

# CITY OF VICTORIA THOROUGHFARE MASTER PLAN



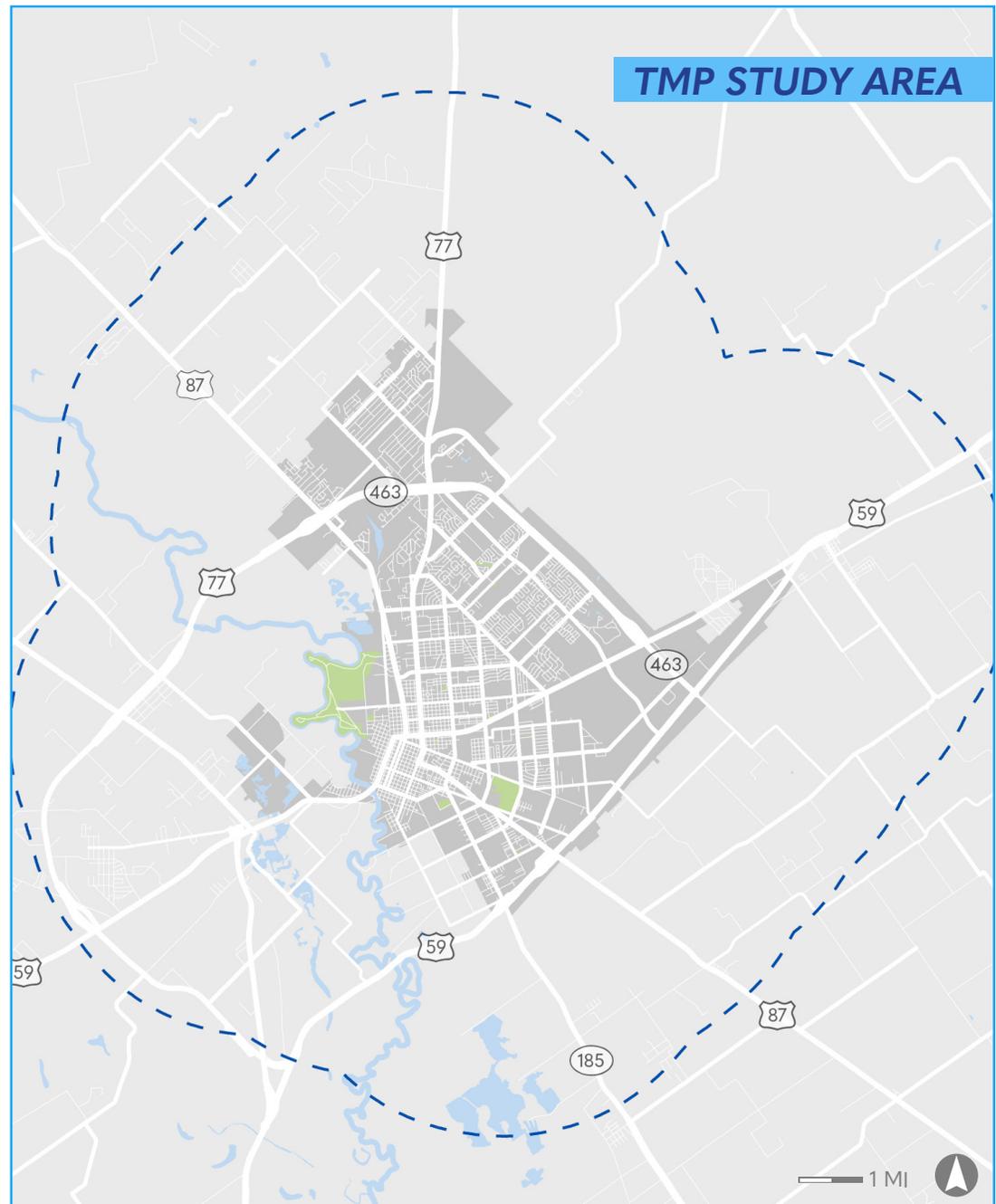
## EXECUTIVE SUMMARY JUNE 2021

# ABOUT THE THOROUGHFARE MASTER PLAN

The Victoria Thoroughfare Master Plan (TMP) is a long-range planning document adopted by the Victoria City Council on June 15, 2021 for use in guiding the development of the community's transportation network. The purpose of the plan is to ensure that the transportation network in and around the City of Victoria meets the current and future travel needs of the growing region for all modes of travel, including walking, bicycling, driving, freight, and public transportation.

The TMP focuses on roadways in the **study area**, which includes the Victoria city limits and the City's extraterritorial jurisdiction. It serves as a guideline intended to help city officials plan for the future of the transportation system through the recommendation of new and enhanced roadway alignments, typical design cross-sections, and policy updates. Rather than focusing solely on maximizing vehicle travel, the plan emphasizes the importance of context-sensitive solutions that consider a variety of factors affecting multimodal mobility, accessibility, and quality of life.

The planning process entailed reviewing the previous TMP and other existing planning efforts, existing conditions and future scenario analyses, and an iterative stakeholder and public engagement effort. The plan was guided by goals developed through reviewing local and regional planning documents, conversations with stakeholders, and public outreach efforts. These goals describe the intended long-term outcomes of the TMP implementation.



# EXISTING CONDITIONS ANALYSIS

Comprehensive analyses of existing conditions in the study area were foundational to developing a TMP that meets the needs and goals of the City of Victoria. The existing conditions analysis was conducted to develop a well-rounded understanding of transportation conditions within the City and ETJ so that key corridors and critical locations could be prioritized for further analysis.

Elements of the transportation system were evaluated in tandem with growth trends reflected in the regional forecasts adopted as part of the Victoria MPO 2045 Metropolitan Transportation Plan (MTP). The analysis for the TMP built off this work to ensure that regional and local planning efforts would remain consistent in their approach to the development of the regional transportation network. The TMP existing conditions analysis established a baseline for examining the existing network and making context-sensitive recommendations for long-term planning.

The existing conditions analysis concentrated on the following resources:

- **Land Use** – Victoria is characterized by commercial and industrial corridors, agricultural land, and residential development. High concentrations of commercial and residential use generate a significant amount of traffic congestion on adjacent roadways.
- **Roadways** – The existing network consists of highway

and expressway infrastructure and a range of arterials, collector roadways, and local streets that provide access from residential areas to main thoroughfares. Traffic congestion is most significant on major north-south corridors and the highways surrounding the city limits.

- **Safety** – Crash data for Victoria County was analyzed to identify locations of safety concerns and understand trends in traffic conditions in the study area. Major intersections on Navarro St, the 5 Points intersection, and along BU 59T are major crash hot spots.
- **Transit & Active Transportation** – Although the TMP does not make specific recommendations for active transportation infrastructure or transit service, facilities were evaluated as part of the plan to ensure that recommendations would accommodate multimodal transportation policy and infrastructure.
- **Environmental & Cultural Features** – The TMP identified water features, parks, historical sites, cemeteries, and floodplains to evaluate the potential impacts of proposed transportation projects.

Land use and development patterns, multimodal needs of the transportation network, the location of key cultural and environmental resources, and other findings were used to identify and prioritize improvements and potential new alignments in the TMP.

## VICTORIA TMP GOALS



MAINTAIN AND REPAIR EXISTING INFRASTRUCTURE



REDUCE TRAFFIC CONGESTION AND TRAVEL TIMES



INCREASE NETWORK CONNECTIVITY



INCREASE CONVENIENT ROUTE OPTIONS



ENSURE NETWORK CAPACITY MEETS DEMAND



INCREASE MULTIMODAL OPTIONS

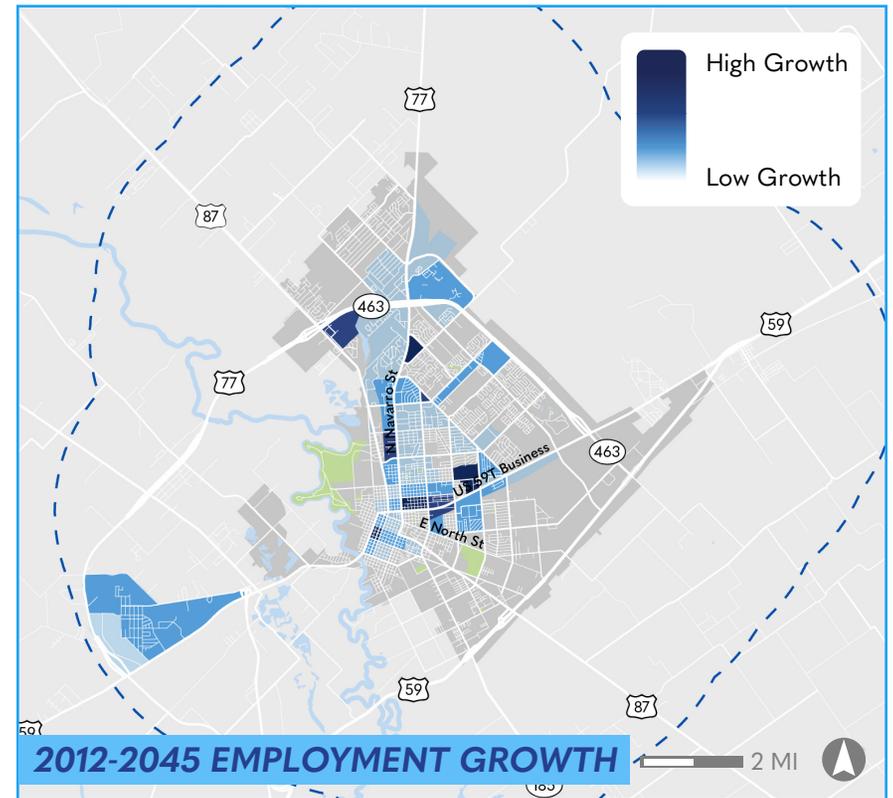
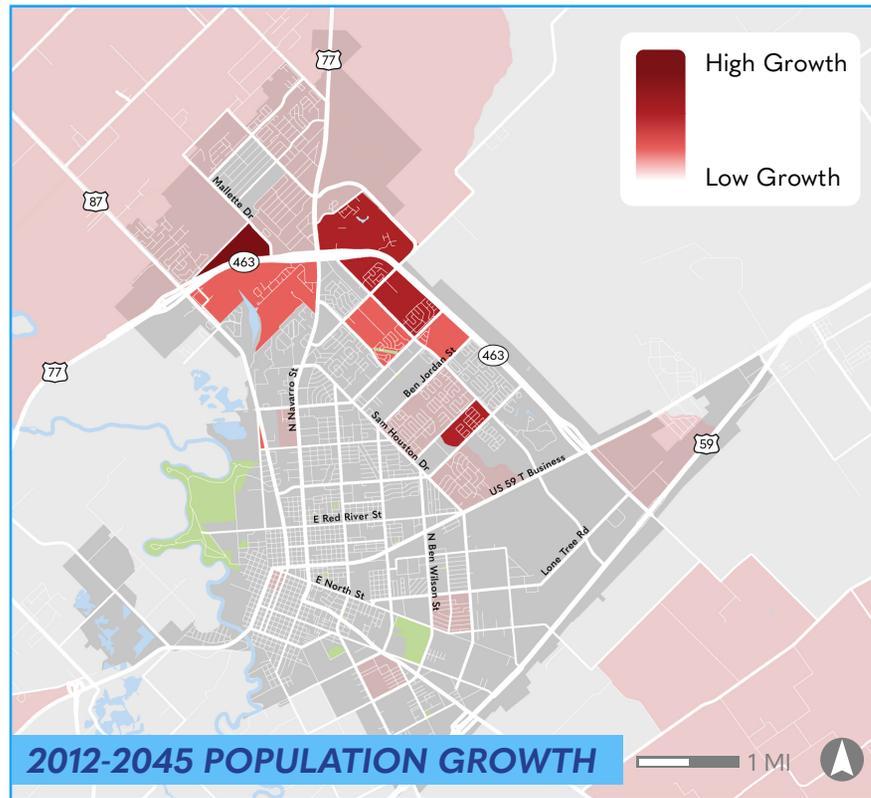
# FUTURE GROWTH IN VICTORIA

The TMP relies on a thorough analysis of projected growth in the Victoria region. Understanding where people will live and work as the region grows has implications for how they will use the future transportation system, and is critical to the long-term success of the plan. The TMP details population and employment projections and how these projections will affect transportation facilities and conditions.

Projections from the Victoria MPO TDM were used to evaluate demographics beyond existing US Census estimates and helped identify transportation system deficiencies and potential improvements in the development of the TMP. The City of Victoria's population is projected to see modest

increases through 2045, particularly in northern areas due to developable land and recent roadway infrastructure investments.

The Victoria TDM forecasts that there will be over 58,000 jobs in the study area by 2045. Areas of high employment growth represent trip generators, or high-activity areas where many people will commute to and from work. Significant growth is projected to occur in Downtown Victoria, near the University of Houston-Victoria, west of the City near Aloe, and along existing commercial corridors such as Navarro St and BU 59T.



# FUTURE CONDITIONS ANALYSIS

## Planned Projects

The projected growth in Victoria has led to the implementation of planned roadway improvements and additions to add capacity and improve infrastructure. Recently completed and planned facilities were considered as part of the TMP development. Key projects include the **future I-69 corridor**, for which the Victoria region is upgrading existing state roads to meet interstate standards. This project would have major implications for the City and region, impacting economic development, freight movement, and traffic flow. Between 2009 and 2019, over \$88 million worth of projects were initiated in Victoria County as part of preparing US 59 and US 77 to become part of the new interstate.

The Victoria MPO also coordinates regional transportation efforts for Victoria County. Using input from the community, local stakeholders, and technical analysis, the MPO identifies transportation issues and prioritizes short- and long-term transportation projects according to regional goals and objectives. These projects are included in the **Transportation Improvement Program (TIP)** and the **Metropolitan Transportation Plan (MTP)** where they will be allocated federal funding over the next 4 and 25 years, respectively.

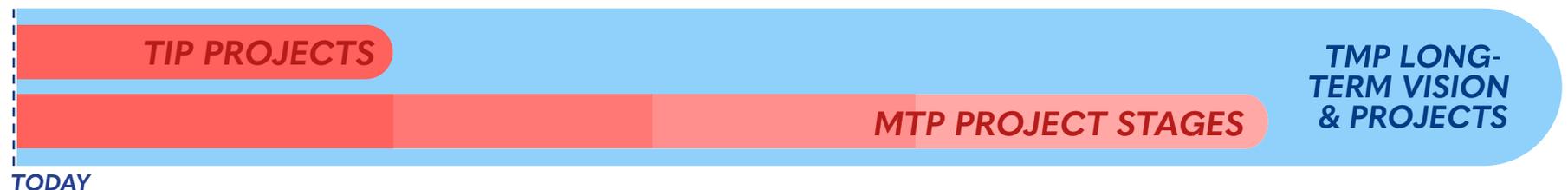
## System Deficiencies & Gaps

Travel demand modeling was used to forecast future year traffic conditions in order to inform recommendations in the TMP. Incorporating demographic forecasts, land use data, and information on future roadway projects, a travel demand model (TDM) forecasts future regional traffic patterns.

The **Victoria MPO TDM** was used to analyze the roadway system for deficiencies before a second, more nuanced level of modeling using **TransModeler™** simulation software was used to evaluate the causes of transportation system deficiencies. This approach allowed the project team to evaluate a holistic projection of future roadway conditions as a whole and at specific locations and recommend appropriate solutions in the form of new or improved roadway alignments.

Roadway segments that showed high levels of delay and/or congestion were flagged and reviewed, and these gaps were reviewed and considered for improvement in the subsequent stages of developing the TMP.

## FUTURE REGIONAL TRANSPORTATION PROJECTS



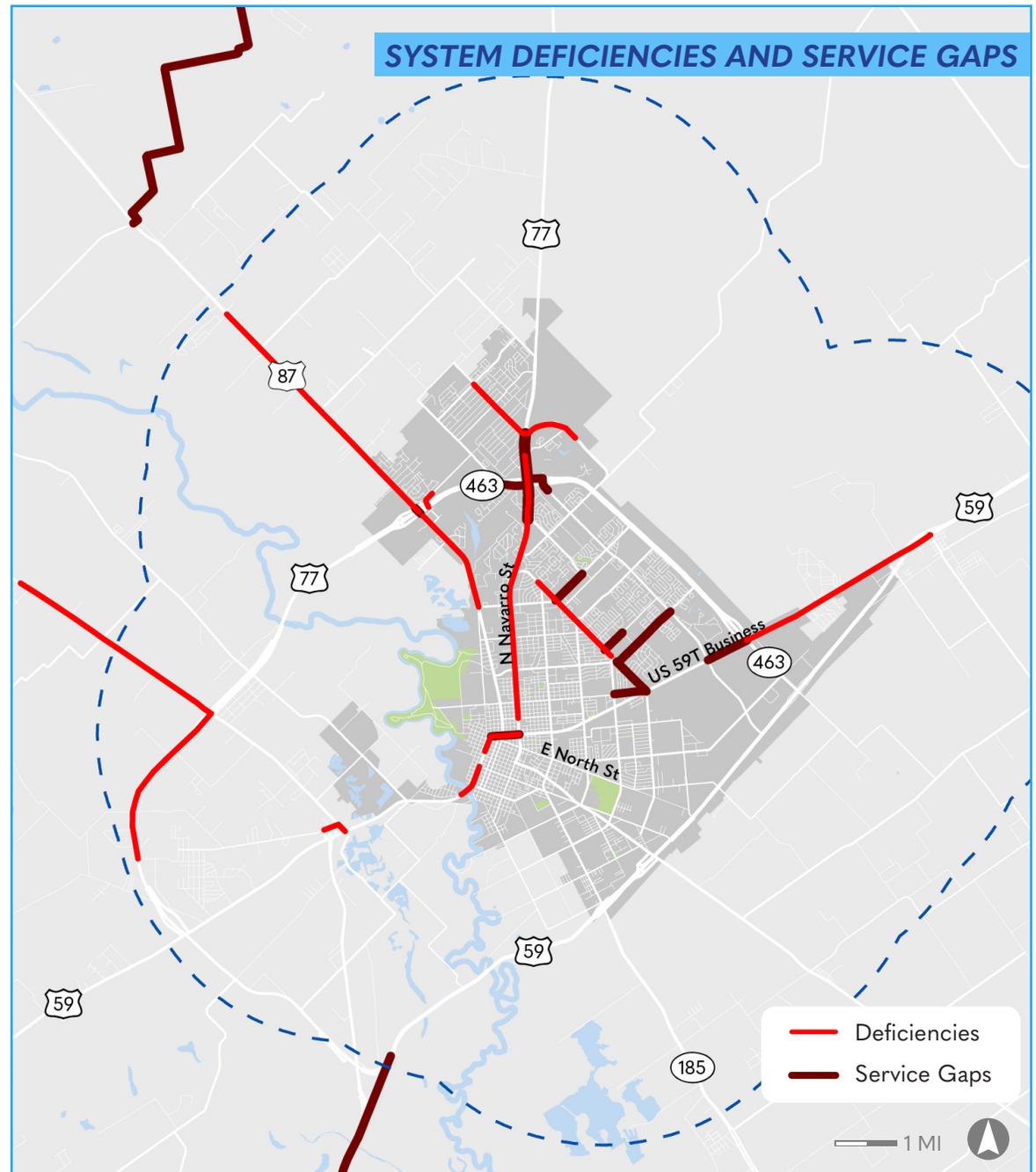
# FUTURE CONDITIONS ANALYSIS

Based on results of the modeling efforts, candidate transportation improvements that would address the system deficiencies were developed. These projects constituted a preliminary list of potential roadway improvements to be recommended in the TMP.

These **conceptual alignments** then went through an iterative process using feedback from stakeholders to ensure their feasibility and that the potential projects aligned with best practices and community vision.

The Victoria 2045 MTP, the existing TMP, the 2035 Victoria Comprehensive Plan, and input from the citizens of Victoria were also used to evaluate conceptual alignment options.

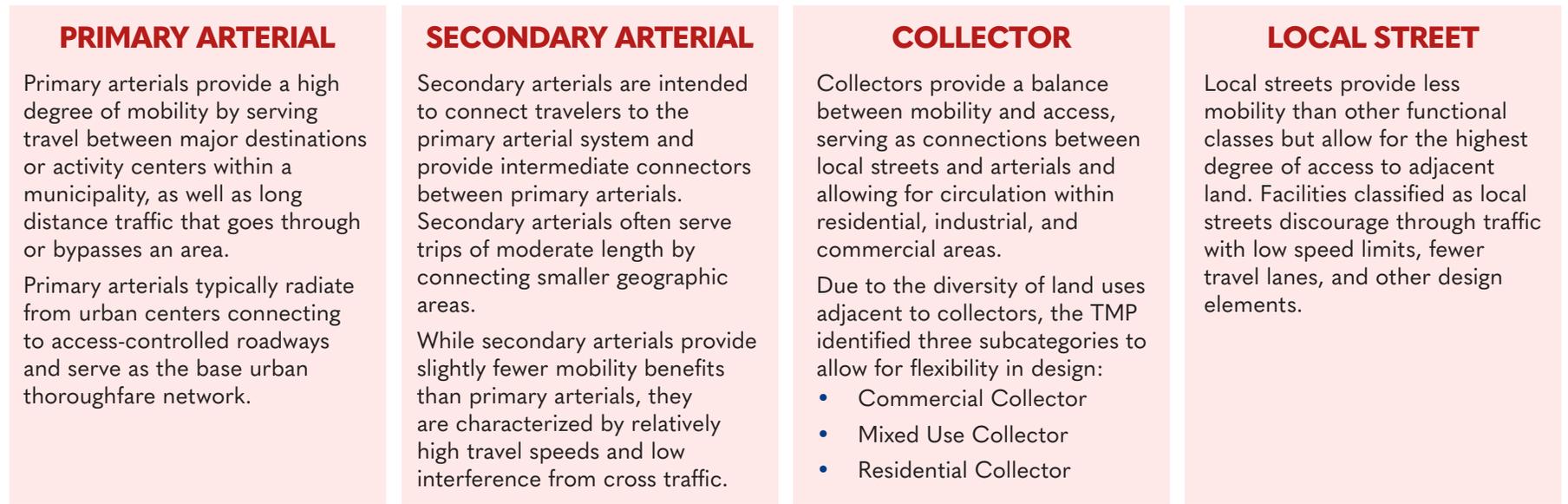
Once all input had been incorporated, this preliminary program of conceptual alignments was evaluated using TransModeler to identify service gaps in the network. Candidate projects were then reviewed by the project team to visualize their potential to mitigate system deficiencies.



# ROADWAY FUNCTIONAL CLASSIFICATIONS

Transportation systems are designed to serve a variety of travel needs, from long-distance freight delivery to local trips from home to the grocery store. This diversity is reflected in the types of roads that comprise a transportation network. Grouping individual roads into hierarchical categories, or **functional classifications**, according to their purpose is important to the process of designing and maintaining a logical and efficient transportation system. Functional classifications identify the role a roadway serves within the context of the overall network and helps determine its characteristics such as speed limit, geometry, and design.

As part of the TMP development, Victoria roadways were assigned functional classifications based on thoroughfare type. The functional classifications are based on federal best practices and a context-sensitive approach that considers the compatibility of thoroughfare types with surrounding land uses, the efficient movement of traffic, and stakeholder feedback.



Examples	Examples	Examples	Examples
Navarro St, Main St/US 87, BU 59T, FM 236	Lone Tree Rd, N Laurent St, Sam Houston Dr, John Stockbauer Dr	Miori Ln, Briggs Blvd, Larkspur St, Juan Linn St, Bottom St	Kingsway St, E Forrest St, Azalea St, N Cameron St, Dairy Rd

# POLICY EVALUATION & BEST PRACTICES

The TMP also includes an evaluation of existing policies, standards, and regulatory documents that impact the city's thoroughfare network. A review of roadway design standards, existing comprehensive plans, public works standards, and city ordinances helped ensure that the TMP recommendations meet the needs and goals of the community.

The policy evaluation makes recommendations to City of Victoria documents based on best practices and local thoroughfare planning goals. Areas of focus for the policy analysis include access management, active transportation facilities, street design standards, and development ordinances.

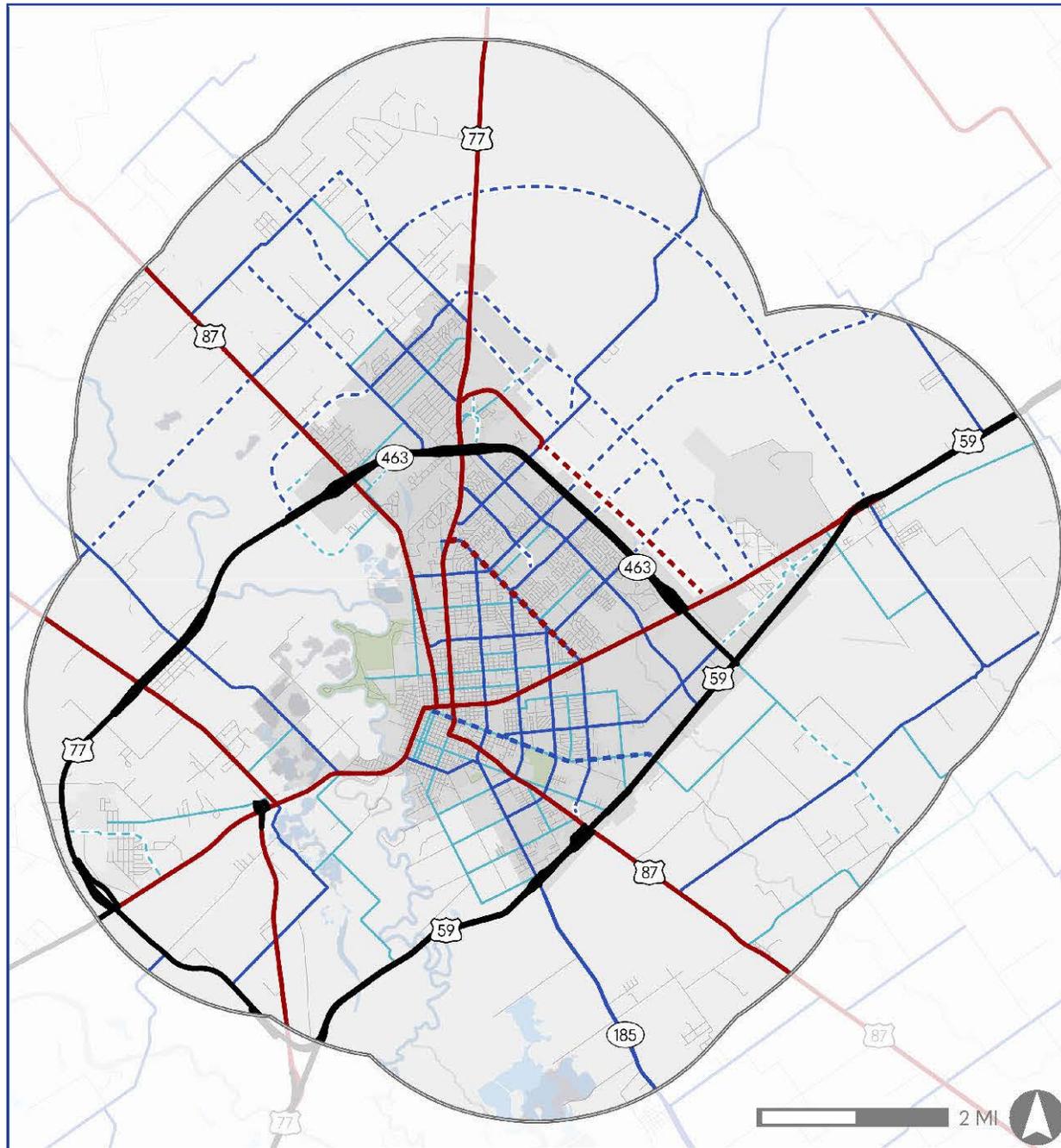
Additional industry best practices and strategies relevant to the thoroughfare network are also detailed in the TMP. Complete Streets that enhance safety and make roadways more accessible to multimodal travel, guidance on bicycle and pedestrian facilities, and transit stop amenities are discussed to supplement the traffic and roadway analysis included in the plan.

## **POLICY & DESIGN BEST PRACTICES RESOURCES**

- TxDOT Roadway Design Manual
- TxDOT Access Management Manual
- National Highway Traffic Safety Administration (NHTSA)
- American Association of State Highway and Transportation Officials (AASHTO)
- National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide
- National Complete Streets Coalition
- National Center for Safe Routes to School



# THOROUGHFARE PLAN



The thoroughfare network was developed as a framework for future growth based on the existing network, prior planning efforts, stakeholder and public feedback, and the various technical analyses that identified needs and constraints within the study area. The final TMP network includes 25 new alignments, 4 roadways with upgraded functional classifications, and several roadway extensions.

### City of Victoria Thoroughfare Network

**Functional Classification**

- Freeway/Expressway
- Primary Arterial
- Secondary Arterial
- Collector Street
- Local Street
- - - Primary Arterial (Proposed)
- - - Secondary Arterial (Proposed)
- - - Collector Street (Proposed)
- Victoria Municipal Boundary
- Extra-Territorial Jurisdiction

**Right-of-Way**

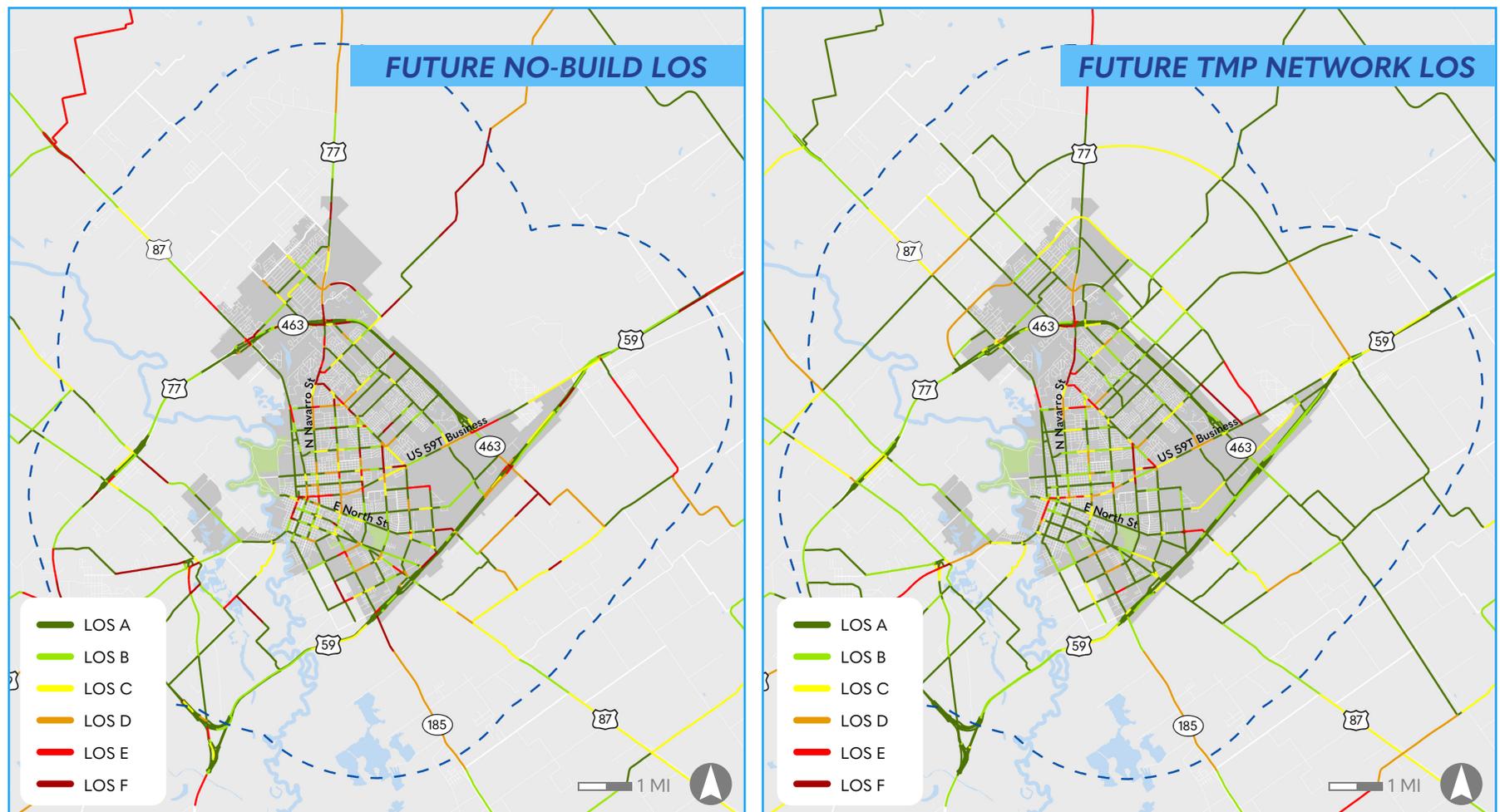
- Primary Arterial – 120'
- Secondary Arterial – 90'
- Collector Street – 75'
- Local Street – 60'

# THOROUGHFARE PLAN

## Scenario Analysis

Developing the TMP required further analysis to demonstrate how the proposed thoroughfare network will function for users. A scenario analysis compared the models of the proposed Victoria thoroughfare network to a 'no-build' scenario that showed future traffic patterns if no upgrades or changes beyond currently committed projects were made over the next 25 years.

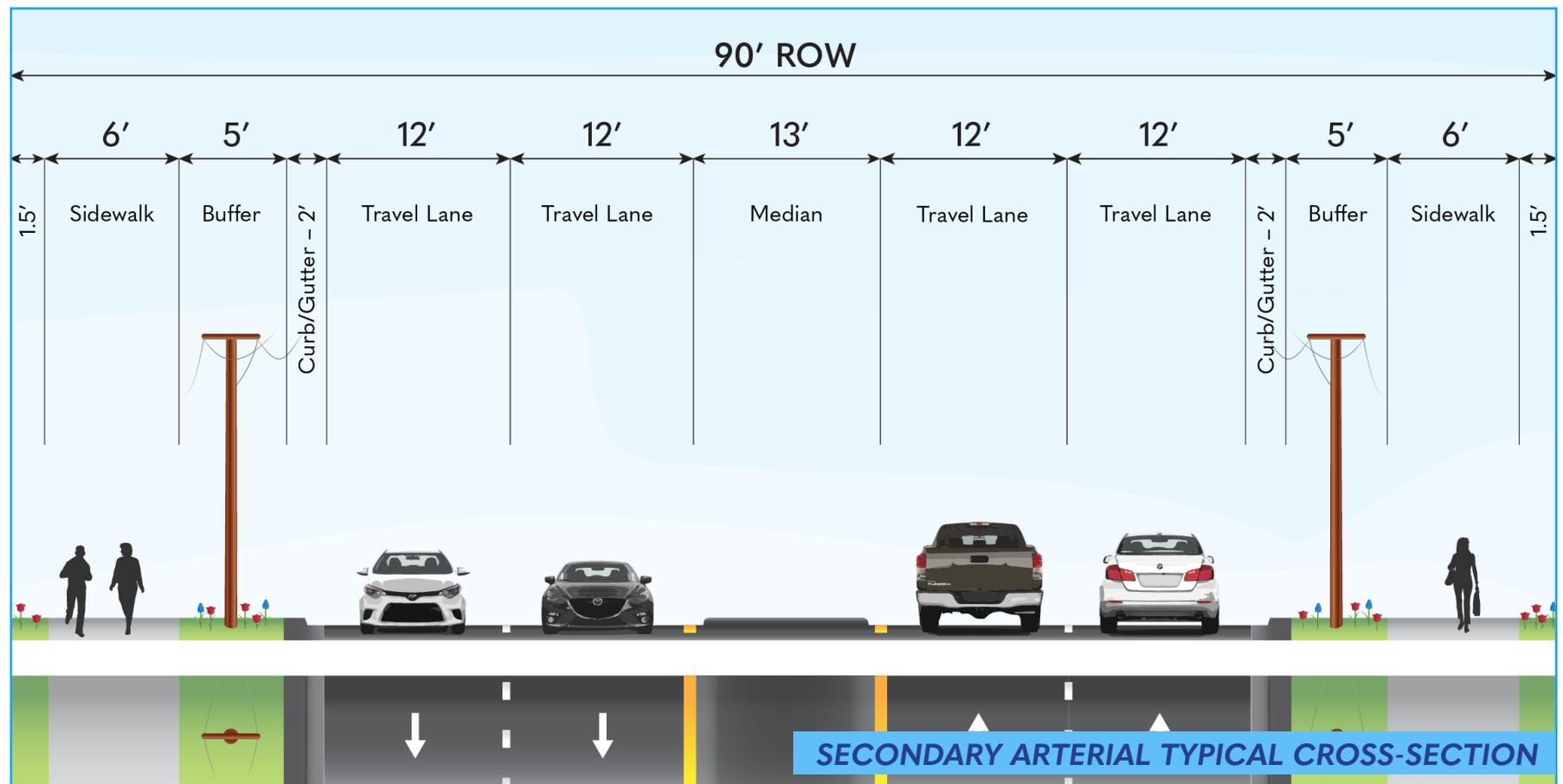
The results of this analysis visualize the benefits that will occur if the recommended TMP alignments are implemented. The future network that includes TMP projects and improvements saw improved level of service (LOS) across the study area, faster travel times, and an increase in average speeds, indicating that they will lead to greater overall mobility in the region.



# THOROUGHFARE PLAN

## Typical Cross-Sections

The TMP provides design standards for each functional classification, which include typical right-of-way distances, number of lanes, medians, active transportation facilities, landscaping, and other elements that should be present depending on a roadway's categorization. While they are not mandates, the typical cross-sections provide flexible examples to further define how aspects of a context-sensitive, multimodal, and efficient thoroughfare network should be implemented and maintained. The complete set of options for roadway dimensions and cross-section features is shown in the TMP as sets of ranges in a matrix by functional class.



# FUNDING & IMPLEMENTING THE TMP

## Funding Sources

Although the TMP network reflects long-term needs and will not be implemented in the immediate future, the TMP considers financial feasibility and describes the likely funding sources that will later be used to support these transportation investments. The City of Victoria maintains a **Capital Improvements Program (CIP)** in order to coordinate the financing of infrastructure projects over a short-term period. Various local sources contribute to the CIP to fund capital projects.

While the TMP proposes a long-term vision for the transportation system in the City of Victoria, the CIP prioritizes projects for implementation over five-year increments. The new alignments and upgraded facilities included in the TMP will be programmed into a future CIP when it is feasible to begin their individual design, engineering, and construction processes.

The City of Victoria is also eligible for funding from state and federal entities. The **TxDOT Unified Transportation Plan (UTP)** is a ten-year plan that allocates funding to transportation projects across the state by coordinating

with regional planning organizations. The Victoria MPO also distributes federal funds through the **TIP** and **MTP**. These documents are required to be fiscally constrained and ensure that included projects are funded or likely to be funded.

Additional sources such as **competitive grants, bonds, public-private partnerships with developers and property owners, and property and sales taxes** such as the Sales Tax Development Corporation (VSTDC) provide the City with opportunities to fund transportation network improvements included in the TMP.

## Implementation

The TMP development process does not replace the thorough impact analyses that will be completed for each project as they are considered for implementation. In the future, individual projects will be identified and undergo detailed design level cost estimation, impact analyses, preliminary engineering, environmental assessments, and final design. Project implementation will depend on a variety of factors, including financial readiness, construction phasing, and local transportation needs.

