeholders were asked to rank the evaluation criteria based on their perceived level of regional importance. The input received on these criteria led to the development of criteria weights. The results of the TTAC scoring were combined with the criteria weights to assign a final ranking of the evaluation criteria based on community values. Table 4-1 shows the rankings of the evaluation criteria resulting from the visioning process and the assigned weights applied for each criterion. The weights were applied as a multiplier for each project's score on that associated criterion.

**TABLE 4-1: EVALUATION CRITERIA WEIGHTING**

| Evaluation Criteria | Points |
|---|---|
| Improve Safety and Security | 3.5 |
| Improve Quality of Life | 2.5 |
| Reduce Congestion | 2 |
| Improve Access | 2.5 |
| Increase Connections | 2.5 |
| Support Land Use and Economic Development Goals | 1 |
| Preserves Right of Way (ROW) | 0.5 |
| Connects Modes of Travel | 1 |

| Evaluation Criteria | Points |
|---|---|
| Promote Efficient System Management and Operation | 1 |
| Protect the Environment | 0.5 |
| Increase Multi-Modal Options and Energy Conservation | 1.5 |
| Improves System Resiliency and Reliability | 1 |
| Reduces or Mitigates Stormwater Impacts | 1 |
| Enhances Travel and Tourism | 1 |
| Cost Sharing | 0.5 |
| Project Readiness | 0.5 |

Once the initial criteria had been tabulated, TxDOT, MPO staff, and the TTAC reviewed the preliminary prioritization process results to assess the community benefits of proposed transportation projects while considering project readiness and project staging, and incorporating the federal metropolitan planning factors and the community-driven goals and objectives established during the visioning phase. The process combined technical judgement about the project's ability to meet national and state performance measures and local goals with sponsor-provided information about the purpose and need for the project, project readiness, and funding availability.

The prioritization process, when paired with the Fiscal Constraint analysis, resulted in a prioritized list of implementation, near-, mid-, and long-term transportation improvements. The TTAC and Policy Advisory Committee reached consensus on the preliminary Draft Project List for the Draft MTP on December 10, 2019. The Final Project List is shown in Chapter 8 and was presented to the public for the 30-day comment period beginning March 5, 2020. Chapter 8 also provides corresponding maps to identify projects in each stage of the plan, as well as project tables with detailed project information.



# Chapter 5: System Level Analysis

# 5 SYSTEM LEVEL ANALYSIS OF PROPOSED PROJECTS

Metropolitan transportation planning is not solely concerned with the best way to move people and goods. In addition to mobility concerns, the planning process also examines the interaction of proposed transportation improvements with the natural and built environment. For the purposes of this MTP update, potential impacts on environmental resources and quality of life in the region are evaluated at a system-wide level.

A more detailed analysis of the specific impacts associated with a project is typically performed during the project development process to fulfill requirements under the National Environmental Protection Act (NEPA).

The primary goal of the System Level Analysis is to evaluate whether the proposed program of unconstrained potential transportation improvements may negatively impact the environment or result in disparate impacts to certain populations. It is intended to serve as a guide for implementing agencies and elected officials as projects progress through the development process.

While it is not always possible to avoid impacts to environmentally sensitive areas, the goal of the environmental mitigation analysis is to balance the need for transportation improvements with environmental protection and quality of life considerations and, where possible, increase access to natural and cultural resources in the region, while reducing or mitigating these potential impacts. As such, mitigation activities must be considered during all phases of project planning, design, construction, and maintenance.

In addition to environmental and cultural resources, the System Level Analysis addresses environmental justice considerations to ensure both the benefits and the burdens of the transportation system are distributed equitably across the region. The term environmental justice first emerged in the metropolitan transportation planning discussion in 1994 with the issuance of Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. The executive order was based upon Title VI of the Civil Rights Act and is meant to ensure that minority and low-income populations are not adversely affected by federal actions.

Identifying potential impacts on the environment, as well as low-income and minority populations, involves a three-step process that includes:

1. Defining and developing an inventory of environmental resources/minority and low-income populations;
2. Identifying and assessing the potential impacts of proposed transportation improvements on these resources; and
3. Addressing possible mitigation activities system wide.

# ENVIRONMENTAL ANALYSIS

One element of the System Level Analysis involved conducting an analysis on the environmental features, environmental hazards, and cultural assets that exist in the MPA.

This environmental analysis identifies the types of environmental features, environmental hazards, and cultural assets that are present in the Victoria MPA and considers their distribution and concentration. This information not only provides a more holistic picture of the current state of the planning region – it also informs the project prioritization process. The project prioritization process is the ranking of all proposed transportation projects based on various performance measures, including whether each project has a positive, neutral, or negative impact on the environmental and cultural elements in the region.

## EXISTING ENVIRONMENTAL FEATURES & HAZARDS

The entirety of the Victoria MPA lies within the Gulf Coast Aquifer, which provides water used for municipal, industrial, and irrigation purposes along the Texas Gulf Coast. The major water feature in the Victoria MPA is the Guadalupe River, which runs through the county along the western boundary of the City of Victoria. Most of the county is drained by the Guadalupe and Lavaca-Guadalupe River Basins. Coleto Creek is another important water feature, which runs from the Guadalupe River to the Coleto Creek Reservoir located just outside the county. There is a total of approximately 18.14 square miles of creeks, streams, and rivers in the MPA.

According to 2019 FEMA databases[1], the 100-year floodplain includes the area surrounding the Guadalupe River and the various creeks running through the Victoria MPA. **Note:** as of the development of this MTP, the Texas Coastal Flood maps have begun the process of being updated, however updated firms were not yet adopted.

Wetlands exist throughout the Victoria MPA, but the largest are found in the southwestern portion of the county, particularly between McFaddin and Bloomington, as well as along the Guadalupe River and Coleto Creek. There are over 3,300 freshwater emergent wetlands within the MPA, making up the most common type of wetland in the region, followed by freshwater ponds and riverines. In total there are approximately 72 square miles of wetlands within the MPA. There is one surface water intake facility in the county. This facility collects surface water from the Guadalupe River, which is the primary source of drinking water for the City of Victoria.

In addition to the environmental features discussed above, a set of nine potential environmental hazards were identified in the MPA. These hazards were identified as Toxics Release Inventory (TRI) sites. According to the US Department of Health & Human Services, these are sites/facilities that release certain toxic chemicals into the air, water, or into a land disposal. Sites that are part of the TRI program must report a variety of activities and information to the EPA on an annual basis.

[1] Source: http://maps.riskmap6.com/TX/Victoria/

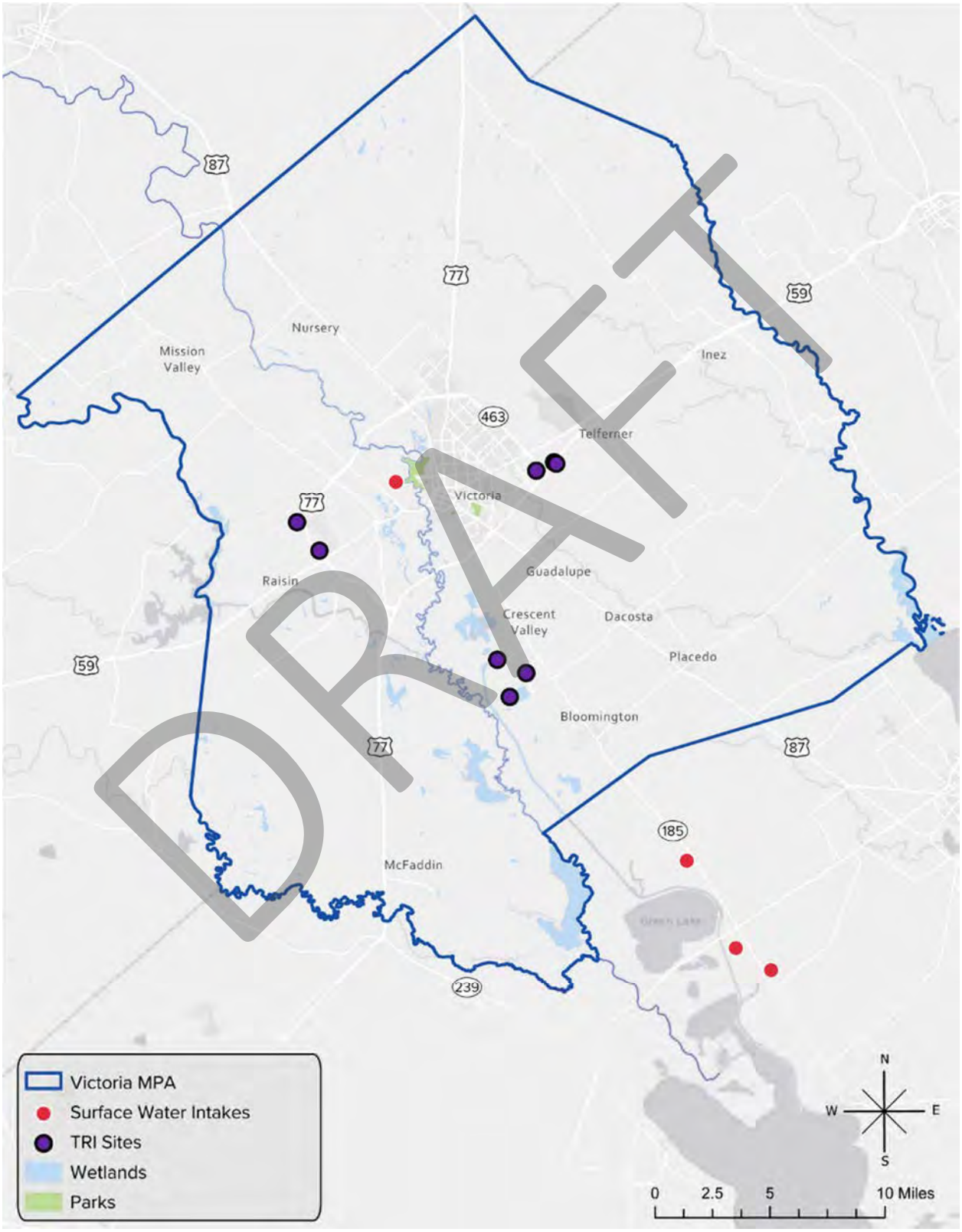
These TRI sites are located in three different clusters in the east, west, and south portions of the MPA. Figure 5-1 shows the various environmental features and hazards in the Victoria MPA.

Table 5-1 contains the aggregate amounts of environmental features and hazards identified in the Victoria MPA.

**TABLE 5-1: ENVIRONMENTAL FEATURES & HAZARDS**

| Environmental Feature/Hazard | Amount |
|---|---|
| Creeks, Streams, and Rivers | 18.14 miles |
| Wetlands | 72 square miles |
| Hazards | 9 sites/facilities |

## FIGURE 5-1: ENVIRONMENTAL FEATURES & HAZARDS



## EXISTING CULTURAL, COMMUNITY, & CIVIC ASSETS

The system level analysis also identifies cultural and community assets in the Victoria MPA in order to understand whether the region's communities have adequate access to these assets. Improving access to such assets may have a positive impact on a proposed transportation project's score.

Civic and cultural assets include public facilities such as libraries, museums, cemeteries, and municipal offices. Historical buildings/markers/districts and parks are also included in this group of assets. These assets are valuable resources for those living in the region. Providing accessibility to these different facilities not only allows people to use various civic resources, but it improves quality of life as people participate in public leisure activities and take advantage of the amenities in the area. In the Victoria MPA, the majority of these assets are found in or around the City of Victoria. Figure 5-2 shows the location of historic districts, cemeteries, and major civic/cultural points of interest. Historic districts within Victoria include the following:

- Original Townsite Historic District
- Victoria Heights Historic District
- Nine Rivers Historic District
- College Park Historic District
- Downtown Business District

Some of the major civic/cultural points of interest include the Victoria Public Library, Victoria County Courthouse, Museum of the Coastal Bend, and Nave Museum. In addition, as of April 2019, there are 116[2] properties throughout the Victoria MPA that are listed in the U.S. National Park Service's National Register of Historic Places.

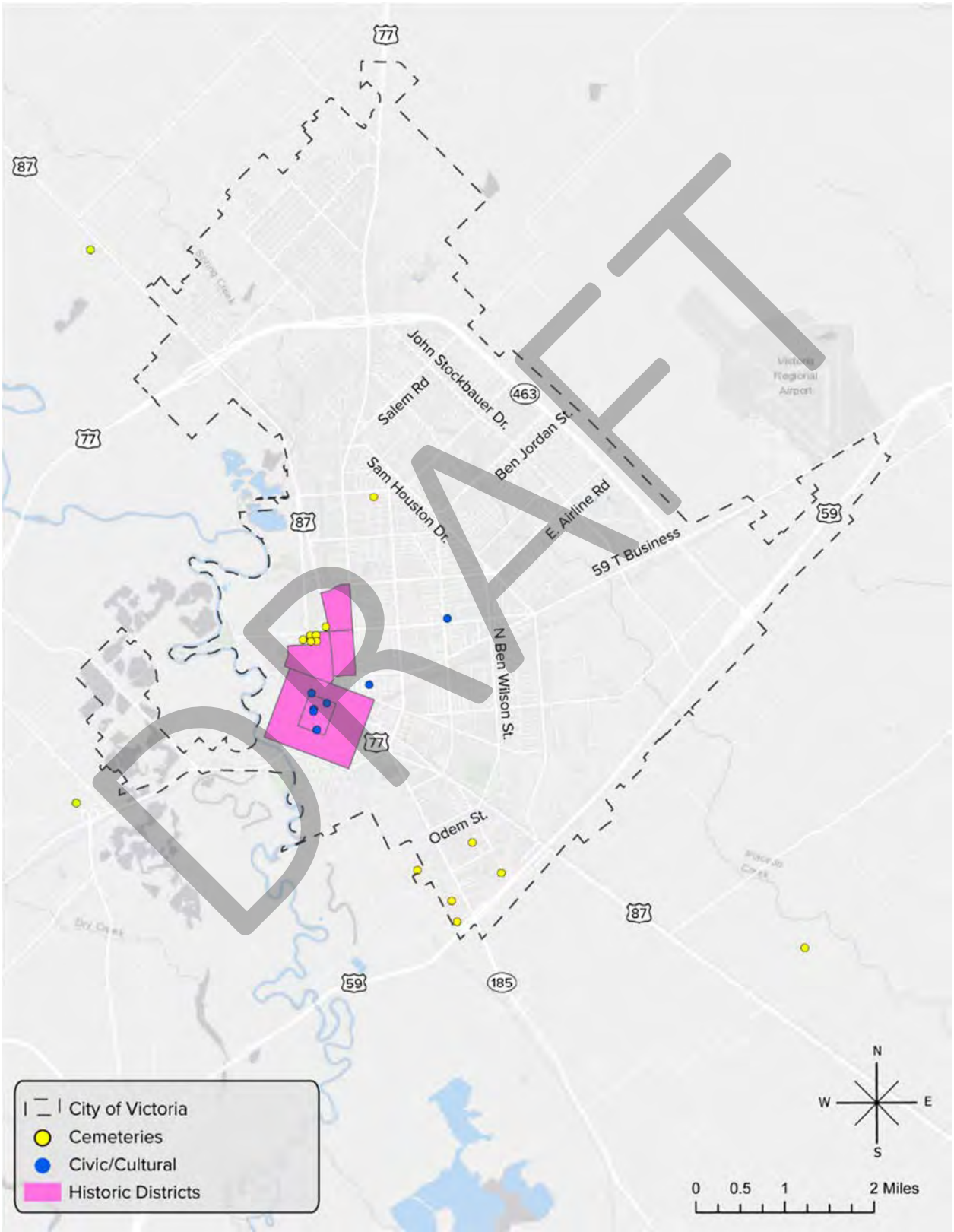
There are roughly 17 parks within the Victoria MPA including City and County Parks, all of which are located within the City of Victoria (Figure 5-3). The largest park is the 660-acre Riverside Park which is home to the Texas Zoo, Riverside Golf Course, Challenged Athletes Dream Complex, and multiple athletic fields.

**TABLE 5-2: CULTURAL & COMMUNITY ASSETS**

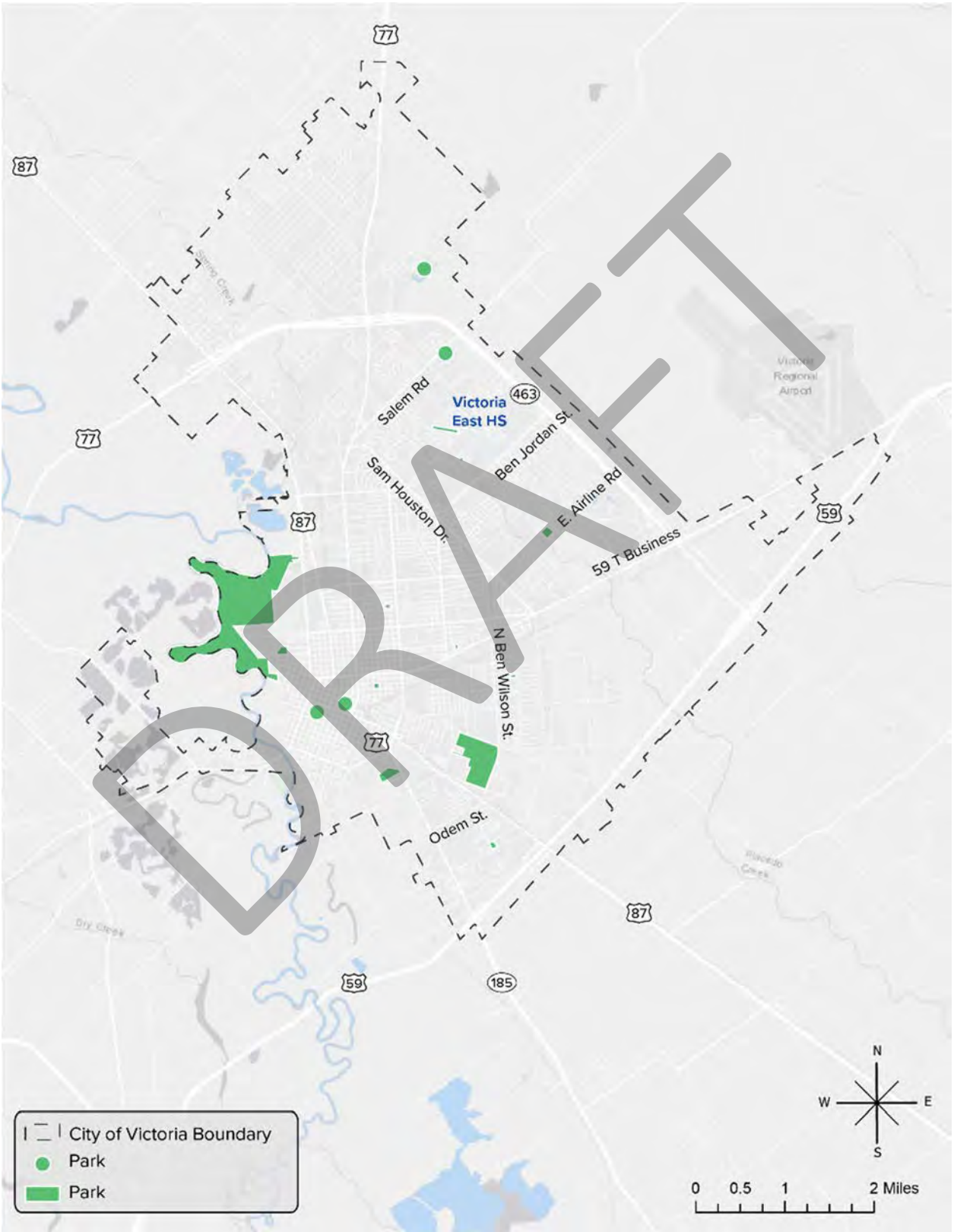
| Cultural/Community Assets | Amount |
|---|---|
| Parks/Public Land | 17 parks |
| Historic District | 1.4 sq. miles |
| Cultural Assets | 22 sites/facilities |

[2] https://atlas.thc.texas.gov/

## FIGURE 5-2: CITY OF VICTORIA CULTURAL & COMMUNITY ASSETS



## FIGURE 5-3: CITY OF VICTORIA PARKS



# ENVIRONMENTAL JUSTICE

Environmental Justice (EJ) as defined by the U.S. Environmental Protection Agency is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Environmental Justice impact analysis is a critical component to transportation planning. Transportation projects have long lasting impacts on communities. Therefore, it is critical to the planning process to establish and ensure fair and equitable transportation policies and funding decisions so that no group of people (by race, ethnicity, or socioeconomic status) should receive unfair treatment or bear a disproportionate share of negative environmental consequences as a result of decisions made by all levels of government.

## ENVIRONMENTAL JUSTICE ZONES

The following section defines Environmental Justice zones in the MPA. These zones were established to be used in the project scoring process to determine the impacts of planned transportation projects on Environmental Justice communities. Environmental Justice zones in the MPA were identified by determining historically underserved and vulnerable communities. Using block group data from the 2017 American Community Survey, Environmental Justice zones were defined as having at least two of the following criteria:

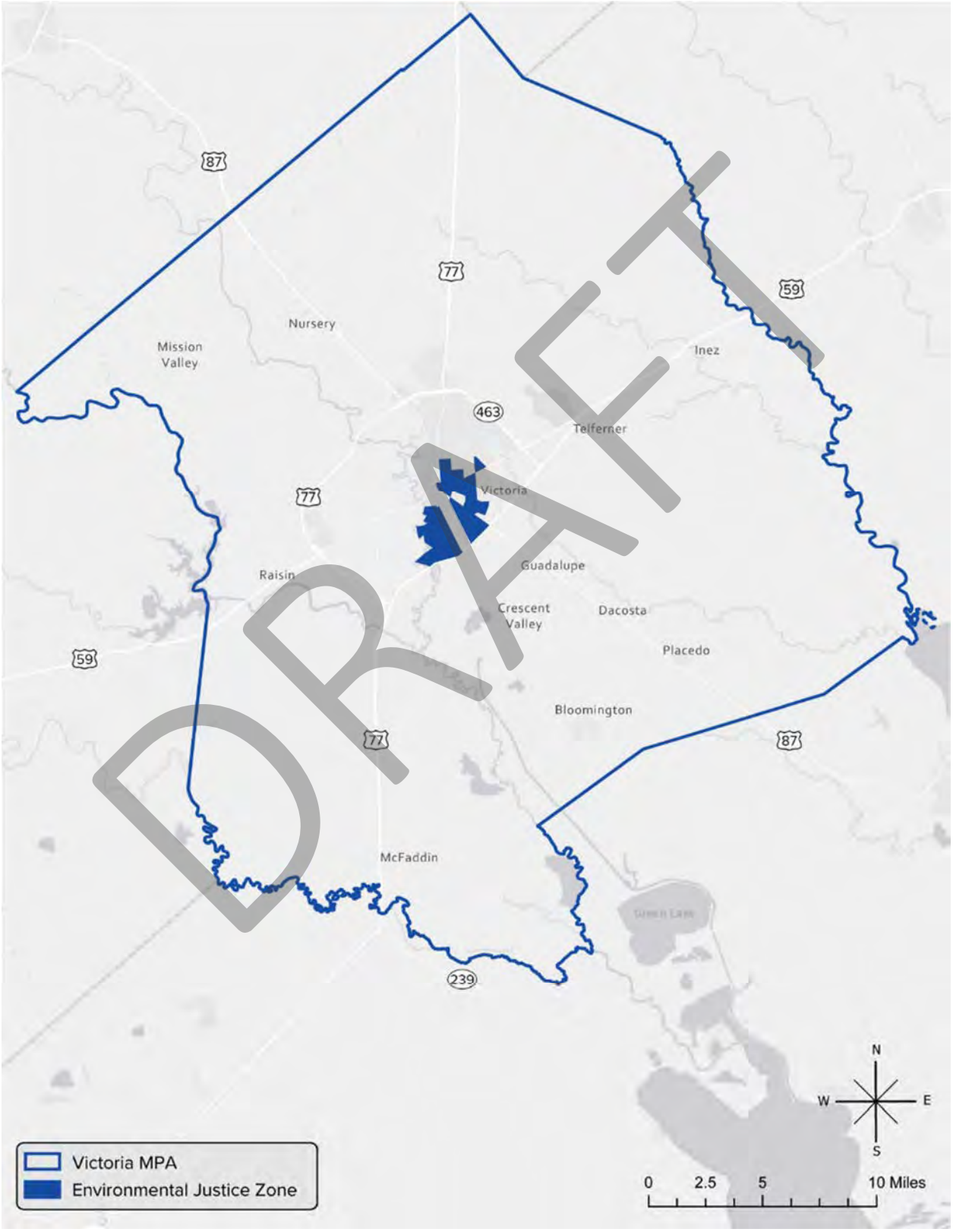
- High Minority Population – Block groups whose percentage of minorities is greater than the MPA's total percentage of minorities (13%).
- High Population in Poverty – Block groups whose percentage of population in poverty is greater than the MPA's total percentage of population in poverty (20%).
- High Limited English Proficient Population – The top 10% of block groups with the highest percentage of Limited English Proficient population.

Figure 5-4 shows where the Environmental Justice zones are located within the Victoria MPA. A concentration of Environmental Justice zones is located within the central portion of the MPA. In addition, zones can be found to the southwest of the center of the MPA. Table 5-3 shows the Environmental Justice zones demographics compared to the entire MPA. High concern Environmental Justice zones were also identified. These block groups were identified as high concern due to meeting all three of the aforementioned criteria and will be given heightened attention during the planned transportation projects impact analyses. As shown in Figure 5-5, high concern Environmental Justice zones are concentrated in the central portion of the MPA.

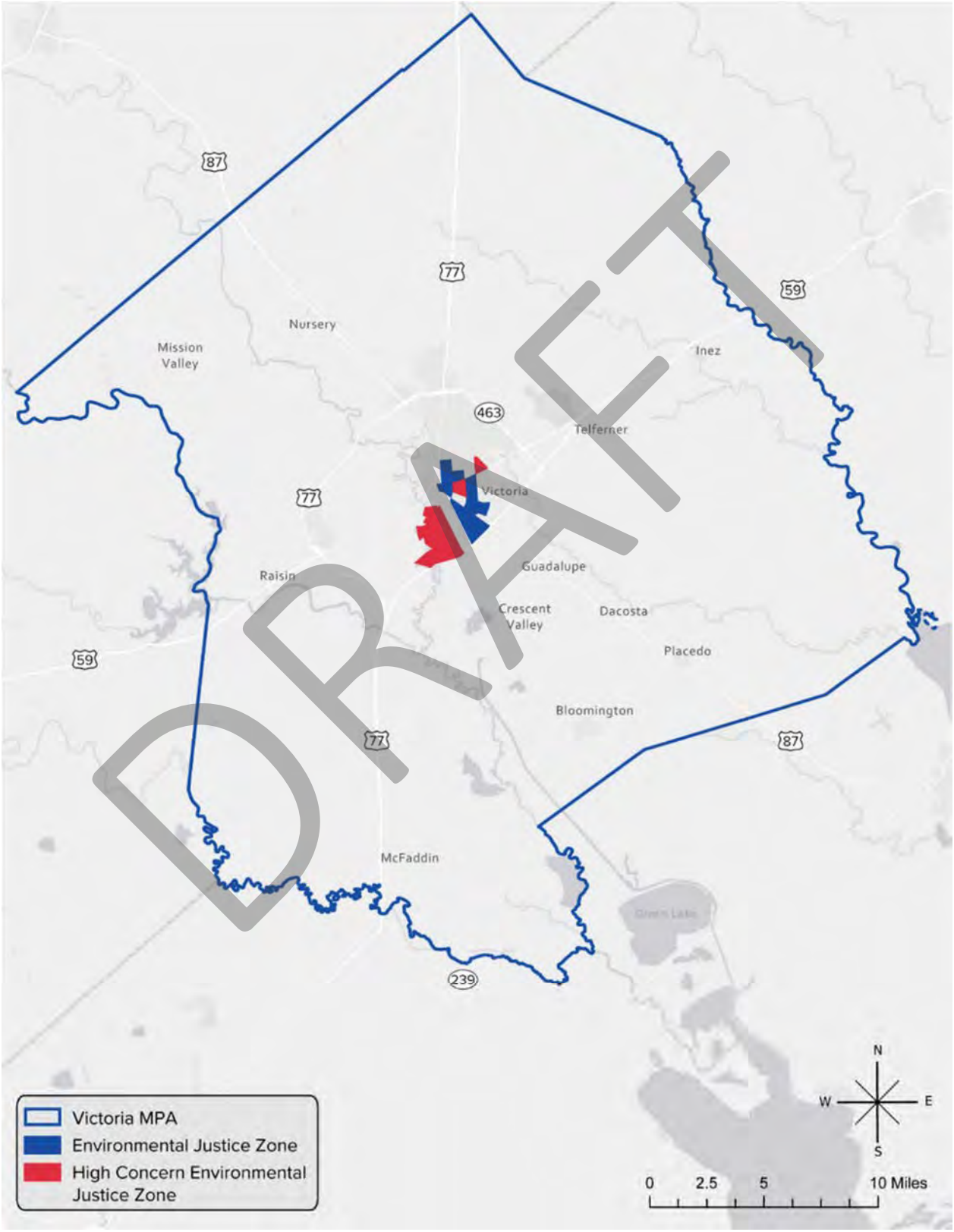
**TABLE 5-3: ENVIRONMENTAL JUSTICE ZONES COMPARED TO MPA**

| | MPA | EJ Zones | High Concern EJ Zones |
|---|---|---|---|
| Total Population | 91,518 | 12,277 | 2,209 |
| Total Minority Population | 11,493 | 8,078 | 549 |
| Percent Minority Population | 13% | 66% | 25% |
| Total Limited English Proficient Population | 2,449 | 642 | 315 |
| Percent Limited English Proficient Population | 3% | 5% | 14% |
| Total Population in Poverty | 13,328 | 7,401 | 833 |
| Percent Population in Poverty | 15% | 60% | 38% |

FIGURE 5-4: ENVIRONMENTAL JUSTICE ZONES – VICTORIA METROPOLITAN PLANNING AREA



## FIGURE 5-5: HIGH CONCERN ENVIRONMENTAL JUSTICE ZONES – VICTORIA MPA



## HOUSING & TRANSPORTATION COSTS

Housing and transportation costs are key indicators for a region's affordability. While housing is generally the singular criteria for looking at regional affordability, a household's transportation expenditure tends to be the second-largest expense. Together these two key expenditures as a portion of household income provide a better understanding of the affordability within the MPA.

According to the Index, housing and transportation costs reaching 45% of household income is considered unaffordable. Transportation costs consider well-researched factors[3] that drive household transportation costs, including the following:

- Neighborhood Characteristics such as block density, regional household intensity, employment access, and transit connectivity.
- Household Characteristics such as commuters per household, household size, auto ownership, auto usage, and public transit usage.

Using H+T Affordability Index[4] data, Figure 5-6 identifies transportation and housing costs as a percentage of household income throughout the MPA. Much of the northern portion of the Victoria MPA is burdened by higher costs for housing and transportation. More affordable areas are found within the southern part of the MPA. The areas with the highest housing and transportation costs are within the northwest portion of the Victoria MPA.

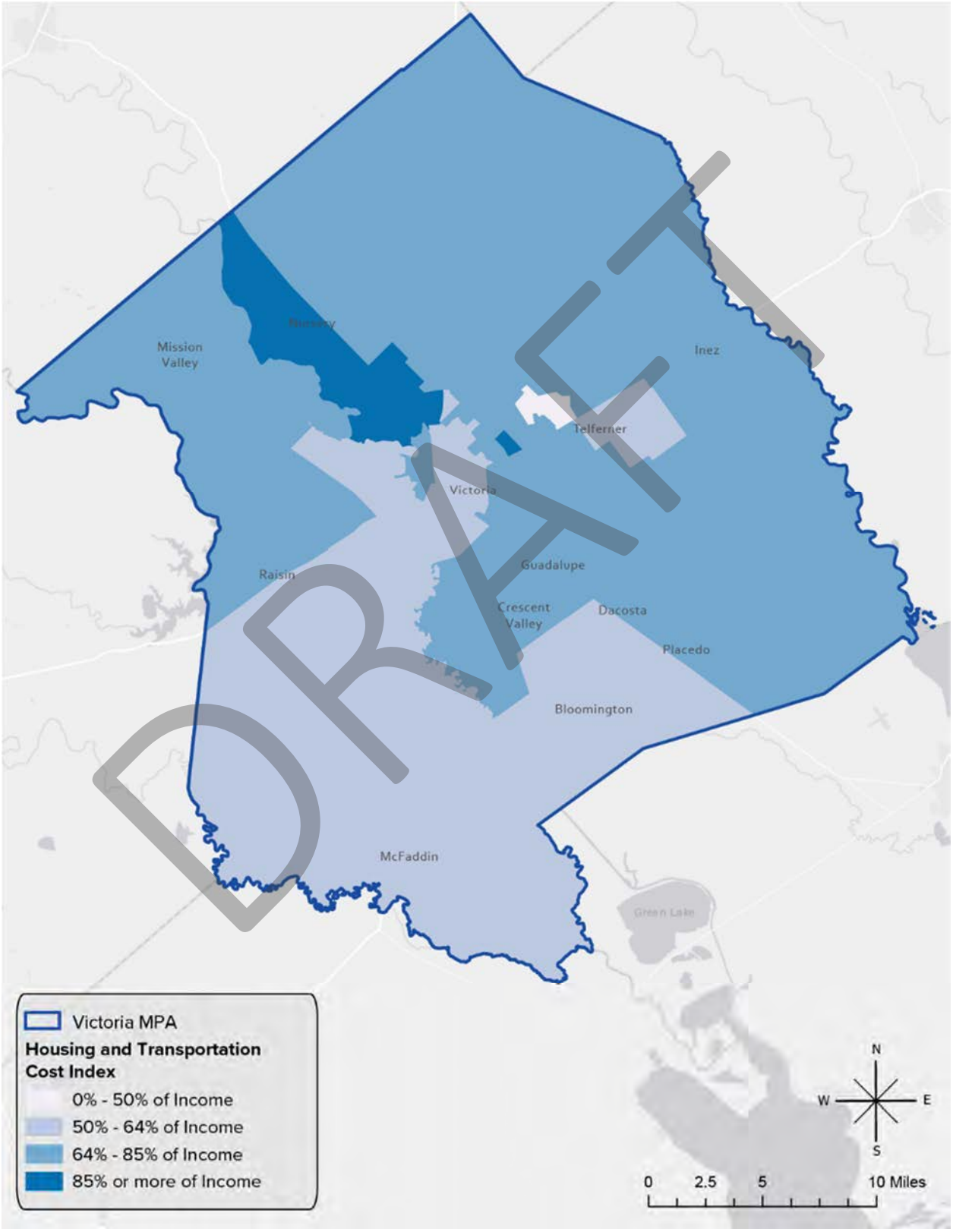
Planned transportation projects can alleviate transportation costs in these key areas of concern by linking mobility projects to areas of high employment and popular destinations. Planned transportation projects can also improve mobility choice in areas where housing and transportation costs are considered unaffordable by assessing the potential for transit, pedestrian, and bicycling facilities.




[3] The Center for Neighborhood Technology's Housing and Transportation (H+T) Affordability Index – H+T Index Methods - https://htaindex.cnt.org/about/HTMethods_2016.pdf

[4] The Center for Neighborhood Technology's Housing and Transportation (H+T) Affordability Index - https://htaindex.cnt.org/

## FIGURE 5-6: HOUSING AND TRANSPORTATION COSTS – VICTORIA METROPOLITAN PLANNING AREA



# MITIGATION ANALYSIS

Transportation projects proposed for inclusion in each MTP have the potential to impact important environmental areas, culturally significant sites, and environmental justice communities within each region. This analysis incorporates the environmental and equity analyses from above to identify potential impacts and mitigation measures for planned transportation projects in each region.

## ENVIRONMENTAL MITIGATION ANALYSIS

The data and information used to conduct the analysis included wetlands maps from the U.S. Fish and Wildlife Service, historic sites from the National Register of Historic Places, and state and federal wildlife protection resources. In order to determine how projects identified in this plan might affect these resources, an FHWA-endorsed GIS methodology originally developed by the Southeast Michigan Council of Governments (SEMCOG) was employed. The analysis assembles projects into types, and then buffer zones are generated and mapped for each type of project. For the sake of this analysis, only capacity projects were considered to have potential impacts on the mapped data.

Buffer sizes were determined based on the type of environmental resource being examined, meaning smaller "areas of influence" were computed depending on the environmental resource.

Some resources, such as recreation areas and historic sites, may only be impacted by projects in close physical proximity, while others (such as water resources) may still be impacted by a project some distance away.

Table 5-4 summarizes the buffer sizes assigned to each resource being examined. Once buffer sizes were determined, buffers and environmental resources were mapped to identify areas of overlap, as these are areas where an impact is possible.

### TABLE 5-4: ENVIRONMENTAL RESOURCES BUFFER SIZES

| Environmental Resource | Buffer Extent |
|---|---|
| Wetlands and Other Waters | 0.25 miles |
| Cemeteries | 250 feet |
| Historic, Cultural & Civic Sites | 250 feet |
| Parks & Wildlife Management Areas | 250 feet |

Figure 5-7 displays the buffer zones and environmental and cultural resources in the Victoria MPA. Table 5-5 presents the number of proposed capacity projects for each project type included in the 2045 MTP.

### TABLE 5-5: PROJECT TYPES

| Project Type | Total Number of Proposed Projects |
|---|---|
| Capacity | 9 |
| Active Transportation | 7 |

## FIGURE 5-7: ENVIRONMENTAL OVERLAY ANALYSIS

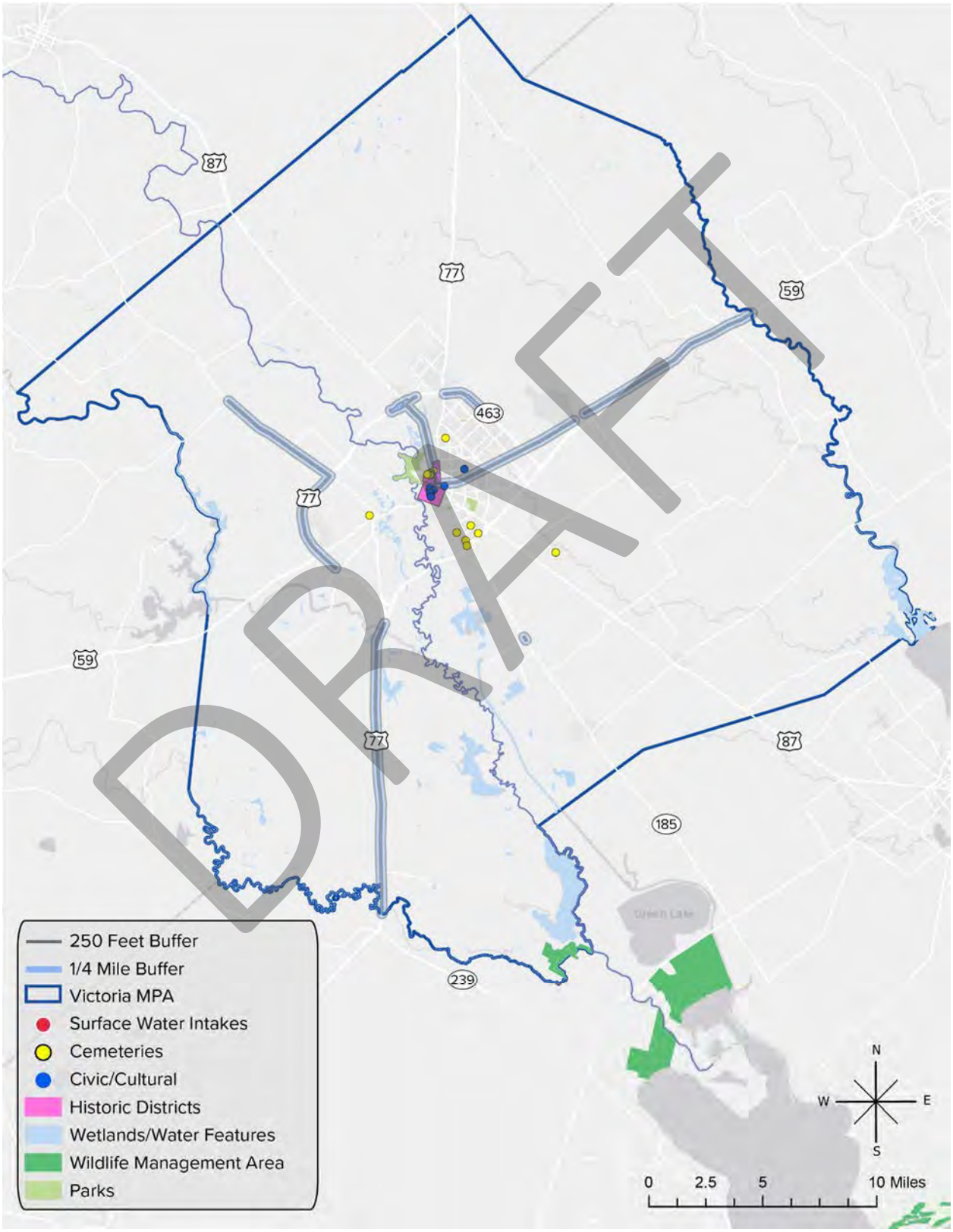


Table 5-6 and Table 5-7 quantify the number of possible impacts to the inventoried resources for capacity projects. The list of potential impacts presents some concerns for cultural resources including Memorial Park and four of the historic districts in the region. Freshwater emergent wetlands, rivers, and freshwater ponds have the highest risk for the potential impact on water resources due to the planned projects. The list of proposed projects presents few concerns regarding civic/cultural sites, parks, and cemeteries.

### TABLE 5-6: NUMBER OF PROJECTS POTENTIALLY IMPACTING INVENTORIED WATER RESOURCES

| Water Resource | Number of Resources Potentially Impacted by Roadway Projects |
|---|---|
| Freshwater Emergent Wetland | 69 |
| Freshwater Forested/Shrub Wetland | 34 |
| Freshwater Pond | 61 |
| Lake | 2 |
| Riverine | 92 |

### TABLE 5-7: NUMBER OF POTENTIAL IMPACTS TO INVENTORIED CULTURAL RESOURCES

| Cultural Resource | Number of Resources Potentially Impacted by Roadway Projects |
|---|---|
| Cemeteries | 1 |
| Historic Districts | 4 |
| Civic/Cultural Sites | 0 |
| Parks | 0 |

## POTENTIAL MITIGATION ACTIVITIES

This analysis of potential environmental impacts is intended to function as a resource for agencies and elected officials that will ultimately implement any of these transportation projects. Detailed, project-level analysis is required in order to definitively identify adverse impacts from specific projects. The buffer analysis is a useful method for narrowing the focus of such studies, but it should be noted that proximity or overlap of a project buffer and environmental resource alone does not mean an impact is present nor does the lack of an overlap indicate that an impact won't occur.

Federal regulations require the metropolitan planning process to include "a discussion of types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the plan." FHWA recommends an ordered approach to mitigation known as "sequencing" that involves understanding the affected environment and assessing transportation effects through project development.

This ordered approach involves:

- Avoiding the impact altogether;
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation;
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; or
- Compensating for the impact by replacing or providing substitute resources.

Table 5-8 provides a toolbox of mitigation measures and general areas where these activities can be implemented as the type and the level of mitigation activities will vary depending on the scope of the project. These measures are intended to be regional in scope and may not necessarily address potential project-level impacts. As a proposed project progresses through the project development process, mitigation should be an integral part of the alternatives' development and the analysis process in order to maximize effectiveness.

**TABLE 5-8: POTENTIAL MITIGATION ACTIVITIES**

| Resource | Mitigation Measures |
|---|---|
| **Wetlands or water resources** | Avoidance, minimization, compensation:<br>• Preservation<br>• Creation<br>• Restoration<br>• In-lieu fees<br>• Riparian buffers<br>• Design exceptions and variances |
| | Environmental compliance monitoring |
| **Forested and other natural resources** | Avoidance, minimization |
| | Replacement property for open space easements to be of equal fair market value and of equivalent usefulness |
| | Design exceptions and variances |
| | Environmental compliance monitoring |
| **Agricultural areas** | Avoidance, minimization |
| | Design exceptions and variances |
| | Environmental compliance monitoring |
| **Endangered and threatened species** | Avoidance, minimization |
| | Time-of-year restrictions |
| | Construction sequencing |
| | Design exceptions and variances |

| Resource | Mitigation Measures |
|---|---|
| | Species research/fact sheets |
| | Memoranda of Agreements for species-specific management |
| | Environmental compliance monitoring |
| Ambient air quality | Transportation control measures |
| | Transportation emission reduction measures |
| Cultural Resources | Avoidance, minimization |
| | Landscaping for historic properties |
| | Preservation in place or excavation for archeological sites |
| | Design exceptions and variances |
| | Environmental compliance monitoring |
| Parks and recreation areas | Avoidance, minimization, mitigation |
| | Design exceptions and variances |
| | Environmental compliance monitoring |

## ENVIRONMENTAL JUSTICE MITIGATION ANALYSIS

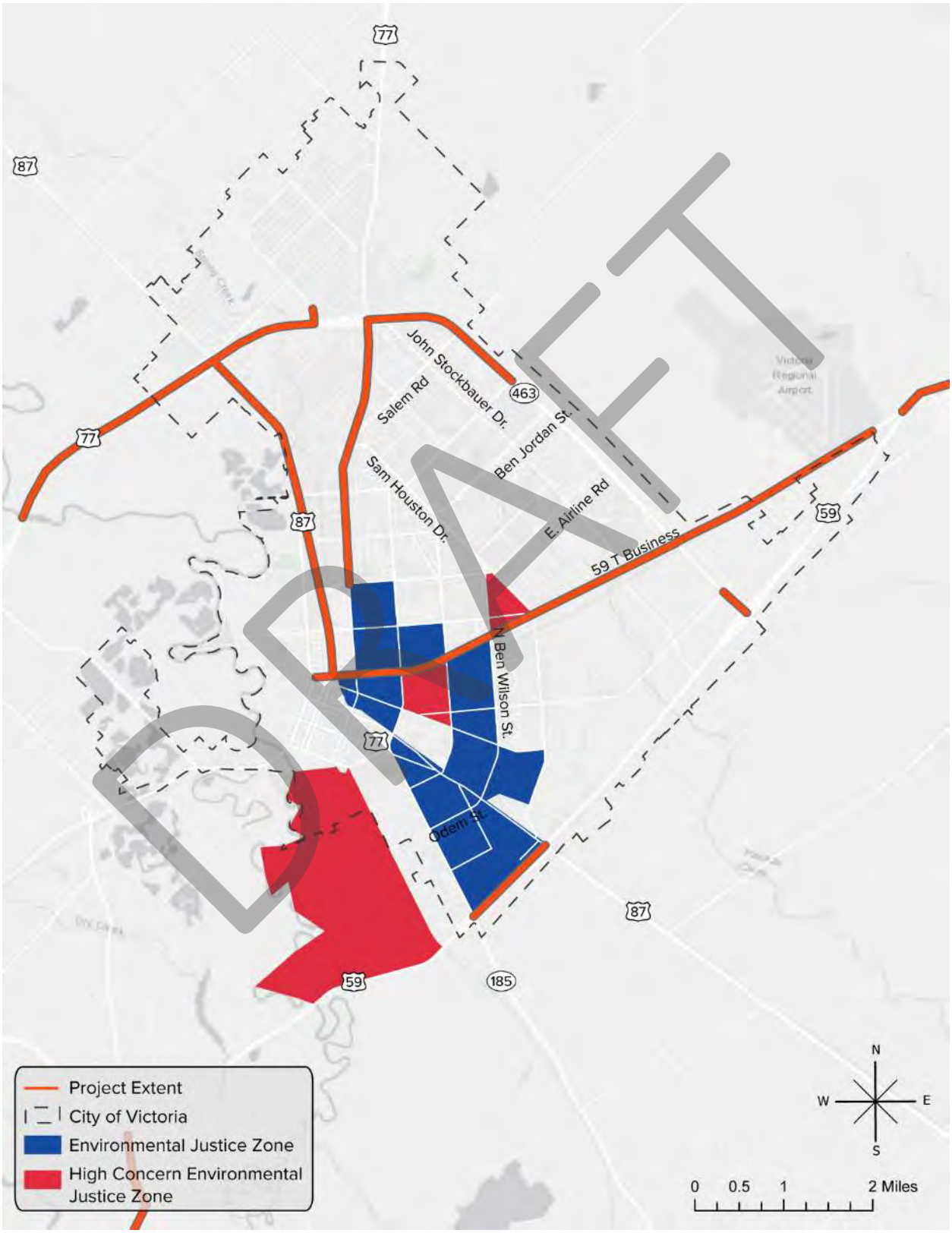
A critical step in the metropolitan planning process is to identify the potential impacts of planned projects on environmental justice communities in the region. Figure 5-8 displays the earlier identified environmental justice zones and the planned capacity projects. As stated earlier, project-scale studies should be conducted in the planning and environmental phases of each project to determine actual impacts on these communities.

Table 5-9 summarizes the number of capacity projects that may impact identified environmental justice areas. Of the 10 block groups identified as environmental justice zones, four are potentially impacted by planned projects. Of the three block groups identified as areas of high concern, one of these are potentially impacted by planned projects. 19% of the roadway projects (3 out of 16) may potentially impact Environmental Justice Zones. Some of the possible impacts, especially with the safety and active transportation components of projects may be beneficial in nature by improving safety and variety of mobility options to these zones.

### TABLE 5-9: POTENTIALLY IMPACTED ENVIRONMENTAL JUSTICE ZONES

| | Total Block Groups | Block Groups Impacted | % of Block Groups Impacted | Number of New/Expanded Roadways |
|---|---|---|---|---|
| Environmental Justice Zones | 10 | 6 | 60% | 1 |
| High Concern Environmental Justice Zones | 3 | 2 | 66% | 1 |

## FIGURE 5-8: ENVIRONMENTAL JUSTICE ZONES & PLANNED CAPACITY PROJECTS



## AIR QUALITY

Improving regional air quality and maintaining compliance with federal air quality standards is a fundamental consideration in the metropolitan transportation planning process. The construction of new transportation infrastructure increases the capacity for vehicles on regional roadways, which has the potential to increase traffic-related air pollutants in the MPO planning area.

In 1963, in response to increasing air pollution, the U.S. Congress passed the original Clean Air Act which established a federal program for researching techniques to monitor and control air pollution. The Clean Air Act of 1970 increased federal enforcement authority and authorized the development of national ambient air quality standards to limit common and widespread pollutants. These standards, known as the National Ambient Air Quality Standards (NAAQS), define the allowable concentration of pollution in the air for six "criteria" pollutants, including carbon monoxide, lead, nitrogen dioxide, particulate matter, ozone, and sulfur dioxide.

The Clean Air Act identifies two types of national ambient air quality standards:

- Primary standards provide public health protection, including protecting the health of "sensitive" populations such as asthmatics, children, and the elderly.
- Secondary standards provide public welfare protection, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

The existing standards for each of the six criteria pollutants are listed in Table 5-10. The units of measure for the standards are parts per million (ppm) by volume, parts per billion (ppb) by volume, and micrograms per cubic meter of air (µg/m3). The existing standard for Ozone was established by a 2008 Final Rule. In November 2014, the EPA proposed to revise the primary and secondary standards to somewhere within the range of 0.065 and 0.070 ppm. After the proposed rule was published in December 2014, the EPA accepted written comments on the proposed rule until March 17, 2015. The EPA issued its final rule strengthening the ozone standards to 0.070 ppm on October 1, 2015.

EPA has delayed issuing guidance on conformity requirements for transportation planning in relation to the 2015 Ozone rule. Until then, MTPs are only required to maintain compliance with the 2008 standard definition.

## TABLE 5-10: EXISTING STANDARDS FOR CRITERIA POLLUTANTS

| Pollutant | | Primary/ Secondary | Averaging Time | Level | Form |
|---|---|---|---|---|---|
| Carbon Monoxide (CO) | | Primary | 8-Hour | 9 ppm | Not to be exceeded more than once per year |
| | | | 1-Hour | 35 ppm | |
| Lead | | Primary and Secondary | Rolling 3-month average | 0.15 µg/m3 | Not to be exceeded |
| Nitrogen Dioxide (NOX) | | Primary | 1-hour | 100 ppb | 98th percentile, averaged over 3 years |
| | | Primary and Secondary | Annual | 53 ppb | Annual mean |
| Ozone | | Primary and Secondary | 8-hour | 0.075 ppm | Annual fourth-highest maximum daily 8-hour concentration, averaged over 3 years |
| Particle Pollution | PM 2.5 | Primary | Annual | 12 µg/m3 | Annual mean, averaged over 3 years |
| | | Secondary | Annual | 15 µg/m3 | Annual mean, averaged over 3 years |
| | PM10 | Primary and Secondary | 24-hour | 35 µg/m3 | 98th percentile, averaged over 3 years |
| | | Primary and Secondary | 24-hour | 150 µg/m3 | Not to be exceeded more than once per year, averaged over 3 years |
| Sulfur Dioxide | | Primary | 1-hour | 75 ppb | 9th percentile of daily 1-hour maximum, averaged over 3 years |
| | | Secondary | 3-hour | 0.5 ppm | Not to be exceeded more than once per year |

Regions are designated by the EPA as either in attainment or non-attainment for NAAQS. Attainment means the concentration of each pollutant does not exceed NAAQS. Non-attainment means the concentration of at least one pollutant exceeds the maximum defined threshold. If an area is designated as non-attainment, the State must develop and submit a State Implementation Plan (SIP). The SIP addresses each pollutant that exceeds NAAQS and establishes an overall regional plan to reduce air pollution emission levels, designed to return the area to, and maintain, attainment status.

Once a non-attainment area meets the standards, EPA will designate the area to attainment as a "maintenance area." Maintenance areas are required to have a Maintenance Plan in place to ensure continued attainment of the respective air quality standard. The Clean Air Act defines specific time-tables to attain air quality standards and requires non-attainment areas to demonstrate reasonable progress in reducing air pollutants until the area achieves attainment.

## MONITORING SITES

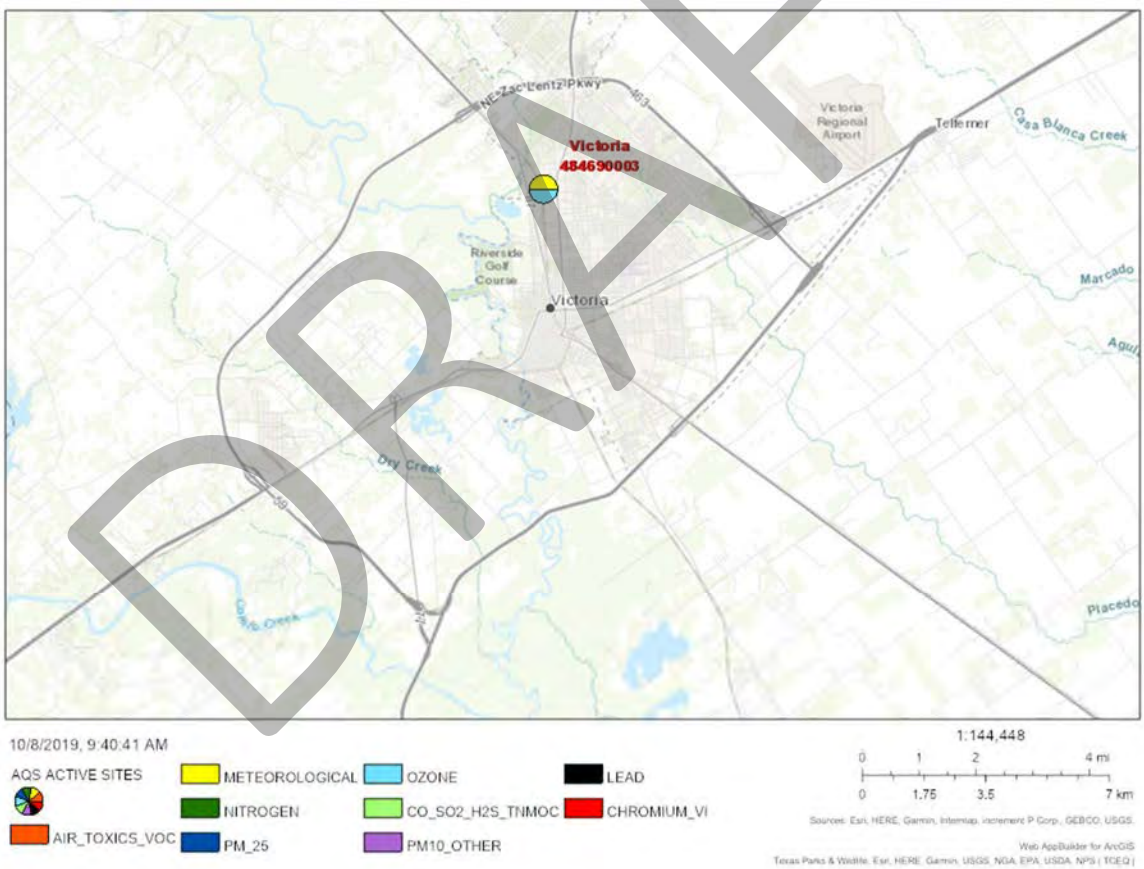
There is one site in the Victoria MPA that forms part of Texas' monitoring network. This site monitors Ozone, solar radiation, temperature, and wind (Figure 5-9).

The Clean Air Act requires transportation plans to prioritize investments for the next three years to meet federal clean air standards in future years should a non-attainment status be determined.

The Victoria MPA is in attainment for air quality as of September 2019, according to the EPA[5]. In order to keep this status, the Victoria MPO should strive to maintain transportation activities that do not contribute to a non-attainment status but continue to increase the air quality of the MPA.



### FIGURE 5-9: VICTORIA AIR QUALITY MONITORING SITE




[5] https://www3.epa.gov/airquality/greenbook/ancl.html

# Chapter 6: Public Involvement

# 6 PUBLIC INVOLVEMENT


Public involvement is the heart and backbone of a well-developed Metropolitan Transportation Plan (MTP). The collaborative nature of public involvement is essential and valuable to the planning process. Public and stakeholder involvement in the development of the Victoria 2045 MTP was encouraged early in the process and throughout plan development using the Victoria Metropolitan Planning Organization's (MPO) Public Participation Plan (PPP).

The primary components of this public participation process for this MTP were as follows:

- Consultation on Regional Transportation Needs
    - TTAC Steering Committee
    - Targeted Stakeholder Engagement
- Development of a Community Vision
    - Online Public Visioning Tool
    - Paper Survey Distribution
- Review of Technical Analyses Performed as Part of Plan Development (Open House Meeting)
- Open House Kick Off 30-Day Review of the Draft Victoria 2045 MTP

## VICTORIA'S PUBLIC PARTICIPATION PLAN

The Victoria MPO maintains and implements a PPP, which was last updated in September of 2018. The purpose of the PPP is to provide guidelines for the tools and timelines that should be used for public involvement during the development of the MPO's planning documents, such as the MTP, the Transportation Improvement Plan (TIP), and the Unified Planning Work Program (UPWP). Through the implementation of the PPP, the Victoria MPO is able to ensure that public participation continues to be a critical component of the transportation planning processes.

This is important because it allows the MPO to consider a diverse array of values and points of view from the communities that it serves.

Early and continuous public involvement enables the MPO to make better informed decisions, improves quality through collaborative efforts, and builds mutual understanding and trust between the MPO and the public. Recognizing the importance of public participation, the Victoria MPO uses procedures that:

- Provide timely information about transportation issues and processes to citizens, affected public agencies, representatives of transportation agency employees, private providers of transportation, other interested parties and segments of the community affected by transportation plans, programs and projects;
- Provide reasonable public access to technical and policy information used in the development of plans and open public meetings where matters related to the Federal-aid highway and transit programs are being considered;
- Require adequate public notice of public participation activities and time for public review and comment at key decision points, including, but not limited to, approval of plans and programs;
- Demonstrate explicit consideration and response to public input received during the planning and program development processes; and
- Seek out and consider the needs of those traditionally underserved by existing transportation systems, including but not limited to elderly, disabled, low-income, and minority households.

## SUMMARY OF STAKEHOLDER AND PUBLIC OUTREACH EFFORTS

As part of the PPP, the Victoria MPO maintains a distribution list of interested groups and individuals; this list includes state, county, and local government officials; Chambers of Commerce; community groups; special interest groups; transportation providers; freight companies, interested individuals, etc.

These individual stakeholders and groups also receive notices or flyers via regular mail or email notification at least 72 hours prior to any public meeting, public review period, or public comment period. The federal transportation legislation expands the listing of interested parties to be engaged during the development of long-term transportation plans.

MPO staff works to ensure that these interested parties have reasonable opportunities to comment on projects of the short-term and long-term transportation plans. Federal regulations require expanded consultation and cooperation with agencies and officials responsible for other planning related activities within the MPA.

The MPO in turn consults with agencies and officials that are affected by transportation in the development of the short- and long-term transportation plans. A full listing of agencies and officials with whom the MPO may consult with can be found in the PPP.

Over the course of the 2045 MTP development process, Victoria undertook a series of public and stakeholder outreach efforts to better understand the needs, challenges, and opportunities for the existing transportation system, as well as the vision and goals the communities in the region have for the future of the transportation system over the next 25 years. The various outreach efforts are described in the following sections.

## STAKEHOLDER INTERVIEWS

In April of 2019, Victoria conducted a series of interviews with different groups of stakeholders from various backgrounds and localities throughout the region. These interested parties represented as stakeholder groups were for the most part met with in a series of grouped meetings by topic. Table 6-1 references the types of groups represented in the stakeholder outreach. The full ungrouped list of stakeholders that were invited can be found in Table 6-2**.** Stakeholder interviews occurred both in group and individual settings. The stakeholder groups were asked questions that they were best suited to answer regarding current conditions of the transportation system in the MPO. Topics and generalized stakeholder concerns about the transportation system discussed during the interviews are listed in Table 6-3**.**

### TABLE 6-1: STAKEHOLDER MEETINGS AND GROUPINGS

| Meeting Date | Stakeholder Category | Time |
|---|---|---|
| Tuesday, April 9, 2019 | Law Enforcement/Safety | 9:00- 9:30 AM |
| Tuesday, April 9, 2019 | Business & Medical | 10- 10:30 AM |
| Tuesday, April 9, 2019 | Trade/Freight & Private | 11 - 11:30 AM |
| Tuesday, April 9, 2019 | Community & Cultural Groups | 4- 4:30 PM |
| Wednesday, April 10, 2019 | Environmental & Historical | 9:30- 10:00 AM |
| Tuesday - Wednesday | Individual Interviews | Varying Times |

## TABLE 6-2: IDENTIFIED STAKEHOLDER GROUPS

| Stakeholder | Stakeholder | Stakeholder |
|---|---|---|
| City of Victoria | Texas Department of Transportation (TxDOT) Yoakum District | Victoria County Sheriff's Office |
| City of Victoria City Council | Port of Victoria | University of Houston-Victoria |
| Victoria County Commissioners Precinct 1-4 | Victoria Transit | Raisin Volunteer Fire Department |
| Cesar's Taxi of Victoria | Victoria Public Works | Quail Creek Fire Department |
| Crossroads Taxi & Transportation Services LLC | Texas Department of Public Safety | Lone Tree Fire Department |
| Texas Concrete | Victoria Local Emergency Planning Committee | Mission Valley Volunteer Fire Department |
| Golden Crescent Regional Planning Commission | Victoria Fire Department | Placedo Volunteer Fire Department |
| Victoria ISD Education Foundation | Museum of Coastal Bend | Bloomington Volunteer Fire Department |
| United Way of Victoria County | Victoria Public Library | Inez Volunteer Fire Department |
| Food Bank of the Golden Crescent | County 4-H Extension Office | CVB |
| Junior League of Victoria | Rotary Club of Victoria | Perpetual Help Home |
| Golden Crescent Habitat for Humanity | Northside Rotary Club | Victoria Housing Authority |
| Boys and Girls Club of Victoria | Downtown Rotary Club | Victoria Chamber of Commerce |
| YMCA of Victoria | Sunrise Rotary Club | VEDC |
| Victoria Ballet Theatre | Lion's Club | UHV Small Business Development Center |
| Children's Museum | VFW | Victoria Main Street Program |
| C.L. Thomas | COV Environmental Services | Victoria Board of Realtors |
| Performance Food Group | COV Public Works | MidCoast Family Services |
| New Distributing Co. Inc., | Texas Parks & Wildlife Department | Citizens Medical Center |
| Hartman Distributing Co. | COV Parks & Recreation | DeTar Healthcare Systems |
| Keen Transportation | Lavaca Navidad River Authority | Gulf Bend Center |
| INSCO | GBRA | Devereux Behavioral Victoria |
| FedEx Freight | State Energy Conservation Office | VISD |
| Central Lines Freight | TX Historical Commission | UHV |
| Saia LTL Freight | Victoria County Historical Commission | Victoria College |
| Del Papa Distributing | Victoria County Heritage Department | Nursery ISD |
| White Trash Services | Amtrak | Industrial ISD |
| Greyhound | Affordable Taxi of Victoria | Superintendent of Catholic Schools-Victoria |

## TABLE 6-3: INTERVIEW TOPICS & GENERALIZED STAKEHOLDER CONCERNS

| Interview Topics | Generalized Stakeholder Concerns |
|---|---|
| Roadway and Traffic Congestion | Several different roadways experience consistent congestion |
| | Need construction projects to increase capacity |
| | Need for a cross-town expressway |
| Safety Concerns | Increasing congestion has resulted in many hazardous roadways |
| | Lacking bicycle and pedestrian infrastructure making pedestrians/bicyclists interact directly with motorists |
| | School zones have become inaccessible to emergency vehicles due to congestion |
| Freight | Trucks can't make right turns from US 87 to US 59 |
| | Trucks are being directed down country roads; need a designated truck route, possibly the Strategic Highway Network (STRAHNET) |
| | Airport has poor connectivity but could be a viable resource if properly funded |
| | Port of Victoria is a valuable resource, but could be improved if made deeper and wider |
| Public Transportation | Current service is viewed as inconvenient and unreliable |
| | Need to conduct a transit ridership and route analysis to improve services |
| | Rural and low-income, unincorporated areas are poorly served; need for regional transportation authority or better coordination |
| | Mentioned the need for better connectivity to Greyhound |
| Mobility, Accessibility, and Connectivity | Poor overall connectivity due to lacking infrastructure for pedestrians and cyclists |
| | Accessibility issues come in three categories: emergency, pedestrian, and school access |
| | Poor accessibility plays a larger barrier for low-income, non-drivers, and senior citizens; limits their independence |
| Biking and Walking | Need more sidewalks, bike lanes, and hiking trails throughout region along with ADA improvements |
| | Road user awareness needs to increase to change stigma related to biking on Victoria roadways and increase the number of cyclists on the road (educational workshops) |
| | Bike/ped improvements would help improve connectivity regionally, decrease congestion, and invest in the quality of life for future generations |
| Natural Resources | New development could cause water quality and drainage issues |
| Growth | Current growth patterns are encouraging sprawl and making public transportation difficult |
| | Growth includes college campuses, retirement homes, and apartment complexes |
| | Infrastructure can't compete up with growth rates and meet capacity, resulting in congestion |

## VISIONING PROCESS

The purpose of the Victoria 2045 MTP visioning process was to solicit the public for input regarding their values and priorities for the future of the transportation system in the region. The feedback received helped the MPO define the goals and objectives for the MTP and played a role in shaping the process used to prioritize transportation improvement projects proposed for inclusion in the plan. Public feedback received from the online tool (discussed below) was used to create weighted bonus points for each evaluation criteria in the scoring process. These points were then assigned proportionally to projects based on the average project score assigned by the Temporary Technical Advisory Committee (TTAC).

The visioning process for the Victoria 2045 MTP consisted of extensive public outreach through an online tool (Figure 6-1) that was custom developed for Victoria's MTP development process as well as through social media (Figure 6-2), paper surveys, and tabling events. The visioning process was designed to:

- Gather information regarding transportation needs in the region;
- Identify deficiencies in the current transportation system;
- Develop a community vision for future growth within the region; and
- Identify appropriate modes and infrastructure for supporting future growth.

**FIGURE 6-1: VISIONING TOOL WITH COMMENTS**

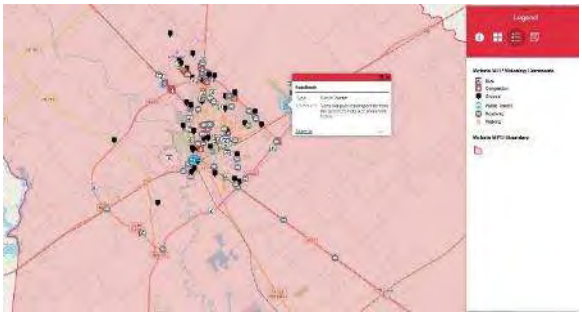
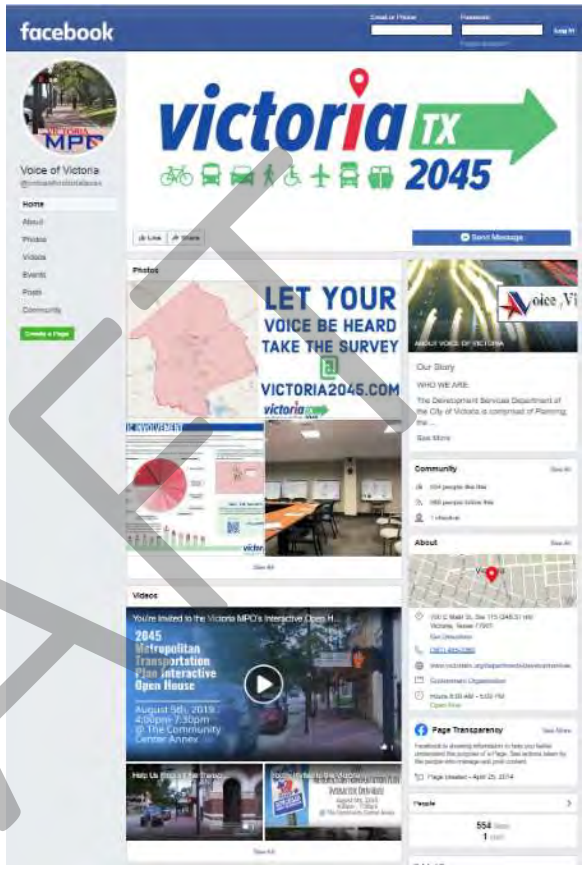


**FIGURE 6-2: SOCIAL MEDIA SCREENSHOT**




The visioning process consisted of modules that both educated the public about the plan development process and requested input about community values and existing conditions in the region. These modules included a survey that gathered basic information about the participants and their transportation usage; an exercise where participants were asked to distribute hypothetical and constrained monetary values to the various planning factors involved in the plan development process; and, an interactive map of the region where participants could place comments in exact locations regarding specific needs or issues related to transportation at those locations.

The online tool was opened on April 11, 2019 and closed on August 9, 2019. During this time, the online tool received a total of 176 survey responses, 180 submissions on the transportation values exercise, and 177 comments on the interactive map.

In addition to the online engagement MPO staff diligently researched and attended multiple public events and engagement opportunities (tabling) to further leverage public engagement for the MTP visioning process. These events are noted in Table 6-4.

Figure 6-3 represents a poster the project team developed for MPO staff to use at these events. Throughout the public visioning process, a total of 310 survey responses were collected.

**TABLE 6-4: TABLING EVENTS AND DATES**

| Event(s) | Meeting Date(s) |
|---|---|
| Healthy Aging Conference | May 16, 2019 |
| Spinning Yarns | June 4, 2019 |
| Greenline (Victoria Transit) | June 8, 2019 |
| Redline (Victoria Transit) | June 8, 2019 |
| Various | June 15 – June 21, 2019 |
| Various | July 2-19 |

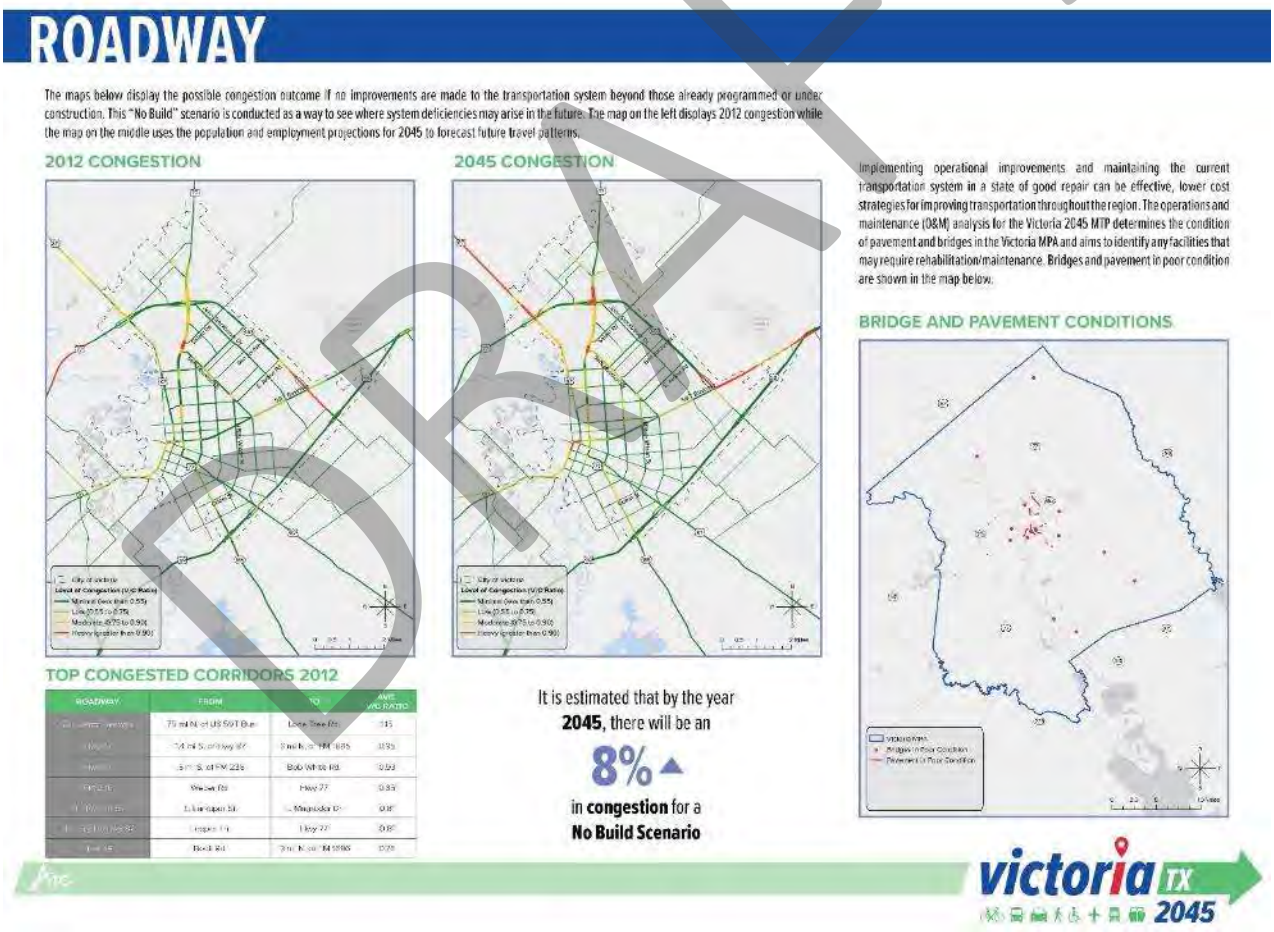
FIGURE 6-3: TABLING EVENT POSTER


## CURRENT CONDITIONS OPEN HOUSE

The Victoria MPO hosted two public open houses during the development of the 2045 MTP update. The first was held on August 5, 2019 with the purpose of presenting the work completed at that point in time on the development of the plan. This included educational aspects about what an MTP is and why the MPO needs to develop one.

This open house also included the results of the Current Conditions Assessment discussed in Chapter 3. The first public open house consisted of a set of exhibit boards that displayed information about the plan and the analyses using text, graphics, and maps. Laptops set to the Online Visioning Tool as well as paper surveys for additional feedback were made available at this open house. Figure 6-4 shows and example of one of the boards displayed at the open house.

**FIGURE 6-4: CURRENT CONDITIONS OPEN HOUSE BOARD EXAMPLE**

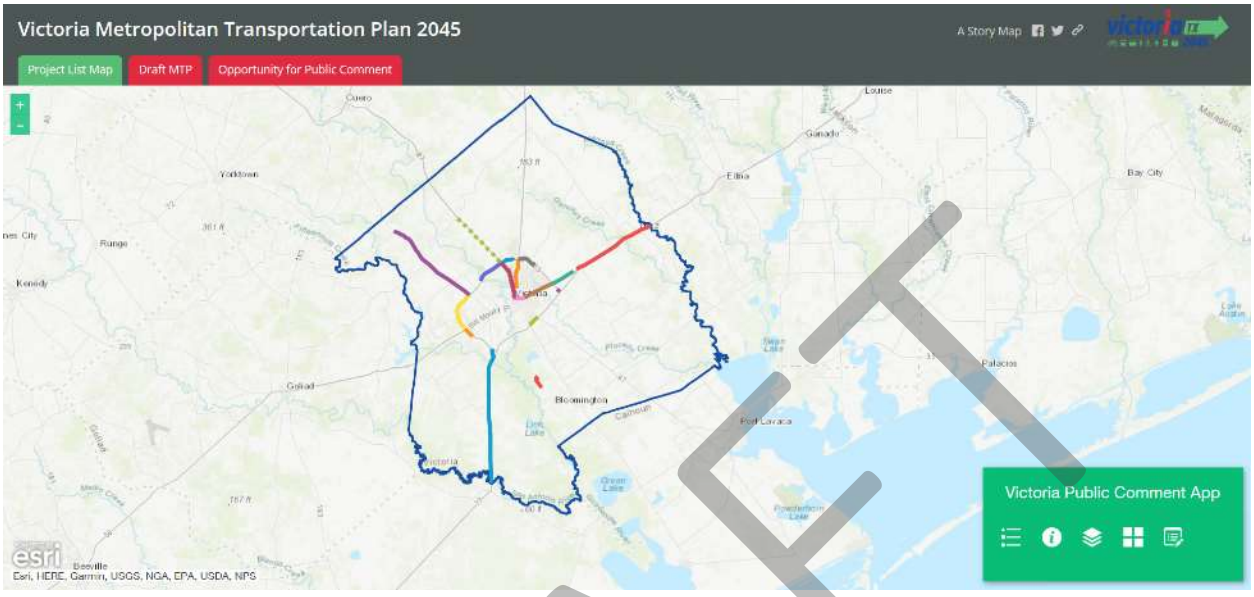


## DRAFT PLAN OPEN HOUSE

The second and final public open house was held on March 5, 2020 and served to kick off the 30-day public comment period for the Draft Victoria 2045 MTP. This open house provided the public with an overview of the draft 2045 MTP, including the proposed plan of fiscally constrained projects, and solicitations for feedback. Like the first open house, the second included a set of exhibit boards to convey information about the draft plan and the proposed projects using text, graphics, and maps. Figure 6-5 shows one of the boards used to facilitate feedback from attendees. Additionally, the project team created an ArcGIS Online Story Map to host a digital copy of the draft plan. The story map also allowed the public to navigate the proposed plan of fiscally constrained projects, and to provide feedback on the plan. Figure 6-6 shows a screenshot of the story map. A full listing of public comments received during the draft plan public comment period is listed in an appendix.

**FIGURE 6-5: DRAFT PLAN OPEN HOUSE BOARD EXAMPLE**

## FIGURE 6-6: DRAFT MTP PUBLIC COMMENT STORY MAP




# Chapter 7: Financial Analysis

# 7 FINANCIAL ANALYSIS

Federal regulations mandate that investments proposed in an MTP must show fiscal constraint by providing enough information to demonstrate that projects included in the plan can likely be implemented using committed, available, or reasonably available revenue sources. This means that the funding available for projects must be able to reasonably support anticipated costs of the projects; and demonstrate reasonable assurances that the transportation system is being adequately operated and maintained.

This chapter includes a primer on funding categories, sources, and dollar amounts reasonably anticipated to be available to fund projects included in the Victoria Metropolitan Planning Organization 2045 MTP. It also outlines the process by which funding levels were established to determine the amount of funds available and discusses project cost development for Year of Expenditure (YOE).

Because federal regulations stipulate that the financial forecast consider the change in value of the dollar over time due to inflation, funding and costs discussed in this chapter were estimated in year-of-receipt and year-of-expenditure dollars, respectively.

## ROADWAY FUNDING RESCOURCES

The funding estimated to be available for projects in the Victoria MPA through the lifespan of the 2020 Unified Transportation Program (UTP) was used in conjunction with an analysis of historical spending by category to establish base year funding assumptions. These base year revenues were extrapolated to complete the estimated funding forecast for the duration of the MTP.

The categories of funding within the UTP represent an allocation of federal transportation funds combined with State monies, a portion of which is sub-allocated to each Texas MPO based on agreed-upon formulas. There are also several different sources of state revenue in Texas for transportation investments, but the most significant sources of the Texas' program are from motor fuel tax allocations, motor vehicle registration fees, severance tax allocations, and voter-approved constitutional amendments (Proposition 1 and Proposition 7), which redirect funding from the general fund to be spent on transportation projects. The revenue that the State receives from the its own revenue sources and the Federal funding sources are gathered into the State Highway Fund (SHF).

The TxDOT Yoakum District makes project-level decisions in close coordination and consultation with the MPO to assure that the development of a multi-year program of projects that is established within available annual budget amounts reflects the needs and goals of the region while following federal and state guidance. The following sections describe the UTP Funding Categories as well as local and other possible funding sources for transportation investments in the Victoria MPA.

## CATEGORY 1: PREVENTIVE MAINTENANCE & REHABILITATION

This category covers funding for preventive maintenance and rehabilitation on the existing state highway system, including pavement, signs, traffic signals, and other infrastructure. Preventive maintenance works to preserve, rather than improve the structural integrity of the pavement or structure. Rehabilitation funds can be expended on any highway in the state highway system and are intended for the rehabilitation of existing main lanes, structures, and frontage roads, including approved preventive maintenance measures. The installation or rehabilitation of signs and their appurtenances, pavement markings, thermoplastic striping, traffic signals, and illumination systems, including minor roadway modifications to improve operations, are also allowed under this category. Funds can be used to install new traffic signals as well as modernize existing signals. Projects are selected at the district level using a performance-based prioritization process that assesses districtwide maintenance and rehabilitation needs. Funds are allocated by the Texas Transportation Commission (TTC) through the formula allocation program.

## CATEGORY 2: METROPOLITAN & URBAN AREA CORRIDOR PROJECTS

The TTC allocates funds in this category to each MPO in the state by formula. For MPOs with populations less than 200,000 within the MPA, such as Victoria, the distribution formula includes considerations for total vehicle miles traveled (on and off system), population, lane miles (on system), truck vehicle miles traveled (on system), percentage of census population below the federal poverty level, centerline miles (on system), congestion, and fatal and incapacitating crashes within the MPA.

MPOs help develop projects in consultation with TxDOT districts through the metropolitan planning process using a performance-based prioritization process that assesses mobility needs within the MPA. Project types may include roadway widening (both freeway and non-freeway), interchange improvements, roadway operational improvements, and must be located on the state highway system. Project funding is authorized by the TTC.

## CATEGORY 3: NON-TRADITIONALLY FUNDED TRANSPORTATION PROJECTS

Funding from sources not traditionally part of the State Highway Funding (SHF), such as state bond financing under programs such as Proposition 12, Proposition 14, Texas Mobility Fund, pass through financing, regional revenue and concession funds, and local

participation funding, are included in this category. These funds are approved by legislation through the TTC, Minute Orders, and local government commitments. Additionally, Federal earmarks or special federal programs are allocated within Category 3.

## CATEGORY 4: STATEWIDE CONNECTIVITY CORRIDOR PROJECTS

Funds in Category 4 may be used for mobility and added capacity projects on major state highway system corridors, which serve the mobility needs of statewide connectivity between urban areas and corridors serving mobility needs throughout the state. Corridors are composed of a network of connected highways that includes the Texas Trunk System, the National Highway System (NHS), and connections from these roadways to major ports on international borders or Texas water ports. Selection of these projects by the TTC is based on analysis of three corridor types; mobility, connectivity, and strategic. These funds are allocated by the TTC to TxDOT districts, who select projects within approved corridors in consultation with MPOs, the Transportation Planning and Programming Division (TPP), and TxDOT Administration using a performance-based evaluation.

## CATEGORY 5: CONGESTION MITIGATION & AIR QUALITY IMPROVEMENT

Funds in this category may be used for projects selected by MPOs in consultation with TxDOT and funded by the district's Allocation Program. The TTC allocates money based on population percentages within areas failing to meet air quality standards. Failing to meet these air quality standards is also known as being in non-attainment for air quality. These funds are known as Congestion Mitigation and Air Quality (CMAQ) funds. This category is not applicable to the Victoria MPO as the planning area is in attainment. Should the planning area become a non-attainment area, CMAQ funding may become available.

## CATEGORY 6: STRUCTURES REPLACEMENT & REHABILITATION

Funding within this category is provided through three main programs - the Highway Bridge Program, the Railroad Grade Separation Program, and the Bridge Maintenance and Improvement Program. Within the Highway Bridge Program, bridges are selected statewide based on eligibility and prioritized based on sufficiency ratings. Eligible bridges have a deficiency status of "structurally deficient" or "functionally obsolete" and have sufficiency ratings below a score of 80. Within the Railroad Grade Separation Program, projects are selected based on a cost-benefit index rating that encompasses vehicle and train traffic, accident rates, casualty costs, and personnel and equipment delay costs. The index is used to select at-grade railroad crossing elimination projects or uses vertical clearance and roadway characteristics for selecting railroad underpass replacement or rehabilitation projects.

Within the Bridge Maintenance and Improvement Program, projects are selected statewide based on identified bridge maintenance/improvement needs to aid in ensuring the management and safety of the state's bridge assets. For projects that are selected, all bridge elements will meet a predetermined condition threshold after rehabilitation. These programs replace eligible bridges on and off the state's highway system that are considered functionally obsolete or structurally deficient. A minimum of 15% of the funding in this category must go toward replacement or rehabilitation of off-system bridges. This funding also eliminates at-grade highway-railroad crossings through the construction of highway overpasses or railroad underpasses and rehabilitates or replaces deficient railroad underpasses on the state highway system.

## CATEGORY 7: METROPOLITAN MOBILITY & REHABILITATION

Funds in this category are part of a federal program that distributes money to MPOs with an urbanized area population of 200,000 or greater, known as Transportation Management Areas (TMAs). The projects are selected by the MPO through coordination with TxDOT. The Victoria MPO is not currently designated as a TMA.

## CATEGORY 8: SAFETY

Funding in this category is provided through four programs; the Highway Safety Improvement Program (HSIP), Railroad Crossing Program, Safety Bond Program, and the Systematic Widening Program. The HSIP focuses on safety-related projects on and off the state highway system using the safety improvement index. The index uses three years of crash data to evaluate and rank projects' likely impacts and improvements to the safety of travelers. Workforce development, training, and education activities are also eligible uses of HSIP funds. Funding within the Railroad Crossing Program is set aside from the HSIP for safety improvements to reduce the number of fatalities, injuries, and crashes at public grade crossings. Funds can be used for the installation of automatic railroad warning devices at railroad crossings both on and off the state highway system. Projects are selected from a statewide inventory list, which is prioritized by a rail-crossing-specific safety index using a crash prediction formula. This index uses a grade crossing safety database known as Texas Railroad Information Management System (TRIMS). The program provides incentive payments to local governments for closing crossings, improving signal preemption, and coordination of train control signals, and improves passive warning devices to comply with federal guidelines.

The Safety Bond Program addresses the safety improvement index, roadway safety characteristics, and anticipated time required to complete a candidate project. Allocations for this program are approved by the TTC and managed as an allocation program on a statewide basis. Projects are evaluated, ranked, prioritized, and selected by the Traffic Rail Foundation (TRF).

The Systemic Widening Program funds improve roadway safety features to prevent severe crash types on the state highway system. Projects are evaluated using roadway safety features for preventable severe crash types. Projects are evaluated, ranked, prioritized and selected by the Traffic Operations Division.

High Risk Rural Roads projects previously authorized remain in Category 8. Future High-Risk Rural Roads projects will be managed under the HSIP if required by special rule. The Safe Routes to School projects previously authorized remain in Category 8. Future Safe Routes to School projects will be managed under the Transportation Alternatives Program guidelines in Category 9.

## CATEGORY 9: TRANSPORTATION ALTERNATIVES SET-ASIDE PROGRAM

The FAST Act eliminates the MAP-21 Transportation Alternatives Program (TAP) and replaces it with a set-aside of Surface Transportation Block Grant (STBG) program funding for transportation alternatives (TA).

These set-aside funds include all projects and activities that were previously eligible under TAP, encompassing a variety of transportation projects such as pedestrian and bicycle facilities, recreational trails, safe routes to school projects, community improvements such as historic preservation and vegetation management, and environmental mitigation related to stormwater and habitat connectivity.

## CATEGORY 10: SUPPLEMENTAL TRANSPORTATION PROJECTS

This category includes transportation-related projects that do not qualify for funding in other categories, such as:

- Landscape and aesthetic improvement;
- Erosion control and environmental mitigation;
- Construction and rehabilitation of roadways within or adjacent to state parks, fish hatcheries, and similar facilities;
- Replacement of railroad crossing surfaces;
- Maintenance of railroad signals;
- Construction or replacement of curb ramps for accessibility to pedestrians with disabilities;
- Improvement to the safe movement of motor vehicles at or across the land border between the United States and Mexico;
- Facilities that are located on or adjacent to or provide access to federal lands;
- Other miscellaneous federal programs.

## CATEGORY 11: DISTRICT DISCRETIONARY

This category includes projects eligible for federal or state funding selected at the district engineer's discretion. Projects are selected at the district level. The TTC allocates funds through the formula allocation program. The TTC may supplement the funds allocated to individual districts on a case-by-case basis to cover project cost overruns, as well as energy sector initiatives, however, these funds are not intended to be used for right-of-way acquisition.

## CATEGORY 12: STRATEGIC PRIORITY

Projects with specific priority for the state fall within this category. The TTC selects projects which generally promote economic opportunity, increase efficiency on military deployment routes, retain military assets in response to the federal military base realignment and closure report, or maintain the ability to respond to both man-made and natural emergencies. The TTC approves pass through financing projects in order to help local communities address their transportation needs.

## POTENTIAL LOCAL FUNDING SOURCES

Any costs not covered by federal and state programs are typically the responsibility of the local governmental jurisdictions. Local funding can come from a variety of sources, including property taxes, sales taxes, user fees, special assessments, and impact fees. Local funding is also critical to maintain eligibility for several federal and state funding sources due to the usual requirements for a "local match" – which is typically around 20% of total project costs for federal funding sources.

### Property and Sales Tax

Property taxes are historically the most prominent source of funding for local governments in the United States (property taxes account for roughly 80% of all local tax revenues). Sales taxes include the retail sales tax which is imposed on a wide array of commodities. The rate is typically a uniform percentage of the selling price. In addition to general sales taxes, with voter approval a county or city can levy a local option sales tax, which is a special-purpose tax appended onto a state's base sales tax rate.

### Tax Increment Reinvestment Zones

A Tax Increment Reinvestment Zone (TIRZ) is a designated political subdivision within Texas where Tax Increment Financing (TIF) occurs. These zones allow local governments to raise additional revenue to subsidize local projects without directly raising taxes in their jurisdiction. In the report of Biennial Registries of Reinvestment Zones for Tax Abatements and Tax Increment Financing from 2018, no TIRZ were shown in Victoria County.

### Special Assessments

Special assessments refer to a method of generating funds for public improvements where the cost of a public improvement is collected from those who directly benefit from the improvement. A primary example would be new streets being financed by special assessment. Accordingly, the owners of property adjacent to the new streets are assessed a portion of the cost of the facility based on the amount of frontage they own along (in this example) the new roadway.

### Municipal Bonds

Municipal bonds are issued to raise money to support a variety of public works projects. These bonds are issued by municipal governments upon approval of the voting public and can help fund transportation projects. According to the State Comptroller website as of May 2013, no local government organization has rejected a bond measure for roadway improvements.

# TRANSIT FUNDING SOURCES

## SECTION 5303 & 5304 PLANNING PROGRAMS

The Section 5303 Metropolitan Planning and Research Program provides planning funding for MPOs. This funding is formula based and TxDOT provides the needed local match through transportation development credits (TDCs). The States also receive Section 5304 Statewide Planning and Research funding, which is awarded to eligible entities for planning purposes.

## SECTION 5307 URBANIZED AREA FORMULA PROGRAM

Section 5307, the Urbanized Area Formula program (49 U.S.C. 5307), makes federal funding available to urbanized areas for transit capital and operating assistance and for transit-related planning activities. Funding for the formula program is determined based on the level of transit service provision, population, and other factors.

## SECTION 5310 (ENHANCED MOBILITY OF SENIORS AND INDIVIDUALS WITH DISABILITIES)

The Enhanced Mobility program provides formula funding to assist in meeting the transportation needs of seniors and persons with disabilities when the transportation service provided is unavailable, insufficient, or inappropriate to meeting these needs. The purpose of this program is to enhance mobility for seniors and persons with disabilities by providing funds for programs to serve the special needs of transit dependent populations beyond traditional public transportation services and paratransit services. Funds from the 5310 program can be used for both capital improvements and operating expenses. However, at least 55% of program funds must be used on capital projects that are for public transportation projects planned, designed, and carried out to meet the special needs of seniors and individuals with disabilities when public transportation is insufficient, inappropriate, or unavailable. The remaining 45% of program funds may be used for the following:

- Public transportation projects that exceed the requirements of the Americans with Disabilities Act (ADA);
- Public transportation projects that improve access to fixed-route service and decrease reliance by individuals with disabilities on complementary paratransit; and
- Alternatives to public transportation that assist seniors and individuals with disabilities.

Funds are apportioned for urbanized and rural areas based on the number of seniors and individuals with disabilities. The federal share for capital projects (including acquisition of public transportation services) is 80%; the federal share for operating assistance is 50%.

## SECTION 5311 (FORMULA GRANTS FOR RURAL AREAS)

This formula-based program (49 U.S.C. 5311) provides states and tribal governments with funding for administration, capital, planning, and operating assistance to support public transportation in rural areas, defined as areas with fewer than 50,000 residents. A percentage of funds in this program are set aside for the Intercity Bus Program, the Rural Transit Assistance Program (RTAP), Public Transportation on Indian Reservations, and the Appalachian Development Public Transportation Program.

## INTERCITY BUS

As part of the Section 5311 program, Federal law requires a State to set aside at least 15% of its Federal Transit Administration (FTA) rural program funding to support intercity bus services, unless intercity bus service needs have been met.

## SECTION 5339 (BUS AND BUS FACILITIES)

This formula-based program (49 U.S.C. 5339) provides capital funding to states and designated recipients to replace, rehabilitate, and purchase buses, vans, and related equipment. It is also used to construct bus-related facilities and is intended to assist in financing the evaluation of all reasonable modal and multimodal alternatives and general alignment options for identified transportation needs in a specific, broadly defined travel corridor.

Funds may be used to assist state and local governmental authorities in conducting alternatives analyses when at least one of the alternatives is a new fixed guideway system or an extension to an existing fixed guideway system. The transportation planning process of alternatives analysis includes:

- An assessment of a wide range of public transportation or multimodal alternatives, which will address transportation problems within a corridor or subarea;

- Steps to provide ample information to enable the secretary to evaluate project justification and local financial commitment;
- Steps to support the selection of a locally preferred alternative; and
- Steps to enable the local MPO to adopt the locally preferred alternative as part of the long-range transportation plan.

## TRANSPORTATION DEVELOPMENT CREDITS (TDCS)

In Texas, the Public Transportation Program is authorized by the TTC to use up to $15 million in TDCs to help provide the required non-Federal match for FTA programs. These TDCs can be combined with FTA funding and awarded to eligible public transportation providers or awarded to eligible recipients who receive Federal funding directly from FTA.

## TA SET-ASIDE PROGRAM

This program provides opportunities to expand transportation choices and enhance alternative transportation infrastructure. Each State DOT reviews FHWA's guidance and develops rules to administer their TA Set-Aside Program according to that State's priorities.

## OTHER FTA FORMULA AND COMPETITIVE FUNDING PROGRAMS

There are several other FTA grant programs with funding available. Most of these grant programs are focused on fixed guideway systems or on temporary assistance.

### Section 5309 (Capital Investment Grants)

The Capital Investment Grant (CIG) Section 5309 program is a discretionary grant program for funding major transit capital investments. This includes heavy rail, commuter rail, light rail, streetcars, and bus rapid transit. By law, projects seeking CIG funding must complete a series of steps over several years to be eligible for funding. New Starts and Core Capacity projects are required by law to complete the Project Development and Engineering phases in advance of receipt of a construction grant agreement. Small Starts projects are required by law to complete the Project Development phase in advance of receipt of a construction grant agreement. By law, FTA rates projects at various points in the process, evaluating project justification and local financial commitment according to statutory criteria. FTA provides policy guidance on the CIG process and the evaluation criteria on their website.

### Section 5337 (State of Good Repair Program)

The purpose of 49 U.S.C. 5337, a new grant program, is to maintain public transportation systems in a state of good repair. This program replaces the Fixed Guideway Modernization Program, Section 5309. Funding is limited to fixed guideway systems (including rail, bus, rapid transit, and passenger ferries) and high intensity bus (buses operating in high occupancy vehicle lanes). Projects are limited to replacement and rehabilitation or capital projects required to maintain public transportation systems in a state of good repair.

### Flexible Federal Funding Sources

Funding from the NHPP, the STBG, and TA Set-Aside can be "flexed" to transit projects, with certain eligibility restrictions depending on the funding source.

### Local Revenue

Local revenue is derived primarily from user fees in the form of bus fares and coupon pass sales, but also comes from advertising, contract services, and other miscellaneous revenue sources.

## REVENUE FORECAST DEVELOPMENT

Historically, transportation improvement projects in the Victoria MPA have been funded through a combination of Federal, State, and local dollars. The process of developing reasonable expectations for future revenues includes a number of factors in reviewing these historical funds. Historical Transportation Improvement Programs (TIPs) and letting lists from the last 15 years were compiled and project funding was sorted by year and funding category. The revenue history was then screened for outliers. Events such as changes in funding categories or additional funds received after a hurricane could ostensibly create a skew in understanding the normal trends and are identified early in the process. The resulting normalized trends in funding were analyzed over that historical 15-year period to establish preliminary growth rates for funding by category.

Table 7-1 summarizes the totals for each applicable funding category broken out into 5-year periods over the last 15 years. Historical transit funding was compiled through a similar process using historical TIPs and compared to the current 2019-2022 TIP.

**TABLE 7-1: HISTORICAL ROADWAY FUNDING**

| UTP Category | 2005 - 2009 | 2010 - 2014 | 2015 - 2019 |
|---|---|---|---|
| 1 | $26,211,214 | $15,974,574 | $48,428,904 |
| 2U | $0 | $0 | $29,238,000* |
| 3 | $0 | $23,791,000 | $4,726,880 |
| 4-3C | $2,390,000 | $0 | $27,046,436 |
| 6 | $9,175,229 | $8,467,000 | $3,230,343 |
| 8 | $1,607,800 | $3,042,936 | $6,474,604 |
| 9 | $519,987 | $0 | $0 |
| 10 | $570,000 | $38,000 | $441,192 |
| 11 | $8,965,839 | $2,710,002 | $20,457,750* |
| 12 | $0 | $3,583,637 | $0 |
| LC | $262,272 | $20,660,000 | $953,672 |

**Changes in funding program and peaks in funding due to Hurricane recovery have been normalized in order to not create a skew in the analysis of future funding.*

The project team next reviewed the current 2020 UTP and worked in close coordination with the TxDOT Yoakum District to verify assumptions of funding levels to include additional projected funding factors and funding targets. Based on the historical and near-term funding expectations, a set of revenue projections were developed for expected Federal, State, and local funding for the stages of this plan. Funding within the first stage of the plan is corollary to projects programmed in the TIP, while the second near term stage of expected funding is tied to planning targets for the current UTP.

The outlying stages covering the remaining years of the plan incorporate the afore-mentioned historical and current funding level growth rates to project reasonable expectations for available funding for the remaining years of the plan horizon. As the Victoria MPO develops and prioritizes projects in close coordination with the District for funding through UTP Categories 2U and 4U, only these categories as well as transit funding summaries are shown by stage in

Table 7-2.



**TABLE 7-2: FUTURE FUNDING ESTIMATES-SUMMARIES BY STAGE**

| Stage (Years) | 2U & 4U Funding Totals | Transit Totals |
|---|---|---|
| Implementation (2020-2023) | $34,000,000 | $8,731,957 |
| Near Term (2024-2029)] | $74,111,000 | $15,448,613 |
| Medium Term (2030-2035) | $85,289,649 | $17,629,451 |
| Long Term (2036-2045) | $121,960,261 | $35,039,126 |
| Total | $315,360,910 | $76,849,147 |

## COST ESTIMATION FOR PROPOSED PROJECTS

Developing reasonable year of expenditure total project costs for the proposed transportation improvements was the next key step in developing fiscal constraint. For this process, Federal regulations define "total project cost" to include:

- Planning elements (e.g. environmental studies and functional studies);
- Engineering costs (e.g. preliminary engineering and design);
- Preconstruction activities (e.g. ROW acquisition);
- Construction activities; and
- Contingencies.

The following assumptions guided the development of cost figures for the proposed projects, as well as the cost estimation for maintenance and operation of the existing transportation system.

- Since Federal regulations do not require that the cost of maintenance and operations activities be broken out into individual project costs, the funding needed for maintenance and operations of the transportation infrastructure was accounted for on a system-wide level.
- Project costs are estimated to include construction costs as well as ROW acquisition and engineering costs in consultation with project sponsors.
- For construction-related activities, a standard inflation rate of 4.0% was used based on TxDOT guidance.
- Whenever a detailed engineering estimate for a particular project was not available, generalized planning-level cost figures were used to assess the cost of each of the projects' elements. These generalized cost figures were based on estimates provided by TxDOT.

Both typical improvement costs and local knowledge of other project costs were used

to develop cost estimates for the projects considered for the MTP. In keeping with federal regulations, cost estimates were computed in YOE dollars using the inflation factors outlined above in accordance with FHWA and TxDOT guidance. Table 7-3 displays the aggregate total estimated project costs for each stage addressed by the MTP for both roadway and transit projects. The complete list of projects considered for inclusion in the MTP, along with estimated YOE costs, can be found in Chapter 8.

**TABLE 7-3: SUMMARY OF ESTIMATED COSTS**

| Stage (Years) | Estimated 2U & 4U Project Costs | Estimated Transit Costs |
|---|---|---|
| Implementation (2020-2023) | $34,000,000 | $8,731,957 |
| Near Term (2024-2029)] | $68,757,550 | $15,448,613 |
| Medium Term (2030-2035) | $49,472,027 | $17,629,451 |
| Long Term (2036-2045) | $107,061,293 | $35,039,126 |
| Total | $259,290,870 | $76,849,147 |

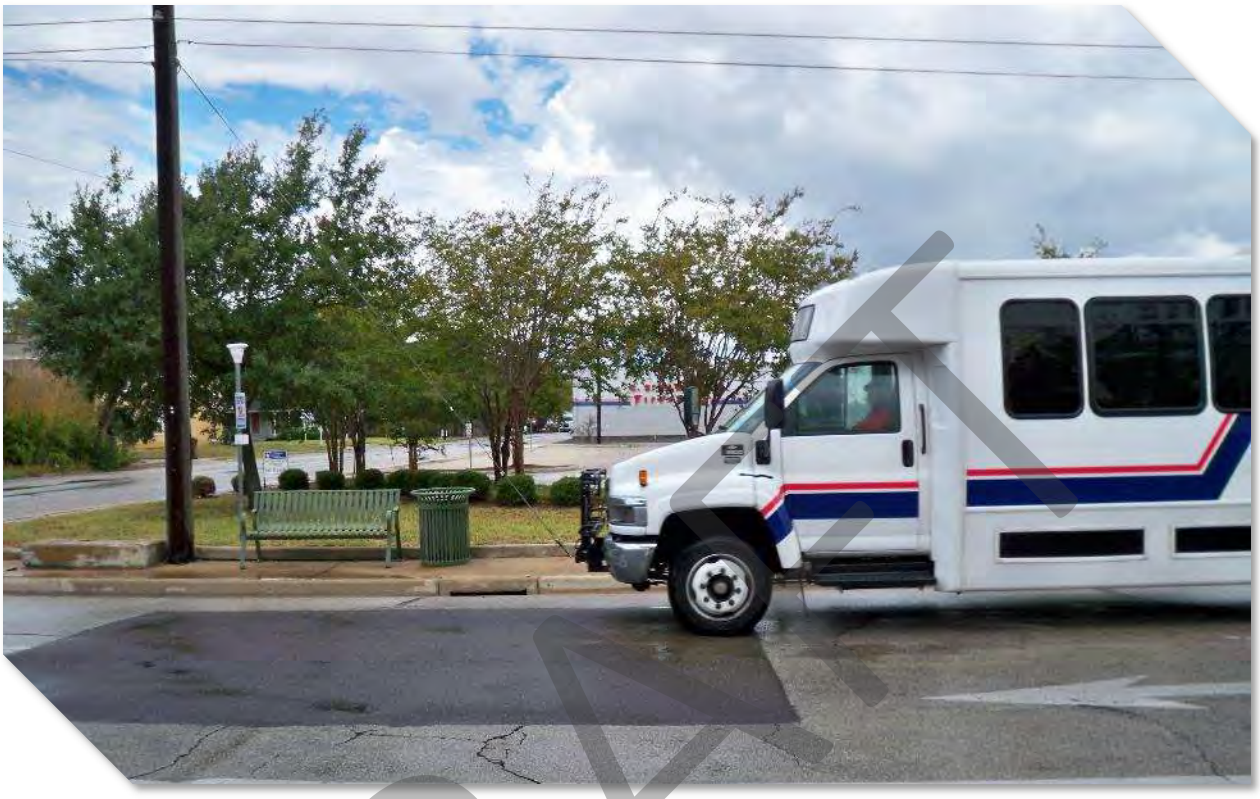
## FISCAL CONSTRAINT

The anticipated total program funding for both highway and transit is expected to be just over $392 million over the 25-year planning horizon of the MTP. Total anticipated program costs are estimated to be just under $385 million in YOE dollars. Because the total program funding is expected to be greater than program costs the Victoria 2045 Metropolitan Transportation Plan is fiscally constrained. In accordance with TxDOT's UTP process, the first ten years of the plan (2020-2029) are also fiscally constrained by funding category.

One project was submitted through the call for projects (discussed in Chapter 4) which exceeded the funding availability projected through this financial analysis. This project has been identified as both regionally significant and high priority, being the I-69 Main Lane Project from Telferner to the Victoria County line. As the proposed project is part of the future I-69 corridor, the MPO has decided to propose the allocation of $5 million of MPO funds (2U) towards the expected $250 million-dollar project. Table 7-4 shows the fiscal summaries for the 2020 - 2045 MTP.

**TABLE 7-4: 2020 - 2045 MTP FISCAL CONSTRAINT SUMMARIES**

| | Estimated Funding | Estimated Costs |
|---|---|---|
| Roadway | $315,360,910 | $259,290,870 |
| Transit | $76,849,147 | $76,849,147 |
| Total | $392,210,057 | $336,140,017 |



# Chapter 8: Plan of Projects

# 8 PLAN OF PROJECTS

This section includes maps and tables that illustrate the plan of projects in the Victoria 2045 MTP. The fiscally constrained projects in this chapter have been grouped into four periods/stages based on related transportation improvement programming and planning documents, as well as staging of revenue forecasts discussed in Chapter 7. The first stage, Implementation, is set up to coincide with projects in the Transportation Improvement Program (TIP). The following stage, the Near-Term stage, includes projects occurring within the remaining outlying years of the current 2020 Unified Transportation Program (UTP), and where funding allows, additional projects from the project prioritization process. Medium- and Long-Term projects are those that fall within the remaining outlying years of the MTP (2030-2035 & 2036-2045).

The years covered by the stages of this plan are separated as following:

- 2020-2023 Implementation (TIP)
- 2024-2029 Near-Term (Remaining Years of 2020 UTP)
- 2030-2035 Medium-Term (MTP)
- 2036-2045 Long-Term (MTP)

## FISCALLY CONSTRAINED PLAN OF ROADWAY PROJECTS

The following maps (**Error! Reference source not found.** through Figure 8-4) show the locations of the fiscally constrained plan of roadway projects in the Victoria MPA by the four project periods/stages mentioned at the beginning of this chapter.

Table 8-1 shows the fiscally constrained roadway project list with associated estimated year of expenditure (YOE) costs.

Though the development of these estimated costs has been discussed in greater detail in Chapter 7, estimated costs are still shown in YOE in this chapter for transparency and communication with the public.

## FIGURE 8-1: IMPLEMENTATION STAGE (2020-2023) PROJECT LOCATIONS

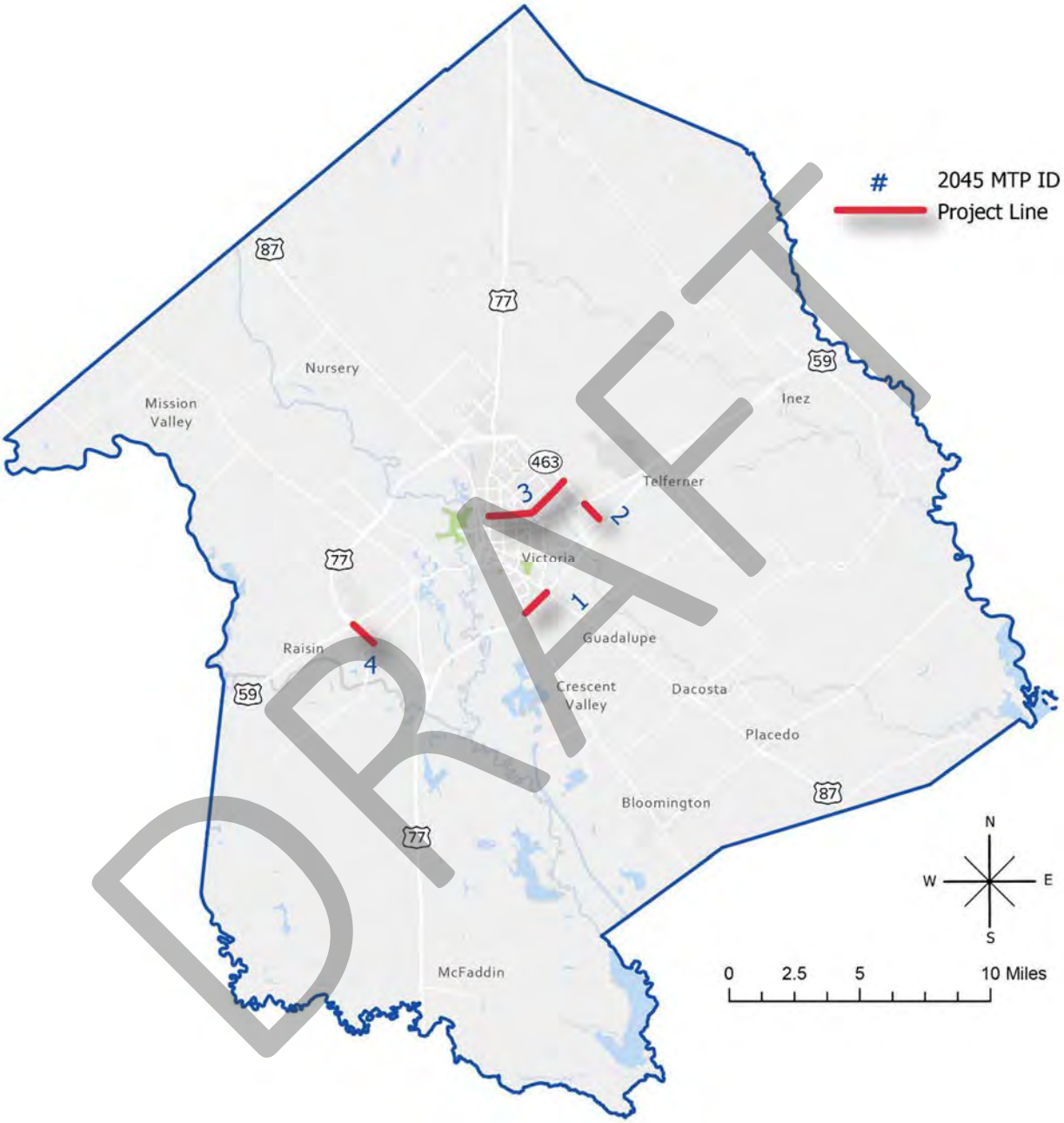
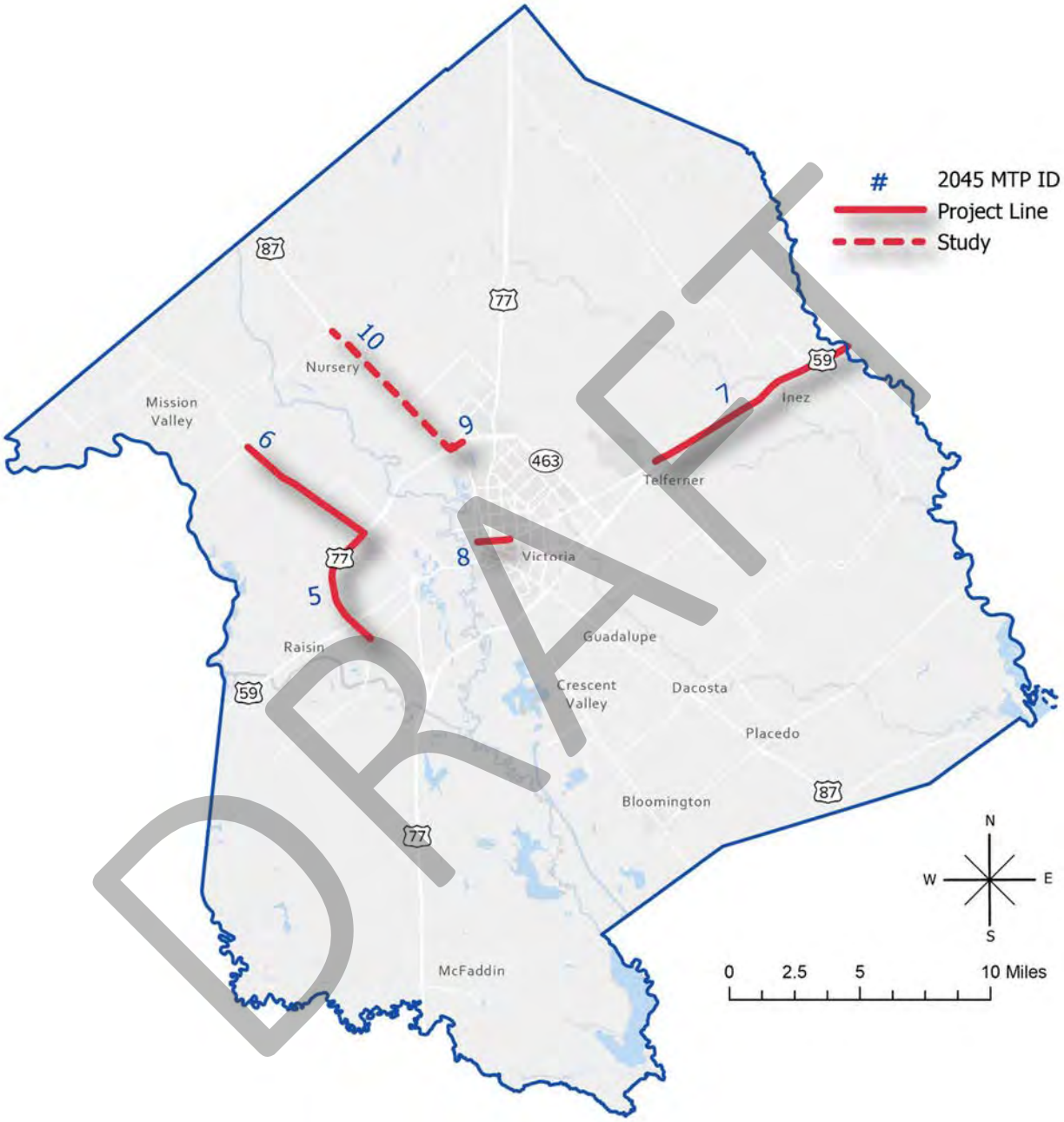


FIGURE 8-2: NEAR-TERM STAGE (2024-2029) PROJECT LOCATIONS



## FIGURE 8-3: MEDIUM TERM STAGE (2030-2035) PROJECT LOCATIONS

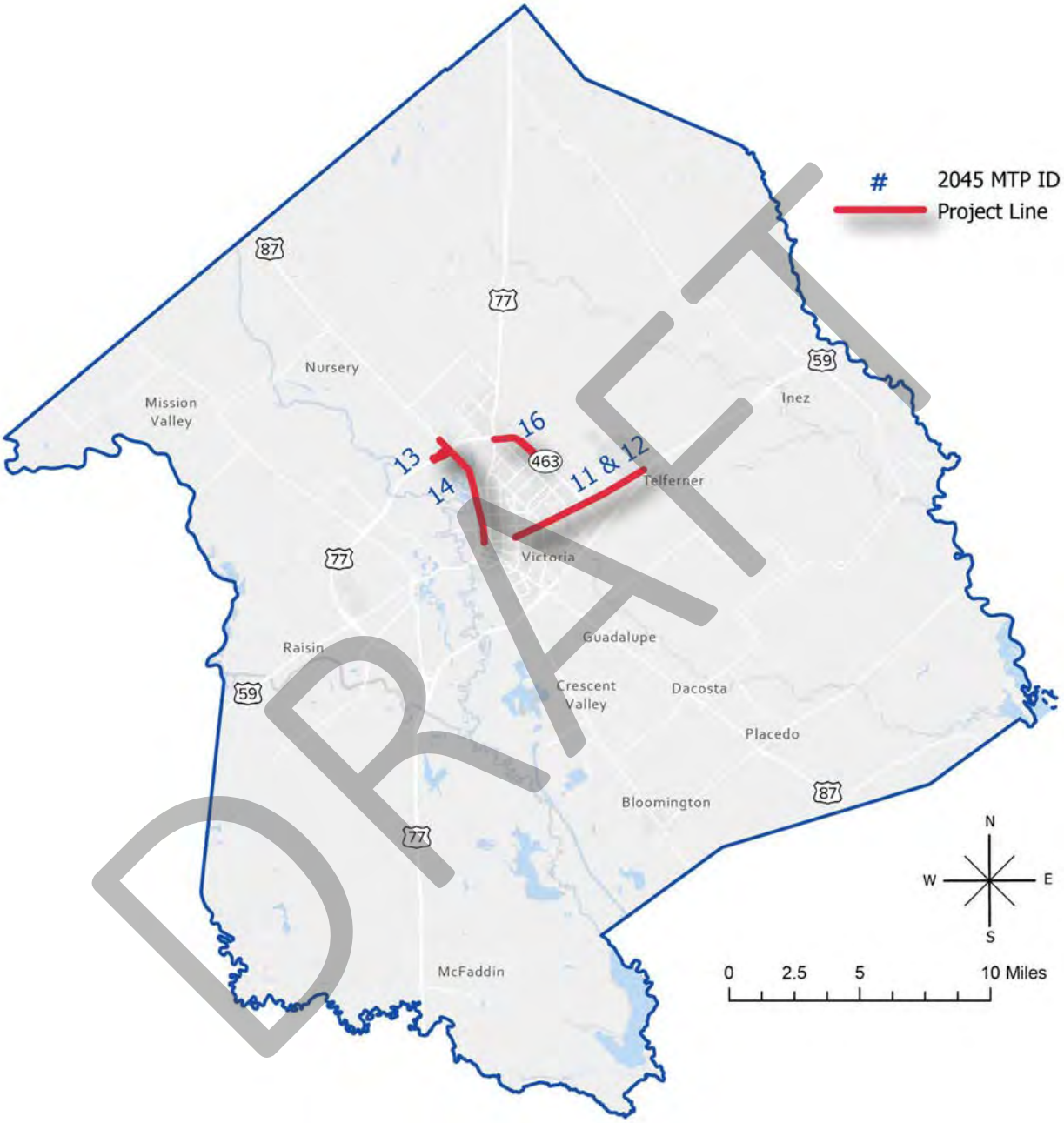


FIGURE 8-4: LONG-TERM STAGE (2036-2045) PROJECT LOCATIONS

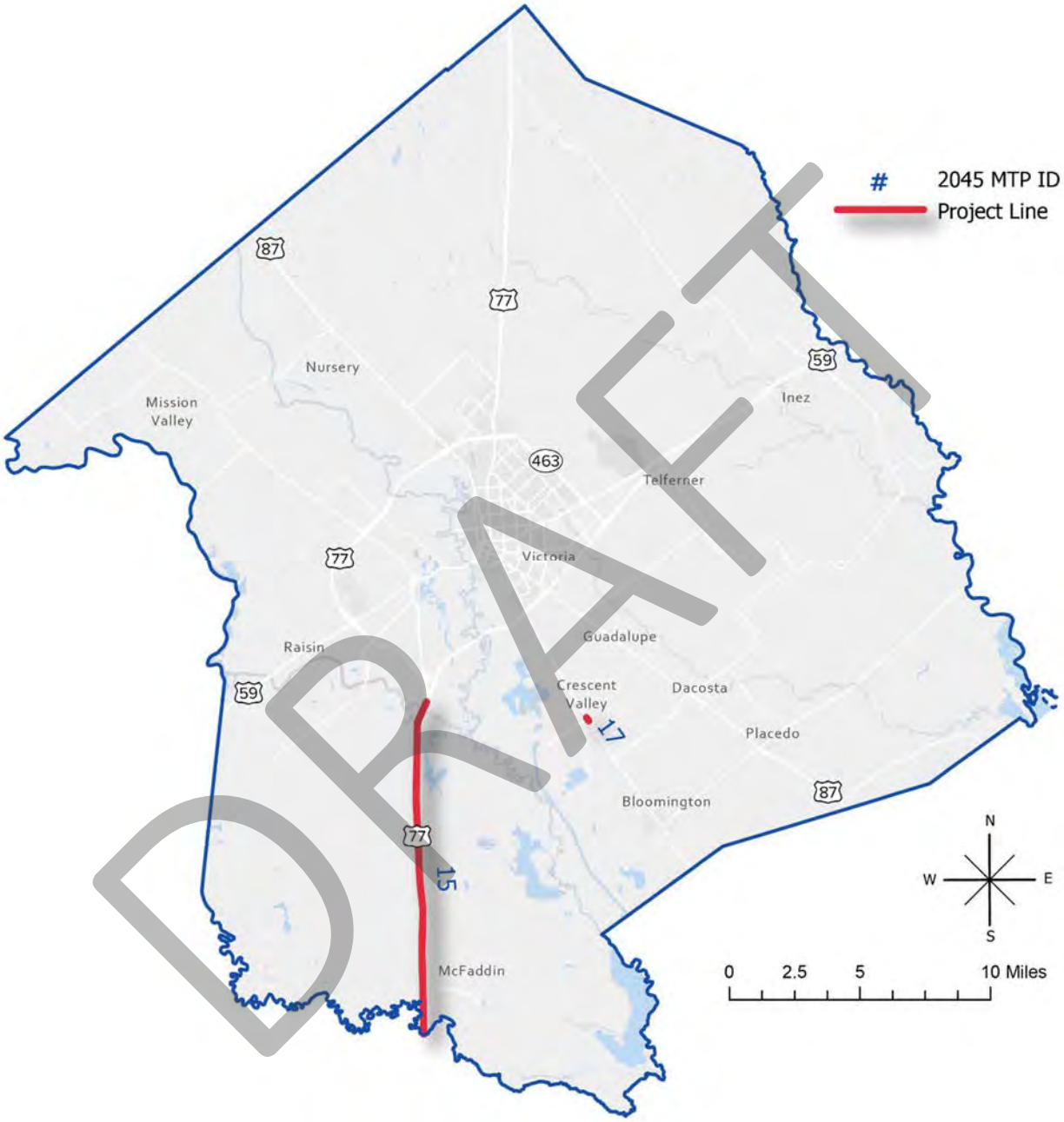


**TABLE 8-1: FISCALLY CONSTRAINED, STAGED PLAN OF ROADWAY PROJECTS**

| 2045 MTP ID | CSJ | Project/ Roadway | Limits To | Limits From | Description | Total Cost in 2020 $ | 2020-2023 Implementation | 2024-2029 Near-Term | 2030-2035 Medium-Term | 2036-2045 Long-Term |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0088-05-098 | US 59 | US 87 | SH 185 | Construct southbound 2-lane one-way frontage road and rehab northbound 2-lane one-way frontage road (Future I-69 Corridor) | $7,000,000 | $7,000,000 | | | |
| 2 | 2350-01-060 | SL 463 | BU 59 | Lone Tree Road | Add 2 lanes for 4-lane undivided highway | $9,000,000 | $9,000,000 | | | |
| 3 | 0370-05-052 | US 59/ BU 77S | LP 463 | Airline Road | Construct center median, ACP overlay, install lighting & pedestrian elements | $8,000,000 | $8,000,000 | | | |
| 4 | 0088-05-096 | US 59 | BU 59-T | FM 466 | Add 2 lanes for 4-lane divided highway (Future I-69 Corridor) | $10,000,000 | $10,000,000 | | | |
| 5 | 2350-01-056 | Capacity to US 77/ Loop 463 | FM 236 | BU 59-T | Add 2 lanes for 4-lane divided highway | $25,000,000 | | $25,000,000 | | |
| 6 | 0842-03-037 | FM 236 Widening Upgrade | FM 237 | US 77 | Add 3 Lanes for a 4- lane undivided highway with continuous left turn lane | $30,000,000 | | $30,000,000 | | |
| 7 | 0089-01-093 | I-69 Main Lane Project (US 59) | Jackson County Line | Telferner/ BU59 Split | Reconstruct main lanes of US 59, install median barrier, install lighting, restrict access to freeway and install one-way frontage roads, where needed. *NOTE: Though the I-69 Main Lane Project estimated costs amount to $250 Million, the MPO has proposed contributing $5 Million of MPO funds | $250,000,000 | | $5,000,000 | | |
| 8 | - | Boulevard Houston Hwy/ BU 59 | N. Moody Street | Delmar/Sam Houston Drive | Install sidewalks and lighting to complete connectivity, restrict left hand turns to signalized intersections | $5,500,000 | | $5,500,000 | | |
| 9 | - | Loop 463 Frontage Rd Extension & Briggs Turnaround | Briggs Blvd. | US 87/Main St. | Create Briggs turnaround and convert Briggs Blvd into a one-way; add an additional lane on the Eastbound frontage road | $2,500,000 | | $2,757,550 | | |
| 10 | - | US 87 N/ Cuero Hwy. Capacity Corridor Study | Zac Lenz Pkwy | FM 447 | Capacity & Access Management Corridor Study | $500,000 | | $500,000 | | |
| 11 | - | Boulevard Houston Hwy/ BU 59 | Delmar/ Sam Houston Dr | Loop 463 | Curb & gutter roadway, install sidewalks and lighting to complete connectivity, restrict left hand turns to signalized intersections | $5,200,000 | | | $6,326,595 | |

| 2045 MTP ID | CSJ | Project/ Roadway | Limits To | Limits From | Description | Total Cost in 2020 $ | 2020-2023 Implementation | 2024-2029 Near-Term | 2030-2035 Medium-Term | 2036-2045 Long-Term |
|---|---|---|---|---|---|---|---|---|---|---|
| 12 | - | Boulevard Houston Hwy/ BU 59 | Loop 463 | Progress Dr | Curb & gutter roadway, install sidewalks and lighting to complete connectivity, restrict left hand turns to signalized intersections | $6,800,000 | | | $8,273,240 | |
| 13 | - | Ball Airport West Underpass at US 77S | US 87 | US 77 at Guadalupe River | Convert frontage roads to 1-way on US 77; curb and gutter, create turnaround and Ball Airport Rd. West underpass approaches | $16,000,000 | | | $21,054,908 | |
| 14 | - | Sidewalks on Main St/ US 87 | E. Rio Grande St | Loop 463 | Install sidewalks and lighting along Main Street; connect to Riverside Park Trail; curb & gutter US 87 | $5,000,000 | | | $6,579,659 | |
| 15 | - | Capacity to US 77 South/ Refugio Hwy | US 77/ US 59 interchange | Refugio County Line | Add 2 lanes | $46,410,900 | | | | $86,926,745 |
| 16 | - | Loop 463 East Sidewalks | E. Mockingbird Ln | N. Navarro St | Sidewalk, curb & gutter Salem Road beginning at the new Placedo Benavides roadway, West towards Loop 463; signalize and install crosswalks and lights at Salem Road and 463, Southeast to Mockingbird Lane. Coordinate installing a yield sign or Pedestrian Hybrid Beacon (PhB) at John Stockbauer and Lone Tree Creek Trail crossing. | $5,500,000 | | | $7,237,625 | |
| 17 | - | State Highway 185 | | FM 1432 | Construct Port Overpass at FM 1432 | $10,750,000 | | | | $20,134,548 |

## GROUPED PROJECTS

For projects and project types that are not singular or are recurring in nature, the FHWA allows TxDOT to develop statewide groupings of projects that are identified by a statewide CSJ. Use of statewide groupings of projects allows for a more efficient method of programming and letting projects by decreasing the need to revise the TIP.

These projects typically use the other Categories of funding discussed in Chapter 7, and are representative of a continuous, comprehensive, and coordinated effort by the Yoakum District and the MPO in identifying ongoing needs of the transportation system. Table 8-2 shows the statewide groupings of projects and provides a description of the type of projects that are placed in each grouping.

**TABLE 8-2: GROUPED PROJECT CATEGORIES**

| Proposed CSJ | Grouped Project Category | Definition |
|---|---|---|
| 5000-00-950 | PE-Preliminary Engineering | Preliminary Engineering for any project except added capacity projects in a nonattainment area. Includes activities which do not involve or lead directly to construction, such as planning and research activities; grants for training; engineering to define the elements of a proposed action or alternatives so that social, economic, and environmental effects can be assessed. |
| 5000-00-951 | Right of Way Acquisition | Right of Way Acquisition for any project except added capacity projects in a nonattainment area. Includes relocation assistance, hardship acquisition and protective buying. |
| 5000-00-952<br>5000-00-957<br>5000-00-958 | Prevention Maintenance and Rehabilitation | Projects to include pavement repair to preserve existing pavement so that it may achieve its<br>designed loading. Includes seal coats, overlays, resurfacing, restoration and rehabilitation done with existing ROW. Also includes modernization of a highway by reconstruction, adding shoulders or adding auxiliary lanes (e.g., parking, weaving, turning, climbing, non-added capacity) or drainage improvements associated with rehabilitation. |
| 5000-00-953 | Bridge Replacement and Rehabilitation | Projects to replace and/or rehabilitate functionally obsolete or structurally deficient bridges. |
| 5000-00-954 | Railroad Grade Separations | Projects to construct or replace existing highway-railroad grade crossings and to rehabilitate and/or replace deficient railroad underpasses, resulting in no added capacity |
| 5800-00-950 | Safety | Projects to include the construction or replacement/rehabilitation of guard rails, median barriers, crash cushions, pavement markings, skid treatments, medians, lighting improvements, highway signs, curb ramps, railroad/highway crossing warning devices, fencing, intersection improvements (e.g., turn lanes), signalization projects and interchange modifications. Also includes projects funded via the Federal Hazard Elimination Program, Federal Railroad Signal Safety Program, or Access Managements projects, except those that result in added capacity. |
| 5000-00-956 | Landscaping | Project consisting of typical right-of-way landscape development, establishment and aesthetic improvements to include any associated erosion control and environmental mitigation activities. |

| Proposed CSJ | Grouped Project Category | Definition |
|---|---|---|
| 5800-00-915 | Intelligent Transportation System Deployment | Highway traffic operation improvement projects including the installation of ramp metering control devices, variable message signs, traffic monitoring equipment and projects in the Federal ITS/IVHS programs. |
| 5000-00-916 | Bicycle and Pedestrian | Construction or rehabilitation of bicycle and pedestrian lanes, paths and facilities. |
| 5000-00-917 | Safety Rest Areas and Truck Weigh Stations | Construction and improvement of rest areas, and truck weigh stations. |
| 5000-00-918 | Transit Improvements and Program | Projects include the construction and improvement of small passenger shelters and information kiosks. Also includes the construction and improvement of rail storage/maintenance facilities bus transfer facilities where minor amounts of additional land are required and there is not a substantial increase in the number of users. Also includes transit operating assistance, acquisition of third-party transit services, and transit marketing, and mobility management/coordination.<br><br>Additionally, includes the purchase of new buses and rail cars to replace existing vehicles or for minor expansions of the fleet. |

# FISCALLY CONSTRAINED PLAN OF PUBLIC TRANSPORTATION PROJECTS

According to the funding presented in Chapter 7, approximately $76,849,147 is expected to be available for operating and capital expenditures over the life of this MTP given assumptions of current FTA funding levels and corresponding local match.

Table 8-3 represents the transit funding source breakdown through 2045 by stage.



### TABLE 8-3: FISCALLY CONSTRAINED, STAGED PLAN OF ROADWAY PROJECTS

| Category Funding | Implementation (2020-2023) | Near Term (2024-2029)] | Medium Term (2030-2035) | Long Term (2036-2045) |
|---|---|---|---|---|
| Section 5307 | $8,043,323 | $14,230,278 | $16,239,127 | $32,275,810 |
| Section 5339 | $688,635 | $1,218,335 | $1,390,324 | $2,763,316 |
| Totals | **$8,731,957** | **$15,448,613** | **$17,629,451** | **$35,039,126** |

# FUTURE I-69 CORRIDOR

The projects included in this MTP update not only encompass thematic priorities such as improving system safety, reducing congestion, and improving state of good repair, but also locational specific priorities. One such major priority for the region is to develop projects to upgrade specific state routes to interstate standards throughout the MPA for designation to the future I-69 corridor.

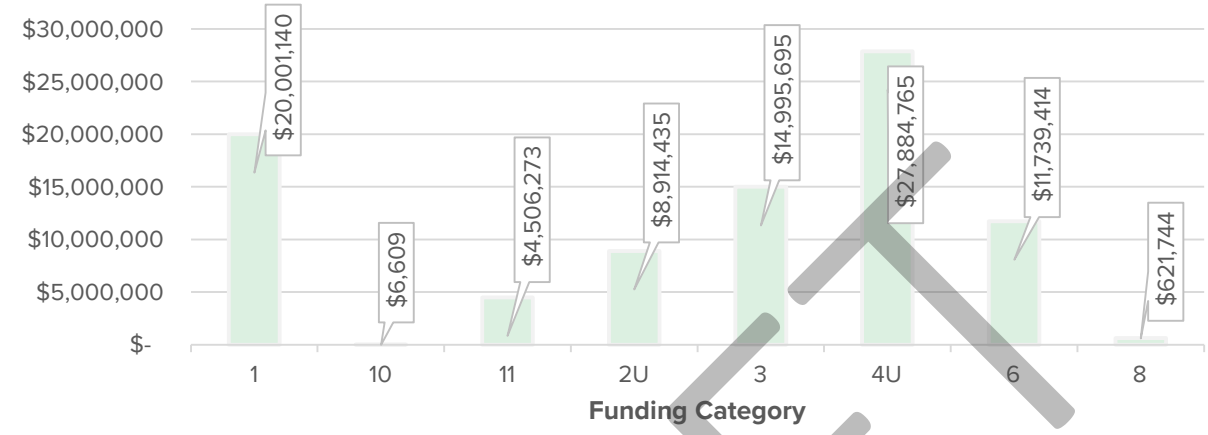

TxDOT created an Advisory Committee for I-69 in 2008 comprised of volunteers from I-69 corridor communities, to advise TxDOT on I-69 issues and priorities, as well as to engage regional and local stakeholders on I-69 status and project development.

Victoria County Judge Ben Zeller is on the TxDOT I-69 Advisory Committee Alliance for I-69 Texas. The following guiding principles were established to provide guidance to the committee:

- I-69 is critical to Texas.
- Achieve interstate designation as quickly as possible.
- Maintain public input as an essential part of all future work.
- Maximize the use of existing highways while seeking to reduce program costs and impacts to private property.
- Address safety, emergency evacuations and emergency response needs.
- Pursue flexibility and efficiencies in design and construction requirements.
- Encourage initiatives that will supplement limited highway funds.

The TxDOT Yoakum District, the MPO and all its planning partners have been working diligently to plan, program, and implement projects contributing to the future interstate corridor. **$88,670,074** worth of projects have been let in Victoria County on US 59 between 2009 and 2019 as part of preparations for the future interstate. Figure 0-1 shows the amounts spent on these projects by funding category over this time period and Table 0-1 shows the specific projects over that same time period.

**FIGURE 0-1: US 59 PROJECTS' COSTS 2009 - 2019 BY CATEGORY**




## TABLE 0-1: HISTORICAL US 59 PROJECTS; 2009 - 2019

| CSJ | Limits From | Limits To | Description | Let Date | Total Cost in YOE |
|---|---|---|---|---|---|
| 0088-05-086 | At Guadalupe River Bridge | South of Victoria | Extend Bridges | 03/2009 | $3,913,301 |
| 0088-04-068 | Us 77 Overpass | Goliad County Line | Seal Coat | 10/2011 | $485,407 |
| 0088-05-089 | 0.02 Mi. North of Loop 463 | 0.03 Mi. North of Us 87 | Construct Frontage Roads | 05/2013 | $14,995,695 |
| 0088-05-090 | 0.28 Mi. South of Us 87 | 0.25 Mi. North of Us 87 | Replace Bridges and Approaches | 07/2013 | $7,826,113 |
| 0088-05-087 | 0.105 Mi. West of Bu 59-T | .396 Mi. West of Loop 463 In Victoria | ACP Overlay | 02/2014 | $1,504,543 |
| 0088-05-088 | Spur 91 (Frontage Rd Only) | Bu 59-T (Frontage Rd Only) | Seal Coat | 10/2014 | $399,788 |
| 0088-05-093 | Spur 91 | 0.157 Mi. North of FM 446 | ACP Overlay | 04/2015 | $2,446,596 |
| 0089-01-090 | 0.4 Mi. East of FM 1686 | Jackson C/L | ACP Overlay | 04/2016 | $7,280,415 |
| 0088-05-092 | 1.26 Mi North of Us 87 | 1.73 Mi North of Us 87 | Construct 4-Lane Overpass at The Intersection of Hanselman Road | 10/2016 | $8,914,435 |
| 0088-04-069 | Us 77 | Goliad C/L | Seal Coat | 11/2016 | $376,764 |
| 0088-05-094 | 2.00 Mi N of Spur 91 | Spur 91 | Install Median Barrier | 07/2017 | $330,601 |
| 0088-05-097 | Us 77 | FM 446 | Install Median Barrier | 07/2017 | $291,142 |
| 0088-05-091 | Loop 463 | Spur 91 | ACP Overlay | 02/2018 | $7,345,013 |
| 0088-04-070 | Bu 59t | Goliad C/L | ACP Overlay | 04/2018 | $4,506,273 |
| 0088-05-085 | 0.5 Mi S of FM 1686 | SL 463 | Upgrade to Rural Freeway | 05/2018 | $27,884,765 |
| 0089-01-091 | Us 59 | Us 59 (NB & Sb Frontage Roads) | Seal Coat(Frontage Roads Only) | 11/2018 | $162,612 |
| 0088-05-101 | On Us 59 | . | Emergency Repair-FHWA ER | 01/2019 | $6,609 |

Projects that were scored for prioritization and inclusion in this MTP update (as discussed in Chapter 4) resulted in the ranking shown in Table 0-2. The ranking of these projects is the result of a continuous, comprehensive, and collaborative process between TxDOT Yoakum District, MPO staff, and MPO committees. TIP and UTP projects are the result of previous planning and needs assessment efforts. Projects listed in these documents are, for the most part programmed for specific years of expenditure and have planned, or obligated funding tied to them already.

The project development and ranking process carried out as part of this MTP update is an integral part of identifying candidate projects for development into future TIPs, UTPS, as well as future MTP updates. Project priority and project delivery are not synonymous. Funding availability, projects costs, as well as the need for right of way acquisition and environmental analysis affect the project delivery process. A number 1 ranked project is not always delivered first due to the complexities involved in programming and delivering the project.

The MPO Policy Advisory Committee, Temporary Technical Advisory Committee, MPO staff, and the TxDOT Yoakum district, as well as community planning partners and decision makers, recognize the economic impacts and value inherent in investments contributing to this priority and have contributed significantly towards this goal.

***I-69 Main Lane Project was ranked number 1***

**TABLE 0-2: RANKED PROJECTS**

| Rank | Project Name | MAP ID |
|---|---|---|
| 1 | **I-69 Main Lane Project (Telferner to County Line) ❖** | 457 |
| 2 | Boulevard Houston Hwy | 451 |
| 3 | Ball Airport Extension Underpass (at Loop 463) | 453 |
| 4 | **Capacity to US 77 Loop (River Bridge to 59) ❖ *** | 405 |
| 5 | Loop 463 Frontage Road Turnaround and Frontage Road Extension | 458 |
| 6 | Sidewalks on Main Street (Loop 463, E, SW) | 454 |
| 7 | FM 236 Widening Upgrade * | 404 |
| 8 | **Capacity to US 77 S (to Refugio) ❖** | 402 |
| 9 | US 87 N Capacity Corridor Study (Loop 463 to Nursery) | 403 |
| 10 | Loop 463 East Sidewalks | 456 |
| 11 | Port Overpass at FM 1432 | 401 |

***❖ I-69 project***

** Project in 2020 UTP*

***This plan represents just under $ investments towards I-69 Designation***

Figure 0-2 illustrates the full plan of projects included in this MTP update, with the projects contributing to the future I-69 corridor highlighted.

*This plan represents just under $379 million in investments towards I-69 Designation in Victoria County.*

**FIGURE 0-2: HIGHLIGHTED I-69 PROJECTS**