

Chapter 8: Transportation

Introduction

The purpose of the Transportation Plan is to plan for adequate road, transit, pedestrian and bicycle facilities. The City is planning these facilities to complement and support the other Comprehensive Plan elements. This is to ensure that the transportation system works so that citizens may enjoy reasonable mobility, access, and safety. The plan also is to ensure that the transportation system protects and enhances neighborhoods while being integral, but not intrusive to residents. In addition, the transportation system should work for individuals so that various types of travel can coexist and accommodate individual choices.

Transportation Issues

Maplewood's transportation system is well established. The City will, however, need to focus on several transportation issues including the following:

- What should the City do about continued traffic growth in Maplewood? The automobile is expected to stay as the dominant mode of travel in Maplewood and in the region for the foreseeable future. Although recent increases in gas prices and current economic trends have resulted in increases in transit ridership, an increase in carpooling, and a decrease in the vehicle miles traveled. The experts do not know if this will be a long term trend although with increases in research in alternative fuels and hybrid vehicles the single occupancy vehicle may remain dominant even with high gas prices. In this region, continued support of auto-dependent development patterns further strengthens the cars dominance as the mode of choice. This growth in car use is driven by several factors including:
 - More households have more than one wage earner
 - More households are using larger numbers of vehicles
 - Vehicle occupancy is low

As a result, traffic volumes have increased and now exceed the intended street capacity in parts of the City, especially near Maplewood Mall. While the City is continuing to address the congestion issues it has control over, the City of Maplewood, like other cities, has a limited ability to change regional transportation patterns and car use.

- Reducing traffic congestion near Maplewood Mall. Growth in the area of the Mall along with development west of the Mall site continues to generate increased vehicle traffic. Both the arterial and the collector streets in the area are operating at high levels of congestion which continued growth will only make worse.

A comprehensive traffic study has been completed to analyze traffic operations and congestion in the area surrounding the Maplewood Mall (URS, November 2001). The traffic study included the identification of numerous transportation improvements that are necessary to reduce congestion in this area of the City. The City is currently in the process of implementing these improvements, and many have already been completed.

- What are the implications of light rail transit (LRT) service or the addition of a busway or passenger rail service in Maplewood? How can the City maximize the potential for economic development while also minimizing impacts on residential areas? How should LRT or passenger rail service be extended to the Maplewood Mall? How can the number of at-grade crossings with the rail corridor be minimized?

- How much the City should be involved with Mn/DOT in the development of plans for improving or expanding the highways and freeways in Maplewood? Many of the existing highways and freeways in and near the City have capacity deficiencies as identified by Mn/DOT in their current Transportation System Plan. As traffic volumes continue to increase, deficiencies in traffic capacity on the regional road system, including the Maplewood area, will get worse.
- As transportation system needs continue to grow, how can the City pay for the necessary improvements when City budgets limit capital solutions? The City (and other agencies) cannot continue to address traffic congestion and access problems by simply increasing the physical capacity of the transportation system. The financial and political costs are too high and the potential for community disruption is too great.
- What should be the City's policies about the development of sidewalks and trails? If such facilities are to be developed, where should they be located? How can the City's plans and policies better serve bicycles and pedestrians? How should the Parks and Recreation Department be involved with the planning, installation and maintenance of trails and sidewalks?

Major Street System

Figure 8.1 illustrates the existing and planned system of major roads and their functional classification.

Street Classification System

Maplewood adopted its street classification system from the Twin Cities Metropolitan Council's "Transportation Development Guide/Policy Plan." The roadway functional classifications are described as follows:

Principal Arterials - roadways designed to carry the highest volume of traffic (15,000+ average daily traffic (ADT)), allow the highest speeds (40-55 mph), handle the longest trips and provide subregional, regional, and intercommunity access. These roadways do not provide direct access to abutting properties. The Minnesota Department of Transportation (Mn/DOT) and Ramsey County set the spacing standards for principal arterials. This roadway type connects with other principal arterials, minor arterial, and collector streets.

Minor Arterials - roadways that connect subregions. These are roads which are the closest routes running parallel to the principal arterial system. Minor arterials supplement and provide relief for traffic to the principal arterial system. These roadways also may provide direct access to abutting properties as determined in the Maplewood City Code, Chapter 32, Article IV, Driveways. Spacing of minor arterials is determined by Mn/DOT and Ramsey County standards, with site specific exceptions. This roadway type serves inter- and intra-community needs for trips, carries high traffic volumes (5,000+ ADT), and allows moderate-to-high travel speeds (35-45 mph). These roads also serve medium to long distance suburb to suburb trips, connect major trip generators, funnel traffic between collectors and restricted access arterials, and contain at least two drive lanes in each direction.

Collector Streets - roadways designed to carry traffic between the arterial system and the local roadway system. These convey intra-community traffic between neighborhoods, business centers, industries, parks and the like, and provide direct access to abutting properties. This type of roadway carries moderate traffic volumes (1,000 -15,000 ADT), allows moderate-to-high speeds (30-40 mph), satisfies local trip needs (one to four miles) and connects local streets with arterials. Spacing of these roads typically places them about one-half mile apart.

Local Streets - roadways primarily designed to serve short trips at low speeds. Local streets connect blocks, provide direct access to properties and convey traffic to and from higher level roadways. This type of roadway carries the lowest traffic volumes (generally less than 1,000 ADT), allows low speeds (maximum 30 mph) and the horizontal curves need not accommodate 30 mph travel speeds. Spacing of local streets is one block or as needed.

Figure 8.2 illustrates the typical street sections for a variety of road types. These street sections may vary based on the particular constraints of a project. The various watershed districts in the City of Maplewood have stringent stormwater capture and treatment requirements which cause significant impacts on the storm water treatment methods that are required on most projects within the City. Reducing the area of impervious surfaces, including roadways, is one method that will be used by the City, particularly in residential areas, to reduce the impacts and costs of the required stormwater treatment facilities such as nationwide urban runoff program (NURP) ponds, stormwater detentions ponds, etc. Street sections are considered on an individual basis to determine if additional width is justified to accommodate unrestricted parking or bike lanes during the planning of each project.

Access Management is the practice of controlling the spacing and design of roadway intersections for the purpose of maintaining the functionality of a given roadway. Mn/DOT and counties control the number and frequency of access points that are added to roadways under their jurisdiction. Higher functional class roadways will typically have greater spacing between access points and the turning movements allowed at the access points may be restricted to help maintain a higher roadway speed and improve safety. Local roadways will have more densely spaced access points in order to improve mobility.

Mn/DOT access management policy is documented in the *Mn/DOT Access Management Manual*. This manual provides recommended intersection spacing and vehicular movements allowed for roadway intersections and private drives based on each roadways assigned category and subcategory. Ramsey County's Public Works Department provides input on access management requirements during the planning process. The City of Maplewood will work with the appropriate agencies to determine the required access requirements during the planning and design phases of a City led project.

Figure 8.3 illustrates the number of vehicle travel lanes on the arterials streets and roads in Maplewood.

Traffic Analysis Zones

The Metropolitan Council has divided Maplewood into 28 traffic analysis zones (TAZs). **Figure 8.4** illustrates the TAZs in Maplewood. These zones, corresponding to data collected via census, are used to forecast population, households, and employment demographics throughout the metropolitan area. Actual 2000 census data along with forecasts for each TAZ in Maplewood for the years 2010, 2020, and 2030 are included in **Table 8.1**.

2006 Average Daily Traffic (ADT) data on key roads in the City of Maplewood (obtained from Mn/DOT) and the projected 2030 ADT for the same road segments are detailed in **Figure 8.5**. 2030 ADT forecasts were created using a trend analysis of Mn/DOT ADT data from 1992-2006 since Maplewood is a developed community.

Transportation Plan Goals

A major goal of the City of Maplewood is having safe, enjoyable neighborhoods. The Comprehensive Plan shows 13 neighborhood areas within the City, where neighborhood integrity is respected and people feel secure and satisfied where they live, work, shop and play.

A second major goal for the City of Maplewood is providing residents with reasonable mobility. The City's residents often depend on and enjoy relatively relaxed pace and ease of travel. This plan recognizes the desire and need for good mobility in every aspect of their lives. A major part of meeting this goal means that the City must provide good access between businesses and their customers, materials and workers.

Maplewood's transportation system must fit into the county and regional system. The plan envisions a City that has its own unique identity, but also contributes to, and benefits from, the strength of the whole region.

Street System Policies

The City will continue to design and maintain its roads and review site plans according to the functional classification system of roads illustrated by **Figure 8.1**, and the design standards illustrated in **Figure 8.2**. These standards will ensure that streets serve Maplewood's needs and enhance regional efforts to reduce traffic congestion.

The City will do what it can to help implement improvements to the metropolitan highway system planned through 2030, although locations for those improvements will frequently occur on state or county rights-of-way.

Maplewood should continue to participate in county and regional planning efforts to improve the City's connection with the region's street and road system. Below are two planning efforts that are currently underway that City staff is involved with at this time:

- Preliminary meetings regarding the addition of transit on I-94 and Trunk Highway (TH) 36. This planning effort is being lead by Washington County.
- The TH 36 and TH 49 Interchange project is being lead by Ramsey County.

Travel Demand Management Policies

Travel Demand Management (TDM) is designed to increase the efficiency and utilization of the existing roadway system by leveling peak demand periods using number of management strategies. The goal is to increase the number of people who share rides, utilize transit and reduce single occupancy vehicle trips during peak rush hours. TDM combined with thorough transit planning has proven to be a more cost effective way to address transportation growth than by simply building more highway lanes. The City will encourage companies to implement a TDM Plan when justified.

The 3M Company, Maplewood's major employer with over 7,000 employees, is also one of the region's leaders in developing ridesharing programs. The company maintains 24 employee-operated vans providing service to 142 employees. 3M had been supporting ridesharing for over 25 years and its Rideshare Services Department also coordinates commuter van services for other 3M facilities across the United States.

Maplewood's location and strong mixture of housing and commercial areas may help to reduce travel on the metropolitan highway system by allowing people to live near their place of work. The Land Use Plan supports the growing number of people who want to live in an "inner ring" suburb like Maplewood as a way to minimize travel times to work, shopping and recreation.

The City continues to guide land use development in ways that reduce vehicle trips and promote the use of alternative modes of travel. The City should work with other agencies to promote an infrastructure and system management that supports transit, carpooling, bicycling and walking as viable mode options in the full transportation spectrum.

The City urges the Minnesota Department of Transportation and the Metropolitan Council to continue educational programs which encourage ride sharing, staggered work hours and off-peak travel. Such campaigns are most effectively mounted at the regional level.

Transit Policies

Effective use of transit can make a significant difference in the level of congestion in certain corridors. Maplewood is currently served by 14 Metro Transit regular bus routes. A general purpose dial-a-ride service called Northeast Suburban Transit (NEST) is available to residents of Maplewood. First Transit is the service provider that provides ADA paratransit services for the Metro Mobility program within the City.

Figure 8.6 shows the existing transit routes, existing transit facilities, and planned transit corridors. Maplewood now has four park-and-ride lots with a total capacity of over 800 parking spaces. City residents and businesses participate in the Metro Commuter Services programs.

The City of Maplewood is located primarily within the Transit Market Area II. This area is characterized by a moderate concentration of jobs, housing, and activities. This area is generally serviced by regular-route locals and all-day expresses depending on land use patterns, and experiences service frequencies of 15-30 minutes or 30-60 minutes 7 days per week. Some sections of the City south of I-94 and west of TH 61 are classified as being within the Transit Market Area III. This area is characterized by a lower concentration of jobs, housing, and activities. Service is typically provided for peak-only express routes, midday circulators, and small vehicle dial-a-ride. Service for this area will generally be limited to 1-2 hour midday frequencies for 10-14 hours per day on weekdays and will have limited service on weekends. The City will work with the regional transit agencies to develop future transit services consistent with the City's market areas.

Maplewood will work with regional transit agencies to help secure transit service that better serves the needs of the residents of the City.

The City supports the expansion of the Metro Transit Rideshare carpool/vanpool rider matching and supports Metro Transit's Guaranteed Ride Home Program for transit riders.

Maplewood supports Metro Transit's construction of new or improved bus stops and shelters.

The City supports efforts by Metro Transit to focus service on the Maplewood Mall transit hub, improve off-peak service and improve express service to St. Paul and Minneapolis.

Maplewood supports efforts by other agencies to improve transit service in the City by the addition of transitways on the arterial roadways. When transitways are added to arterials, the City will encourage higher-density economic development and redevelopment near such corridors.

The City will review major new developments for inclusion of shelters and pull-outs, if such sites are along Metro Transit bus routes.

The City should coordinate its sidewalk and trails plan to encourage walking, biking, and bus usage.

Light Rail Transit (LRT)/Busway

The Ramsey County Regional Railroad Authority (RCRRA) has identified the Rush Line Corridor as being a candidate for transit. The RCRRA is currently completing an Alternatives Analysis Study for the Rush Line that studying the feasibility of commuter rail, light rail, and BRT (bus rapid transit) on the Vento Trail alignment, 35E, or TH 61. At this point the RCRRA is anticipating that the Vento Trail Corridor will be some type of transit corridor. This

Alternatives Analysis Study will be completed in 2009 and construction of the Rush Line is included in the long range plan.

The City will continue to actively participate in the planning for light rail transit and bus systems in the City. Maplewood will work closely with RCRRA officials in the siting and design of potential LRT or busway station locations, including park-and-ride facilities. These stations should maximize access for residents and complement the City's land use plan. The RCRRA should provide a transit link to the medical campus (Saint John's Hospital area) and to Maplewood Mall. The RCRRA should place a high priority on providing as many grade separated roadway crossings as possible along LRT and busway lines.

Safety

The 2006 crash toolkit was obtained from Mn/DOT that includes accident data summarized for all intersections on the state highway system. The intersection in Maplewood that are on the top 1000 cost ratings are summarized below:

| Intersection | Cost Rank | Remarks |
|--|-----------|--|
| TH 61 & Beam Avenue | 93 | Reconstructed in 2007 – Monitor Crash Data |
| Stillwater Road & McKnight Road & Minnehaha Avenue | 133 | Cooperative agreement funding was not approved in 2006 |
| TH 36 & English Street | 148 | Intersection to be reconstructed |
| Stillwater Avenue & Stillwater Road & Lakewood Drive | 511 | |
| TH 61 & Larpenteur Avenue | 752 | |
| TH 36 & Hazelwood Avenue | 770 | Access to be removed |
| TH 61 & County Road C | 870 | |

Several of the identified intersection have or are programmed to be modified. The City should continue to identify where opportunities for improvements at these locations can be implemented that will improve the safety at these intersections.

Street Capacity Management Policies

Maplewood should use traffic controls, enforcement, design practices and land use policies to maintain the current function of streets as designated in this plan. Specifically, the City should ensure that arterials are used for longest trips, collectors for intermediate and local trips and local streets for local access.

The City should ensure that traffic management policies discourage increased volumes and speeds and protect pedestrians and neighborhoods.

The City will follow Urban State Aid design standards for appropriate parts of the system to better accommodate pedestrians and to help calm traffic.

The City will work with county, state and federal agencies to implement capital improvements which mitigate traffic congestion where operational capacity improvement cannot adequately address the needs.

Maplewood should design streetscapes and operations in ways that alleviate the negative impact of major streets on their surroundings and to protect and improve pedestrian safety.

The City should continue to work closely with Ramsey County and Mn/DOT to ensure compatibility with county, state and federal standards.

Neighborhood Protection and Enhancement Policies

The City should use a neighborhood traffic management process to address neighborhood requests to calm or divert traffic while maintaining access. The City should work with neighborhoods to promote this process and commit City staff to work closely with the neighborhood during any project design.

Maplewood should explore a variety of traffic-calming street design options with interested neighborhoods when local street construction or reconstruction is being planned. Realizing that a variety of traffic calming strategies exist and each must be tailored to individual project needs, the City supports implementation of traffic calming as a principal but will determine the specifics on a case by case basis.

Maplewood supports the consideration of roundabouts as an alternative to traditional intersection control methods such as the all-way stopped control or signalized intersection. A roundabout can significantly improve the safety of an intersection because there are less conflict points when compared to a traditional full-movement intersection and lower travel speeds. Roundabouts typically have less maintenance when compared to a traffic signal but the right-of-way requirements can be significant. Roundabout installations have also been used as a form of traffic calming. Mn/DOT now requires that an Intersection Control Evaluation (ICE) be completed on the Trunk Highway System instead of a Signal Justification Report (SJR) which requires that a roundabout be considered as a design alternative. Ramsey County and Mn/DOT State Aid do not require ICE reports at this point although where a roundabout has merit an ICE report should be considered by the City.

The City should continue its current policy concerning the installation of neighborhood stop signs on local streets. This policy requires all neighborhood stop sign installations and removals to be supported by a neighborhood petition and approved by City Council.

Maplewood supports the use of smaller buses for neighborhood circulators as part of the redesign of the transit system.

The City should try to limit the negative impacts on residential properties caused by parking spillovers from commercial areas by regulating land uses and by promoting site plans that minimize these impacts.

Maplewood staff shall work with developers to plan access points and parking facilities for commercial uses when near residential land uses.

The City should incorporate streetscape guidelines that emphasize the enhancement of the neighborhood environment. Such improvements shall maintain and improve pedestrian quality and the feeling of personal safety among users.

Maplewood should require parking lots to have strong landscaped edges and encourage the use of pervious surfaces and landscaping in parking lots. The City should encourage or require improvements in existing parking lots and in newly constructed parking lots.

The City should continue its residential street reconstruction program, setting construction priorities based on cost effectiveness, neighborhood support, community development goals and public safety goals.

The City should use its land use and regulatory powers to reinforce or create major transit destinations and transfer station locations. If transitways (busways or LRT) are built, the City should work with planning and implementing agencies to ensure they are designed to support pedestrian activity by including features such as public art, wayfinding signing, architectural features, and pedestrian scale lighting. These facilities should be designed so that they blend in with the character of surrounding neighborhoods.

The City and other agencies should continue the practice of using neighborhood or community-inclusive design processes for transportation projects.

Bicyclist, Pedestrian, and Accessibility Policies

A coordinated sidewalk and trails system plan is outlined in the Parks and Recreation part of this plan. **Figure 8.7** illustrates the existing sidewalks and trails.

Maplewood should consider both on and off-road trail options when designing road improvement and construction projects.

The City will consider the following goals when designing sidewalks and trails:

- Emphasize harmony with the environment.
- Protect users from vehicular traffic.
- Create a network of relatively uninterrupted trails.
- Tie parks together into a comprehensive park and trail system.
- Tie the City trail system with those of adjacent cities and counties.
- Are coordinated with school district busing policies.
- Provide safe and convenient access to parks, community facilities, work, shopping and schools.
- Encourage transit usage.
- Support county and regional trail systems.
- Tie neighborhoods together.
- Bike routes should be off-street, however when not feasible, streets should be designed for safe bicycle passage under all conditions, including wide shoulders, no bump-outs, clearly striped, signage for bicycle awareness, clearly marked intersections where trails cross roads, and trimmed vegetation at intersections.

The current policy of the City is to install sidewalks or trails on both sides of arterials and on one side of collectors. Trails can be substituted for sidewalks. Maplewood should install new sidewalks or trails where pedestrian safety is at risk and where they would provide access to popular pedestrian destinations. Sidewalks or trails which would provide safe bicycle and pedestrian routes to schools should be considered.

The City should use its development policies and design standards to improve pedestrian facilities in Maplewood.

The City should not remove sidewalks unless there is a compelling reason to do so.

The City should work with other agencies to ensure that the requirements of the Americans with Disabilities Act (ADA) are met with transportation facilities and in new construction or development sites.

The City should identify potential easements during the development/redevelopment process when land acquisition is not possible.

The trail system will be available to promote and encourage residents to be active through the development of an efficient and accessible trail system.

Maplewood supports transit service that is accessible, convenient and affordable for persons with disabilities, as well as being cost-effective for the system.

Transportation Action Plan

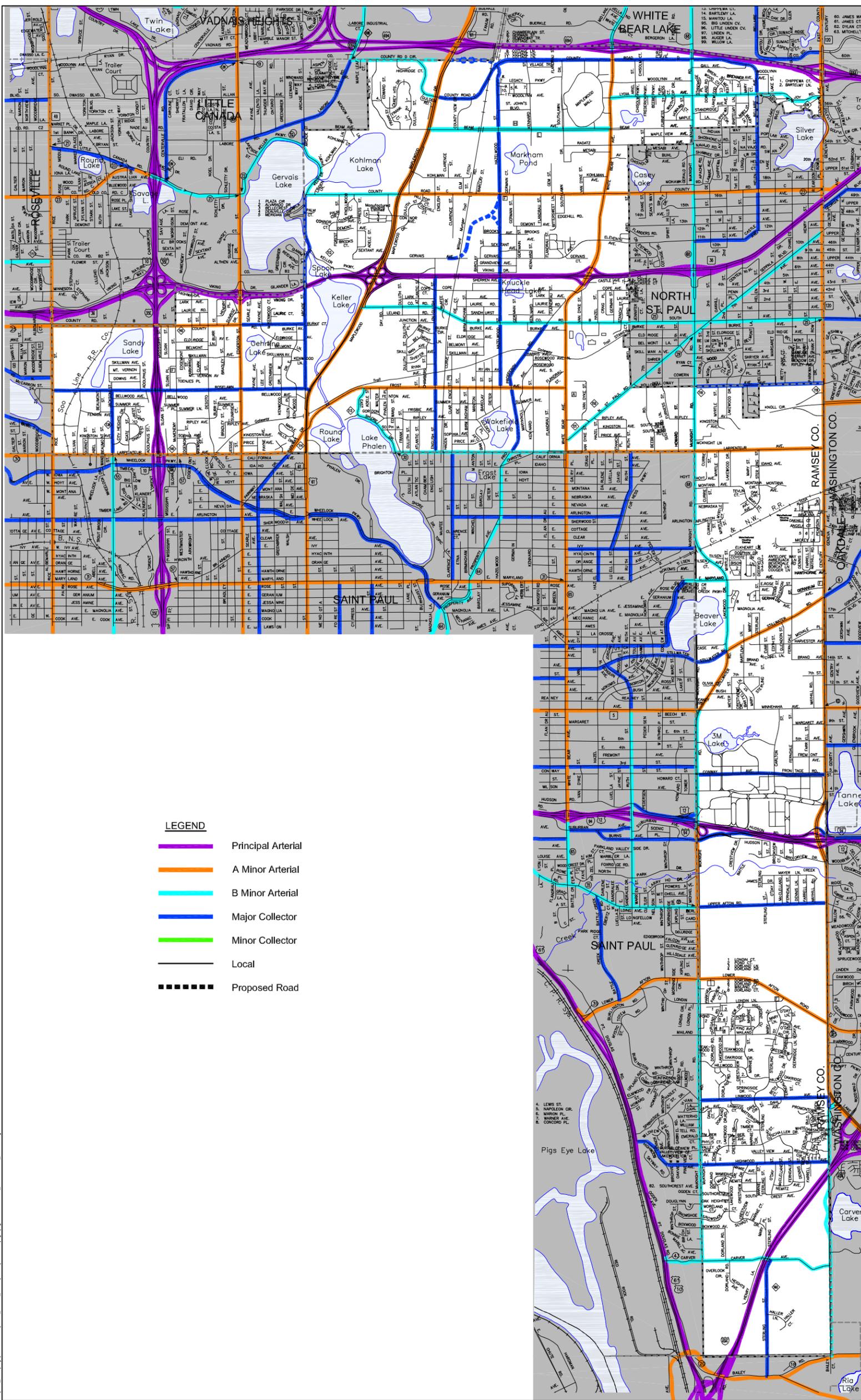
Figure 8.8 identifies significant roadway projects that are anticipated by 2030. The majority of these projects are located on Mn/DOT or county roadways. **Table 8.2** lists activities that Maplewood should undertake in the coming years to implement the Transportation Plan. This table also shows the responsibility, timing, funding and coordination for each activity. The City will periodically review and update this table.

In addition to City and county projects, Mn/DOT is planning several large projects near and through Maplewood for the years 2001-2030. A summary of the projects identified in Figure 8.8 is included below:

- A. Improvements to the I-94 interchanges at Century Avenue and McKnight Road including revised access to 3M. Since much of the land to the south is a regional park and 3M has developed the land to the north, these changes should not affect the land use plan. The City will work with the Mn/DOT and 3M in the planning of these changes to coordinate any necessary City transportation changes. Mn/DOT committed to improve both interchanges by 2018 as a condition of municipal consent given by the City as a part of prior improvements by Mn/DOT in this area. At this point no funding has been identified to construct these interchanges by 2030 although the City should continue to work with Mn/DOT to make sure these improvements move forward.
- B. The improvement and expansion of TH 36 from I-35W in Roseville to I-694 in Oakdale. This project could include adding a HOV or a transitway lane, metered ramps and HOV by-pass lanes at ramp meter locations. This work will eliminate signalized intersections and close several accesses to TH 36. This will be a joint effort between Maplewood and the Cities of Roseville, Little Canada, North St. Paul, and Oakdale.
- C. Complete a study of alternatives to improve safety around the 3M site on Century Ave between I-94 and Conway Avenue in partnership with Mn/DOT, Oakdale, Washington County and Ramsey County.
- D. The expansion of I-35E from I-94 in downtown Saint Paul to I-694 in Little Canada. This project may include HOV lanes, a thru-lane for transit service or be designed to accommodate a LRT line in the future. Due to Federal Highway Administration (FHWA) interchange spacing standards this project may result in the removal of the I-35E Interchange at Roselawn Avenue. The City will stay involved in the planning process to help ensure the appropriate mitigation measures to City roadways are made to accommodate the proposed I-35E changes that impact the local roadway system.
- E. Complete a transportation plan and program improvements for White Bear Avenue between Larpenteur Avenue and Radatz Avenue. This will require close coordination with Ramsey County since White Bear Avenue is under the jurisdiction of the county.
- F. Improvements to I-694 from I-35E in Little Canada to TH 36 in Oakdale. Such improvements would optimize safety and add capacity to the highway where there are existing bottlenecks. Examples of possible improvements include interchange reconstruction, bridge replacement, the addition of HOV or transitway lanes and safety management improvements. Previous plans had considered an additional interchange at I-694 and McKnight Road. Due to access spacing requirements this interchange will no longer be pursued which puts additional importance on the high capacity improvements being planned at the I-694 and White

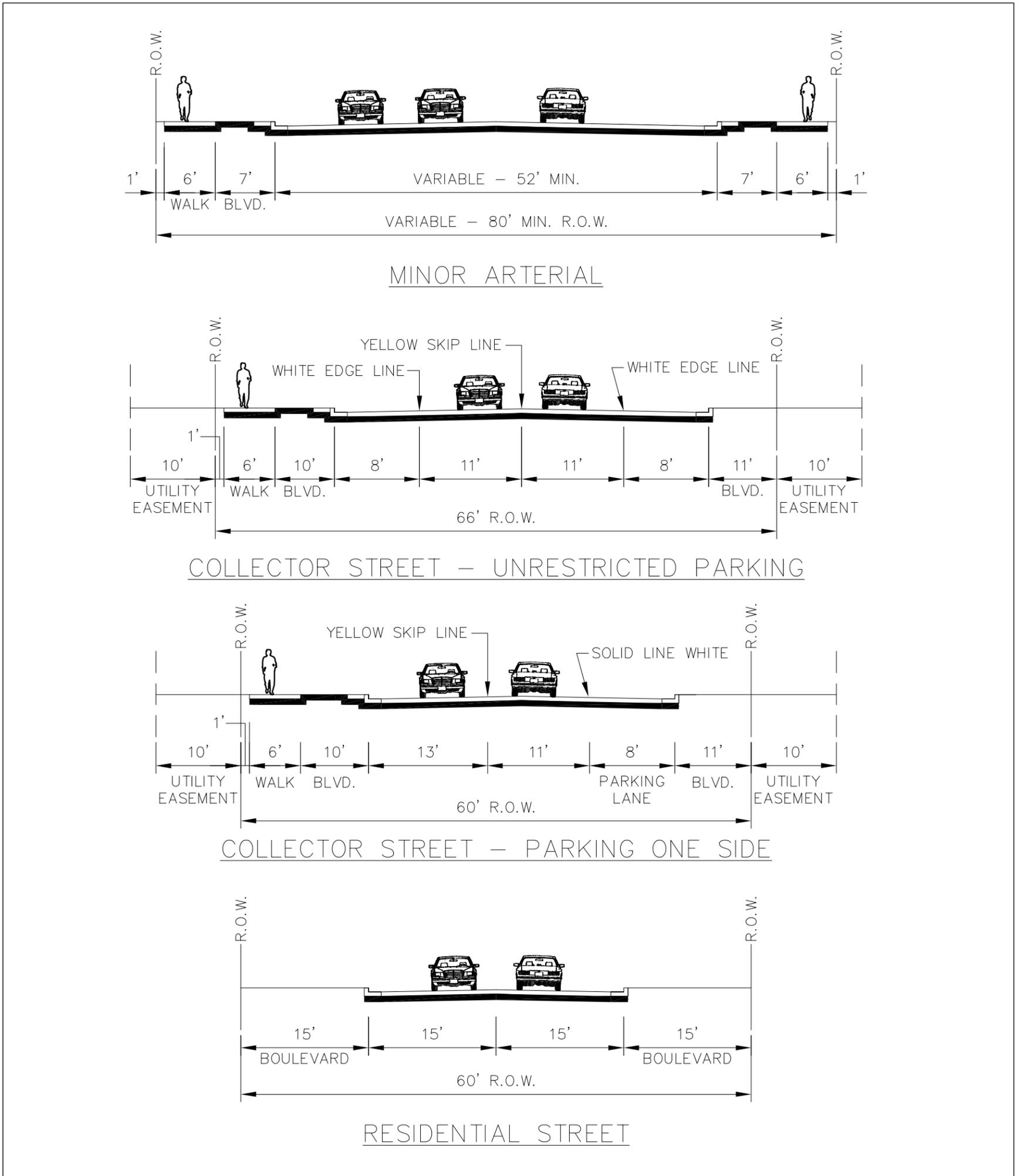
Bear Avenue interchange. The White Bear Avenue interchange improvements will require coordination with Mn/DOT, Ramsey County, and City of White Bear.

- G. Continued implementation of the Maplewood Mall Area Transportation Improvements (MMATI) Program. This comprehensive transportation improvements package addresses key transportation infrastructure needs surrounding the Maplewood Mall area and supports redevelopment of large parcels located west of the Mall area. The key elements of this program that remain include:
- Reconstruction of the White Bear Avenue/I-694 interchange.
 - Reconstruction and widening of White Bear Avenue between Radatz Avenue and County Road D to a 6-lane roadway.
 - Reconstruction of County Road D between Kennard Street and White Bear Avenue.
 - Other signal and access management improvements in the area to increase safety and better manage access in this high traffic volume area.
- H. Mn/DOT is planning, though no timetable is set, on turning back TH 61 to Ramsey County. A turn back project will occur prior to the maintaining agencies changing that should result in improvements along the entire length of TH 61 within the City. The City will stay involved in planning efforts to make sure that the impacts of proposed changes are properly mitigated.
- I. Study the feasibility of a roadway connection north of TH 36 between Hazelwood Street and Gervais Avenue. This will connect English Street to Hazelwood Street and County Road C and provide an additional connection across TH 36 for the traveling public and fire department access. This access is important based on the proposed modifications to TH 36 between TH 61 and White Bear Avenue where access is being modified. As an alternative to the proposed connection an overpass at TH 36 and Hazelwood Street will be considered by the City.
- J. Study the feasibility of extending Century Avenue to Bailey Road. The need for this roadway would likely be driven by anticipated development in the area that is allowed by the land use plan. Coordinate with Woodbury, Newport, Ramsey County, and Washington County.
- K. Study the feasibility of additional roadway connections north of County Road D between Hazelwood Street and TH 61. These roadways would provide access between Hazelwood Street and TH 61 to the land parcels located between County Road D and I-694.
- L. Mn/DOT is working on planning efforts for improvements to Stillwater Road (TH 5). No funding has been dedicated at this time and the planning is preliminary in nature. At this point improvements being considered are pedestrian facilities on the south side of the roadway and drainage improvements. This project will be a turn back project to Ramsey County and both the City and County have participated in recent planning meetings.
- M. Ramsey County is involved with studying interchange improvements at I-694 and TH 49. This interchange is located just outside of the City of Maplewood but this interchange impact traffic operations on TH 49 within the City of Maplewood and many that travel to and from the City.

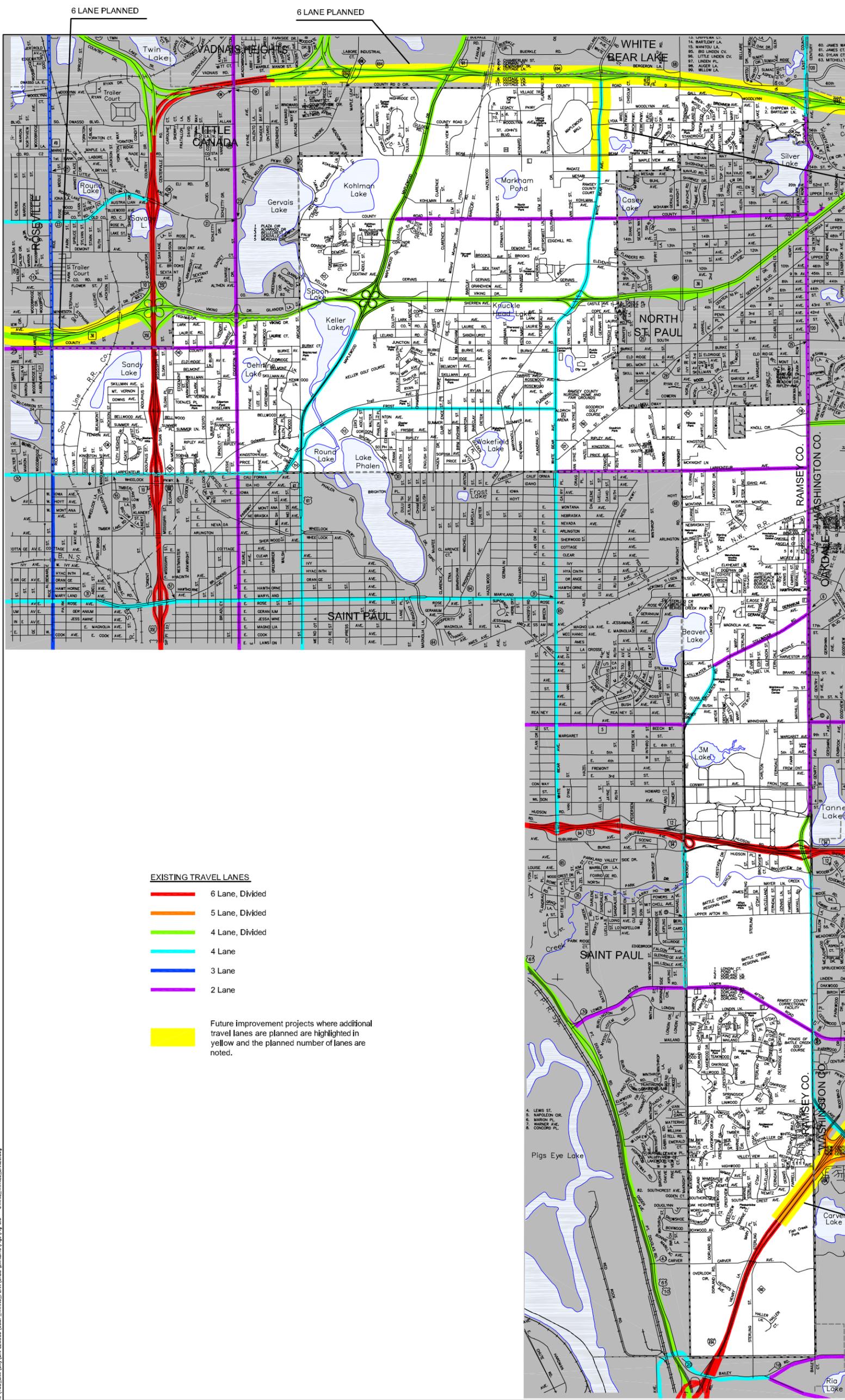


- LEGEND**
- Principal Arterial
 - A Minor Arterial
 - B Minor Arterial
 - Major Collector
 - Minor Collector
 - Local
 - - - - - Proposed Road

FIGURE 8.1



K:\TWC_Ovr\City\Maplewood\Comp_Trans_Plan\GADO\EXHIBITS\Fig 8.2 - CRTRL STREET SECTIONS.dwg



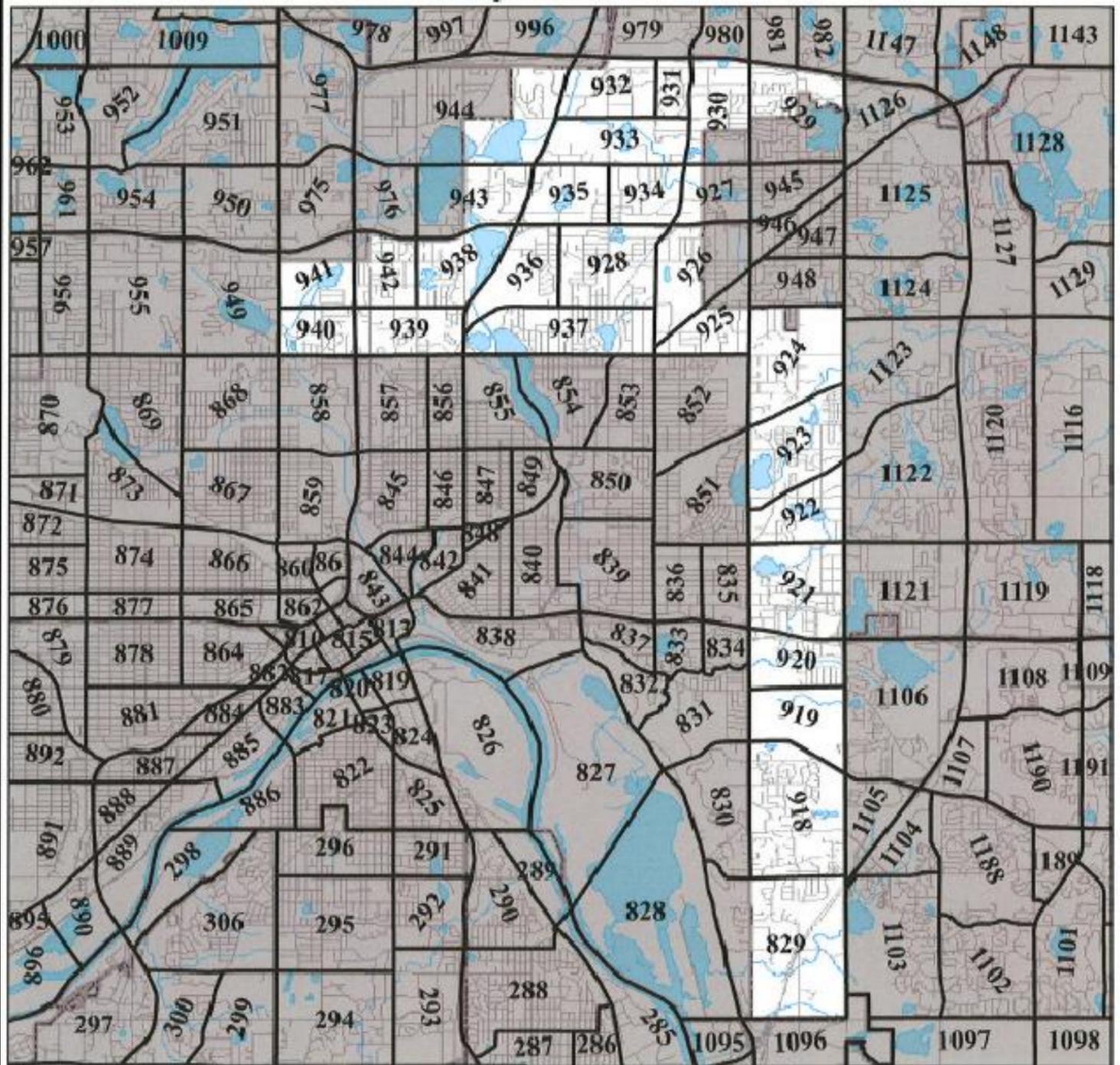
EXISTING TRAVEL LANES

- 6 Lane, Divided
- 5 Lane, Divided
- 4 Lane, Divided
- 4 Lane
- 3 Lane
- 2 Lane

Future improvement projects where additional travel lanes are planned are highlighted in yellow and the planned number of lanes are noted.

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Transportation Analysis Zones (TAZ)* Maplewood



SOURCE: The geography for the TAZ's are based on the Twin Cities Regional Travel Demand Forecast Model. Local Roads are from The Lawrence Group's Street Centerline data. Community Boundary, Stream, and Open Water are from DataFinder.org

* Some users describe TAZ's as Traffic Analysis Zones or some other closely related words. In principle, they refer to similar transportation planning areas.

Metropolitan Council

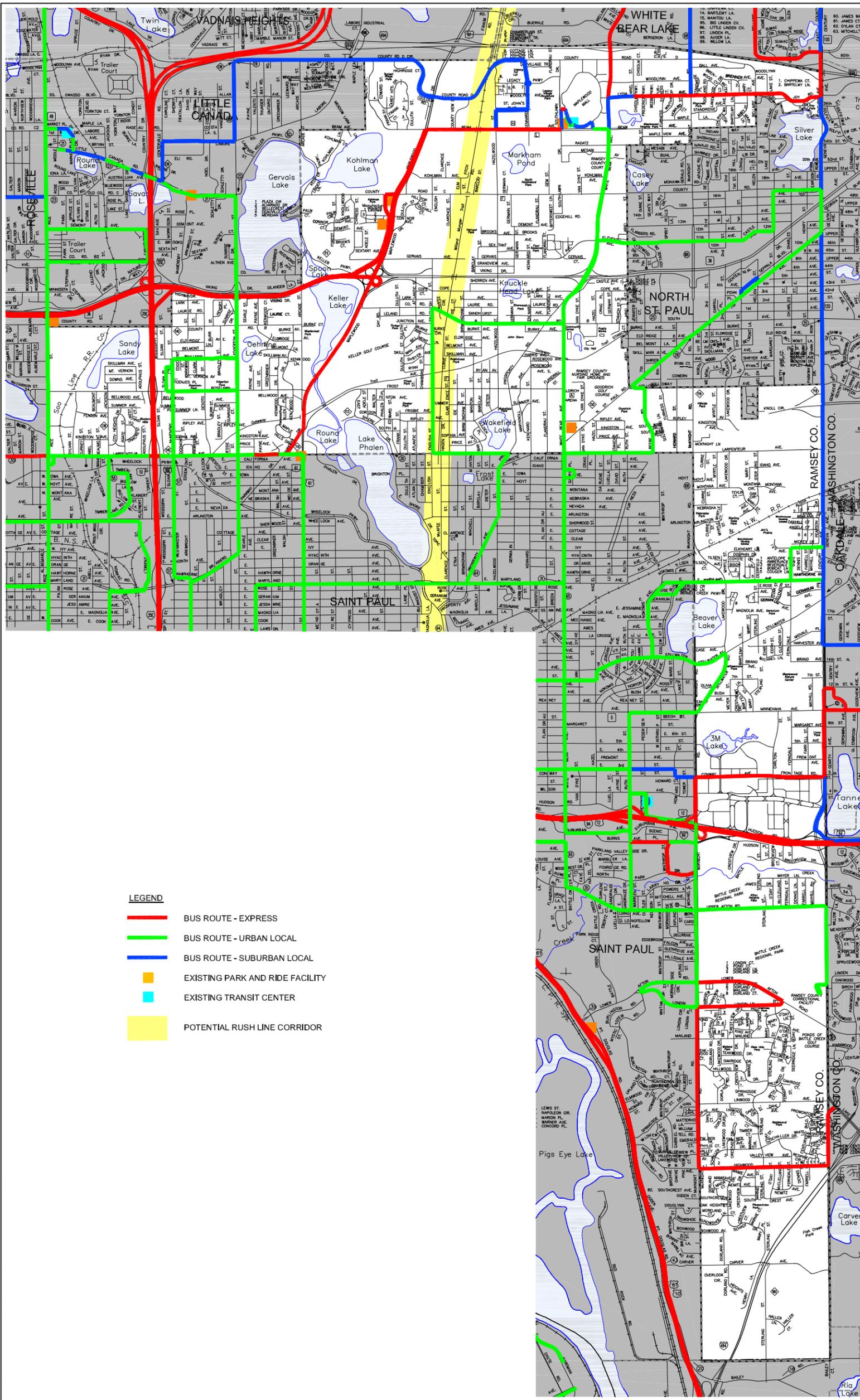


- 1148** TAZ Identification Number
- TAZ Boundary
- Local Roads
- Community Boundary
- Stream
- Open Water



Community Development
 October 23, 2007

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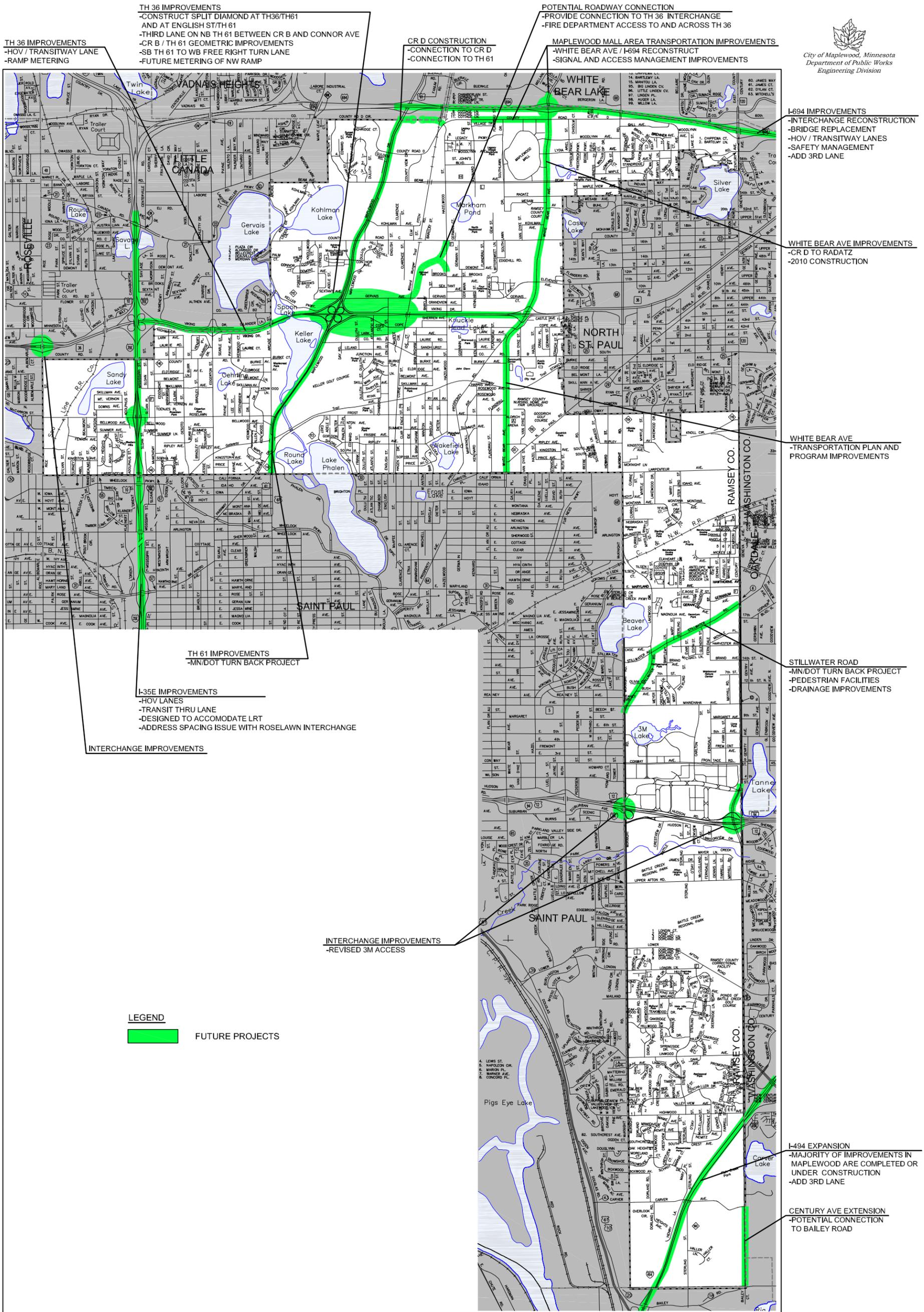


- LEGEND**
- BUS ROUTE - EXPRESS
 - BUS ROUTE - URBAN LOCAL
 - BUS ROUTE - SUBURBAN LOCAL
 - EXISTING PARK AND RIDE FACILITY
 - EXISTING TRANSIT CENTER
 - POTENTIAL RUSH LINE CORRIDOR

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City of Maplewood, Minnesota
Department of Public Works
Engineering Division



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City of Maplewood
Table 8.1
TAZ Demographic Forecasts
Comprehensive Transportation Plan - October 2009

| TAZ | Population | | | | Households | | | | Total Employment | | | | Retail Employment | | | | Non-Retail Employment | | | |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|------------------|---------------|---------------|---------------|-------------------|--------------|---------------|---------------|-----------------------|---------------|---------------|---------------|
| | 2000 | 2010 | 2020 | 2030 | 2000 | 2010 | 2020 | 2030 | 2000 | 2010 | 2020 | 2030 | 2000 | 2010 | 2020 | 2030 | 2000 | 2010 | 2020 | 2030 |
| 829 | 1,687 | 3,138 | 3,526 | 4,303 | 526 | 1,209 | 1,542 | 1,912 | 50 | 61 | 68 | 74 | - | - | - | - | 50 | 61 | 68 | 74 |
| 918 | 3,731 | 3,736 | 3,737 | 3,740 | 1,500 | 1,596 | 1,642 | 1,694 | 144 | 176 | 197 | 214 | 37 | 42 | 51 | 54 | 107 | 134 | 146 | 160 |
| 919 | 6 | 6 | 6 | 6 | 2 | 2 | 2 | 2 | 87 | 106 | 119 | 129 | 38 | 43 | 52 | 55 | 49 | 63 | 67 | 74 |
| 920 | 1,142 | 1,144 | 1,144 | 1,145 | 445 | 473 | 487 | 503 | 257 | 314 | 352 | 382 | 199 | 226 | 273 | 290 | 58 | 88 | 79 | 92 |
| 921 | 521 | 521 | 521 | 522 | 220 | 234 | 241 | 249 | 12,701 | 15,515 | 17,381 | 18,864 | - | - | - | - | 12,701 | 15,515 | 17,381 | 18,864 |
| 922 | 1,420 | 1,421 | 1,422 | 1,423 | 580 | 617 | 635 | 655 | 199 | 243 | 272 | 296 | 4 | 5 | 5 | 6 | 195 | 239 | 267 | 290 |
| 923 | 2,991 | 2,995 | 2,996 | 2,999 | 1,402 | 1,491 | 1,535 | 1,584 | 340 | 415 | 465 | 505 | 21 | 24 | 29 | 31 | 319 | 392 | 437 | 474 |
| 924 | 2,089 | 2,092 | 2,093 | 2,094 | 785 | 835 | 860 | 887 | 252 | 308 | 345 | 374 | 4 | 5 | 5 | 6 | 248 | 303 | 339 | 368 |
| 925 | 1,282 | 1,862 | 2,018 | 2,328 | 563 | 795 | 909 | 1,035 | 743 | 908 | 1,017 | 1,104 | 198 | 224 | 271 | 288 | 545 | 683 | 746 | 815 |
| 926 | 957 | 959 | 959 | 960 | 233 | 248 | 255 | 263 | 956 | 1,168 | 1,308 | 1,420 | 279 | 316 | 382 | 407 | 677 | 852 | 926 | 1,013 |
| 927 | 123 | 123 | 123 | 123 | 42 | 45 | 46 | 47 | 920 | 1,124 | 1,259 | 1,366 | 362 | 410 | 496 | 527 | 558 | 714 | 763 | 839 |
| 928 | 2,472 | 2,475 | 2,476 | 2,478 | 921 | 980 | 1,008 | 1,040 | 1,735 | 2,119 | 2,374 | 2,577 | 288 | 326 | 395 | 420 | 1,447 | 1,793 | 1,980 | 2,157 |
| 929 | 1,174 | 1,176 | 1,176 | 1,177 | 384 | 409 | 420 | 434 | - | - | - | - | - | - | - | - | - | - | - | - |
| 930 | 1,223 | 1,224 | 1,225 | 1,226 | 557 | 593 | 610 | 629 | 1,027 | 1,255 | 1,405 | 1,525 | 667 | 756 | 914 | 972 | 360 | 499 | 492 | 554 |
| 931 | 182 | 182 | 182 | 182 | 105 | 112 | 115 | 119 | 4,456 | 5,443 | 6,098 | 6,618 | 4,041 | 4,579 | 5,536 | 5,888 | 415 | 864 | 562 | 730 |
| 932 | 117 | 117 | 117 | 117 | 75 | 80 | 82 | 85 | 58 | 71 | 79 | 86 | 7 | 8 | 10 | 10 | 51 | 63 | 70 | 76 |
| 933 | 1,012 | 1,013 | 1,014 | 1,014 | 385 | 410 | 422 | 435 | 740 | 904 | 1,013 | 1,099 | 293 | 332 | 401 | 427 | 447 | 572 | 611 | 672 |
| 934 | 1,200 | 1,201 | 1,202 | 1,202 | 581 | 618 | 636 | 656 | 1,235 | 1,509 | 1,690 | 1,834 | 455 | 516 | 623 | 663 | 780 | 993 | 1,067 | 1,171 |
| 935 | 607 | 608 | 608 | 609 | 199 | 212 | 218 | 225 | 839 | 1,025 | 1,148 | 1,246 | 29 | 33 | 40 | 42 | 810 | 992 | 1,108 | 1,204 |
| 936 | 1,059 | 1,102 | 1,314 | 1,936 | 404 | 454 | 553 | 830 | 308 | 376 | 421 | 457 | 55 | 62 | 75 | 80 | 253 | 314 | 346 | 377 |
| 937 | 2,586 | 2,589 | 2,790 | 3,392 | 1,024 | 1,089 | 1,197 | 1,482 | 248 | 303 | 339 | 368 | 40 | 45 | 55 | 58 | 208 | 258 | 285 | 310 |
| 938 | 1,076 | 1,078 | 1,078 | 1,079 | 376 | 400 | 412 | 425 | 227 | 277 | 311 | 337 | - | - | - | - | 227 | 277 | 311 | 337 |
| 939 | 1,525 | 1,654 | 1,688 | 1,757 | 521 | 649 | 711 | 781 | 360 | 440 | 493 | 535 | 18 | 20 | 25 | 26 | 342 | 419 | 468 | 508 |
| 940 | 1,025 | 1,026 | 1,027 | 1,027 | 397 | 422 | 435 | 448 | 367 | 448 | 502 | 545 | 286 | 324 | 392 | 417 | 81 | 124 | 110 | 128 |
| 941 | 350 | 351 | 351 | 351 | 140 | 149 | 153 | 158 | 637 | 778 | 872 | 946 | 229 | 260 | 314 | 334 | 408 | 519 | 558 | 612 |
| 942 | 2,098 | 2,100 | 2,101 | 2,103 | 827 | 880 | 906 | 934 | 520 | 635 | 712 | 772 | 53 | 60 | 73 | 77 | 467 | 575 | 639 | 695 |
| 943 | 800 | 801 | 801 | 802 | 307 | 327 | 336 | 347 | 198 | 242 | 271 | 294 | 105 | 119 | 144 | 153 | 93 | 123 | 127 | 141 |
| 944 | 802 | 803 | 803 | 804 | 257 | 273 | 281 | 290 | 357 | 436 | 489 | 530 | 322 | 365 | 441 | 469 | 35 | 71 | 47 | 61 |
| Totals | 35,258 | 37,500 | 38,500 | 40,900 | 13,758 | 15,600 | 16,650 | 18,150 | 29,961 | 36,600 | 41,000 | 44,500 | 8,030 | 9,100 | 11,000 | 11,700 | 21,931 | 27,500 | 30,000 | 32,800 |

City of Maplewood
 Table 8.2
 Transportation Action Plan
 Comprehensive Transportation Plan - December 2008

| Actions | Responsibility | Timing | Funding | Coordination With |
|--|--|---------|---------|--|
| Maintain local streets | Engineer | Ongoing | City | Utility Projects |
| Minimize excessive non-local traffic on residential streets | Engineer Planning Staff | Ongoing | City | Land Use Plan |
| Review major site plans to encourage transit use | Planning Comm Planning Staff | Ongoing | City | Site Plan Review |
| Continue mixture of land uses | Planning Comm Planning Staff | Ongoing | City | Land Use Plan |
| Promote use of transit | Planning Comm City Council Planning Staff | Ongoing | None | Metro Transit |
| Participate in LRT/Busway planning | Planning Comm City Council Planning Staff | Ongoing | None | RCRRA |
| Promote new public and private bus shelters | Engineer Planning Staff | Ongoing | None | Metro Transit |
| Promote improved bus and transit service | Planning Comm City Council | Ongoing | None | Metro Transit |
| Provide sidewalks and trails along arterials and collector streets | Engineer | Ongoing | City | Site Plan Review |
| Coordinate sidewalks and trails with schools, parks, transit, county and regional plans | Planning Comm Engineer Planning Staff Parks & Rec | Ongoing | City | Site Plan Review |
| Implement traffic calming measures as appropriate in street reconstruction program and new development | Engineer Planning Staff | Ongoing | City | Site Plan Review Land Use Plan Utility Project |

Abbreviations
 Comm - Commission
 REC - Recreation
 RCRRA - Ramsey County Regional Railroad Authority