

Chapter Seven: Community Facilities and Transportation

Much of the City of Grayling is shaped by the transportation system and various community facilities that serve the area. The information in this Chapter is intended to give City officials a frame of reference when preparing future plans for these facilities, and also acts as a handy guide for new residents and visitors who are seeking information about the City.

Existing Community Facilities

As the county seat, the City of Grayling contains several public facilities, including those owned by local schools, and by City, County, State and Federal governmental agencies. These facilities are described below:

City of Grayling

Along with the AuSable River City Park discussed in the Existing Land Use Chapter, the City maintains several other sites, which are described below and shown on Map Five, Community Facilities:

Grayling is the county seat of Crawford County, and as such, contains several City, County, State and Federal buildings, as well as various schools and religious institutions.

Administration. The City's administrative offices are located on City Boulevard, near the City's northern boundary.

Public Safety. The City's full-time Police Department maintains a force consisting of the Police Chief and 4 patrolmen, and operates from the City's main administrative office. The Grayling City and Township Fire Department, also located on City Boulevard, serves both the City and Township, and provides service to Camp Grayling, the Grayling Army Airfield and two rest areas located off of I-75. Their 20+ members, with over 200 years of combined experience, operate on a volunteer basis.

Other Facilities. The Department of Public Works maintains a garage, the City's water tower and wastewater treatment lagoons which are all located on Industrial Street, in the southern end of the City. City wells are located near the Grayling Elementary School and the hospital along Michigan Avenue. The historic Elmwood Cemetery with its larger, more modern expansion is located along North Down River Road.

Crawford County

County sites include the Crawford County Jail and Courthouse, located downtown where Michigan Avenue terminates at the railroad tracks. The County Library (Devereaux Memorial Library) is located on Plum Street, where it turns into Ingham Street. In addition, the County maintains a garage off of Huron Street (M-72), just west of Industrial Street.

Located on North Down River Road, near the City's eastern boundary is the Fish Hatchery. The hatchery was established by Rasmus Hanson in 1917 and is now owned by the County as an attraction open to the public. The State of Michigan purchased the site in 1927, and sold it in 1995 to Crawford County. While the hatchery operations ceased in the mid 1960s, the facility is operated as a tourist attraction. A county-wide millage helps fund the efforts of the Recreational Authority, including their operations of the Hanson Hills ski area. The County maintains a large retention basin that receives storm water runoff from approximately one quarter of the City, located on the hatchery site.

Federal

The U.S. Postal Service maintains an office in Grayling, which is located downtown on Michigan Avenue.

Crawford AuSable School District

The City of Grayling is home to a few local schools. While Grayling High School is located outside of the City, the Crawford AuSable School District maintains the AuSable Primary School (grades K-2) on Plum Street near the Library, the Grayling Elementary School (grades 3-5) just around the corner on Michigan Avenue, and the Grayling Middle School (grades 6-8) located on Spruce, just north of Michigan Avenue.

Transportation Conditions

A major factor in future planning for the City of Grayling is the transportation system. While railroad lines originally provided access from southern portions of Michigan, the roadway system is now a more dominant factor in the development of the community with I-75 and other regional arterials such as M-72 and M-93 traversing the area. The I-75 expressway is a major carrier of tourist traffic to the area, which provides convenient access to the City via two off-ramps located at the north and south ends of the City. M-72 and M-93 are more regional corridors that primarily carry traffic west to Kalkaska and Traverse City, east to Mio and north to Gaylord. Transportation facilities need to be considered in relation to traffic volumes and roadway congestion, safety, non-motorized

transportation, land use relationship and intensities, impact on community character, environmental impacts, air quality, noise and fiscal constraints.

Relationship between Transportation and Land Use

A well-developed master plan must consider plans for land use in the context of transportation planning. Future traffic patterns within the road network will be closely related to specific land use. The intensity of land uses should, in part, be considered in relationship to the suitability of the transportation system. Future traffic volumes will depend on the amount, type and intensity of development. *Table 7-1* below provides the estimated traffic generated by various land uses. The figures represent averages and are given for the peak morning hour and total trips within a typical weekday. The peak hour represents the AM or PM hour when traffic is greatest (i.e. rush hour), which in Grayling is between 8 and 9 AM and 4 to 5 PM. The figures provided below are intended only as a guide and should not replace more detailed traffic impact studies. Rather, they should be used to help evaluate the accuracy of such studies. The fractional numbers shown in the *Table 7-1* represent the average number of trips that can be expected from the various land uses listed. For example, the City can expect apartments to produce 0.51 vehicle trips per hour, or roughly 1 trip every two hours during the peak morning rush.

Convenience stores and banks are the land uses that generate the highest volume of traffic.

**Table 7-1
Typical Traffic Volumes
Comparison of Trip Generation Rates**

	Trips In Peak Hour	Trips In Weekday
Residential (per unit)		
Single Family	0.75 (AM)	9.57
Apartment	0.51 (AM)	6.63
Condominium	0.44 (AM)	5.86
Office (per 1,000 sq. ft. gross floor area)		
General Office Building	1.56 (AM)	11.01
Medical Office Building	2.43 (AM)	36.13
Commercial (per 1,000 sq. ft. gross floor area)		
Shopping Center	3.74 (PM)	42.92
Supermarket	11.51 (PM)	111.51
Quality Sit-down Restaurant	7.49 (PM)	89.95
Service Station (per pump)	14.56 (PM)	168.56
Convenience Store	53.73 (PM)	737.99
Drive-in Bank	54.77 (PM)	265.21
Industrial (per 1,000 sq. ft. gross floor area)		
Light Industrial	0.92 (AM)	6.97

Note: A trip is a one-way movement, 10 trips = 5 in, 5 out

Source: Institute of Transportation Engineers, Trip Generation Manual, 6th Ed.

Traffic information for the City was obtained from another local study of the Grayling transportation system, which is being organized by the Northeast Michigan Council of Governments (NEMCOG) and facilitated by the Crawford County Economic Development Council. This study is being conducted to understand the current traffic patterns of the community and to identify future transportation needs in the region, with emphasis on the local interstate access to the City and surrounding townships. Traffic counts were taken in June and July of 2007 at four intersections within the City: the intersection of the I-75 BL and Michigan Avenue, the intersection of the I-75 BL and North Down River Road, the intersection of North Down River Road and Michigan Avenue, and the intersection of I-75 BL, State Street and M-72 East. These counts indicate the largest volume of traffic in the morning rush hour travels into the City's commercial areas (on Michigan Avenue and I-75 BL) from North Down River Road and I-75 BL. These patterns generally reverse during the evening. Other results of the traffic counts are summarized for each intersection in *Table 7-2* below:

Table 7-2
Peak Traffic Volumes at Four Major Intersections
City of Grayling, June/July 2007

Intersection	Peak AM hour			Peak PM hour		
	Begins at:	Highest Vehicle Count	Direction of Travel	Begins at:	Highest Vehicle Count	Direction of Travel
I-75 BL at Michigan Ave.	7:45 am	333	I-75 BL southbound traveling through intersection	4:00 pm	589	I-75 BL northbound traveling through intersection
I-75 BL at N. Down River Rd.	7:30 am	175	N. Down River westbound turning left onto southbound Michigan Ave.	4:15 pm	216	Michigan Ave. northbound turning right onto eastbound N. Down River
N. Down River Rd. at Michigan Ave.	7:45 am	167	I-75 BL northbound traveling through intersection	4:00 pm	242	I-75 BL southbound traveling through intersection
I-75 BL at State & M-72 E	7:45 am	326	I-75 BL heading north/northwest bearing left through intersection	4:00 pm	603	I-75 BL heading southeast/south bearing right through intersection

Functional Classification

Management of the roadway system in Grayling can be described and evaluated through the use of a road classification system, and they can be improved by planning and designing facility improvements for their

specific purpose. Most communities use a functional system or hierarchy of roads that evaluates roads based on their ability to move traffic or how access is granted to specific sites. This hierarchy ranges from major arterials, which primarily provide for travel to areas outside of the City, to local subdivision streets, which serve to access individual homes. The roadway system in Grayling consists of five different road classifications which are depicted on Map Seven: Transportation Map, and are described briefly below.

Interstate. Interstates are designed to carry the largest volumes of traffic from state to state and region to region. Because their function is not to provide access to individual properties, access to interstates is limited to on- and off-ramps. In Grayling, the I-75 interstate serves as the principal route between northern and southeastern Michigan as well as to the eastern and southeastern states. I-75 also provides regional connections to cities north of Grayling, such as Gaylord and Mackinaw City.

Major Arterials. Major arterials provide for movement through the City. And, similar to the Interstate, provide major traffic links between communities. The primary function of these roads is to move large volumes of traffic, therefore, access to these roads must be properly managed in order to maintain safe and effective movement. Arterials in



Grayling include the I-75 Business Loop, and that portion of M-72/M-93 that extends west of the Business Loop. These roadways are all designated as state major arterials and are under the jurisdiction of MDOT.

Minor Arterials. Minor arterials provide access to important traffic generators, such as employment/shopping centers, and to areas outside of the City. Similar to major arterials, the primary function of these roads is to move large volumes of traffic, therefore, access to these roads must also be properly managed for safety and travel efficiency. Minor arterials in the City consist of portions of M-72 and M-93 as they extend east and north from the I-75 Business Loop. While both M-72 and M-93 fall under the State's jurisdiction, these segments do not carry the same volume of traffic that those designated as Major Arterials do, and therefore are classified as Minor Arterials.

Collectors. Collectors serve to gather traffic from local roads and subdivision streets of residential neighborhoods and deliver it to higher classified roads. Collectors also serve to provide access to abutting properties. The sole collector road in Grayling is North Down River

Road. While it can be argued that some of the internal streets like Michigan Avenue, located within the City's primary neighborhood, act in this capacity, they are located within the neighborhood and are therefore considered local streets.

Local Streets. Local streets primarily provide access to individual property and homes. These roadways include all of the residential streets in Grayling, which are generally short, and provide connections to streets of higher classifications.

Community Facilities Plan

Parks and Recreation

There are currently several parks that serve the residents of Grayling. In addition, regional opportunities are plentiful for both passive and active recreation. However, improvement can always be made, and the City of Grayling is committed to providing enhanced recreation to all residents. During development of this plan, the following priorities were established for recreation:

- Efforts should be made toward providing additional non-motorized amenities, or connections between existing regional trails. Accomplishing this will require cooperation with neighboring communities and Crawford County.
- The Grayling area is especially popular to snowmobile enthusiasts during the winter months. A common activity for snowmobile groups is to visit various eating and drinking establishments. This presents an opportunity for Grayling businesses; currently the City has designated snowmobile trail routes. In order to capitalize on the additional business that snowmobilers can bring to the community, a study of local roads and the needed connections from regional trail systems, should be conducted to ensure they can handle this additional traffic. For example, identified snowmobile road crossings should be reinforced with a paving material that is more durable than asphalt to withstand the additional wear and tear. Seasonal parking areas could also be established to help accommodate the often large number of snowmobiles that gather at various locations.
- Residents in Grayling have identified a desire for additional indoor recreational facilities. While these sorts of facilities are extremely costly and often require special millages to support construction and operations, the City may choose to participate in a regional effort. This concept should be viewed as a long-term goal, due to the fact that Crawford County is not likely to grow in population fast enough to support such projects.

The City Parks & Recreation Committee developed a Grayling Parks & Recreation Master Plan and is being updated at the time this Master Plan was updated. The following are some of the primary improvements expected to emerge from that effort:

- **AuSable River City Park.** The City wishes to expand the existing pathways at this park to establish a connection between it and the fish hatchery site located on N. Down River Road. The route of the pathway would follow the AuSable River through the central neighborhood and cross the river near the south end of the medical

complex located there. The long-term goal is to improve the pathway with a durable material that will allow for all modes of non-motorized travel including pedestrian, bicycle, rollerblade or wheelchair accessibility.

- **North Town Recreation Nature Park.** This new park will be the final destination for the pathway expansion discussed above. It is expected to encompass the remaining vacant land located south of the fish hatchery. The property will be enhanced with a parking lot, canoe/kayak launch and passive trail facilities.
- **Central Residential City Youth Park.** This park is planned to enhance the existing playground facilities at the Grayling Middle School. The City wishes to see additional playground facilities focused toward pre-school and elementary aged children at the corner of Ottawa and Chestnut. An existing vacant green space is located behind the homes on Ottawa, between Spruce and Chestnut, and could effectively accommodate the expansion of the playground at the school. However, since it requires the purchase and demolition of the homes fronting on Ottawa, this park is more of a medium-term goal for the City.



Utilities

To ensure the continuance of high quality community facilities and services, the city needs to adequately plan for future development patterns and ensure adequate public services for the entire community. Responsible planning of the community's land uses and residential densities requires an accurate assessment of community utilities. This process establishes whether the appropriate infrastructure is available to support the demands of new development.

Because the City is mostly developed, Grayling's water and sewer systems are currently adequate. Clearly, improvements to these systems will be implemented as new treatment mandates are created by the State and Federal governments. However, in general, capacity and treatment are currently satisfactory.

The future land use plan does not threaten the integrity of either system, as it provides a reasonable land relationship that should not overtax them. However, any annexation of land into the City could demand additional service beyond what can currently be accommodated. The City currently owns adequate land to accommodate any needed expansion of the City's settling ponds at the south end of the industrial park, but may be pressed to provide financing of large expansion projects. The City may wish to perform its own assessment of system capacity to establish a baseline of

information upon which future expansions can be based. Large development projects are not anticipated for the term of this plan; however, should this change, the City may need to adjust its fee schedule to address future system improvements.

Transportation Plan

Roadway Improvements

Over time, traffic levels will increase creating capacity deficiencies. While there is significant need for roadway improvements, this should be supplemented with transportation management practices that will help maintain the capacity of the network. Transportation management practices described later in this chapter, such as access management, can be used to maintain the efficiency of the transportation network. The approach of managing the system combined with targeted improvements limits costs and minimizes impacts to the community character.

The City of Grayling has identified the following road improvement projects that should be considered:

- **I-75 Interchanges.** Expand access options to the City from the I-75 freeway. Ideally, this will be accomplished through expanded interchange designs at N. Down River Road and at the south end of the I-75 Business Loop. Coordination with MDOT is needed to secure proper funding to design and construct such improvements.
- **Norway Street.** Norway Street, located west of James Street (I-75 BL), currently provides valuable secondary access to the central business district. It can become a vibrant extension of the district with some attention. Although the east side of Norway Street abuts the rear of several businesses that front on James Street, the west side contains many valuable businesses that can significantly contribute to the vitality of downtown. The City envisions a streetscape along Norway that is similar to the recent improvements along Michigan Avenue. This will help connect the two areas, while providing a catalyst for redevelopment, especially the rear portions of those businesses that currently back onto Norway Street.

Regional Considerations

Camp Grayling Expansion. Because Grayling is part of a larger area of commerce and recreation, it plays a role in the success or failure of various other aspects of the community, and vice versa. It is important to take a regional approach to planning, especially with respect to transportation systems that often traverse municipal boundaries. Camp Grayling, located west of the City in Grayling Township on M-93, expects to expand its military operations to include year-round activity and training. They also plan to improve operations at the Grayling Army Air Field, located just north of the City on M-93. Therefore, cross access between their two facilities, as well as to the military reservation located farther north, will be an important factor in the movement of troops and supplies between these areas. The City of Grayling is active in regional transportation planning efforts, and intends to facilitate the additional traffic and activity in as much as possible. The City envisions establishing a bypass route around the City for tourists and visitors whose destination is not Grayling, which could help alleviate traffic congestion during peak tourist seasons. Ongoing communication between Camp Grayling and the City is needed to properly design the bypass.



Residential Roads

The typical pavement width for local residential streets within a subdivision is 27 feet, back to back of curb. This width allows for two travel lanes with parking on one side of the road. Some residential roads in Grayling's central neighborhood are wider than this standard. If it is found that excessive speeding or traffic safety is a concern, the City may choose to modify the road to help alleviate these problems. This can be achieved through physical reconstruction to narrow the road width, or through road re-striping. Physical changes can include traffic calming elements, as described below, or a complete reconstruction of the roadway. Re-striping can include adding a center turn lane to higher volume residential collectors, or adding on-street parking. Both of these approaches will narrow the striped travel lane and encourage slower speeds.

Transportation Management

The City can help manage traffic through a variety of tools that reduce vehicle trips or lessen their impact. These efforts can often be

implemented at a lesser cost than physical improvements and, as such, should be considered and weighed alongside physical improvement alternatives. The concept of transportation management is that some automobile trips can be eliminated by giving people other choices, such as transit or walking, to help relieve congestion of the street system. Land use arrangements that shorten the length of vehicle trips, or interconnected streets that eliminate the need to use major roads can also help. Other less tangible elements can include demand management, which involves coordination of work hours for large employers in the City. Removal or re-design of driveways that are close to one another or to an intersection will help preserve capacity and reduce potential for crashes. Use of new technology, such as signals that respond to actual traffic conditions or informing motorists of alternate routes when there is congestion or a crash, can further benefit traffic operations, especially during peak hours of travel. Collectively, these ideas can help address the City's future transportation needs without large capital investments. Some specific transportation management tools are discussed below.

Traffic Calming

Residents expect low volumes of traffic and low speeds within neighborhoods and in areas of high pedestrian activity. Where high volumes and speeds exist, traffic calming measures may help keep driver speeds at an appropriate level. Physical changes in the road design can affect the driver's psychological frame of mind, causing them to intuitively reduce their speed of travel. Some of the common traffic calming measures described below may be appropriate in certain situations in the City, such as in the central neighborhood where wider roads are found, or in areas where mixed-use, pedestrian-oriented development is planned. A number of factors need to be considered such as traffic volumes, cost, maintenance, and impact on emergency access.



Street Narrowing, Slow Points, or Chokers. These features can include curb modifications, channelization, and landscaping features that narrow the street to a minimum safe width. They are often installed at intersections to reduce speed and/or redirect traffic. They provide larger areas for landscaping, enhance the neighborhood, facilitate loading and unloading and optimize pedestrian crossing locations.



Medians and Boulevards. Medians and boulevards include center islands that divide the opposing travel lanes at intersections or at mid-blocks. They are aimed at reducing vehicle speeds while enhancing the safety of pedestrian crossing points by offering them a "refuge" area when

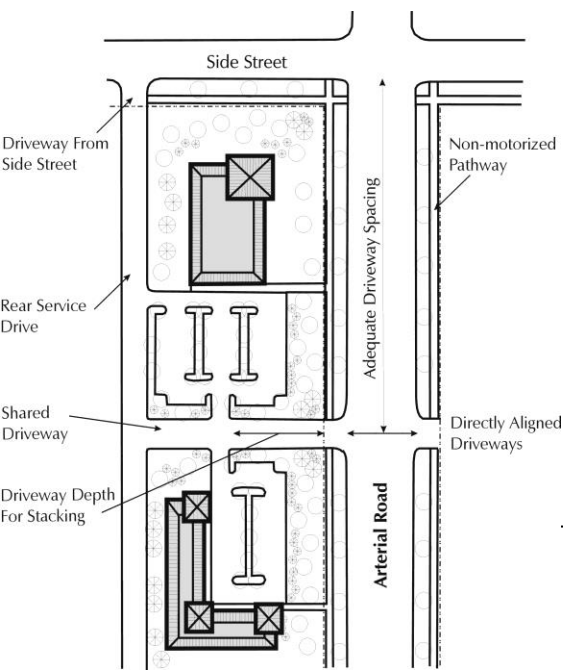
high traffic volumes make it difficult to cross several lanes of traffic at once. Medians have been constructed on the south Business Loop, which has enhanced safety and improved aesthetics along the corridor. A median may also be desirable on some wider residential streets such as Michigan, if higher traffic volumes are expected.

Perimeter Treatments. Visual and physical treatments are used to communicate a message to drivers entering a residential neighborhood. Traffic signs, intersection narrowing, boulevards, and textured pavement surfaces, such as brick and landscaping features, are often used to create this effect. Entry treatments can be a visual enhancement and can be used to increase driver awareness of changes in roadway environment. These types of elements should be coordinated with any larger streetscape projects or planned gateway improvements.

Access Management

Control of the location and spacing of driveways or access points along the main roads will improve safety and help preserve the roadway's ability to carry traffic. Access management guidelines have two functions, to protect the public investment in the roadway by minimizing congestion and crash potential and to provide property owners with reasonable access to property. The goal of access management is to provide standards that will facilitate traffic operations and improve public safety along major roads. Access management looks at the following factors:

- **Number of Access Points:** Because the number of driveways allowed along major roads will affect traffic flow, ease of driving, and crash potential, the number of driveways on a major road should be limited. Alternative access should be provided from side streets, shared driveways, or frontage roads, wherever possible.
- **Sight Distance:** Proper sight distance needs to be provided at driveways and intersections to ensure a vehicle can safely enter or exit the traffic stream.



- **Driveway Spacing:** Driveways need to be adequately spaced from intersections and other driveways to assist in the reduction of turning movement conflicts.

Access management is implemented generally either as part of road improvement projects or application of standards as sites are proposed for development or redevelopment. Consequently, access management requires a joint effort between MDOT, Crawford

County and the City in terms of both standards and review. City development regulations can be important tools for implementing access management concepts.

The City of Grayling Zoning Ordinance currently contains access management standards that permit one driveway per parcel (more for those with excessive frontage width). The ordinance also contains driveway spacing standards that require driveways to be spaced at least 150 feet from the nearest intersection or 300 feet from other driveways. These regulations provide a good basis for access management; however, the City’s standards could be improved through stronger requirements or additional regulations, as recommended below.

- The City should consider driveway spacing regulations from Expressway Ramps. A minimum of 600 ft. is recommended between expressway ramps and any driveway.
- Stronger spacing requirements can further improve traffic flow and reduce crashes. Driveways should be spaced a minimum of 300 feet from un-signalized intersections. Where this standard cannot be met, a right-turn-in, right-turn-out driveway could be considered for access, with left-turns accommodated through frontage roads or service drives. Changes to these guidelines should only be considered if it can be demonstrated by a traffic impact study that the driveway operation will not result in conflicts with vehicles at the adjacent intersection.
- Minimum and desirable driveway spacing requirements should be determined based on posted speed limits along the parcel frontage, in accordance with the Driveway Spacing Guidelines Table. The recommended distances provided in the table are based on the sight distance necessary to allow an exiting vehicle to enter the major road traffic stream without causing oncoming traffic to decrease their speed by more than 10 mph, and should be required where parcel size permits. The "minimum" values in the table are based on the distances required to avoid conflicts between vehicles turning right or left from adjacent driveways.

Driveway Spacing Guidelines		
Posted Speed (mph)	Driveway Spacing* (in feet)	
	Minimum	Recommended
30	150	185
35	175	245
40	200	300
45	315	350
50+	350	455
* As measured from the centerline of each driveway. Spacing on boulevards may be adjusted.		

Traffic Impact Analysis

Increases in traffic may over time begin to place a strain on the road system. One procedure to help ensure that traffic impacts are properly evaluated during the development process is to require a traffic impact study. A traffic impact study allows for the evaluation of a development's potential impact on the local road system and the identification of roadway improvements needed to mitigate the traffic impact, such as adding additional turn lanes or re-timing a traffic signal.

A detailed traffic impact statement should be required for larger developments that will generate higher volumes of traffic, such as more than 100 peak hour directional trips or 750 or more trips on an average day. This study needs to include an evaluation of traffic impacts at each of the site's access points and nearby intersections.

The traffic impact study should include trip generation rates based on the most recent edition of Trip Generation published by the Institute of Transportation Engineers. The traffic impact study should address site access issues, such as the potential to share access or use service drives, and should identify the likely impact the project will have on local levels of service, either along adjacent roadways or intersections. The study should analyze options to mitigate traffic impacts, including needed changes to access or improvements to the roadway or intersection.

Streetscape

Significant road corridors in the City must be treated as design elements that represent the quality and character of the City. This will distinguish it from other communities in Northern Michigan. Streetscape enhancements can also be utilized as a unifying element in the community to define Grayling as a unique place. Significant streetscape improvements have been made to the I-75 Business Loop, south of M 72, and along Michigan Avenue in the central business district. These projects were implemented based on similar goals: to improve the aesthetic quality of each roadway, while creating a more attractive environment for new or redeveloped businesses. However, the character created by each project varies greatly due to the different function and character desired. The Business Loop improvements focused on landscaping and pathway installations, including new sidewalk benches and other pedestrian amenities.

- Landscaping should be provided along roadways. For commercial sites where visibility from the road is important, landscaping should be designed to enhance the aesthetics of the site and soften views of the parking lot with canopy trees and shrub plantings within a greenbelt along the road frontage.

- Ornamental street lights are an important element to a streetscape design. These not only provide aesthetic enhancement, but also improve the comfort and safety of the roadway for pedestrians. Ornamental street lights can serve as a strong unifying element for certain districts such as the central business district. Ornamental street lights should also be considered for new residential developments within proximity to the downtown and for historic residential neighborhoods.
- Community entrance signage may be provided at entrance locations to the City to help further define it as a unique place.
- All streets need to be considered from a multi-modal perspective and be designed to that serve all users, moving by car, truck, transit, bicycle, wheelchair or foot. Sidewalks and non-motorized pathways need to be included as part of the streetscape. Sidewalks should be required along all new residential streets. Non-motorized pathways should be constructed along major roadways.