

Chapter 7 - Transportation

Framework

The transportation system is tied to a city's future growth and development. The network of streets in a community helps determine land use configurations. It is a challenging task for cities to balance the access needs of shoppers and employees of 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 provide for the often-conflicting needs of pedestrians and automobiles.

Sauk Rapids has a transportation system typically found in outer-ring suburbs and older communities. "Suburban-type" system includes street layouts in the newer subdivisions of the city consisting of cul-de-sacs and curvilinear designs. In addition, Highway 10, Highway 15 and Highway 23 border the community and connect Sauk Rapids with the rest of the region. North-south access through and into/out of the city is generally good; and with the construction of the new Mississippi River crossing, east-west access will be improved. The remaining transportation system in the older part of the city is a typical, grid-like pattern of streets. This grid generally follows the Mississippi River, the BNSF railway corridor and Highway 10, all of which run north-south through the city.

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 and regional and local agencies are involved in planning the transportation system of Sauk Rapids 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) and the Environmental Protection Agency (EPA) are 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 (MnDOT) and the Minnesota Pollution Control Agency (MPCA) are involved with assessing state concerns with planned transportation projects. MnDOT oversees the Interstate Highway and Truck Highway system and provides secondary support assistance to cities, metropolitan planning efforts and transit planning activities. MnDOT maintains a 3-year STIP (State Transportation Improvement Program), which identifies funding for programmed projects within the 3-year time frame. Each MnDOT

District is required to develop a Project Work Plan (which identifies projects 4, 5, and 6 years in the future) and a Project Studies Plan (which identifies projects in future years 7 through 10). Projects between 10 and 20 years in the future are in a Long Range Plan. The MPCA's responsibilities include monitoring developments and projects having potential environmental impacts. 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 – The city of Sauk Rapids lies within the area covered by the St. Cloud Area Planning Organization (APO). This organization primarily focuses on transportation system development and funding agent for member communities. Continued collaboration with the St. Cloud APO is a priority to developing 20-year transportation plans for the region.
- County - Sauk Rapids is in Benton County. Collaboration among county, townships, and the city will be crucial as the city expands within these jurisdictions.

FUNCTIONAL CLASSIFICATION

Sauk Rapids' 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.

To aid in the understanding of Sauk Rapids' thoroughfare system, all of the city's roadways have been classified by function and are summarized below in Table 7-1 and illustrated on Figure 7-1, *Existing Roadway 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 often 50 miles per hour or more.

Principal arterial 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 Sauk Rapids, 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 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. For example, large trucks would soon destroy local streets if they were allowed to use them and that 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.

In summary, Sauk Rapids' existing street hierarchy is as follows:

**Table 7-1
Existing Functional Classification of Roadways
City of Sauk Rapids
2004**

Principal Arterials	
Route	Jurisdiction
Trunk Highway 10	State
Trunk Highway 23	State
Trunk Highway 15	State
Minor Arterials	
Route	Jurisdiction
Benton Drive	City
2 nd Street North	City
CSAH 29 (35 th Street North West)	County
CSAH 1	County
Major Collectors	
Route	Jurisdiction
11 th Street North	City
8 th Street North	City
1 st Street South	City
5 th Street South	City
10 th Street North East	City/County
15 th Street North East	City/County
4 th Avenue North	City
6 th Avenue North/South	City
Summit Avenue North/South	City
County Road 3 (Golden Spike Road)	County

Source: St. Cloud Area Planning Organization

ACCESS MANAGEMENT OVERVIEW

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 allows no direct access except through limited and controlled interchanges. These roadways have consistently had significantly lower accident rates than any other 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. A primary example of this is at the intersection of County 1 and County Road 3, and is close vicinity to the access of the new Sauk Rapids-Rice High School. Controlled intersection improvements and access to this area will become an increasing issue for the community.

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.

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 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 10, Highway 15, and County Road 1 serve as the major north-south traffic routes through Sauk Rapids. There are also three major east-west traffic routes through the community and into the City's growth areas. Table 7-2 shows traffic counts along these roadways from 2001.

**Table 7-2
Average Daily Traffic Counts
City of Sauk Rapids
2001**

North-South Routes	
Trunk Highway 10 Segment	2001
5 th Street South to CR 3	21,500
CR 3 to CSAH 29	18,700
Trunk Highway 15 Segment	2001
CR 1(Sartell) to Benton Dr.	20,000
Benton Dr. to CSAH 29	13,400
County Road 1	2001
TH 23 to 15 th Street NE	3,600
15 th Street NE to CR 3	4,550
CR 3 to 45 th Street NE	2,450
East-West Routes	
CSAH 29	2001
TH 15 to TH 10	7,300
TH 10 to 5 th Avenue NE	2,600
5 th Avenue NE to CR 1	2,200
2 nd Street North/CR 3	2001
Benton Dr to Summit Ave N	8,100
Summit Ave N to TH10	8,600
TH 10 to CR 1	5,200
5 th Street S/10 Street NE	2001
Benton Dr to TH 10	3,400
TH 10 to CR 1	2,650

Source: MnDOT

Road (County Road 7). The St. Cloud Regional Airport has a modern airline terminal consisting of 10,000 square feet, which houses aviation controls, airport administration and meeting rooms. The airport grounds have numerous private hangars and aviation related businesses on site. Car rental is also available for passengers on site.

The airport currently provides two runways, with expansion plans recently adopted. The main runway is 7,000 feet long by 150 feet wide, and the current crosswind runway is 3,000 long by 75 feet wide. According to the current St. Cloud Regional Airport Master Plan, the length of these facilities is expected to increase to 8,000 long and 5,000 feet long, respectively. The runways have pilot controlled lighting sunset to sunrise, Automated Surface Observing System (ASOS) weather reports are available 24 hours per day, and the facility is equipped with aircraft rescue and fire fighting equipment. Construction of a control tower began in 2003 and is scheduled to be complete in the fall of 2004.

The airport primarily serves smaller corporate and private planes, with limited commercial service. Northwest AirlinK/ Mesaba Aviation provides commercial air service to the St. Cloud Area. Northwest AirlinK offers roundtrip service daily with five arrivals and departures to and from the Minneapolis/St. Paul International Airport.

The nearest international airport is the Minneapolis St. Paul International Airport.

Future Traffic Forecasts

The forecasting of traffic movements is very difficult because of the very nature of how trip-making decisions occur. While some travel patterns can change drastically, others have been found to remain stable over a long period of time. In the recently completed St. Cloud Area 2025 Transportation Plan, the APO concluded the following as it impacts the transportation system within the city of St. Cloud and the region:

- Notable growth characteristics of the 2025 Transportation Plan include a 34 percent increase in population and a 36 percent increase in employment from 2000 to 2025 within the St. Cloud region.
- It is estimated that these population and employment increases will generate approximately twenty square miles of new land use by 2025.
- Travel demands generated from this additional land use are expected to increase 56 percent over the 25 year forecast period, causing severe congestion along many key state, regional and local arterial roadways within the St. Cloud Metropolitan Area.

AIR SERVICE

Sauk Rapids and the region are currently served by the St. Cloud Regional Airport located east of Trunk Highway 10 on Del Tone

RAILROAD

Although the Burlington Northern Santa Fe Rail Line passes through the community, its functionality for commerce or transportation for the community is limited. However, with the potential of a North Star Commuter Rail Station, the rail line could have the potential as a transportation alternative for the community.

METROPOLITAN TRANSIT COMMISSION (MTC)

The Metropolitan Transit Commission (MTC) provides public transportation throughout the cities of Sauk Rapids, St. Cloud, Sartell and Waite Park. It provides both fixed route and demand responsive services. The fixed route network includes 18 bus lines. The demand responsive system offers several services, including two types of paratransit service and evening service between SCSU and student housing areas.

In addition to services operated by the MTC, there are other private transportation providers in the area. Greyhound provides intercity bus service while several cab companies offers taxi service. Student transportation is provided by the Sauk Rapids -Rice School District. There are also non-profit organizations that provide various transportation services to their specific clientele.

Comprehensive Plan Transportation Goals and Strategies

Sauk Rapids recognizes the importance of transportation in the overall health of the city. Following are the goals and strategies of Sauk Rapids to address these issues. These express the community's aspirations related to transportation for citizens of, and visitors to, the city of Sauk Rapids.

SUMMARY OF TRANSPORTATION ISSUES

- Potential for a North Star Station
- Accessibility to Regional Business Centers
- Highway 10 Corridor
- Negative Issues tied to the Bridge Project
- Lack of Infrastructure to Accommodate Growth
- Railroad Tracks Separate Community from River

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.
3. Require the provision of safe and adequate access to all properties through the implementation of subdivision regulations.
4. Create, strengthen and maintain the appearance of the city gateways and key transportation corridors through streetscaping, design standards, zoning, trails, lighting, sidewalks, signage and other tools.
5. Continue to plan and construct a new Sauk Rapids Bridge at Benton Drive and 2nd Street to promote mobility within the region and locally.

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 (APO) to ensure an integrated regional transportation system.
2. Continue to work with the Minnesota Department of Transportation to minimize the impacts of the functional change of Highway 10 to a Freeway System, while maintaining access to the community.
3. Schedule transportation projects in the city's annual capital improvement program.
4. Support and actively participate in transportation improvement planning as identified in the Area Joint Planning District Plan, APO plans, Benton County plans and other proposed study areas.
5. Connect streets in developing areas to the existing network of streets and reflect its character and design.
6. Create conceptual master plans of the city's growth areas that identify future transportation corridors by acquiring needed right-of-way in advance when possible and through the use of official mapping.
7. Continue to explore all federal, state and other funding opportunities for local and regional transportation projects.
8. Consider the impacts to neighborhoods when planning new or upgrading existing roadways.

Transportation Goal #3

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. Support and promote the construction of a Northstar Commuter Rail Station within the community as an alternative means of transportation for area residents.
3. Work with Burlington Northern Santa Fe Railroad to identify opportunities for safe pedestrian crossings to connect the river resources and potential commercial development with the Downtown and neighborhoods.
4. Continue to maintain and seek ways to expand the existing network of bicycle and pedestrian trails throughout the city, including the feasibility to reuse the old Mississippi bridge to connect and enhance existing trail systems.
5. Encourage sidewalks and separated pathways, where feasible 10 feet wide, along all arterial, collector and local streets in developing residential and commercial areas through the city's subdivision regulations.
6. Promote the connectivity of alternative transportation systems in new and existing developments.
7. Continue to support and work with the MTC to provide and expand safe, affordable efficient public transit for residents and employees.
8. Seek funds to provide pedestrian crossings at appropriate locations at Highway 10 and Highway 15 to promote connectivity and safety.

Transportation 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. The street system can play a major role in the image of a community. It is important that a community balance the conflicting needs of pedestrians and automobiles.

PLANNED IMPROVEMENTS

There are a number of key roadway and other transportation projects that are either being planned and/or underway for Sauk Rapids and the region. These projects, listed below, are in varying degrees of design and approval. This is not an exhaustive list, nor is it in order of importance or likelihood of occurrence. Many of the projects are within the City's five- to ten-year planning process, while others are currently being developed.

Regional Roadway Planned Improvements

TRUNK HIGHWAY 10

The Minnesota Department of Transportation (MnDOT) plans to upgrade Highway 10 from a Highway to Freeway status. This improvement is part of the state's effort to study and improve its Interregional Corridor system. Interregional Corridors include key transportation corridors in Minnesota that connect regional trade centers. These were identified and adopted by MnDOT in January 2000 as part of the State Transportation Plan.

TH 10 CORRIDOR STUDY FOR BENTON COUNTY

In 2001, the TH 10 Corridor Study for Benton County was undertaken. The purpose of the report was to analyze the existing and future conditions of TH 10 in Benton County and to make recommendations on how best to manage access to the highway. By planning ahead it is possible to design land use and the transportation system work together, providing the highest Level of Service (LOS) possible, both for adjacent land development and to the thru traffic on the highway. The TH 10 Corridor Study for Benton County identified six potential interchange locations in Benton County.

CSAH 29 REGIONAL CORRIDOR

Benton County is currently study the extension of CASH 29 from County Road 1 to a connection at Trunk Highway 23. This study will determine the functionality, design and location of this future roadway. The intent of this segment is to supplement the creation of a regional corridor that will provide a circumferential system around the St. Cloud Region. Other planning efforts in St. Cloud and Stearns County have identified segments of this road system, including the inclusion in regional transportation plans. As a comprehensive look at the entire corridor and actual concepts were developed for interchanges and frontage roads in the Benton County area.

MISSISSIPPI RIVER CROSSING

The study and planning for a new Mississippi River crossing is currently underway between the city of Sauk Rapids and Stearns County. The new crossing will connect with 2nd Street north from the St. Cloud side of the river. Significant right-of-way building acquisition is underway to make from for the new bridge, which is detailed in the Downtown Chapter of this plan.

In addition, the subsequent reconstruction of 2nd Street North to County Road 1 is being considered by Benton County. City Engineers and Benton County Engineering Department will be discussing the planned improvements in conjunction with the bridge project.

FUTURE CONSIDERATIONS FOR LOCAL SYSTEMS IMPROVEMENTS

The following list of local system improvements have been provided by the City's Consulting Engineer, and City Staff. The identified projects require total reconstruction of the roadway, replacement of utilities, curb, gutter and storm water, sidewalks and possible acquisition of right-of-way.

2004

- 1st Street South (2nd Avenue South to Summit Avenue)
- Summit Avenue (1st Street South to 2nd Street South)
- 10th Avenue NE (CSAH 3 to CSAH 29)
- Benton Drive (4th Street North to Trunk Highway 15)

2007

- 8th Street North (Benton Drive to 6th Avenue North)

2008

- 2nd Avenue South (Benton Drive to South City Limits)

2009

- 6th Avenue South Realignment (1st Street South to 3rd Street South)

The city should work with MnDOT and Benton County to study the impacts of new development in the growth areas identified in Chapter 11 of this plan. Through the planning process, the Planning Advisory Committee and City Staff have identified future improvements and upgrades to existing systems. In addition, constructions of new facilities have been considered to create an efficient transportation system and mobility in the community and growth areas.

Transit

NORTHSTAR COMMUTER RAIL

Plans are underway for an 82-mile commuter rail system between downtown Minneapolis and the St. Cloud/Sauk Rapids area. The Northstar Corridor Commuter Rail would use existing rail lines along Highway 10 to transport commuters between the St. Cloud region and the Twin Cities, with an extension north to Sauk Rapids. The current anticipated opening date was 2003 with a projected ridership of 9,600 passengers per day. However, actual opening is dependent upon funding. The project was not funded in the 2004 Legislature.

The system would include a transit station in a location to be determined in Downtown Sauk Rapids adjacent to the railroad tracks. A plan for future land uses and development near the station will need to be considered when developing the Redevelopment Plan for Downtown Sauk Rapids.

FUTURE ROADWAY CONCEPT

Figure 7-2, *Transportation Concept Plan*, provides a proposed concept for future roadways in Sauk Rapids. Existing arterial roadways (as identified on Figure 7-1, *Existing Transportation Classification*) are expected to continue to function as such. Figure 7-2 also includes the logical extension of collector roads into new growth areas to accommodate future development. County Roads 1, 3, 29 are shown as collectors. Currently all of these roads are designated as local roads. However, as Sauk Rapids grows and develops, additional roadways may begin to function as collectors.

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 concept 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. However, a generalized concept is important in the development of the Future Land Use Plan detailed in Chapter 12. In particular, collector frontage roadway alignments and accesses that result from the Highway 10 improvements may be slightly different than shown on Figure 7-2. As land is platted for development more study can be done and exact alignments can be finalized.

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 environmental reviews where necessary, coordinating funding, etc.

ACCESS MANAGEMENT PROGRAM

As the city grows and develops, access management will become increasingly important. The city should consider the development of an Access Management Plan 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.

The city of Sauk Rapids has a system of roadways that vary 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 and access 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. Guidelines need to be developed consistent both with good access management principles and the land use and transportation goals of this Plan. Following are some generalized guidelines that should be considered in developing access management standards.

Access to principal arterials, such as Highway 10, 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 should seek to limit direct access to intersections with other roadways or specific, limited or shared driveways. Minor arterials in growth areas should have access limited to intersections with other roadways and driveways serving collective areas at intermediate locations. Direct access of residential properties to arterial streets should be discouraged.

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 in the subdivision design on collector streets.

Some of the elements that should be part of the Access Management Plan to achieve these objectives include the following:

- Spacing standards between access points.
- Spacing distances between intersections and other access points.
- Promoting the use of service roads or common driveways wherever possible along arterial and even major collector roadways, especially in commercial areas.