

Chapter VIII Transportation Plan

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

Minnetonka is responsible for maintaining public roadways as well as a system of trails and sidewalks within the city. Maintaining and improving this multi-modal transportation system is important to the ongoing economic health and quality of life of the city and it is needed for people to travel easily and safely to work and other destinations, to develop property and to move goods.

The Transportation Plan is organized into the following sections:

- * Roadway System Plan
- * Transit System Plan
- * Bicycle and Trail System Plan
- * Aviation Plan
- * Implementation Plan

A. Goals and Policies

Guidance for the development of the Transportation Plan is provided by the Metropolitan Council's 2030 Transportation Policy Plan (TPP). The Metropolitan Council's TPP includes five major themes that address regional transportation:

- * Land Use and Transportation Investments: Coordinate transportation investments with land use objectives to encourage development at key nodes.
- * Priorities for Transportation Modal Investments: Encourage a multi-modal transportation system including bicycles, pedestrians, roadways and transit.
- * Highway Planning: Plan a cost-effective, safe, multi-modal regional highway system that reflects the needs of a growing population and economy.
- * Improve the Transit System: Tailor transit services to diverse market conditions, improve ridership on transit services, and develop a regional network of transitways on dedicated rights-of-way.
- * Travel Demand Management: Encourage behavioral and land use changes that will result in fewer vehicle trips, particularly during the peak rush hours.

To respond to the above themes as well as to serve economic activities and improve the quality of life within Minnetonka, the city has adopted transportation policies. These policies

were developed in concert with the overall comprehensive plan goals and policies and include:

Policy No. 1: Provide a safe and integrated transportation system.

- ✓ Treat all modes of transportation and related facilities as one integrated system to be coordinated and developed with other partners and stakeholders.

Policy No. 2: Recognize the interrelationship of land use and transportation, and anticipate impacts of the location and intensity of planned land uses on the transportation system.

- ✓ Plan transportation facilities to function in a manner compatible with adjacent land uses.
- ✓ Strongly encourage pedestrian-friendly and transit-oriented building and site design through measures such as high-density development and growth, which is located along major transportation routes.
- ✓ Require pedestrian connections between complementary land uses.
- ✓ Encourage shared access to streets by adjacent land uses.

Policy No. 3: Provide and promote convenient and accessible transportation systems to residents and businesses.

- ✓ Encourage shared parking between different developments when appropriate.
- ✓ Advocate the location of commercial activity at focused points in the city with adequate transportation infrastructure to accommodate these uses.

Policy No. 4: Manage the impact of new development upon the local transportation system and encourage the use of Transportation Demand Management (TDM) and other traffic management techniques.

- ✓ Require new developments of a certain size to prepare Travel Demand Management Plans.
- ✓ Require new developments to prepare traffic impact studies to determine and mitigate impacts from the proposed development on the transportation system.

Policy No. 5: Anticipate, plan for and collaborate with other agencies for local and regional transportation improvements and programs to lessen the impacts of congestion.

- ✓ Continue to work with Mn/DOT and the State Legislature to improve the capacity of regional highways.
- ✓ Continue to work closely with Hennepin County to improve mobility along county routes within the city.

Policy No. 6: Encourage, with other government agencies, the expansion of multi-modal and transit services in the city to support resident and business transportation needs.

- ✓ Work with existing groups and organizations to adequately meet the specialized transportation needs of seniors, youth, handicapped, and underprivileged citizens in the city.
- ✓ Promote mass transit options, such as bus rapid transit, to reduce dependence on automobiles and provide a diverse, balanced set of public transportation alternatives.
- ✓ Promote telecommuting and flex scheduling to reduce traffic.
- ✓ Identify or develop additional park-and-ride lots throughout the city to encourage transit ridership.

Policy No. 7: Plan for trails and pedestrian ways as a transportation mode and provide a network of trails and pathway connections to schools, commercial areas, parks, activity centers, and access to transit services.

- ✓ Maintain safe road crossings in high traffic areas.
- ✓ Identify pedestrian/bike trails to connect with adjacent surrounding communities.
- ✓ Focus bicycle and trail connections on activity centers within the community and in neighboring communities.

Policy No. 8: Encourage appropriate “traffic calming” techniques within and near residential neighborhoods that are impacted by congestion and excessive traffic volumes and/or speeds.

- ✓ Consider traffic-calming measures to discourage through traffic on local streets.
- ✓ Encourage design of all local residential streets to prevent penetration by through traffic, and properly direct traffic to collector or arterial streets.
- ✓ Where possible, ensure that roadways carrying through traffic border residential and service-commercial areas, rather than penetrating through these areas.
- ✓ Support regional roadway improvements to reduce local roadway traffic levels, which otherwise belong on the regional system.

B. Major Trends and Influencing Factors

Several social, economic, and environmental trends will have an effect on the entire Twin Cities Metropolitan Area, including the Minnetonka over the next 20 years. These include population growth, changes in household size, increases in transportation fuel costs and environmental efforts/concerns. With increased population growth and limited new and/or expanded transportation facilities, congestion on the regional highway system is expected to increase.

Specific transportation issues the City of Minnetonka faces include:

- Growing congestion on regional routes such as I-394, I-494, TH 169 and TH 62 causing diversion of traffic to county roads and local streets.
- Increased traffic and infrastructure needs due to specific redevelopment, such as
- I-394, TH 7, CSAH 101 and the Opus area.
- Changing transportation needs due to an aging population.
- Increasing competition for space among modes (i.e., vehicles and bicycle/pedestrian interests).
- Declining financial resources needed to maintain and improve the transportation system as costs are expected to continue to increase.

Section I Roadway System Plan

The roadway network portion of the transportation system in Minnetonka is expanding in order to accommodate growth and redevelopment. Additional elements required to respond to congestion, safety and modal issues are expected to be added to the roadway system in order to accommodate these changes. This section of the Transportation Plan will address jurisdictional issues, the functional classification system, future traffic volumes, congestion, safety, future roadway system improvements and key transportation policies.

A. Jurisdictional Classification

Roadways in Minnetonka are administered by different agencies depending upon their jurisdictional classification. The Minnesota Department of Transportation (Mn/DOT) maintains state highways, which include the Interstate system and other Trunk Highways (TH). Hennepin County maintains the County State Aid Highway System (CSAH) and other County Roads (CR). The remaining roads are maintained by the City of Minnetonka or are designated as private roads. The three jurisdictions cooperate in the planning and improvement of the roadway system in the city. The existing roadway system showing jurisdictional classification is illustrated in Figure VIII-1. The city's Municipal State Aid (MSA) roadways are shown in Figure VIII-2.

The jurisdictional classification system is intended to maintain a balance of responsibility among the agencies and is organized around the principle that the highest volume limited access roadways that carry regional trips are primarily maintained by Mn/DOT, the intermediate volume roadways that carry medium length trips are maintained by Hennepin County and the local street system that provides access to individual properties is maintained by the city. In addition, some roads within the city are designated private roads. This means the road may not meet minimum city design standards such as pavement thickness, roadway cross-section width, surface material, etc. Minnetonka does not maintain (i.e., plowing, patching, etc.) private roads and once a road is designated private, it is the city's intention the roadway remain private, unless otherwise approved by the City Council. In order for the city to assume control or jurisdiction over these types of roadways in the future, they must be brought up to city standards.

Occasionally, the jurisdictional classification needs to be adjusted to reflect changes in the way certain roadways are used (due to development, changes in traffic patterns or the construction of new facilities). Hennepin County, as part of its 2025 Transportation Plan (2004), identified two jurisdictional transfers within the City of Minnetonka:

- CSAH 16 (McGinty Road) from the west limits of the city to CSAH 5 (Minnetonka Blvd) is identified as a potential transfer from Hennepin County to the City of Minnetonka. This is only a proposed transfer and no negotiations or agreements between the city and the County have taken place regarding this potential transfer.
- CSAH 61 (Shady Oak Road) between CSAH 5 (Minnetonka Blvd) and TH 7 is identified as a potential transfer from Hennepin County to the City of Minnetonka. Again, this is only a proposed transfer and no negotiations or agreements have taken place between the city and the county regarding this potential transfer.

Please Refer to Existing Roadway System Map (Figure VIII-1)

Please Refer to Municipal State Aid System Map (Figure VIII-2)

B. Functional Classification

Roadway functional classification categories are defined by the role they play in serving the flow of trips through the overall roadway system. Table VIII-1 illustrates the Metropolitan Council's detailed criteria established for the functional classification of roadways within the Twin Cities Metropolitan Area.

**Table VIII-1
Roadway Functional Classification Criteria**

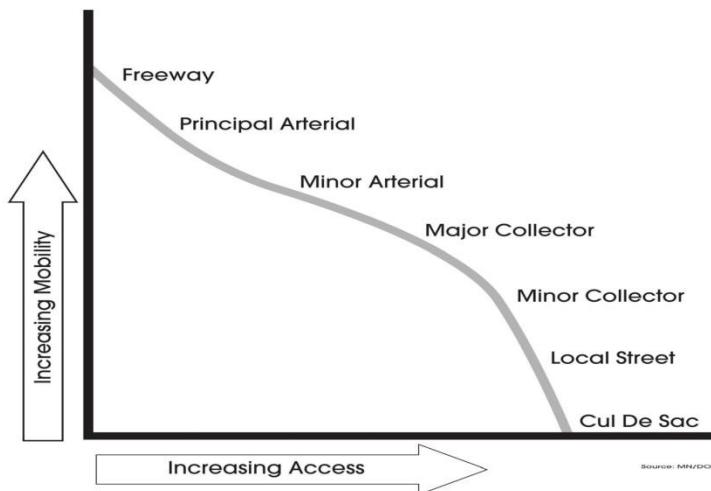
Criteria	Principal Arterial	Minor Arterial	Collector	Local Street
Place Connections	Interconnects metro centers and regional business concentrations	Interconnects major trip generators	Interconnects neighborhoods and minor business concentrations	Interconnects blocks within neighborhoods and land parcels within commercial areas
Spacing	Developed areas: 2-3 miles Developing areas: 3-6 miles	Developed areas: 1/2-1 mile Developing areas: 1-2 miles	Developed areas: 1/4-3/4 mile Developing areas: 1/2-1 mile	As needed to access land uses
Roadway Connections	To interstates, principal arterials and selected minor arterials and collectors	To interstates, principal arterials, other minor arterials, collectors and some local streets	To minor arterials, other collectors and local streets	To collectors, other local streets and a few minor arterials
Mobility	Highest	High	Moderate	Low
Access	No direct property access	Limited access to property	Access to properties is common	Unrestricted property access
Percent of Mileage	5-10%	15-25%	5-10%	65-80%
Percent of Vehicle Miles Traveled	40-65%	15-40%	5-10%	10-30%
Intersections	Grade separated or high-capacity intersection controls	Traffic signals, roundabouts and cross-street stops	All-way stops, roundabouts and some traffic signals	As required for safe operation
Parking	None	Restricted as necessary	Restricted as necessary	Usually unrestricted

Criteria	Principal Arterial	Minor Arterial	Collector	Local Street
Large Trucks	No restrictions	No restrictions	Restricted as necessary	Permitted as necessary
Typical Average Daily Traffic	15,000-200,000	5,000-30,000	1,000-15,000	Less than 1,000
Posted Speed Limits	45-65 mph	35-45 mph	30-40 mph	Maximum 30 mph
Right-of-way Width	100-300 feet	60-150 feet	60-100 feet	50-80 feet
Transit Accommodations	Priority access for transit in peak periods	Preferential treatment where needed	Designed for use by regular route buses	Normally used as bus routes only in non-residential areas

Source: Refined from Metropolitan Council Transportation Policy Plan, 1995

The intent of the functional classification system is to create a hierarchy of roads that collect and distribute traffic from neighborhoods to the metropolitan highway system. Roadways with a higher functional classification (arterials) generally provide for longer trips, have more mobility, have limited access and connect larger centers. Roadways with a lower functional classification (collectors and local streets) generally provide for shorter trips, have lower mobility, have more access and connect to higher functioning roadways. A balance of all functions of roadways is important to any transportation network. Figure VIII-3 depicts the relationship of the various functional classifications to access and mobility.

Figure VIII-3 - Access/Mobility Relationship



The following discussion describes each of the roadway functional classification categories and provides examples of these classifications in Minnetonka.

1. Principal Arterials

Principal arterials are part of the Metropolitan Highway System and provide high-speed mobility between the Twin Cities and important locations outside the metropolitan area. They are also intended to connect the central business districts of the two central cities with each other and with other regional business concentrations in the metropolitan area. These roadways, which are typically spaced from three to five miles apart, are generally constructed as limited access freeways in the urban area, but may also be constructed as multiple-lane divided highways.

Minnetonka is served by five principal arterials including I-494, I-394, TH 169, TH 62 and TH 7.

2. Minor Arterials

Minor arterials also emphasize mobility over land access, serving to connect cities with adjacent communities and the metropolitan highway system. Major business concentrations and other important traffic generators are usually located along minor arterial roadways. In urbanized areas, one to two mile spacing is considered appropriate. “A” minor arterials are roadways that are of regional importance because they relieve, expand or complement the principal arterial system. “A” minor arterials are categorized into four types, consistent with Metropolitan Council guidelines:

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

A well-planned and adequately designed system of principal and “A” minor arterials will allow the city’s overall street system to function the way it is intended and will discourage through traffic from using residential streets. Volumes on principal and minor arterial roadways are expected to be higher than on collector or local roadways. Providing capacity for these higher volumes will keep traffic on other city streets lower. Examples of existing “A” Minor Arterials in Minnetonka include such routes as CSAH 3 (Excelsior Blvd), CSAH 5 (Minnetonka Blvd), and CSAH 61 (Plymouth Road). “A” Minor Arterials within the City of Minnetonka are either relievers or expanders. Currently, there are no connectors or augmenters within the City of Minnetonka.

“B” Minor Arterials provide a citywide function, serving medium to long distance trips. Currently, there are no “B” Minor Arterials within the City of Minnetonka.

3. Collectors

Collectors are designed to serve shorter trips that occur within the city and provide access from neighborhoods to other collector roadways and the arterial system. They are expected to carry less traffic than arterial roads and to provide access to some properties. Collectors in Minnetonka are categorized as major and neighborhood collectors. Major collectors link both local streets and neighborhood collectors to minor arterials; neighborhood collectors connect local streets to other collectors or minor arterials. The city’s zoning code differentiates between major and neighborhood collectors based upon building requirements (i.e., setbacks) for adjacent development. There are no city design standard differences between the two

types of collectors. There are several collector routes within the city. Examples of roadway segments designated as major collectors in the City of Minnetonka include Tonkawood Road, Carlson Parkway, and Williston Road. Examples of neighborhood collectors include Highwood Drive, Scenic Heights Drive, and Essex Road.

4. Local Streets

Local streets provide access to adjacent properties and neighborhoods. Local streets are generally low speed, and designed to discourage through traffic. All of the remaining roadways in the city that are not classified as a collector or arterial fall under the local streets designation. The City of Minnetonka has a unique local street system. The constantly changing topography, large lot sizes, off-street parking and street design standards result in a eclectic mix of interconnecting streets (with a high number of cul-de-sacs).

C. Functional Classification Changes

The city is proposing changes to the existing functional classification system. None of these changes affects the Principal Arterial system or the “A” Minor Arterial system.

Changes that affect other roadways in the city are illustrated in Figure VIII-4 and listed below as follows:

1. Major Collectors

- a. Rowland Road (Bren Road to the south city limits) - This roadway is recommended to be upgraded from a neighborhood collector to a major collector. It connects a major collector to a principal arterial and continues into Eden Prairie. This route is on the MSAS.
- b. Cheshire Parkway/Lane (Carlson Parkway to the north city limits) - This road is recommended to be upgraded from a neighborhood collector to a major collector. This route connects to Carlson Parkway and travels into Plymouth. As such, it provides a connection for local traffic to access areas and businesses near I-494 and I-394.
- c. Parkers Lake Road (Twelve Oaks Center Drive to north city limits) - This road is recommended to be upgraded from a neighborhood collector to a major collector and is on the MSA system. This road serves a similar north-south function as Carlson Parkway for residential and office land uses in this area.
- d. Twelve Oaks Center Drive (Carlson Parkway to west city limits) - This road is recommended to be upgraded from a neighborhood collector to a major collector. This road serves as an alternate east-west route to I-394 for local traffic in this area.

2. Neighborhood Collectors

The following roads are recommended to be upgraded from local roads to neighborhood collectors. Each of these roadways is on the city’s MSA system (see Figure VIII-2).

- a. Sparrow Road (TH 7 to Ridgewood Road)
- b. Clear Spring Road (CSAH 3 (Excelsior Blvd) to TH 7)
- c. Covington Road (Vine Hill Road to CSAH 101)
- d. Whited Road/Highland Road (CSAH 62 to TH 7)
- e. Woodhill Road (TH 7 to Lake Street Extension)

- f. Lake Street Extension (Williston Road to Woodhill Road) and (Fairview Avenue to CSAH 61 (Shady Oak Road))
- g. Lake Street Extension/North Service Drive (CSAH 60 (Baker Road) to CSAH 61 (Shady Oak Road))
- h. Dominick Drive (CSAH 61 (Shady Oak Drive) to Pioneer Road)

Please Refer to Functional Classification Map (Figure VIII-4)

D. Programmed or Planned Improvements

Various roadway projects are either currently under construction, programmed for completion in the next few years, or proceeding through the planning process. As noted earlier, from the standpoint of identification of future need, roadways that are programmed were considered part of the future roadway system because they will likely be in place during the 2030 planning horizon. We have also identified roadway projects that are planned, meaning a need has been identified but funding has not yet been allocated, therefore the project is not yet programmed.

1. Mn/DOT

The Mn/DOT Metro District 2008 to 2030 Transportation System Plan (TSP) was reviewed to identify regional roadway improvements. Mn/DOT's TSP does not identify any programmed regional roadway improvements within Minnetonka during the 2030 planning time period. However, several regional needs were identified. Although they are not currently funded improvements, they are important to note since a need has been identified for each of these projects before 2030. The following projects are identified in the TSP as needed improvements between 2008 and 2014.

- a. TH 7 (west city limits to I-494) - improve to four-lane freeway
- b. TH 7 (I-494 to the east city limits)- improve to six-lane freeway
- c. TH 62 (I-494 to east city limits) - add a lane in each direction
- d. TH 7/Williston Road intersection - rebuild intersection

Since the regional improvements noted above are not currently funded (programmed), they were not incorporated into the model as part of the future roadway system. However, based upon the city's anticipated future land use, 2030 traffic forecasts will identify whether or not there is a need for these improvements during the 2030 planning horizon.

2. Hennepin County

In addition, the following roadway improvements are identified in the 2008-2012 Hennepin County Transportation Capital Improvement Program (2008). The improvements will add capacity through the addition of lanes to each facility. The City of Minnetonka is involved in the overall planning process for these improvements; however the proportional cost share for the city has not been determined.

- a. CSAH 61 (TH 7 to CSAH 3) - Four-lane roadway construction anticipated in 2010-2011.
- b. CSAH 101 (CSAH 5 to I-394) -Three-lane roadway construction anticipated in 2010-2011.
- c. CSAH 101 (CSAH 3 to CSAH 62) - Four-lane roadway construction anticipated in 2012.

Additionally, the following roadway improvements are currently unfunded in the County's 2008-2012 CIP but are identified as provisional projects, meaning if funding becomes available they will likely proceed as programmed projects.

- a. CSAH 61 (Cedar Lake Road to Hilloway Road)
- b. CSAH 73 (I-394 to Cedar Lake Road)

Similar to the unfunded regional improvements noted above, the provisional County projects were not incorporated into the model as part of the future roadway system.

3. City of Minnetonka

Minnetonka's 2009-2013 Capital Improvement Program identifies each of the Hennepin County projects noted above since the city participates financially in these projects. Beyond the projects listed above, there are several additional reconstruction projects planned on local roads. The 2009-2013 CIP identifies the following additional local road projects:

- a. Dominick Drive - Construction anticipated in 2009-2010
- b. North TH 7 Frontage Road (west of Highland Road) - Construction anticipated in 2009
- c. Vine Hill Road - Construction anticipated in 2010-2011
- d. Highwood Drive - Construction anticipated in 2012
- e. Sparrow Road - Construction anticipated in 2013
- f. Other neighborhood streets - annual CIP contribution for miscellaneous projects

Beyond the near-term local improvements identified above as being included in the City's CIP, several other projects have been identified but do not have money allocated for construction. These improvements are not entirely the result of land use changes and traffic growth within the city, but are due to a combination of factors that include traffic growth within the city, traffic growth within adjacent communities, congestion on the regional highway system, diversion from the regional system to the City's local roadways, etc. The City is identifying these improvements here to raise awareness for their need and to allow time to identify funding strategies. The city's 2009-2013 CIP prioritizes these projects into three categories, as shown below:

Highest Priority (2009-2013)

- I-394/Ridgedale Drive Interchange
- TH 169/Bren Road Interchange

Middle Priority (2014-2018)

- CSAH 73 (Hopkins Crossroad) - from Cedar Lake Road to I-394
- CSAH 61 (Plymouth Road) - from the railroad to Hilloway Drive
- I-394/CSAH 73 (Hopkins Crossroad) Bridge

Lower Priority (2019-2023)

- Opus Area Street System and Ridgedale Area Improvements

This transportation plan, within the city's comprehensive plan, is a long-range planning tool that will be updated approximately every ten years. Because of the duration between updates, this plan is not able to identify additional priority projects as the city's CIP is updated each year. Therefore, city staff intends to produce a memorandum each year outlining additional or changing needs that will be kept with the transportation chapter of the comprehensive plan. This will allow city staff, elected officials and the public to continue to monitor upcoming projects and prioritize/identify funding between comprehensive plan updates.

4. Coordination with Other Jurisdictions

The City of Minnetonka will continue to coordinate with adjacent jurisdictions (i.e., Eden Prairie, Hopkins, St. Louis Park, Plymouth, Wayzata, Edina, Greenwood, and Deephaven) as well as Hennepin County and Mn/DOT when planning future improvements. Coordination among jurisdictions may provide opportunities for collaboration that could benefit all agencies and the public. This may result in financial and time savings through economies of scale as well as potentially reducing construction impacts to residents through the coordination of projects.

E. Demographics and Land Use Background

The pattern and intensity of travel within any city is directly related to the distribution and magnitude of households, population and employment growth within that community, in neighboring communities and in the region as a whole.

Land use, travel patterns, population and employment change over time and affect the efficiency and adequacy of the transportation network. This section provides an overview of expected changes in the city's land use pattern, households, population and employment, which will then be the basis for estimating future travel demand within the city. A complete discussion of the land use characteristics in the City of Minnetonka is contained in Chapter IV-2030 Land Use Plan, of this Comprehensive Plan.

1. Land Use

In 2006, Minnetonka celebrated 50 years as an incorporated village. The majority of the city is developed as low-density single-family residential. However, the city's proximity and convenient access to downtown Minneapolis and the airport has attracted many office, light industrial and commercial developments, resulting in an assessed valuation of \$1.7 billion (2007) and an estimated 45,700 employees in 2006.

Land for future new residential and/or business growth is limited. Therefore, continued growth in residential and business development is likely to take the form of expansion or redevelopment. It is likely that redevelopment activities will increase as buildings and land uses age and become functionally obsolete. In terms of transportation, redevelopment activities within the city should consider proximity to regional transportation corridors and transit hubs/facilities, as well as proximity to commercial services and employment centers.

Redevelopment is essential in order to build affordable housing, revitalize village center areas and introduce additional vitality to regional areas such as the I-394 corridor and the Opus area. The City will encourage mixed uses and higher density residential uses in village centers and the Ridgedale / Opus regional areas. Road, trail and sidewalk connections between neighborhoods and major destinations such as parks, schools, shopping, and libraries will increase transportation choices and support the potential for more active living among residents. Regional areas reflect larger areas of commercial and retail activity that draw from a regional market much larger than the City of Minnetonka. Villages are considered compact areas of multiple activities, which draw largely from the surrounding residential areas. The term Corridors reflects linear patterns of activity, often lining a major transportation corridor.

Currently there are three notable areas in Minnetonka that draw people from all over the region for work, shopping or entertainment. These places are the I-394 Corridor; Ridgedale area as an important subset of this Regional Corridor, and the Opus area. Since their initial

construction, these areas have demonstrated their economic success. The city is committed to maintaining the economic strength and mix of attractive land uses in each of the three areas, as well as continuing to work with business owners in these areas as they grow into the future or alter their respective developments to preserve themselves.

Additional, specific areas that have the potential for further development and redevelopment within the life of this Comprehensive Plan are:

- TH 7 corridor (specifically the Highwood Drive area and the CR 101 intersection),
- CSAH 5 (Minnetonka Boulevard)/CSAH 101 area,
- Glen Lake,
- Opus area,
- Shady Oak Road, and
- Minnehaha Creek area.

2. Socio-Economic Data

Using the land use plan and development objectives as guidance, and with the assistance of the Metropolitan Council, the city has estimated existing and future population, employment and households for sub-areas of the city called Traffic Analysis Zones (TAZs). Estimates for 2030 as well as the boundaries of the TAZs are shown in Appendix B.

F. Existing Capacity Deficiencies

Congestion on the existing roadway system is judged to exist when the ratio of traffic volume to roadway capacity (v/c ratio) approaches or exceeds 1.0. The ratio of volume to capacity provides a measure of congestion along a stretch of roadway and can help determine where roadway improvements, access management, transit services, or demand management strategies need to be implemented. It does not, however, provide a basis for determining the need for specific intersection improvements.

Table VIII-2 provides a method to evaluate roadway capacity. For each facility type, the typical planning-level, average daily traffic (ADT) capacity ranges and maximum ADT volume ranges are listed. These volume ranges are based upon guidance from the Highway Capacity Manual, discussions with the Metropolitan Council, and professional engineering judgment. A range is used since the maximum capacity of any roadway design ($v/c = 1$) is a theoretical measure that can be affected by its functional classification, traffic peaking characteristics, access spacing, speed, intersection node geometry and other roadway characteristics. Further, to define a facility's "daily capacity," it is recommended that the top of each facility type's volume range be used. This allows for capacity improvements that can be achieved by roadway performance enhancements.

Another useful capacity analysis index is the level of traffic that a facility can accommodate before it is defined as approaching its capacity limit. A segment of road is noted as "approaching capacity" when the observed daily volume equals or exceeds 85 percent of daily capacity ($v/c > 0.85$). This level of traffic volume is also presented in Table VIII-2 by facility type.

Table VIII-2
Planning Level Roadway Capacities by Facility Type

Facility Type	Planning Level Daily Capacity Ranges (ADT)	Minnetonka Daily Capacity (ADT)	Minnetonka Approaching Capacity (85% of ADT)
Two-lane undivided urban	8,000-10,000	10,000	8,500
Two-lane undivided rural	14,000-15,000	15,000	12,750
Three-lane urban(two-lane divided with turn lanes)	14,000-17,000	17,000	14,450
Four-lane undivided urban	18,000-22,000	22,000	18,700
Five-lane urban (four-lane divided with turn lanes)	28,000-32,000	32,000	27,200
Four-lane divided rural	35,000-38,000	38,000	32,300
Four-lane freeway	60,000-80,000	80,000	68,000
Six-lane freeway	90,000-120,000	120,000	102,000

Note: The terms urban and rural describe typical section design (e.g., curb and gutter for urban, and ditch drainage for rural). They do not imply geographic areas.

Using the methodology described above, existing capacity deficiencies were identified by comparing existing¹ ADT volumes to the thresholds noted in Table VIII-2 to identify and map roadways that currently exhibit capacity deficiencies. The existing traffic volumes (Figure VIII-5) and the existing number of lanes (Figure VIII-6) were used to develop the existing capacity deficiencies shown in Figure VIII-7.

As noted in Figure VIII-7, over capacity or “congested” roadway segments are defined as those with a v/c ratio at or above 1.0. This signifies that a segment of road has observed volumes which exceed its design capacity, as noted in Table VIII-2. These segments are shown as bold, red lines in Figure VIII-7. Roadway segments with a v/c ratio between 0.85 and 1.0 are designated “approaching capacity” and are shown as bold, yellow lines in Figure VIII-7. Based on this analysis the following road segments currently exceed their design capacity:

- TH 169 - Along the eastern border (north of Hopkins) and along the southeast border with Edina
- TH 7 - From the west city limits to Williston Road

Please note that I-394 exceeds the volume thresholds for a four-lane freeway facility, however this roadway is actually a four-lane freeway with high occupancy toll (HOT) lanes in each direction. The HOT lanes provide additional capacity (nearly creating a six-lane freeway).

¹ 2005 ADT volumes were used for existing conditions. Although 2007 ADT volumes were available at the writing of this report, the 2005 ADT volumes were used for consistency with the Metropolitan Council’s Regional Model, which also uses 2005 ADT volumes as its foundation.

Please Refer to Existing Traffic Volumes Map (Figure VIII-5)

Please Refer to Existing Number of Lanes (Figure VIII-6)

Please Refer to Existing Congestion Map (Figure VIII-7)

The following road segments are approaching their design capacity:

- I-394 - From Ridgedale Drive to the east city limits
- CSAH 101 - From CSAH 5 (Minnetonka Boulevard) to CSAH 16 (McGinty Road)

The methodology described above is a planning-level analysis that uses average daily traffic volumes and is not appropriate for all traffic conditions. For example, traffic conditions that do not fit the average daily traffic criteria (i.e., weekend travel, holiday travel, special events, etc.) are likely to produce different levels of congestion.

This methodology does not take into account specific geometric conditions that exist at the intersection nodes, potential peaking characteristics of these roadways or directional flow disparities, which can greatly impact the order of magnitude of the deficiency (either meaning there is not a deficiency or it is more significant than what is indicated by the ADT alone). For purposes of the transportation planning process, this methodology is widely accepted and applicable. For detailed design consideration of access management, intersection traffic control and congestion mitigation, it is the city's practice to conduct detailed operational analysis for specific developments via traffic studies. Minnetonka has in place a Planned I-394 Zoning Ordinance that stipulates that any development greater than a particular size or expanding more than a certain percentage must conduct a traffic impact assessment. The assessment findings may include: compliance to a maximum number of trips generated during peak hours, road improvements, phased occupancy, and alternative demand management measures. A similar approach has been applied to all traffic studies that are conducted throughout the city; requiring that the respective developer be responsible for necessary roadway improvements and alternative demand management measures.

G. Existing Congestion on the Regional Highway System

The 2008-2030 Mn/DOT Metro District Transportation System Plan (TSP) identifies the segments of I-494, I-394, TH 169, TH 7 and TH 62 in Minnetonka as having a high-mobility deficiency ranking (note that the I-494 corridor was also listed as under construction for improvement; this corridor is no longer deficient at this time of this transportation plan). Corridors with a high deficiency ranking are targeted for improvements to enhance mobility between 2008 and 2014. Mn/DOT's overall objective in identifying freeway and arterial roadway improvement areas, associated investments/costs and construction timelines, is to lower congestion to 33 percent on the metro freeway and arterial trunk highway system by year 2030. The TSP also identifies roadway expansion investments to meet congestion/mobility targets. Capacity improvements to all of the regional roadways in Minnetonka (I-394, TH 169, TH 7, and TH 62) are identified as "needed" projects in the TSP during the 2008-2014 timeframe, due to their high-mobility deficiency ranking. However, no improvements to these roadways are currently programmed.

H. Forecast Year 2030 Traffic Volumes

Year 2030 traffic forecasts for Minnetonka were prepared using the future households, population and employment data outlined in the socio-economic data section. A summary of the methodology used to develop these traffic forecasts, as well as a discussion of the difference between 2030 traffic forecasts and ITE trip generation, is attached in Appendices A and B. These traffic forecasts are an essential analytical tool to approximate the adequacy of the road system to handle future development, as anticipated by the city and Metropolitan Council. The traffic forecast model takes into account future planned and programmed improvements identified in Mn/DOT's 2008-2030 Transportation System Plan, Hennepin

County's 2008-2012 Capital Improvement Program, and the City of Minnetonka 2008-2012 Capital Improvement Program. In addition, the traffic forecast model accounts for planned improvements that are in the Metropolitan Council's Transportation Policy Plan (TPP) for regional highways outside the city. The resulting forecasted 2030 traffic volumes are shown in Figure VIII-8.

I. Future (Year 2030) Capacity Deficiencies

A planning-level analysis was performed to identify locations where capacity problems are expected to occur in the planning horizon year. Demand was estimated using the year 2030 traffic forecasts shown in Figure VIII-8. Capacity was based upon the existing roadway system along with the programmed improvements identified earlier.

Similar to methodology described above to determine existing capacity deficiencies, the future volumes were reviewed to determine if future capacity deficiencies will develop. Based on this review, Figure VIII-9 illustrates Minnetonka's projected future capacity deficiencies. The following summarizes the road segments anticipated to exceed their design capacity:

- I-494 - From I-394 to the north city limits
- I-394 - From Ridgedale Drive to the east City limits
- TH 169 - Along the eastern border (north of Hopkins) and along the southeast border with Edina
- TH 7 - From the west city limits to Williston Road
- CSAH 61 (Plymouth Road) - From Sherwood Place to McGinty Road
- CSAH 101 - From CSAH 5 (Minnetonka Boulevard) to Arrowhead Trail

Some of the deficiencies that exceed capacity were identified under existing conditions as either exceeding capacity or approaching their design capacity. Mn/DOT did identify the TH 7 congestion issues from the west city limits to I-494 (yet there is no improvement scheduled for this segment). The CSAH 101 segment from CSAH 5 (Minnetonka Boulevard) to Arrowhead Trail was recently (year 2007/2008) reconstructed from a two-lane roadway to a three-lane roadway. The forecast ADT for this segment is slightly greater than the typically accepted maximum for this type of roadway. As was previously discussed, the methodology applied to this capacity deficiency determination is a high-level planning approach and does not take into account specific geometric conditions that exist at the intersection nodes, potential peaking characteristics of these roadways or directional flow disparities, which can greatly impact the order of magnitude of the deficiency (either meaning there is not a deficiency or it is more significant than what is indicated by the ADT alone). It is County practice to micro-model these types of facilities as part of the overall design process to ensure that the proposed roadway design can operate at an acceptable level of service under projected peak hour conditions. The CSAH 101 roadway section was modeled to determine that it will operate at an acceptable level of service. Although this is the case, for purposes of consistency we have identified this roadway segment as having a planning-level deficiency.

The following roadways have year 2030 traffic volumes approaching their design capacity:

- I-494 - From I-394 to CSAH 3 (Excelsior Boulevard)
- I-394 - From CSAH 61 (Plymouth Road) to Ridgedale Drive

Please Refer to Year 2030 Traffic Volumes Map (Figure VIII-8)

Please Refer to Year 2030 Future Congestion/Deficiencies Map (Figure VIII-9)

- TH 7 - From Shady Oak Road (CSAH 61) to east city limits
- CSAH 73 (Hopkins Crossroad) - From I-394 South Frontage Road to Cedar Hills Blvd
- CSAH 101 - From CSAH 5 (Minnetonka Boulevard) to CSAH 16 (McGinty Road)
- CSAH 5 (Minnetonka Boulevard) - From Woodland Avenue to Sussex Drive
- CSAH 3 (Excelsior Boulevard) - From Holiday Road to I-494

Some of the roadway segments identified as approaching their design capacity were either recently improved (prior to year 2008) or included in the funded Hennepin County CIP. Being included on this list indicates they begin to approach their failure points in the year 2030. Figure VIII-9 identifies what programmed improvements were assumed in the 2030 roadway network for each congested or near-congested segment.

It should also be noted that the City conducts detailed traffic studies for the majority of individual development proposals. The associated impacts related to these proposed developments identify needs or improvements that are sometimes above and beyond what can be captured with the previous deficiency review. As of year 2008 the City has attempted to document these additional needs as part of their 2009-2013 CIP based on priority.

J. Safety Issues

A central concern of transportation professionals is roadway safety. To assist in the evaluation of crashes, Mn/DOT maintains a database of crash records from around the State of Minnesota. These records identify the location, severity and circumstances associated with each crash. This dataset is useful for identifying crashes within the city, but it should be noted that the crash location data input may not always be extremely accurate. Therefore, further evaluation may be needed to determine if safety issues exist at locations identified as having a high frequency of crashes. Mn/DOT's dataset was reviewed to identify the number, location and severity of crashes in the City of Minnetonka for the years 2002-2006. Overall there were 3,507 crashes, of which 12 involved fatalities, 1,208 involved personal injury and 3,507 involved property damage (see Table VIII-3).

Table VIII-3
Motor Vehicle Crashes in Minnetonka (2002-2006)*

Year	Number of Crashes					
	Fatal Crashes	Personal Injury Crashes			Property Damage Crashes	Total Crashes
		Type A Incapacitating Injury	Type B Non-Incapacitating Injury	Type C Possible Injury		
2002	3	14	71	147	506	741
2003	0	14	74	157	434	679
2004	2	6	66	181	457	712
2005	5	5	41	201	475	727

2006	2	9	43	179	415	648
5-Year Total	12	48	295	865	2287	3507
5-Year Ave	2	10	59	173	457	701

*Includes Interstate and Trunk Highway Facilities

These crashes were generally widely distributed throughout the city with most locations accounting for only one or two incidents, suggesting that a crash at that location was a random event. However, several of these crashes were concentrated at a limited number of locations.

There is a high correlation between the frequency of crashes and traffic volumes. Roadways with high volumes have a tendency to have more crashes than a lower volume roadway. A planning-level safety analysis was conducted to identify locations in Minnetonka with a high frequency of crashes. Further investigation is warranted at these locations to evaluate the types of crashes and to calculate crash rates at these locations to determine their relevance. The locations with the most crashes are listed in Table VIII-4 and illustrated in Figure VIII-10.

In keeping with the state's goal of "Toward Zero Deaths", additional analysis of the fatal crashes was also conducted using crash reports. Based on the reports, roadway geometry was not cited as contributing factors in the fatal crashes. Instead, the reports showed the following:

- Five of the 12 fatal crashes involved middle-aged drivers (age 30-39) under the influences or chemically impaired.
- Two of the 12 fatal crashes involved middle-aged drivers (age 28-62) and unsafe speeds or driver inattention.
- Two of the 12 fatal crashes involved drivers failing to yield. One of crashes involved an elderly driver (65 or older).

Three of the 12 fatal crashes were contributed to other factors (i.e., vision obscured or unknown).

Table VIII-4

Top Crash Locations within Minnetonka 2002-2006 (by frequency of crashes)

<u>Crash Location</u>	<u>Number of Crashes</u>
CSAH 5 (Minnetonka Blvd) and CSAH 101	50*
CSAH 73 (Hopkins Crossroad) and I-394 Bridge	36
CSAH 5 (Minnetonka Blvd) and Williston Road	32
CSAH 101 and Hutchins Road	29
CSAH 61 (Plymouth Road) and I-394 Bridge	27

<u>Crash Location</u>	<u>Number of Crashes</u>
CSAH 61 (Shady Oak Road) and CSAH 3 (Excelsior Blvd)	27
CSAH 3 (Excelsior Blvd) and CSAH 101	25
CSAH 73 (Hopkins Crossroad) and I-394 S. Frontage Road	25
CSAH 61 (Plymouth Road) and Ridgedale Drive	25
CSAH 5 (Minnetonka Blvd) and CSAH 60 (Baker Road)	24
CSAH 101 and Breezy Point Road	22
CSAH 101 and TH 7	21
CSAH 73 (Hopkins Crossroad) and Cedar Lake Road	20
CSAH 61 (Plymouth Road) and Cartway Dr	20
Ridgedale Drive and I-394 S. Frontage Road	20
CSAH 61 (Shady Oak Road) and CSAH 5 (Minnetonka Blvd)	20
CSAH 60 (Baker Road) and CSAH 3 (Excelsior Blvd)	18*
CSAH 61 (Shady Oak Road) and TH 62	18
CSAH 73 (Hopkins Crossroad) and Greenbriar Road	17
CSAH 61 (Plymouth Road) and Wayzata Blvd	17
CSAH 101 just north of TH 7	15
CSAH 62 just west of CSAH 60 (Baker Road)	15
Cedar Lake Road and Lindbergh Drive	15
CSAH 5 (Minnetonka Blvd) just east of I-494 bridge	14
CSAH 16 (McGinty Road) and CSAH 5 (Minnetonka Blvd)	14
CSAH 61 (Shady Oak Road) and Red Circle Drive	14
CSAH 101 and Covington Trail	13
CSAH 101 and CSAH 62	13
CSAH 73 (Hopkins Crossroad) and Wayzata Blvd	13

<u>Crash Location</u>	<u>Number of Crashes</u>
CSAH 60 (Baker Road) just north of CSAH 62	12
CSAH 3 (Excelsior Blvd) and Fairview Drive	12
Cedar Lake Road and Greenbriar Road	11
CSAH 101 and Ridgewood Road	11
CSAH 61 (Shady Oak Road) and Bren Road	11
CSAH 62 and CSAH 60 (Baker Road)	11
Cedar Lake Road and Cedar Bend	10
CSAH 101 and Grays Bay Blvd	10
Ridgedale Drive and Cartway Lane	10

*Improvements have been made to these locations since 2006 which will likely reduce the frequency of crashes in these locations.

Please Refer to the Crashes at Intersections Map (Figure VIII-10)

K. Additional Roadway System Needs

Future roadway improvements designed to address system connectivity, continuity, congestion and/or safety issues have been identified for the roadway system in Minnetonka. The additional roadway system needs are presented in Figure VIII-6 and are derived from a combination of system needs and the intended function of each roadway as it relates to the adjacent supporting land use. It should be noted that the proposed roadway section discussed here does not account for spot intersection improvements and/or trails.

The determination of how and if to implement the additional roadway system needs, and their proper sequencing, will be determined through each jurisdiction's programming process that considers the estimated cost of each project, available financing and coordination with other projects.

1. Mn/DOT Roadways

These improvements are on the regional highway system and are primarily Mn/DOT's responsibility. The timing of these projects is uncertain.

- I-494 - Add capacity in both directions north of I-394
- I-394 - Add capacity in both directions east of Ridgedale Drive
- TH 169 - Add capacity in both directions along all portions through Minnetonka (creating a six-lane freeway facility)
- TH 7 - Upgrade to a four-lane freeway facility throughout Minnetonka

The TH 7 need has been identified by Mn/DOT as part of their unfunded TSP projects.

2. Hennepin County Roadways

The following projects are on the County roadway system and are the County's responsibility, although the city participates financially and therefore must include them in the city's Plan and the city's CIP. These are additional needs beyond the projects already programmed and therefore could be completed in the 2013 to 2030 timeframe (if funding were available).

- CSAH 61 (Plymouth Road) - Upgrade to a three-lane facility from Sherwood Place to McGinty Road
- CSAH 73 (Hopkins Crossroad) - Upgrade to a three-lane facility from I-394 South Frontage Road to Cedar Hills Boulevard
- CSAH 5 (Minnetonka Boulevard) - Upgrade to a three-lane facility from Woodland Avenue to Sussex Drive
- CSAH 3 (Excelsior Boulevard) - Upgrade to a three-lane facility from Holiday Road to
- I-494

The CSAH 3 (Excelsior Boulevard) need is based more on safety and access consideration than heavy volumes. In addition, this roadway currently implements bypass lanes where possible.

3. City of Minnetonka Roadways

No additional needs have been identified beyond what is discussed under "Hennepin County Roadways."

L. Access Management

Control of access to roadways, both in terms of cross-street spacing and driveway placement, is a critical means of preserving or enhancing the efficient operation of the roadway system and improving safety by reducing accident exposure. Access control guidelines are used to preserve the public investment in the roadway system and to give direction to developers for plan preparation. The guidelines balance the public interest (mobility) with the interests of property owners (access). Effective control of driveway access on the entire street system requires cooperation of municipal, County and state officials. Mn/DOT has developed a policy on access management, and guidelines for access spacing. Mn/DOT's Highway Access Category System and Spacing Guidelines can be found on Mn/DOT's website.

1. Access to Principal Arterials

Minnnetonka will strive to meet metropolitan guidelines for access to principal arterials. These guidelines recommend limiting cross-street access to one-half-mile spacing within urbanized areas, with one- to two-mile spacing being optimal. No new driveway access is permitted to principal arterials. Minnetonka will continue to look for opportunities to reduce/combine existing accesses where possible (i.e., TH 7 west of the I-494).

2. Access to Minor Arterials

The city will strive to meet Hennepin County guidelines for access to the minor arterial system. These guidelines generally call for one quarter mile spacing of all access points (cross streets and driveways). Minnetonka will work with Hennepin County to minimize the number of driveways directly accessing minor arterials in the city and will continue to look for opportunities to reduce/combine existing accesses where possible.

3. Driveway Access on City Streets (Collectors and Local Roads)

Driveways contribute to accidents and reduced traffic flow on major streets in municipalities because they add to the number of locations where vehicle conflicts can occur. Hence, it is desirable to have policies and ordinances in place that:

- Limit the number of driveways to those that are actually needed to safely accommodate the traffic generated by each development.
- Provide adequate spacing between driveways so conflicts (and resulting crashes) between vehicles maneuvering at adjacent driveways do not arise.
- Ensure proper design to accommodate driveway traffic and minimize vehicle conflicts without significantly reducing roadway capacity.

Occasionally, topographic features of a particular site or the needs of a particular land use may require special access features in a proposed development. The city may wish to withhold approval of these developments or site changes until a study has been made of the potential impacts on the affected roadways and the adequacy of the proposed access design is determined. The city may require the following steps be included in the traffic study for the site:

- Estimate site traffic generation and future non-site traffic.
- Determine directional distribution of trips.
- Estimate turning movements at driveways and the resulting level of service.
- Analyze current and future access requirements.

- Provide necessary geometric and operational improvements to safely accommodate the site's access requirements without negative impacts to traffic operation on the adjoining roadways.

M. Right-of-Way

Right-of-way (ROW) is a valuable public asset. Therefore it needs to be protected and managed in a way that respects the roadway's intended function, while serving the greatest public good.

Minnetonka will, with its current and anticipated growth, need to reconstruct, widen and construct new roadway segments to meet future capacity and connectivity demands. Such improvements will require that adequate ROW be maintained or secured. The city will coordinate with Mn/DOT and Hennepin County for ROW acquisition along county or state routes. For ROW acquisition along local roads, the city may use any of the following tools:

1. Right-of-Way Dedication

When future expansion or realignment of a roadway is proposed, but not immediately programmed, the city will consider ROW dedication strategies to reduce costs and maintain the feasibility of the proposed improvement. Several different strategies will be used to preserve ROW for construction, including direct purchase, zoning and subdivision dedication techniques and official mapping. At the writing of this document, the city had officially mapped one location, Plymouth Road south of Ridgedale Drive, within its jurisdiction. Before implementing any ROW preservation programs, local agencies should weigh the risks of proceeding with ROW preservation without environmental documentation. (Note: Mn/DOT policy requires environmental documentation prior to purchase.) If environmental documentation has not been completed, agencies risk preserving a corridor or parcel that has associated environmental issues.

2. Direct Purchase

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

3. Planning and Zoning Authority

The city may use the following methods to regulate existing and future land use. Under this authority, agencies have a number of tools for preserving right-of-way for transportation projects. These tools include:

a. Zoning

If the property has a very low-density zoning classification, the city may try to maintain its existing zoning classification (i.e. do not rezone it). A low zoning classification limits the risk for significant development, and can help preserve land for potential ROW until funding becomes available for roadway construction.

b. Platting and Subdivision Regulations

Platting and subdivision regulations give the city authority to consider future roadway alignments during the platting process because most land must be platted before it is

developed. The city may use their authority to regulate land development to influence plat configuration and the location of proposed roadways. In most instances, planning and engineering staff work with developers to formulate a plat that meets development objectives and that conforms to a long-term community vision and/or plans. The City of Minnetonka does require ROW dedication as part of the platting and subdivision process.

c. Official Mapping

A final strategy to preserve ROW is to adopt an Official Map. An Official Map is developed by the city and identifies the centerline and ROW needed for a future roadway. The city then holds a public hearing showing the location of the future roadway and incorporates the official map into its thoroughfare or community facilities plan. The official mapping process allows the city to control proposed development within an identified area, and to influence development on adjacent parcels. However, if a directly affected property owner requests to develop his/her property, the city has six months to initiate acquisition and purchase of the property to prevent its development. If the property is not purchased, the owner is allowed to develop it in conformance with current zoning and subdivision regulations. As a result, the official mapping process should only be used for preserving key corridors in areas with significant growth pressures.

Additional information on some of the tools and techniques listed above can be found in Appendix J of Mn/DOT's *Interregional Corridors: A Guide for Plan Development and Corridor Management*. This guide also includes information on the environmental review and documentation process as it relates to right-of-way preservation.

Section II Transit System Plan

Roadways alone will not be able to address all of the transportation needs within Minnetonka. Other systems, such as transit, are required to serve the varied needs of a metro community. Transit is an important element in the overall transportation network because it:

- Offers an option to senior citizens and people who cannot drive or cannot afford an automobile with access to various services within the area (i.e., medical care, shopping and governmental services).
- Provides opportunities to people who prefer an alternative to automobile travel.
- Potentially removes a portion of existing or future automobile traffic from the roadway, possibly reducing travel time and congestion for other vehicles on the roadway.

A. Existing Transit Services and Facilities

The 2004 Metropolitan Council 2030 Transportation Policy Plan identified four existing transit market service areas for all communities within the Twin Cities metropolitan area. The market service areas were defined by:

- Population density
- Employment concentration and job density
- Trip volumes and patterns
- Transit dependent segments of the population

Minnetonka is located in the Metropolitan Transit Taxing District. Portions of the city are located within Transit Market Area II while others are located within Transit Market Area III. This means that the eastern portion of the city has a comparatively high level of transit service, with frequent local and express service offered 12-20 hours a day, seven days a week. The majority of the western half of the city is located within Transit Market Area III which means there are fewer transit opportunities featuring peak-only express routes and dial-a-ride service. Please refer to Table VIII-5 for detailed information on Transit Market Areas and their corresponding levels of service. Figure VIII-11 illustrates existing transit services and facilities within the city.

**Table VIII-5
Transit Market Area Services**

Market Area	Land Use Pattern	Service Options	Service Characteristics
I	Highest concentrations of activity, housing and jobs	Regular-route locals, all-day expresses, special needs paratransit (ADA, seniors, etc.) ridesharing	<p>Frequencies: 5-15 minute local and circulator</p> <p>Span of Service: 18-24 hours, 7 days per week</p> <p>Access: Locals spaced 0.25-0.5 miles apart with 8-10 bus stops per mile</p>
II	Moderate concentrations of jobs, housing and activities	Regular-route locals, all-day expresses, small-vehicle circulators, special needs paratransit (ADA, seniors, etc.) ridesharing	<p>Frequencies: 15-30 minute or 30-60 minute depending on land use pattern</p> <p>Span of Service: 12-20 hours per day, 7 days per week</p> <p>Access: Locals spaced 0.5-1.0 miles apart with 6-8 bus stops per mile</p>
III	Generally lower concentrations with intermittent pockets of moderate concentrations (pockets would receive highest service levels)	Peak-only express, small vehicle dial-a-ride, midday circulators, special needs paratransit (ADA, seniors, etc.) ridesharing	<p>Frequencies: Peak-period-only expresses, 1-2 hour midday frequencies, dial-a-ride advance registration</p> <p>Span of Service: 10-14 hours per day, weekdays and limited weekends</p> <p>Access: Services tied to park-and-ride lots and hubs</p>
IV	Lowest concentrations of housing and jobs	Dial-a-ride, volunteer driver programs, ridesharing	<p>Frequencies: As needed</p> <p>Span of Service: 8-10 hours per day, weekdays</p> <p>Access: Services tied to park-and-ride lots and hubs</p>

Please Refer to the Transit Map (Figure VIII-11)

Minnetonka is currently served by three transit service providers:

- Metro Transit
- Metropolitan Council Transportation Services
- Metro Mobility

These agencies provide the following:

1. Metro Transit

Metro Transit is the primary transit operating division of the Metropolitan Council. There are a number of Metro Transit routes through Minnetonka, including limited service, non-stop service (including to/from downtown Minneapolis) and more frequent service routes. The routes running more frequently offer service every 15 minutes during weekdays from 6:00 a.m. to 7:00 p.m., and Saturdays from 9:00 a.m. to 6:00 p.m. Key transit corridors include TH 7 and I-394. There are four park-and-ride locations within the city. The largest park-and-ride lot is located at the interchange near CSAH 73 (Hopkins Crossroad) and I-394.

This park-and-ride location has a capacity of 1,046 vehicles and offers a connection to four bus routes (615, 652, 673 and 675). The second park-and-ride location within Minnetonka is located at the Plymouth Road Transit Center at I-394 and CSAH 61 (Plymouth Road). It has a capacity of 111 vehicles and provides a connection to five bus routes (652, 671, 672, 675 and 677). Residents have expressed concern regarding capacity issues at both the CSAH 73 (Hopkins Crossroad)/I-394 and CSAH 61 (Plymouth Road)/I-394 park-and-ride lots. In order to meet current and expected demand at these two sites, the need for expanded capacity and increased service levels should be studied further.

Two smaller park-and-rides are located along CSAH 5 (Minnetonka Boulevard) one at the intersection with CSAH 60 (Baker Road) (capacity 10) and one at the intersection with Steele Street (capacity 25). In addition to these park-and-ride facilities, transit users in Minnetonka have access to the Louisiana Avenue Transit Center with connections to 10 bus routes (9, 604, 643, 649, 652, 663, 672, 675, 755 and 756). All transit routes serving the City of Minnetonka are listed in Table VIII-6. Figure VIII-11 displays the existing transit facility information within the city.

Table VIII-6
Characteristics of the Metro Transit Routes Serving Minnetonka

Route	Type	Cities Served	M-F Hours	Sat Hours	Sun Hours	Weekday Peak Period Frequency
9	Local	Minnetonka, St. Louis Park, Golden Valley, Minneapolis	5 a.m. to 1 a.m.	5 a.m. to 1 a.m.	6 to 11 p.m.	15 min
12	Local	Minnetonka, Hopkins, St. Louis Park, Minneapolis	5 a.m. to 2 a.m.	5 a.m. to 1 a.m.	5:30 a.m. to 12 a.m.	15-20 min

Route	Type	Cities Served	M-F Hours	Sat Hours	Sun Hours	Weekday Peak Period Frequency
568	Express	Minnetonka, Minneapolis, Edina	6 a.m. to 9 a.m. and 3 p.m. to 6:30 p.m.	-	-	1 trip
612	Local	Minnetonka, Hopkins	6 a.m. to 9 a.m. and 3 p.m. to 6:30 p.m.	-	-	60 min
615	Local	Minnetonka, Hopkins, St. Louis Park	7 a.m. to 6 pm.	7 a.m. to 6 p.m.	-	60 min
643	Express	Minnetonka, Golden Valley, St. Louis Park, Minneapolis	6 a.m. to 9 a.m. and 3 p.m. to 6:30 p.m.	-	-	30-50 min
652	Express	Minnetonka, Golden Valley, St. Louis Park, Minneapolis	7-9 a.m. EB 3:30 - 5:15 p.m. WB	-	-	3-4 trips
663	Express	Minnetonka, Golden Valley, St. Louis Park, Minneapolis	6 - 10 a.m. EB 3-7 p.m. WB	-	-	15-60 min
664	Express	Minnetonka, Hopkins, St. Louis Park, Minneapolis	6-8 a.m. EB 3:30 to 6:30 p.m. WB	-	-	4-5 trips
665	Express	Minnetonka, Hopkins, Minneapolis	6 a.m. to 9 a.m. and 3 p.m. to 6:30 p.m.	-	-	3 trips
667	Express	Minnetonka, Hopkins, St. Louis Park, Minneapolis	5:30 to 9 a.m. EB 3:30 to 7 p.m. WB	-	-	15-40 min

Route	Type	Cities Served	M-F Hours	Sat Hours	Sun Hours	Weekday Peak Period Frequency
670	Express	Orono, Tonka Bay, Shorewood, Excelsior, Minnetonka, Hopkins, Minneapolis	6:15 to 8:20 p.m. EB 4 to 6:30 p.m. WB	-	-	3-4 trips
671	Express	Shorewood, Excelsior, Greenwood, Deephaven, Minnetonka, Minneapolis	6:20 to 8:20 a.m. EB 4 to 6:20 p.m. WB	-	-	3 trips
672	Express	Orono, Long Lake, Wayzata, Minnetonka, Plymouth, St. Louis Park, Minneapolis	6 a.m. to 6 p.m.	-	-	20-35 min
673	Express	Minnetonka, Minneapolis	5:20 a.m. to 6:30 p.m.	-	-	10-20 min
675	Express	Mound, Spring Lake Park, Wayzata, Minnetonka, Golden Valley, St. Louis Park, Minneapolis	5:20 a.m. to midnight	6:15 a.m. to 11 p.m.	9 a.m. to 8 p.m.	30-60 min
677	Express	Mound, Spring Lake Park, Wayzata, Minnetonka, Minneapolis	5:50 to 8:20 a.m. EB 4 to 6 p.m. WB	-	-	2-3 trips

2. Metropolitan Council Transportation Services

Metropolitan Council Transportation Services provides transit service using contracted private providers, in a variety of applications not easily covered by the primary regular route public service providers. This includes contracted regular route services and dial-a-ride systems for community circulation and connections. Transportation Services currently provides weekday

and Saturday general-public dial-a-ride service covering all of Minnetonka, which includes key connections to regular route transit in Hopkins and at Ridgedale Mall for city residents.

3. Metro Mobility

Metro Mobility is the Americans with Disability Act (ADA) public paratransit service for persons with disabilities. The Metro Mobility service area is divided into six zones with service providers operating in each zone under contract to the Metropolitan Council. Metro Mobility operates service in Minnetonka during the same span of service each day as the fixed route service operates. Metro Mobility is a shared ride system, in which customers make a reservation and routes are developed according to the trip origins and destinations. Rider eligibility is based on a person's functional inability to use regular-route services due to disability or health condition. The federal Americans with Disabilities Act (ADA) provides parameters and requirements for the service structure that the Metropolitan Council must follow. Metro Mobility service is funded through appropriations from the Minnesota State Legislature, passenger fares and federal funding. The Metro Mobility service in Minnetonka is currently available to eligible customers from 5:00 a.m. to 2:00 a.m., seven days a week.

B. Transit Strategies

The regional transit goal for the Twin Cities metropolitan area is to double ridership by 2030. Transit needs and strategies for the metropolitan area as a whole were identified in the Metropolitan Council's 2030 Regional Development Framework (2004) and Transportation Policy Plan (2004). Both of these documents essentially emphasize similar transit development goals. The findings and recommendations from these plans relevant to Minnetonka are summarized below:

1. 2030 Regional Development Framework

- a. Make local transportation, transit, pedestrian and bicycle investments to improve connections between workplaces, residences, retail, services and entertainment activities.
- b. Identify opportunities to improve connections and address transportation issues such as travel demand management, access management, safety and mobility when planning infill and redevelopment projects.
- c. Adopt ordinances to support integrated land use (i.e. ordinances encouraging or allowing shared parking; centers, transit oriented developments).
- d. Coordinate with businesses and other public agencies congestion-reduction measures such as collaboration with employers, provision of information or incentives to minimize or decrease peak-period impacts.

2. Transportation Policy Plan

- a. Planning and investing in multi-modal transportation choices based on the full range of costs and benefits.
- b. Encouraging mixed-use development in centers along transportation corridors that better links housing, jobs and amenities, and reduces the need for single destination trips.
- c. Making more efficient use of the regional transportation system by encouraging flexible work hours, telecommuting, ridesharing and transit ridership.

- d. Focusing highway investments first on maintaining and managing the existing system, and second on slowing congestion.
- e. Building transit ridership by expanding the current bus system and developing a network of dedicated rail and/or bus “transitways”.
- f. Encouraging local communities to implement a system of fully interconnected arterial and local streets, pathways and bikeways.

3. Travel Demand Management

Travel Demand Management (TDM) includes strategies and actions for reducing single-occupant vehicle travel, increasing vehicle-occupancy rates, and reducing vehicle miles of travel. Changes in travel behavior for the metropolitan area are constantly being sought to more effectively manage existing transportation facilities. By modifying demand for travel, congestion and the need for facility (roadway) expansion can be lessened.

Minnetonka is a member and active participant in the I-494 Corridor Coalition and their I-494 Commuter Services. This coalition is a Transportation Management Organization (TMO) funded by ongoing Congestion Mitigation and Air Quality (CMAQ) grants for 80 percent of cost primarily by the Metropolitan Council.

Travel demand management may include strategies and incentives to reduce trip-making activity, decrease single-occupant vehicle travel, shift travel away from congested locations, increase high occupancy vehicle travel and decrease peak hour travel. Most TDM actions are targeted toward the peak hour work trip in highly congested areas. TDM programs are more effective where there are multiple strategies for changing behavior. The particular actions selected depend upon the stated objectives and priorities of the TDM sponsor, funding availability, administrative resources, and participant support. Minnetonka has a TDM program that requires developers to provide a sidewalk/trail alignment plan and describe efforts to promote walking, biking, transit and carpools with each development proposal. As part of the city’s TDM program, they will also consider reduced zoning ordinance requirements such as a reduction in requirements for auto parking in transit-oriented developments or bike/walk districts. Other TDM strategies applicable to Minnetonka are discussed below:

- a. Ridesharing: Minnesota Rideshare provides carpool and vanpool matching services, promotes ridesharing, and sponsors demonstration projects in the Twin Cities area. Ridesharing can be especially attractive for longer trips on congested corridors such as work trips from Minnetonka to other metropolitan centers.
- b. Transit/Ridesharing Incentives: Employers can encourage employees to rideshare or use public transit if available. The benefits to the employer may include a reduction in the need for parking facilities and less traffic congestion around the employment site. Incentives from employers can include subsidized bus passes, on-site sale of bus passes, distribution of transit schedules and ridesharing information, subsidy of vanpools, and preferential parking for those ridesharing.
- c. Alternative Work Schedules: Variable work hours, flex time and other alternative work schedules can shift from the peak hour or period. However, changes in start-time tend to dilute the ability to share rides.
- d. High Occupancy Vehicle Lanes: High Occupancy Vehicle (HOV) facilities provide incentives for carpooling, vanpooling and transit. As highways become congested, highway lanes reserved for HOVs can provide time savings over the more congested

mixed traffic lanes. The occupancy restriction typically applies during peak periods and in the peak direction.

C. Future Transit Development

1. Local Public Transit Services

Minnetonka has been provided by the Legislature, the right to operate an independent suburban transit authority, with the ability to locally manage and operate transit services for residents and share in a portion of regional operating and capital transit funds. The city obtained this authority in 2002, and currently receives and oversees transit services from the Metropolitan Council via a Memorandum of Understanding. Minnetonka could elect in the future to directly contract for and operate these services if the City Council so chooses for any reason. With or without independent transit operations, city staff may direct and provide input for service redesigns annually under current agreements. Local bus service redesign can benefit residents and provide for changing travel patterns, population growth, and business growth where it is deemed appropriate, depending on resource availability and transit usage.

2. Transitways and transit facility enhancement

Metro Transit and the Metropolitan Council are considering a list of new transitway projects that will impact Minnetonka transportation and access. The current Transportation Policy Plan calls for continued development of at least one Light Rail Transit (LRT) corridor in the area. A route proposed that has the potential to affect Minnetonka transit users includes the Southwest Corridor LRT Line. Transit stations at key points on this route will offer park-and-ride facilities and bus transfers from local routes to expedite travel in the Metro area. The Southwest Corridor LRT includes a preferred alignment that directly serves the Opus area, as well as Hopkins and the Golden triangle, offering significant transit improvements for Minnetonka-area residents, employees, and employers as well as the communities of Eden Prairie, St. Louis Park and Minneapolis.

Minnetonka will continue to study opportunities to improve transit effectiveness throughout the city. This will include planning for walkable communities, Transit-Oriented Development (TOD), additional park-and-ride facilities, better coordination of transportation services and resources, and densification of housing and employment where it is appropriate and advantageous. The I-394 corridor is a key corridor that runs along the cities northern boundary, moving both Minnetonka residents to and from home and work and servicing the many needs of people throughout the Twin Cities. This corridor must play a significant role in the advance of transit opportunities. These considerations will be fully integrated with and complementary to Hennepin County's and the Metro Region's plans and policies for transit and transportation. In addition, as the new Village Center areas (see Land Use Section) continue to develop/redevelop, the overall transit system will need to be reviewed to ensure connectivity to these centers.

3. Improved Travel Demand Management

As noted earlier, Travel Demand Management (TDM) strategies and travel options, as promoted by I-494 Commuter Services, the local Transportation Management Organization (TMO) and Metro Commuter Services, the regional TMO, have had some success affecting commuter travel, especially ridesharing, car-pooling, and van-pooling, but has not had a significant impact on congestion or travel flexibility. Strategies such as flex work hours have not been adopted widely in the Twin Cities, nor has telecommuting. These both offer good

potential as future measures, especially telecommuting as computer networks continue to grow in capacity and sophistication.

New TDM options will be supported and explored by Minnetonka as they develop. These include systems such as Nu-Ride, a commercial internet-based and highly flexible rideshare system, and car-share programs such as HourCar and ZipCar that provide easy local access to short term car rentals or car subscription services. Transit promotions, new fare tools and transit incentives including expanded specialty pass programs, and changes to taxi regulation and other commercial services are other TDM activities that may provide benefits to Minnetonka residents and employers.

4. Other transit alternatives

Minnetonka residents are part of the regional car pool matching database, a service for those wishing to share a ride. Carpool participants qualify for the regional guaranteed ride home program; may use High Occupancy Vehicle (HOV) lanes and meter bypass ramps; receive parking discounts in some circumstances; may participate in occasional promotional benefits. Minnetonka commuters also have the opportunity to participate in the regional Van-GO! program. Van-GO! is a regional vanpool program sponsored by the Metropolitan Council. Van-GO! vanpools are made up of 5 to 15 commuters picked up along the vanpool route or at an agreed upon location. Like buses and carpools, vanpools are eligible to use meter bypass lanes or ramps and HOV lanes.

D. Transit Advantages

There are several “transit advantages” available to commuters traveling to and from the city of Minnetonka. These are facilities such as bus-only shoulders, HOV lanes, and ramp-meter bypasses that give buses, and the people riding them, an advantage over a single-occupant vehicle. Bus-only use of freeway shoulders when the roadway is congested is available along portions of I-494 and I-394. I-394 includes a reversible high-occupancy-vehicle (HOV) lane, which creates a priority route for buses and car pool vehicles during peak traffic hours. Recently, the MnPASS toll system was implemented on this road, allowing single-passenger vehicles to use the road for a fee. These lanes can only be used by buses and vehicles carrying two or more people during peak congestion hours. There are several meter bypass lanes within the Minnetonka service area. Bypass lanes allow buses and cars with two or more people to bypass congested on-ramps during peak travel times. There are additional meter bypass lanes accessible to commuters traveling from Minnetonka to other parts of the region, but not located within the city of Minnetonka itself.

Section III Freight System Plan

All industrial areas in the City of Minnetonka are located with adequate access to the metropolitan highway system. The Interstate and Minnesota Trunk Highway systems in Minnetonka are all built to 10-ton axle loading standards, and are part of either the National Twin Trailer network or the Minnesota Twin Trailer network, allowing extra capacity and flexibility for commercial trucking. This major highway coverage reduces the impact of truck traffic on local roadways and minimizes the potential for disruption of neighborhoods.

Truck traffic from industrial, industrial/warehousing and commercial land uses can be adequately accommodated through the following measures:

- Locating truck-intensive land uses with good proximity to the metropolitan highway system and with good access to the minor arterial system
- Using acceptable design standards on arterials, which will ensure adequate turning radius and pavement depth for trucks
- Signing and marking to minimize truck traffic through neighborhoods

Although railroad traffic in Minnetonka is minimal, it is important to encourage compatible operations with adjacent land uses. Minnetonka has three at-grade railroad crossings in neighborhood environments (at Oakland Road and Crosby Road for the BNSF line and Dominick Drive for the Canadian Pacific line). Minnetonka, like many communities, seeks to balance the negative impacts of at-grade train activity and train horn noise on sensitive neighborhoods with the need to maintain satisfactory auto/rail safety and efficiency. Minnetonka is in the process of implementing Quiet Zones at each of the at-grade train crossings referenced above. In 2005 the Federal Railroad Administration (FRA) issued a new Quiet Zone rule that offers a solution for this balancing act. Minnetonka proceeded with constructing supplemental safety measures at the BNSF at-grade crossings in 2007. The third crossing (Dominick Drive) did not require physical modification in order to implement a Quiet Zone.

Section IV Bicycle and Trail System Plan

Minnetonka has a well-developed system of trails (Figure VIII-12). These trails may help reduce traffic by encouraging the use of alternatives to the automobile, including non-motorized transportation modes such as bicycle and pedestrian.

The City will strive to achieve the following trail system goals as related to transportation:

- ✓ To enhance the transportation system through provisions for multiple modes of travel and intermodal connections;
- ✓ To encourage pedestrian travel for local trips and the use of transit facilities;
- ✓ To provide direct and continuous access for destination-oriented pedestrian and bicycle trips;
- ✓ To provide pedestrian and bicycle-oriented improvements that overcome natural and man-made barriers and promote neighborhood connectivity;
- ✓ To provide safe, attractive and convenient pedestrian-oriented improvements which recognize the differing needs of bicyclists and pedestrian, especially the needs of the elderly, disabled and children;
- ✓ To provide for the integration of street and park systems, so as to support the transportation, park and land-use elements of the City's Comprehensive Plan.

A. Trail System Plan

The city's Trail System Plan ensures there are linkages between on- and off-road trails as well as trails within the City and County park systems. Trails are either existing or proposed for nearly all major roadways within the City. Trails are also shown connecting the village areas, regional centers, and other activity centers such as schools, parks, lakes, and transit facilities. The City desires to complete a comprehensive trail system by installing an off-road trails or sidewalks on minor arterials or major collector roadways, where possible.

Hennepin County conducted a Bicycle System Gap Study in 2004, which identified critical gaps in the County's trail system. Within Minnetonka, gaps were identified along:

1. CSAH 101 - from CSAH 5 (Minnetonka Blvd) to the north city limits (completed)
2. Carlson Parkway - from I-394 to the north city limits
3. CSAH 61 (Plymouth Rd) - from north city limits to just north of Hilloway Road
4. CSAH 73 (Hopkins Crossroad) - over I-394
5. CSAH 3 (Excelsior Blvd) - from Williston Road to Woodhill Road
6. CSAH 5 (Minnetonka Blvd) - from just west of CSAH 73 (Hopkins Crossroad) to TH 169 (partially completed)
7. Bren Road - from Rowland Road to Shady Oak Road (completed)
8. CSAH 61 (Shady Oak Rd) - from Rowland Road to the south city limits
9. Bren Road - from CSAH 61 (Shady Oak Road) to the east city limits
10. Townline Road- from CSAH 101 to Vine Hill Road (completed)

Please Refer to the Trails Map (Figure VIII-12)

As roadway projects arise, the City will continue to work with the County to complete these trail connections.

Another important element of the City's trail system is its relationship to the transit system. Better trail connectivity to park-and-ride facilities as well as commercial areas in the City offer users the opportunity to utilize the trail system to travel to and from transit nodes throughout the City. By increasing the number of trail connections to the transit system (park-and-ride lots and/or transit stations), commuters may be encouraged to use transit.

Currently, there are trail connections to each of the park-and-lots within the City. As additional transit facilities are developed in the Minnetonka, the City will ensure adequate pedestrian/bicycle trail connections are available.

The recreational and land use related information, policies and strategies of the city trail system and connections are discussed in Chapter III - Overall Policies, Chapter IV - 2030 Land Use Plan, and Chapter VII - Parks, Open Space, and Trails of this Comprehensive Plan.

B. Sidewalk System Plan

In addition to providing trail facilities for bicyclists and pedestrians, the City of Minnetonka is committed to providing pedestrian sidewalk facilities, where applicable. Pedestrian sidewalk facilities are typically in the more "urbanized" areas of the city (near significant retail or commercial development) to provide potential connections from various uses. The majority of Minnetonka is suburban in nature and does not have sidewalks located in residential neighborhoods.

In order to improve the pedestrian experience, the city is committed to improving pedestrian facilities, where appropriate. Typically, this will occur at the time of redevelopment for a particular area. The following key points could be used as guiding factors in their future sidewalk improvement and implementation:

- Maintain a goal to fill gaps in this existing sidewalk network.
- Install new sidewalks as roadways are reconstructed or redevelopment occurs.
- Use care to locate sidewalks in locations that will have the least impact on adjacent property owners, but provide the most efficient connectivity and system continuity.
- Locate sidewalks to connect major recreation, shopping and institutional uses.
- Attempt to minimize adjacent sidewalk spacing (avoid sidewalk to nowhere trap).
- Where possible, ensure sidewalks can connect to potential trail networks.

Section 5 Aviation Plan

Minnetonka does not contain, nor is it adjacent to, any airports. However, the airspace over Minnetonka is used by aircraft operating from metropolitan area airports and other airports. The closest metropolitan airport is the Crystal Airport, about six miles away. In the Metropolitan Council's Aviation Policy Plan, the northwestern section of Hennepin County is identified as "General Aviation Search Area A." A new reliever airport is recommended in this search area as a way to improve capacity and resolve operational deficiencies projected for Anoka County-Blaine, Crystal and Flying Cloud Airports. The northwestern edge of Minnetonka falls within this search area.

Structures which are 200 feet or higher above ground level may pose hazards to air navigation. Minnetonka has no existing structures of this height; does not permit such structures under its zoning ordinance, and has no plans to permit such structures in the future. Any applicant who proposes to construct such a structure shall notify the city and the Federal Aviation Agency (FAA) as defined under the provisions of Federal Regulation Title 14 Part 77, using the FAA Form 7460-1 "Notice of Proposed Construction or Alteration" (see http://forms.faa.gov/forms/faa7460_1.pdf).

These forms must be submitted 30 days before alteration/construction begins or the construction permit is filed, whichever is earlier. Mn/DOT must also be notified (see Mn/DOT Rules Chapter 8800). The Minneapolis-St. Paul (MSP) airport/community zoning board's land use safety zoning ordinance should also be considered when reviewing construction in the city that raises potential aviation conflicts.

A. Heliports

There are no heliports within the City of Minnetonka.

B. Float/Sea Planes

Wayzata Bay of Lake Minnetonka is designated in Minnesota State Rules Chapter 8800.2800 as authorized for purposes of safe sea plane use. The operation of seaplanes on Wayzata Bay must conform to all applicable marine traffic rules and regulations.

Section 6 Implementation Plan

This section of the Plan provides valuable strategies that can help city officials implement the Transportation Plan’s recommendations and make wise long-term decisions.

A. Functional Classification Changes

Recommended changes to the functional classification system will be adopted by the city as part of the adoption of the overall Comprehensive Plan. Changes that involve “B” Minor Arterial, Major Collector or Minor Collector streets may be made without the approval of another agency, provided that these changes are consistent with State and County Plans. However, the changes and the resulting functional classification should be officially reported to the Metropolitan Council under separate communication to ensure that the Council has the opportunity to update their records.

In addition, any proposed change to a Principal Arterial or “A” Minor Arterial designation will need to be approved by the Transportation Advisory Board (TAB) of the Metropolitan Council. Since these changes are likely to involve either State or County roadways, the city should work closely with these agencies to ensure that the process of approval is carried forward.

B. Access Management

The City of Minnetonka will work to support the access management guidelines of other jurisdictions. The city is aware that both Hennepin County and Mn/DOT have access guidelines managing their roadways located within the City of Minnetonka. The city acknowledges these guidelines and will work with these agencies to support access management in Minnetonka.

C. Project Development

The Transportation Plan is designed to review transportation needs at a policy level and does not make recommendations for design. Each recommended improvement should be studied in more detail through an engineering study to verify the need and identify the exact nature of the improvement. Such studies will also serve to identify specific projects that will be designed to achieve the improvements recommended in the Plan. The cost and schedule of individual projects should be addressed in preliminary and final design.

D. Establish Improvement Program

An overall strategy of improvement should be developed and adopted that considers the recommendations contained in the Plan. The city should develop, in cooperation with the State and County, a list of projects that will collectively result in the achievement of the desired system in order to complete recommended improvements to the roadway system within the planning horizon of this Plan. These projects should be prioritized in such a way that overall system benefits are maximized.

This improvement program should also identify the cost of the system improvements and identify sources of funding for each individual project.

E. Sources of Funding

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

1. State Aid

An extremely important source of revenue to the city is state aid. A network of city streets called Municipal State-Aid Streets (MSAS.) is eligible for funding assistance with revenue from the State Highway User Tax Distribution Fund. This constitutionally-protected funding allocation is comprised of gasoline taxes and vehicle registration fees, and is allocated based on a formula that takes into account the population of a city and the financial construction needs of its MSAS system. Legislative action in 2008 will increase MSA funding to the city (approximately \$5.5 million over the next ten years).

2. Assessments

Property that benefits from a roadway scheduled for improvement may be assessed for a portion of the cost of construction pursuant to Minnesota State Laws Section 429.011-429.111. In order to assess a property owner, it must be demonstrated that the value of their property will increase by at least the amount of the assessment. For this reason, it is a limited source of revenue. It is also limited by the almost-certain requirement that property be adjacent to the roadway. It is difficult to show direct benefit to property that is not contiguous. Nevertheless, this is an important source of revenue for the city.

3. Ad Valorem Taxes

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

4. Tax Increment Financing

Establishing a tax increment financing (TIF) district is a method of funding infrastructure improvements that are needed immediately using the additional tax revenue to be generated in future years by a specific development. Municipal bonds are issued against this future revenue, which is dedicated for a period of years to the repayment of the bonds or to other improvements within the TIF project area. When used appropriately, a TIF district can accelerate economic development in an area by ensuring that the needed infrastructure is in place without requiring support from the usual funding. This method of financing has already been used successfully in the City of Minnetonka and is expected to be used again in selected areas in the future.

5. Federal Surface Transportation Program (STP) Funds

The Metropolitan Council, through its Transportation Advisory Board, solicits projects (generally on a biennial basis) through a competitive process using a set of evaluation criteria

to determine projects eligible for STP federal funding. Generally, “A” minor arterial projects and enhancement projects such as pedestrian/bikeways are funded through this program.

6. Congestion Management and Air Quality (CMAQ)

CMAQ is a categorical federal funding program directed to projects that contribute to meeting national air quality standards, and generally include projects such as transit, non-motorized transportation and travel demand management. The Metropolitan Council, through its Transportation Advisory Board, solicits projects (generally on a biennial basis) through a competitive process using a set of evaluation criteria.

F. Potential Sources of Revenue

Revenues available from current sources of funding are not always sufficient to meet highway maintenance and construction needs. In order to reduce the potential shortfall of revenue, other sources of funding need to be considered. Options include negotiated impact fees, road access charges, or transportation utility billing.

1. Impact Fees

Impact fees negotiated with developers or landowners for specific sites or community wide, are assessed as property is improved. An attempt is made to determine what impact the additional traffic will have on roadways both near the development and away from it. The cost associated with improving the roadway system sufficiently to handle the additional traffic is assessed to the developer. Minnetonka has been involved with reviewing impact fee assessments in a number of areas in the city. Their approach has been to determine the vehicular trip generation associated with various developments in an area and based on this information and the level of roadway impacts or mitigation measures, develop a cost assessment and proportional share for each developing property.

2. I-394 Zoning Ordinance

The goal of the Planned I-394 Zoning Ordinance is to limit development and ensure reasonable traffic operations on corridor road systems including I-394 interchanges, in addition to establishing a comprehensive planned framework for development within the I-394 corridor. This zoning ordinance has an impact on future development along the corridor and safeguards the city against development occurring in a fashion that is not accountable for its impacts. The impact assessment portion of the ordinance is the component that is used as a means to an end, determining what roadway improvements are necessary to accommodate development and their associated cost. The developer is then responsible for a proportionate cost share.

G. Project Development and the Environmental Process

Projects that involve federal funding, federal permits/approvals (e.g., Section 404 permit, Interstate Access Request, etc.), or result in a major Federal action require review under the National Environmental Policy Act (NEPA). The type of document needed to satisfy the NEPA process is determined by the Federal Highway Administration (FHWA) and requires consideration of social, economic, and environmental impacts. There are three types of projects under NEPA :

1. Environmental Impact Statement (EIS): An EIS is required when the proposed project will have a significant impact on the environment. NEPA requires an EIS for all major Federal actions resulting in a significant impact on the human environment (Section

102 [42 USC § 4332]).

2. Environmental Assessment (EA): An EA is prepared when there is uncertainty with respect to significant impacts. The EA is prepared to determine if there are significant impacts associated with the project.
3. Categorical Exclusion (CE): Projects without significant impacts do not require the preparation of an EA or EIS and are prepared as categorical exclusions. In Minnesota, categorical exclusion determinations are documented as a Project Memorandum (PM).

At the State level, projects that meet specific thresholds require review under the Minnesota Environmental Policy Act (MEPA). Projects in Minnesota, regardless of funding source (e.g., local, state, private) require review under MEPA if the project meets one or more of the mandatory threshold categories identified in Minnesota Rules. There are two types of documents that satisfy the review requirements under MEPA:

1. Environmental Assessment Worksheet (EAW): projects that meet the thresholds identified in Minnesota Rules 4410.4300 (mandatory EAW categories) require completion of an EAW.
2. Environmental Impact Statement (EIS): projects that meet the thresholds identified in Minnesota Rules 4410.4400 (mandatory EIS categories) require completion of an EIS.

In the case when projects require Federal and State environmental review, a joint environmental document can be prepared to fulfill the requirements of both the NEPA and MEPA processes.

Even if no federal or state funding is involved, state environmental review requirements and local ordinances or guidelines may apply. Specific rules on the level of environmental documentation can be found in the Highway Project Development Process Handbook at www.dot.state.mn.us.

In addition to state and federal rules regarding environmental documentation, there are a number of local, state and federal permits that regulate wetlands, water quality, air quality, noise and other environmental and cultural resources. Early coordination with appropriate environmental agencies and the State Historic Preservation Office (SHPO) can reduce delays in the project development process and in acquiring applicable permits.

APPENDIX A

2030 Traffic Forecasts vs. ITE Trip Generation

Please Refer to Appendix VIII-A

APPENDIX B

Travel Demand Forecasting Methodology

Socio-Economic Data

TAZ Boundary Map

Please Refer to Appendix VIII-B