# CITY OF DAYTON
# 2040 COMPREHENSIVE PLAN
# Chapter 8: Transportation

SRF Consulting Group, Inc.
ENGINEERS
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# TABLE OF CONTENTS

# LIST OF FIGURES



# LIST OF TABLES



# LIST OF APPENDICES

# VISION FOR THE TRANSPORTATION SYSTEM

The purpose of the Transportation Plan is to provide the policy and program guidance needed to make appropriate transportation-related decisions when development occurs, when elements of the transportation system need to be upgraded, or when transportation problems need to be addressed. The Transportation Plan demonstrates how the City of Dayton will provide for an integrated transportation system that will serve the future needs of its residents and businesses, support the city's development plan, and complement the portion of the metropolitan transportation system that lies within the city's boundaries.

Maintaining and improving the multimodal transportation system throughout the city is important to the ongoing economic health and quality of life in Dayton; is necessary for people to travel easily and safely to work and other destinations; to support property development; and to assist in the movement of goods. To accomplish this, the Transportation Plan:

- identifies a functional hierarchy of streets and roads and defines their access to the regional system to ensure they support the existing and anticipated development of the area, serve both short trips to and from Dayton destinations as well as trips to adjacent communities, and complement and support the metropolitan highway system.
- establishes a system improvement program that ensures higher priority projects are constructed first, maintains a consistent and coherent process, and provides for adequate funding for all needed improvements.
- identifies appropriate transit services and travel demand management strategies for implementation in Dayton to increase the number and proportion of people who use transit or share rides and reduce the peak level of demand on the entire transportation system.
- identifies strategies and policies that need to be implemented to properly integrate the trail system, including pedestrian and bicycle, with the future roadway and transit system, to ensure the provision of trails in a sequence consistent with the development of the roadway system, and to create a rational network of sidewalks.

# GOALS AND POLICIES

## Summary of Regional Transportation Goals

Guidance for the development of the Transportation Plan is provided by the Metropolitan Council's 2040 Transportation Policy Plan (TPP), which identifies six broad goals for the regional transportation system. The six goals are paraphrased below:

1. **Transportation System Stewardship:** Providing sustainable investments in the transportation system which are protected by strategically preserving, maintaining, and operating system assets.
2. **Safety and Security:** Ensuring the regional transportation system is safe and secure for all users.
3. **Access to Destinations:** Allowing people and businesses to prosper by using a reliable, affordable, and efficient multimodal transportation system that connects them to destinations throughout the region and beyond.
4. **Competitive Economy:** Ensuring the regional transportation system supports the economic competitiveness, vitality, and prosperity of the region and State.

5. **Healthy Environment:** Confirming the regional transportation system advances equity and contributes to communities' livability and sustainability while protecting the natural, cultural, and developed environments.
6. **Leveraging Transportation Investment to Guide Land Use:** Leveraging the region's transportation investments to guide land use and development patterns that advance the regional vision of stewardship, prosperity, livability, equity, and sustainability.

## City of Dayton's Goals and Policies

The role of the Metropolitan Council, reflected above, is to coordinate large-scale transportation planning efforts to benefit the metropolitan region. As a metropolitan community, Dayton's role is to respond to Metropolitan Council's initiatives and coordinate with adjacent communities, while addressing its local responsibility to improve the quality of life for its residents. To respond to the above themes, as well as to serve economic activities and improve the quality of life in Dayton, the following goals and policies were established:

### Goal 1: Develop an integrated transportation plan that fully promotes connectivity and is coordinated with neighboring cities and counties.

- Policy 1: Identify a transportation grid that efficiently moves traffic as development occurs and is consistent with MnDOT, Hennepin County, neighboring communities, and the land use plan.
- Policy 2: Residential areas are designed to ensure excess traffic is not traveling through residential neighborhoods.
- Policy 3: Use weight restrictions to minimize deterioration of roadways and enforce these restrictions.
- Policy 4: Incorporate the use of innovative traffic management options and technologies.
- Policy 5: Develop a pavement management program that ensures City roads are being maintained cost effectively as needed.
- Policy 6: Plan for expanded and improved road system to accommodate projected increases in traffic volume accompanying planned growth and development.

### Goal 2: Encourage transportation methods other than individual automobile travel.

- Policy 1: Promote ride sharing by residents with the addition of park and ride lots in convenient locations.
- Policy 2: Work with the Metropolitan Council to increase transit services to Dayton and encourage use by residents.

### Goal 3: Coordinate transportation planning and system improvements with other government jurisdictions.

- Policy 1: Continue to work with Hennepin County and adjacent jurisdicitions to develop and improve the transportation system in of the I-94/ Dayton parkway area (including improvements to Brockton Lane Intersections, and County Road 81). Work closely with MnDOT and Hennepin County to ensure transportation needs are met. Include developers in the area to assist in the design and implementation process. Actively explore and pursue all funding options.

- Policy 2: Identify all connections and alignments to MnDOT and Hennepin County corridors in and adjacent to Dayton.
- Policy 3: A Mississippi River Crossing is not identified in other jurisdiction's plans between the existing TH 169 and TH 101 river crossings. Identify the approach/options if a river crossing is included after 2040. The I-94/ Dayton Parkway Interchange design should identify the impacts to its design if a river crossing is constructed. The corridor between a river crossing and interchange with I-94 shall be identified at some point in the future.

## Major Trends and Influencing Factors

Several social, economic, environmental, and technological trends will affect the City of Dayton, as well as the entire Twin Cities metropolitan area, over the next 20 years. These include population growth, changes in household size, increases in the cost of conventional fuels coupled with transition to alternative fuel sources, the emergence of ride hailing and similar alternative modes, and various environmental efforts and concerns. With increased population growth and limited new or expanded transportation facilities, congestion on the regional highway system is expected to increase. Specific transportation issues the City of Dayton faces include:

### Dayton Parkway Interchange

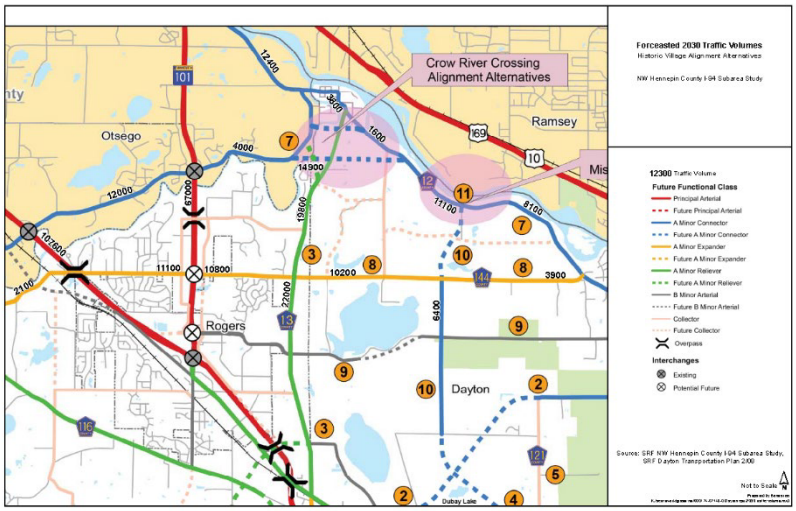
As the northwest Hennepin County area grows, increased access to I-94 is necessary to relieve current access points and to balance flows on the arterial roadway system. The NW Hennepin Study examined an interchange at the Brockton Lane area considering spacing with other I-94 access points as well as connections to the arterial roadway system. The location shifted east and is no longer at Brockton. The interchange opened fall 2021. This regional access to I-94 serves to relieve adjacent interchanges, increase system efficiency and safety, and relieve overloads on other local system linkages.

### Lack of Arterial Roadways

There is a lack of arterial roadways within Dayton, given the planned urbanization of the area over time and the potential for an interchange at I-94/Brockton Lane. Improving system connectivity would provide better east-west and north-south flow in immediate growth areas as well as address current and future capacity issues at major intersections and interchanges and overloaded segments.

### River Crossings

The potential need for a new Crow River crossing was raised by the Wright County Transportation Plan in 1994 but was identified as beyond the study period in the previous Hennepin County Transportation Systems Plan (HC-TSP). The impacts of this river crossing are still being considered. The ultimate arterial roadway alignment with a new river crossing has not yet been determined and will require further detailed study.




A Mississippi River crossing is not included in the 2040 Transportation Policy plan. Future planning of a corridor and right-of-way protection will be considered as Dayton develops. Future corridor alignment between a future crossing and I-94/Dayton Parkway Interchange would be Vicksburg Lane/Zanzibar Lane to Dayton Parkway.

## Emerging and Developing Technologies

In addition to the issues cited above, several emerging technologies are anticipated to impact Dayton and the rest of the Twin Cities metropolitan area within the 20-year planning horizon of this Transportation Plan update. Emerging technologies include electric vehicles, connected vehicles, automated vehicles, and continued development of ride hailing systems such as Uber and Lyft. As a growing community located within an expanding metropolitan economy, Dayton will experience some degree of impacts from these technologies in the next 20 years.

# ROADWAY SYSTEM

The roadway network in the City of Dayton is a significant component of its transportation system and continues to expand to accommodate growth and redevelopment within and outside the City. The City of Dayton features efficient access to the regional transportation roadway system with major corridor routes passing through the City. Industrial areas and economic centers in the City of Dayton are located with nearby access to the metropolitan highway system, which reduces the impact of truck traffic on local roadways and minimizes the potential for disruption of neighborhoods. This section of the Transportation Plan addresses key features of Dayton's roadway system including the jurisdictional and functional classifications, roadway system improvements, traffic volumes, congestion, safety, and additional transportation components and policies.

## Jurisdictional Classification

Ownership of the City's roadway system is shared among the Minnesota Department of Transportation (MnDOT), Hennepin County, and the City of Dayton. MnDOT maintains the interstate and trunk highway system on behalf of the State of Minnesota, Hennepin County maintains the County State Aid-Highway (CSAH) and County Road (CR) systems, and the remaining public roadways within the City are owned and maintained by the City of Dayton including Municipal State Aid Streets (MSAS). The three jurisdictions coordinate in the planning and improvement efforts of the roadway system in Dayton. The existing and future jurisdictional classification maps are shown in **Figure 1A** and **Figure 1B**, respectively.

The jurisdictional classification system is intended to maintain a balance of responsibility among the three governing agencies. It is organized around the principle that the highest volume and limited access roadways that carry regional trips are primarily maintained by MnDOT, the intermediate volume roadways that carry medium length trips are maintained by Hennepin County, and the local street system that provides access to individual properties is maintained by the City of Dayton. Occasionally, due to growth and development, changes in travel patterns or construction of new facilities, the jurisdictional classification needs to be adjusted to reflect changes in the way certain roadways are utilized.

### Jurisdictional Transfers and New Roadways

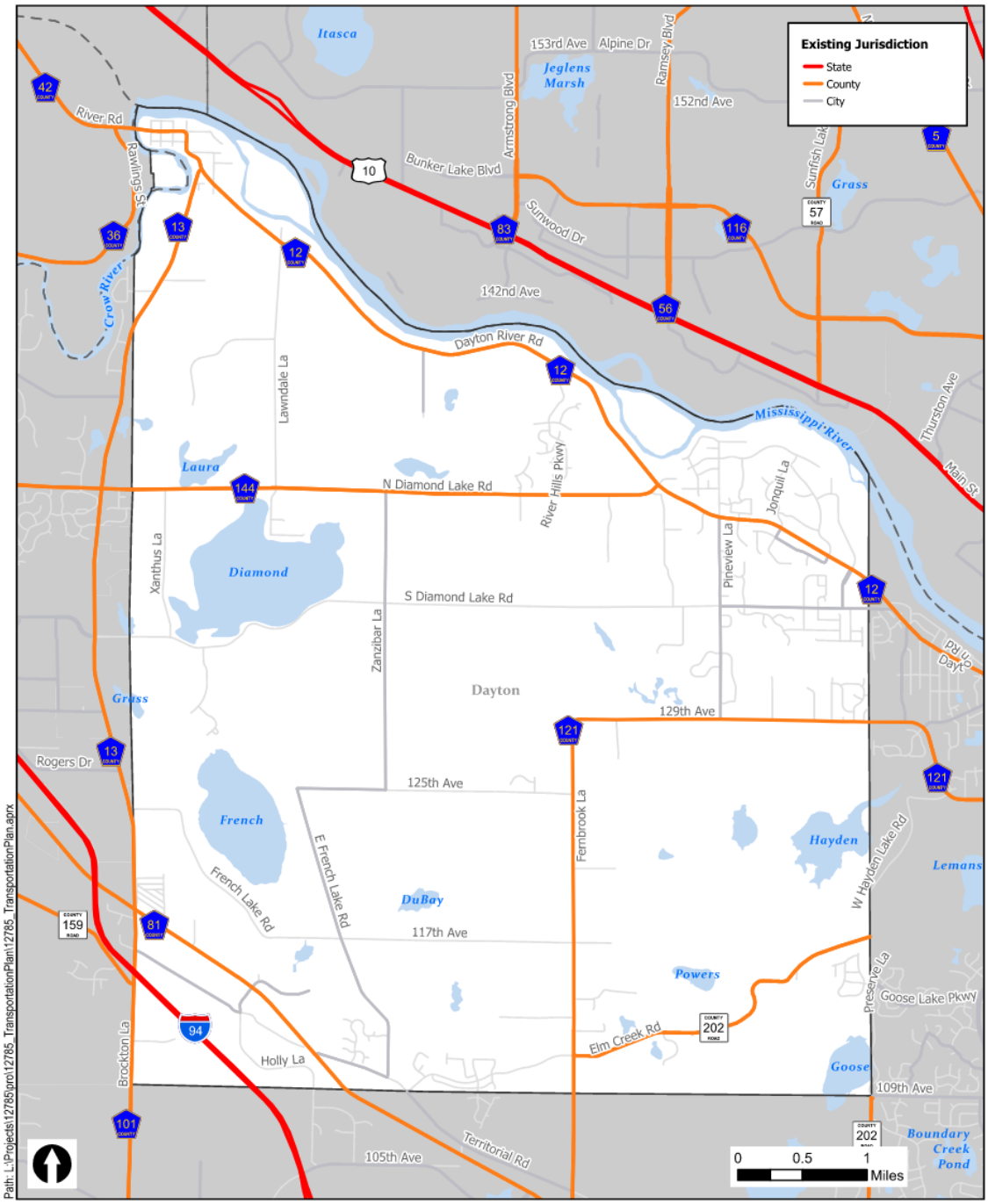
Below is a list of new roadways within the City of Dayton and their respective proposed jurisdictional ownership currently. Note that identification of the jurisdictional agency is not binding but a planning-level understanding of the desired jurisdictional alignment currently. Much discussion and coordination are needed amongst the jurisdictions involved for the resultant alignment to occur. It is recommended the potential transfers be pursued as opportunities arise across the planning horizon. Examples of appropriate times for discussing jurisdictional issues are:

- When a new roadway segment is constructed that replaces the function of the current roadway.
- During improvements or major rehabilitation of a facility that is identified as a potential transfer
- candidate.

Transfer candidates:

- Pioneer Parkway from Lawndale Lane to Dayton River Road (new City road)
- French Lake Road redirect to connect to Rogers Drive (new City road)
- Existing Fernbrook Lane from new redirect to 129th Avenue (County to City)
- Zanzibar Lane from Mississippi River to existing Fernbrook Lane (City to County)
- 113th Avenue extension to French Lake Road (new City road)
- Dayton Parkway from west City limits to 129th Avenue (City/County coordination)
- Interchange at I-94 and Dayton Parkway (new MNDOT facility, coordinated with City/County)
- County Road 202 through Elm Creek Park (County to City)

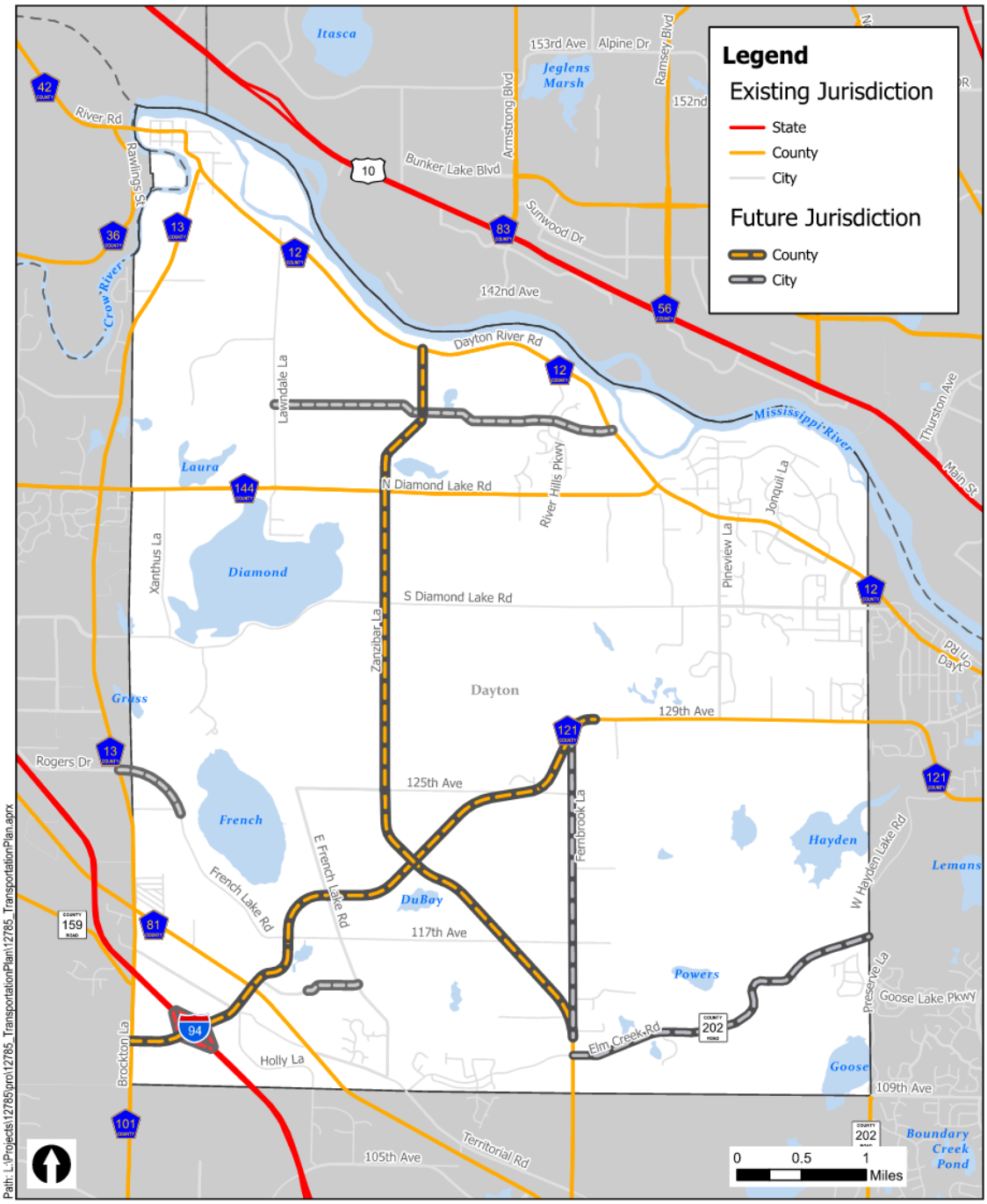
## Figure 1A. Existing Roadway System




**Existing Jurisdictional System**
Dayton Transportation Plan Update
City of Dayton

**Figure 1A**

## Figure 2B. Future Roadway System




**Future Jurisdictional System**
Dayton Transportation Plan Update
City of Dayton

**Figure 1B**

## Functional Classification

Roadway functional classification categories are defined by the way roadways serve the flow of trips through the overall roadway system. Within the Twin Cities metropolitan area, the Metropolitan Council has established detailed criteria to define roadway functional classifications, which are presented in **Table 1**. The following is a detailed discussion of each functional classification category.

### Table 1. Metropolitan Council Roadway Functional Classifications

| Criteria | Principal Arterial | Minor Arterial and Other Arterial | Collector | Local Street |
|---|---|---|---|---|
| **Place Connections** | Connect regional job concentrations and freight terminals within the urban service area. | Provide supplementary connections between regional job concentrations, local centers, and freight terminals within the urban service area. | Connect neighborhoods and centers within the urban service area. | Connect blocks and land parcels within neighborhoods and within commercial or industrial developments. |
| **Spacing** | Urban communities: 2 to 3 miles. Suburban communities: Spacing should vary in relation to development density of land uses served, 2 to 6 miles. | Regional job concentrations: 1/4 to 3/4 mile. Urban communities: 1/2 to 1 mile. Suburban communities: 1 to 2 miles. | Job concentrations: 1/8 to 1/2 mile. Urban Communities: 1/4 to 3/4 mile. Suburban Communities: 1/2 to 1 mile. | As needed to access land uses. |
| **System Connections** | To interstate freeways, other principal arterials, and select A-Minor arterials. Connections between principal arterials should be of a design type that does not require vehicles to stop. Intersections should be limited to 1 to 2 miles. | To most interstates, principal arterials, other minor arterials, collectors and some local streets. | To minor arterials, other collectors, and local streets. | To a few minor arterials. To collectors and other local streets. |
| **Trip-Making Service** | Trips greater than 8 miles with at least 5 continuous miles on principal arterials. Express and highway bus rapid transit trips. | Medium-to-short tips (2 to 6 miles depending on development density) at moderate speeds. Longer trips accessing the principal arterial network. Local, limited-stop, and arterial bus rapid transit trips. | Short trips (1 to 4 miles depending on development density) at low-to-moderate speeds. | Short trips (under 2 miles) at low speeds, including bicycle and pedestrian trips. Longer trips accessing the collector and arterial network. |
| **Mobility versus Land Access** | Emphasis is on mobility for longer trips rather than direct land access. Little or no direct land access within the urbanized area. | Emphasis on mobility for longer trips rather than on direct land access. Direct land access limited to concentrations of activity including regional job concentrations, local centers, freight terminals, and neighborhoods. | Equal emphasis on mobility and land access. Direct land access predominantly to development concentrations. | Emphasis on land access, not on mobility. Direct land access predominantly to residential land uses. |
| **System Mileage** | 5-10% | 10-15% | 5-15% | 60-75% |

## Table 1. Metropolitan Council Roadway Functional Classifications (continued)

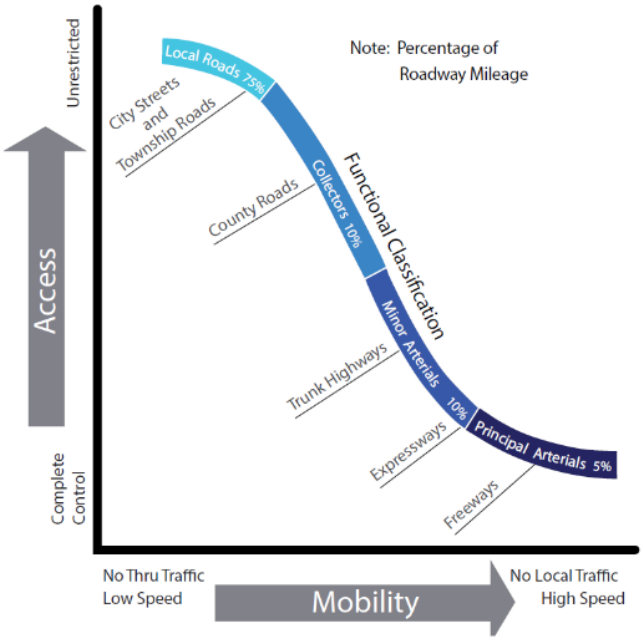
| Criteria | Principal Arterial | Minor Arterial and Other Arterial | Collector | Local Street |
|---|---|---|---|---|
| **Percent of Vehicle Miles Traveled** | 15-35% | 15-25% | 10-25% | 10-25% |
| **Intersections** | Grade separated desirable where appropriate. At a minimum, high-capacity controlled at-grade intersections. | Traffic signals, roundabouts, and cross-street stops. | Four-way stops and some traffic signals. | As required. |
| **Parking** | None | Restricted as necessary. | Restricted as necessary. | Permitted as necessary. |
| **Large Trucks** | No restrictions. | Candidates for local truck network, large trucks restricted, as necessary. | May be candidates for local truck network, large trucks restricted, as necessary. | Permitted as necessary. |
| **Management Tools** | Ramp metering, preferential treatment for transit, access control, median barriers, traffic signal progression, staging of reconstruction, and intersection spacing. | Traffic signal progression and spacing, land access management and control, preferential treatment for transit. | Number of lanes, traffic signal timing, land access management. | Intersection control, cul-de-sacs, and diverters. |
| **Typical Average Daily Traffic Volumes** | 15,000 to 100,000+ | 5,000 to 30,000+ | 1,000 to 15,000+ | Less than 1,000 |
| **Posted Speed Limit** | 40 to 65 mph | 30 to 45 mph | 30 to 40 mph | Max. 30 mph |
| **Right-of-Way** | 100 to 300 feet | 60 to 150 feet | 60 to 100 feet | 50 to 80 feet |
| **Transit Accommodations** | Transit advantages that provide priority access and reliable movement for transit in peak periods where possible and needed. | Transit advantages for reliable movement where needed. | Regular-route buses, transit advantages for reliable movement, where needed. | Normally used as bus routes only in nonresidential areas. |
| **Bicycle and Pedestrian Accommodations** | On facilities that cross or are parallel to the principal arterial with greater emphasis along transit routes and in activity centers. Crossings should be spaced to allow for adequate crossing opportunities. | On facilities that cross or are parallel to the minor arterial with greater emphasis along transit routes and in activity centers. Crossings should be spaced to allow for adequate crossing opportunities. | On, along, or crossing the collector with higher emphasis along transit routes and in activity centers. Crossings should be spaced for adequate crossing opportunities. | On, along, or crossing the local road. |

Source: Metropolitan Council, 2040 Transportation Policy Plan, Adopted January 14, 2015.

The intent of the functional classification system is to create a hierarchy of roads that collect and distribute traffic from neighborhoods to the metropolitan highway system. Roadways with a higher functional classification, such as arterials, generally provide for longer trips, have more mobility, have limited access, and connect to larger economic and industrial centers. Roadways with a lower functional classification, such as collectors and local streets, generally provide for shorter trips, have lower mobility, have more access, and connect to higher functioning roadways. A balance of all functions of roadways is important for effective operation of the City's transportation network.

The roadway functional classification is based on several factors, including:

- Trip characteristics such as length of route, type and size of activity centers, and route continuity;
- Access to regional population centers, activity centers, and major traffic generators;
- Proportional balance of access, ease of approaching or entering a location;
- Proportional balance of mobility and ability to move without restrictions;
- Continuity between travel destinations;
- Relationship with neighboring land uses;
- Eligibility for State and Federal funding.




The existing roadway functional classification within the City of Dayton is shown in **Figure 2A**. The functional classification system represents the system that has been approved by the Metropolitan Council and is in place at the writing of this document.

Further information on Metropolitan Council functional classification criteria can be found in Appendix D of the Council's 2040 Transportation Policy Plan.

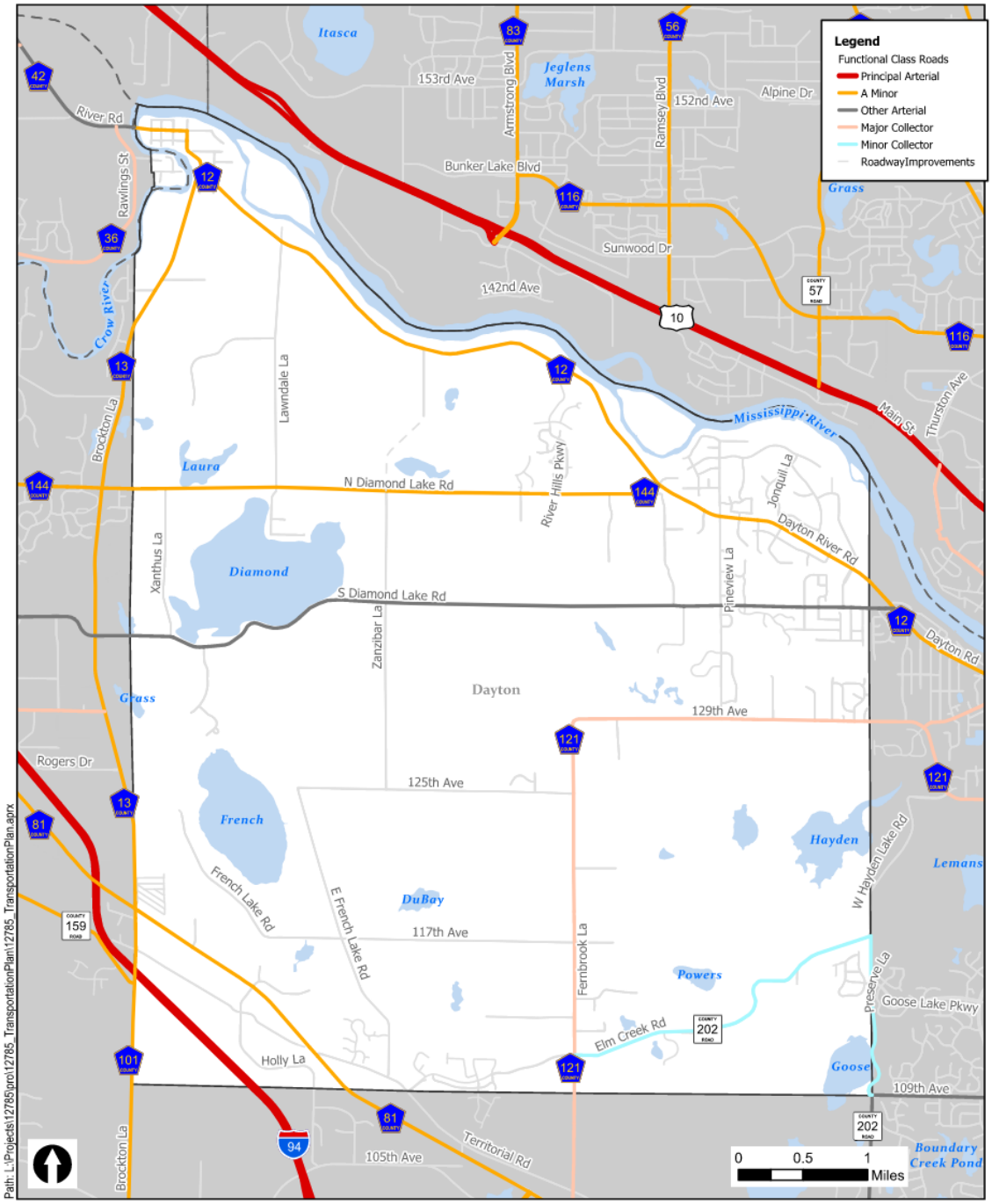
## Principal Arterials

Principal arterials are part of the Metropolitan Highway System and provide high-speed mobility between the Twin Cities and important locations outside the metropolitan area. They are also intended to connect the central business districts of the Twin Cities along with other regional business concentrations in the metropolitan area. Principal arterials are generally constructed as limited access freeways in urban areas and may also be constructed as multiple-lane divided highways.

## A-Minor Arterials and Other Arterials

Minor arterials also emphasize mobility over land access, serving to connect large cities with adjacent communities and the metropolitan highway system. Major business concentrations and other important traffic generators are usually located on minor arterial roadways. In urban areas, one- to two-mile spacing of minor arterials is considered appropriate, and most locations within the City of Dayton are within one mile of a minor arterial.

## Figure 3A. Existing Functional Classification




**Existing Functional Class**
Dayton Transportation Plan Update
City of Dayton

**Figure 2A**

A-Minor arterials are defined by the Metropolitan Council as roadways of regional importance as they serve to relieve, expand or complement the principal arterial system. Consistent with Metropolitan Council guidelines, A-Minor arterials are categorized into four types and are described in further detail below:

- Relievers – Roadways that provide direct relief for metropolitan highway traffic.
- Expanders – Roadways that provide a way to make connections between urban areas outside the I-494/I-694 beltway.
- Connectors – Roadways that provide safe connections to communities at the edge of the urbanized area and in rural areas.
- Augmenters – Roadways that enhance principal arterials within the I-494/I-694 beltway.

A well-planned and adequately designed system of principal and minor arterials will allow the City of Dayton's overall roadway network to function properly and discourage through traffic from travelling on residential streets. Volumes on principal and minor arterial roadways are expected to be greater than volumes on collector or local roadways.

### Collectors

Collectors are designed to serve shorter trips that occur within the City and to provide access from neighborhoods to other collector roadways and the arterial system. Collector roadways are expected to carry less traffic than arterial roadways and intended to provide access to some local properties. Collectors are typically categorized as major and minor, with major collectors linking other collectors to minor arterials, and minor collectors linking local streets to other collectors or minor arterials.

### Local Streets

Local streets provide access to adjacent properties and neighborhoods. Local streets are generally low speed and designed to discourage through traffic. All remaining roadways in the City of Dayton that were not listed under the previous functional classifications fall under the local street designation.

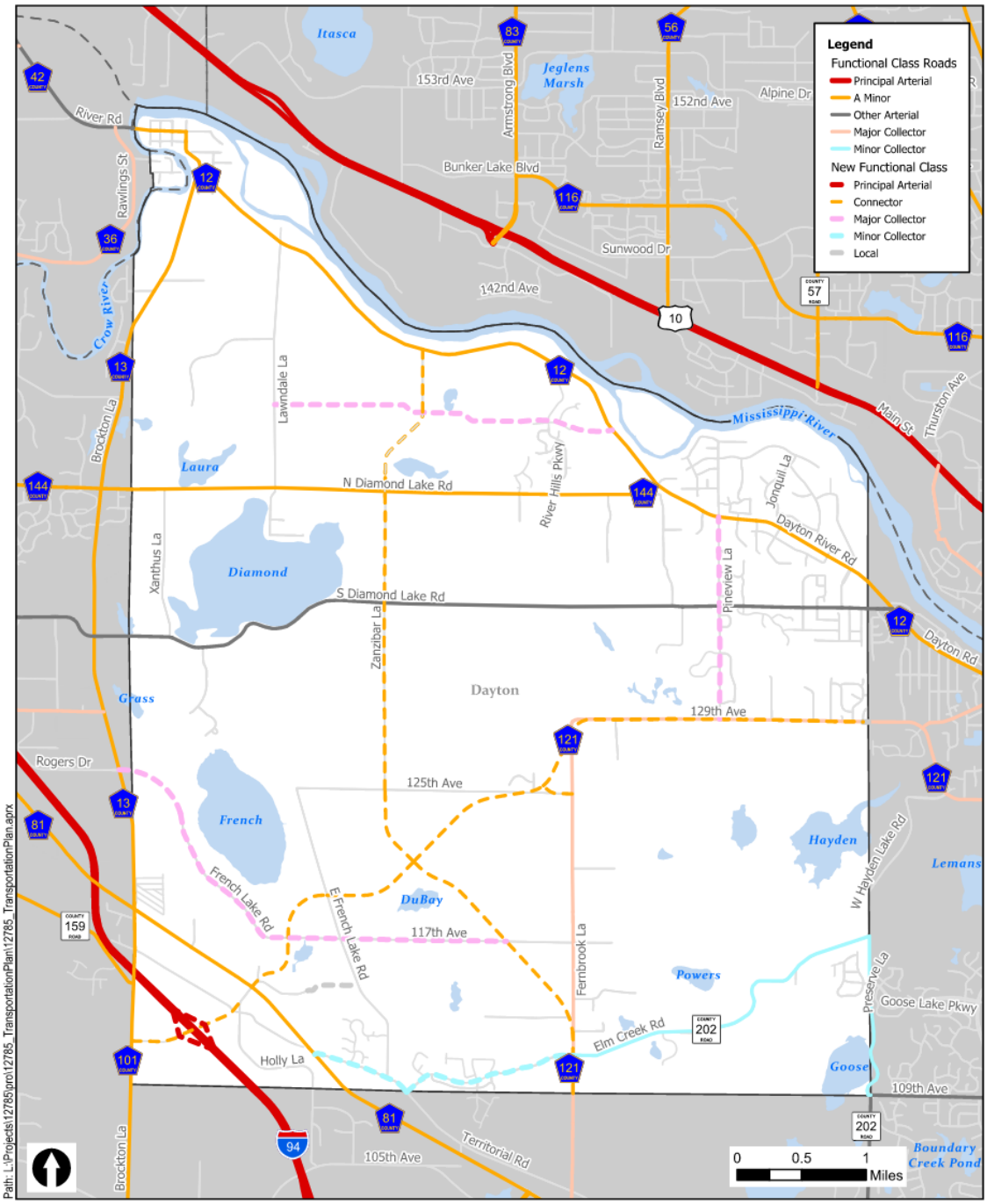
### Proposed Functional Classification Changes

The future functional classification within the roadway system is important for determining access and long-term land use. Occasionally, due to growth and development, changes in travel patterns or construction of new facilities, the functional classification needs to be adjusted to reflect changes in the way certain roadways are utilized. Future functional classification changes as indicated in the Hennepin County 2040 Transportation Plan within the City of Dayton are listed below (major collector shifting to an A-minor arterial):

- County Road 121 (Fernbrook Lane) – South Dayton Border to East Dayton Border
- Zanzibar Lane extension
- Dayton Parkway

There are no additional recommended functional classification changes to the principal or A-minor arterial systems as part of this plan. There are a couple of major and minor collector recommended changes to the functional classification system as well. These recommended changes, along with all others, are shown in **Figure 2B.**

## Figure 4B. Future Functional Classification




**Future Functional Class**
Dayton Transportation Plan Update
City of Dayton

**Figure 2B**

## Programmed and Planned Improvements

**Table 2** identifies programmed roadway improvements from the City of Dayton's Capital Improvement Program (CIP), the Hennepin County CIP and MnDOT's 10-Year Statewide Capital Highway Improvement Plan (CHIP). Programmed improvements have advanced through the project funding programming process and have funds committed to the improvement in a designated year. Planned projects have also been identified that can reasonably be considered within the planning horizon. These planned projects have been formally studied and/or included in a transportation plan, but typically no commitments to fund the improvement have been made. The anticipated timeframe is also identified within the table, along with the responsible jurisdictional agency.

Note that identification of the jurisdictional agency is not binding but a planning-level understanding of the desired jurisdictional alignment currently. Much discussion and coordination are needed amongst the jurisdictions involved for the resultant alignment to occur.

### MnPASS System Study

In 2018 MnDOT developed the MnPASS System Study Phase 3 to assist in updating the MnPASS system vision and prioritized list of MnPASS corridors in the Metropolitan Council's 2040 TPP. The MnPASS System Study Phase 3 builds on the first MnPASS System Study (2005) and MnPASS System Study Phase 2 (2010). The system Scenario 3 represents the optimal MnPASS system evaluated in the study and identifies I-94 (from TH 101 to I-494) as a potential future MnPASS corridor in the City of Dayton.

### Coordination with Other Jurisdictions

The City of Dayton strives to coordinate with adjacent jurisdictions, such as the Cities of Rogers, Corcoran, Maple Grove, Brooklyn Park, Champlin, Coon Rapids, Ramsey, Otsego, Elk River, as well as Hennepin County, Sherburne County, Wright County and MnDOT when planning future transportation improvements. Coordination among jurisdictions will provide opportunities for collaboration that could benefit all agencies, City residents, and the public. Additionally, effective coordination may result in financial and time savings through economies of scale, and potentially reducing construction impacts to residents.

**Table 2. List of Programmed and Planned Improvements**

| Roadway | Extents | | Timeframe | Jurisdiction |
|---|---|---|---|---|
| **I-94 Interchange** | Interchange Area | | 2020 | Dayton/MnDOT |
| **Dayton Parkway** | Brockton Lane (CSAH 101) to CSAH 81 | 4-Lane Construction | 2020 | Dayton/MnDOT |
| **Dayton Parkway** | CSAH 81 to 117th Avenue | 4-Lane Construction | 2025 | Dayton/ Hennepin Co |
| **113th Avenue** | 113th Avenue existing to East French Lake Road | 3-Lane Construction | 2025 | Dayton |
| **French Lake Road** | Rogers Drive to Dayton Parkway | 2-Lane Construction | 2025 | Dayton |
| **Pioneer Parkway** | Lawndale Lane to Dayton River Road (CR12) | 2-Lane Construction | 2030* | Dayton |
| **Dayton Parkway** | 117th Avenue to Fernbrook Lane Extension | 4-Lane Construction | 2035 | Dayton/ Hennepin Co |
| **Fernbrook Lane** | Fernbrook Lane existing to 125th Avenue | 4-Lane Construction | 2035 | Dayton/ Hennepin Co |
| **Zanzibar Lane** | 125th Avenue to North Diamond Lake Road | Roadway Extension | 2040 | Dayton/ Hennepin Co |
| **Dayton Parkway** | Fernbrook Lane Extension to 129th Avenue | 4-Lane Construction | 2040** | Dayton/ Hennepin Co |
| **Dayton Parkway** | 129th Avenue to East City Limits | 4-Lane Construction | 2040** | Dayton/ Hennepin Co |
| **Zanzibar Lane** | North Diamond Lake Road to Vicksburg Lane | Roadway Extension | 2040 | Dayton/ Hennepin Co |
| **Vicksburg Lane** | Zanzibar Lane Extension to Dayton River Road (CR12) | 3-Lane Reconstruction | 2040 | Dayton/ Hennepin Co |
| **Pineview Lane** | 129th Avenue to Dayton River Road | 4-Lane Construction | 2040 | Dayton |

* Development driven for roadway completion

** Construction of this roadway network is highly dependent on development growth and jurisdictional coordination

## 2040 Travel Demand Forecasts

The pattern and intensity of travel within the City of Dayton is directly related to the distribution and magnitude of households, population, and employment within the community, in neighboring communities and in the overall region.

Land use, travel patterns, population, and employment change over time affect the efficiency and adequacy of the transportation network. Expected changes in the City's land use pattern, households, population, and employment will be the basis for estimating future travel demand within the City of Dayton.

## Land Use

The City of Dayton has a community designation of emerging suburban edge located within the Metropolitan Council's urban service area. Existing land use within the City of Dayton is identified in the City's Comprehensive Plan.

As the metropolitan area moves forward with a greater focus on multimodal transportation, new development and redevelopment in Dayton will be constrained by the existing and future transportation system. The Transportation Plan is designed to assist the City in developing a transportation system that supports land use and provides safe and efficient movement of people and goods throughout the City.

### Socioeconomic Data

The Metropolitan Council prepared estimates for the overall regional growth in terms of population, households, and employment for the years 2020, 2030, and 2040, allocating an appropriate portion to each municipality. Historic and estimated future population, households, and employment levels for the City of Dayton are shown in **Table 3**.

### Table 3. Summary of Socioeconomic Data for Dayton

| Year | Population | Households | Employment |
|---|---|---|---|
| **2020** | 5,900 | 2,200 | 2,000 |
| **2030** | 7,900 | 3,200 | 2,490 |
| **2040** | 10,400 | 4,400 | 3,000 |

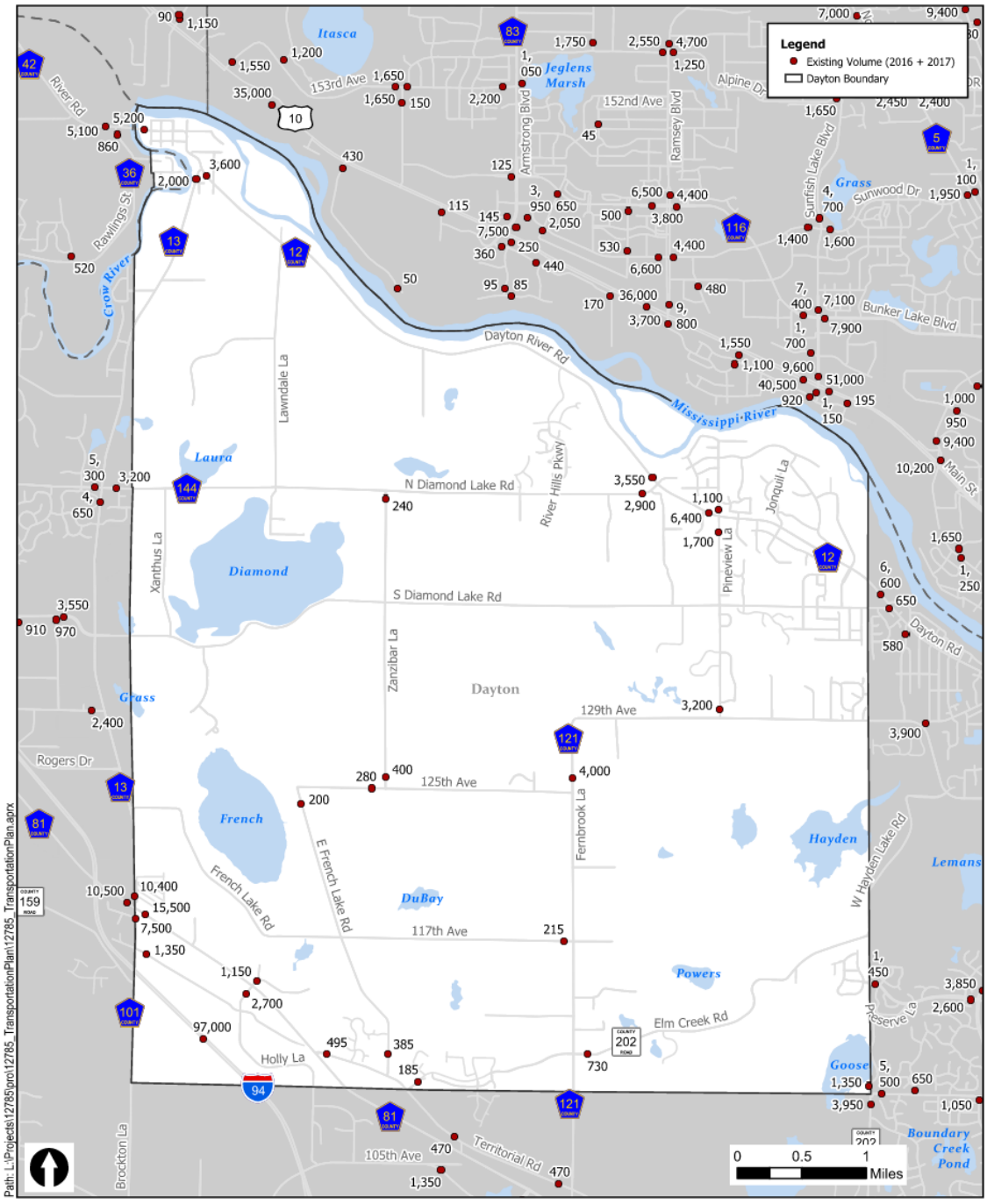
Source: Metropolitan Council, 2018.

Dayton, with the assistance of the Metropolitan Council, has estimated existing and future population, households, and employment levels for sub-areas within the City known as Traffic Analysis Zones (TAZs). This information was required to complete the traffic forecasting procedures used to estimate future roadway traffic volumes. A map identifying the location of each TAZ within the City and a table summarizing the allocation of socioeconomic data to each TAZ for the year 2020, 2030, and 2040 are provided in **Appendix A**.

### Forecast 2040 Traffic Volumes

Estimated 2040 traffic forecasts for the City of Dayton were prepared using the future population, households, and employment data outlined above. These forecasts are an essential analytical tool to determine the adequacy of the roadway system to handle future development, as anticipated by the City of Dayton and the Metropolitan Council. In addition to the programmed and planned roadway projects identified in **Table 2**, the traffic forecast model accounts for future planned improvements that are in the Metropolitan Council's 2040 TPP for regional highways outside Dayton. The existing traffic volumes are shown in **Figure 3** and results of the 2040 traffic forecasts are shown in **Figure 4.**

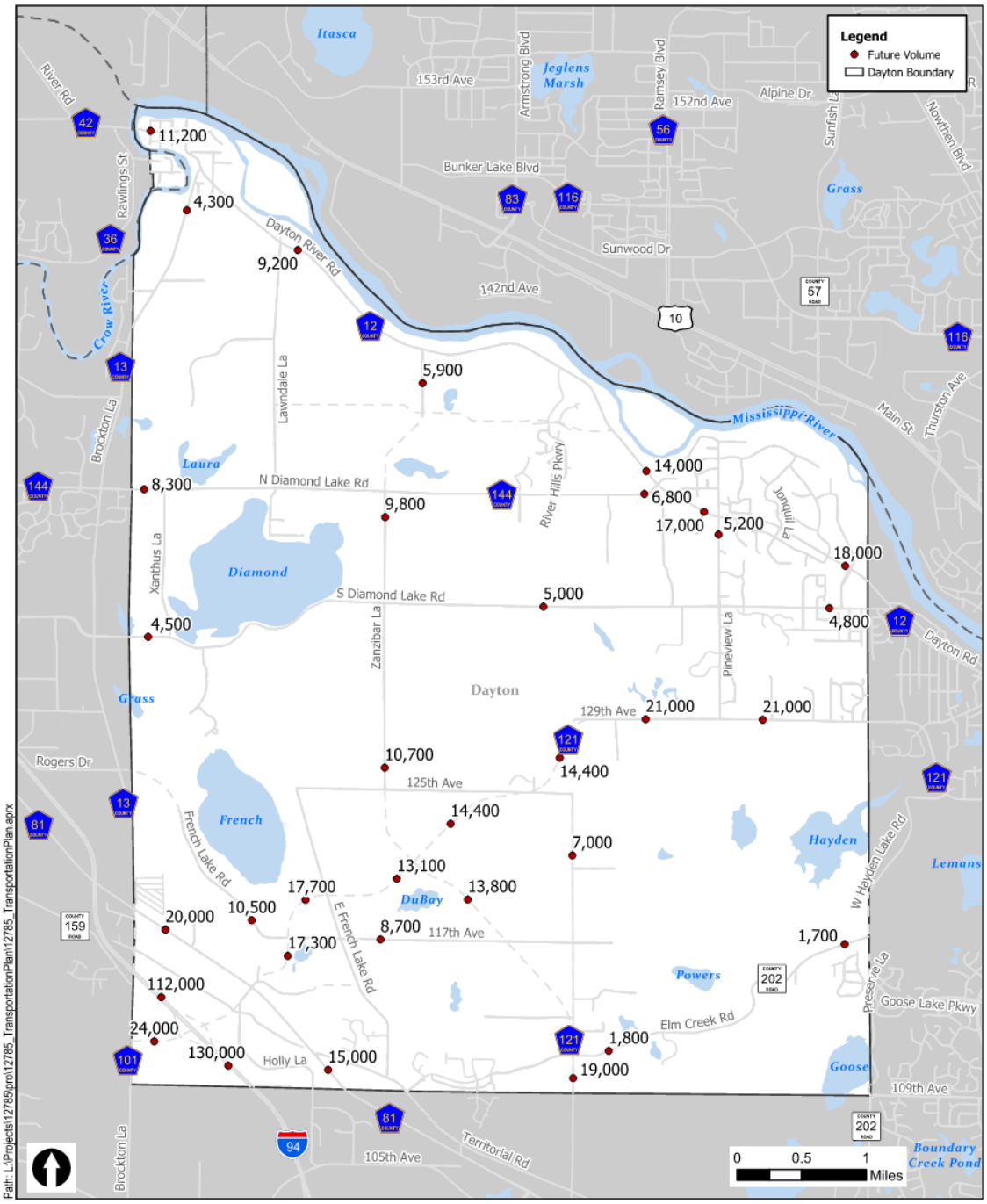
## Figure 5. Existing Traffic Volumes




**Existing Traffic Volumes**
Dayton Transportation Plan Update
City of Dayton

**Figure 3**

## Figure 6. Future (2040) Forecast Traffic Volumes




**Future (2040) Forecast Traffic Volumes** — **Figure 4**

Dayton Transportation Plan Update

City of Dayton

## Existing and Anticipated System Deficiencies

Congestion on the roadway system is judged to exist when the ratio of traffic volume to roadway capacity, or Volume Capacity (v/c) ratio, approaches or exceeds 1.00. The v/c ratio provides a measurement of congestion along a stretch of roadway and can help determine where roadway improvements, access management, transit services, or travel demand management strategies could be implemented. It does not, however, provide a basis for determining specific intersection improvements.

### Planning-Level Capacity Thresholds

**Table 4** provides a method to evaluate roadway capacity. For each facility type, the typical planning-level annual AADT capacity ranges and maximum AADT volume ranges are indicated. These volume ranges are based on guidance from the Highway Capacity Manual, discussions with the Metropolitan Council and professional engineering judgment. A range is used since the maximum capacity of any roadway design (v/c = 1) is a theoretical measure that can be affected by its functional classification, traffic peaking characteristics, access spacing, speed, and other roadway characteristics. Further, to define a facility's "daily capacity," it is recommended that the top of each facility type's volume range be used. This allows for capacity improvements that can be achieved by roadway performance enhancements. This planning-level assessment does not supersede the potential need for detailed operational analysis; nor does it preclude the city from making decisions with respect to the transportation system that are more context based that this planning-level may accommodate.

### Table 4. Planning-Level Roadway Capacities by Facility Type

| Facility Type | Planning Level Daily Capacity Ranges (AADT) | Under Capacity | | | Approaching Capacity | | Over Capacity |
|---|---|---|---|---|---|---|---|
| | | LOS | A | B | C | D | E | F |
| | | V/C | 0.2 | 0.4 | 0.6 | 0.85 | 1.0 | >1.0 |
| Two-lane undivided urban | 8,000 – 10,000 | 2,000 | | 4,000 | 6,000 | 8,500 | 10,000 | > 10,000 |
| Two-lane undivided rural | 14,000 – 15,000 | 3,000 | | 6,000 | 9,000 | 12,750 | 15,000 | > 15,000 |
| Two-lane divided urban (Three-lane) | 14,000 – 17,000 | 3,400 | | 6,800 | 10,200 | 14,450 | 17,000 | > 17,000 |
| Four-lane undivided urban | 18,000 – 22,000 | 4,400 | | 8,800 | 13,200 | 18,700 | 22,000 | > 22,000 |
| Four-lane undivided rural | 24,000 – 28,000 | 5,600 | | 11,200 | 16,800 | 23,800 | 28,000 | > 28,000 |
| Four-lane divided urban (Five-lane) | 28,000 – 32,000 | 6,400 | | 12,800 | 19,200 | 27,200 | 32,000 | > 32,000 |
| Four-lane divided rural | 35,000 – 38,000 | 7,600 | | 15,200 | 22,800 | 32,300 | 38,000 | > 38,000 |
| Four-lane expressway rural | 45,000 – 55,000 | 9,000 | | 18,000 | 27,000 | 38,250 | 45,000 | > 45,000 |
| Four-lane freeway | 60,000 – 80,000 | 16,000 | | 32,000 | 48,000 | 68,000 | 80,000 | > 80,000 |
| Six-lane freeway | 90,000 – 120,000 | 24,000 | | 48,000 | 72,000 | 102,000 | 120,000 | > 120,000 |

### Level of Service

Level of Service (LOS), as related to highways and local roadways, categorizes the different operating conditions that occur on a lane or roadway when accommodating various traffic volumes. It is a qualitative measure of the effect of traffic flow factors such as speed and travel time, interruption, ability to maneuver, driver comfort and convenience, and is an indirect measure of safety and operating costs. LOS is expressed as levels "A" through "F," with level "A" being a condition of free traffic flow with little or no restriction in speed or maneuverability caused by the presence of other vehicles, and level "F" being a forced-flow condition at low speed with many stoppages resulting in the roadway acting as a storage area. Further definition of LOS is described in **Table 5**.

### Table 5. Level of Service Definitions

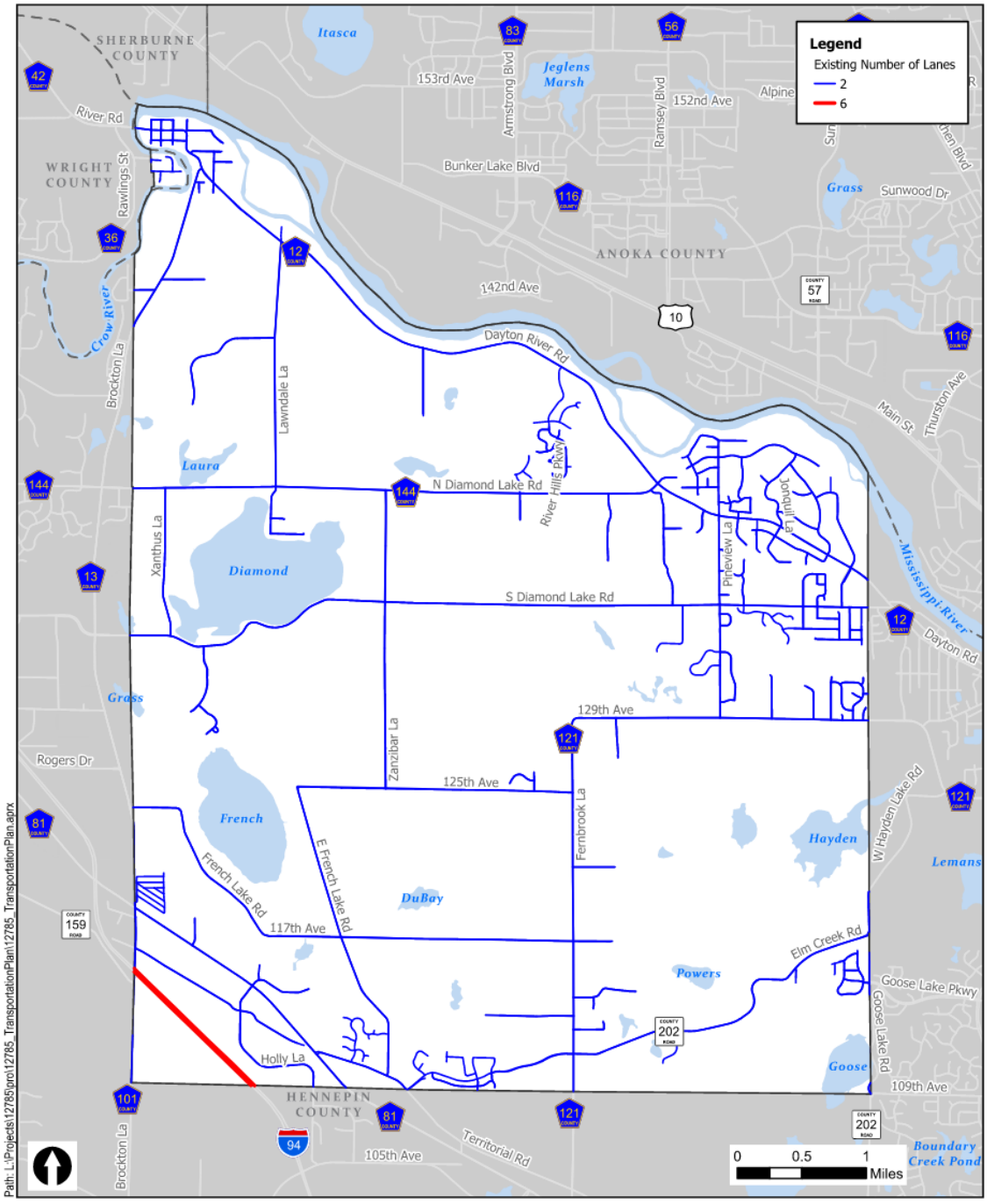
| Level of Service (LOS) | Traffic Flow | Volume/Capacity Ratio | Description |
|---|---|---|---|
| **A** | Free Flow Below Capacity | 0.20 | Low volumes and no delays. |
| **B** | Stable Flow Below Capacity | 0.40 | Low volumes and speed dictated by travel conditions. |
| **C** | Stable Flow Below Capacity | 0.60 | Speeds and maneuverability closely controlled due to higher volumes. |
| **D** | Restricted Flow Near Capacity | 0.85 | Higher density traffic restricts maneuverability and volumes approaching capacity. |
| **E** | Unstable Flow Approaching Capacity | 1.00 | Low speeds, considerable delays, and volumes at or slightly over capacity. |
| **F** | Forced Flow Over Capacity | >1.00 | Very low speeds, volumes exceed capacity, and long delays with stop-and-go traffic. |

## Existing and Year 2040 Capacity Deficiencies

The existing and year 2040 traffic volumes were analyzed against the existing and future number of lanes (see **Figure 5** and **Figure 6**). The results of this analysis were mapped to identify roadways that currently exhibit capacity deficiencies (see **Figure 7** and **Figure 8**).

The methodology described above is a planning-level analysis that uses average daily traffic volumes and is not appropriate for all traffic conditions. For example, traffic conditions that do not fit the average daily traffic criteria (e.g., weekend travel, holiday travel, special events, etc.) are likely to produce different levels of congestion. Additionally, factors such as the amount of access and roadway geometrics may influence capacity. Roadway segments are defined as overcapacity if the volume-to-capacity ratio is at or above 1.0, which signifies that a segment of road has observed volumes which exceed its design capacity. Roadway segments are defined as near capacity if the volume-to-capacity ratio is at or above 0.85.

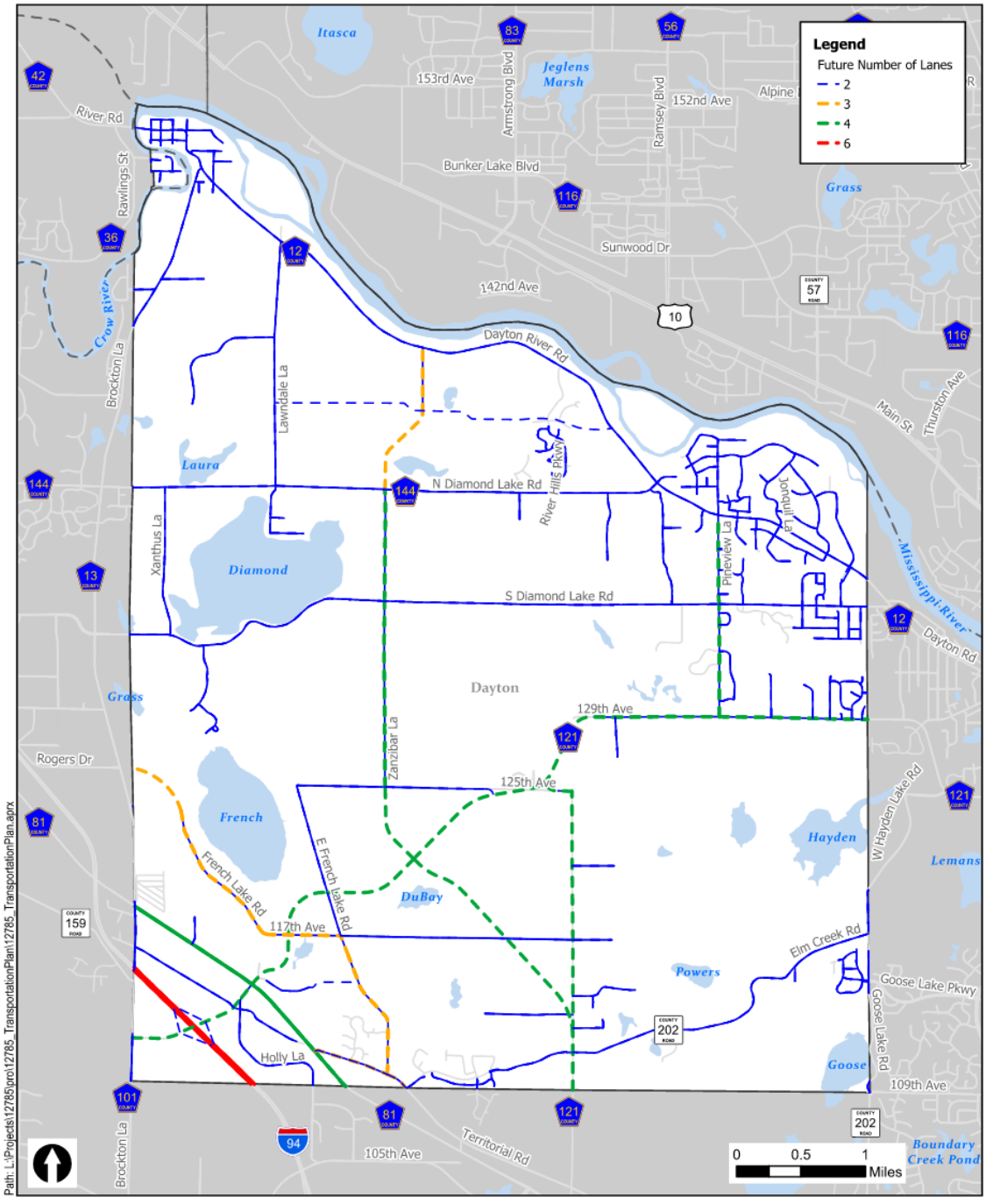
## Figure 7. Existing Number of Lanes




**Existing Number of Lanes**
Dayton Transportation Plan Update
City of Dayton

**Figure 5**

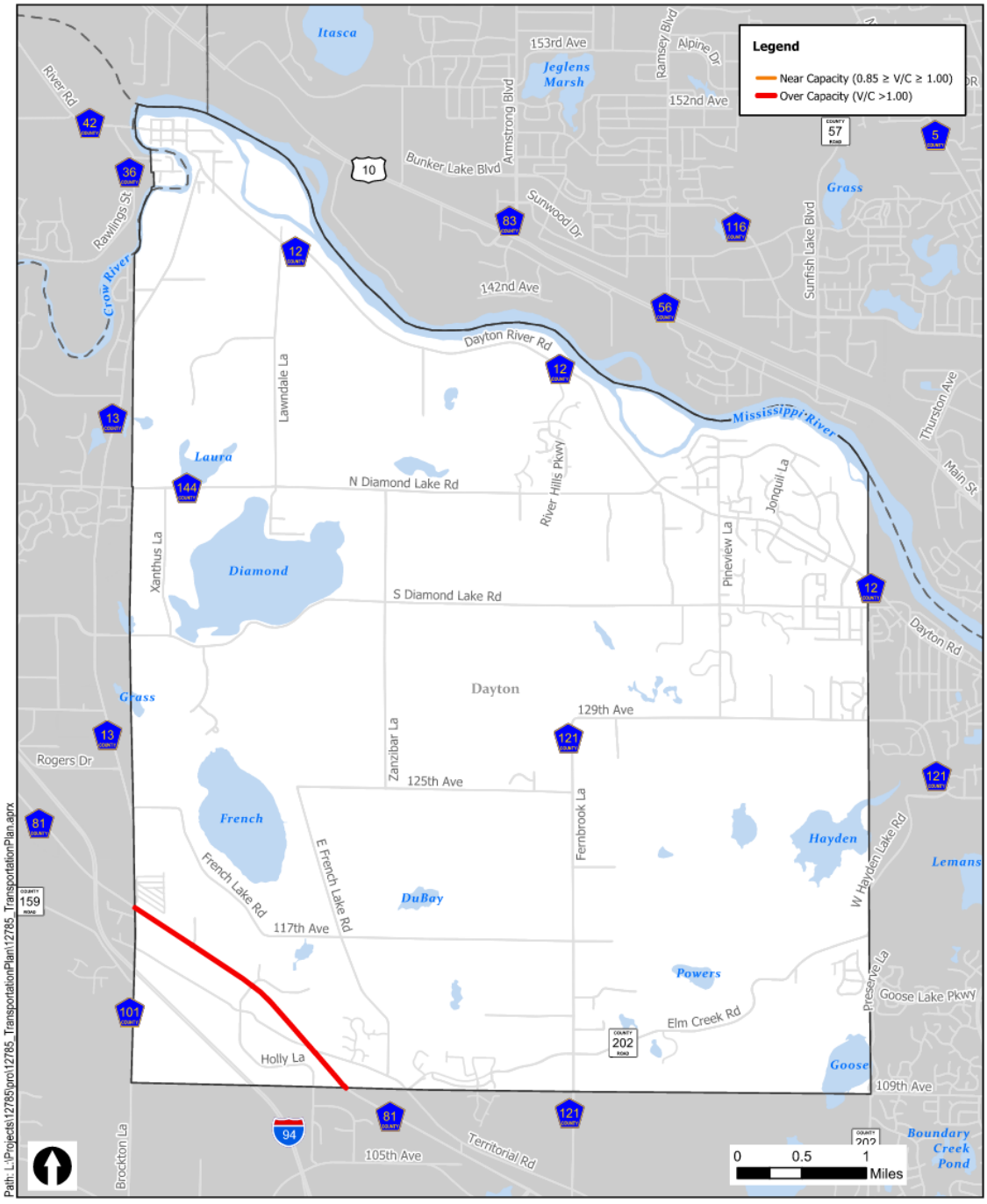
## Figure 8. Future Number of Lanes




**Future Number of Lanes**
Dayton Transportation Plan Update
City of Dayton

**Figure 6**

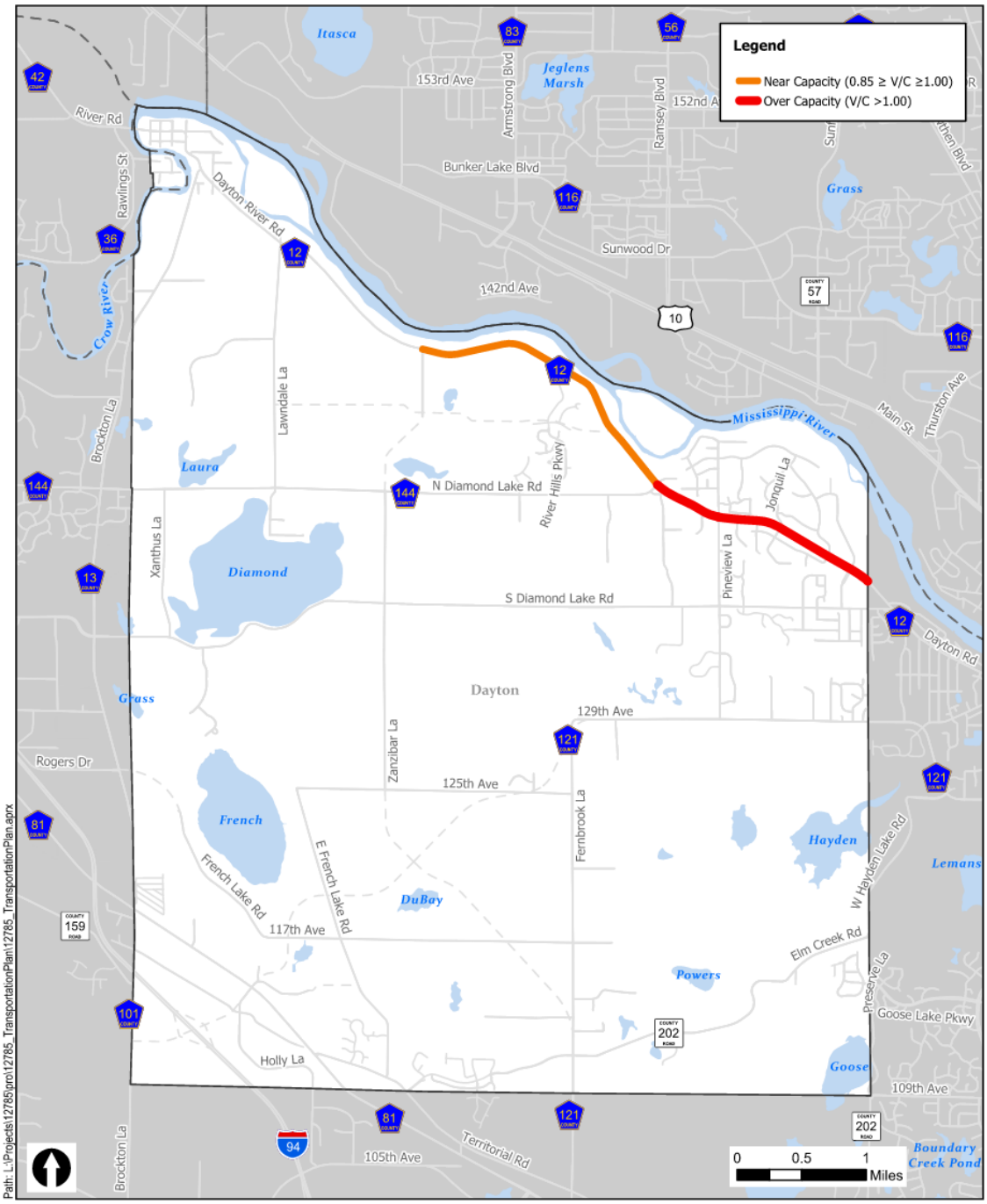
## Figure 9. Existing Capacity Deficiencies




**Existing Capacity Deficiencies**
Dayton Transportation Plan Update
City of Dayton

**Figure 7**

## Figure 10. Future Forecasted (2040) Capacity Deficiencies




**Future Forecasted (2040) Capacity Deficiencies** — **Figure 8**

Dayton Transportation Plan Update

City of Dayton

## Roadway Safety

Dayton reviewed safety as part of the transportation system assessment. To assist in the evaluation of crashes, MnDOT maintains a database of crash records throughout the State of Minnesota. These records identify the location, severity and circumstances associated with each crash. As shown in **Table 6**, this dataset was reviewed to identify the quantity, location, and severity of crashes in the City of Dayton for years 2011 to 2015. This timeframe was chosen due to data availability; 2016-2018 data is not readily available in the Minnesota Crash Mapping Analysis Tool (MnCMAT).

### Table 6. Motor Vehicle Crashes in Dayton (2011 to 2015)

| Year | Fatal | Personal Injury Crashes | | | Property Damage | Total Crashes |
|---|---|---|---|---|---|---|
| | | Type A Incapacitating Injury | Type B Non-Incapacitating Injury | Type C Possible Injury | | |
| **2011** | 0 | 2 | 5 | 13 | 46 | 66 |
| **2012** | 0 | 1 | 7 | 7 | 46 | 61 |
| **2013** | 1 | 2 | 5 | 17 | 48 | 73 |
| **2014** | 0 | 3 | 11 | 6 | 59 | 79 |
| **2015** | 0 | 3 | 5 | 12 | 46 | 66 |
| **Totals** | 1 | 11 | 33 | 55 | 245 | 345 |

These crashes were generally widely distributed throughout the City with most locations accounting for only one or two incidents, suggesting that a crash at that location was a random event. However, several of these crashes were concentrated at a limited number of locations. The 10 intersection locations with the highest frequency of crashes between 2011 and 2015 are listed in **Table 7** and illustrated in **Figure 9**. These intersections were also evaluated for the critical index using MnDOT's crash rate methodology, also indicated in **Table 7**. Following MnDOT guidelines, a critical index of 1.00 or less indicates performance within statewide trends, and a critical index above 1.00 indicates that the intersection operates outside the normally expected range.

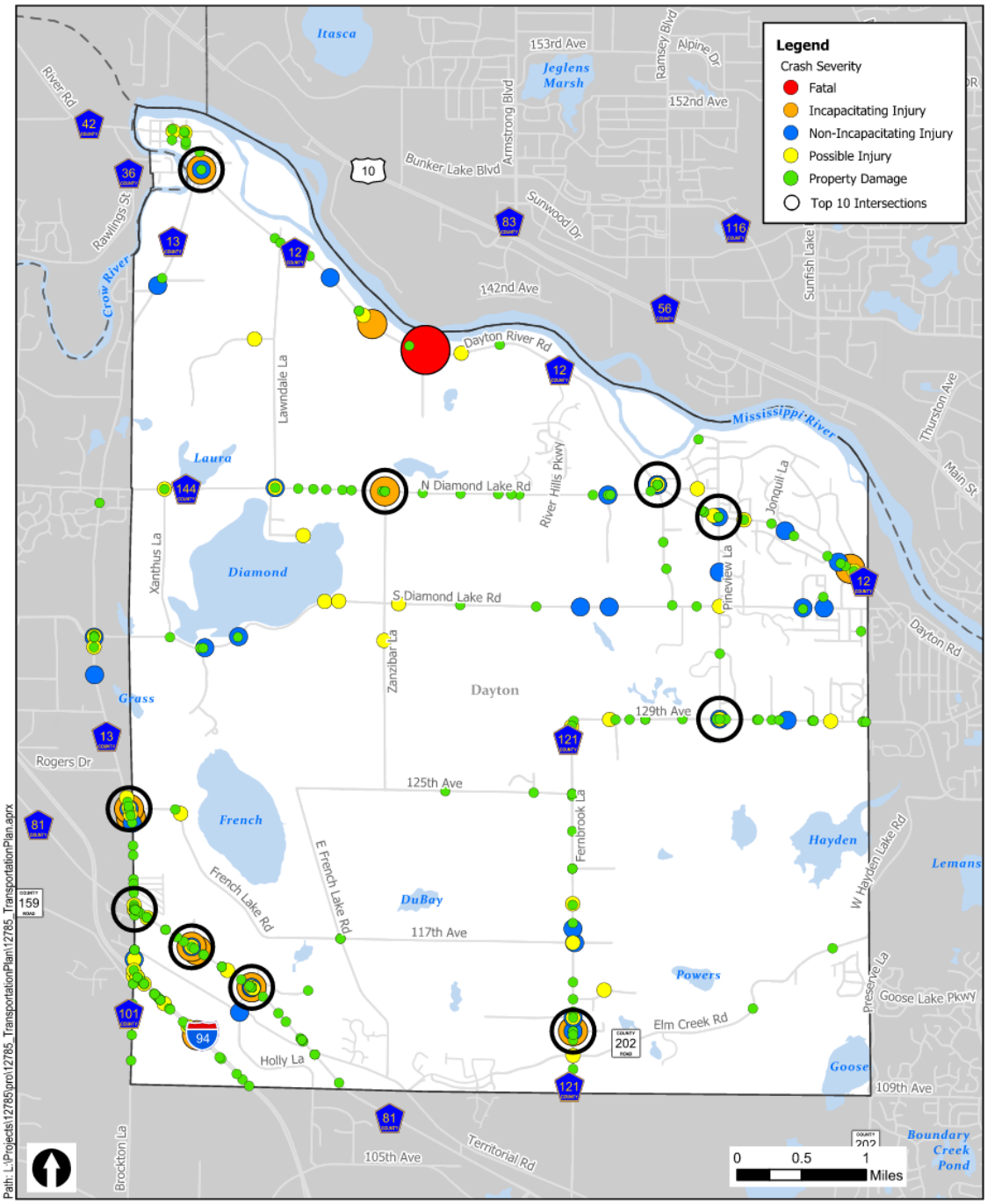
### Critical Index

The critical index is the ratio of the observed crash rate to the critical crash rate. Critical indexes above 1.00 indicate there is likely an existing safety concern at the intersection. Additional analysis and observation of the intersection should be completed to determine the cause of the high critical index. Based on this conclusion, further investigation is recommended at the crash locations with a critical index above 1.00 as identified in **Table 7** to determine the types of crashes occurring and identify mitigation approaches to increase safety.

**Table 7. Top 10 Intersection Crash Locations in Dayton (2011 to 2015)**

| Intersection | Severity | | | | | Traffic Control | Critical Index | Severity Index |
|---|---|---|---|---|---|---|---|---|
| | Fatal | Type A | Type B | Type C | Property Damage | | | |
| **1.** Dayton River Road / N Diamond Lake Road / 142nd Avenue N | 0 | 0 | 3 | 1 | 6 | Thru Stop | 1.20 | 0.00 |
| **2.** Holly Lane / CSAH 81 / 113th Avenue N | 0 | 1 | 2 | 5 | 13 | Signal | 0.86 | 0.87 |
| **3.** 129th Avenue N / Pineview Lane | 0 | 0 | 1 | 2 | 3 | Thru Stop | 0.83 | 0.00 |
| **4.** N Diamond Lake Road / Zanzibar Lane | 0 | 1 | 0 | 0 | 3 | Thru Stop | 0.78 | 1.14 |
| **5.** Brockton Lane / CSAH 81 | 0 | 0 | 0 | 2 | 18 | Signal | 0.68 | 0.00 |
| **6.** CSAH 13 / 124th Avenue / Brockton Lane | 0 | 1 | 1 | 1 | 4 | Thru Stop | 0.63 | 0.78 |
| **7.** Fernbrook Lane / 112th Avenue N | 0 | 1 | 1 | 0 | 2 | Thru Stop | 0.51 | 0.94 |
| **8.** Dayton River Road / Brockton Lane | 0 | 1 | 1 | 0 | 1 | Thru Stop | 0.42 | 0.98 |
| **9.** CSAH 81 / Troy Lane | 0 | 1 | 1 | 2 | 2 | Thru Stop | 0.41 | 0.66 |
| **10.** Dayton River Road / Pineview Lane | 0 | 0 | 0 | 1 | 2 | Thru Stop | 0.33 | 0.00 |

## Figure 11. Crash Data (2011 to 2015)




**Crash Data (2011 to 2015)**
Dayton Transportation Plan Update
City of Dayton

**Figure 9**

As shown above, most crash hotspots occurred at thru-stop intersections within the City. The overwhelming crash types occurring at these intersections include: right turn into traffic, right angle, and left turn into traffic.

## Right-of-Way

Right-of-way (ROW) is a valuable public asset that needs to be protected and managed in a way that respects the intended function of the adjacent roadway, while serving the best interest of the public. The City of Dayton will likely construct new roadway segments to meet future capacity and connectivity demands due to the City's current and anticipated growth. Such improvements will require adequate ROW be maintained or secured. The City will coordinate with MnDOT and Hennepin County for ROW acquisition along County or State routes.

All planned and programmed improvements (**Table 2**) and recommended roadway improvements (**Figure 10**) will allow the minimum right-of-way requirements below in **Table 8**.

### Table 8. Dayton Right-of-Way Guidelines

| Functional Classification | Min. Roadway Width | ROW Widths[1, 2] |
|---|---|---|
| **Arterial Street** | 44 feet | 80 feet |
| **Collector Street** | 36 feet | 66 feet |
| **Commercial Street** | 36 feet | 60 feet |
| **Local Roadways** | 32 feet | 50 feet |

Note: [1] Due to certain development conditions or physical features of the site or highway, the City may require additional ROW width greater than shown in the guidelines. At intersections, ROW widths may be greater to accommodate additional geometric configurations such as signals, turn lanes, and roundabouts.
[2] For any parkway constructions or reconstruction projects, consult the parkway plan.

### Right-of-Way Preservation

When future expansion or realignment of a roadway is proposed, but cannot immediately be constructed, the City may consider ROW preservation strategies to reduce costs and maintain the feasibility of the proposed improvement. Several strategies may be implemented to preserve ROW for future construction, including advanced purchase, zoning and subdivision dedication techniques, official mapping, and corridor signing. Before implementing any ROW preservation programs, local agencies should consider the risks of proceeding with ROW preservation without environmental documentation, as MnDOT policy requires environmental documentation prior to purchase. If environmental documentation has not been completed, agencies risk preserving a corridor or parcel that has associated environmental issues.

## Direct Purchase

One way to preserve ROW is to purchase it. Unfortunately, agencies rarely have the necessary funds to purchase ROW in advance, and the public benefit of purchasing ROW is not realized until a roadway or transportation facility is constructed. In most cases, local jurisdictions utilize various corridor preservation methods prior to roadway construction and then purchase the ROW, if it is not dedicated, at the time of design and construction.

## Planning and Zoning Authority

Local agencies have the authority to regulate existing and future land use. Under this authority, agencies have several tools for preserving right-of-way for transportation projects. These tools include:

- Zoning – If the property has a very low-density zoning classification, local agencies should try to maintain its existing zoning classification. A low zoning classification limits the risk for significant development and can help preserve land for potential ROW until funding becomes available for roadway construction.
- Platting and Subdivision Regulations – Local platting and subdivision regulations give local agencies authority to consider future roadway alignments during the platting process since most properties must be platted before development. The City of Dayton can use their authority to regulate land development to influence plat configuration and the location of proposed roadways. In most instances, planning and engineering staff work with developers to formulate a plat that meets development objectives and conforms to a long-term community vision and plans. Most local agencies require ROW dedication as part of the platting and subdivision process.
- Official Mapping – A final strategy to preserve ROW is to adopt an Official Map. An Official Map is developed by the local governmental unit and identifies the centerline and ROW needed for a future roadway. The local agency then holds a public hearing showing the location of the future roadway and incorporates the Official Map into its thoroughfare or community facilities plan. The mapping process allows agencies to control proposed development within an identified area, and to influence development on adjacent parcels. However, if a directly affected property owner requests to develop property, agencies have six months to initiate acquisition and purchase of the property to prevent its development. If the property is not purchased, the owner can develop it in conformance with current zoning and subdivision regulations. As a result, this process should only be used for preserving key corridors in areas with significant growth pressures.

## Corridor Signing Program

In addition to land use regulations, some jurisdictions have used a corridor signing program to identify arterial roadways that are planned for expansion projects. This signage program notifies residents and potential developers that the roadway is planned to be upgraded or a new roadway is planned to be constructed. This often streamlines negotiations with residents and developers since they have been given advanced notice of major roadway expansion projects. Further, this advanced information aids developers in planning coordinated land uses and access management measures into their subdivisions. Signs are generally placed along section line roads on the urban fringe near the City limits or within a City's extraterritorial expansion area.

## Access Management

Access management is an important aspect of providing a safe and efficient roadway network. Control of access to roadways, both in terms of cross-street spacing and driveway placement, is a critical means of preserving or enhancing the efficient operation of the roadway system and improving safety by reducing crash exposure. Access control guidelines are used to preserve the public investment in the roadway system and to give direction to developers for plan preparation. The guidelines are intended to balance the public interest in mobility with the property owners interest in access. Access refers to providing roadway access to properties and is needed at both ends of a trip. Mobility is the ability to get from one place to another freely or easily. Most roadways serve both functions to some degree based on their functional classification. Effective control of driveway access on the entire roadway system requires the cooperation of City, County, and State officials.

MnDOT has developed a policy on access management and guidelines for access spacing. MnDOT's Highway Access Category System and Spacing Guidelines can be found at:
https://www.dot.state.mn.us/accessmanagement/resources.html

### Access to Principal Arterials

The City of Dayton should follow MnDOT guidelines for access to principal arterials. These guidelines recommend limiting cross-street access to one-half mile spacing within urbanized areas, with one- to two-mile spacing being optimal. No new driveway access is permitted to principal arterials.

### Access to Minor Arterials

The City of Dayton strives to meet Hennepin County guidelines for access to the minor arterial system. These guidelines generally call for one-quarter mile spacing of all access points such as cross streets and driveways.

### Driveway Access on City Streets (Collectors and Local Roads)

Driveways contribute to crashes and reduced traffic flow on major streets in local communities as they add to the number of locations where vehicle conflicts can occur. Therefore, it is desirable to have guidelines in place that:

- Limit the number of driveways to those that are needed to safely accommodate the traffic generated by each development;
- Provide adequate spacing between driveways so conflicts and resulting crashes between vehicles maneuvering at adjacent driveways are avoided;
- Ensure proper design to accommodate driveway traffic and minimize vehicle conflicts without significantly reducing roadway capacity.

Occasionally topographic features of an individual site or the needs of a unique land use may require special access features in a proposed development. The City of Dayton may wish to withhold approval of such developments or site changes until a study has been made of the potential impacts on the affected roadways and the adequacy of the proposed access design determined. The City may require that the following steps be included in the traffic study for the site:

- Estimate site traffic generation and future non-site traffic;
- Determine directional distribution of trips;
- Estimate turning movements at driveway and the resulting level of service;
- Analyze current and future access requirements;
- Provide necessary geometric and operational improvements to safely accommodate access requirements without negative impacts to traffic operation on the adjoining roadways.

The City of Dayton will continue to support MnDOT and Hennepin County's access management guidelines on the principal and minor arterial roadway network in the City through the measures listed above. In addition, the City utilizes Hennepin County's access spacing guidelines to guide access decisions on the City's arterial and collector roadway network.

## Traffic Management Strategies

### Traffic Signals

A well-coordinated traffic signal system will promote the efficient flow of traffic along the A-minor arterials in the City of Dayton, as this type of system reduces the likelihood of through traffic diverting to local streets. The City will work with Hennepin County to periodically monitor the progression of traffic signals on key County roadways to ensure efficient system operation.

Operational refinement of the signal system will take place on an ongoing basis. New traffic signals will be built at intersections where specific signal warrants are achieved, and funding is available. Intersection improvements will be considered on a site-by-site basis and will be constructed consistently with the warrants identified in the Minnesota Manual on Uniform Traffic Control Devices (MUTCD) when funding is available. Warrants include specific thresholds relating to traffic volumes and considerations of safety and pedestrian activity.

### Stop Signs

The City of Dayton receives numerous requests for the installation of stop signs to manage speed and other perceived traffic safety problems in residential neighborhoods. City traffic engineers will evaluate each stop sign request by utilizing MnDOT's uniform traffic warrant criteria.

### Traffic Calming

The primary function of minor collector and local streets is to provide access to residences and other uses along the roadway. However, these streets may also provide routes for traveling to and from or passing through a neighborhood. Conflicts arise between these latter functions when residents become concerned about traffic volumes, speeds and pedestrian safety.

Traffic calming generally refers to strategic physical changes made to streets to reduce vehicle speeds, improve safety, discourage through traffic on residential streets, and decrease the automobile's visual dominance in a neighborhood setting. There are several activities that may be referred to as traffic calming, examples of which include raised intersections and crosswalks, roundabouts, curvilinear streets, street narrowing, raised medians and islands, pedestrian treatments, and streetscaping. These traffic calming treatments are considered for low volume local and minor collector streets where excessive speeds pose a safety problem. The City of Dayton will consider requests for traffic calming devices on a case-by-case basis.

## Recommended Roadway System Improvements

Future roadway improvements designed to address system connectivity, continuity, congestion and safety issues are planned and recommended for the roadway system in the City of Dayton. Recommended roadway improvements are shown in **Figure 10** and are derived from the combination of system needs and the intended function of each roadway as it relates to the adjacent supporting land use. It should be noted that improvements discussed in this section do not include spot intersection improvements or trails.

The determination of which projects will be built, and their proper sequencing, will be determined through each jurisdictions programming process that considers the estimated cost of each project, available financing and coordination with other projects.

**MnDOT and City Roadways**

- None

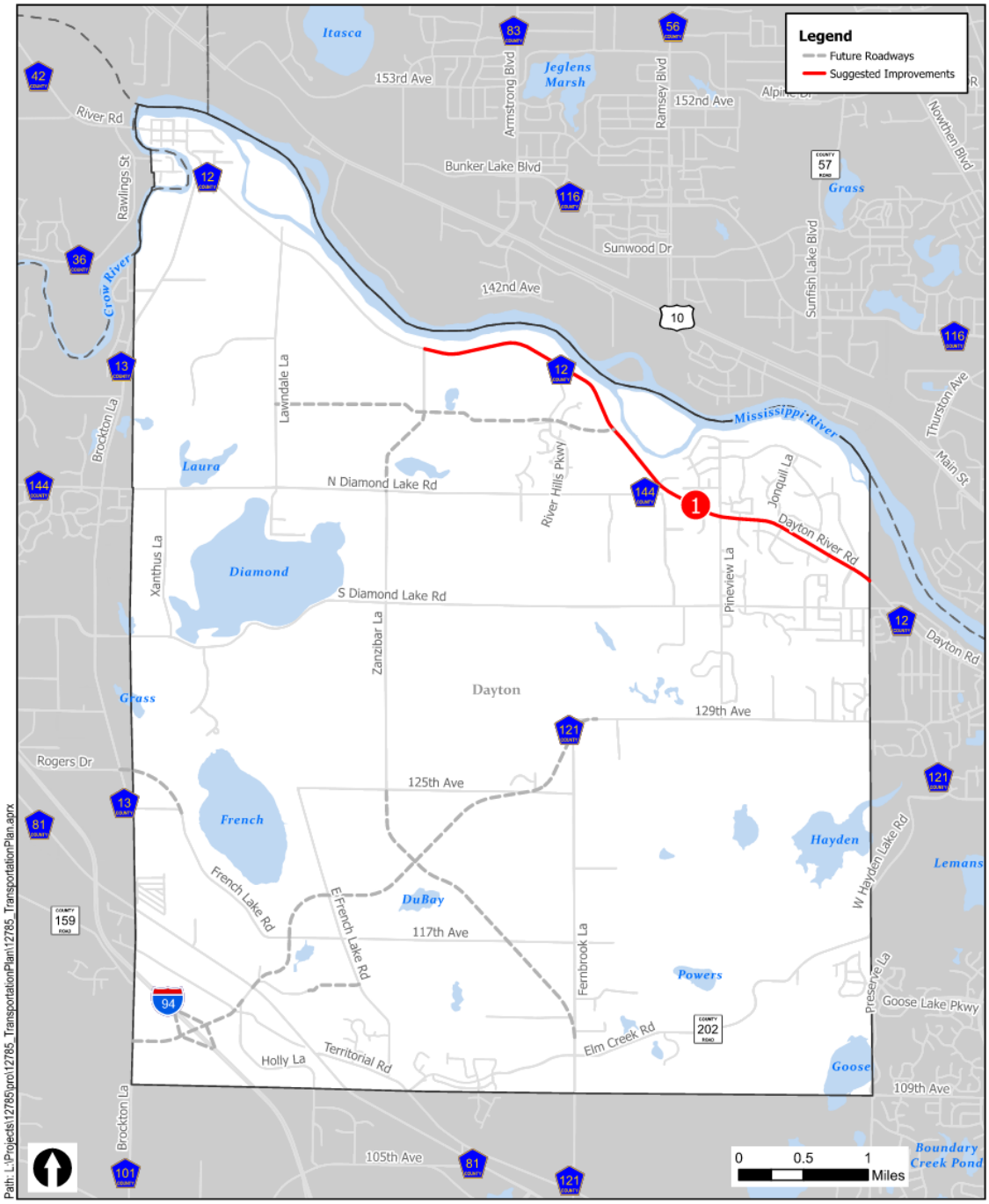
**Hennepin County Roadways**

The following projects are on the County roadway system and are the County's responsibility, although the City may participate financially and therefore must include them in the City's Plan and the City's CIP.

- County Road 12 (Dayton Road) - consider three-lane/four-lane roadway from Zanzibar Lane to East city limit

All improvement considerations should account for safety and access improvements as well.

## Figure 12. Recommended Roadway Improvements




**Recommended Roadway Improvements**
Dayton Transportation Plan Update
City of Dayton

**Figure 10**

# TRANSIT SYSTEM

As more people choose to live, work, and travel in Dayton, public transit is a key component of meeting mobility needs and linking the City's residents to regional job centers and activities. Transit systems, both fixed route and demand-response, provide for the varied transit needs of the City. Affordable and convenient transit is an essential characteristic of an urban community.

Transit is an important element in the overall transportation network as it offers access to medical care, shopping, and government services for those who cannot access or operate a vehicle, provides opportunities for people who prefer an alternative to automobile travel, and removes a portion of existing or future automobile traffic from the roadway, reducing travel time and congestion for other vehicles on the roadway.

The City of Dayton is committed to seeking ways to implement transit opportunities for residents, employees, and visitors. The City can support transit service by promoting more transit supportive land use patterns as sections of the community continue to develop.

This section of the Transportation Plan identifies the existing transit-related services, facilities, and programs within the City of Dayton, suggests improvements, and discusses the City's role in supporting the transit system.

Public transit is being considered in Dayton as part of the Trailblazer Transit Service. As growth and development occur in the community it will be important to include transit options in designs. Park and Ride or carpool areas should be accommodated in site development or on public sites. One parcel directly north of the Dayton Parkway interchange area has been identified by the City as a possible Park and Ride Station. Streets or parking lots can be designed with pull over locations to accommodate bus stops that do not impede traffic flow. The City is collaborating with Hennepin County, Wright County, and Metro Transit to integrate transit into its transportation network.

## Transit Market Areas

There are five existing transit service areas for all communities within the Twin Cities metropolitan area as identified by the Metropolitan Council[1]. The market service areas are defined by:

- Population density
- Employment density
- Automobile availability
- Intersection density

**Table 9** describes community, land use, ridership potential, and transit service characteristics for the two transit market areas within the City of Dayton. The northern third of the City is in Metropolitan Transit Market Area V with the remainder of the City in Transit Market Area IV. Transit Market Area V has very low population and employment densities and tends to be primarily rural communities and agricultural uses. General public dial-a-ride service may be appropriate here, but due to the very low-intensity land uses these areas are not well-suited for fixed-route transit service.

Transit Market Area IV has lower concentrations of population and employment and a higher rate of auto ownership. It is primarily composed of Suburban Edge and Emerging Suburban Edge communities. This market can support peak-period express bus services if a sufficient concentration of commuters likely to use transit service is located along a corridor. The low-density development and suburban form of development presents challenges to fixed-route transit. General public dial-a-ride services are appropriate in Market Area IV. Additionally, **Figure 11** displays the transit market areas within Dayton along with the City's existing transit system.

[1] Metropolitan Council 2040 Transportation Policy Plan, 2015.

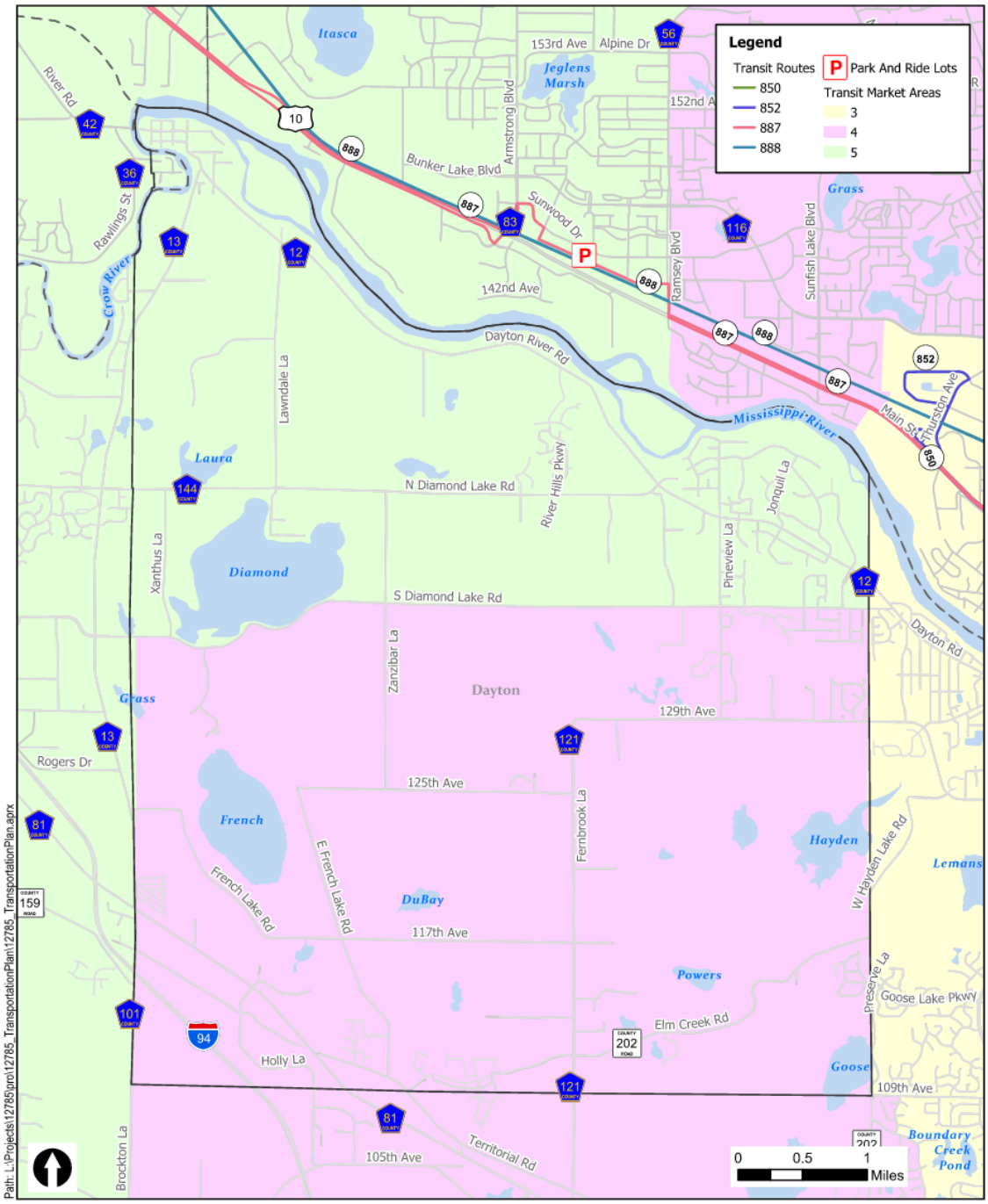
**Table 8. Metropolitan Council Transit Market Areas in Dayton**

| Transit Market Area | Propensity to Use Transit | Market Area Description and Typical Transit Services | Presence in Dayton |
|---|---|---|---|
| **IV** | Approximately half ridership potential of Market Area III. | Transit Market Area IV has lower concentrations of population and employment and a higher rate of auto ownership. It is primarily composed of Suburban Edge and Emerging Suburban Edge communities. This market can support peak-period express bus services if a sufficient concentration of commuters likely to use transit service is located along a corridor. The low-density development and suburban form of development presents challenges to fixed-route transit. Public dial-a-ride services are appropriate in Market Area IV. | Southern two-thirds of Dayton |
| **V** | Lowest potential for transit ridership. | Transit Market Area V has very low population and employment densities and tends to be primarily Rural communities and Agricultural uses. Public dial-a-ride service may be appropriate here, but due to the very low-intensity land uses these areas are not well-suited for fixed-route transit service. | Northern third of Dayton |

## Transit Services

Transit Link is currently the only transit service operating within the City of Dayton. Trailblazer Transit Service may provide service within Dayton in the future.

## Figure 13. Existing Transit System




**Existing Transit System**
Dayton Transportation Plan Update
City of Dayton

**Figure 11**

# BICYCLE AND TRAIL SYSTEM

## Planning for a Connected Pedestrian and Bicycle System

The City of Dayton is an emerging suburban edge community that has experienced significant growth over the last several decades. Throughout this expansion, the City has been implementing a plan for park and trail development that provides residents with a well-established system of recreational amenities. These amenities include trails and sidewalks that provide important enhancements to the City's transportation system and allow residents and visitors an alternative approach for travelling to work, school, employment centers and transit centers. The City of Dayton continues to improve its trail system and future multimodal planning will focus on filling gaps in the existing local trail system and connecting the local system to the regional parks and trail systems, regional employment clusters and the regional transit system.

## Existing Trail System

The City of Dayton has a well-developed local trail system including connections to City Parks, Three Rivers Park District Regional Parks, regional trails, and regional search corridors that extend through the City. Over the last decade, Dayton has incorporated off-street trails, sidewalks, and bikeways into major roadway improvements throughout the City, creating key linkages within the bicycle network. Many roadway improvement projects have included trails on both sides of roadways, providing more connections to neighborhoods and local trails and enhancing the local trail system. As the City's trail system continues to expand, it will be important to identify gaps in the existing system and implement enhancements to the future system to improve connections and provide additional access to regional parks and trails and connections to regional employment clusters. **Figure 12** identifies the existing and future trail system in Dayton.

## Gaps in the Trail System

The local trail system within the City of Dayton is robust and includes important north-south and east-west trails that serve as the main arteries to a growing network. Improving the local trail system involves identifying gaps and planning to fill those gaps to enhance connections to key destinations within and outside City limits. The primary connections for the local trail system include the following:

1. Connections to local parks and schools;
2. Connections to regional parks and trails;
3. Connections to regional employment clusters;
4. Connections to the regional transit system;
5. Connections to the Regional Bicycle Transportation Network (RBTN).

There were no gaps in the local bicycle or trail networks identified.

## Connections to Regional Employment Clusters

The Metropolitan Council has not identified regional destinations such as regional job and activity centers with the City, however the City of Dayton has identified a local employment cluster that are characterized by industrial development. There is one identified employment cluster in Dayton

- CSAH 81 in the southwest corner of the City.

Creating strong multi-modal connections to regional employment clusters outside of the City with trails and sidewalks will enhance the trail network within Dayton by providing residents and visitors alternatives to driving to frequently utilized services. The regional employment clusters are commonly located at the intersection of major highways and can create obstacles for local trails often due to the presence of large bridges and expansive intersections nearby or within the regional employment cluster locations. Planning for trail connections to regional employment cluster locations is an important first step in ensuring that future development includes multi-modal facility enhancements, such as off-road trails, independent pedestrian bridges, and ADA compliant roadway crossings.

Another important element of the City's trail system is its relationship to the local transit system. As transit facilities are developed within Dayton, the City will need to ensure adequate pedestrian and bicycle trail connections are available.

## Regional Parks System Components

Regional parks system components such as regional parks, park reserves, special recreation features, and regional trails are identified in the 2040 Metropolitan Council Regional Parks Policy Plan. The regional park within and adjacent to the City of Dayton is the Elm Creek Park Reserve. Additionally, planned and existing regional trails within the City of Dayton are the West Mississippi River, Rush Creek, Crow River and Medicine Lake Regional Trails. Further information regarding this regional trail is listed below:

- West Mississippi River Regional Trail – This is a regional trail that includes segments that are open to the public as well as planned segments that will be developed in the future. The West Mississippi River Regional Trail serves as a compliment to local and non-regional County trails by crossing municipal boundaries and acting to connect cities, townships, and other regional destinations.
- Rush Creek Regional Trail – This is a regional trial which links Elm Creek Park Reserve to the Mississippi Gateway Regional Park. It is planned to extend west from Elm Creek Park Reserve to the Crow-Hassan Park Reserve.
- Crow River Regional Trail – This is a regional trail master plan approved in 2017. The route is planned to connect from the Watertown Township to the West Mississippi River Regional Trail in Dayton and provide connection to the Crow River.
- Medicine Lake Regional Trail – This is a regional trail which will provide connections between Elm Creek Park Reserve, Fish Lake, and French Regional Parks.
- Diamond Lake Regional Trail – Formerly North-South 1 Corridor, this regional trail that will connect Crow River, Rush Creek, Luce Line, Dakota Rail, Lake Minnetonka LRT, and Highway 101 Regional Trail Corridors.

Additionally, Elm Creek Park Reserve is in Dayton. The park consists of over 20 miles of paved biking and walking trails. There are other amenities such as turf hiking trails, a chlorinated pond, children's play area, nature center, picnic pavilions, archery ranges, dog park, tubing hill, ski trails, and ski/snowboarding hill.

## Regional Bicycle Transportation Network (RBTN)

The City of Dayton is a leader in developing bicycle and trail facilities and planning the next phases of the multi-modal system within the City should correspond closely to the corridors identified in the Regional Bicycle Transportation Network to provide seamless connections to neighboring communities and the broader regional transportation network.

The RBTN was developed as part of the to the Metropolitan Council 2014 Regional Bicycle System Study, which highlights important regional transportation connections for cyclists. The RBTN serves as framework for designated regional corridors and alignments and defines critical bicycle transportation links to help municipalities guide their bikeway planning and development. The RBTN is subdivided into two tiers for regional planning and investment prioritization:

### RBTN Tier 1

These corridors and alignments have been determined to provide the best transportation connectivity to regional facilities and developed areas and are given the highest priority for transportation funding. RBTN Tier 1 corridors and alignments within Dayton include:

- CSAH 81 in southwest Dayton
- Parts of northern Dayton along the Mississippi River

### RBTN Tier 2

These corridors and alignments are the second highest priority for funding. They provide connections to regional facilities in neighboring cities and serve to connect priority regional bicycle transportation corridors and alignments. Currently, there are no Tier 2 corridors or alignments in Dayton.

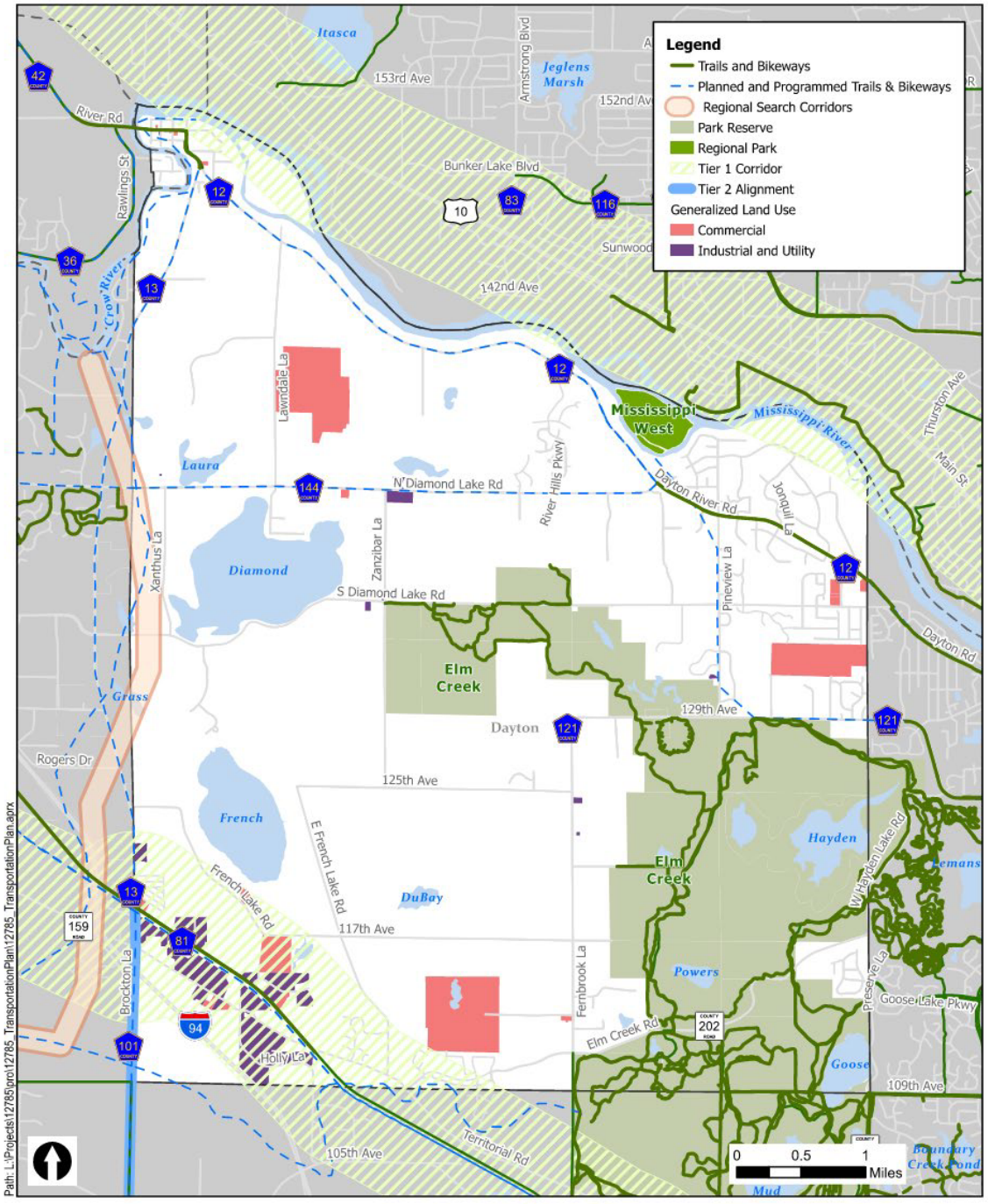
## Linking Local Trails to the RBTN

The goal of the RBTN is to develop an integrated seamless system of on-street bikeways and off-road trails that complement each other to most effectively improve conditions for bicycle transportation at the regional level. Cities, such as Dayton, are encouraged to plan for and implement future bikeways within and along these designated corridors and alignments to support the RBTN vision.

The RBTN corridors and alignments make up the trunk arterials of the overall system of bikeways that connect to regional employment and activity centers. These are not intended to be the only bicycle facilities in the region, and local municipalities, such as Dayton, are encouraged to consider planning for any additional bike facilities desired by their communities. RBTN corridors are shown where more specific alignments within those corridors have not yet been designated, so the City of Dayton is encouraged to use their comprehensive planning process to identify suitable alignments within the RBTN corridors.

In addition, it is recommended for the City of Dayton to consider planning local on- and off-road bikeway networks to connect to the designated Tier 1 and Tier 2 alignments, as well as any new network alignments within RBTN corridors to be proposed in future comprehensive plans. Currently, local trails in Dayton provide important connections to the existing West Mississippi River Regional Trail. Details of the RBTN in Dayton are indicated in **Figure 12**.

## Figure 14. Existing and Future Bicycle and Trail System




**Existing and Future Bicycle and Trail System** — **Figure 12**

Dayton Transportation Plan Update

City of Dayton

# FREIGHT SYSTEM

Freight transportation is the movement of goods and products from one point in the production process to another. This includes raw commodities such as corn and soybeans and finished products such as clothing and electronics. Freight transportation is not a mode of transportation but includes several modes that focus on the movement of goods instead of people. The most significant transportation modes utilized by freight haulers in the City of Dayton and the surrounding Hennepin County region include trucks on highways, followed by waterways and rail.

## Existing Freight System

A major component of Dayton's freight system is the existing roadway network as identified in **Figure 13**. The key freight corridor within Dayton is I-94. The I-94 corridor serves the industrial uses in the southwest corner of Dayton as well as connecting freight traffic to Rogers and other nearby communities. A BNSF railroad is also aligned through the southwest corner along I-94.

## Regional Freight System

The Metropolitan Council's Regional Truck Highway Corridor Study, completed in 2017, identified and prioritized the improvement of the most significant regional truck highway corridors. The study identified I-94 through Dayton as a Tier 2 regional truck corridor. Brockton Lane running along the border of Dayton has been classified as a Tier 1 corridor. The study notes that while the Interstate Highway System is the region's freight backbone, it is supported by a critical network of principal and minor arterials that serve as relievers to the Interstate system, as well as providing door-to-door access to manufacturing facilities, distribution centers, intermodal freight hubs, and ultimately retailers and customers.

Railroads in Hennepin County serve regional agriculture and industrial uses. The three carriers that currently operate in Hennepin County are the Union Pacific Railroad, Canadian Pacific Railroad, and the BNSF Railroad. If any railroad line is up for abandonment, the County will evaluate preservation of the corridor for multiple transportation needs. The BNSF rail line from Golden Valley to outstate Minnesota passes through the southwestern corner of Dayton.

## Heavy Commercial Vehicle Volumes

Existing heavy commercial annual average daily traffic (HCAADT) volumes are depicted in **Figure 13**. The high-volume corridor within the City of Dayton is I-94, which within the City of Dayton is estimated to carry between 10,000 trucks per day.

## Regional Freight Issues

Knowing where freight needs, and issues exist on significant highway corridors can inform policy and investment decision-making. The success of the County and the State's economic engine relates to the ability of the multimodal freight system to convey goods safely and efficiently.

No regional freight issues were identified in Dayton. However, a Top 30 hotspot for Truck Delay was noted in Rogers just outside of Dayton on Diamond Lake Road.

The way highways are designed or operate can also be a freight movement issue. Since 2000 Hennepin County and MnDOT have invested in roundabouts as a traffic safety solution in the growing and developing rural and residential areas. These safety features are perceived as difficult to maneuver by operators of heavy commercial vehicles. Increased prevalence of roundabouts and driver training have combined to reduce some concerns related to roundabouts. However, concerns with roundabouts remain for oversized and non-professional drivers transporting raw agricultural products through roundabouts.

Hennepin County will continue to consider the installation of roundabouts as a highway safety solution and will include the freight community as part of outreach efforts. Previous freight studies in Minnesota have identified the lack of significant shoulders on rural roadways as a potential safety concern. The County will consider increased paved shoulder widths as part of pavement improvement projects and consider increased paved shoulder widths as a proactive safety project.

Hennepin County features significant rail facilities and conflicts between trains and vehicles at unprotected rail crossings are a concern. Unprotected railroad crossing are roadway crossings without both gates and lights. Many crossings in Hennepin County have stop signs with additional signs advising drivers to look both ways before continuing travel.

In understanding freight safety and capacity issues, it is important that commercial vehicle traffic from industrial, warehouse and commercial land uses be adequately considered. Increased traffic can be sufficiently accommodated through the following measures:

- Locating freight-intensive land uses in areas that are proximal to the metropolitan highway system and with ample access to minor arterials;
- Utilizing acceptable design standards on arterials, ensuring adequate turning radius, pavement depth, and space for commercial vehicles; and
- Providing adequate signage and marking along roadways to minimize commercial vehicle traffic through residential neighborhoods.

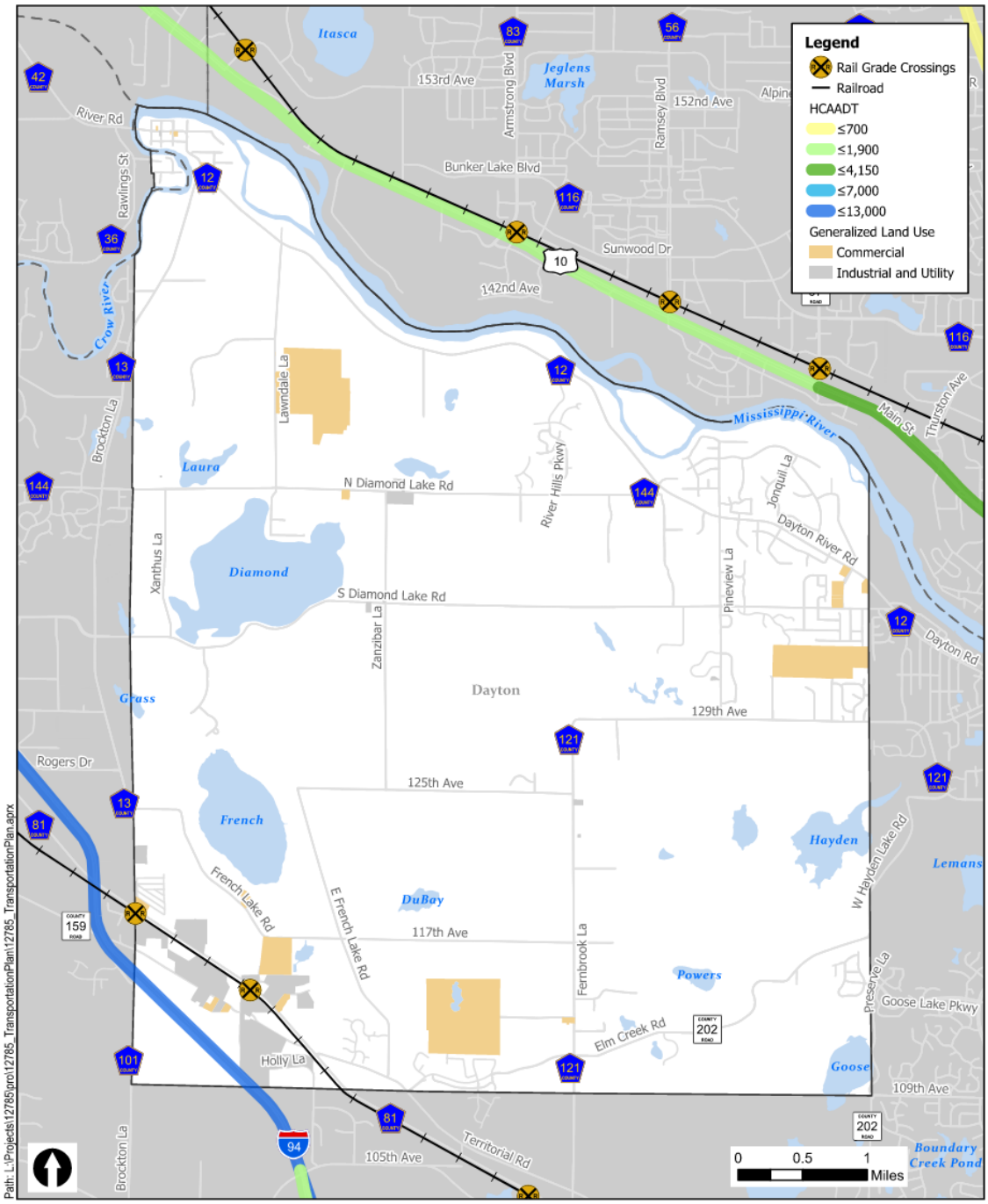
## Future Considerations

The City of Dayton is continuing its development as a major hub of industrial centers, business locations, and commercial districts. Much of development along freight corridors within and adjacent to the City is driven by regional developments that are experiencing increased growth of commercial, industrial and warehouse businesses. Transportation system improvements recommended by the City accommodate these continually changing land uses and facilitate increased demand for efficient freight operations to serve these new and growing business developments.

In recent years, e-commerce and day-of deliveries have also become increasingly more important to the national economy and is reflected at a regional level throughout the greater Twin Cities area. The demands of customers to receive products within the shortest amount of time has, and will continue to, increase freight traffic on major and local roadways. Given the proximity of Dayton to the Twin Cities, it is imperative that these trends be planned for to maintain traffic flows and avoid congestion along roadways in Dayton.

More cost-effective strategies must be implemented to address regional mobility issues. One strategy proposed for implementation is strategic capacity enhancements. Projects in the form of new interchanges, non-priced managed lanes and limited general-purpose lanes may be needed to address corridor congestion and provide lane continuity for an existing facility or to complete an unfinished segment of the Metropolitan Highway System.

## Figure 15. Existing Freight System




**Existing Freight System** — **Figure 13**

Dayton Transportation Plan Update

City of Dayton

# AVIATION SYSTEM

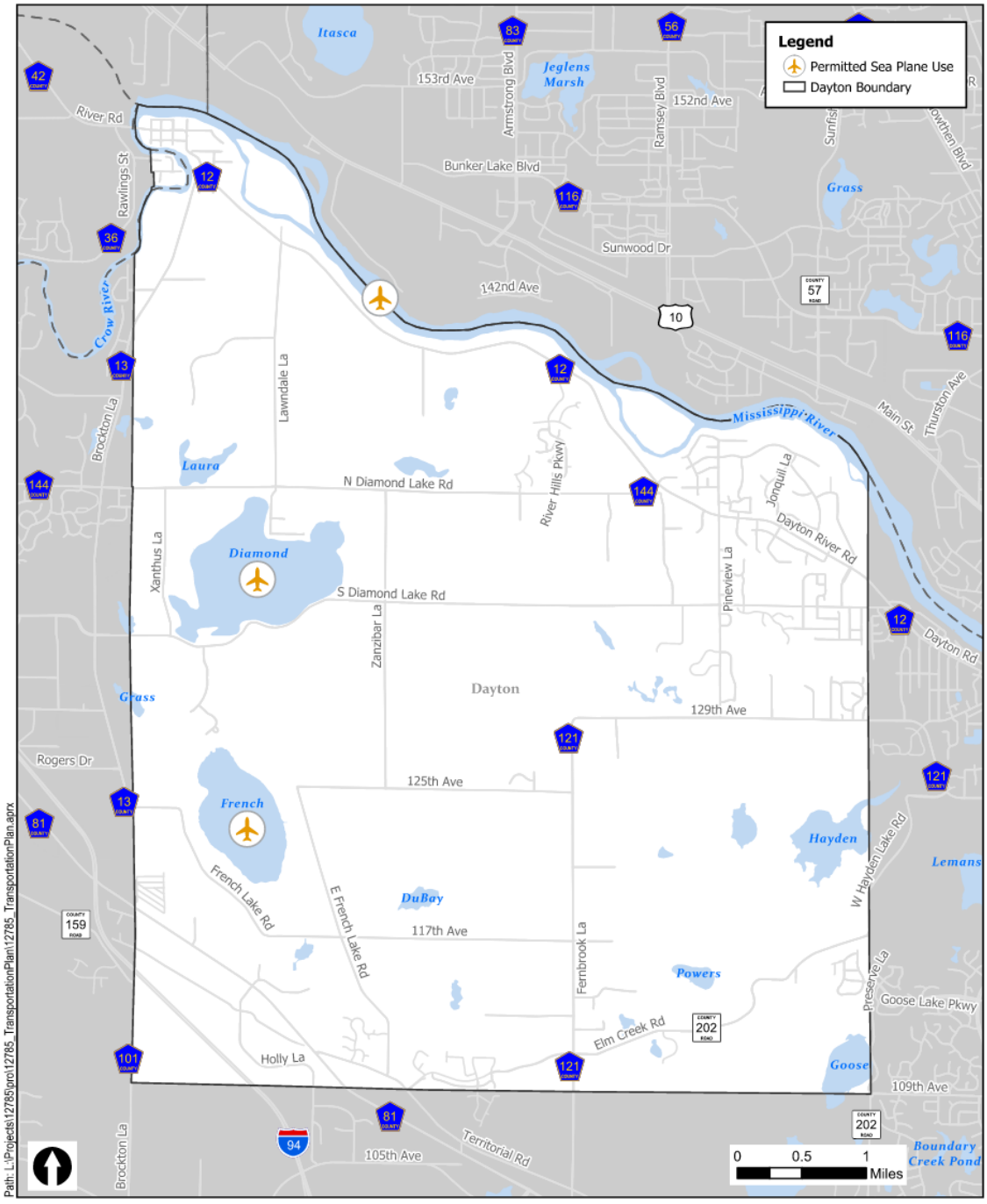
There are no existing or proposed local system airports located in the City of Dayton. Commercial flights are directed to the Minneapolis-St. Paul International (MSP) Airport, which is approximately 20 miles southeast of the City. The City of Dayton is outside the noise exposure zones and airport safety zones of MSP Airport.

Since all airports identified in this section have minimal impacts on the City of Dayton, airport safety zones have not been established in the City Zoning Ordinance. The City recognizes the need for airspace protection from potential electronic interference and obstructions where regular flight patterns have been established. Any proposed structure over 200 feet shall require notification to the Federal Aviation Administration (FAA) at least 30 days prior to construction, using FAA Form 7460-1 "Notice of Proposed Construction or Alteration," as defined under code of federal regulations CFR - Part 77. In addition, MnDOT must also be notified of the proposed development. The Minneapolis/St. Paul Airport Community Zoning Board's land use safety zoning ordinance should also be considered when reviewing construction within the City of Dayton that raises potential aviation conflicts.

## Seaplane Usage

For purposes of safe use of surface waters and compatible land use, certain public waters within the Twin Cities seven-county metropolitan area have been designated by the Minnesota Department of Transportation (MnDOT) Aeronautics for permitted seaplane use. Two lakes and the Mississippi River located in Dayton are designated as seaplane accessible. These two lakes are Diamond Lake and French Lake. **Figure 14** identifies locations of the existing seaplane accessible locations.

## Figure 16. Existing Aviation System




**Existing Aviation System**
Dayton Transportation Plan Update
City of Dayton

**Figure 14**

# IMPLEMENTATION PLAN

## Funding Strategies

Roadways under City jurisdiction are maintained, preserved, constructed, and reconstructed by the City of Dayton Department of Public Works. Funding for these activities, including the administrative costs of operating the Department, are obtained from a variety of sources, including ad valorem taxes, special assessments, development fees, and tax increment financing. A major concern of the City is the availability of sufficient funds for maintenance and construction activities. If funds are unavailable, needed projects may be delayed or terminated and maintenance of existing facilities may fall short of acceptable standards. The following explains the existing sources of funding and potential new sources of revenue.

### State Aid

An important source of revenue to the City is State Aid. A network of City streets called Municipal State-Aid Streets (MSAS) are eligible for funding assistance with revenue from the State Highway User Tax Distribution Fund. This constitutionally-protected funding allocation is comprised of gasoline taxes and vehicle registration fees and is allocated based on a formula that considers the population of a City and the financial construction needs of its MSAS system.

### Ad Valorem Taxes

For situations in which 20 percent of the cost of a City project can be assessed to the adjacent property owners, the remaining cost of the project can be added to the ad valorem or property taxes of the remaining property owners in the City. Ad valorem taxes for street improvements are excluded from the State-mandated levy limits.

### Tax Increment Financing

Establishing a tax increment financing (TIF) district is a method of funding infrastructure improvements that are needed immediately using the additional tax revenue to be generated in future years by a specific development. Municipal bonds are issued against this future revenue, which is dedicated for a period of years to the repayment of the bonds or to other improvements within the TIF project area. TIF districts can accelerate economic development in an area by ensuring that the needed infrastructure is in place without requiring support from the usual funding.

### Grant Funding

There are many opportunities for metropolitan cities to take advantage of various grant funding initiatives. Regional Solicitation and Highway Safety Improvement Program (HSIP) are among grant solicitations for the Twin Cities metropolitan area. The City should monitor the grant funding opportunities available for applicable projects and submit applications when possible.

## Planning for the Future

Throughout the City of Dayton's comprehensive planning effort, the City will consider how to address existing transportation needs, while setting the stage for future growth. Items for consideration include the following:

- System Preservation
- Connected Vehicles and Autonomous Vehicles
- Travel Demand Management
- Complete Streets and Safe Routes to School

## System Preservation

Infrastructure systems such as roadways, bridges, culverts, and sidewalks have become expensive and challenging to maintain in today's environment with aging infrastructure, rising costs of materials, and stagnant or declining revenue. In fact, many local agencies are being forced to pause, and ask questions about the costs and benefits of continuing to maintain assets throughout their entire system, or if other approaches should be explored to better balance needs with available resources. Generally, approaches to be considered include:

### Performance Standards and Measures

A performance-based approach improves the accountability of local infrastructure investments, assesses risks related to different performance levels, and monitors progress and increases transparency.

### Project Prioritization

Project prioritization can help the City rank infrastructure needs in a manner that is consistent with preservation goals and objectives. This technique can help avoid the typical "worst first" approach to programming preservation projects that tends to invest limited resources in the most expensive improvements instead of directing maintenance funds to infrastructure that merely need rehabilitation, which will provide more cost-effective solutions in a timely manner.

### New Revenue Sources

There are methods to capture new revenue streams to close the financial gap in maintaining assets in a state of good repair. Exploring new revenue sources will allow the City to expand and accelerate preservation initiatives.

### New Maintenance Techniques

There are new maintenance techniques that can extend the lifecycle of an asset. For example, new maintenance techniques for roadway surfaces can provide longer service life and higher traffic volume thresholds, resulting in more stable road maintenance costs. Cost reduction of life cycle extension strategies which save money, or extend surface life, can directly benefit preservation needs, and minimize any identified financial gap.

### Asset Management

Tracking assets and their condition will provide a stronger outlook on lifecycle costs and replacement schedules. This will help establish funding plans and identified future funding gaps or shortfalls.

## Connected Vehicles and Autonomous Vehicles

Connected Vehicles (CVs) refers to vehicles that communicate with one another and with other elements of intelligent transportation infrastructure. Autonomous, automated, or self-driving vehicles (AVs) describes a spectrum of vehicles that require varying degrees of human control. Connected Automated Vehicles (CAVs) to refers to both technologies, which are automated vehicles connected to other vehicles and the transportation system.

There is a wide range of forecasted adoption scenarios for CV and AV technology. Analysts from the automotive industry tend to provide more conservative forecasts, while analysts from the technology world tend to be less conservative, with some forecasting heavy adoption by as early as 2030. Before widespread adoption occurs, there will be an extended period during which the developing CV and AV platform must coexist with human-operated personal vehicles, as well as with public transit, pedestrian users, and other modes. In Metropolitan Council's 2040 TPP, it is noted that the implications of connected and automated vehicles need to be thoroughly examined. As with many new transportation technologies, automated and connected vehicles are likely to penetrate urban markets prior to expanding to the suburbs, especially if they are initially developed through a ride-hailing platform.

### Highway Capacity Implications

Many analysts predict that widespread adoption of connected and automated vehicles will increase road capacity initially. Connected and automated vehicles are anticipated to require narrower lane widths than are needed for non-connected and automated vehicles. Reduced vehicle headways are also anticipated. Each of these factors would decrease congestion, however deployment of CVs and AVs will also lead to an increase in the number of zero-occupancy trips. Furthermore, travelers will likely adjust their behavior in response to the new technology, which could increase congestion and vehicle miles traveled (VMT).

### Parking Implications

An increased share of autonomous vehicles could impact parking, both the amount needed and its location. With more AVs and fewer drivers, the location of parking could shift to the periphery of activity centers. Correspondingly, Dayton could see the need to expand parking in some areas and retrofit underutilized surface parking in others. Plans to significantly expand parking should be thoroughly reviewed, as communities which have issued large bonds to meet current and projected parking demand could be challenged to recoup investment costs if demand decreases.

### Impacts to Other Modes

In response to increased prominence of CV and AV technology, the role of regional and local transit providers could be reduced or become more specialized. Pedestrian and bicycle activity could become more regulated, so as not to interfere with automated systems on streets and sidewalks. As CV and AV technology is deployed in the Twin Cities, Dayton and other communities will be faced with policy considerations as they look to promote equity for all transportation users and continue to provide a balanced transportation system.

## Electric Vehicles

In October 2017, General Motors announced plans to release 20 electric vehicle models by 2023. This reflects a fundamental shift in the automobile industry vision of the future. While the first generation of electric vehicles remained expensive compared to their conventional vehicle counterparts, automakers aim to bring to down the purchase price and increase profits by expanding electrical vehicle output. A growing fleet of electric vehicles would have implications for planning at all levels of government. For example, electric vehicles will require charging stations, which should be considered at public and private facilities in Dayton's land use planning and zoning ordinance. The placement of these charging stations should complement existing infrastructure, encourage equitable resource development, and enhance intermodal connections. Widespread adoption of electric vehicles would require significant changes to highway funding programs. Most highway revenue is generated through fuel taxes. Widespread adoption of electric vehicles would necessitate changes to State and local revenue sources. Unlike other

technologies discussed in this section, the proliferation of electric vehicles is not expected to be geographically dependent. Demand for electric vehicles in Dayton is expected to be similar as in other urban areas.

## Travel Demand Management

Research has shown that Travel Demand Management strategies are a useful technique in helping alleviate parking demands in a geographical area. TDM strategies are applied to help reduce the number of single occupancy vehicles traveling and parking in a certain area. Opportunities to encourage TDM strategies are highlighted throughout this section.

### Bicycle Amenities

Actively promoting bicycling as an alternative means of travel to and from a destination can be achieved through information dissemination and the provision of bicycle storage facilities and adding on-street bicycle lanes and additional connections to trails. These actions can help decrease the demand for vehicle parking.

### Car Sharing Provisions

Car sharing programs provide mobility options to a cross section of residents who would not otherwise have access to a vehicle. These programs encourage the efficient use of a single vehicle among multiple users, while reducing the amount of parking needed to accommodate each resident within a neighborhood. Zoning language can encourage or require new developments of a certain size to include off-street parking provisions for car sharing programs.

### Shared Mobility

Shared mobility includes bikesharing, carsharing, and ridesourcing services provided by companies such as Uber and Lyft. Predictions indicate that by creating a robust network of mobility options, these new modes will help reduces car ownership and increase use of public transit, which will continue to function as the backbone of an integrated, multimodal transportation system.

### Travel Demand Management Plans (TDMP)

A TDMP outline measures to mitigate parking demand as part of the development permit process, which can result in innovative solutions that are tailored to the specific needs of a neighborhood or district. These types of plans may require specific strategies for reducing single-occupancy vehicle trips and promoting alternative modes of transportation.

## Complete Streets and Safe Routes to School

Complete Streets are commonly defined as roadways that accommodate all users such as pedestrians, bicyclist, vehicles and transit, regardless of age and ability. This is important to consider when recognizing the diversity of people traveling throughout the community.

The Transportation Plan's goals and policies embrace several elements of complete streets, such as safety for pedestrians and bicyclists. MnDOT has adopted a Complete Streets Policy, last updated in May 2016, and has committed to assessing opportunities for incorporating complete street design principles in all MnDOT projects. MnDOT's Complete Streets Policy can serve as a resource to the City for incorporating complete street design standards into City projects.

Safe Routes to School is a national initiative to increase safety and promote walking and bicycling for America's youth. The Safe Routes to school program will assist in providing infrastructure and non-infrastructure grants to build trails, paths, and safe connections to local schools.

Planning for safe routes to schools will require specific attention to certain elements such as bike routes, complete street treatments, sidewalk networks, pedestrian/bicycle amenities and wayfinding signage. Combined, these elements can create Safe Routes to Schools or Complete Streets.

# SUBAREA PLANNING

Two subareas were reviewed from a roadway connectivity perspective to help the City plan for and guide future development in these areas. The intent of this planning effort was to identify a preliminary local roadway network that can support future development, while maintaining best practices and guidance with respect to access, circulation, and operations. These efforts are intended to be a starting point for discussions as development opportunities arise, while providing flexibility to the City and other jurisdictions to modify these areas to support economic development. The following two subareas were reviewed.

## Subarea 1: Southwest W French Lake Road Area

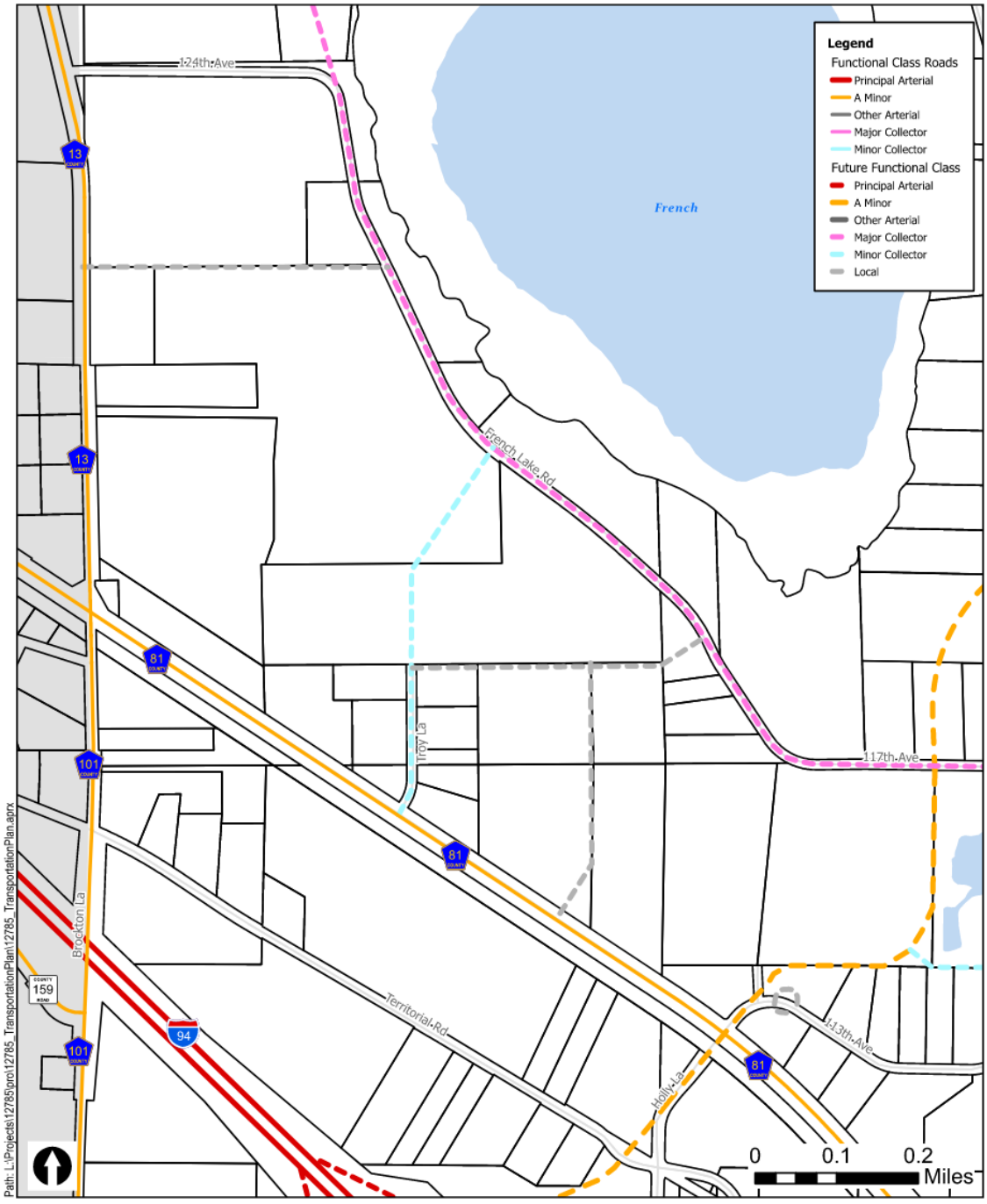
Subarea 1 is generally bounded by Brockton Lane/CSAH 13 to the west, the future Dayton Parkway to the east, W French Lake Road to the north, and County Road 81 to the south. This area currently provides access to a wide range of uses, including agricultural, residential, and industrial/commercial land use. As this area develops, the land use is generally guided towards industrial users. Therefore, the purpose of this subarea assessment was to identify a roadway network to support future development in this area, provide improved access to each parcel, and maintain parcel continuity.

The roadway network identified for Subarea 1 is shown in **Figure 15**. Key roadway connectivity includes:

1) Troy Lane Extension – this minor collector would provide connectivity between County Road 81 and W French Lake Road; full-access at the intersection of County Road 81/Troy Lane is expected.
2) W French Lake Road Extension – this major collector would be realigned and extended to connect to Rogers Drive; the existing 124th Avenue alignment may or may not remain, depending on development opportunities.
3) New East-West Local Road 1 – this local road would provide east-west connectivity between Brockton Lane/CSAH 13 and W French Lake Road and be located approximately one-quarter (1/4) mile south of 124th Avenue.
4) New East-West Local Road 2 – this local road would provide east-west connectivity between Troy Lane and W French Lake Road and be located approximately 1,000 feet north of County Road 81.
5) New North-South Local Road – this local road would provide north-south connectivity between County Road 81 and the new East-West Local Road 2 and be located approximately one-quarter (1/4) mile from Troy Lane and Dayton Parkway.

The specific roadway cross-section was not reviewed as part of this subarea assessment, nor was an implementation timeline of these subarea roadways identified. However, as developers begin to inquire about potential opportunities, this subarea roadway network will be integral to help inform development plans as well as to provide efficient access to the regional transportation system.

## Figure 175. Subarea 1: Southwest W French Lake Road Area




**Subarea 1: Southwest W French Lake Road Area** — **Figure 15**

Dayton Transportation Plan Update

City of Dayton

## Subarea 2: Southeast Dayton Parkway Area

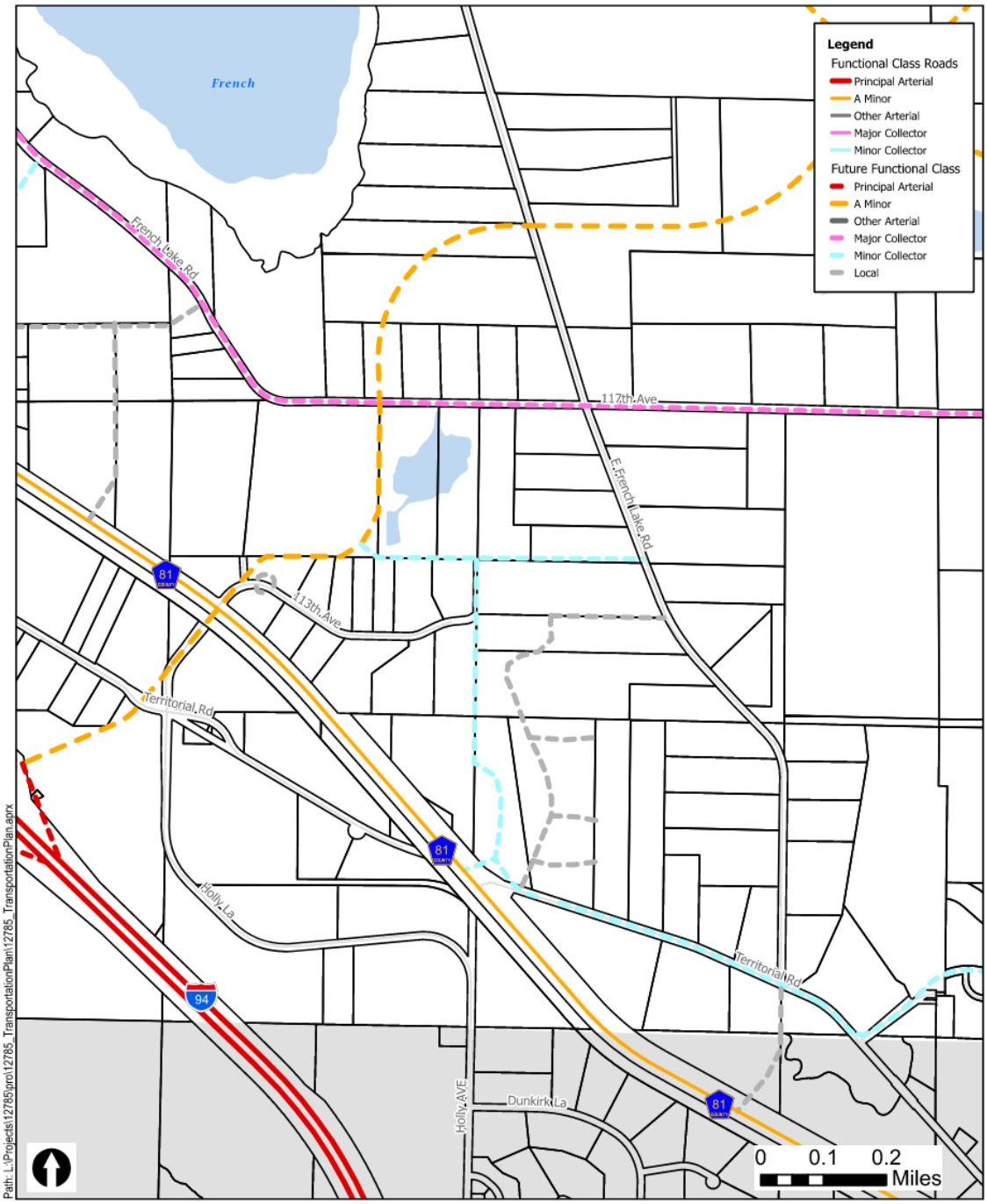
Subarea 2 is generally bounded by the future Dayton Parkway to the west, E French Lake Road to the east, 117th Avenue to the north, and County Road 81 to the south. This area currently provides access to a wide range of uses, including agricultural, residential, and industrial/commercial land use. As this area develops, the land use is generally guided towards industrial users along County Road 81 and the western portion of the subarea and residential uses within the eastern portion of the subarea. Therefore, the purpose of this subarea assessment was to identify a roadway network to support future development in this area, provide improved access to the regional transportation system, and maintain roadway continuity/connectivity that fits within the future land use context.

The roadway network identified for Subarea 2 is shown in **Figure 16**. Key roadway connectivity includes:

1) New East-West Collector 1 – this minor collector would provide east-west connectivity between the new Dayton Parkway and E French Lake Road and be located approximately one-quarter (1/4) mile between County Road 81 and W French Lake Road/117th Avenue.
2) New North-South Collector 2 – this minor collector would provide north-south connectivity between the new east-west collector 1 and County Road 81 and be located approximately one-quarter (1/4) mile between the new Dayton Parkway and E French Lake Road; a new full-access to County Road 81 would be provided approximately 300 feet west of the current Territorial Road access, which would be eliminated.
3) Territorial Road Extension – the minor collector would be realigned from County Road 81 to connect to the new north-south collector 2 approximately 350 feet north of County Road 81.
4) 113th Avenue – once additional access to 113th Avenue can be provided, 113th Avenue should be disconnected from the new Dayton Parkway and a cul-de-sac constructed at the western terminus of the roadway.
5) E French Lake Road Extension – this local road would be extended from Territorial Road south to connect to County Road 81 with a connection at least one-half (1/2) mile from other public access along County Road 81; full-access to County Road 81 would fit within the County's access spacing guidelines.

The specific roadway cross-section was not reviewed as part of this subarea assessment, nor was an implementation timeline of these subarea roadways identified. However, as developers begin to inquire about potential opportunities, this subarea roadway network will be integral to help inform development plans as well as to provide efficient access to the regional transportation system.

## Figure 186. Subarea 2: Southeast Dayton Parkway Area




**Subarea 2: Southeast Dayton Parkway area** — **Figure 16**

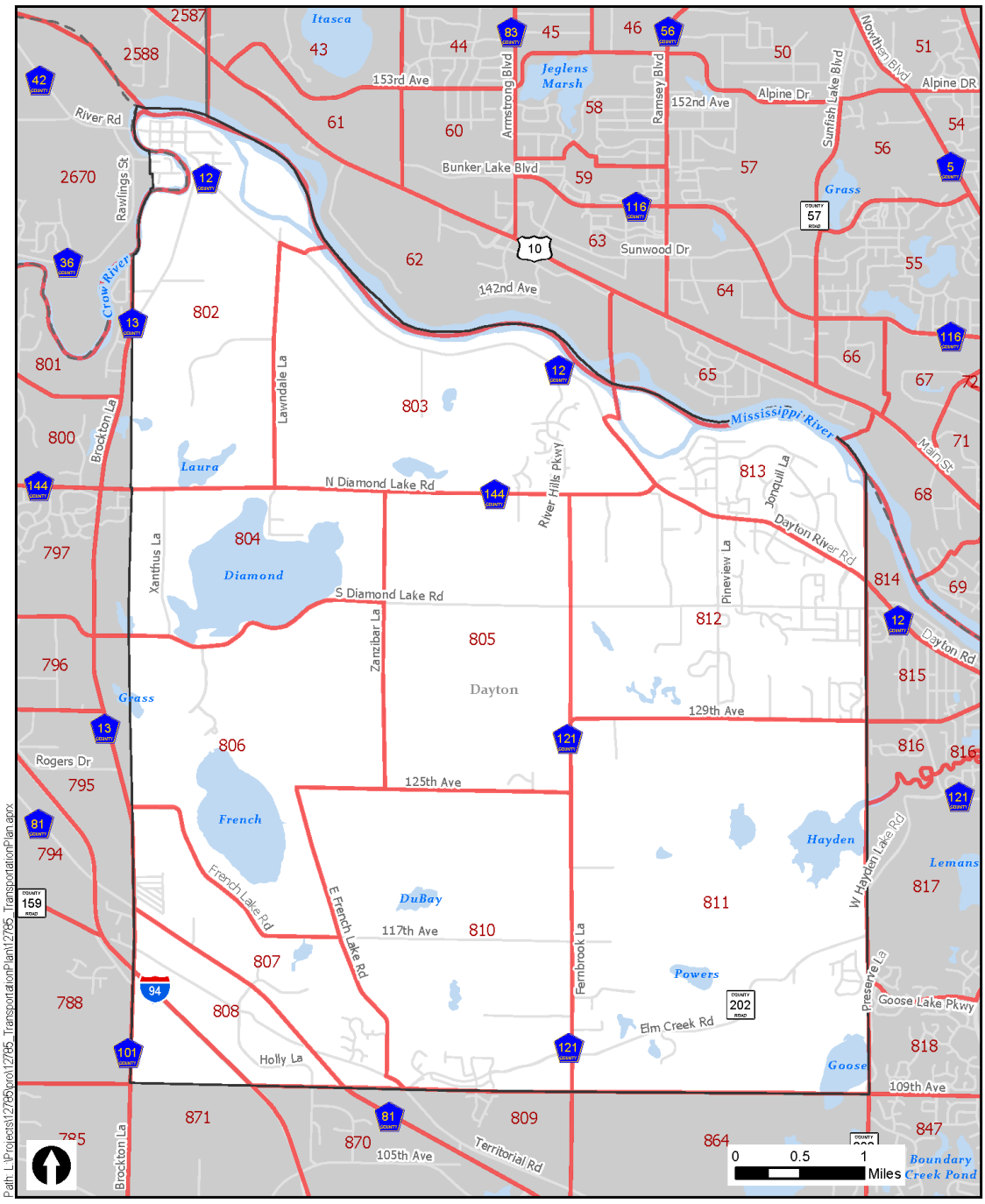
Dayton Transportation Plan Update

City of Dayton

## Appendix A. Socioeconomic Data Allocation to Traffic Analysis Zones

| | Existing (2014) | | | | | Year 2020 | | | | | Year 2030 | | | | | Year 2040 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TAZ | Population | Households | Retail Employment | Non-Retail Employment | Total Employment | Population | Households | Retail Employment | Non-Retail Employment | Total Employment | Population | Households | Retail Employment | Non-Retail Employment | Total Employment | Population | Households | Retail Employment | Non-Retail Employment | Total Employment |
| 802 | 526 | 206 | 6 | 19 | 25 | 722 | 272 | 13 | 98 | 111 | 1,123 | 466 | 18 | 153 | 171 | 1,682 | 735 | 23 | 224 | 247 |
| 803 | 200 | 72 | 6 | 20 | 26 | 272 | 103 | 9 | 63 | 72 | 510 | 213 | 9 | 78 | 87 | 885 | 388 | 9 | 90 | 99 |
| 804 | 341 | 123 | 3 | 19 | 22 | 288 | 107 | 2 | 26 | 28 | 312 | 124 | 2 | 29 | 31 | 275 | 114 | 2 | 30 | 32 |
| 805 | 253 | 89 | - | 1 | 1 | 356 | 132 | - | 2 | 2 | 436 | 173 | - | 2 | 2 | 393 | 162 | - | 2 | 2 |
| 806 | 141 | 53 | - | 1 | 1 | 200 | 74 | - | 5 | 5 | 509 | 203 | 1 | 10 | 11 | 957 | 396 | 1 | 21 | 22 |
| 807 | 843 | 269 | 19 | 347 | 366 | 1,062 | 393 | 41 | 614 | 655 | 1,141 | 452 | 49 | 717 | 766 | 1,006 | 413 | 56 | 797 | 853 |
| 808 | 8 | 3 | 17 | 305 | 322 | 12 | 5 | 36 | 546 | 582 | 13 | 5 | 46 | 664 | 710 | 11 | 5 | 54 | 777 | 831 |
| 810 | 180 | 66 | 3 | 57 | 60 | 475 | 176 | 10 | 160 | 170 | 1,375 | 546 | 18 | 269 | 287 | 2,706 | 1,115 | 30 | 420 | 450 |
| 811 | 484 | 169 | - | 34 | 34 | 435 | 168 | 69 | 46 | 115 | 447 | 190 | 105 | 52 | 157 | 508 | 226 | 149 | 57 | 206 |
| 812 | 1,345 | 444 | 6 | 222 | 228 | 1,108 | 405 | 10 | 225 | 235 | 1,024 | 410 | 13 | 229 | 242 | 1,062 | 447 | 15 | 217 | 232 |
| 813 | 883 | 299 | 3 | 9 | 12 | 966 | 363 | 3 | 22 | 25 | 1,006 | 416 | 3 | 23 | 26 | 911 | 397 | 3 | 23 | 26 |
| 871 | 4 | 2 | - | - | - | 4 | 2 | - | - | - | 4 | 2 | - | - | - | 4 | 2 | - | - | - |
| 2670 | 60 | 21 | - | - | - | 63 | 22 | - | - | - | 66 | 23 | - | - | - | 69 | 25 | - | - | - |
| Total | 5,268 | 1,816 | 63 | 1,034 | 1,097 | 5,963 | 2,222 | 193 | 1,807 | 2,000 | 7,966 | 3,223 | 264 | 2,226 | 2,490 | 10,469 | 4,425 | 342 | 2,658 | 3,000 |

## TAZ Map Figure




**Transportation Analysis Zones**
Dayton Transportation Plan Update
City of Dayton

## Appendix B. City of Dayton Capital Improvement Program (2019–2028) (See CIP on City Website, this is updated yearly)