

TRANSPORTATION

INVENTORY AND ANALYSIS

A city's transportation system has a great influence on its future growth and development, as the network of streets in a community determines land use configurations. It is a challenging task for cities to provide access for shoppers and employees to local businesses and industries, provide efficient through transportation for regional travelers, and provide for recreational transportation opportunities. These challenges are further complicated by the need to balance the conflicting needs of pedestrians and the automobile.

Sartell has approximately 97 miles of surfaced roads, most of which are local streets. Its thoroughfare system consists of all the various streets and highways designed to accommodate vehicular movement within its corporate limits. A typical city thoroughfare system serves the needs of two general types of traffic:

Through-Traffic. Traffic that has its origin and destination outside the community and merely travels through it, typically on arterial roadways.

Local Traffic. This is traffic that has its origin and destinations inside the community and utilizes the local street system.

TRANSPORTATION PLANNING OBJECTIVES AND CYCLE

Transportation planning is a study of the cyclical relationships between land development and the needs for transportation facilities. The steps that frequently occur during the "development-improvement-development" cycle are:

- Land development generates vehicle trips
- Additional trips increase roadway needs
- Needs dictate roadway improvements
- Improvements modify access
- Modified access changes land values
- Changed land value attracts intensified development
- Intensified development generates more trips
- More trips lead back to the second step of the cycle

Within the development-transportation cycle, the objective of transportation planning is to provide the information necessary for making decisions on when, where and what type of improvements should be made in the transportation system to satisfy current and anticipated travel demands; and to promote land development patterns that are in keeping with community goals and objectives.

TRANSPORTATION PLANNING JURISDICTION

Many jurisdictions, including federal, state, regional and local agencies are involved in planning the transportation system of Sartell and the surrounding areas. Many of the agencies described within this section have and will continue to play a critical role in developing transportation strategies, approvals and funding at the local and regional level.

- Federal - The Federal Highway Administration (FHWA), the Urban Mass Transportation Administration (UMTA) and the Environmental Protection Agency (EPA) are all involved in providing funding and review of transportation projects. Generally, the corresponding state agencies are given the primary responsibilities for overseeing the federal programs.
- State - Both the Minnesota Department of Transportation (MN/DOT) and the Minnesota Pollution Control Agency (MPCA) are involved with assessing state concerns with planned transportation projects. MN/DOT oversees the Interstate Highway and Truck Highway system and provides secondary support assistance to cities, metropolitan planning efforts and transit planning activities. MN/DOT maintains a five-year Capital Improvement Program that prioritizes project needs with a statewide perspective.

The MPCA's responsibilities include monitoring developments and projects having potential environmental impacts. The MPCA annually reviews the Transportation Control Plan (TPC) for the St. Cloud metropolitan area that describes transportation improvements aimed at reducing the emissions of carbon monoxide. The MPCA also becomes involved in large development or roadway projects that require Environmental Assessment Worksheets (EWA), Environmental Impact Statements (EIS) or Indirect Source Permits (ISP).

- Regional - Two agencies have transportation responsibilities at the regional metropolitan level, the St. Cloud Area Planning Organization (APO) and the St. Cloud Metropolitan Transit Commission (MTC). The APO is a voluntary association of townships, cities and counties in the St. Cloud area. It acts as a planning and advisory body to its member jurisdictions and serves as the area's Metropolitan Planning Organization (MPO). All metropolitan areas with a population of 50,000 or more are required to establish an MPO to receive federal transportation funding. The APO examines many issues related to land use and transportation planning, such as trends in population and employment characteristics, land use, travel demand and other related areas. With this information, it prepares and updates transportation plans and improvement programs for the St. Cloud area.

The MTC operates the metro transit system and also performs short and long-range transit planning functions.

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County - Portions of Sartell lie within Benton and Stearns counties, with a majority of the city being in Stearns County. Collaboration between these counties and the city will be crucial as the city expands within these jurisdictions.

FUNCTIONAL CLASSIFICATION

To aid in the understanding of Sartell's thoroughfare system, all of the City's roadways have been classified by function and are summarized below in Table 6-1 and illustrated on Figure 6-1, *Existing Functional Classification*. The function and basic characteristics of each of these types of roadways are as follows.

Principal or Major Arterial. These roadways serve moderate to long trip lengths and provide a system to distribute traffic making external trips. Turning movements are often handled with channelized turn lanes or signal systems. Their very nature causes them to divide neighborhoods and to have negative effects on adjacent residential land use. Principal arterials are characterized by an emphasis on traffic mobility rather than land access, typically with traffic counts in excess of 8,000 cars per day. Typical speeds are between 30 and 50 miles per hour.

Principal arterials typically have access to minor arterials and collectors, which are described below. Typically there is no direct land access to these arterials with the exception of major traffic generators.

Minor Arterial. These thoroughfares either augment the arterial system in more densely or intensively developed areas or provide service in lieu of principal arterials in less densely or intensively developed areas where trip lengths are relatively short. Minor arterials provide a somewhat lower level of mobility than that provided by principal arterials, but should not penetrate identifiable neighborhoods.

They may, however, provide slightly greater direct access to abutting properties than a principal arterial. Traffic volumes on minor arterials are generally in excess of 3,000 cars per day. Access to these arterials should be limited to principal and other minor arterials and collectors.

Direct land access to minor arterials is typically restricted. However, in an urban setting like Sartell, where speeds are posted at 35 MPH or less, local streets typically access a minor arterial.

Collectors. These streets serve as connections between local streets and minor arterials. Their principal function is to carry short trip lengths and to serve adjacent land. At the same time, they must be capable of moving relatively large traffic volumes for limited distances. They may also carry traffic to and from dispersed major traffic generators. Access to

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collectors includes other collectors, minor arterials, local streets and direct access from/to abutting lands.

Local Streets. Residential streets that carry less than 100 vehicles per day and have average speeds of less than 30 MPH are the best example of local streets. They serve almost exclusively to collect and distribute traffic by connecting blocks within neighborhoods and specific activities within similar land uses. Access to local streets is provided by collectors, other local streets, and direct access to abutting properties.

With each step upward in the street hierarchy comes an increase in the size and carrying capacity of the roadway. Large trucks would soon destroy local streets if they were allowed to use them; and it would be counter-productive to build major thoroughfares in front of every house. Therefore, properly determining the size, location and timing of roadway construction are important aspects of transportation planning.

One basic principle of land use planning tied directly to traffic is that land uses that generate heavy traffic loads and require efficient access to function properly, such as industrial facilities, should be located near major thoroughfares. Conversely, land uses that generate very little traffic and that would not be benefited by through-traffic, such as residential neighborhoods, should be located away from the noise, pollution and bustle of busy arterials.

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In summary, Sartell's existing street hierarchy is as follows:

**Table 6-1
Existing Functional Classification of Roadways
City of Sartell
2009**

Major Arterials	
Route	Jurisdiction
Trunk Highway 10	State
Trunk Highway 15	State
Minor Arterials	
Route	Jurisdiction
Pine Cone Road	City, Township
County Rd 1	County
County Rd 133	County
County Rd 29	County
Benton Dr. (CR 33)	County
County Rd 120	County
Collectors	
Route	Jurisdiction
Heritage Drive	City
2 ½ Street	City
7 th Street	City
12 th Street	City
15 th Street	City
13 th Avenue	City
19 th Avenue	City
Scout Drive	City
Robert Road	City
Scenic Drive (Benton)	City
County Road 33 (Benton)	County

ACCESS MANAGEMENT

A key element to providing a safe, efficient roadway system is access management. Access management attempts to balance the need to maintain the mobility of the roadway system while allowing reasonable access to adjacent land uses. Generally speaking, with each step upward in the roadway functional classification system the greater is the need for mobility and thus more limited access. Traffic conflicts may involve merging, diverging, stopping, weaving or crossing movements between uses of the roadway system.

As the number of potential conflict points increases, driving conditions become more complex and drivers are more likely to make mistakes. Access management aims to reduce conflicts between vehicles, vehicles and pedestrians, and vehicles and bicycles. The benefits of access control on roadways have been demonstrated through many studies. These studies have consistently indicated that a reduction in access reduces conflicts, which in turn reduces crashes, as well as increases capacity and smoothes the flow of traffic.

The best example of access control is the interstate freeway system, which has no access except through limited and controlled interchanges. These roadways have consistently had significantly lower accident rates than any type of roadway.

Other roadways also have restricted or limited access. On some, access is limited primarily to intersections with other roadways, while on others there are also limited private access points between intersections. This often occurs on state or county roadway systems, and the agencies owning the roadway have often purchased the right of access from adjacent landowners. This restricted access is important in lowering crash rates. Where numerous driveways exist and turning movements can occur virtually anywhere along the roadway, the number of conflicts, and thus the number of crashes, is generally higher.

Many conflicts also exist between turning traffic at intersections that are close together. Traffic from one intersection may backup through the adjacent intersection creating problems for traffic turning at the second intersection.

Driveways located very close to an intersection create additional conflicts. A left turn to a driveway just beyond an intersection is often unexpected by drivers behind the vehicle making the turn and often results in abrupt braking or lane changes. Left turns to driveways immediately in front of an intersection are also unexpected and lead to erratic maneuvers on the part of many drivers. Some examples of this in Sartell occur on 19th Avenue.

Offsetting the desirability of limited access is the need for access to properties and commercial areas. Over-controlling of access can lead to problems. In many communities, a major barrier to transportation flow is a freeway with no access. A lack of access to an expressway can often result in increased traffic on other roadways

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parallel to the expressway or leading to the access points. Residential traffic from a neighborhood that is forced to use a single access point often creates problems for the residents along the street that serves as the access. Also, as motorists seek to find alternate routes, many will choose local streets creating other types of problems.

A major concern of businesses is reasonable access to the roadway system. While some businesses desire unlimited immediate access, the access only needs to be convenient for both the motorist and the customer, and consistent with the onsite circulation patterns.

TRAFFIC COUNTS

Average daily traffic counts are used in planning for expansions and improvements within a transportation system. Traffic counts are also important in creating and maintaining well-functioning roadways. Highway 15 serves as the major north-south traffic route through Sartell. Table 6-2 shows that this highway carries most of Sartell's traffic.

**Table 6-2
Average Daily Traffic Counts
City of Sartell
2007-2030**

	2007	2030
Trunk Highway 15: CSAH 1 to CR 120	24,100	52,700
TH 15: CR 134 to 12 th Avenue	32,000	50,400
Pine Cone Road: 7 th to 2 ½ St.	6,400	16,700
Pine Cone Road: 2 ½ St. to CR 133	13,100	14,300
CR 120: 50 th Ave to Cty Road 4	12,800	12,300
CR 134: TH 15 to 50 th Avenue	15,400	27,400

* Source: Stearns County Highway Department, St. Cloud APO, MnDOT, WSB and Associates

PEDESTRIAN AND BICYCLE WAYS

A discussion of the city's trail system is included in the Parks, Recreation and Environmental Features chapter.

RAILROADS

The Burlington Northern Santa Fe rail runs through Sartell, providing daily service.

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The Metropolitan Transit Commission (MTC) provides public bus transportation throughout the metropolitan area, including limited service to Sartell. The North Star Commuter Rail is scheduled to open in 2010 and will run from St. Paul to Big Lake. MTC is thinking of the possibility of a commuter bus link that would serve the St. Cloud Area.

AIR SERVICE

Sartell is served by the St. Cloud municipal airport. It provides charter, commercial, freight and jet service to the area and accommodates most light air craft. The nearest major airport is the Minneapolis/St. Paul International airport.

POLICY PLAN

Transportation Goal #1: Provide a safe, efficient and adequate transportation system that serves and balances both access and mobility needs.

Strategies:

1. Use the functional classification system to define and plan existing and new roadways.
2. Develop and utilize access management guidelines, particularly along collector and arterial roadways.
3. Require the provision of safe and adequate access to all properties through the implementation of subdivision regulations.
4. Encourage a more grid-like street pattern.
5. Discourage the use of cul-de-sacs, except where it is impractical to provide through streets, environmental or other important features are best preserved with a cul-de-sac, or other unique circumstances exist.

Transportation Goal #2: Maintain a transportation system that is coordinated and cost-effective.

Strategies:

1. Continue to work with surrounding jurisdictions, state and federal agencies, and the Area Planning Organization to ensure an integrated regional transportation system.
2. Schedule transportation projects in a capital improvement program.
3. Support and actively participate in transportation improvement planning as identified in the St. Cloud Area Joint Planning District Plan, APO plans, county plans and other proposed study areas.
4. Create conceptual master plans of the city's growth areas that identify future transportation corridors.
5. Proactively work to preserve future transportation corridors both by acquiring needed right-of-way in advance when possible and through the use of official mapping.
6. Continue to explore all federal, state and other funding opportunities for local and regional transportation projects.

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Transportation Goal #3: Coordinate transportation with land use planning and environmental protection.

Strategies:

1. Analyze the traffic generation characteristics of proposed land uses to avoid exceeding the capacity of local, county and regional roadways.
2. Support transportation projects that support the compact, orderly development of the city and region.
3. Consider the impacts to neighborhoods when planning new or upgrading existing roadways.
4. Consider the environmental impacts of any proposed transportation projects.

Transportation Goal #4: Promote alternative transportation such as bicycling, walking, transit and rail.

Strategies:

1. Incorporate, where feasible, bicycle and pedestrian infrastructure and safety standards when planning changes, additions, or maintenance to roads, sidewalks, bridges, paths or other public facilities.
2. Encourage bike-parking facilities in new development.
3. Continue to maintain and seek ways to expand the existing network of bicycle and pedestrian trails throughout the city.
4. Promote the connectivity of alternative transportation systems and have such transportation systems connect efficiently to community and recreational facilities.
5. Continue to work with the MTC to provide and expand safe, affordable efficient regional public transit.

GENERAL PLAN

The transportation system is one of the most important elements of a city. The network of streets in a community determines land use configurations and relationships. Many times the street system will play a major role in the particular image of a community. It is important that through its street system a community balance the conflicting needs of pedestrians and automobiles. Traffic analysis reports for North and South Sartell were produced in February 2005 and January 2006, respectively, by WSB & Associates. Each report details an analysis of the corresponding area including ADT projections in 2030, traffic congestion projections, and suggested road improvements/additions. A brief overview of each report is included below:

TRANSPORTATION NORTH PLAN

The North Plan was a cooperative project undertaken by the city of Sartell and the Sartell-St. Stephen Independent School District 748. Its purpose was to determine the future peak-period traffic loads in the proposed system and to address future access needs within that system. The boundaries of the study area are defined by 12th and 40th Streets North on the south and north, respectively, and 75th Avenue and Stearns County State Aid Highway (CSAH) 1 on the west and east. Based on the analysis documented in this report, WSB has concluded that it is unlikely that there would be any significant traffic operational problems associated with the collector system corridors proposed to address the local access and commuting demands in the next 25 years; that is, based on the current available data, it appears that a collector system of two-lane roads including intersections with turn lanes controlled by stop signs, as covered in the report, should adequately serve the study area through 2030.

TRANSPORTATION SOUTH PLAN

The purpose of the Sartell South traffic study was to plan a system of arterial and collector streets in the Sartell south area, as the primary commercial/business district, to provide and preserve corridors that will adequately serve the city's anticipated rapid growth and transportation needs through 2030. Its boundaries include, and are defined by, 2½ Street North on the north, 75th Avenue and CSAH 4 on the west, CSAH 1 (Riverside Avenue) on the east, and CSAH 120/CSAH 134/County Road (CR) 134 on the south in Stearns County. In Benton County, the boundaries were Scenic Drive on the north, CSAH 33 (1st Avenue East on the west, Minnesota Trunk Highways (TH) 10/15 on the east, and CSAH 29 (1st Street Northeast) on the south. The proposed Sartell South transportation network will provide the city and the immediate surrounding area with adequately spaced corridors that should meet needs through 2030; however, anticipated growth will present a considerable challenge with respect to providing adequate traffic carrying capacity in those corridors. The areas of concern consist mostly of major and minor arterials including, but not limited to, CSAH's 1, 134, 133, 29, 120, 33, and 4, Pinecone Rd., and TH's 10 and 15; with focus on TH 15 as being the primary problematic corridor based on future traffic projections. Based on this report,

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further studies should be conducted by the city and the APO to identify more pertinent road improvements/additions and right-of-way acquisition that would enable the city to preserve the corridors for these important portions of the system and to maintain the integrity of future development of the land. Several of the key road system improvements are discussed in the proceeding section “Future Functional Classification.”

FUTURE FUNCTIONAL CLASSIFICATION

Existing arterial and collector roadways (as identified on the Existing Functional Classification map) will continue to function as their existing classification. Figure 6-2, *Future Functional Classification*, provides a proposed functional classification system of roadways for Sartell. It includes the logical extension of some existing collector and arterial roads into new growth areas. In addition, new collector and minor arterials will be needed to accommodate future transportation needs.

This map serves as a generalized future roadway concept only. It is outside the scope of this comprehensive planning process to study these connections in detail, identify what improvements may need to be made to any existing roads, establish the timing of roadway construction, etc. The future roadway functional classification map only suggests what classification a road may be in the future as the city grows and develops. Similarly, the map shows new collector roadways to serve future development. These are not intended to be precise alignments, rather generalized connections. Detailed alignments will depend upon specific site conditions, including the presence of wetlands and other natural barriers, cost and other factors.

For each potential new roadway or classification upgrade, the city, county and/or state will need to undergo a complete transportation planning process including studying need, developing design concepts, looking at and comparing alternatives, preparing an Environmental Impact statement (EIS) where necessary, coordinating funding, etc.

Three significant roadways identified on the Future Functional Classification map are discussed below:

Roberts Road and 50th Avenue Realignment

The extension of Roberts Road from CSAH 4 to CSAH 1 is an integral link in providing an east-west collector corridor to alleviate future traffic congestion as the adjacent land becomes developed. The area is currently mostly undeveloped agricultural and grassland and is sparsely populated with increasing pressure for development; it is currently zoned medical professional mix, mixed use, low, medium, and high residential, and general business. This connecting link will define the corridor in accordance with which developers will use to form their future plats. Closely connected to this project also comes the realignment of 50th Avenue to provide a north-south transportation corridor to accommodate for roadway deficiencies in the southern part of the city. The

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city has taken the necessary precautions and completed an environmental assessment (EA) of this project and has concluded that the project does not have the potential for significant environmental impacts and has determined that an Environmental Impact Statement is not required. The most significant finding of the EA is that of the additional surface water runoff that will be generated by 16.35 acres of new impervious surface that will have potential for sediment erosion. Precautions to be used for mitigation of this impact include stormwater infiltration systems, detention ponds, vegetated swales and ditches, and erosion control Best Management Practices (BMP's) such as erosion blankets, temporary and permanent vegetation, and rip rap.

Pinecone Road / West Metro Corridor

The extension of Pinecone Road south is a significant piece of the regional metropolitan transportation system. It is part of the "West Metro Corridor" plan which includes the extension of Pinecone Road south from CR 120 to 50th Avenue in St. Cloud with a new four-lane bridge crossing the Sauk River. This will provide an important north-south alternative to Highway 15 between Sartell and the southern regional transportation system and significant regional commercial destinations on Division Street (CR 75) in St. Cloud.

Regional Circumferential Roadway

The proposed minor arterial roadway from CR 4 near 19th Avenue South to CSAH 1 (crossing Pinecone Road) is part of a proposed circumferential roadway around the metropolitan area. This beltway was identified in the St. Cloud Area Joint Planning District Plan as one of the two most significant regional roadway concepts for the metropolitan area.

Town Center

A major commercial center is proposed for land on Pinecone Road south of CR 133 and north of CR 120. This area is proposed to be developed as a "town center" commercial and mixed use area and will be Sartell's primary commercial center. It is centered around the intersection of Pinecone Road and the proposed circumferential roadway identified above. In order to facilitate traffic movement within this area, a series of major collector roadways are proposed generally circling this node.

Although not shown on Figure 6-2, if the need for an additional river crossing arises in the future, the city will need to work with appropriate local, regional, and state agencies to identify an alignment.

PLANNED ROADWAY IMPROVEMENTS

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The following roadway improvements are included in the APO's 2030 plan for Sartell. These are also shown on Figure 6-3, *Planned Transportation Improvements*.

In addition to the items in Table 6-3, the Minnesota Department of Transportation (MnDOT) has long-term plans to remove the at-grade crossing of Scenic Drive with Highway 10 and bridge Scenic Drive across the highway. A service road would be provided west of the highway from Scenic Drive to the CR 33 interchange.

Table 6-3
Potential Roadway Improvements from APO 2030 Transportation Plan
City of Sartell

Map #	Roadway	Project Description	Implementing Agency
1	CSAH 1	Widen roadway to four lanes from CR 119 to 9 th Avenue North	City of Sartell, City of St. Cloud, Stearns County
2	Benton Drive	Widen roadway from 18 th St. NW to south of CR 29	City of Sartell and City of Sauk Rapids
3	18 th Street North	Construct new two lane roadway from TH 15 to CSAH 29	City of Sartell
4	CR 133 New Alignment	Construct new two lane CR 133 alignment from east of 65 th Avenue to CR 133 at Pinecone Road	City of Sartell and Stearns County
5	CSAH 1	Expand existing two lane to three lane from 12 th Street North to CR 119	City of Sartell and Stearns County
6	Roberts Road	Construct new east west collector from CSAH 4 to CSAH 1	City of Sartell
7	18 th Street North Connection	Construct new two lane road from CSAH 27 North to Benton Dr.	City of Sartell
8	Sartell Bridge	Restripe to four lanes	City of Sartell
9	Pinecone Road	Four lanes divided from CR 119 to 32 nd Street	City of Sartell

Source: St. Cloud Metropolitan Area 2030 Transportation Plan (APO)

ACCESS MANAGEMENT PROGRAM

The need exists to develop an access management plan for Sartell that will provide the safety benefits of reduced access and still provide reasonable access for residents and business customers. Recognizing this, many road jurisdictions have developed access policy guidelines that limit access to specific locations along their roadways. These consist of full access intersections at a specific minimum distances or partial intersections that can either be $\frac{3}{4}$ (which prohibit left turns onto a county road) or a right-in/right-out only location.

The city of Sartell has a system of roadways that vary widely in both purpose and need for access. Development of a single spacing guideline for roadways would be very difficult to develop and implement. In addition, the development of specific distance guidelines for different types of roadways is beyond the scope of the Comprehensive Plan and instead should be developed as part of the implementation process of the Plan. This can be done either as a separate Plan element and/or as part of the zoning and subdivision ordinances. Guidelines need to be developed consistent both with good access management principles and the land use and transportation goals of this Plan.

Access to principal arterials, such as Highways 10 and 15, should be limited to intersections with other roadways wherever possible. Some right-in/right-out movements to private driveways may be acceptable depending upon location. Traffic signals should be planned for predetermined locations, but not every intersection. The adjacent road system should be oriented to the full access locations to the highway.

Minor arterials in highly developed areas, such as Pine Cone Road, should seek to limit direct access to intersections with other roadways or specific, limited or shared driveways. The following guidelines may be helpful in adjusting to the restrictions as opposed to virtual free access in the past. Minor arterials in growth areas should have access limited to intersections with other roadways and driveways serving collective areas at intermediate locations.

Collector streets should also have restricted access, although individual driveways from commercial developments are acceptable. Fronting houses with individual driveways for every lot can lead to safety and traffic flow concerns and should be avoided on collector streets.

Some of the elements that should be part of the access management plan include the following:

- Access to individual parcels should be limited to a single driveway unless the lot footage is relatively long.
- Access to an arterial or collector street should be located a significant distance from any intersection.

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- In residential areas, minimum spacing distances for driveways from intersections should be developed.
- Direct access of residential properties to arterial streets should be discouraged.
- The location of any driveway or access should be consistent with sight distance along the roadway. Where sight distance is not adequate, an alternate access location should be required.
- Development of service roads or common driveways should be used wherever possible along arterial and even collector roadways, especially in commercial areas.
- The use of medians should be considered to control multiple access locations and provide left turn lanes for heavier movements to private driveways or public streets.
- Access to any location where there is a designated left turn lane past the driveway should be restricted to right-in and right-out movements only.
- In multi-family areas, there should be significant distance between the multiple driveways to provide for snow storage and maneuvering area. These types of driveways should be discouraged from occurring on city streets and restricted to onsite streets and aisles.
- Through site plan approval process; driveways should have a throat or area approaching the roadway where there is no additional conflict with an on-site circulation pattern.

Insert Figure 6-1, Existing Functional Classification

Insert Figure 6-2, Future Functional Classification

Insert Figure 6-3, Planned Transportation Improvements