

SHAKOPEE TRANSPORTATION PLAN

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Prepared by:

**WSB & Associates, Inc.
701 Xenia Avenue South, Suite 300
Minneapolis, MN 55416
(763) 541-4800
(763) 541-1700 (Fax)**

TABLE OF CONTENTS

1.0 INTRODUCTION1

2.0 STUDY AREA AND TRANSPORTATION SYSTEM OVERVIEW3

 2.1 Study Area3

 2.2 Existing Roadway Functional Classification4

 2.3 Existing Roadway Jurisdictional Classification.....7

 2.4 Existing Traffic Levels7

 2.5 Safety/Crash Information.....7

 2.6 Transit Service7

 2.7 Aviation.....8

3.0 GENERAL PLANNING CONSIDERATIONS.....9

 3.1 Future Land Use in Shakopee, Jackson Township, Louisville Township9

 3.2 Transportation Plans10

4.0 TRANSPORTATION ISSUES REVIEW AND ANALYSIS14

 4.1 Trunk Highway 41 River Crossing.....14

 4.2 County State Aid Highway 21 Extension15

 4.3 Shakopee Mdewakanton Sioux Community Land--Valley View Road Extension.....16

 4.4 Extension of Pike Lake Road.....17

 4.5 CSAH 16 Area Study.....17

 4.6 Western Extension of 17th Avenue18

 4.7 CSAH 17/TH 13 Corridor Study20

 4.8 CSAH 42 Corridor Study.....20

5.0 FUTURE TRANSPORTATION NEEDS22

 5.1 Analytical Approach22

 5.2 Assumed Future Land Use and Baseline Roadway Network22

 5.3 2030 Traffic Forecast Model and Results.....23

 5.4 2030 Roadway Deficiencies and Needs.....24

 5.5 Future Intersection Assessments and Improvements24

 5.6 2050 Traffic Results.....28

6.0 TRANSPORTATION PLAN29

 6.1 Funding Sources.....29

 6.2 Capital Roadway Improvements.....29

 6.3 Future Roadway Functional Classification.....30

 6.4 Future Roadway Jurisdictional Classification30

 6.5 Design and Right-of-Way Guidelines.....31

 6.6 Transit36

 6.7 Non-Motorized Transportation38

List of Tables

5.1 Transportation Improvements Assumed as Part of 2030 Baseline Roadway Network 22
 5.2 2030 Transportation Analysis Zone Information..... 23
 5.3 2030 Roadway Design/Capacity Improvement Requirements 26
 5.4 2050 Transportation Analysis Zone Information..... 28
 6.1 Roadway Design Guidelines..... 33
 6.2 Right-of-Way Guidelines..... 34
 6.3 Access Spacing Guidelines 35

List of Figures

Please note that all figures are compiled together at the end of the text.

1.1 Regional Location Map
 1.2 2030 and 2050 Planning Areas
 2.1 Project Area Aerial Photograph
 2.2 Existing Roadway Functional Classification
 2.3 Existing Number of Roadway Travel Lanes
 2.4 Existing Roadway Jurisdictional Classification
 2.5 Existing Traffic Volumes
 2.6 Crash Locations and Frequencies
 2.7 Transit Service and Facilities
 3.1 Future Land Use Plan
 4.1 TH 41 River Crossing Study Alternatives
 4.2 CSAH 21 Extension
 4.3 Shakopee Mdewakanton Sioux Community (SMSC) Land Use and Roadway Planning
 4.4 CSAH 16 Area Study
 5.1 Assumed Baseline 2030 Roadway Improvements
 5.2 Transportation Analysis Zone (TAZ) Map
 5.3 Projected 2030 Traffic Volumes
 5.4 Projected 2030 Congested Roadways (LOS E/F)
 5.5 Future Roadway Capacity/Design Needs
 5.6 Projected 2050 Traffic Volumes
 6.1 2030 Roadway Functional Classification
 6.2 2030 Roadway Jurisdictional Classification
 6.3 Typical Sections (sheets 1-8)
 6.4 Trails Map

List of Appendices

Appendix A Travel Forecasting Model and Methods
 Appendix B Typical Cross-Sections and Right-of-Way Requirements for Scott County Roadways
 Appendix C Scott County Access Management Guidelines

1.0 INTRODUCTION

Background

The City of Shakopee is located in Scott County on the Minnesota River approximately 25 miles from downtown Minneapolis (see *Figure 1.1*). It is a historic community first incorporated as a City in 1857. While it was once a free-standing community, it is now part of the developing area of the seven-county Twin Cities Metropolitan Area. The City experienced strong regional development pressure and dynamic urban growth from 1997 until 2006. Like most of the Region and communities across the country, the pace of development in Shakopee has slowed since 2006, but the City is expected to experience robust growth to the year 2030. Shakopee is home to large regional entertainment centers including Valleyfair and Canterbury Park Racetrack. An important owner of extensive lands within the City is the Shakopee Mdewakanton Sioux Community (SMSC).

The last full Transportation Plan for the City of Shakopee was prepared in 1998. That document covered a range of transportation issues and addressed transportation improvement needs through a 2020 planning horizon. Since the 1998 Transportation Plan, a number of developments have taken place including:

- Population and economic growth occurred at a very rapid rate, calling for ongoing transportation assessments and improvements.
- Scott County has designated large areas of land directly west and south of Shakopee (in Jackson and Louisville Townships) for possible urban expansion in its 2001 Comprehensive Plan. It is anticipated that Shakopee will/may provide urban services in the long-term. The 1998 Shakopee Transportation Plan did not address these areas.
- A number of significant developments have taken place regarding transportation projects and issues affecting Shakopee and its relationship to the regional transportation network.

Purpose

The purpose of this Transportation Plan Update (Update) is to build upon the information, analyses, and recommendations from the 1998 document and to address issues which were perhaps not at the forefront at that time. This document presents updated traffic forecasts through 2030 and uses them to refine the definition of transportation needs into the future. It also updates the discussion of general transportation planning issues including: functional and jurisdictional roadway classification, general design guidelines, access management, pedestrian, and transit considerations.

Transportation and Land Use Planning

The broader purpose of this plan is to make sure that the relationship between land use planning and transportation planning is recognized and respected. Effective transportation planning is very important for any community, but particularly for one experiencing rapid growth such as Shakopee. Residents must be provided with transportation facilities and services which meet mobility needs in an efficient and safe manner. Transportation facilities, at the same time, need to be planned and constructed so as to limit

negative social, environmental, and aesthetic impacts to the greatest degree feasible. In addition, residents who cannot or choose not to drive need to have transportation options to meet their daily needs.

There is fundamental link between transportation planning and land use planning. Successful land use planning cannot take place without taking transportation considerations into account. Conversely, transportation planning is driven by the need to support existing and future land uses which the community supports and/or anticipates. This Transportation Plan has been prepared with the goal of supporting the land use vision identified in Shakopee's Land Use Plan.

2030 and 2050 Planning Periods

Metropolitan Council requirements dictate that cities use 2030 as the planning timeframe for their 2008 Comprehensive Plan Update documents. The City of Shakopee also wishes to address a longer timer timeframe to evaluate the outcomes and infrastructure needs associated with the potential annexation of Jackson and Louisville Townships. The 2030 analysis of Transportation Needs includes only areas within existing City limits. The 2050 analysis also includes Jackson and Louisville Townships with assumed urban development in those areas. *Figure 1.2* shows the 2030 and 2050 planning areas, respectively.

Structure of Document

The remainder of this Update is structured as follows:

- Section 2.2 - Study area and transportation system overview
- Section 2.3 - General planning considerations
- Section 2.4 - Transportation issues review and analysis
- Section 2.5 - Future roadway needs
- Section 2.6 - Transportation plan

2.0 STUDY AREA AND TRANSPORTATION SYSTEM OVERVIEW

2.1 Study Area

Figure 2.1 shows an aerial photograph of the City and Jackson and Louisville Townships. It can be seen that there are still substantial areas of undeveloped areas of land which in the future will be considered very attractive by developers.

According to the 1990 census, the population of Shakopee was 11,739. By the 2000 census, this figure had grown to 20,568, an increase of approximately 75 percent. Between 2000 and 2007, Shakopee was the most rapidly growing city in the Region, having added in excess of 10,000 residents to reach a population of nearly 33,000. In its January 2004 Comprehensive Plan Update (adopted by the Shakopee City Council, but not acted on by the Metropolitan Council), the City of Shakopee predicted a population of 40,653 by the year 2020 within the current municipal boundaries (not including Jackson and Louisville Townships). This represents a 100 percent increase over the 2000 census.

The rate and shape of development in Shakopee has been dictated to an important degree by transportation factors. Since the City is south of the Minnesota River, river crossings are very important development considerations. The new Bloomington Ferry Bridge (TH 169 completed in 1996) significantly increased access between Shakopee and the metro areas to the north. In addition, the TH 169 bypass around downtown allowed the overall transportation system in the City to operate more efficiently by removing regional “through” trips from local roadways. The TH 169 bypass has drawn commercial activity from the traditional downtown area to intersections between important north-south roadways and the bypass. “Big box” and general suburban-form commercial development is taking place in proximity to the bypass, as well as roadways such as CR 17/Marschall Road and CSAH 18, and this trend is anticipated to continue. However, other than the Bloomington Ferry Bridge, which is at capacity in the a.m. peak traffic period, there is not another river crossing to the west that is not subject to periodic flooding until the crossing at the City of Belle Plaine.

There are two large entertainment facilities in Shakopee which generate relatively high levels of regional traffic and are important factors regarding transportation planning for the City. These are the Valleyfair Amusement Park located north of TH 101 and east of CSAH 83 and the Canterbury Park Racetrack located on CSAH 83 north of TH 169. In addition, Mystic Lake Casino and its associated enterprises located in Prior Lake to the south generate high levels of traffic on roadways within the City.

Further information on land use as it pertains to future transportation issues and needs for the City is presented in Section 3.1 of this Plan Update.

2.2 Existing Roadway Functional Classification

The functional classification system is the creation of a roadway and street network which collects and distributes traffic from neighborhood streets to collector roadways to arterials and ultimately the Metropolitan Highway System. Roads are placed into categories based on the degree to which they provide access to adjacent land or provide mobility for through traffic. Ideally, roads are designed to perform a designated function, and are located to best serve the type of travel needed.

The functional classification system used in the City of Shakopee, as described below and shown in **Figure 2.2**, conforms to the Metropolitan Council standards. The Metropolitan Council has published these criteria in the Transportation Development Guide/Policy Plan. This guide separates roadway into five (5) street classifications, including principal arterials, minor arterials, major collectors, minor collectors, and local streets. These classifications address the function of State, County, and City streets from a standpoint of the safe and efficient movement of traffic through the City while providing satisfactory access to residents and businesses located within the City. A further description of design standards for streets within the City of Shakopee is contained in Section 6.5.1 of this Plan.

For the purposes of this Plan, the City of Shakopee, plus Jacksonville Township and Louisville Township, will be referred to as the Project Area. Information regarding existing roadway functional classification in the Project Area is provided under the following headings. This information is depicted graphically on **Figure 2.2**.

Principal Arterial Roadways have the highest traffic volume and capacity. They are considered part of the Metropolitan Highway System. They are intended to connect the Metropolitan Centers with one another and connect major business concentrations, important transportation terminals, and large institutional facilities. They are typically spaced two to six miles apart in developing areas and six to 12 miles apart in commercial/agricultural and general rural areas. Interchanges on principal arterials are usually spaced at least one mile apart in urban areas.

- In the Project Area, there are two principal arterials: TH 169 and CSAH 18. Adjacent to the City, there are two additional principal arterials: TH 13, east of TH 169, and CSAH 42 from CSAH 18 to the east.

Minor Arterial roadways connect important locations within the Project Area with access points to the Metropolitan Highway System and with other locations within Scott County. Minor arterial roadways and highways serve less concentrated traffic generating areas such as a neighborhood shopping centers and schools. Minor arterial roadways serve as boundaries to neighborhoods and distribute traffic from collector streets. Although the predominant function of minor arterial streets is the movement of through traffic, they also serve considerable local traffic that originates or is destined to points along specific corridors.

The Metropolitan Council has identified “A” minor arterials as streets that are of regional importance because they relieve, expand, or complement the principal arterial system. There are four types of “A” minor arterials as described below:

1. **Relievers** – These minor arterials provide direct relief for traffic on the Metropolitan Highway System. These roadways include the closest routes parallel to the principal arterials within the urban area. These roadways accommodate medium length trips, as well as provide relief to congested principal arterials.
 - CSAH 69/CSAH 101 (Old TH 169) ,and CSAH 16 are reliever roadways in the City.
2. **Expanders** – These minor arterials provide a way to make connections between developing areas outside the interstate ring or beltway. These routes are located conveniently beyond the area reasonably served by the beltway. The roadways serve medium to long, suburb-to-suburb trips.
 - CSAH 78, CSAH 42, and CSAH 101 across River are expander roadways in and around the City of Shakopee.
3. **Connectors** – These minor arterials are those roads that provide good, safe connections among town centers in the rural areas within and near the seven counties. Connectors also link rural areas to principal arterials and “A” minor arterials.
 - CSAH 17 and CSAH 83 are connector roadways in the Project Area.¹
4. **Augmenters** – These minor arterials are roads that augment principal arterials, primarily within the I-494/I-694 interstate ring. The principal arterial network in this area is mature; however, it is not sufficient in all cases relative to density of development that the freight network serves. In these situations, key minor arterials serve many long trips.
 - There are no augmentser roadways in or adjacent to the Project Area.

All other minor arterials are considered “B” minor arterials. “B” minor arterials have the same function as “A” minor arterials but are not eligible for federal funds. In or close to the City of Shakopee, the following roadways are classified as “B” minor arterials:

- 4th Avenue; CSAH 83 to Fuller Street
- 6th Avenue; Harrison Street to Holmes Street
- 10th Avenue; CSAH 69 to CSAH 17
- CSAH 16; CSAH 17 to CSAH 18
- CSAH 14; TH 169 to CSAH 17
- CSAH 15; 6th Avenue to TH 282
- Fuller Street; CSAH 101 to 4th Avenue (connection to/extension of 4th Avenue “B” minor arterial)

¹ It may be noted that CSAH 17 is being studied by Mn/DOT and Scott County to determine its most appropriate future functional classification; it may become a principal arterial.

The existing numbers of travel lanes on minor arterials in Shakopee are depicted on *Figure 2.3*.

Collector Streets (Major and Minor) provide direct service to residential areas, commercial and industrial areas, local parks, churches, etc. In order to preserve the amenities of neighborhoods while still providing direct access to business areas, these streets are usually spaced at one-half mile intervals. This spacing allows for the collection of local traffic and conveyance of that traffic to higher-use streets. Collector streets may also serve as local through routes. Parking and traffic controls are usually necessary to ensure safe and efficient through movement of moderate and low traffic volumes. These streets are usually included in the City's Municipal State Aid System. Collector roadways in the Project Area are as follows:

- County Road 69; TH 169 to CSAH 14
- County Road 77; 10th Avenue to CSAH 78
- County Road 79; 10th Avenue to CSAH 14
- Holmes Street; 4th Avenue to 10th Avenue
- County Road 79 (Spencer Street); 1st Avenue to 10th Avenue
- Market Street; 4th Avenue to Bluff Avenue
- Sarazin Street; CSAH 16 (Eagle Creek Boulevard) to CSAH 101
- Shenandoah Drive; 4th Avenue to CSAH 101
- Valley Park Drive; 12th Street to CSAH 101
- Valley Industrial Boulevard South; CSAH 83 to Valley Park Drive
- 12th Avenue; CSAH 83 to Valley Park Drive
- 13th Avenue; CSAH 18 to east municipal boundary
- Vierling Drive; County Road 77 to CSAH 16
- St. Francis Avenue/Sarazin Street/Valley View Road; CSAH 17 to CSAH 83
- County Road 72; County Road 73 to CSAH 17

The existing numbers of travel lanes on collector roadways are depicted on *Figure 2.3*.

Local Feeders are local streets that will function as collector roadways. They collect and distribute traffic from local streets within a given development area but are short in length relative to a collector roadway. Their design standards are not substantially different from local streets, but the City will require that they have sidewalks on, at a minimum, one side.

Local Streets provide the most access and the least mobility within the overall functional classification system. They allow access to individual homes, shops, and similar traffic destinations. Direct access to abutting land is essential for all traffic originates from or is designated to abutting land. Through traffic should be discouraged by using appropriate geometric designs and traffic control devices. Local streets in the Project Area are depicted on *Figure 2.2*.

City Policy is to provide a network of City local and collector streets which provides efficient circulation and connectivity characteristics. Cul-de-sacs and other design approaches which restrict inter-connected flows of local traffic are discouraged. It is also City policy to provide a sound network of integrated streets which limits an over-reliance on the County roadway system.

2.3 Existing Roadway Jurisdictional Classification

Roadways are classified on the basis of which level of government owns or has jurisdiction over the facility. *Figure 2.4* depicts the existing jurisdictional classification of the roadways serving the Shakopee. Mn/DOT maintains the Interstate and State Trunk Highway system. Scott County maintains the County State Aid Highways (CSAH) and County Road (CR) systems. The remaining roads and streets located within the City are the responsibility of the City of Shakopee. In addition, a portion of McKenna Road is in SMSC Trust Land and is therefore is on the SMSC Indian Reservation Roads (IRR) Inventory. IRR roadways are subject to federal and tribal jurisdiction.

2.4 Existing Traffic Levels

Average Daily Traffic (ADT) volumes on the most important streets in the Project Area are depicted on *Figure 2.5*. The ADT volumes represent the total traffic carried on the average 24-hour day for the year. The data depicted was gathered by Mn/DOT during 2005.

2.5 Safety/Crash Information

Figure 2.6 presents the locations and frequencies of crashes in Shakopee based on Mn/DOT crash data for the 2004-2006. Mn/DOT data files allow individual intersections, corridors, or areas to be analyzed in detail. For each study area, crashes can be sorted and analyzed in terms of severity and type (e.g. rear-end, sideswipe, etc.) and other factors.

2.6 Transit Service

Shakopee is within the Metropolitan Transit Taxing District. It is within Market Area III as designated by the Metropolitan Council. Service options for Market Area III include peak-only express, small vehicle circulators, midday circulators, special needs transit (ADA, seniors), and ridesharing.

The City of Shakopee has adopted the original Scott County Unified Transit Management Plan (UTMP) and its 2008 update. The UTMP serves as a guide for the development and provision of transit services to both City and Scott County residents in the short and long-term.

Existing transit service and facilities are presented on *Figure 2.7*. The facilities include the Seagate Park and Ride lot and the Southbridge Crossings park-and-ride lot. There is currently one commuter route, a circulator route, and commuter shuttle route which serve residents of Shakopee. The commuter line is the BlueXpress (Route 490) providing eight runs to Downtown Minneapolis in the morning and afternoon. The BlueXpress service is a cooperative venture between Shakopee Transit and the City of Prior Lake/Laker Lines. This service operates from the Southbridge Crossings Transit Station, which was a joint project of the Cities of Shakopee and Prior Lake and Scott County, with funding assistance from MnDOT and the Metropolitan Council.

The City also operates circulator service (Route 496 East and West, provided under contract by Scott County) and a commuter shuttle service (Route 498, also provided under contract by Scott County). Fares on these services follow the regional fare schedule.

In 2007, Scott County took over the provision of dial-a-ride service from the City. The County now provides dial-a-ride to all County residents.

2.7 Aviation

There currently is no airport within the City of Shakopee. The major airport in the region is the Minneapolis-St. Paul International Airport (MSP), which is approximately ten miles northeast of Shakopee. The closest airport to Shakopee is the Flying Cloud Regional Airport which is owned and operated by the Metropolitan Airports Commission. It has three runways, with lengths of 3,910 feet; 3,600 feet; and 2,690 feet; respectively. Flying Cloud Airport is approximately one mile north of Shakopee. The northern edge of Shakopee is within the Flying Cloud Airport “Influence Area” requiring coordination with the Metropolitan Airports Commission (MAC) to implement airport-specific zoning. *(Last sentence added per comment of Chauncey Case/Metropolitan Council)*

The Metropolitan Council identifies that all Minnesota communities have the responsibility to include air-space protection in their comprehensive plans, even if there is no existing or planned aviation facility within the given city. The protection is for potential hazards to air navigation, including electronic interference. Airspace protection should be included in local codes/ordinances to control height of structures, especially when conditional-use permits would apply. The comprehensive plan should include policy/text on notification to the FAA as defined under CFR – Part 77, using FAA Form 7460-1 “Notice of proposed Construction or Alteration.”

3.0 GENERAL PLANNING CONSIDERATIONS

3.1 Future Land Use in Shakopee, Jackson Township, Louisville Township

Scott County, in its 2030 comprehensive plan, posits that the City of Shakopee will continue to provide about 43 percent of the jobs in the County. Recently, the Scott County Association for Leadership and Efficiency (SCALE) has set as a goal having 50 percent or more of all jobs in the County filled by residents of the County. Currently, only about 32 percent of these jobs are held by County residents. Shakopee is supportive of this goal, as it would bring economic benefits to the City and the County, and would potentially reduce the size of road, bridge, and transit investments that would need to be made during this time period.

As can be seen on *Figure 2.1* there are substantial areas of undeveloped land within the City of Shakopee, as well as the adjacent Jackson and Louisville Townships. These areas are and will be considered very attractive for developers. Within the current municipal boundaries, Shakopee's population is projected to double by 2020 in the 2004 *Shakopee Comprehensive Plan Update*. This does not include anticipated development in Jackson and Louisville Townships.

The overall development pattern of Shakopee is moving away from the traditional pattern emanating from the historic Downtown area and First Avenue Corridor to a more dispersed pattern based upon new transportation corridors and proximity to natural features such as lakes, wetlands, and bluffs. Commercial development is concentrating along important north-south corridors such as CSAH 17 and CSAH 18 and their intersections with TH 169. The City wishes to ensure that adequate land is maintained for balanced commercial and industrial land use in the face of intense demand for residential development. This dispersion is likely to be further impacted by the recent, substantial SMSC land acquisitions within the City limits of Shakopee

Scott County has designated Jackson and Louisville Townships as Urban Expansion Districts. As can be seen in *Figure 2.1*, these areas currently are largely undeveloped. It is anticipated that the City of Shakopee will be providing urban infrastructure and service needs for these areas. The City and Jackson Township currently have an orderly annexation agreement (OAA), so it is likely that areas currently in that township will be served after appropriate annexation procedures. It is not yet clear whether services would be provided to Louisville Township as the result of annexation, agreement, or some other process.

The 2030 land use plan for the Project Area is presented on *Figure 3.1*. Regarding future development, the highlights of this plan area as follows:

- Large areas of low density residential to the south,
- An industrial area northwest of TH 169 in current Jackson Township with good access to the Union Pacific Railroad line,

- Continued commercial development in the interchange areas of north-south roadways (such as CSAH 69, CSAH 17 and CSAH 18) and TH 169; a new commercial zone southeast of TH 169 in current Jackson Township, and
- Business park development east of the CSAH 83/TH 169 interchange.

3.2 Transportation Plans

The following sections summarize transportation planning documents which are important relative to transportation issues for the City of Shakopee. Wherever possible, the City of Shakopee does, and will continue, to cooperate with adjacent jurisdictions to develop supportive and interconnected local roadway systems.

Scott County Transportation Plan

The current version of the *Scott County Transportation Plan* is dated 2001 and plans for the year 2020. The County, like the City, is in the process of updating its plan, and proposed revisions to the County plan may affect the final form of the City's plan when it is adopted by the City Council. From the perspective of this Shakopee Transportation Plan Update, highlights of this document are discussed below.

Roadway Jurisdictional Classification—the County Transportation Plan suggests that 17th Avenue, ultimately envisioned to extend from CR 69 to CSAH 83 and serve as a south parallel route to TH 169, may be discussed as a facility changing from City to County jurisdiction. The County Transportation Plan suggests that a future alignment study involving the County, the City, and Jackson Township may be needed before 17th Avenue would be constructed all the way west to CR 69. The jurisdictional change has taken place, as has the alignment study.

Safety—CSAH 17 north of Vierling Drive in Shakopee is cited as an area of safety concern given the direct commercial access on an “A” minor arterial, relatively high traffic levels, and a four-lane undivided design. (In the meantime, this roadway has been re-striped for a three-lane design with a center turn lane.)

Capacity—the County Transportation Plan recommends (among others) the following projects:

- TH 41 from TH 169 to the County border (one mile)—expand from two-lane to four-lane divided.
- CSAH 16 between CSAH 18 and CSAH 83 (three miles)—expand from two-lane to four-lane divided.
- CSAH 17 from Vierling Drive to CSAH 101 (1.5 miles)—expand from four-lane undivided to four-lane divided (this leg has since been revised to a three-lane section design with center-turn lane; as an interim measure, intersections may be reconstructed with four-lane/channelized turn lanes design).
- CSAH 17 from St. Francis Avenue to CSAH 82 (three miles)—expand from two-lane to four-lane divided.

- CSAH 83 from TH 169 to CSAH 82 (four miles)—expand from two-lane to four-lane divided.
- CSAH 101 from CSAH 69 to CSAH 17 (one mile)—expand from four-lane undivided to four-lane divided.²

Access Management—The County Transportation Plan identifies recommended Scott County Minimum Access Spacing Guidelines (see Section 6.5.2 of this Plan Update) which were developed from those guidelines from the 1995 Scott County Transportation Plan.

System Continuity—The County Transportation Plan identifies the extension of CSAH 21 from CSAH 42 north to CSAH 18 as a continuity improvement requiring further evaluation prior to programming. The NEPA planning and environmental documentation process is currently underway for this project (see further information provided in Section 4.2).

As of November 2008, the Draft Scott County 2030 Transportation Plan is available for review. This document has been reviewed by City representatives as was been used as a source of information regarding traffic forecasts and recommended improvements on County roadways.

TH 169 Interregional Corridor Management Plan

Mn/DOT’s goal with the Interregional Corridor (IRC) program is to “...enhance the economic vitality of the state by providing safe, timely, and efficient movement of goods and people. The emphasis is on providing efficient connections between regional trade centers.” The TH 169 IRC Management Plan covers TH 169 between I-494 and TH 60 south of Mankato. Between I-494 and TH 19 at the southern border of Scott County, TH 169 has been classified as a High Priority Interregional Corridor. From this point south, it is a Medium Priority Interregional Corridor.

From the perspective of this Shakopee Transportation Plan Update, the most significant aspects of the TH 169 IRC Management Plan are as follows:

- The segment of TH 169 between I-494 and Belle Plaine (TH 25) is recommended to become a freeway design with access only at interchange facilities. This will require local authorities to control land use/access accordingly and to work with Mn/DOT and, as-appropriate, County authorities to provide local road networks which support the TH 169 freeway design.
- As part of the transition to a freeway design, an overpass at CSAH 69 is identified as a potential alternative. Under this approach, access would be provided through frontage roads connecting to a potential new interchange at TH 41. The TH 169 IRC Management Plan also identifies that the City of Shakopee did not favor this approach and that the overpass without access “should not be used to make future decisions without additional analysis and study.” A key study for this issue is the TH 41 Over Minnesota River analysis and documentation. This issue is further discussed in Section 4.1 of this report.

² The *Scott County Transportation Plan* indicates that that if sufficient right-of-way for the recommended CSAH 101 project cannot be obtained, alternative routes need to be built or expanded to relieve congestion on the designated route.

Prior Lake Transportation Plan

Prior Lake has completed its 2030 update. This document was reviewed from the perspective of consistency with the City of Shakopee's intentions. Of primary interest from Shakopee's perspective are north/south roadways which link Shakopee and Prior Lake. These are: CSAH 17, CSAH 83, McKenna Road, Pike Lake Road, CSAH 21 (future extension), and CSAH 18. In addition, CSAH 42 is an important east-west roadway which runs south of Shakopee within Prior Lake passing into Shakopee approximately a half mile west of CSAH 83.

Significant information on these roadways is in the Prior Lake Transportation Plan relative to this Shakopee Transportation Plan is highlighted below:

- CSAH 17 is identified as an "A" Minor Arterial from Shakopee south to TH 13.
- CSAH 83 is identified as an "A" Minor Arterial from Shakopee south to CSAH 82, from north of CSAH 42 to Shakopee, CSAH 83 to be improved to four-lane urban divided ("long-range" project) design.
- McKenna Road, one half mile north and south of CSAH 42, to be re-aligned to straighten the roadway ("short-range" project).
- CSAH 21 to be extended between CSAH 42 and Shakopee (and north to TH 169) to be designated as Principal Arterial with a four-lane Urban Divided Expressway design ("short-range" project).
- Pike Lake Road, between CSAH 42 and Shakopee, to be realigned and improved ("long-range" project) to be designated as a Major Collector.
- CSAH 18 to be reclassified from Principal Arterial to "A" Minor Arterial.
- CSAH 42 to be upgraded to a six-lane urban divided between TH 13 and CSAH 21. Between TH 13 and Boone Avenue this is identified as "short range," and between Boone Avenue and CSAH 21, it is identified as "long range."
- CSAH 42 between CSAH 18 and CSAH 21 to be reclassified from "A" Minor Arterial to Principal Arterial.

This information is generally consistent with the City of Shakopee's understandings and intentions.

Savage Transportation Plan

The City of Savage Transportation Plan was reviewed to ensure consistency with that document. The primary roadways between Savage and Shakopee are CSAH 101 and CSAH 16 (McColl Road). These are under the jurisdiction of Scott County. The functional classification which Shakopee has for these roadways is consistent with Scott County and Savage. CSAH 16 is currently four-lane west to TH 13; the Savage Transportation Plan identifies that Scott County intends to upgrade the facility to four-lane west to CSAH 18. This is consistent with Shakopee's expectations and intentions.

The only other common roadway between the two Cities is Preserve Trail. This serves as a local street for both communities, and there are not significant issues involving it. One of the key elements identified is to develop a functional hierarchy of streets and roadways, as well as their access to the regional system, to ensure that they support the existing and anticipated development of the area; serve both sort trips and trips to adjacent communities; and compliment and support the metropolitan highway system.

4.0 TRANSPORTATION ISSUES REVIEW AND ANALYSIS

With the rapid growth the City of Shakopee and neighboring communities have experienced, transportation issues develop on an ongoing basis requiring systematic consideration and assessment. The purpose of this section is to identify specific issues, to provide background and assessment discussion, and make preliminary recommendations as appropriate. Individual issues are discussed in the following sections.

4.1 Trunk Highway 41 River Crossing

A National Environmental Policy Act (NEPA) Tier 1 Environmental Impact Study (EIS) process is currently underway to examine the need and preferred corridor for a new regional river crossing. The purpose of this crossing would be to connect TH 169 with realigned TH 212 (north of the existing TH 212) with adequate capacity to meet the long-term needs of development in Scott and Carver County within the seven-county Metropolitan Area. The Scoping Document/Draft Scoping Decision Document for this process was prepared by Mn/DOT as the Responsible Government Unit and put on public notice in April of 2004. The final Scoping Decision Document was published in February of 2005. Mn/DOT anticipates selecting a preferred alternative corridor and filing a record decision on that corridor in 2008. The Tier 2 EIS would occur when construction of the new crossing is contemplated and when funding has become available.

The Scoping Decision Document identifies that the project may not be constructed for 20 years or more, but since the area is developing rapidly, right-of-way needs and potential project impacts should be defined in the near term through the Tier I documentation. The existing TH 41 bridge was replaced due to structural problems with work commencing in 2005. In addition, the existing TH 41/TH 169 intersection was improved to enhance operational and safety performance. However, the bridge replacement and short-term intersection improvements will be inadequate to meet long term system requirements.

The issue of most importance to Shakopee and its transportation system regarding the outcome of the TH 41 over Minnesota River planning process is where the crossing would connect with TH 169 on the Scott County side of the Minnesota River. Any such connection will be a freeway-to-freeway interchange facility. This location, in turn, raises two primary issues for the City of Shakopee:

- Would the location of the new river crossing/TH 169 interchange preclude an interchange at TH 169/CSAH 69 which the City of Shakopee strongly desires for access needs?
- How would the traffic flow to and from the new river crossing/TH 169 interchange affect the overall transportation system serving Shakopee, as well as development in Shakopee and Scott County generally.

The TH 41 River Crossing Scoping Decision Document identifies various river crossing alignments to be further analyzed in the DEIS. These alternatives are presented on **Figure 4.1**. The alignments

recommended for continuing analysis in the EIS process and their interchange location with TH 169 are listed below:

West Alignment

- W-2: one mile southwest of CSAH 78 in Louisville Township

Center Alignment

- C-2A: C-2A➔existing TH 41/TH 169 location; C-2C➔ at or near the existing TH 169/CSAH 69 intersection

East Alignments

- E-1: at or near the existing TH 169/CSAH 69 intersection
- E-2: at or near the existing TH 169/CSAH 69 intersection

The City of Shakopee will continue to monitor the TH 41 Minnesota River study and planning process. The City has gone on record favoring one of the easterly alignments, or a variation thereof, as they best serve the demonstrated current and future transportation needs. The City, however, believes that a future, additional river crossing to the west will be required to handle traffic needs in the outlying portions of Scott and Carver counties and areas to the south and west.

The TH 41 Study Advisory Committee (SAC) met in April 2008 to review the project status and factors being considered by Mn/DOT and FHWA in the selection of a preferred alternative, and as a forum for SAC members to share their perspectives on the project. The SAC has representation by the City of Shakopee. No consensus emerged from the discussion regarding the best of the river crossing locations studied in the Tier I Draft EIS as described above. However, there was near unanimous agreement that “do nothing” is not a viable alternative. Mn/DOT will continue consultations with stakeholders and further review of information to build consensus toward a preferred alternative.

4.2 County State Aid Highway 21 Extension

A NEPA study and documentation process has been completed for a project to extend CSAH 21 north and east from CSAH 42 to connect with CSAH 18. This link is being pursued to provide countywide continuity between TH 169 and points south on CSAH 21. Scott County is moving forward with planning and design of this roadway with construction planned to commence in 2009 and completion planned in 2011.

The overall Build corridor that was analyzed in the DEIS process is generally depicted on *Figure 4.2*. The roadway extension will be approximately three miles in length. It will connect to CSAH 18 at Southbridge Parkway. CSAH 18 will be reconstructed to align with Southbridge Parkway, forming a four-way intersection (or possibly grade-separated interchange) with CSAH 21. Existing CSAH 18 north of Southbridge Parkway to the interchange at TH 169 will be redesignated as CSAH 21.

Regarding the intersection of the new CSAH 21 roadway with existing CSAH 18, three alternatives were considered in the DEIS: four-lane at-grade intersection, six-lane at-grade intersection, and a

four-lane grade-separated interchange. Ultimately, the four-lane alternative was selected for this intersection.

The new link will function as a principal arterial in the Scott County roadway system. Current plans for the project include the construction of a second park and ride facility at the southwest corner of CR 16 and future CR 21 on land least from the SMSC. This park and ride would provide approximately 540 parking spaces to serve transit needs in the TH 169 corridor. The site has potential for significant expansion if needed in the future.

4.3 Shakopee Mdewakanton Sioux Community Land--Valley View Road Extension

The Shakopee Mdewakanton Sioux Community (SMSC) currently owns approximately 900 acres of land in the south-central portion of the Shakopee corporate boundaries (see *Figure 4.3*). The SMSC owns and operates Mystic Lake Casino approximately two miles south of their land holdings in Shakopee. The SMSC has expanded their holdings within Shakopee through ongoing land acquisition and this trend appears to be continuing.

As can be seen on *Figure 4.3*, the three categories of SMSC land are Fee, Trust, and Proposed Trust. Native American-owned land which is in Trust status is exempt from state and local controls and taxation. In 2000 the SMSC applied to the Federal Department of Interior to move 593 acres in Shakopee into Trust status. The schedule of a determination from the Department of Interior is not known.

The SMSC land presented on *Figure 4.3* is significant regarding the City's transportation planning efforts in two ways:

- Valley View Road—For roadway system coverage and continuity, a logical eastern extension of Valley View Road would be on an alignment which would pass through SMSC land. The 1998 *Shakopee Transportation Plan* envisioned Valley View Road extended east to CSAH 21 and being classified as a collector facility. If the City were to attempt to construct a roadway through SMSC Trust land, it would not legally be able to ensure the City design standards to be used because this area would be exempt from City regulation. This portion of roadway would have to be constructed under an Agreement to Cooperate as negotiated between the City and the SMSC.
- SMSC Land Use—The degree and type of land-use development on SMSC land would have bearing on the appropriate location and design of roadways in the vicinity. Presumably any such development would require access (for example by a roadway such as an extended Valley View Road).

The value of an extension of Valley View Road from an operational perspective was analyzed through traffic forecasting which was done for this Transportation Plan. The forecasting methods and overall results are discussed in detail in Section 5.0. The forecast model, including the baseline 2030 road network and 2030 land-use development, was run with and without the Valley View

Road extension between CSAH 83 and Foothill Trail. The run with the extension showed a decrease in traffic on parallel roadways (CSAH 16 and CSAH 42) by approximately ten percent.

The baseline and Valley View Road extension computer simulation runs both assumed that the SMSC land will be developed with single-family housing by 2030. This is the best estimate which can be made by the City at this time. This assumption was made for the overall traffic forecasting analysis addressed in more detail in Section 5.0.

As identified above, the Valley View Road extension would have significant operational benefits in terms of relieving traffic levels on other roadways within the system. Perhaps more importantly, however, this extension would be important from a roadway spacing and system continuity perspective. East of CSAH 83, there currently is no east-west roadway between CSAH 16 and CSAH 42. The distance between these existing east-west roadways is approximately two miles at CSAH 83 and approximately 1.3 miles at Pike Lake Road. The east-west distance between CSAH 83 and Pike Lake Road is approximately two miles. This gap in coverage is not currently a substantial problem because the area is not highly developed, but with anticipated future development, it will become a more serious transportation issue. When there are substantial gaps in roadway networks, this requires travelers and emergency response providers to take circuitous routes leading to increased travel/response times.

The Valley View Road extension would be a logical and effective location for a collector level roadway to meet future roadway spacing, access, and operational requirements. The extension is listed in the SMSC Transportation Plan. The SMSC Engineering Design Manual requires streets to be designed to Mn/DOT State Aid standards. It is recommended that the City formally pursue this extension within the relative near future beginning with discussions with the Shakopee Mdewakanton Sioux Community (SMSC) regarding the SMSC's ultimate land-use development goals, roadway design considerations, and agreements which will have to be in place between the City and the SMSC.

4.4 Extension of Pike Lake Road

Pike Lake Road has now been connected to Southbridge Parkway. Within Prior Lake, the roadway is proposed to be classified as a collector in the transportation plan being prepared by the City of Prior Lake. As development is taking place north of CSAH 16, it is logical to extend this road to connect more fully with the local network.

4.5 CSAH 16 Area Study

The City of Shakopee has conducted a CSAH 16 Area Study. The study area was generally bounded by TH 169 to the north, CSAH 42 to the south, CSAH 83 to the west, and CSAH 18 to the east. The purpose of the study was to address a range of issues including the development of north/south and east/west collector system to serve this developing area of Shakopee and Prior Lake. Key topics and outcomes are summarized below:

Valley View Road Extension

One of the outcomes of this study and associated coordination with Prior Lake was that the Valley View Road extension discussed in Section 4.3 should be shifted slightly to the north at its connection to Foothill Trail. This would accommodate residential development which has been platted south of the Shakopee/Prior Lake border. It would mean that the extension would be entirely within the City of Shakopee.

East/west Collector Street

Another issue that received analysis and discussion was a potential east/west collector roadway south of Martindale Street extending from Pike Lake Road to Foothill Trail. **Figure 4.4** depicts the general alignment of this roadway. It would be partially in Shakopee and partially in Prior Lake. It was determined that a new roadway would be required, in conjunction with proposed development in this area of Prior Lake, to connect an extension of Foothill Trail to Muhlenhardt Road. It would be logical to extent this roadway west to Pike Lake Road as depicted on **Figure 4.4**. The extension of Foothill Trail from CSAH 42 to the proposed east/west roadway discussed under this heading is an issue that the City of Prior Lake will address with future study.

Coordination Issues

Jurisdictional alignments of roadways, concerning maintenance responsibilities and future improvements, were discussed between the Cities of Shakopee and Prior Lake as part of the CSAH 16 Area Study. It was determined that the City of Shakopee and Prior Lake should enter into written agreements on existing and future roadways, as well as utility agreements for sewer and/or water service.

4.6 Western Extension of 17th Avenue

The 1998 *Shakopee Transportation Plan* identifies the goal of constructing 17th Avenue ultimately between CR 69 and CSAH 83. This roadway would serve as a southern frontage road to TH 169, similar to Vierling Drive north of TH 169. The Plan also identifies the future 17th Avenue as an “A” Minor Arterial and recommends a four-lane facility with left and turn lanes at major intersections. To date, 17th Avenue has been constructed with this section west to CSAH 15.

In its *2020 Transportation Plan* (2001), Scott County identifies that a 17th Avenue jurisdictional change to the County may be discussed between the County and the City. This jurisdictional change occurred in 2008.

Currently, a question involving 17th Avenue is how far west it should be extended. An important factor in this assessment process is the bluff line which exists west of CSAH 15. If 17th Avenue were extended directly west of CSAH 15 on its existing alignment to connect with CR 69, it would have to be cut through the bluff at substantial cost. The Future Land Use Map used for the Shakopee Transportation Plan travel model generally calls for commercial development below (north of) the bluff line and residential development above the bluff line.

The *TH 169 Corridor Management Plan* (Mn/DOT, 2002) identifies a potential frontage road south of TH 169 beginning at the TH 169/CSAH 15 interchange and extending west to CR 69 (and beyond) north of the bluff line. This is a logical location for a frontage road given the anticipated

location of commercial development in the TH 169/CR 69 area, as well as the construction constraints associated with the bluff line.

When assessing how far west to extend 17th Avenue as an anticipated future County arterial roadway, it is unclear how much County-level demand there would be for such an extension beyond CSAH 15. Motorists on 17th Avenue/CSAH 16 wishing to access TH 169 to the north could efficiently do so via the TH 169/CSAH 15 interchange. Those wishing to access destinations south of Shakopee could use CSAH 15 more effectively than CR 69 because it extends further to the south all the way to the southern County border. CSAH 15 has connections to significant east-west roadways including TH 282, TH 13, and various County State Aid Highways.

The alternative of extending 17th Avenue all the way west to CR 69 was evaluated from an operational perspective using the traffic forecasting model developed for this Transportation Plan (please refer to Section 5.0 for further discussion of Shakopee traffic forecasting). A model called TP+ was used to forecast traffic levels for 2030 in Shakopee and what is currently Jackson Township and Louisville Township. A base simulation run was performed with the assumed baseline 2030 road network and land-use development. The baseline roadway network has 17th Avenue terminating at CSAH 15. It also assumes a frontage road south of TH 169 between CSAH 15 and CR 69 accessing anticipated commercial development in the area. The base simulation results were compared with an alternate run, which included the baseline roadway and development conditions referenced above, plus an extension of 17th Avenue between CSAH 15 and CR 69.

The Viper run, including the 17th Avenue extension to CR 69, did not show substantial operational gains in terms of reduced traffic levels on surrounding roadways. The following summary points can be made regarding the 17th Avenue extension results relative to the base results:

- Assuming an interchange at TH 169/CR 69, 2030 traffic levels for CSAH 78, the closest parallel, non-Trunk Highway road, were reduced by less than six percent. If an overpass is assumed at this location (an alternative not supported by the City of Shakopee), the traffic reduction on CSAH 78 associated with the extension is between four and five percent.
- Assuming either an interchange or an overpass at TH 169/CR 69, the traffic levels on 17th Avenue drop by over 50 percent west of CSAH 15, suggesting relatively limited “through” traffic on this segment.
- The recommended 2030 roadway system identified in the draft Shakopee Transportation Plan will have more than adequate capacity for the forecasted traffic levels assuming 17th Avenue to terminate at CSAH 15. The 17th Avenue extension west to CR 69 does not decrease traffic levels enough on other roadways to affect recommendations regarding future roadway network improvements.

Assuming the frontage road north of the bluff line to be constructed as referenced above, it appears that the extension of 17th Avenue west of CSAH 15 would have local access benefits, but not substantial system-wide capacity and/or connectivity benefits.

Based upon the factors identified above, it is recommended that 17th Avenue be extended west only to CSAH 15 as an “A” minor arterial. A westerly leg of the CSAH 15/17th Avenue intersection could be built above the bluff line to connect to CR 69 in the future. However, this extension would

likely meet primarily local needs and would best be constructed to meet residential demand as development actually takes place. It would be designated as a local collector street.

A study was performed in 2007 by Scott County in partnership with the City of Shakopee to further evaluate this issue. This study evaluated various alignments and designs to address east-west connectivity and access needs south of TH 169 in this area of Shakopee. A key issue addressed was the bluff line referenced above. The outcome of the study was a preferred alternative that is consistent with the discussion and recommendations above. The preferred alternative includes a southerly TH 169 frontage road connecting at the CSAH 15 ramps and proceeding below the bluff line to access future commercial land uses adjacent to the highway per the City's future land use plan. South of this frontage road, CSAH 16/17th Avenue would be extended to the west to connect with CR 19. However, it would shift to a southerly alignment to stay above the bluff line. This general approach is reflected on *Figure 5.1* of this Transportation Plan.

4.7 CSAH 17/TH 13 Corridor Study

CSAH 17/TH 13 is the only continuous north/south corridor in Scott County, and CSAH 17 is a key roadway within Shakopee's network. With anticipated future growth in Shakopee, Prior Lake, and the rest of the County, the County and Mn/DOT, along with the Cities of Shakopee and Prior Lake and Spring Lake and Cedar Lake Townships decided to develop a long-term vision for the corridor. This study process is currently (November 2008) coming to a close and a final report is anticipated by the end of 2008 or early 2009.

The corridor has been divided in to discreet study segments based on geography, roadway and operational issues, land uses, development density, roadway jurisdiction, and programmed improvements. Each of the segments has its own set of issues to be addressed on a sort, medium, and long term basis. A portion of Segment B, as well as Segments C, D, E, and F lie within Shakopee.

- Segment C – The study is preparing a more detailed preliminary design for CSAH 17 from CSAH 42 to St. Francis Avenue, which identifies needs, impacts, and costs related to the project, which is programmed for 2013. The segment will be upgraded to 4-lane divided section.
- Segment D – The study is evaluating safety and congestion issues and exploring various improvement options for the area near the TH 169 interchange.
- Segment E and F – The study is reviewing future safety and congestion issues through the heart of Shakopee; the final report will identify potential long-term solutions.

4.8 CSAH 42 Corridor Study

CSAH 42 is the major east-west travel corridor through the fast-growing southern metro area. Scott County, in conjunction with its study partners, has undertaken a corridor study for the segment from CSAH 21 east to Glendale Road. The study is addressing the following primary issues and questions:

- What level of mobility should be provided by 2030, and what should CSAH 42 look like?
- What are the potential costs of improving the highway, and what impacts and costs would be incurred if it is not improved?
- What impacts to adjacent properties and resources may take place with the improvements being considered?
- What alternative investments should be considered, such as transit?
- How should improvements best be phased to allow the long term vision to be implemented in harmony with individual projects being planned and built?

This project was commenced in 2006 and is on-going as of November 2008. While the project area does not directly include Shakopee, it is in close proximity to the City's southern boundary, and the project is of significant interest to the City and its residents.

5.0 FUTURE TRANSPORTATION NEEDS

5.1 Analytical Approach

The basic approach to determining roadway deficiencies and needs can be summarized as follows:

- Define assumed 2030 land use development and a baseline transportation network.
- Forecast traffic levels and distribution based upon the 2030 assumptions.
- Analyze different 2030 roadway alternatives as appropriate.
- Use forecasted traffic levels and functional classification information to identify the need for future system/roadway improvements.

These steps will be addressed in the following sections.

5.2 Assumed Future Land Use and Baseline Roadway Network

The future land use for the City is presented on *Figure 3.1* as discussed in Section 2.3.1 of the Plan Update. The assumed baseline transportation network is the existing system plus improvements which are programmed or are anticipated to be constructed prior to 2030. The future improvements which are assumed as part of the baseline network are presented in *Table 5.1* and depicted graphically on *Figure 5.1*.

**Table 5.1
TRANSPORTATION IMPROVEMENTS ASSUMED AS PART OF 2030 BASELINE
ROADWAY NETWORK**

Programmed/Anticipated Improvement	Identification Number on <i>Figure 5.1</i>
Interchange at TH 169/CSAH 69	1
Extension of Vierling Drive from Taylor Street to CSAH 69	2
Extension of 17 th Avenue from CSAH 15 to CR 69 (above bluff line)	3
Re-align Valley View Road connection with CSAH 17 further to north; extend Valley View Road west and north to a connection with 17 th Avenue	4
Extension of Thrush Street east to CSAH 83	5
Extension of 12 th Avenue west and north to Eastway Avenue at Shenandoah Drive	6
Extension of Pike Lake road north and west to Soutbridge Parkway, with and easterly connection to Crossings Boulevard	7
Extension of CSAH 21 north and east from CSAH 42 to CSAH 18	8
Extension of Dakota Parkway north to Valley View Road	9
Extension of Wood Duck Trail east to CSAH 83	10
Extension of Valley View Road between CSAH 38 and Foothill Trail	11

Programmed/Anticipated Improvement	Identification Number on Figure 5.1
Expansion of CSAH 17 to 4-lane divided between St. Francis Avenue and CSAH 42	12

5.3 2030 Traffic Forecast Model and Results

Background and Results

The traffic modeling performed for this Plan Update utilized a program called TP+. The Shakopee transportation model was designed to be consistent with the Metropolitan Council Regional Transportation Model.

Transportation Analysis Zone TAZ information was derived from 2030 land use assumptions for the City. This 2030 TAZ data used for modeling purposes for this Transportation Plan Update is presented in *Table 5.2*, below.

**Table 5.2
2030 TRANSPORTATION ANALYSIS ZONE INFORMATION**

TAZ	Population	Households	Retail Jobs	Non-Retail Jobs	Total Jobs
1059*	2,700	1116	700	50	750
1060*	13,358	5523	870	50	920
1061	4,872	2014	1,500	2,344	3,844
1061B (1181)	6,272	2593	0	10	10
1062*	414	171	35	102	137
1063	1,977	817	50	17	67
1064	3,640	1505	350	102	452
1065	1,946	805	250	902	1,152
1066	3,301	1365	200	1,714	1,914
1067	201	83	100	492	592
1068	2,078	859	250	214	464
1069	2,563	1060	533	2,022	2,555
1070	7,613	3148	4,378	6,494	10,872
1071	1,000	414	697	6,486	7,183
1072	65	27	20	89	109
Total	52,000	21,500	9,933	21,088	31,021

*Some of the TAZ is outside the City. Only the information for the area within the City is presented.

The TAZ map for the Shakopee area is provided on **Figure 5.2**. Additional information regarding how the model was set up and used for this Plan Update is provided in **Appendix A**. The 2030 projections are presented on **Figure 5.3**.

5.4 2030 Roadway Deficiencies and Needs

As part of the needs identification process, an evaluation of future congestion conditions was performed. This evaluation is based on Level of Service (LOS) analysis. For planning-level roadway segment LOS analysis, projected volumes are compared against the operational capacity of a roadway segment as determined by its number of lanes and general design. LOS ranges from A (free flowing) to F (excessive congestion and delay). The LOS rating is determined by the volume to capacity ratio for the segment being analyzed. Consistent with Mn/DOT guidance, the standard practice in the Twin Cities metropolitan area is to provide design capacity such that LOS D or better (A-C) is achieved; LOS E and F conditions require capacity improvements. **Figure 5.4** depicts the roadway segments in the Shakopee area that have projected 2030 congestion levels requiring capacity improvement (LOS E/F).

Roadway needs are summarized in **Table 5.3** and depicted graphically on **Figure 5.5**. It may be noted a number of the identified improvements are not directly associated with capacity expansion, but are intended to improve network connectivity, access to developing areas, and/or to upgrade rural roadways to urban standards.

5.5 Future Intersection Assessments and Improvements

Based upon the system-wide 2030 traffic forecasts summarized on **Figure 5.3**, there are a number of intersections which will likely require analysis and potentially some form of improvement to address higher traffic levels. These locations include the following:

- 10th Avenue/Spencer Street
- Vierling Drive/Spencer Street
- Vierling Drive/Eagle Creek Boulevard
- 17th Avenue/CSAH 15
- 17th Avenue/Independence Drive
- CSAH 16/McKenna Road
- CSAH 16/CSAH 21
- CSAH 78/New Westerly North/South Roadway
- CSAH 78/County Road 69
- CSAH 78/CSAH 15
- CSAH 78/County Road 79
- Valley View Road/Independence Drive
- Valley View Road/CSAH 83
- Valley View Road/McKenna Road
- Valley View Road/CSAH 21
- CSAH 42/CSAH 17

- CSAH 42/Independence Drive
- CSAH 14/County Road 79 (west)
- CSAH 14/County Road 79 (east)
- CSAH 14/CSAH 17

Prior to traffic control measures potentially being implemented at any of these locations, Intersection Control Evaluations would be performed to evaluate signal systems, roundabouts, or other potential approaches. If signals are ultimately implemented at any of these intersections, all applicable warrants would have to be met and approvals from applicable government agencies would be obtained. Such approvals would also be required for roundabouts.

**Table 5.3
2030 Roadway Design/Capacity Improvement Requirements**

Figure 5.5 ID No. ¹	Roadway	Segment	Type of Improvement	Anticipated 2030 Functional Class	Recommended Design
North/South Roads					
1	CR 77	South of TH 169 to CSAH 78	Upgrade existing rural roadway	Collector	2-lane urban
2	CR 79	South of TH 169 to CSAH 14	Upgrade existing rural roadway	"B" Minor Arterial	2-lane urban
3	CSAH 17	CSAH 101 to Prairie Lane	Upgrade existing 3-lane roadway	"A" Minor Arterial	4-lane divided with turn lanes <i>(identified in Draft 2030 Scott County Transportation Plan)</i>
4	CSAH 17	Prairie Lane to St. Francis Lane	Upgrade existing 4-lane roadway	"A" Minor Arterial	6-lane divided with turn lanes <i>(identified in Draft 2030 Scott County Transportation Plan)</i>
5	CSAH 17	St. Francis Lane to Southern City Limit	Upgrade existing 2-lane roadway	"A" Minor Arterial	4-lane divided with turn lanes <i>(identified in Draft 2030 Scott County Transportation Plan, programmed between St. Francis Lane and CSAH 42)</i>
6	Shenandoah Drive/12 th Avenue connection	Eastway Avenue to Vierling Drive	New roadway	Local	2-lane urban
7	Independence Drive	Valley View Road to CSAH 42	New roadway (extension)	Collector	2-lane urban
8	CSAH 83	CSAH 16 to CSAH 42	Upgrade existing rural roadway	"A" Minor Arterial	4-lane divided with turn lanes
9	McKenna Road	CSAH 16 to CSAH 42	Upgrade existing rural roadway	Collector	2-lane urban
10	CSAH 21 Extension	CSAH 42 to CSAH 18	New roadway	Principal Arterial	4-lane divided with turn lanes <i>(programmed and in design)</i>
11	Pike Lake Road Extension	Future CSAH 21/Southbridge Parkway	Upgrade existing rural roadway south of CSAH 16; new	Collector	2-lane urban

Figure 5.5 ID No. ¹	Roadway	Segment	Type of Improvement	Anticipated 2030 Functional Class	Recommended Design
			roadway north of CSAH 16		
East-West Roads					
12	17 th Avenue Extension	CR 69 to CSAH 15	New roadway	Collector	2-lane urban
13	CSAH 16	CSAH 83 to CSAH 18	Upgrade existing rural roadway	"B" Minor Arterial	3-lane urban
14	Crossings Boulevard Extension	Pike Lake Road Extension	CSAH 18	Collector	2-lane urban
15	Valley View Road	Evergreen Lane to Sarazin Street	New roadway	Collector	3-lane urban
16	Thrush Street	Eastern edge (current) of Thrush Street to CSAH 83	New roadway	Local	2-lane urban
17	CSAH 78	CR 79 to CSAH 17	Upgrade existing rural roadway	"A" Minor Arterial	4-lane with turn lanes (<i>identified in Draft 2030 Scott County Transportation Plan</i>)
18	Valley View Road extension	CSAH 83 to Foothill Trail	New roadway	Collector	3-lane urban
19	Wood Duck Trail	Eastern edge (current) of Wood Duck Trail to CSAH 83	New roadway	Local	2-lane urban

¹ Numbering system has no reference to priority and/or timing of individual projects.

5.6 2050 Traffic Results

As discussed previously, the City wishes to begin considering longer term (post-2030) transportation conditions and needs. This assumes urban development of Jackson and Louisville Townships consistent with the land use map identified on *Figure 3.1* after annexation has taken place. The assumed TAZ information for the 2050 scenario is presented in *Table 5.4*. It should be kept in mind that the City does not wish the Metropolitan Council to consider these values from a 2030 perspective, and that these are generalized, preliminary planning level estimates. The traffic volumes associated with the 2050 assumptions are presented on *Figure 5.6*.

Table 5.4
2050 TRANSPORTATION ANALYSIS ZONE INFORMATION

TAZ	Population	Households	Retail Jobs	Non-Retail Jobs	Total Jobs
1958	2,259	553	30	230	260
1059	19,802	4,853	3147	4917	8064
1060	17,811	4,364	2719	50	2769
1061	4,872	1,194	1500	2344	3844
1061B (1181)	6,272	1,537	0	10	10
1062	818	200	35	21834	21869
1063	1,977	489	50	17	67
1064	3,640	892	350	102	452
1065	1,946	477	250	902	1152
1066	3,301	811	200	1714	1914
1067	201	49	100	492	592
1068	2,078	509	250	214	464
1069	2,563	628	533	2022	2555
1070	7,613	1,865	4378	6494	10872
1071	1,000	245	697	6486	7183
1072	65	16	20	89	109
Total	76,218	32,365	14229	47917	61916

6.0 TRANSPORTATION PLAN

6.1 Funding Sources

Funding for construction and reconstruction can be obtained from a variety of sources including special assessments and tax increment financing. Further information is provided below.

General Ad Valorem (Property) Taxes – Transportation projects can be funded with the general pool of municipal revenues raised through property taxes.

Assessments – Properties that benefit from a roadway scheduled for improvement may be assessed for the cost of construction. In order to assess the owner, it must be demonstrated that the value of their property will increase by at least the amount of the assessment.

Municipal State Aid – Cities with populations of greater than 5,000 are eligible for funding assistance from the highway user Task Distribution Fund (gas tax and vehicle registration tax). These funds are allocated to a network of Municipal State Aid (MSA) streets. Currently, the City of Shakopee receives an apportionment per year for improvements to their MSA streets.

Cooperative Agreements with Mn/DOT, Scott County and/or SMSC-US Department of Interior – Different levels of government can cooperate on planning, implementing, and financing transportation projects which provide benefits to all the concerned agencies. The financial terms and obligations are generally established at the front end of the projects.

Tax Increment Financing (TIF) – This is a method of funding improvements that are needed immediately by using the additional tax revenue anticipated to be generated because of the given project's benefits in future years. The difference between current tax revenues from the targeted district and the increased future tax revenues resulting from the improvements is dedicated to retiring the municipal bonds used to finance the initial improvement(s).

Developer Contributions – Under this approach, the impact of the additional traffic from a proposed development on the local roadway system is projected using standard traffic engineering procedures. Costs associated with improving the roadway system to handle the additional traffic at an acceptable level of service are assessed to the developer. This approach generally involves some level of negotiation between the local government and the developer to work out a cost-sharing agreement that allows the development to move forward.

6.2 Capital Roadway Improvements

Future roadway improvement needs are summarized in *Table 5.3* and depicted on corresponding *Figure 5.5*.

6.3 Future Roadway Functional Classification

The existing roadway function classification system is described in Section 2.2 of this Plan. The system envisioned for 2030 is presented on **Figure 6.1**. The recommended and/or anticipated changes from current conditions to the 2030 system are as follows:

- Vierling Drive between Eagle Creek Boulevard and CR 69 → to become an “A” Minor Arterial
- CSAH 21 FROM TH 169 to Municipal limit and south → to become a Principal Arterial (per TH 21 Scoping Decision Document and *2020 Scott County Transportation Plan*)
- CSAH 18 from CSAH 21 to CSAH 42 → to become a Minor Arterial (per TH 21 Scoping Decision Document and *2020 Scott County Transportation Plan*)
- Eagle Creek Boulevard between CSAH 17 and CSAH 83 (old CSAH 16) → to become a Collector
- Valley View Road from CSAH 17 to CSAH 83 → to become a Collector
- Independence Drive from 17th Avenue/CSAH 16 to Valley View Road → to become a Collector
- Sarazin Avenue from St. Francis Avenue to 17th Avenue/CSAH 16 → to become Collector

The City understands requests must be made, separate from the Comprehensive Plan review process, from the agency with jurisdiction over a roadway for the roadway’s functional classification to be revised on the Metropolitan Council map. These requests are addressed to the Transportation Advisory Board.

6.4 Future Roadway Jurisdictional Classification

The anticipated jurisdictional classification system for roadways serving Shakopee for 2030 is depicted on **Figure 6.2**. This figure depicts jurisdictional changes are either agreed upon or are recommended to be discussed as summarized below:

- Current CSAH 16 (Eagle Creek Boulevard) between CSAH 83 and CSAH 17 will be turned back from County to the City.
- Jurisdiction over 17th Avenue from CR 83 to CR 15 has been transferred from the City to Scott County, and it is now designated as CR 16. The County has also completed a corridor study for the possible extension of that roadway to the west to CR 169. (Added per Scott County comment)
- CR 73 within Jackson Township should be discussed as a turnback from the County to the Township/City. In the 1998 Shakopee Transportation Plan, this was recommended as a turnback to the Township, but with anticipated growth and annexation procedures, it appears appropriate for this to ultimately be a City roadway. Within Louisville Township, this road has already been turned back.

- CR 77 between TH 169 and CSAH 78 should be discussed as a turnback from the County to the City. The discussion for CR 73, above, also applies for this proposed change.

In addition, a portion of the extension of Valley View Road from CSAH 83 to Foothill Trail (see *Figure 6.2*) will pass through proposed trust land and thus may be subject to tribal and federal jurisdiction.

6.5 Design and Right-of-Way Guidelines

Roadway Standards

A system of design guidelines is an effective tool to help to provide safe, efficient, and consistent roadway networks. Some situations may require additional analysis due to unusual or unforeseen conditions, but established baseline standards will minimize design uncertainty in most circumstances.

Table 6.1 presents recommended typical roadway cross-sections based on each functional class for City-level streets and roads. This table presents a range of Average Daily Traffic (ADT) levels for each roadway functional class and the corresponding recommended design parameters. This information is depicted graphically on *Figure 6.3* (sheets 1-8). Scott County's typical cross-sections for roadways under the County's jurisdiction are provided in *Appendix B*.

General City guidelines for on-street parking in non-residential areas and/or collector streets involve a minimum of a ten-foot parking lane measured to the face of curb and a minimum of 20 feet for the length of a parking stall. Parking on residential streets is allowed on streets within the typical cross section.

It is very important to preserve adequate right-of-way for roadways in developing or redeveloping areas. This minimizes the potential for having to acquire or otherwise impact developed properties in the future to allow needed transportation projects. *Table 6.2* shows right-of-way requirements for different types of roadway cross sections. These guidelines should be considered for inclusion in the City's ordinances. These right-of-way widths could vary with topography and requirements for sidewalks or off-street facilities and are intended to provide minimum street needs and green space on right-of-way. Scott County right-of-way widths for County roadways as identified in the *2001 Scott County Transportation Plan* are presented in *Appendix B*. Scott County is in for final process of updating this document.

Access Spacing

Access to the transportation network serving the City should be appropriately controlled in terms of driveway openings and side street intersections. The Metropolitan Council's Transportation Development Guide/Policy Plan identifies a policy framework within which the City of Shakopee Transportation Plan was developed. Access guidelines allow the City discretion and negotiating authority regarding individual access decisions. The spacing of intersections and driveways should be controlled as defined by roadway functional class and traffic volumes. This approach limits the

impact of intersections and driveways on average speeds and levels of service on roadways appropriate to the function of those facilities.

Table 6.3 presents City guidelines for controlling access to the transportation network based upon roadway functional class. Residential, commercial, and industrial access will be directed to local streets to the greatest degree feasible. New developments and sites which are being redeveloped may be required to provide internal traffic design so as to limit the number of driveways to the roadway system and/or to provide that access on appropriate roadways.

**Table 6.1
Design Guidelines – City Roadways ¹**

Functional Classification	Adt	Lanes	Cross Section			
			URBAN			RURAL
			With Parking Both Sides	With Parking One Side	No Parking	
Minor Arterial	15,000-30,000	4-Lane Undivided	10-12-12-12-12-10 (68 ft)	2-12-12-12-12-10 (60 ft)	2-12-12-12-12-2 (52 ft)	10-12-12-12-12-10 (68 ft)
Major Collector	7,500-18,000	4-Lane Undivided	10-11-12-12-11-10 (66 ft)	2-11-12-12-11-10 (58 ft)	2-11-12-12-11-2 (50 ft)	8-11-12-12-11-8 (62 ft)
	10,000-25,000+	4-Lane Divided	10-11-13-6-13-11-10 (74 ft)	2-11-13-6-13-11-10 (66 ft)	2-11-13-6-13-11-2 (58 ft)	8-11-13-6-13-11-8 (70 ft)
Minor Collector	2,000-9,000	2-Lane	10-12-12-10 (44 ft)	4-12-12-10 (38 ft)	6-12-12-6 (36 ft)	8-12-12-8 (40 ft)
	4,000-16,000	3-Lane	10-12-14-12-10 (58 ft)	2-12-14-12-10 (50 ft)	2-12-14-12-2 (42 ft)	8-12-14-12-8 (54 ft)
	7,500-18,000	4-Lane Undivided	10-11-12-12-11-10 (66 ft)	2-11-12-12-11-10 (58 ft)	2-11-12-12-11-2 (50 ft)	8-11-12-12-11-8 (62 ft)
Local Feeders ²	2,000-9,000	2-Lane	8-10-10-8 (36 ft)	8-12-12 (32 ft)	3-12-12-3 (30 ft)	NA
Local	0-9,000	2-Lane	8-10-10-8 (36 ft)	8-12-12 (32 ft)	3-12-12-3 (30 ft)	NA

¹ PLEASE NOTE: Scott County roadway design standards apply for all County-level roadways which serve Shakopee and the rest of the County. These standards, as identified in the *Scott County Transportation Plan* (2001) are provided in **Appendix B**. Scott County is in the final process of updating this document.

² Sidewalks are required on, at minimum, one side of Local Feeders.

**Table 6.2
Right-of-Way Guidelines – City Roadways ¹**

Functional Classification	Adt	Lanes	Right-Of-Way ²	
			Urban	Rural
Minor Arterial	15,000 – 30,000	4-Lane Divided	120 ft. to 150 ft.	150 ft. to 200 ft.
Major Collector	7,500 – 18,000	4-Lane Undivided	100 ft	100 ft
	10,000 – 25,000 +	4-Lane Divided	120 ft	150 ft
Minor Collector	2,000 – 8,000	2-Lane	80 ft	100 ft
	4,000 – 16,000	3-Lane	80 ft	100 ft
	7,500 – 18,000	4-Lane Undivided	100 ft	100 ft
Local Feeders	0-9,000	2-Lane	60 ft	80 ft
Local	0 – 9,000	2-Lane	60 ft	80 ft

¹ PLEASE NOTE: The Scott County Transportation Plan identifies typical right-of-way requirements for County-level roadways which serve Shakopee and the rest of the County. Please refer to **Appendix B** for relevant right-of-way information for County roadways. Scott County is in the final phase of updating its 2001 Transportation Plan.

² Additional R.O.W. width and/or easements may be necessary for the addition of turn lanes and/or trails/ sidewalks.

**Table 6.3
Access Spacing Guidelines – City Roadways¹**

Type Of Access	Minor Arterial	Major Collector	Minor Collector	Local Feeders	Local
Residential Driveways	No Direct Access	No Direct Access	No Direct Access	As Required	As Required
Commercial Driveways	Based on: Speed, Traffic Volume, Sight Distances, etc. (1/8 to 1/4 mile)	Based on: Speed, Traffic Volume, Sight Distances, etc. (min. 500 ft.)	Based on: Speed, Traffic Volume, Sight Distances, etc. (min. 200 ft.)	Based on: Speed, Traffic Volume, Sight Distances, etc. (min. 100 ft.)	Based on: Speed, Traffic Volume, Sight Distances, etc. (min. 100 ft.)
Low Volume Streets	Full Access – 1/8 mile	Full Access – 1/8 mile	Full Access – 1/8 mile	Full Access – 330 ft.	Full Access – 330 ft.
	Partial Access – 330 ft.	Partial Access – 330 ft.	Partial Access – 330 ft.	Partial Access – 330 ft.	Partial Access – 330 ft.
High Volume Streets < 10,000 ADT	Full Access – 1/4 mile	Full Access – 1/4 mile	Full Access – 1/8 mile	Full Access – 330 ft.	Full Access – 330 ft.
	Partial Access – 1/8 mile	Partial Access – 1/8 mile	Partial Access – 330 ft.	Partial Access – 330 ft.	Partial Access – 330 ft.
Collector Streets	Full Access – 1/2 mile	Full Access – 1/4 mile	Full access – 1/4 mile	Full Access – 1/8 mile	Full Access – 1/8 mile
	Partial Access – 1/4 mile	Partial Access – 1/8 mile	Partial Access – 1/8 mile	Partial Access – 330 ft.	Partial Access – 330 ft.

¹ PLEASE NOTE: The spacing guidelines identified in this table may be adjusted on a case-specific basis pending detailed traffic engineering analysis and review by the City Engineer. The Scott County Transportation Plan identifies access spacing guidelines for County-level roadways which serve Shakopee and the rest of the County. Please refer to **Appendix C** for this information. Scott County is in the final phase of updating their Transportation Plan. Mn/DOT access guidelines apply for TH 169 and TH 41.

The guidelines presented in **Table 6.3** apply to City roadways. For County roadways, Scott County access spacing guidelines apply. The Scott County access guidelines are found in **Appendix D**. It is understood that these may be revised in the final, adopted 2030 Scott County Transportation Plan. Mn/DOT access spacing guidelines pertain to TH 169 and TH 41.

6.6 Transit

Transit Planning Team/Transit Review Board

Section 2.2.6 of this Transportation Plan describes the transit service which is provided in Shakopee. This is good service for a City of approximately 20,000, but as the community continues to grow, the City and Scott County will continue to review ways to upgrade this service and the facilities which support it.

Scott County has established a Transit Planning Team and a Transit Review Board. The Transit Planning Team is made up of staff from the Cities of Shakopee, Prior Lake, Savage, Belle Plaine, and Jordan, as well as Scott County and the Scott County HRA staff. The Transit Planning Review Board is made up of Council Members from each of the cities along with a Scott County Commissioner.

In 1993, a report entitled *Scott County Transit Demand Analysis* was prepared for the Scott County Housing and Redevelopment Authority. The primary purpose of this report was to perform the preliminary work necessary to apply for Federal T-21 transportation funding to support transit projects in the County. Findings of the report included the following:

- The highest demand for transit service and facilities within the County will be in Shakopee.
- Future demand for Park & Ride spaces will far exceed the existing supply at the Seagate Park facility in Shakopee.
- An outstanding site for a new transit facility would be the Shakopee Crossing site along CSAH 18 just south of TH 169. This would be the best overall site for such a facility in the County. This facility, the Southbridge Crossing Park and Ride, was constructed and open to the public in 2007.
- An alternate location for a new transit facility would in the vicinity of the intersection of CSAH 16 and the proposed CSAH 21 extension on right-of-way to be purchased for the project. This area could also be the site of a bus storage and maintenance facility. It is anticipated that this facility will be constructed in 2012 through a lease agreement with the SMCS which now owns the land.
- Further study is required to continue to improve and coordinate transit services provided within the County. A County-wide Transit Service Plan should be prepared.

Since the completion of the 1993 transit report, a *Unified Transit Management Plan* (UTMB) has been prepared for Scott County with participation by the Cities of Shakopee, Prior Lake, and Savage. The primary recommendations of the UTMP relevant to Shakopee were as follows:

- Scott County should immediately begin the process of site selection and acquisition, design and construction of a new transit center in the area south of the Bloomington Ferry Bridge near the confluence of CSAH 18, TH 169, TH 13, and the future CSAH 21 extension. The transit center should have an initial capacity of 500 parking stalls and should be expandable to include approximately 1,000 stalls within six to eight years.
- A temporary Park & Ride site in the vicinity of the future transit center should be developed with capacity in the range of 100 to 250 stalls.
- The Cities of Shakopee and Prior Lake should pool their transit funding and focus their attention on fixed route services.
- Service should be developed from Shakopee and Prior Lake to downtown Minneapolis via TH 169 and I-394.
- Existing service should be continued along TH 13 to the Burnsville Transit Station.
- Increasing ridership and demand should be monitored to assess need for increasing service levels.

Southwest Corridor Transitway Planning

On its 2030 Transitways Plan, the Metropolitan Council identifies the Southwest Corridor as a proposed transitway extending from Minneapolis south and west to Eden Prairie. The project would utilize old railroad right-of-way and, potentially, various roadway alignments. It would pass through the Cities of St. Louis Park, Hopkins, and Minnetonka, as well as Eden Prairie and Minneapolis. It could involve light rail transit (LRT) or a dedicated, limited-stop busway approach (“bus rapid transit”). The Hennepin County Regional Railroad Authority (HCRRA) has taken the lead regarding studies and planning for the transitway.

In 2003, the *Southwest Regional Rail Transit Study* was completed. This study evaluated ridership potential, local impacts, and cost-effectiveness of rail transit service in the southwest study area, and identified potential alignment alternatives for further analysis. Currently, the HCRRA, along with its corridor partners, is following up the *Southwest Regional rail Transit Study* with an *Alternatives Analysis Study*. The objective of this study is to expand upon the previous work by further evaluating transit alternatives to reach a broad consensus on a preferred course of action. Both rail and busway alternatives are being considered.

Currently, no crossing of the Minnesota River is being formally considered in the Southwest Corridor analysis and planning. However, a logical connection between Shakopee residents and a future Southwest Transitway could be made via a river crossing at TH 169. There will likely be a Southwest corridor transit stop in Hopkins (in the vicinity of TH 169 and Excelsior Boulevard), which could potentially be accessed with transit service along TH 169. The Metropolitan Council has identified TH 169 as a route for express commuter bus service on its 2030 Transitway System Plan. The southern terminus of the proposed Southwest Transitway is in the vicinity of TH 5 and Mitchell Road in Eden Prairie. This stop could possibly be accessed from Shakopee via the CSAH

101 river crossing and TH 5. According to Hennepin County staff, all stops along the Southwest Transitway would have Park & Ride lots. Thus, Shakopee residents could access the Southwest corridor transit service by private vehicle if necessary.

It cannot be predicted with confidence if and when the Southwest Transitway will actually be developed. It is being comprehensively evaluated and planned, but it would be dependent upon the availability of federal funding. The City of Shakopee will continue to monitor developments regarding the Southwest Corridor.

6.7 Non-Motorized Transportation

Policies and Plans

Pedestrian Safety and Access

Ensuring pedestrian safety is a critical goal for the City. In general, most pedestrian accidents and injuries take place at roadway intersections; thus, intersections must be properly designed to accommodate both vehicular and pedestrian movements.

At this time, there does not seem to be undue pedestrian safety issues at roadway intersections in Shakopee. However, with the anticipated growth of the City as discussed in Section 2.0, vehicular and pedestrian traffic levels will increase, and safety conditions will have to be reviewed on an ongoing basis. Should given intersections become problematic, safety measures including the following will be assessed and implemented as-needed:

- Installation of new traffic control signals
- Revised timing of existing signals
- Revised roadway geometry (layout and design of lanes)
- Curb bump-outs
- Traffic calming measures

Another way to promote pedestrian safety, as well as access, is to provide a coordinated network of sidewalks in locations where there is sufficient demand. The City's policy for sidewalks has been to provide a five-foot sidewalk on one side and an eight-foot bike trail on the other side for all roadways of collector functional classification and higher. This policy will continue. In addition, the City will now formally require that all local feeder streets have sidewalks.

Trails

The City is committed to providing a comprehensive and coordinated series of trails that provides transportation as well as recreational value. The City's desire to encourage trail development is linked to Goal 9 of the City's Parks, Trails, and Open Space Plan. **Figure 6.4** depicts existing and anticipated future trails. This information is taken from the City of Shakopee *Parks, Recreation, Trails and Open Space Plan* (1999), which the City intends to update in the relative near future. The existing and proposed trails plan is consistent with the trail standards as identified in the City's *Parks, Recreation, Trails and Open Space Plan*:

- Trails should be the primary pedestrian circulation system in the rural service area.
- City Trails should be connected with State, Regional, and adjoining community trails where possible.
- City trails should be continuous with other trail systems and/or sidewalks in the City.
- Trails should connect recreation and amenity areas with areas of potentially higher pedestrian and bicycle traffic volumes.
- Trails should provide access in the City where sidewalks are deficient.

The City will continue to coordinate with other government agencies regarding trail planning and development. Scott County adopted *Interim Scott County Parks, Trails, and Open Space System Plan* in June 2004. This plan identifies a Scott County Regional Trail corridor which will ultimately extend from the Murphy-Hanrehan Park Reserve, to the Cleary Lake Regional Park, to Prior Lake, and to the Minnesota Valley State Trail in Shakopee. The corridor enters Shakopee from the south along CSAH 17; it jogs to the west at CSAH 78, and then turns north on CR 79. From CR 79, it continues through Shakopee to connect with the Minnesota Valley State Trail along the Minnesota River. Approximately one mile of this trail has been constructed in Shakopee, adjacent to CR 79, directly north of TH 169. In general, the trail sections are being completed during scheduled roadway upgrades and maintenance activities. The *Interim Scott County Parks, Trails, and Open Space System Plan* also identifies proposed County trail corridors in locations including the following:

- Along CSAH 78 from the Minnesota River to CSAH 17
- South of TH 169 from CSAH 78 to CSAH 83
- Along CSAH 16 from CSAH 83 east to the City limit and beyond
- Along CSAH 42 from CSAH 17 east to the City limit and beyond
- Along future CSAH 21 extension from CSAH 42 to TH 169
- North of CSAH 101 from approximately Memorial Park to TH 169
- CSAH 15 from CSAH 78 to southern City limit and beyond

Safe Routes to School Program

Mn/DOT administers a program called Safe Routes to School that allocates federal funding to local projects. The primary goals of this program are to promote kids walking to school with associated health benefits and to improve overall safety conditions in the vicinity of schools. A broad range of projects are eligible for funding, including trail/sidewalk construction, signal systems, improved

pavement treatments and markings, signage, educational programs, and others. The City of Shakopee will work with School officials to track and develop possible projects for funding applications through this program.

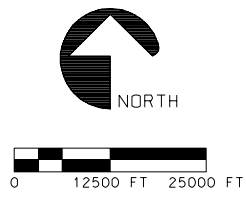
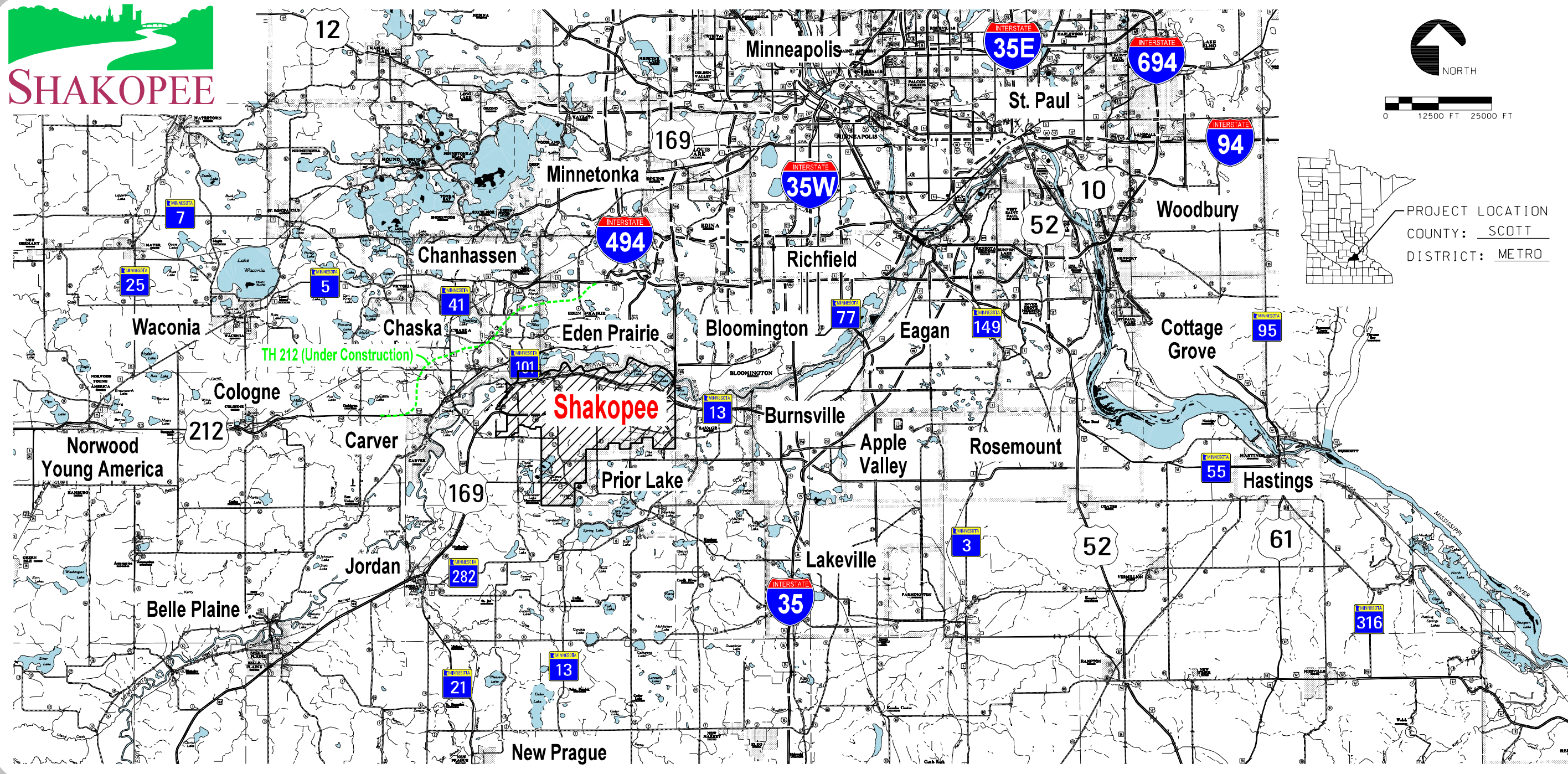
Non-Motorized Access to Transit

The transit service and facilities in Shakopee are presented in on **Figure 2.7**. The Seagate park-and-ride facility is accessible by off-street multi-use trails along all of the roads that surround the site: Eagle Creek Boulevard (CSAH 16) to the south, Canterbury Road South (CSAH 83) to the east, 12th Avenue to the north, and Vierling Drive to the west. The Southbridge Crossings park-and-ride facility can be accessed by a multi-use off-street trail parallel to Crossings Boulevard, which serves as the access road to the facility.

The circulator service in Shakopee (Routes 496 West and East) make stops at various locations that are linked to the City-wide off-street multi-use trail and/or sidewalk network. This includes the following stops:

- Public Library
- Public Pool
- Courthouse Building
- St. Francis Hospital
- Kohl's/Target Site
- Community Center
- Seagate Park and Ride

FIGURES



PROJECT LOCATION
COUNTY: SCOTT
DISTRICT: METRO

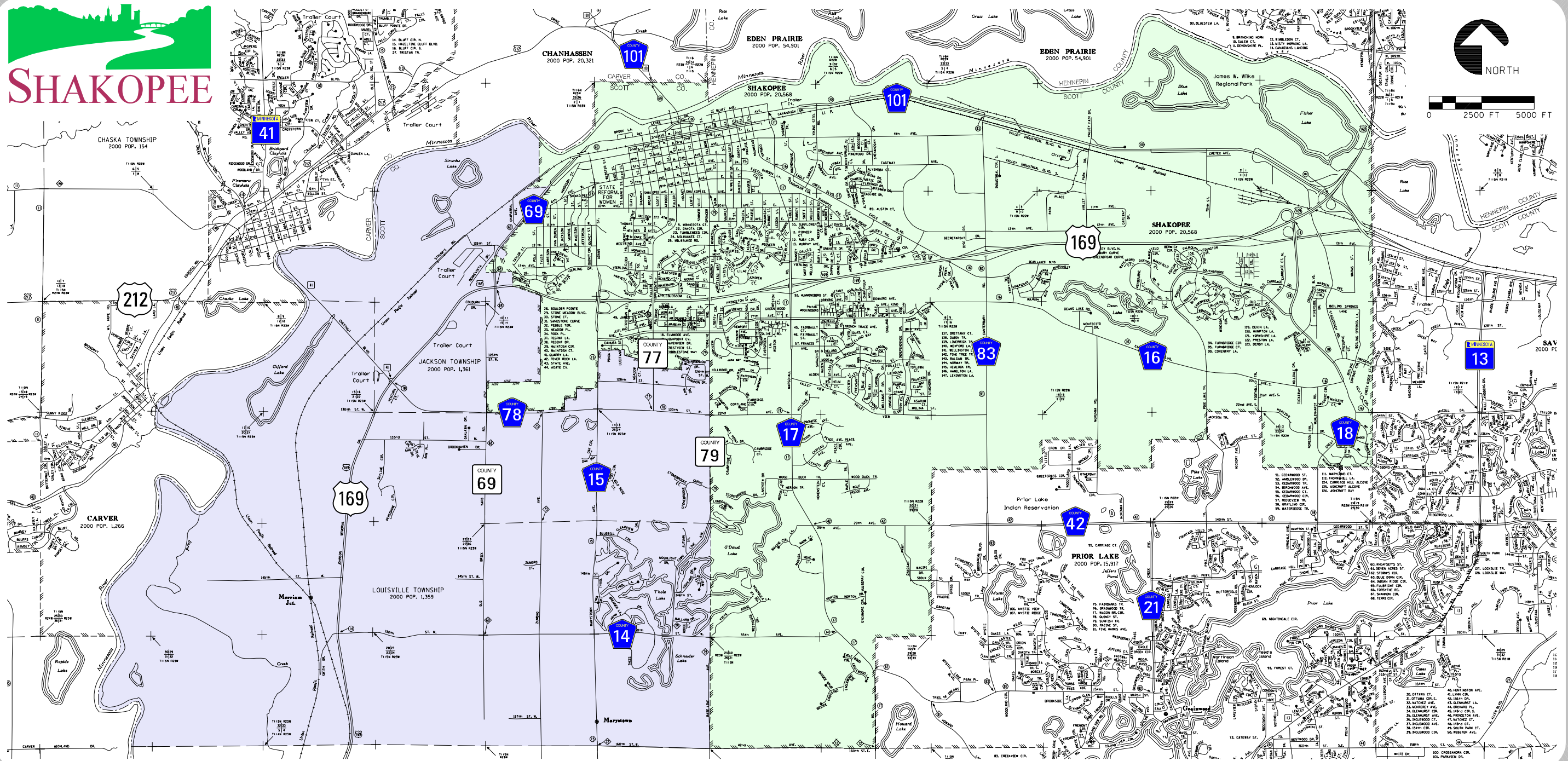
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Regional Location Map

Figure 1.1



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Legend

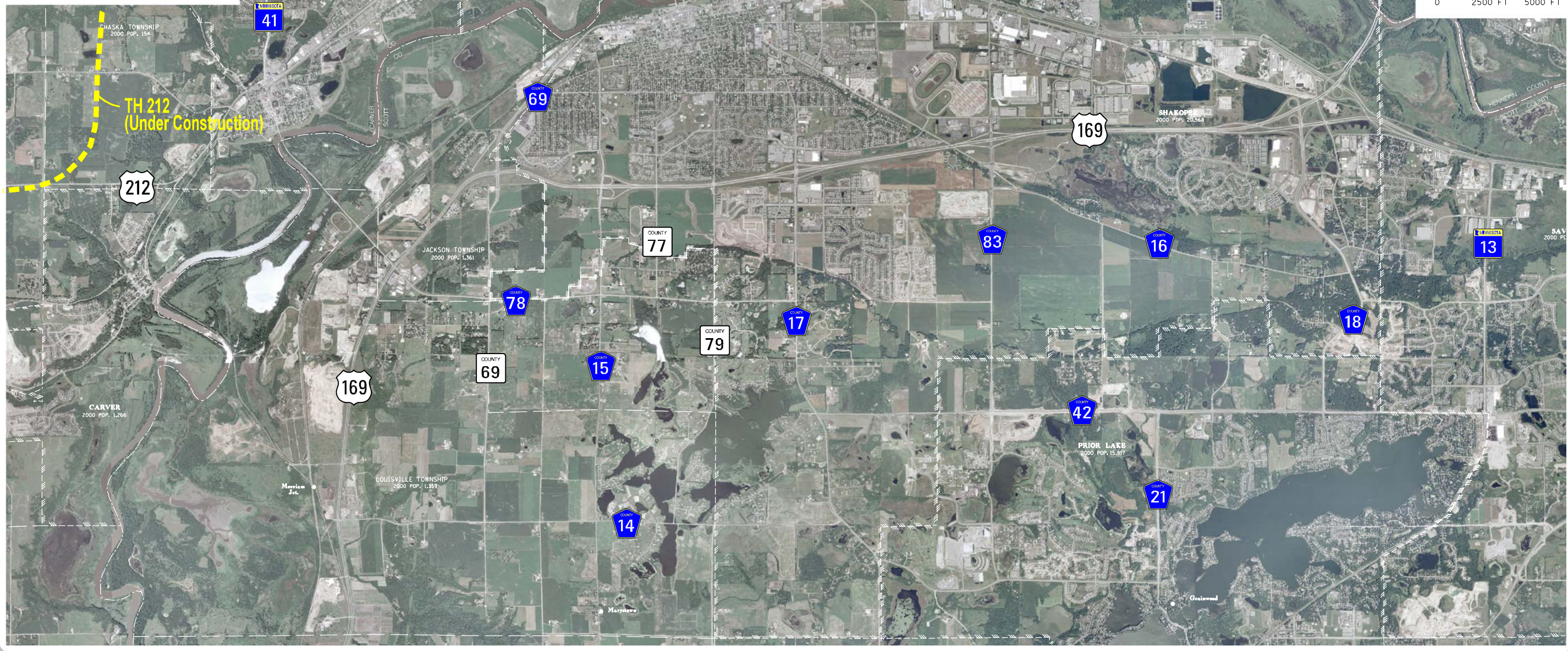
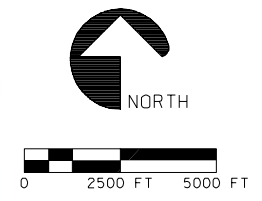
- 2030 Planning Area
- Additional 2050 Planning Area

2030 and 2050 Planning Areas

Figure 1.2

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& Associates, Inc.
701 Xenia Avenue South, Suite 300
Minneapolis, MN 55416
www.wsbeng.com
763-541-4800 • Fax 763-541-1700
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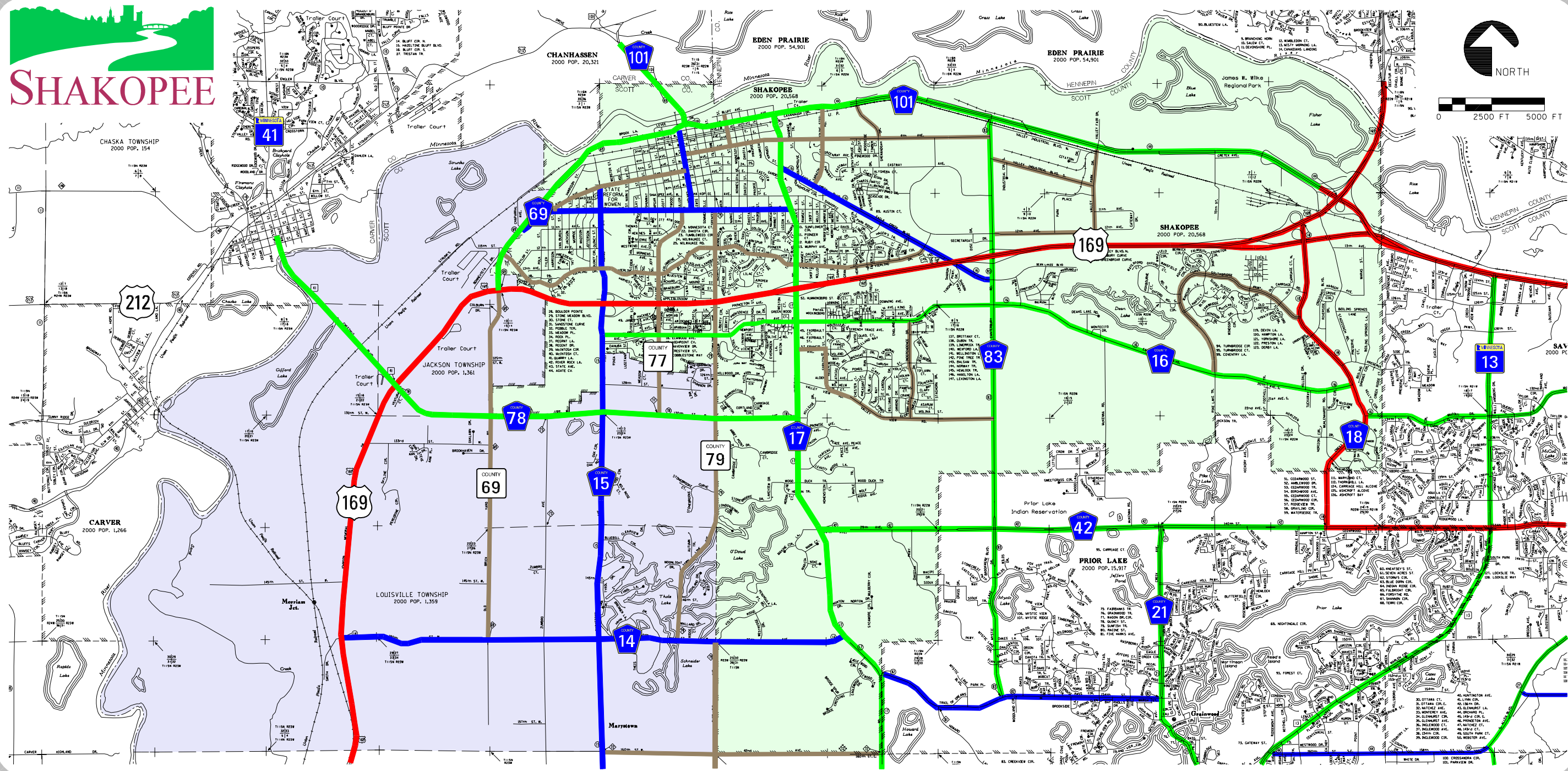
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Aerial Photo Map

Figure 2.1

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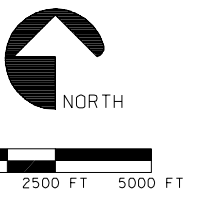
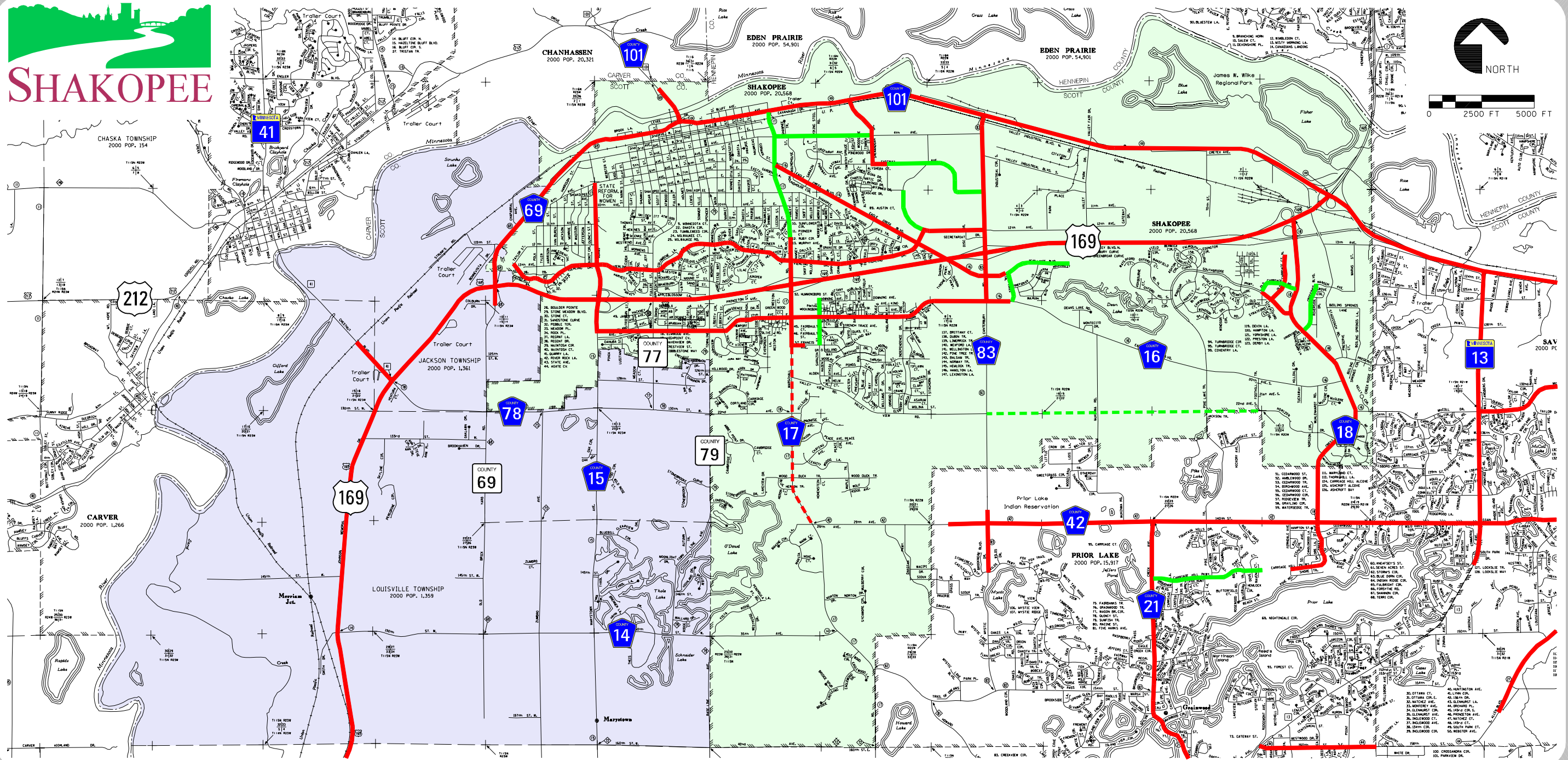
Legend

- Principal Arterial
- A Minor Arterial
- B Minor Arterial
- Collector
- Local Road
- 2030 Planning Area
- Additional 2050 Planning Area

Existing Roadway Functional Classification

Note:
Functional class network is depicted consistently with
the Metropolitan Council information (November 2008).

Figure 2.2



City of Shakopee, Minnesota Transportation Plan Update

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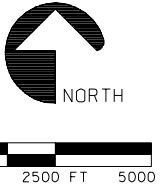
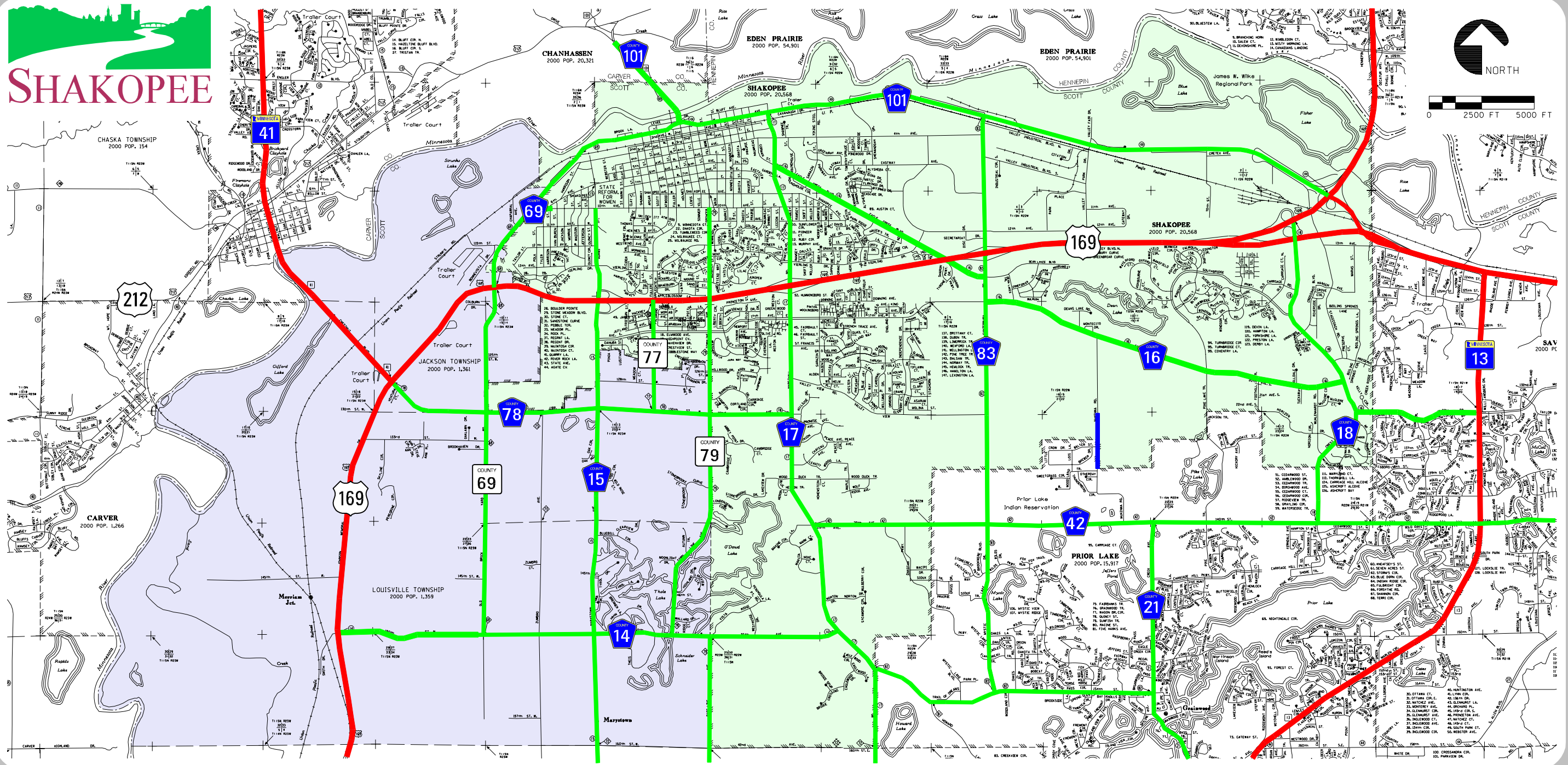
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Legend

- Existing 4 - Lane
- - - - Programmed/Anticipated 4 - Lane
- Existing 3 - Lane
- - - - Programmed/Anticipated 3 - Lane
- 2030 Planning Area
- Additional 2050 Planning Area

Existing Number of Roadway Travel Lanes

Figure 2.3



City of Shakopee, Minnesota Transportation Plan Update

Legend

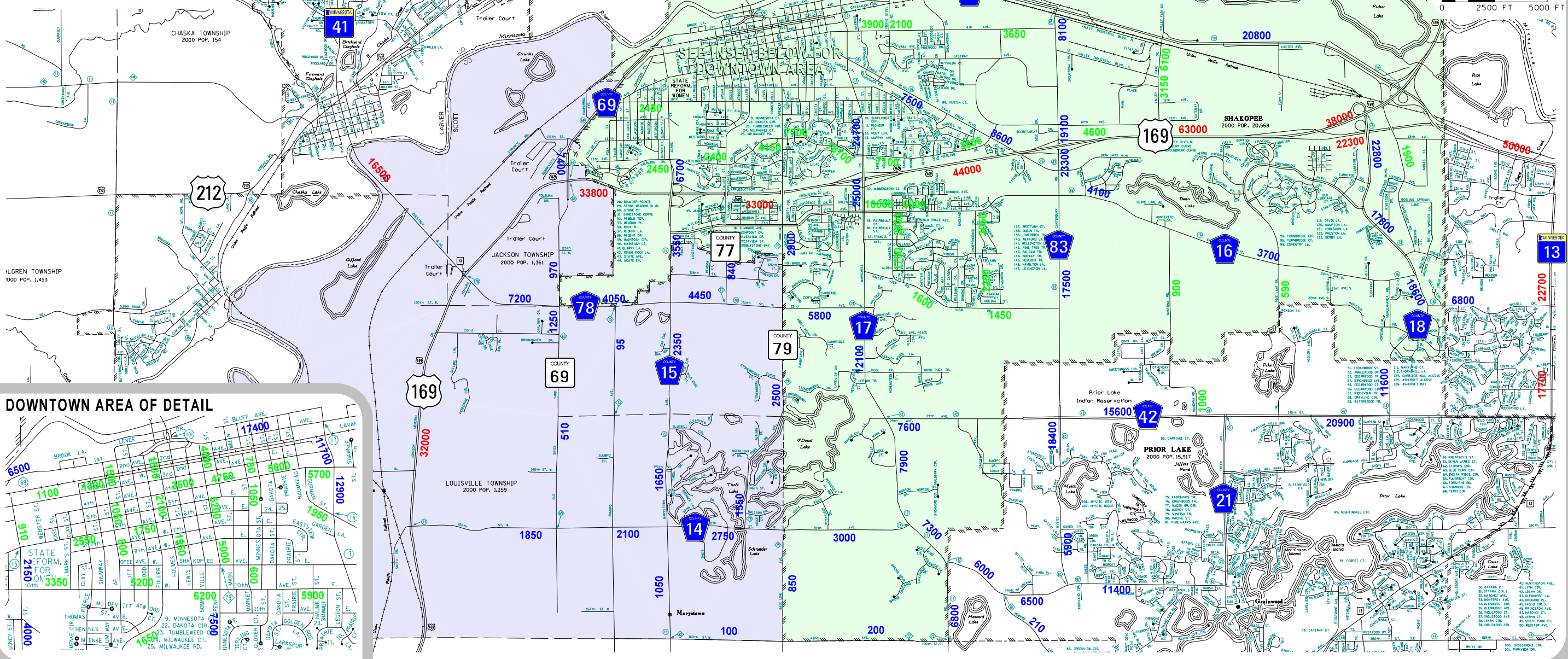
- Minnesota Department of Transportation
- Scott County
- Shakopee Mdewakanton Sioux Community
- City or Township

Existing Roadway Jurisdictional Classification

Figure 2.4

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& Associates, Inc.
701 Xenia Avenue South, Suite 300
Minneapolis, MN 55416
www.wsbeng.com
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Legend

- Average Annual Daily Traffic (AADT).....6500
- Trunk Highway Routes are 2006 AADT Volumes
- County System Roads are 2007 AADT Volumes
- Municipal Street Routes are 2007 AADT Volumes

- 2030 Planning Area
- Additional 2050 Planning Area

Source: Minnesota Department of Transportation

Existing Traffic Volumes

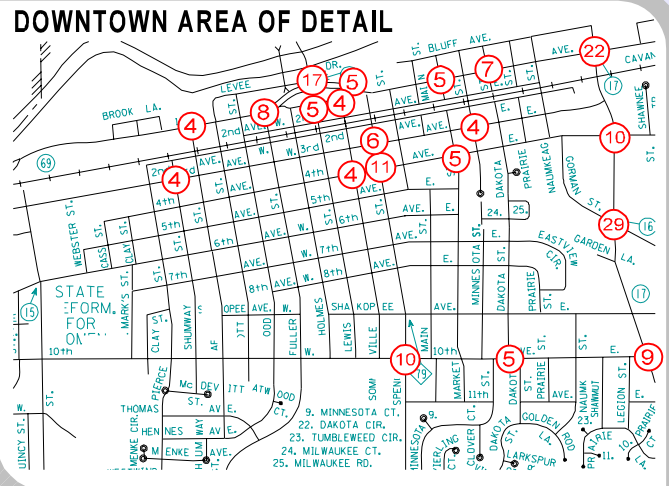
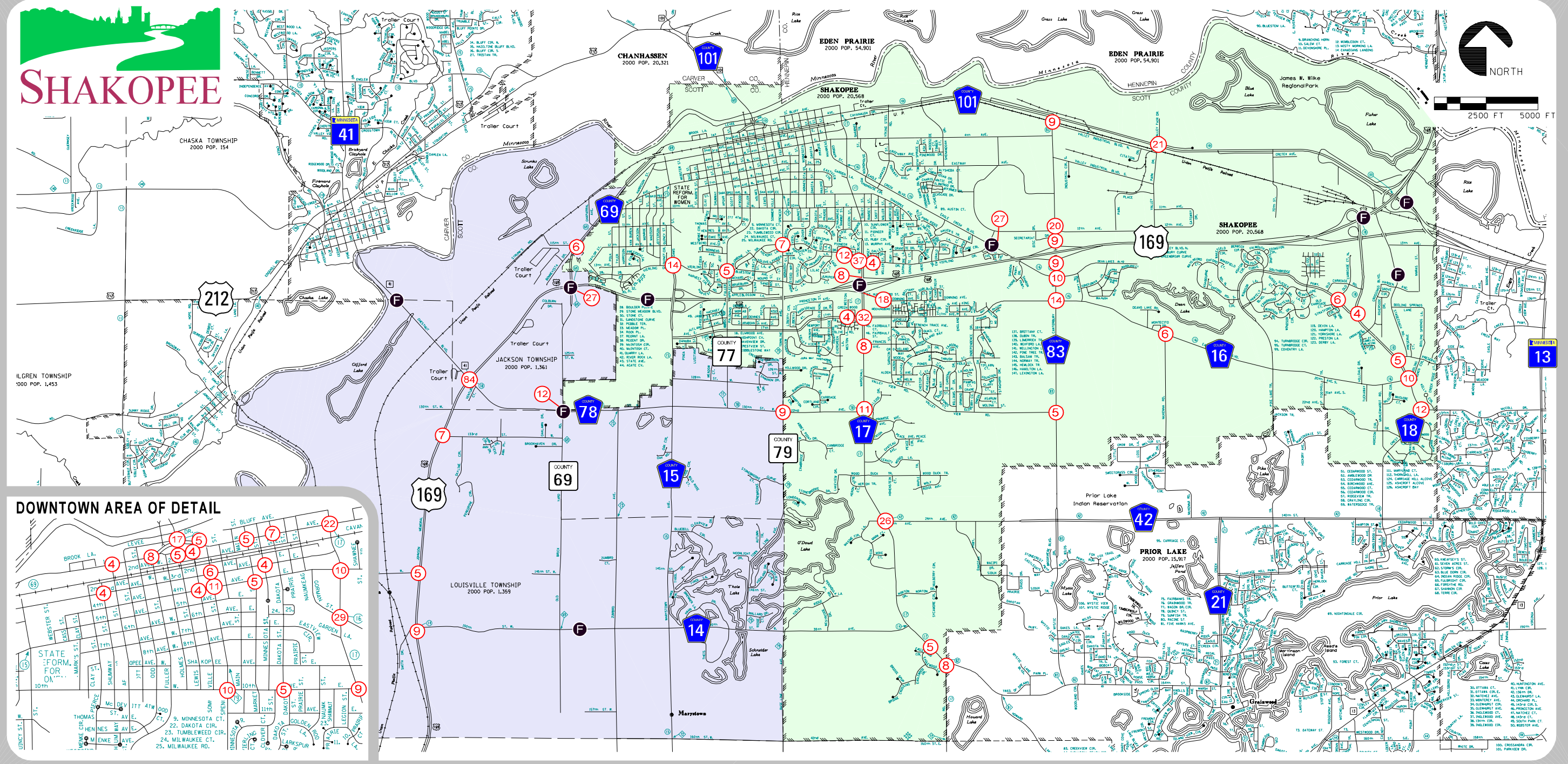
Figure 2.5

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& Associates, Inc.
701 Xenia Avenue South, Suite 300
Minneapolis, MN 55416
www.wsbeng.com
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SHAKOPEE



City of Shakopee, Minnesota Transportation Plan Update

Legend

- ⊗ X = Number of crashes
- ⦿ F = Fatality
- 2030 Planning Area
- Additional 2050 Planning Area

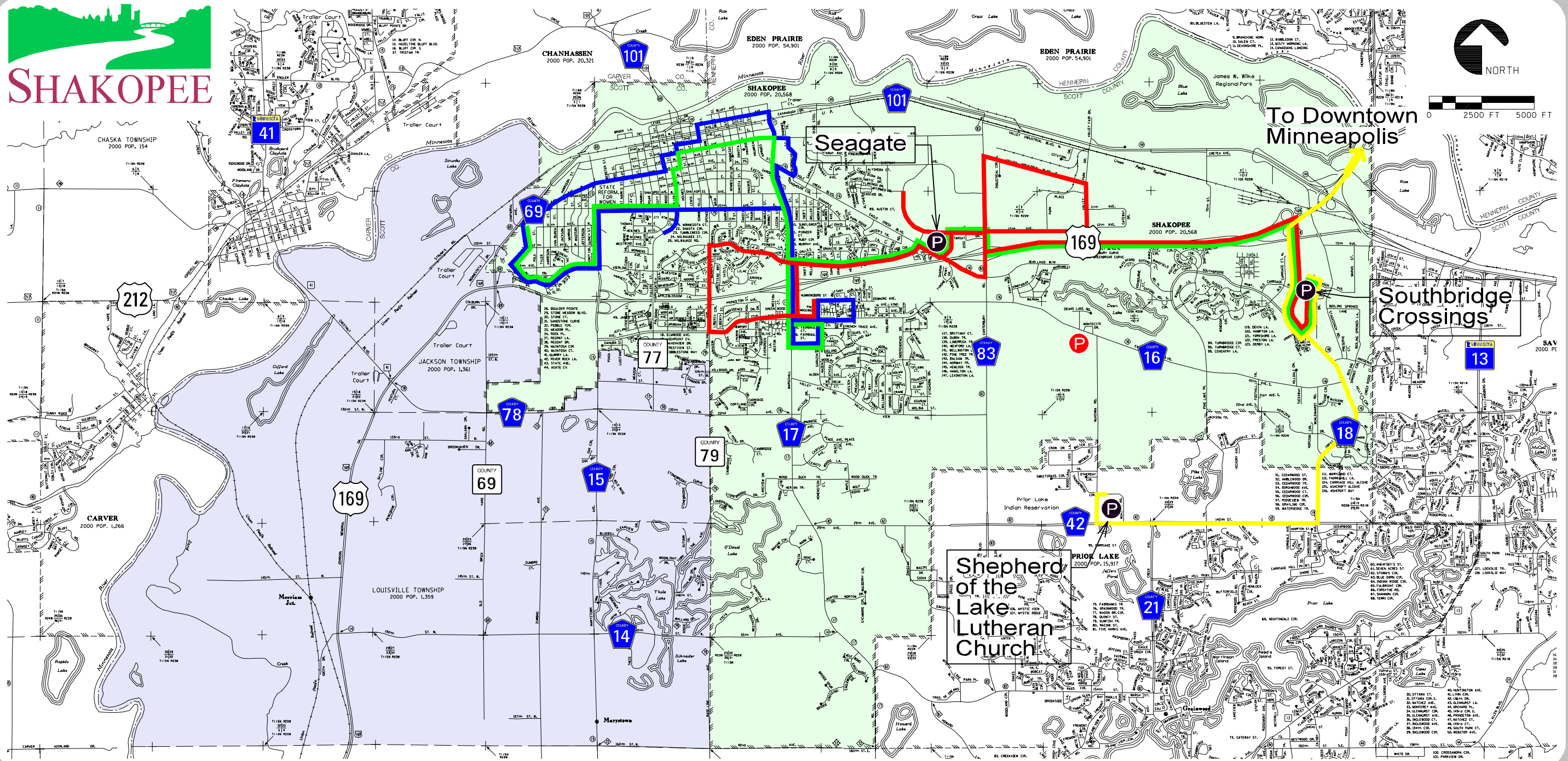
Source: Minnesota Department of Transportation

Crash Locations and Frequencies (2004-2006)

Figure 2.6

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 701 Xenia Avenue South, Suite 300
 Minneapolis, MN 55416
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Legend

TRANSIT ROUTE

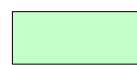
- 490
- 496-E
- 496-W
- 498



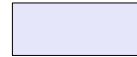
Park and Ride



Future Park and Ride



2030 Planning Area



Additional 2050 Planning Area

Transit Service and Facilities

Figure 2.7

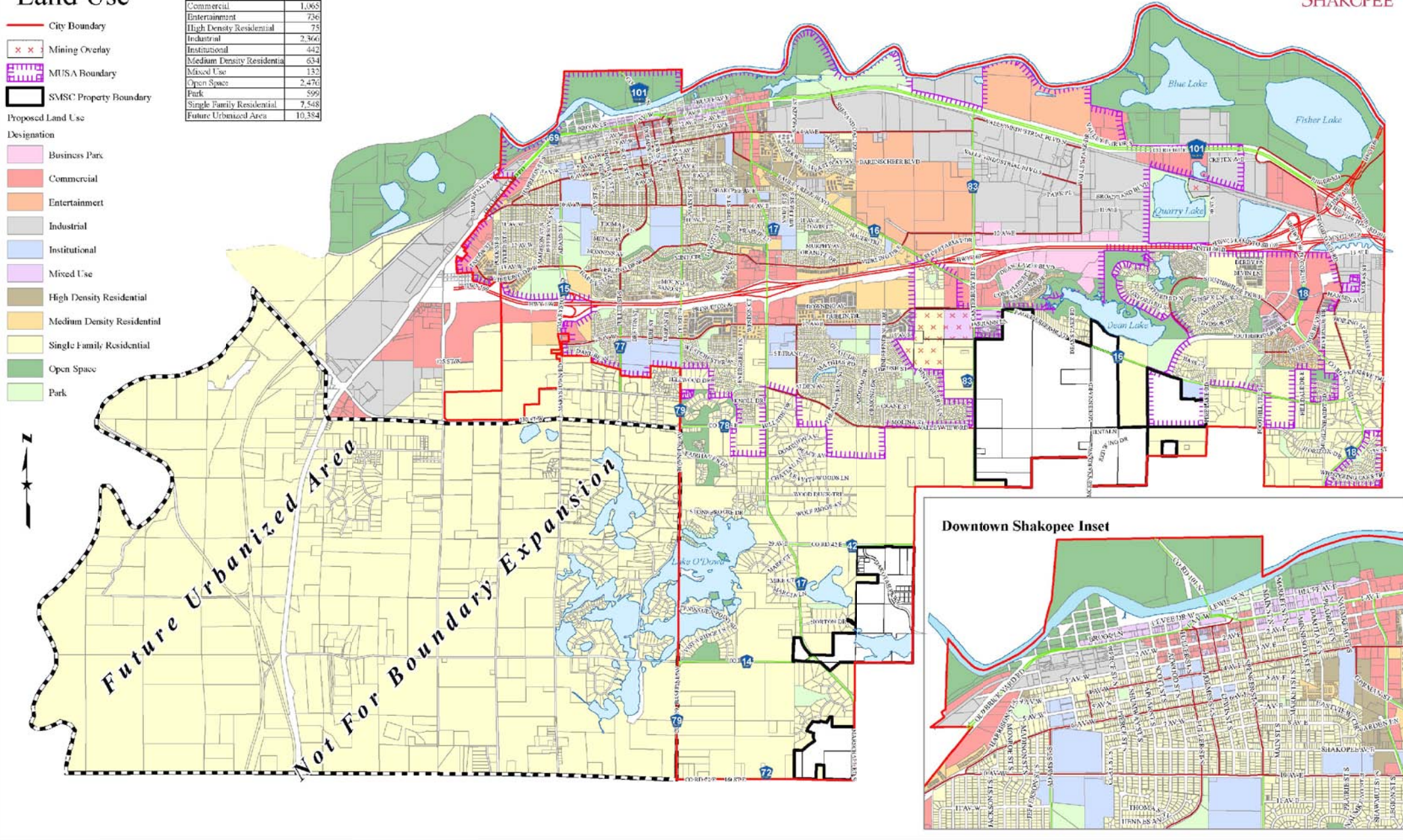


Proposed Land Use

- City Boundary
 - Mining Overlay
 - MUSA Boundary
 - SMSC Property Boundary
- Proposed Land Use Designation
- Business Park
 - Commercial
 - Entertainment
 - Industrial
 - Institutional
 - Mixed Use
 - High Density Residential
 - Medium Density Residential
 - Single Family Residential
 - Open Space
 - Park

Land Use Designation Total Area for areas inside City Boundary

Designation	Acres
Business Park	190
Commercial	1,065
Entertainment	736
High Density Residential	75
Industrial	2,366
Institutional	442
Medium Density Residential	634
Mixed Use	133
Open Space	2,470
Park	599
Single Family Residential	7,548
Future Urbanized Area	10,384



City of Shakopee, Minnesota Transportation Plan Update

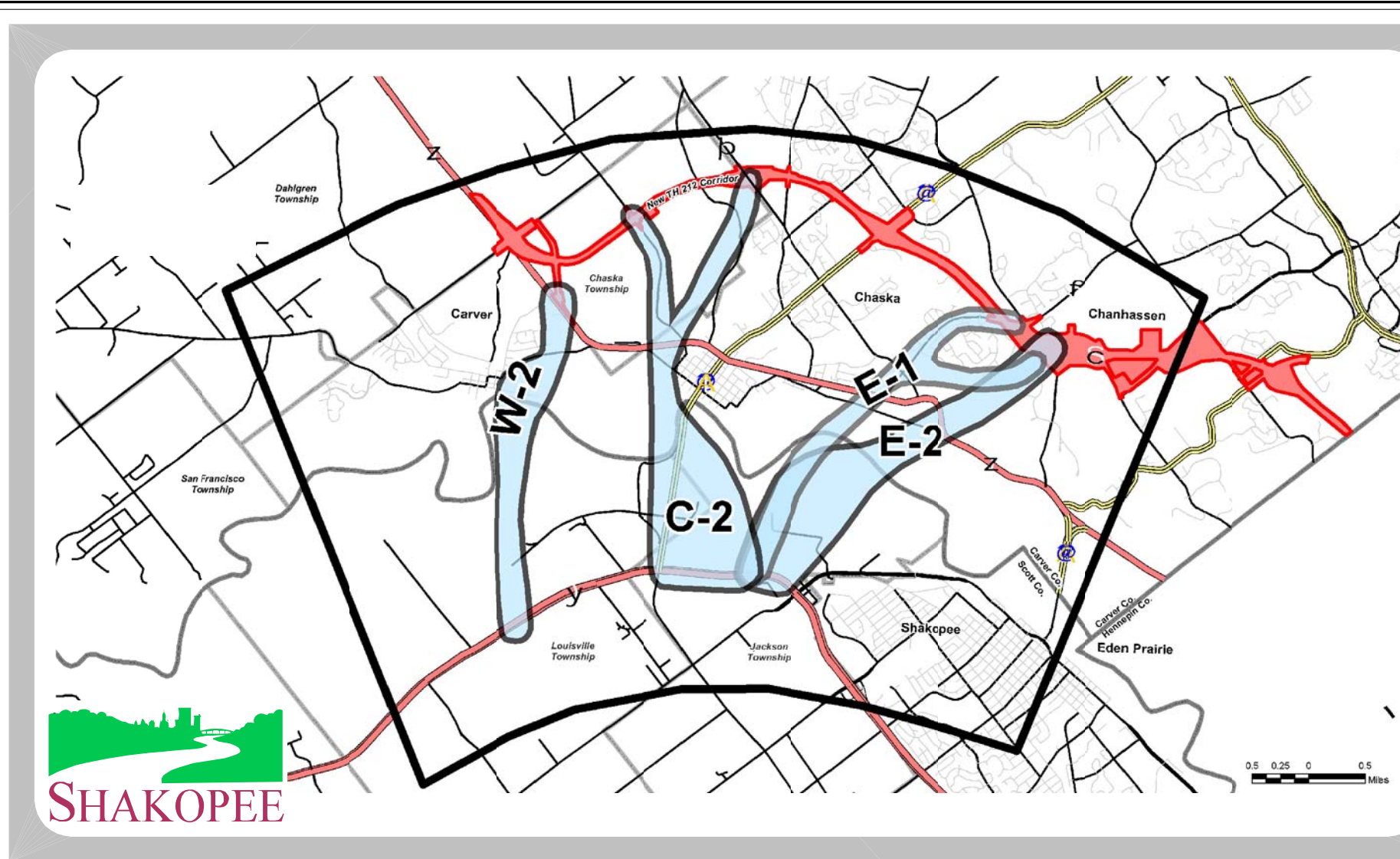
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701 Xenia Avenue South, Suite 300
Minneapolis, MN 55416
www.wsbg.com

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Future Land Use Map

Figure 3.1



**City of Shakopee, Minnesota
Transportation Plan Update**

Source : Trunk Highway 41 Over Minnesota River Scoping Decision Document.

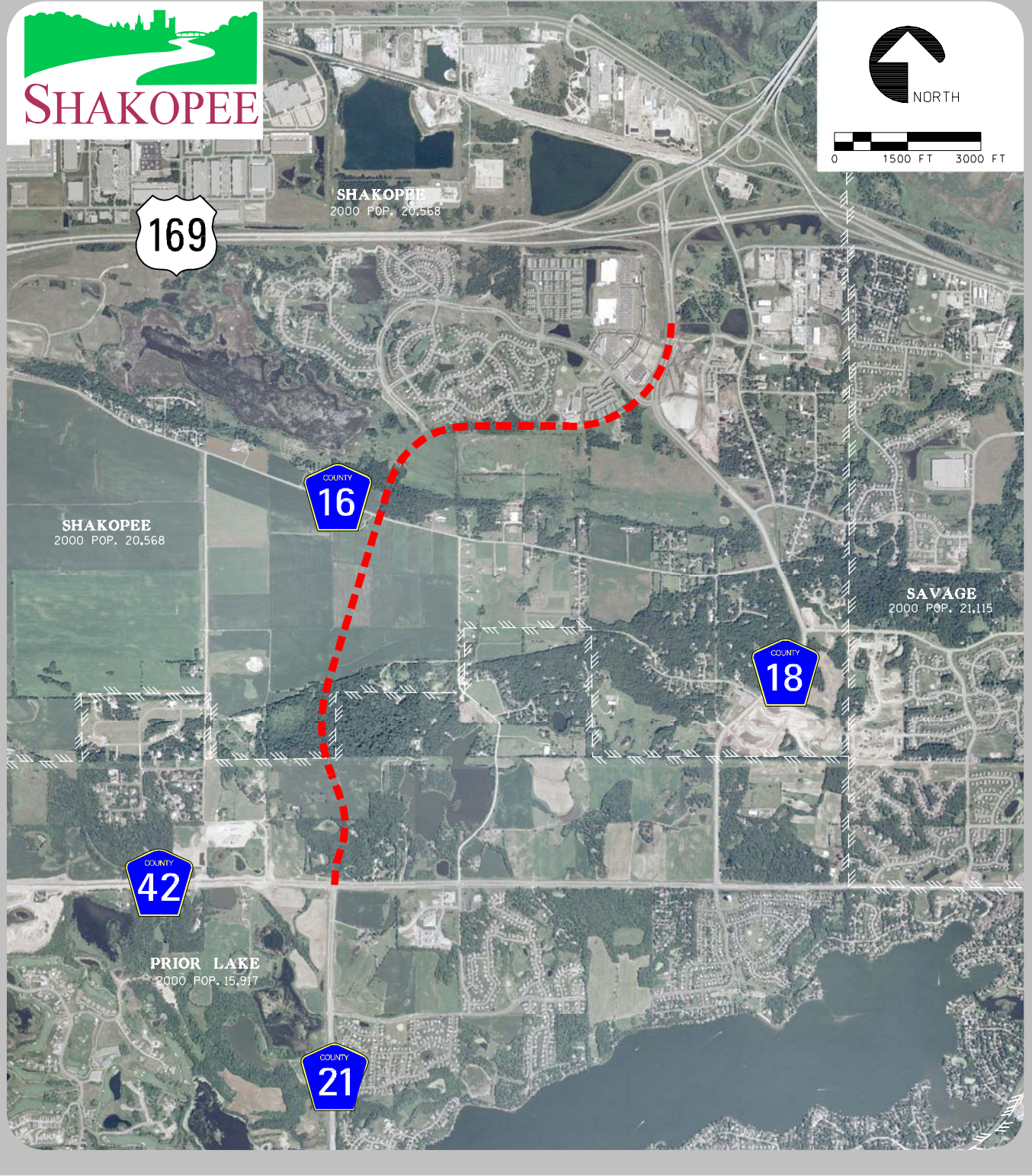
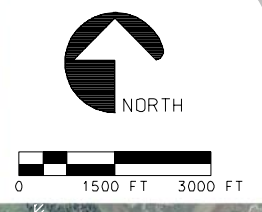
**Trunk Highway 41
River Crossing Alternatives**

Figure 4.1

Prepared by:

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& Associates, Inc.
701 Xenia Avenue South, Suite 300
Minneapolis, MN 55416
www.wsbeng.com
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Date Printed: 12/8/2008
WSB Filename: F:\0605-00\Cad\fig-04-1.dgn



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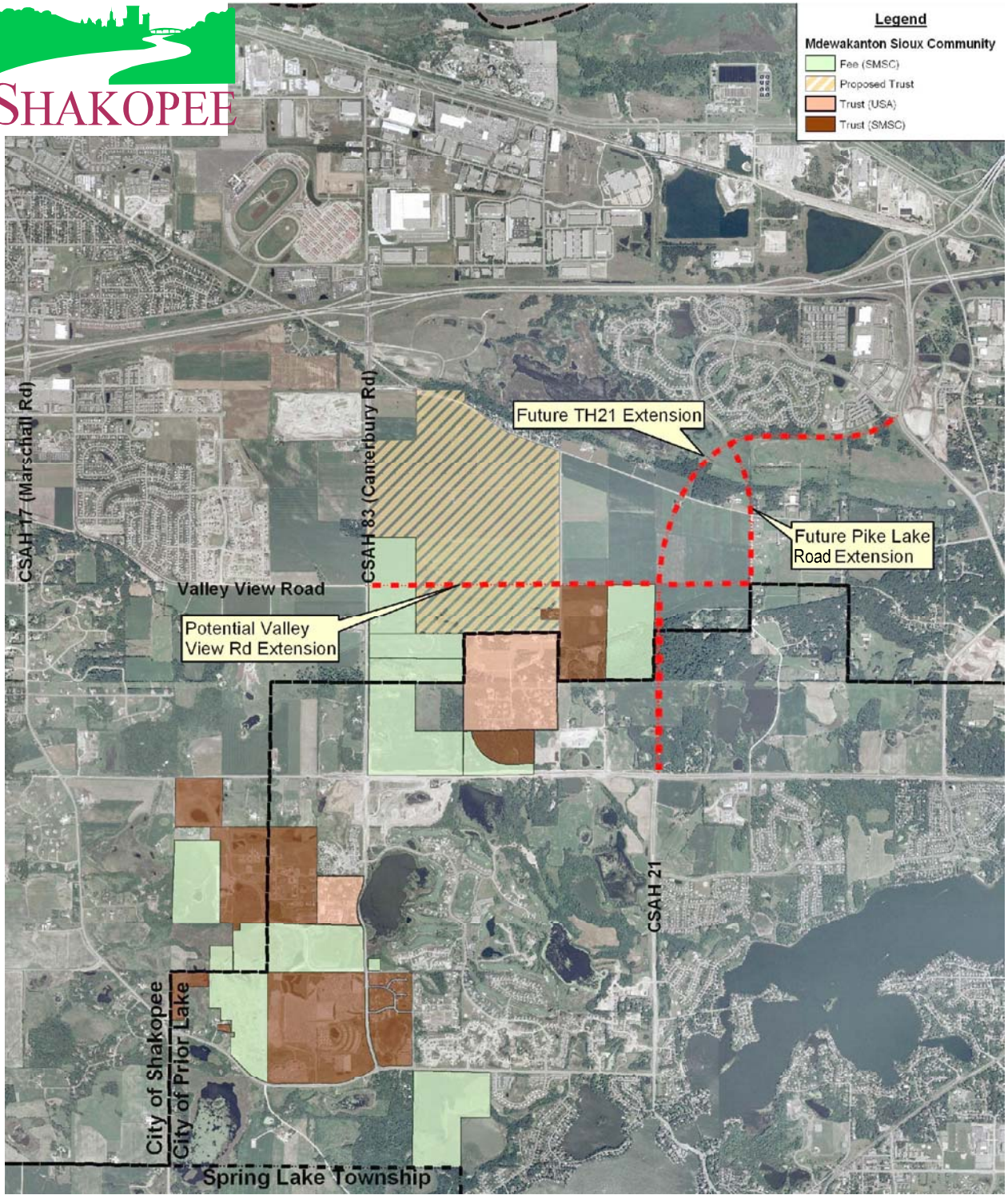
CSAH 21 Extension

Prepared by:

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Minneapolis, MN 55416
www.wsbang.com
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Figure 4.2

Date Printed: 12/8/2008
WSB Filename: I:\0605-00\Cad\fig-04-2.dgn



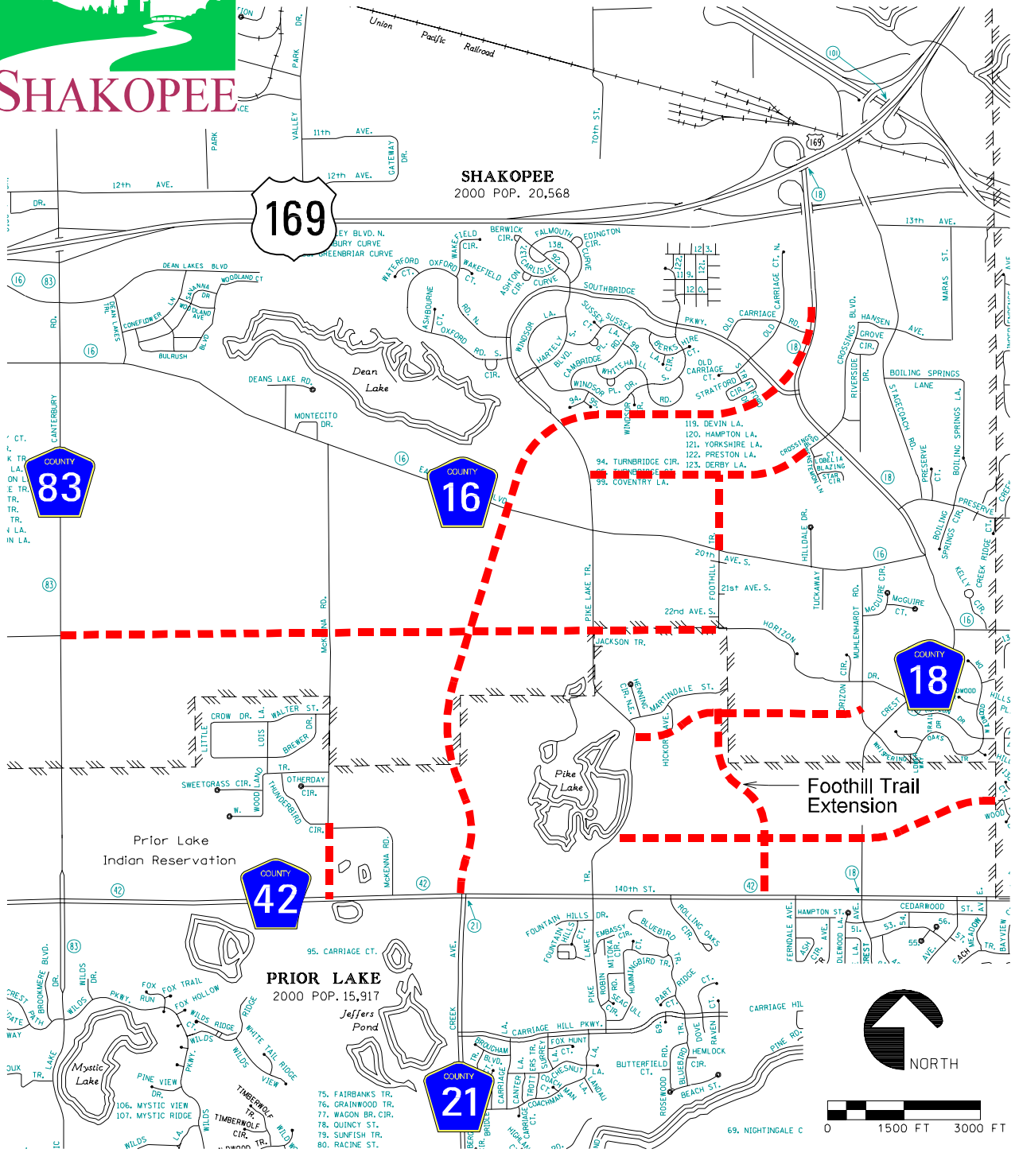
City of Shakopee, Minnesota Transportation Plan Update

Prepared by:


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Shakopee Mdwakanton Sioux Community Land and Roadway Planning

Figure 4.3



City of Shakopee, Minnesota Transportation Plan Update

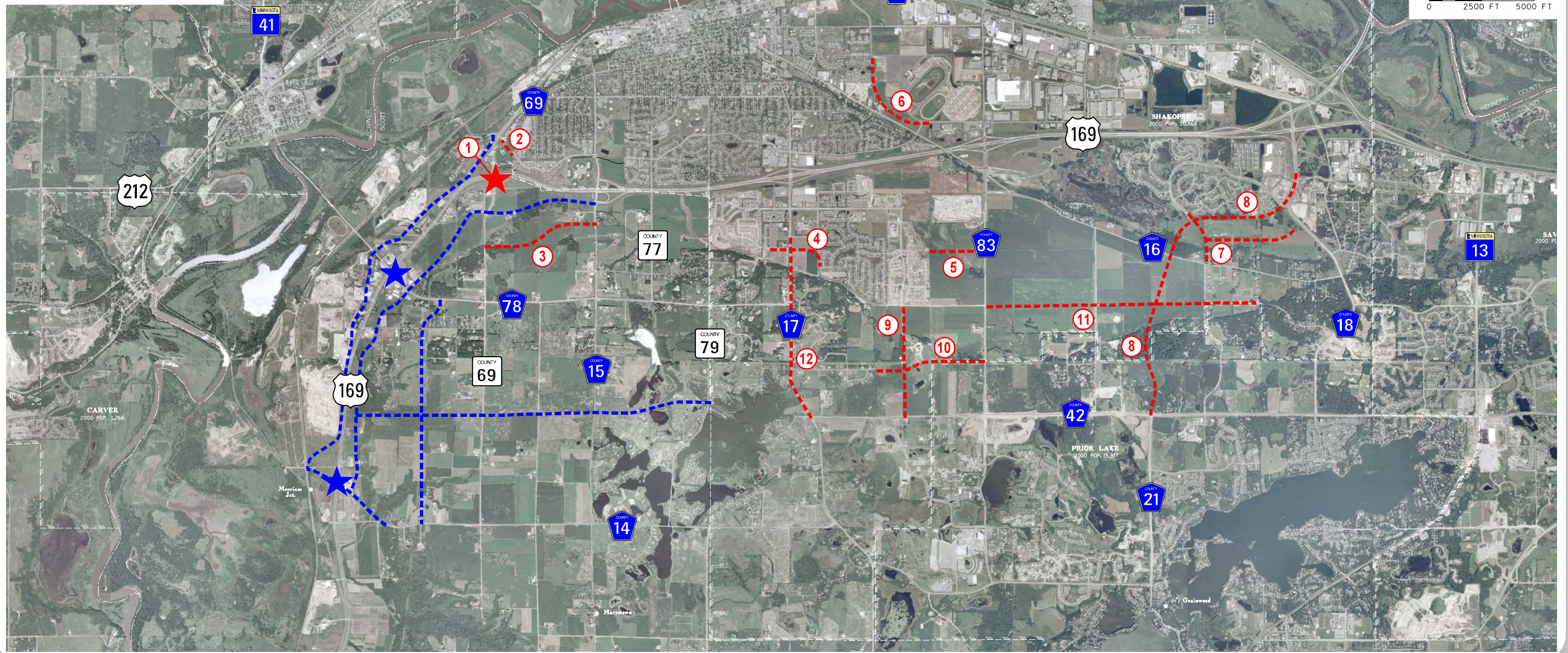
CSAH 16 Area Study

Prepared by:


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 Minneapolis, MN 55416
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Figure 4.4

Date Printed: 12/8/2008
 WSB Filename: I:\0605-00\Cod\fig-04-4.dgn



City of Shakopee, Minnesota Transportation Plan Update

Legend

- - - - - Roadway Improvements Assumed in the Baseline 2030 Network
- - - - - Future Improvements Pending Future Growth
- ★ Assumed Interchange
- ★ Future Interchange Pending Development

(X) Please refer to Table 5.1 for roadway identification.

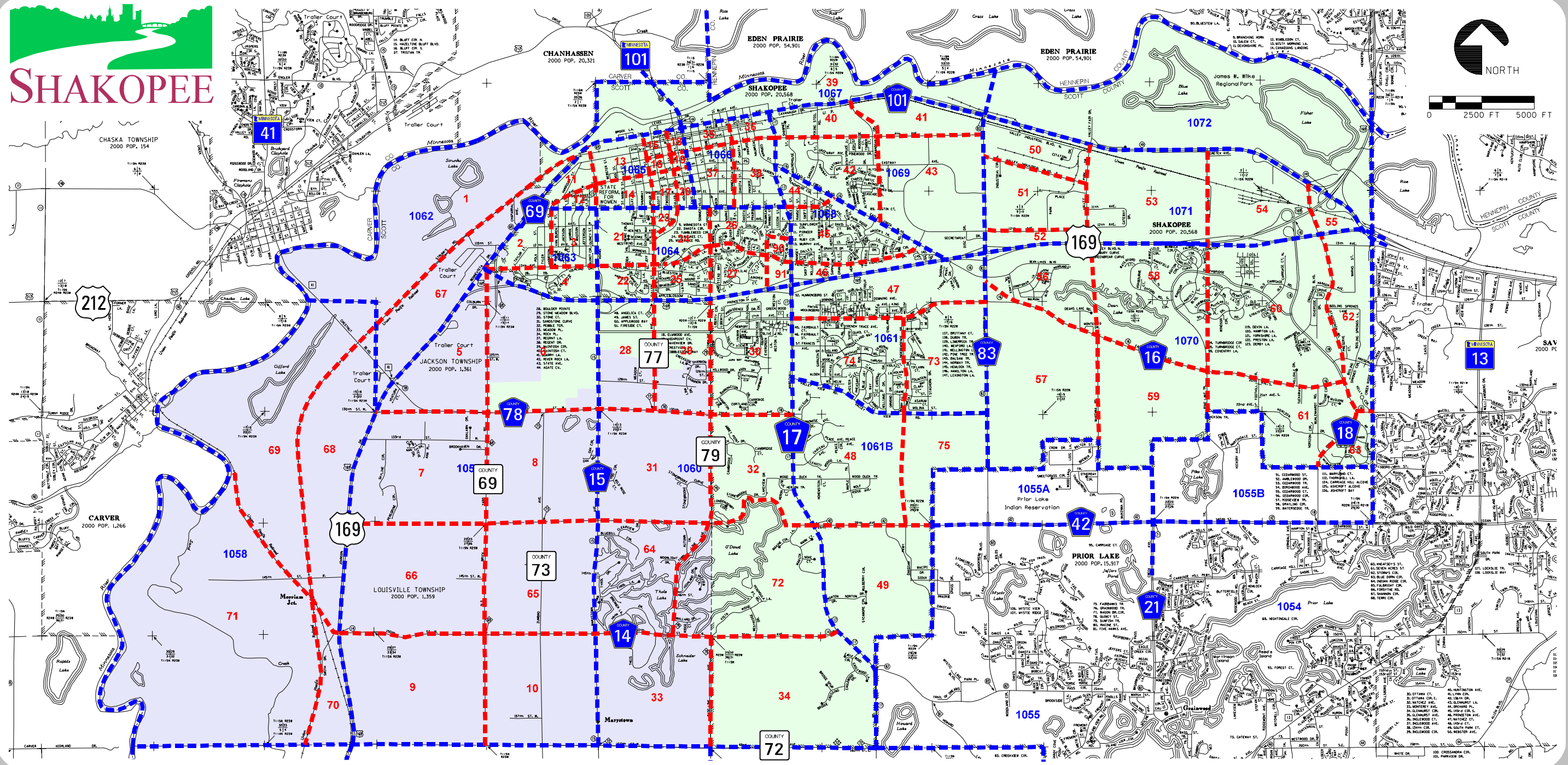
Please Note:
Actual final alignments may be somewhat different from those depicted to account for natural features and / or right-of-way issues. Future TH 169 frontage road locations are conceptual pending on-going TH 41 river crossing analysis.

Assumed Baseline 2030 Roadway Improvements

Figure 5.1

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City of Shakopee, Minnesota Transportation Plan Update

Prepared by:



Legend

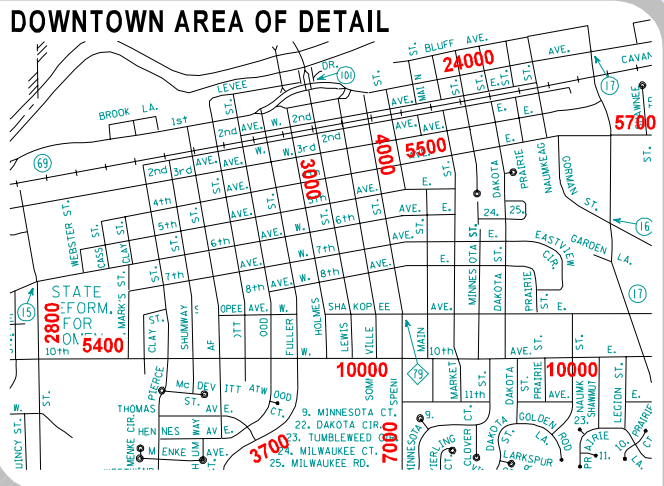
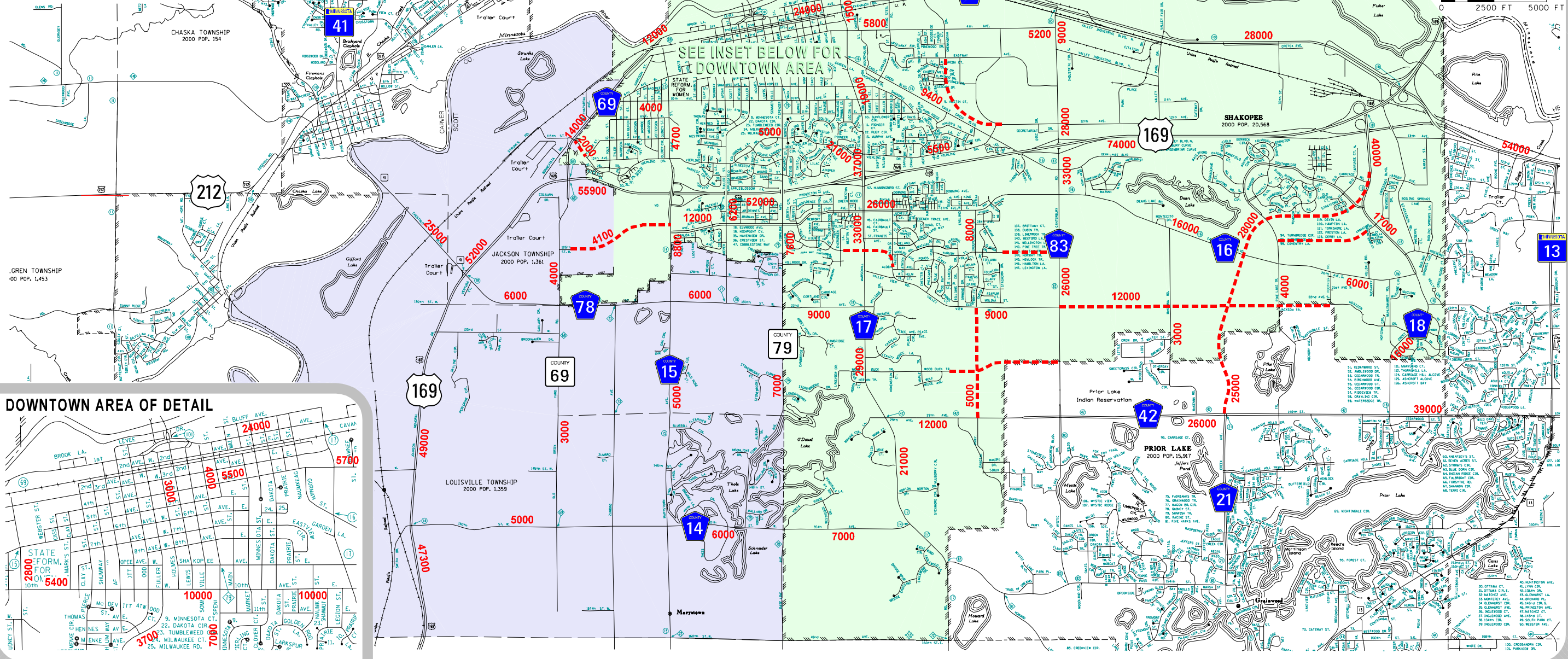
- - - Shakopee TAZ
- - - Metropolitan Council TAZ
- 2030 Planning Area
- Additional 2050 Planning Area

Shakopee Traffic Analysis Zones

Figure 5.2



SHAKOPEE



City of Shakopee, Minnesota Transportation Plan Update

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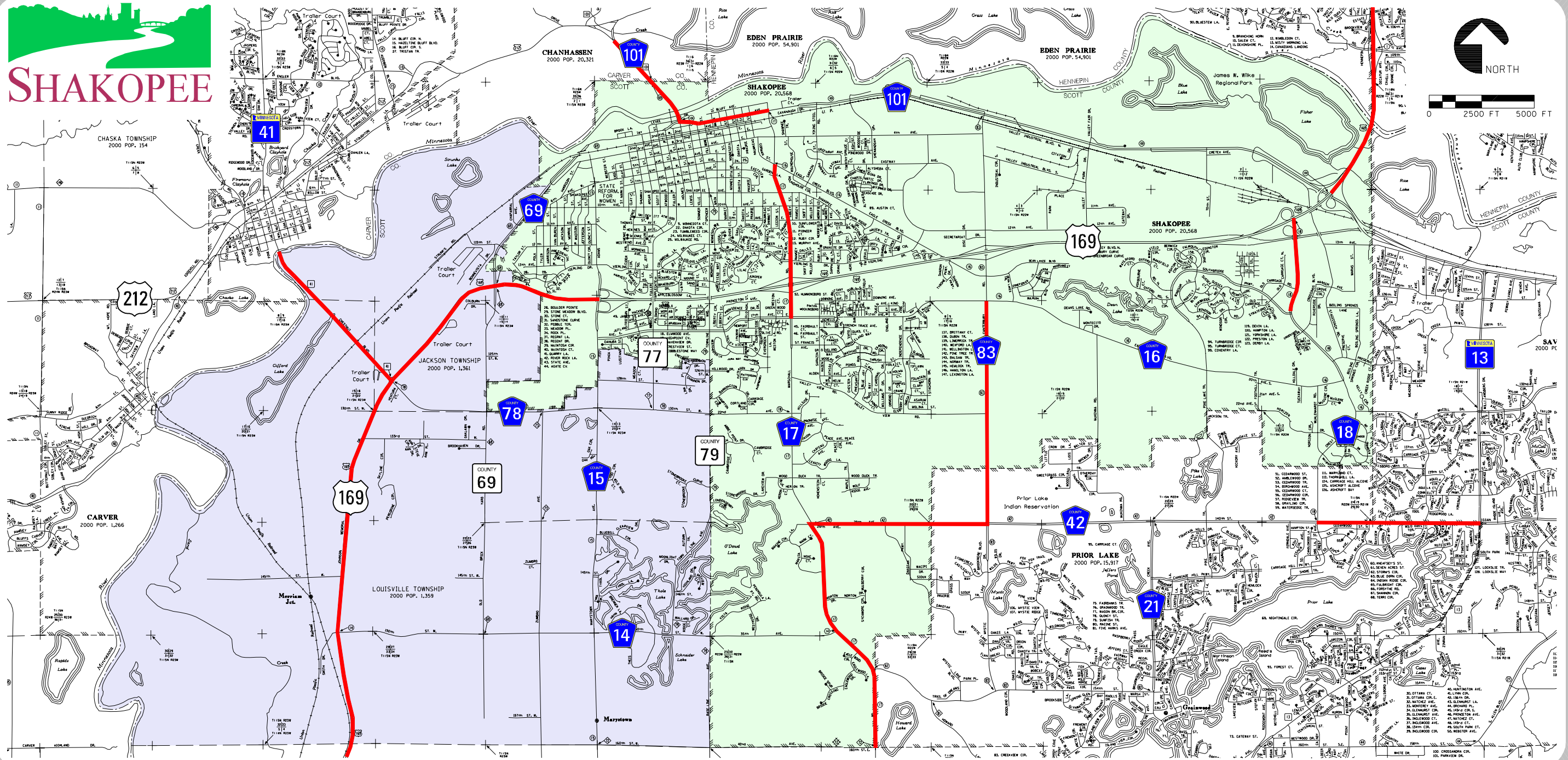
Legend

- - - - - Future Roadway
- 2030 Planning Area
- Additional 2050 Planning Area

Note:
Assumes 2030 Land Use and Baseline
Future Roadway Network Plus Valley
View Road Extension

Projected 2030 Daily Traffic Volumes

Figure 5.3



City of Shakopee, Minnesota Transportation Plan Update

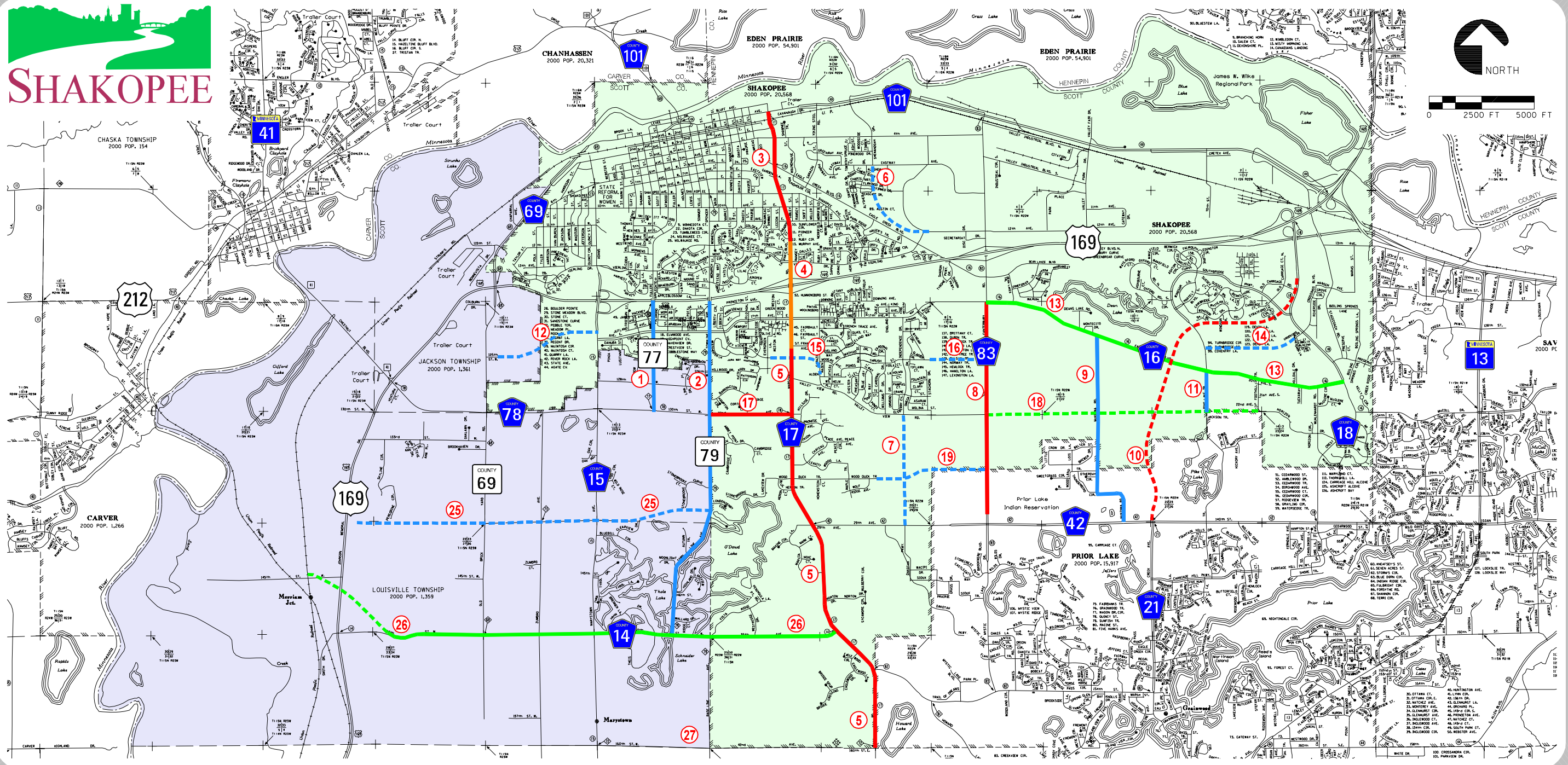
Legend

- Congested Roadway (LOS E/F)
- 2030 Planning Area
- Additional 2050 Planning Area

Projected 2030 Congested Roadways (LOS E/F) Figure 5.4

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& Associates, Inc.
701 Xenia Avenue South, Suite 300
Minneapolis, MN 55416
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Legend

- 2 Lane Urban - Upgrade
- - - 2 Lane Urban - New Roadway
- 3 Lane Urban - Upgrade
- - - 3 Lane Urban - New Roadway
- 4 Lane with Turn Lanes - Upgrade
- - - 4 Lane with Turn Lanes - New Roadway
- 6 Lane Divided - Upgrade

(X) Please refer to Table 5.2 for improvement project identification.

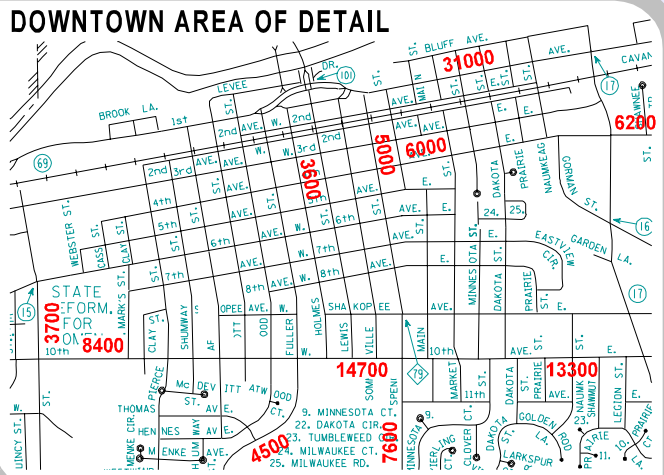
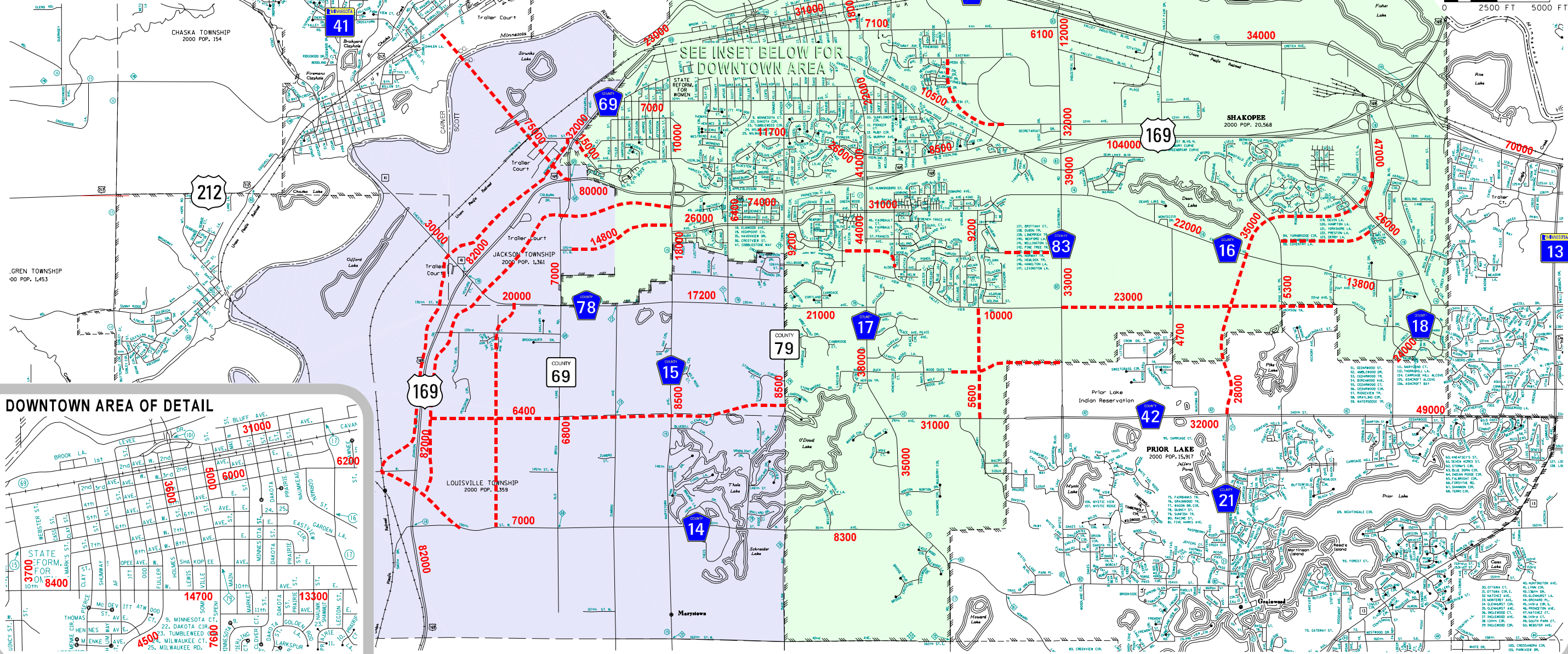
*Please Note:
Actual final alignments may be somewhat different from those depicted to account for natural features and / or right-of-way issues.*

2030 Roadway Capacity / Design Needs

Figure 5.5



SHAKOPEE



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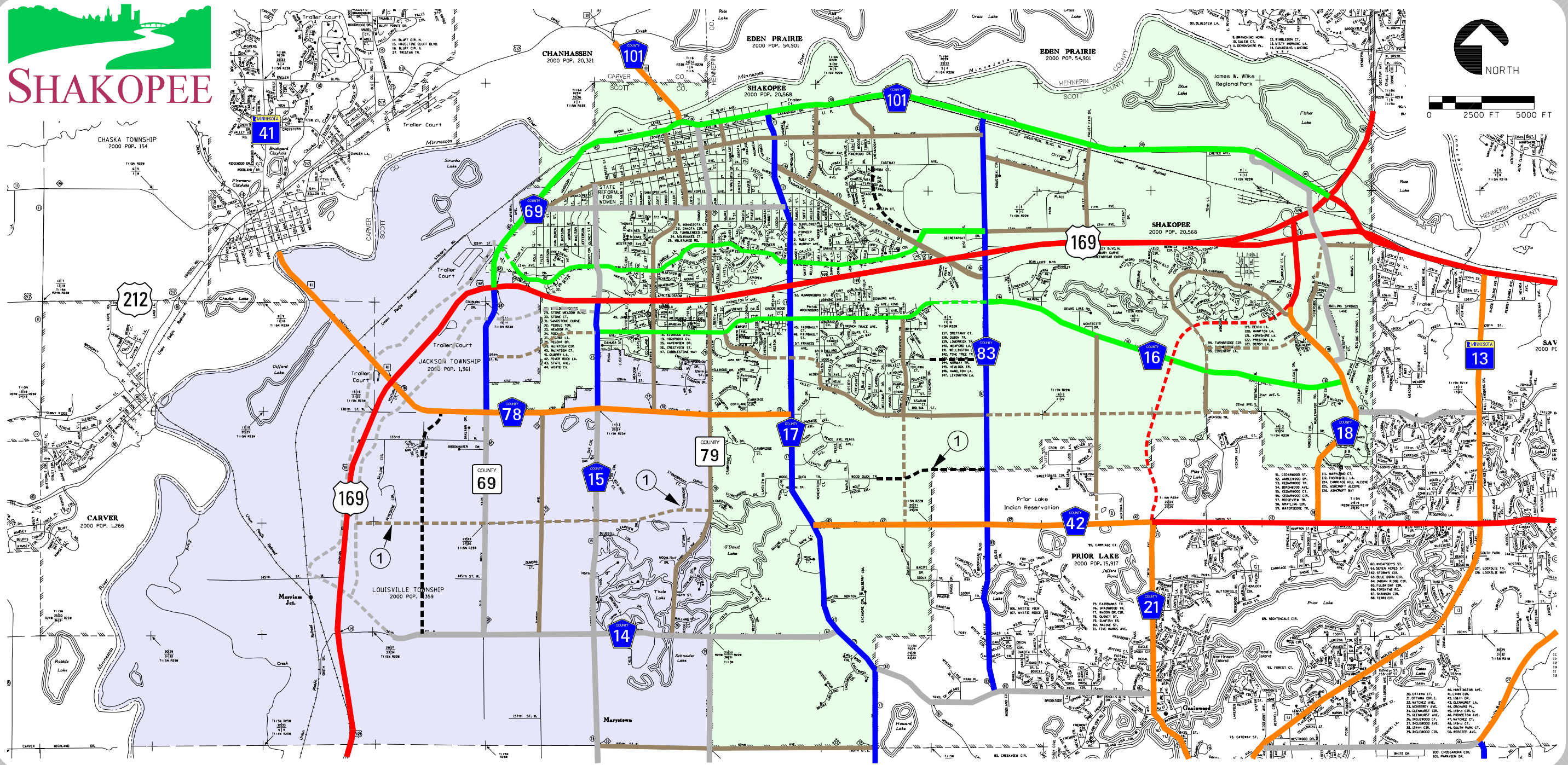
Legend

- - - - - Future Roadway
- 2030 Planning Area
- Additional 2050 Planning Area

Note:
Assumes 2030 Land Use and Baseline
Future Roadway Network Plus Valley
View Road Extension

Projected 2050 Daily Traffic Volumes

Figure 5.6



City of Shakopee, Minnesota Transportation Plan Update

Note: Future Functional Class Network may vary depending on TH 41 River Crossing analysis and recommendations.

Legend

- | | | | |
|--|------------------------------|--|------------------------------------|
| | Principal Arterial | | Future Principal Arterial |
| | A Minor Arterial (Reliever) | | Future A Minor Arterial (Reliever) |
| | A Minor Arterial (Expander) | | Future B Minor Arterial |
| | A Minor Arterial (Connector) | | Future Collector |
| | B Minor Arterial | | Future Local Road |
| | Collector | | |
| | Local Road | | |
- ① Final design/alignment to be determined pending future development and/or detailed assesment of environmental issues.

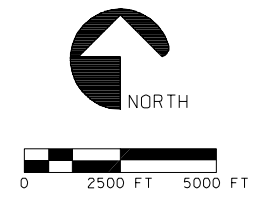
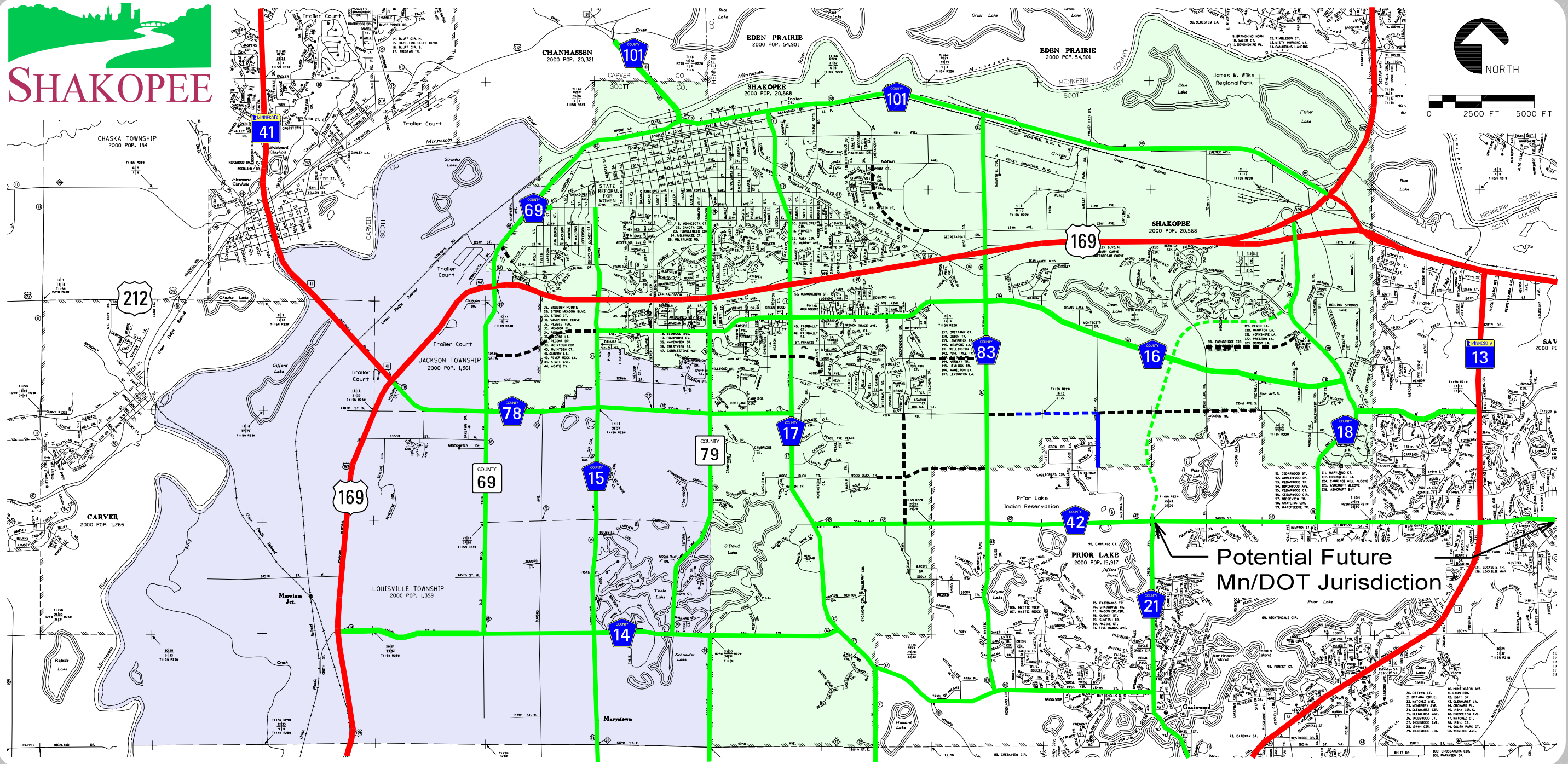
2030 Roadway Functional Classification

Figure 6.1

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701 Xenia Avenue South, Suite 300
Minneapolis, MN 55416
www.wsbeng.com

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Legend

- | | | | |
|--|----------------------------------------|--|-------------------------------------|
| | Minnesota Department of Transportation | | Future Roadways: Scott County |
| | Scott County | | Shakopee Mdwakanton Sioux Community |
| | Shakopee Mdwakanton Sioux Community | | City or Township |
| | City or Township | | |

* As identified in 2001 Scott County Transportation Plan

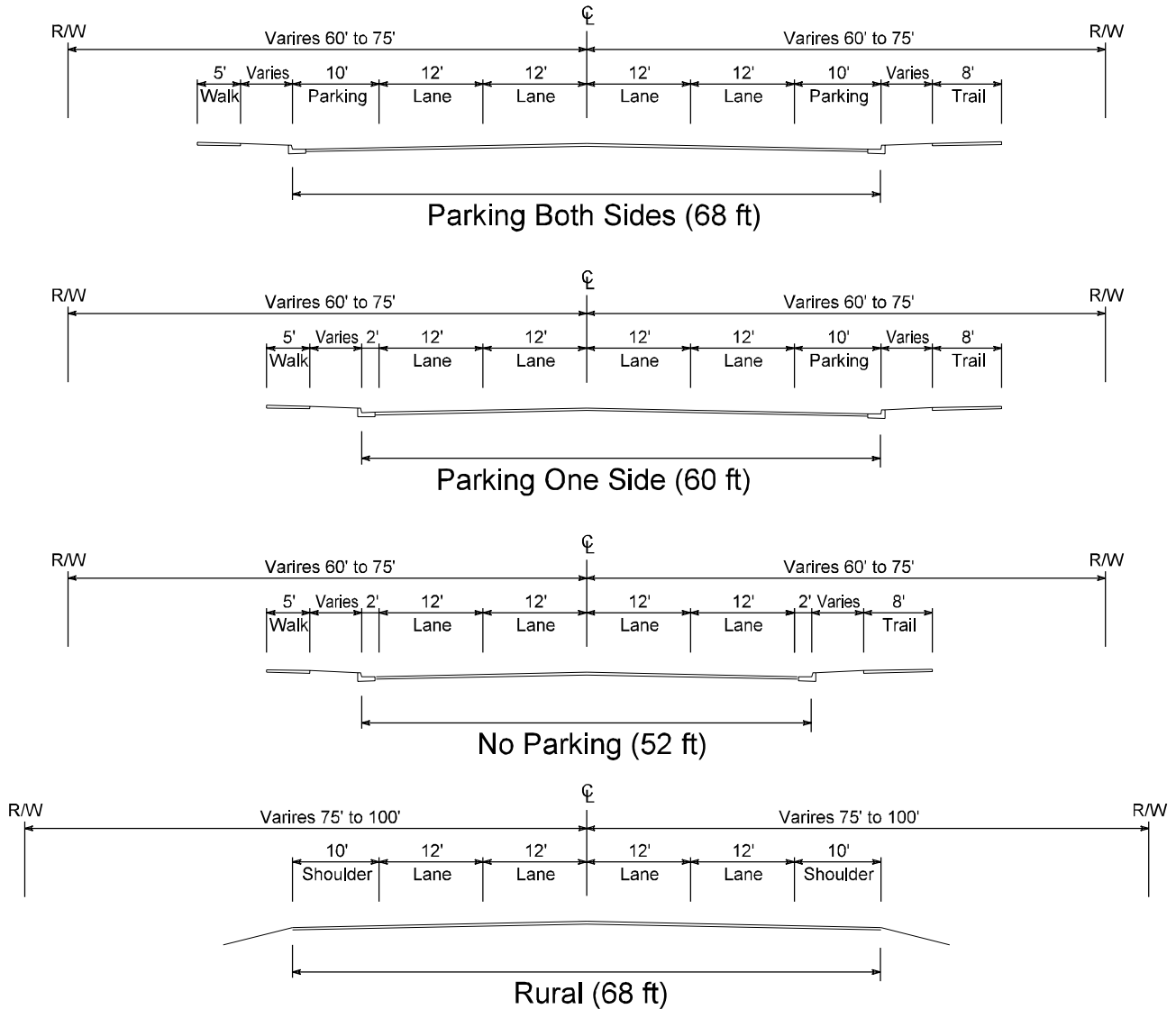
2030 Roadway Jurisdictional Classification

Figure 6.2



Minor Arterial - 4 Lane Undivided

ADT = 15,000 to 30,000
 R.O.W. (Urban) = 120 ft to 150 ft
 R.O.W. (Rural) = 150 ft to 200 ft



Notes: 1) Turn lanes may be added at intersections as required.
 2) Scott County's typical sections for county roadways are provided in Appendix D of this Transportation Plan.

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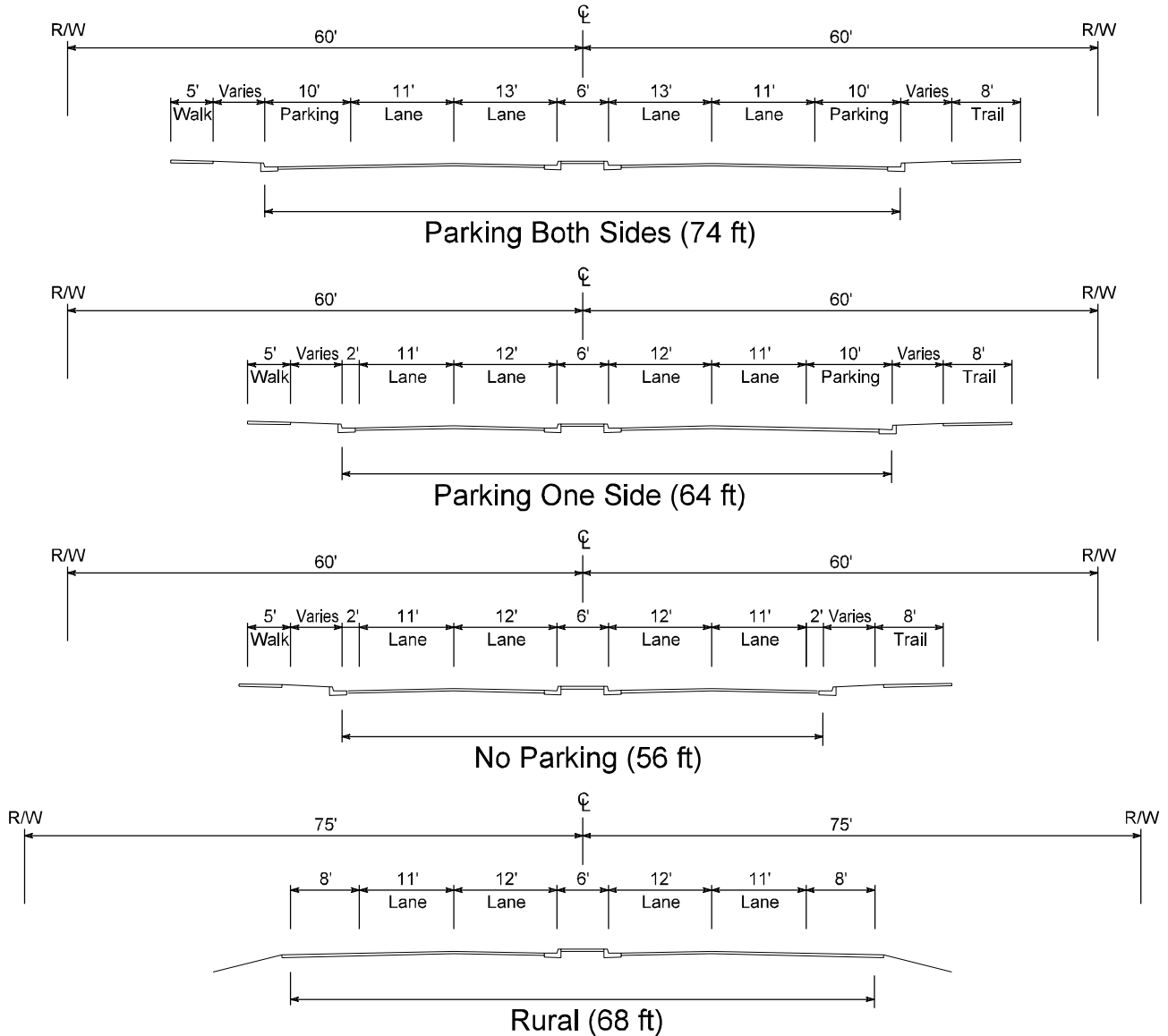
Typical Sections

Figure 6.3-1



Major Collector - 4 Lane Divided

ADT = 10,000 to 25,000
 R.O.W. (Urban) = 120 ft
 R.O.W. (Rural) = 150 ft



Notes: 1) Turn lanes may be added at intersections as required.
 2) Scott County's typical sections for county roadways are provided in Appendix D of this Transportation Plan.

City of Shakopee, Minnesota Transportation Plan Update

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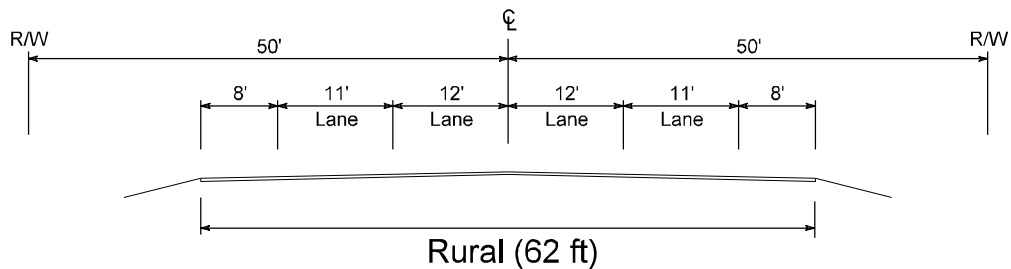
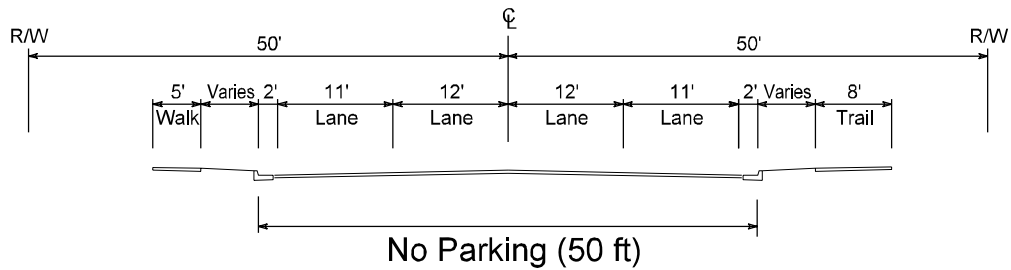
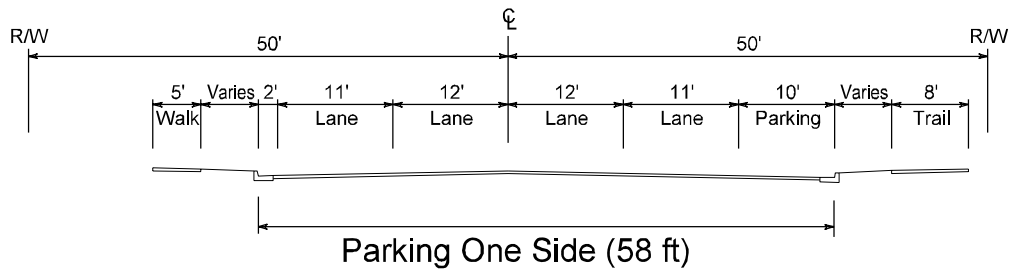
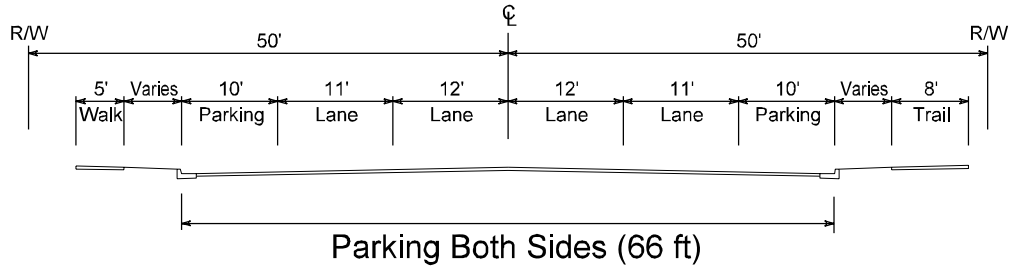
Typical Sections

Figure 6.3-2



Major Collector - 4 Lane Undivided

ADT = 7,500 to 18,000
 R.O.W. (Urban) = 100 ft
 R.O.W. (Rural) = 100 ft



Notes: 1) Turn lanes may be added at intersections as required.
 2) Scott County's typical sections for county roadways are provided in Appendix D of this Transportation Plan.

City of Shakopee, Minnesota Transportation Plan Update

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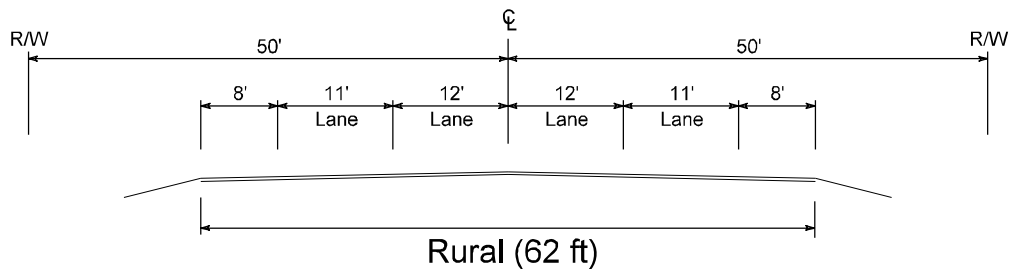
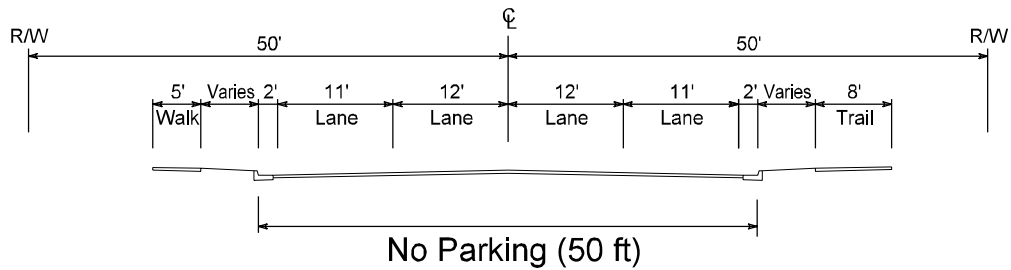
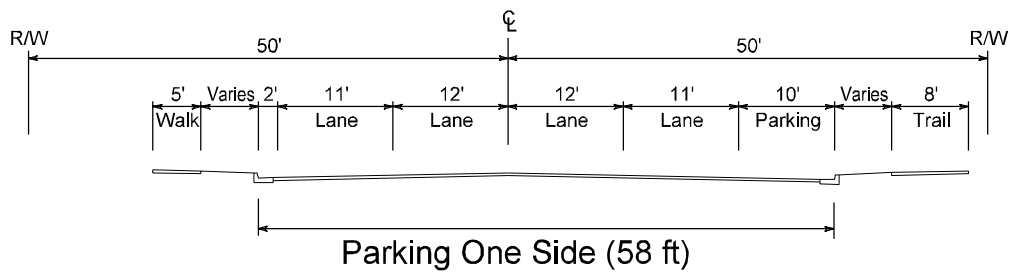
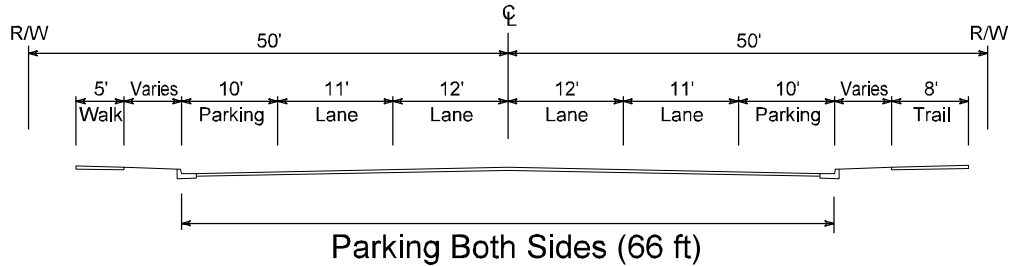
Typical Sections

Figure 6.3-3



Minor Collector - 4 Lane Undivided

ADT = 7,500 to 18,000
 R.O.W. (Urban) = 100 ft
 R.O.W. (Rural) = 100 ft



Notes: 1) Turn lanes may be added at intersections as required.
 2) Scott County's typical sections for county roadways are provided in Appendix D of this Transportation Plan.

City of Shakopee, Minnesota Transportation Plan Update

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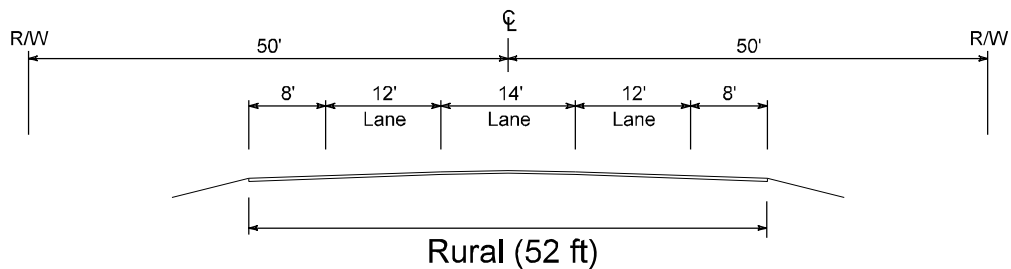
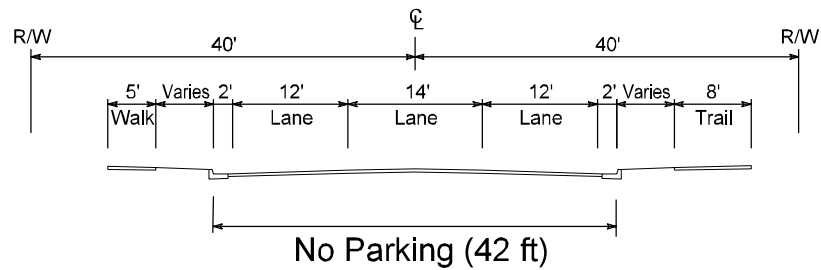
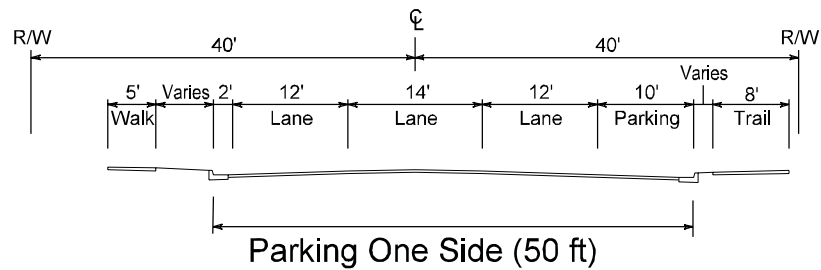
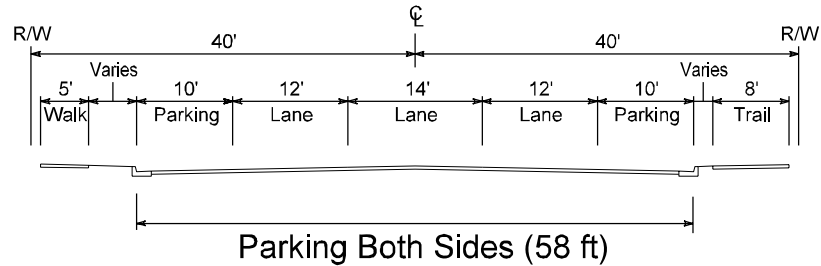
Typical Sections

Figure 6.3-4



Minor Collector - 3 Lane

ADT = 4,000 to 16,000
 R.O.W. (Urban) = 80 ft
 R.O.W. (Rural) = 100 ft



Notes: 1) Turn lanes may be added at intersections as required.
 2) Scott County's typical sections for county roadways are provided in Appendix D of this Transportation Plan.

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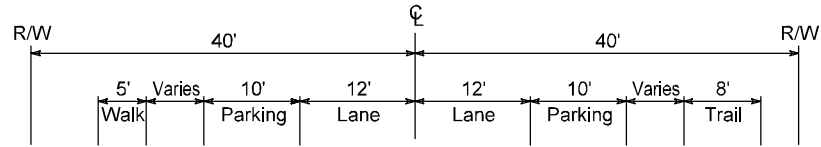
Typical Sections

Figure 6.3-5

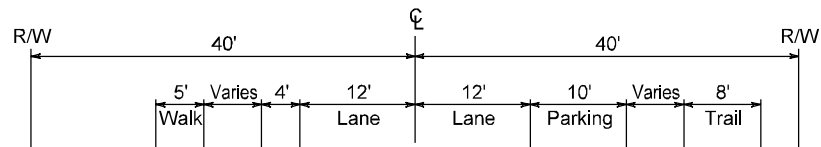


Minor Collector - 2 Lane

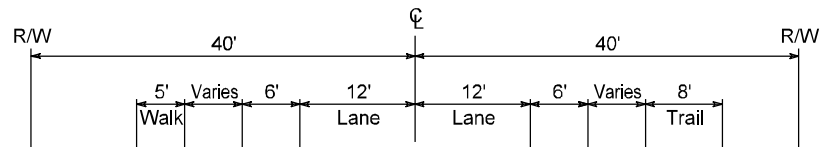
ADT = 2,000 to 9,000
 R.O.W. (Urban) = 80 ft
 R.O.W. (Rural) = 100 ft



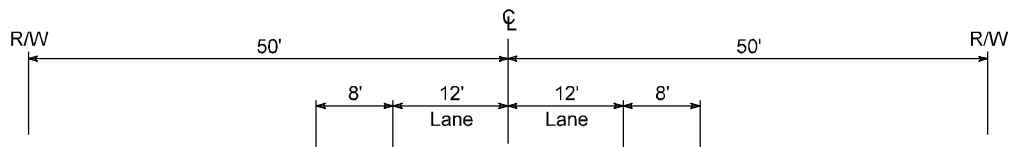
Parking Both Sides (44 ft)



Parking One Side (38 ft)



No Parking (36 ft)



Rural (40 ft)

Notes: 1) Turn lanes may be added at intersections as required.
 2) Scott County's typical sections for county roadways are provided in Appendix D of this Transportation Plan.

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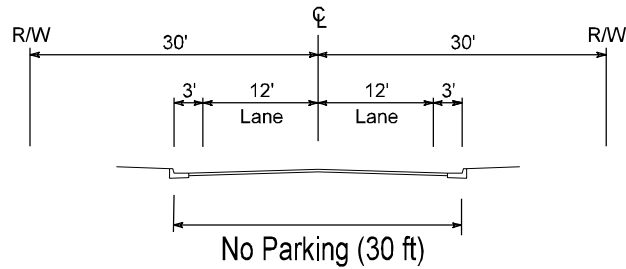
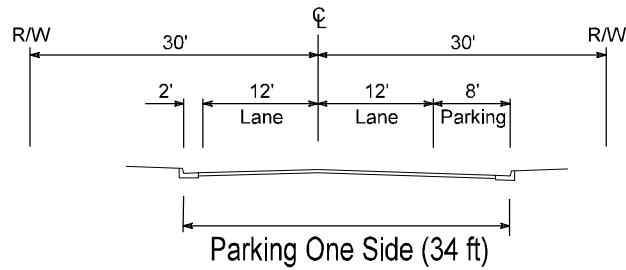
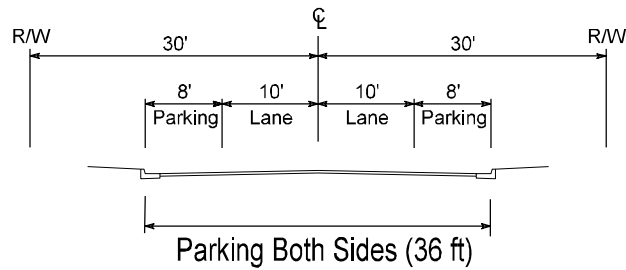
Typical Sections

Figure 6.3-6



Local Street - 2 Lane

ADT = 0 to 9,000
R.O.W. (Urban) = 60 ft



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701 Xenia Avenue South, Suite 300
Minneapolis, MN 55416
www.wsbing.com

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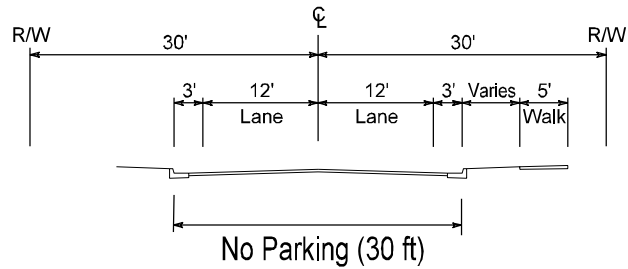
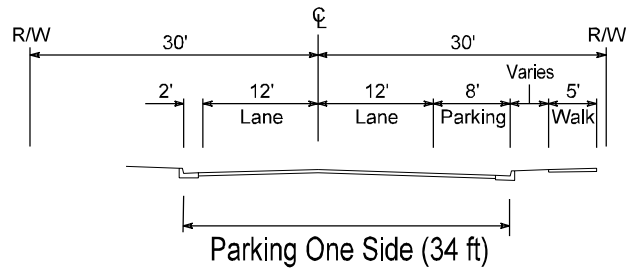
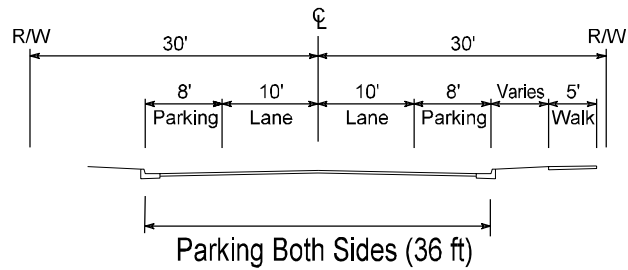
Typical Sections

Figure 6.3-7



Feeder Street - 2 Lane

ADT = 2,000 to 9,000
R.O.W. (Urban) = 60 ft



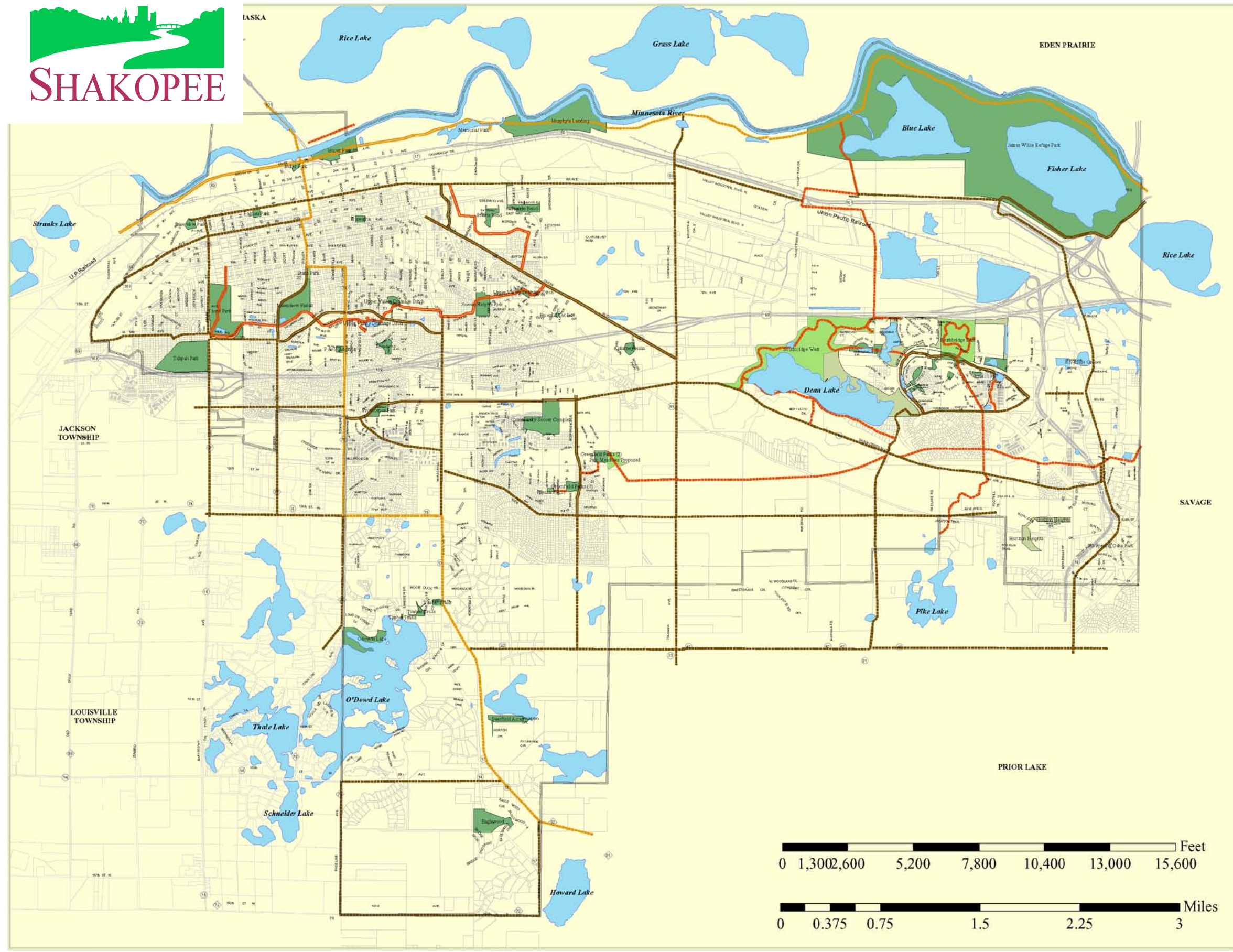
City of Shakopee, Minnesota Transportation Plan Update

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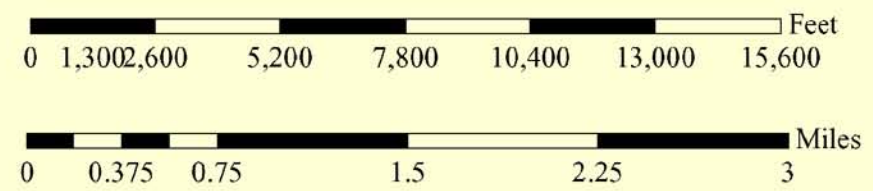


Typical Sections

Figure 6.3-8



- Existing Park
- Open Space
- Proposed Park
- Existing Recreational
- Existing Regional
- Existing Transportation
- Proposed Recreational
- Proposed Regional
- Proposed Transportation
- Water
- Shakopee Boundary
- lot polygon



Shakopee Parks and Trails

Figure 6.4

Source: City of Shakopee

APPENDIX A

Travel Forecasting Model and Methods

APPENDIX A

TRAVEL FORECASTING MODEL AND METHODS

Travel forecasting is based upon computer modeling which uses land use and population data in conjunction with transportation network information to determine future roadway deficiencies and needs. The projections for this Transportation Plan were performed by WSP & Associates, Inc. (WSB) using a software program by Citilabs called TP+.

TP+ can be used to simulate current and future traffic conditions. For this Plan, it was used to prepare city-wide model allowing traffic projections on a system-wide basis. The model is dynamic, such that assumptions can be revised as future land uses are developed and new roadways are constructed. For use in this Plan, the development and use of the Shakopee travel forecasting model involved the steps discussed under the headings below.

Data Collection

The data used for the analysis in this Plan was collected by WSB staff. This included existing traffic data and information on the existing and anticipated roadway network. Information regarding existing and future land use and population was obtained from Met Council and the City of Shakopee. Regional traffic forecast information was obtained from Scott County, Met Council, and Mn/DOT sources.

Traffic Analysis Zone System

Land use and population data for the transportation planning process is organized and assigned according to Traffic Analysis Zones (TAZs). The TAZs used for this analysis are depicted on *Figure 5.2* of the main 2030 Shakopee Transportation Plan document. The system used was based upon the Metropolitan Council zones, with some refinement appropriate to the local analysis. Each TAZ has trip generation and attraction characteristics determined by the data assigned to it as referenced above.

Trip Generation

Vehicle trips are classified into purpose categories: Home Based Work (HBW), Home Based Nonwork (HBN), Home Based Other (HBO), and Non-Home Based. The differing types of trips have significance in how the model relates trip productions and attractions to each other and, accordingly, how it matches origins with destinations for individual trips. The primary trip types determined as part of this forecasting process are:

Through trips—these trips do not have origins or destinations within the study area (the City). For example, they might originate in Minneapolis, continue through Shakopee on Trunk Highway 169, and terminate at Mankato. These trips, for the purposes of this study, were based on regional forecasts by Scott

County, Mn/DOT, Met Council, as well as historical trend analysis of traffic levels in the overall project area.

Internal trips—these trips begin and end within the study area. The numbers of trips produced and attracted are based on the population and land use data assigned to each TAZ.

External to internal trips—these are trips generated from outside the study area but have destinations within the City. An example would be residents of Minneapolis accessing the Canterbury Park racetrack. These trips are based upon the number of “attractions” within the City balanced against internal trip productions and external trips which would not pass completely through the City based upon Met Council forecast information.

Internal to external trips—these are trips generated inside the City with destinations elsewhere. An example would be a resident of Shakopee who commutes to Bloomington for work. These are based upon trip productions within the City balanced against internal “demand” for these trips and regional traffic patterns.

Trip Distribution/Route Assignment

For individual trips, origins and destinations are matched between TAZ areas, based primarily on a system-wide balance between trip generations and trip attractions, and relative distances between them. Once the trips are distributed between TAZ areas, they are assigned to individual routes (streets) in a way which minimizes delays on the network. This assumes that motorists will choose the route between origin and destination which minimizes travel time. The model performs iterations to balance all trip productions and attractions and minimize delays.

Model Calibration

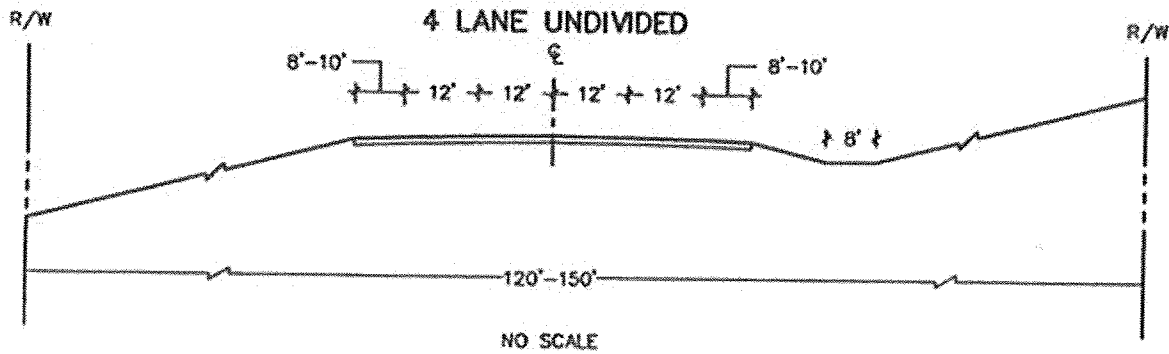
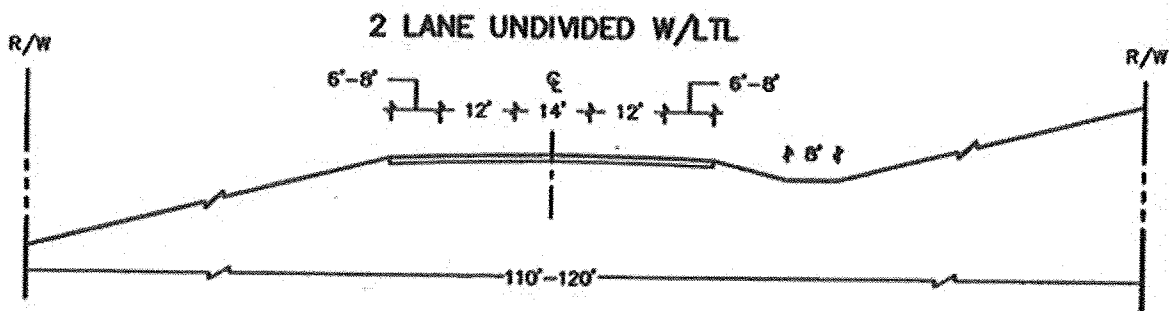
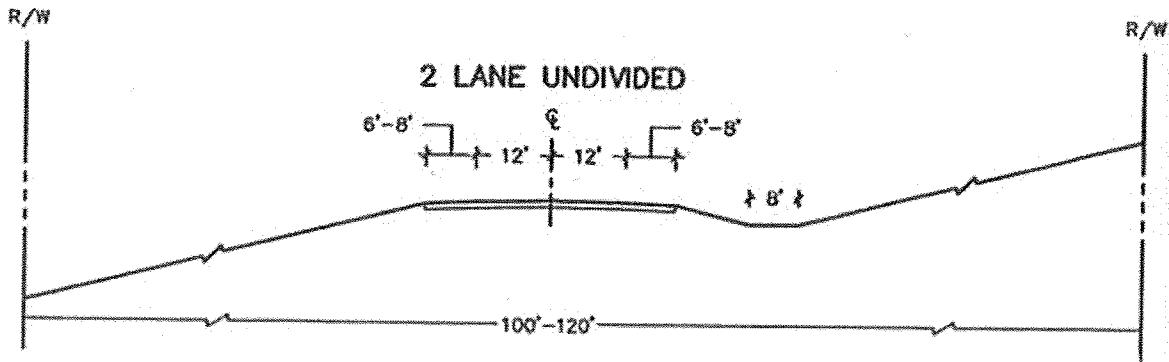
The National Council of Highway Research Program (CHRP) Circular 255 was used to determine the maximum allowable difference between modeled trip volumes/route assignments and actual traffic counts. In the analysis used for this Plan, the modeled outputs for 2000 were compared with observed traffic counts. Some adjustments to road capacity and vehicle travel speeds were made to calibrate the model results to observed conditions.

Future Traffic Levels

Once the travel model for the City was established and calibrated as described in the preceding steps, it was ready to be used for forecasting purposes. To perform forecasting, future land use and population information data (as discussed above) was loaded into to the model, organized according to TAZ areas. The model performs iterations to generate, distribute, and assign total trips throughout the overall network.

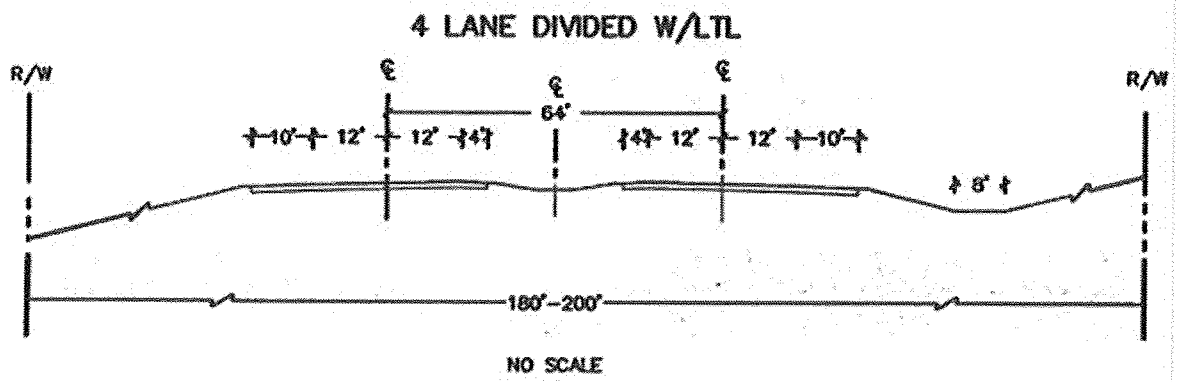
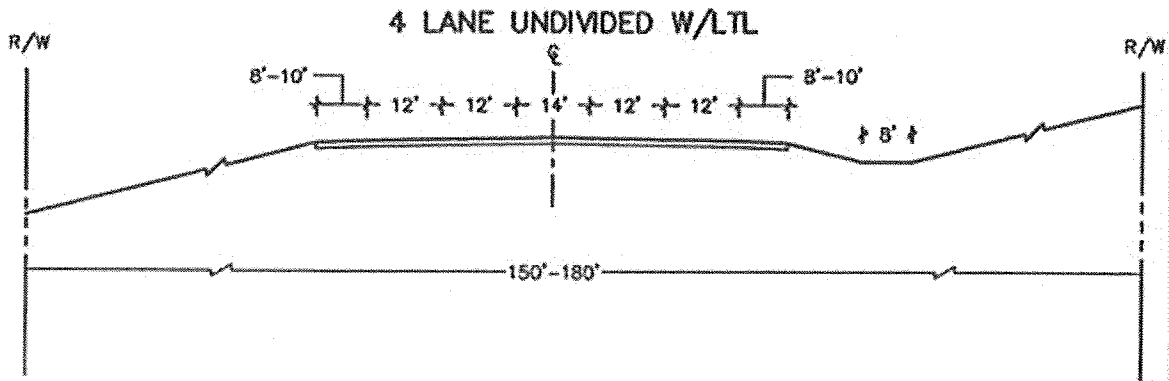
APPENDIX B

Typical Cross-Sections and Right-of-Way Requirements for Scott County Roadways



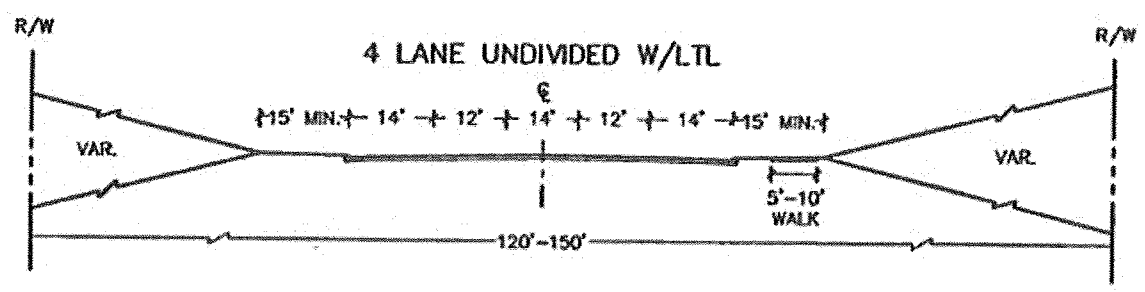
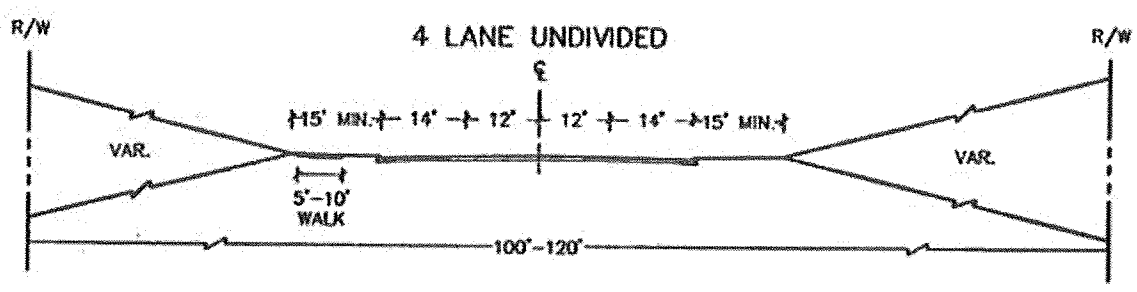
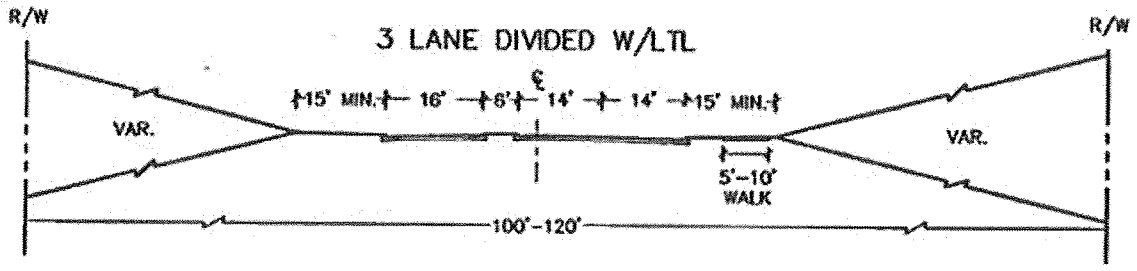
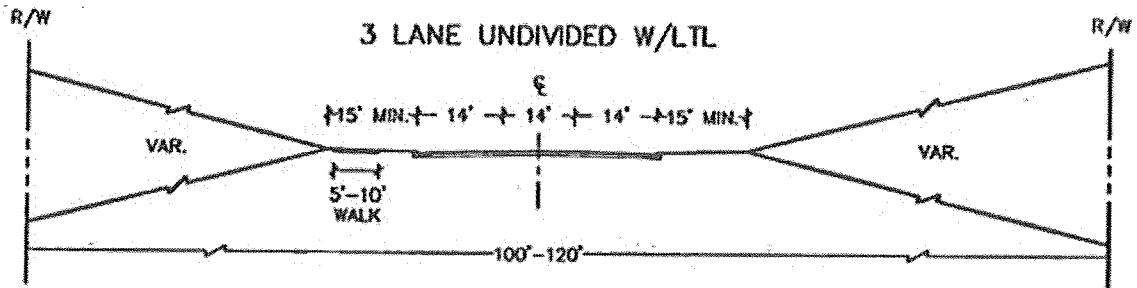
SCOTT COUNTY TRANSPORTATION PLAN
TYPICAL RURAL CROSS-SECTIONS
 NO SCALE

C-1



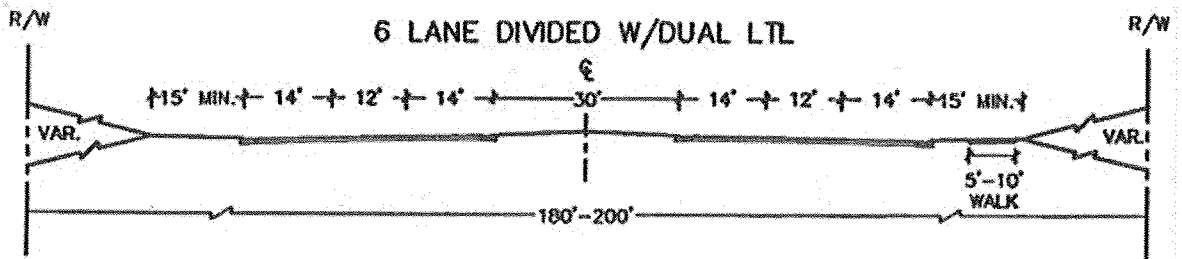
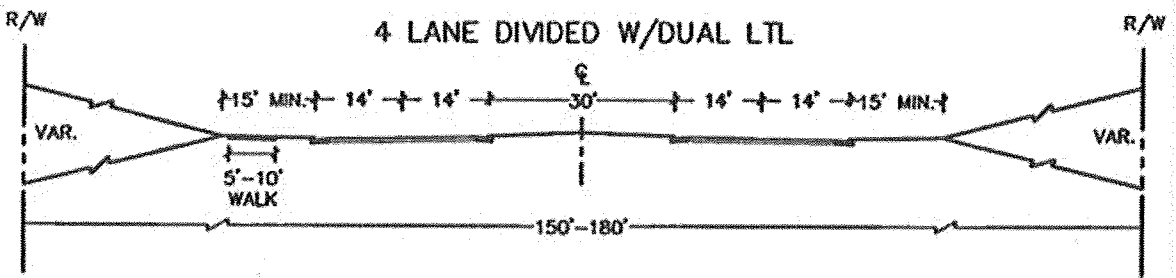
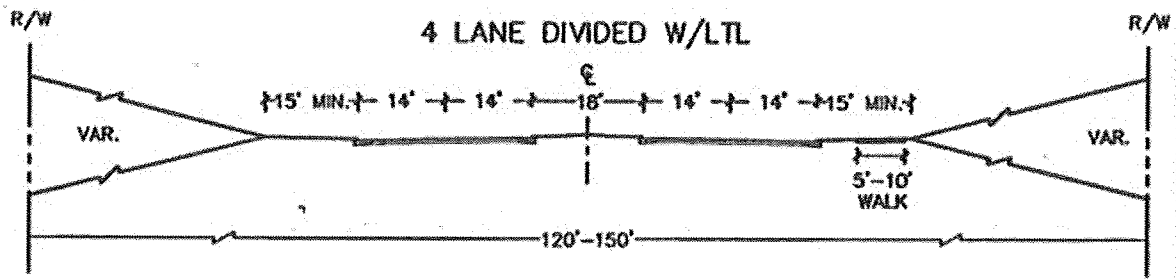
SCOTT COUNTY TRANSPORTATION PLAN
TYPICAL RURAL CROSS-SECTIONS
 NO SCALE

C-2



SCOTT COUNTY TRANSPORTATION PLAN
TYPICAL URBAN CROSS-SECTIONS
 NO SCALE

C-3



SCOTT COUNTY TRANSPORTATION PLAN
TYPICAL URBAN CROSS-SECTIONS
 NO SCALE

APPENDIX C

Scott County Access Management Guidelines

MINIMUM ACCESS SPACING GUIDELINES

TYPE OF ACCESS BEING REQUESTED	TYPE OF COUNTY HIGHWAY AFFECTED BY ACCESS					
	PRINCIPAL ARTERIAL	DIVIDED 4 OR 6 LANE	UNDIVIDED 4-LANE		UNDIVIDED 2-LANE	
			> 15,000 ADT	< 15,000 ADT	> 3,000 ADT	< 3,000 ADT
A. Private Residential or Individual Commercial	Not Permitted	Not Permitted	Not Permitted	1/8 Mile Spacing	1/8 Mile Spacing	Determination based on other criteria
B. Low Volume, Non-Continuous Streets	1/8 Mile Spacing With No Median Opening	1/8 Mile Spacing With No Median Opening	1/4 Mile Spacing	1/4 Mile Spacing	1/4 Mile Spacing	Determination based on other criteria
C. Med-High Volume, Non-Continuous Streets	1/8 Mile Spacing - With No Median Opening	1/4 Mile Spacing With Turn Lanes	1/4 Mile Spacing With Turn Lanes	1/4 Mile Spacing With Turn Lanes	1/4 Mile Spacing	1/4 Mile Spacing
	1/4 Mile Spacing - RIGHT TURNS AND LEFT-IN ONLY					
D. Low-Medium Volume, Thru Streets	1/4 Mile Spacing - RIGHT TURNS AND LEFT-IN ONLY	1/2 Mile Spacing With Turn Lanes	1/4 Mile Spacing With Turn Lanes	1/4 Mile Spacing With Turn Lanes	1/4 Mile Spacing	1/4 Mile Spacing
	1/2 Mile Spacing - FULL ACCESS					
E. Medium-High Volume, Thru Streets	1/2 Mile Spacing With Turn Lanes	1/2 Mile Spacing With Turn Lanes	1/2 Mile Spacing With Turn Lanes	1/2 Mile Spacing With Turn Lanes	1/2 Mile Spacing With Turn Lanes	1/2 Mile Spacing
F. High Volume, Arterials and Expressways	1 Mile Spacing With Signals and Turn Lanes	1 Mile Spacing With Turn Lanes	1 Mile Spacing With Turn Lanes	1 Mile Spacing With Turn Lanes	1 Mile Spacing With Turn Lanes	1 Mile Spacing

NOTES:

1. All traffic volumes refer to 20-year forecasts.
2. Roadway types refer to anticipated cross-section.
3. Access volume classifications generally pertain to the following breakdowns:
 - "Low Volume": Under 3,000 ADT (Design Volumes)
 - "Medium Volume": 3,000 - 10,000 ADT (Design Volumes)
 - "High Volume": Over 10,000 ADT (Design Volumes)
4. "Non-Continuous Streets" refer to cul-de-sac or short-length local streets which do not necessarily cross the County Highway in question.
5. Fully developed urban areas will require individual evaluation on a case by case basis.
6. When there is opportunity for private access on more than one public roadway, access shall be taken on the lower-function or lower-volume roadway.
7. Turn lanes shall be required at access locations where conditions warrant, even if not specifically noted here.
8. Signals shall be installed only where warranted and justified, consistent with the MMUTCD. 1/2 mile spacing of signals will be preserved where possible.