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Chapter Six: Transportation



Access is a key determinant of growth because it facilitates the flow of goods and people to the community. The Village of Cottage Grove is well connected to the region, with an interchange at Interstate 94, the primary connection between the Madison and Milwaukee metro areas and USH 12. The Village is also connected to the region by an extensive network of County highways and local roads, and an outstanding regional trail network.

A. Existing Transportation Network

The Village of Cottage Grove is well connected to the region through the existing roadway network, with Interstate 94 located on the north side of the Village and USH 12/18 and Interstate 39/90 are located just to the south. Access to these primary arterials is via CTH N, which is the north-south arterial road through the plan-

ning area. CTH BB is the main east-west minor arterial road serving the Village, providing direct access to the central urban area of Dane County. This section describes the existing conditions of transportation facilities in the Village. Late 2011 saw the completion of a major construction project in which I-94 was expanded to six lanes between Madison and Cottage Grove, accompanied by the reconstruction of the I-94/CTH N interchange including the construction of three new roundabouts and associated street-scaping.

Roadways:

All the local, county, state and federal transportation routes within Dane County are classified under the “Roadway Functional Classifications.” These routes are identified and mapped by the Madison Area MPO on their website. The following are the main functional classifications:

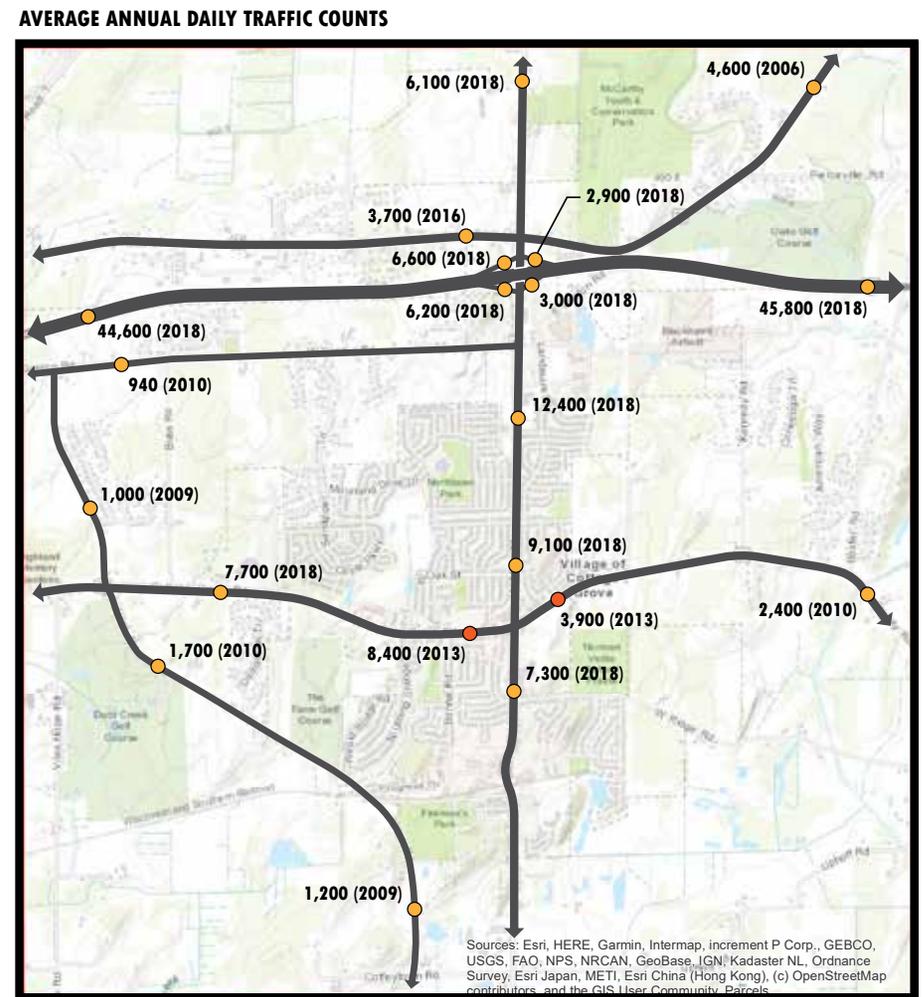
Principal arterial - freeway: Interstate 94 is the one ‘principal arterial - freeway’ within the Cottage Grove. In 2018, traffic counts (measured as Annual Average Daily Traffic, or AADT) on Interstate 94 west of CTH N were 44,600, and 45,800 east of CTH N (see Figure 6.1). While not within the Village, I-39/90 can be accessed approximately 4.5 miles to the south.

Principal arterial - other: the only ‘principal arterial - other’ within the Village is County Highway N from County Highway TT to the southern Village Boundary (AADT 12,400 south of Gaston Road, 9,100 north of CTH BB, and 7,300 south of CTH BB all measured in 2018).

Minor arterial: ‘minor arterials’ within the Village include County Highway BB/W. Cottage Grove Road from beyond the western Village boundary to just east of Highway N (AADT 7,700 in 2018 and 8,400 closer to CTH N in 2013), County Highway TT within the Village (AADT of 3,700 in 2016), and County Highway N north of Highway TT (AADT of 6,100 in 2018).

Urban collector: ‘urban collectors’ within the Village include the entire length of Progress Drive, and Highway BB from just east of

Figure 6.1



Source: Wisconsin Dept. of Transportation

Highway N to Myer Road (AADT of 3,900 in 2013). Other 'urban collectors' near the Village include Gaston Road (AADT of 940 in 2010) and Vilas Road from Gaston Road to Progress Drive (AADT of 1,000 north of CTH BB in 2009 and 1,700 south of CTH BB in 2010).

Major rural collector: 'major rural collectors' near the Village include County Highway BB east of Myer Road (AADT of 2,400 in 2010), and Highway TT east of Highway N (AADT of 4,600 in 2006).

Local streets: are neighborhood streets that provide access to individual homes and businesses, but do not serve as carriers of through traffic. In newer neighborhoods, local streets are often curvilinear in order to discourage through traffic and provide more privacy to residents.

Airports

The Village is served by the Dane County Regional Airport, which is located approximately 10 miles to the northwest in Madison. Dane County Regional currently offers direct flights to 19 destinations. General Mitchell International Airport is located about 73 miles to the east in Milwaukee, and Chicago Rockford International Airport is located 75 miles to the south in Rockford, IL. Blackhawk Airfield, located along Kennedy Road in the Village of Cottage Grove, is privately-owned and it is categorized as a General Utility-B airport offering general aviation services.

Passenger and Freight Rail

The Village is served by the Chicago & Northwestern Railroad Company, which operates a rail corridor between Madison and Cottage Grove. The rail line is used for on-demand service only. Among the products moved on the rail line are fertilizer and lumber. Local customers include the Cottage Grove Cooperative and the Hydrite Company. More than half of the rail line customers are located in Madison.

Bicycle and Pedestrian Facilities

Some of the older local streets in Cottage Grove do not have sidewalks to accommodate pedestrian movement. The main concern for pedestrian safety focuses on intersections with heavy traffic, such as Main Street and Cottage Grove Road. Newer developments in the community are providing sidewalks.

The Glacial Drumlin State Trailhead is located in the southeast portion of the Village along the abandoned section of the Chicago & Northwestern Railroad line east of CTH N. The state trail continues east to the Village of Deerfield before exiting the County and then continues east through Jefferson County to Waukesha. As the Village of Cottage Grove expands, planned development should accommodate, or at least not impede, safe bicycle and pedestrian travel as an integral part of the community's growth.

Public Transportation and Para-Transit

Transportation services for those without access to, or those that choose not to use their auto for certain trips, is an important element in the Village's overall transportation system, and a mobility need that will continue to grow. In that light it is important that the Village work with existing and potential users as well as existing and potential service providers to expand the Village's overall transportation system.

Although there is currently no regularly scheduled bus service (such as that provided by Madison Metro) in the Village or any of its surrounding towns, a fair number of groups do provide valuable transportation service. Following are some of those services coordinated through the Dane County Department of Human Services:

- Rural Senior Group Transportation Program
- Specialized Transportation Services (STS) for Adults with Disabilities
- Driver Escort Program (RSVP of Dane County)
- Vets Helping Vets (RSVP of Dane County)

Park and Ride Facilities

The Wisconsin DOT operates a park and ride facility at the southwest corner of the CTH N & CTH TT intersection, just north of I-94. The facility features an asphalt parking lot with 107 parking spaces. Parking is free, with a 48 hour limit. The facility can accommodate future bus service.

Water and Truck Transportation

The Village's arterials and collectors facilitate truck traffic through the Village. Interstate 94 is identified as the major trucking route serving Cottage Grove.

There are no water transportation services within the Village.

B. Review of County, State, and Regional Transportation Plans

Dane County Comprehensive Plan (2007)

The Dane County Comprehensive Plan (2007) is designed to serve the land use developments in the county over a twenty year planning period. Recommendations of the plan include developing express commuter transit and vanpool services to and from the central Madison area and other major activity centers from outlying villages and cities, including park and ride lots along major travel corridors. Recommendations related to Cottage Grove include improvements to various sections of CTH N (south, middle, and north under and beyond I-94) and expansion of CTH BB as substantial development necessitates.

Madison Metropolitan Area and Dane County – Transportation Improvement Program (TIP), 2019 - 2023

The following projects in or near Cottage Grove have been selected for inclusion in the TIP – Glacial Drumlin path extension from N to Vilas Rd, Capital City Trail extension from I-39/90 to Vilas Rd., I-94 bridge replacement from N to Jefferson County line, W. Cottage Grove Rd. resurfacing (completed 2019), E. Cottage Grove Rd. reconstruction from N to Village limit, and reconstruction of N from TT north 3,400 feet.

Southwest Region Six Year Highway Improvement Program, 2018-2023

Wisconsin Department of Transportation (WISDOT) maintains six-year improvement programs for state and federal highways within each the state's five regions. This highway improvement program covers the state highway system that is administered and maintained by WISDOT. Other roadways are improved and maintained by the villages, cities, towns, and counties in which the roadways are located. This plan includes bridge replacement on four bridges between Cottage Grove and Lake Mills.

Connections 2030: Wisconsin's Long-Range Transportation Plan

Adopted in October 2009, this multimodal transportation plan will help the state meet transportation needs of the 21st century. This plan focuses on strategies to maintain and enhance the state's transportation system to support future mobility and economic growth. Key elements of this plan include: safety and security; preserving the existing and future system; optimizing investment in the system for continued safety, enhanced mobility, and efficiency; responding to local, regional, national, and international economic trends to maintain state economic competitiveness; considering environmental issues to maintain Wisconsin's quality of life; and providing users with transportation choices. The policies in this plan will aid transportation decision-makers when evaluating transportation programs and projects.

Bicycle Transportation Plan for the Madison Urban Area and Dane County, Wisconsin (2015)

This plan addresses bicycle transportation and planning throughout the region. It serves as a blueprint for continuing to improve bicycling conditions and safety; identifies desirable bicycle routes in Dane County, including routes into and out of the Madison area and connections between cities and villages; and provides guidelines for planning, designing, and maintaining bicycle facilities. The Bicycle Transportation Plan calls for extension of the Capital City Trail to eventually connect with the Glacial Drumlin

Trail which begins in Cottage Grove. This extension would provide a continuous bicycle trail route that would extend from the west side of Dane County through the City of Madison to the east side of the County. It also identifies Highways N and TT as future primary paths.

Wisconsin State Airport System Plan 2030

Adopted by WISDOT in 2015, the Wisconsin State Airport System Plan provides a framework for the preservation and enhancement of a system of public-use airports adequate to meet the current and future aviation needs of the State of Wisconsin. This plan determines the number, location and type of aviation facilities required to adequately serve the state's aviation needs over a 15-year planning period, 2015 through 2030. The plan defines the State Airport System and establishes the current and future role of each airport in the system. The privately owned Blackhawk Airfield, located adjacent to the Commerce Park, is identified as a Small General Aviation airport.

Wisconsin Bicycle Transportation Plan 2020

WISDOT completed the Wisconsin Bicycle Transportation Plan 2020 in 1998. This plan established WISDOT goals, objectives, and policies for intercity, urban and suburban bicycling, and recommends strategies and actions for WISDOT, local governments and others to implement the plan. The two primary goals for the plan are to double the number of trips made by bicycles and to reduce bicyclist-motorist crashes by at least 10 percent by 2010. More specifically, it seeks to improve bicycle access to major destinations along arterial and collector streets.

Wisconsin Pedestrian Policy Plan 2020

The Wisconsin Pedestrian Policy Plan 2020, created by WISDOT, was established to make pedestrian travel a viable, convenient and safe transportation choice. The plan attempts to improve pedestrian traffic flow along State Trunk Highway expansions and improvements. The plan also provides guidance to communities on how to encourage pedestrian travel through the creation

WHAT IS AN OFFICIAL MAP?

An Official Map is a plan implementation tool authorized under Wisconsin Statutes (Section 62.23(7)) for adoption by cities and villages. An Official Map is not the same as a “chamber of commerce”-type road map. It is actually a city or village ordinance that may be used to show alignments of future roads, expanded rights-of-way for existing roads, and other planned public facilities like trails and parks. When land development is proposed in an area of a facility shown on the adopted Official Map, the city or village may obtain or reserve land for that future facility through public dedication, public purchase, or reservation for future purchase.

Cities and villages generally use Official Maps to show future highways and bypasses, other future arterial and collector streets, and suggested wider rights-of-way for some existing major streets. Official Maps generally show desired right-of-way widths for all future new and expanded roads, but do not show road improvement standards like pavement width or sidewalks. Official Maps rarely show planned minor streets, as their locations are usually difficult to determine in advance of development.

Wisconsin Statutes attach some unique authority to Official Maps. For example, a city or village may require that no building permits be issued within land shown for a future public facility on its Official Map. Additionally, a community may require that no subdivision or land division may be recorded unless its arrangement conforms to the Official Map. These and related provisions may apply within both the municipal limits and within the city's or village's extraterritorial jurisdiction.

of pedestrian plans, increasing enforcement of pedestrian laws, adopting and implementing sidewalk ordinances, and addressing pedestrian issues through comprehensive planning. There are no recommendations specific to the Village of Cottage Grove.

WISDOT U.S. 12/18 Conversion Study

The Wisconsin Dept. of Transportation is currently studying alternatives for the conversion of a 3.5 mile stretch of U.S. Highway 12/18 from a 4-lane expressway to a 4-lane freeway. The study area includes the stretch between I-90 in Madison and CTH N, south of Cottage Grove. Elements being studied include the potential addition of interchanges, grade separated overpasses, and frontage roads. An Environmental Assessment (EA) will be conducted as part of this study. In the end the study will recommend a preferred alternative. While the study area is not within the Village's jurisdiction, the project represents the potential improvement of a key commuting route for many Village residents and employees who work in the Village. The Village should track the progress of the study and provide input as needed to protect and advocate for the Village's interests. The study began in 2012 and is listed as an active project by WISDOT, but is not in an active public participation phase.

WISDOT Madison Beltline Study

This study is examining long term solutions to current congestion on the Madison beltline (U.S. Highway 12/18 from I-90 to Middleton). The study will engage a broad range of stakeholders to plan for the area's environmental, community, and economic future. In addition to focusing on roadway improvements, the study will investigate alternative transportation options that may help to reduce congestion on the beltline. A large number of Cottage Grove residents and employees use the beltline to travel to their workplace. The Village should seek opportunities to provide input into the study to advocate for the Village's interests. A Planning and Environmental Linkage (PEL) study was completed in 2017. A NEPA (National Environmental Protection Act) study is ongoing. The study began in 2013.

C. Transportation Goals, Objectives, and Policies

Goals:

1. Continue to improve the street network as population, employment, and travel continue to grow.
2. Develop and maintain a comprehensive system of bicycle and pedestrian facilities in the Cottage Grove area.
3. Provide a safe and efficient transportation system that meets the special needs of pedestrians, bicyclists, motorists, trucks, and trains.

Objectives:

1. Ensure that transportation system improvements are well-coordinated with land development.
2. Work to coordinate multi-jurisdictional (Village, town, county, state) transportation system improvements in the Cottage Grove area.
3. Utilize the Village's official mapping authority within the Village limits and its extraterritorial planning area.
4. Provide safe and convenient access between neighborhoods, employment centers, schools, service centers, and recreational centers.
5. Plan for an on-street and off-road bicycle route systems which connect to the regional system.
6. Divert high volume traffic around existing and proposed residential areas.
7. Provide a quality transportation system in strategic Village growth areas.
8. Provide for adequate road capacities and road quality.
9. Provide for regional transit service.
10. Plan for a complete arterial road network around the Village.
11. Provide additional east-west routes north and south of the

Village and additional north-south routes east and west of the Village.

12. Limit access on major transportation corridors (CTH N and CTH BB).
13. Map adequate widths along major transportation corridors (CTH N and CTH BB) for future transportation improvements.
14. Have developers dedicate right-of-way along major transportation corridors to provide sufficient area to accommodate future improvements as part of the plan and certified approval process.
15. Monitor evolving technology related to transportation such as electric vehicles or driverless vehicles as these may relate to the Village's transportation system.

Policies:

The Village of Cottage Grove transportation policies are presented below in one of four categories: (1) Ordinances and Official Mapping, (2) Aesthetics, Wayfinding, and Gateways (3) Connectivity, Bicycle and Pedestrian Facilities, (4) Driveways and Access.

Ordinances and Official Mapping

1. Generally follow the recommendations presented on Map 6, Future Transportation Facilities.
2. Coordinate capital improvements with the recommendations presented in the Village of Cottage Grove Comprehensive Plan.
3. Implement the recommendations of the Comprehensive Plan through the Village's Zoning Ordinance, Subdivision Ordinance, Official Map and Capital Improvements Program.
4. Adopt and enforce the Official Map both within the Village limits and within the Village's extraterritorial plat review jurisdiction.
5. Utilize the Official Map to reserve right of ways for existing, upgraded and future arterial and collector streets, pedestrian and bicycle paths, bridges, riverwalks, rail lines, airport facilities,

ties, and other transportation-related features.

6. Prior to approval of any certified survey map, preliminary plat, final plat, site plan or planned unit development, ensure that the proposed development is consistent with the recommendations of the Official Map.
7. Protect (via official mapping) operational and inactive rail lines for future use as recreational trails, greenways, parkways, etc.
8. Encourage neighboring town and Dane County to work closely with the Village of Cottage Grove to implement the transportation recommendations and policies presented in the Village of Cottage Grove Comprehensive Plan.
9. Keep ordinances up to date regarding evolving transportation technology.

Aesthetics, Wayfinding, and Gateways

1. Encourage appropriate aesthetic improvements such as canopy shade trees along terraces, pedestrian scale theme lighting, landscaped boulevards, traffic circles, banners, benches, etc. in all arterial and collector street construction and reconstruction projects.
2. The Village will consider establishing a comprehensive community wide wayfinding signage system in order to better direct travelers to key destinations in the community.
3. Enhance the visual quality of Village gateway corridors by revising existing Village ordinances that regulate the visual quality of development.

Connectivity, Bicycle and Pedestrian Facilities

1. The policy for connecting streets when a new planned subdivision or neighborhood abuts an existing Town subdivision is as follows. When an existing Town street ROW abuts the Village boundary and the Town street's pavement ends within 100' of the boundary, the developer of the new subdivision shall build a Village street to the boundary for possible future connection.

If the Town street pavement ends more than 100' from the boundary, the developer shall provide a Village ROW connection but they may forego construction of the Village street stub at the discretion of the Plan Commission and Village Board. In rare cases when there is a Town ROW with no paved street in it (for example, off of Meadowlark St. in the Elmargo Estates subdivision) the developer is not obligated to connect to the ROW. Any subsequent binding agreement between the Town and Village regarding street connections will take precedence over this policy.

2. Discourage the creation of cul-de-sacs except in very limited situations (e.g. where existing topography or the existing development pattern necessitates their use).
3. Establish bicycle routes throughout the Village to connect neighborhoods with schools, parks, and shopping. These routes should be identified with appropriate signs.
4. Encourage all new development projects to accommodate the needs of pedestrians, bicyclists, and the physically challenged.
5. Encourage all new residential, commercial, community facility, and mixed use developments to be served with sidewalks or pedestrian/bicycle paths.
6. Work to ensure that all arterial and collector streets are served by either sidewalks or pedestrian/bicycle paths.

Driveways and Access

1. Limit the number of direct driveway access points on arterial and major collector streets (including CTH N and CTH BB) in order to maintain traffic flow and improve safety.
2. Encourage new subdivisions to provide more than one vehicular access point whenever feasible.
3. Direct access to arterial or collector streets should not be allowed for major facilities such as large shopping centers or other significant traffic generators. Access to those facilities should be from adequately designed intersecting streets.

4. Encourage the spacing of signalized streets of a minimum of 1,200 to 1,500 feet from any other signalized street.
5. Encourage driveways to be adequately spaced to minimize vehicular conflicts and maintain safe traffic flows. The following driveway spacing standards will be used by the Village:
 - Require appropriate spacing between two-way driveways:
 - Along major arterials; a minimum distance of 300 feet (as suggested by Dane County) from centerline to centerline.
 - Along minor arterials a minimum distance of 185 to 300 feet from centerline to centerline.
 - Encourage alignment of driveways on opposite sides of the street to facilitate cross travel.
 - Generally, do not approve driveway access closer than 50 feet to a local street intersection and 175 feet to an intersection on an arterial or major collector street. Greater driveway setbacks may be encouraged depending on the function of the street and whether or not the intersection is signalized.

D. Transportation Plans and Programs

The transportation element of this Plan is designed to facilitate the implementation of safe and efficient multi-modal traffic by supplementing major arterial improvements with improvements to local roads; by guiding the reservation of future rights-of-ways; and by guiding development towards transit-friendly land use patterns, development intensities, and site designs.

Street and Highway Programs and Recommendations

The Future Transportation Facilities Map (Map 6.0) recommends right-of-way widths for future road expansions and proposed new roads. It is important to remember that actual expansion of the roads indicated for expansion may not occur for many years.

However, the Village should work to acquire through dedication or purchase additional right-of-way width well in advance of actual need.

As a first step, the Village will continually monitor and amend its Official Map to reflect recommended rights-of-way in the Future Transportation Facilities Map. It should then use the Official Map to obtain additional right-of-way, particularly when new developments (e.g., land divisions) are proposed. Specific transportation recommendations are described below:

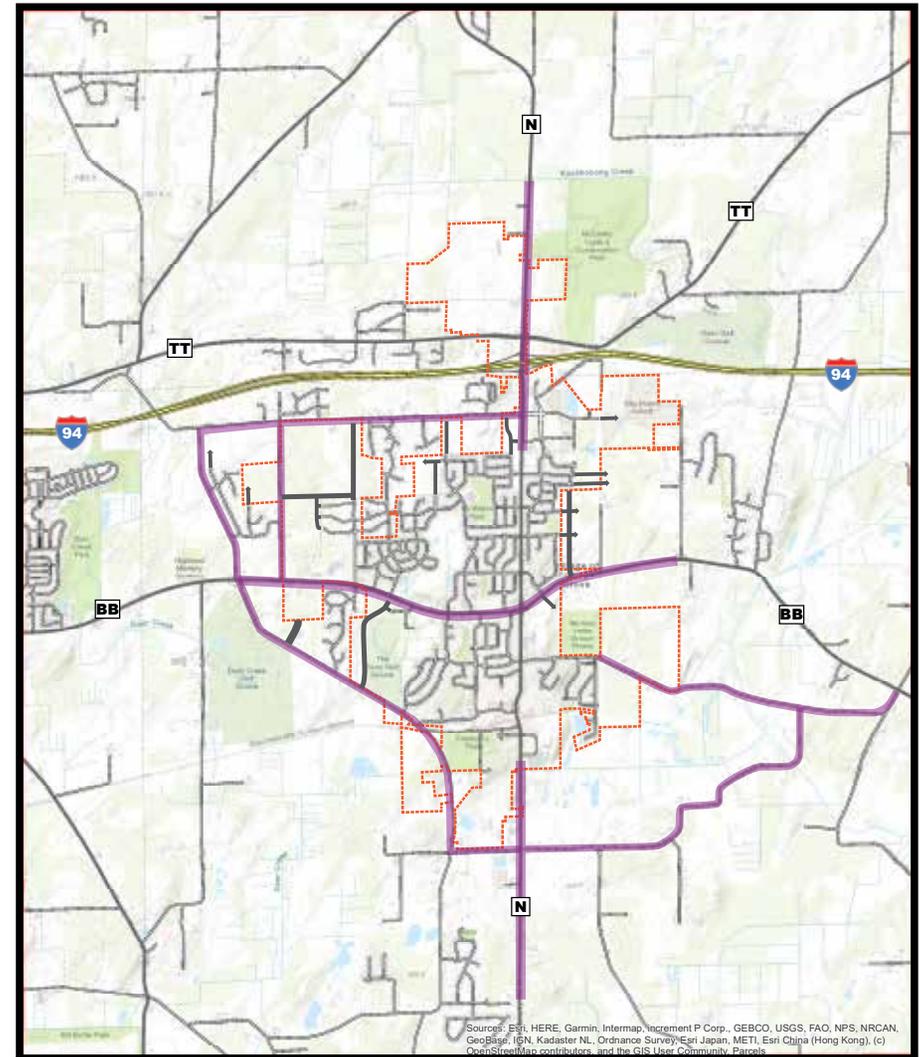
Minor Arterial and Collector Roads

The Village intends to cooperate on and advocate improvements to the following minor arterial and collector roads over the planning period:

- CTH BB: Traffic volumes will likely increase significantly over the planning period, with this as a primary route to Madison. Map 6.0 advises additional right-of-way width (expanding to 120 feet). As substantial development occurs, expansion of the portion of the road east of CTH N will be advised.
- CTH N: Map 6.0 advises additional right-of-way width (expanding to 120 feet).
- Buss Road: Buss Road may be considered for expansion in the western portion of the planning area. This road will become increasingly important as new neighborhoods develop in this area. The road could be developed as a boulevard (with a landscaped median) or a parkway (with extensive landscaping and buffer yards on either side). The preferred design will depend largely on community character desires and costs, and whether development fronts or backs onto this road. The Village should obtain rights-of-way (recommended 100 feet) and begin to construct this route (or require private developer construction) as this area develops.

As the Village expands, existing roads in the peripheral area will be extended and new roads will be added to maintain a complete, interconnected roadway network. Several new roads are planned

AMENDED OCTOBER 21, 2019



MAP 6.0 FUTURE ROADS & ROW

NOT TO SCALE

Proposed ROW Expansion

- Arterial (120' ROW typ.)
- Collector (100' ROW typ.)

Proposed Streets

- Collector (100' ROW typ.)
- Primary Local (70' ROW typ.)
- Local (66' ROW typ.)



for the northeast and northwest portions of the planning area. For the most part, these roads are extensions of existing roadways through platted subdivisions.

Local Roads

New local roads needed to serve development are generally not shown on Map 6. These should be shown on Detailed Neighborhood Plans (described in the Planned Neighborhood section of the Land Use chapter), and will be required as new neighborhoods develop. In general, the construction of local street connections should be timed so as to avoid serving as de-facto collector or arterial streets until the actual collector or arterial road is constructed. Subdivisions and other developments should be interconnected, however, by local roads.

Inter-Village Transit

In the long-term, the Village should encourage the establishment of regional commuter passenger bus service to link Cottage Grove to major employment centers. The Village could facilitate this by encouraging local businesses to establish a bus station at an accessible site, including the existing shopping area on Cottage Grove Road, and the planned office park area, planned industrial park area, and planned downtown area. The Village could also encourage bus companies to provide “on-demand” service rather than regularly scheduled service.

Pedestrian and Bicycle Facilities

Map 6.1 shows both existing and planned trails and on-street connections serving the Village. These types of facilities are covered in greater detail in the Village’s Park and Open Space Plan. The Village will prioritize and collaborate on the following initiatives related to off-street trails:

- Link the Glacial Drumlin State Trail in Cottage Grove with the Capital City State Trail through the Madison metro area. The Village has tentatively planned the construction of the segment within the Village for 2021. The segment outside the Village will be built by the WDNR and Dane County. As of this writing they

are analysing potential routes.

- Southern spur off the Capital City Trail to McFarland and Stoughton. This would be a later stage project that first requires the construction of the Capital City Trail link between Madison and Cottage Grove mentioned above.

- Trail between Glacial Drumlin Trail and McCarthy County Park. Segments of trail were constructed under the I-94 overpass when it was reconstructed in 2011. The Village continues to install off-street trail along Highway N to reach I-94. As of this writing the trail extends along N from the Glacial Drumlin Trailhead north to Northlawn Street. The Village should collaborate with Dane County and the Town of Sun Prairie regarding continuing this trail to Token Creek County Park.

Other recommendations include a signed bikeway system over several low-volume roads in the Village; bicycle lanes on roads with heavier traffic; and improved pedestrian connections from neighborhoods to existing and planned parks. Specific recommendations include:

- On-Street Bicycle Lanes: A signed and striped bicycle lane is the preferred bicycle accommodation on busier streets (generally more than 2,000 vehicles per day). Striping bicycle lanes establishes designated traffic channels that promote an orderly flow by both cyclists and motorists. According to AASHTO’s Guide for the Development of Bicycle Facilities (1999), the recommended minimum width for a designated bike lane is 4 feet (not including the gutter pan). Where on-street parking is provided, the bike lane should be located between traffic and parked cars with a minimum 8-foot wide parking lane and 5-foot wide bike lane. Where a combined on-street parking and bike lane is provided, the minimum width of the lane should be 11 feet. Bike lanes should be maintained on a regular basis through street sweeping to remove any sand, gravel, and/or debris.

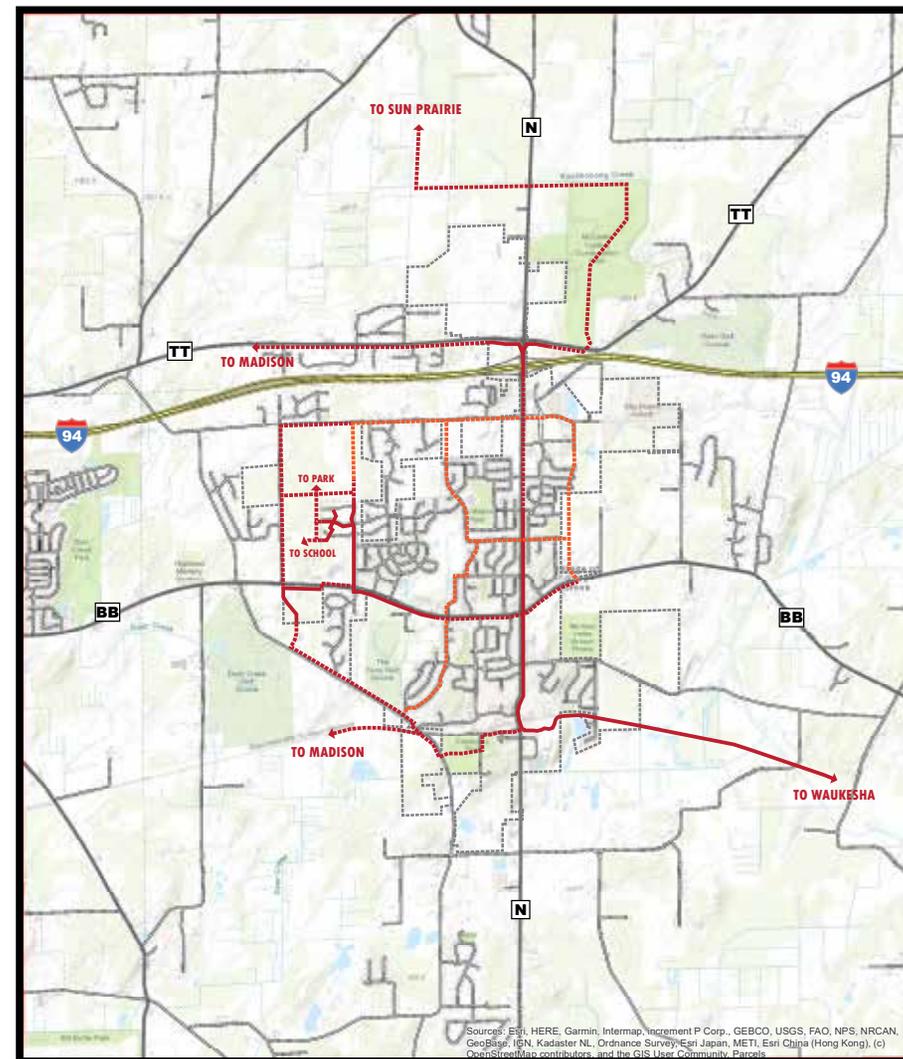
- Rural Roads with Bicycle Facilities: Rural roadways with high traffic volumes (generally more than 1,000 vehicles per day) can

best accommodate bicycle use through the construction of widened, paved shoulders. Paved shoulders intended to benefit bicyclists should be at least 4 feet wide. On rural roadways with low traffic volumes (generally less than 1,000 vehicles per day), cyclists can “share” the roadway with motorists without widened shoulders.

- **On-Street Bike Routes:** On-street bike routes are generally recommended to provide a continuous bike route system. These types of routes provide good access to many origins and destinations throughout a community. Bicyclists typically find that sharing roadway space with automobiles is most feasible on local streets in residential areas with low automobile traffic volumes (< 2,000 vehicles per day) and slow speed limits (< 30 mph). Maintaining on-street bike routes is relatively inexpensive and can be accomplished primarily by eliminating basic hazards to bike travel, including parallel drainage grates, rough at-grade railroad crossings, rumble strips, pot holes, pavement seams, and gravel and debris along the curbside. Preferred routes, which provide direct access to major destinations, may be signed with a bicycle symbol and in some cases directional arrows.

The following recommendations apply to the installation of Proposed On- and Off-Street routes:

- Major roadway crossings should generally be at controlled intersections.
- For areas posing crossing challenges, consider installation of bike/pedestrian crossing signs or flashing light signals at a minimum, consider the feasibility of over or under passes.
- Trail standards should include a minimum of 10 feet of paved surface within a 20 foot wide easement or dedication; ¼ mile markers to indicate location on trail for longer trails; regular extended right-of-way bulb out for emergency vehicle turn-arounds. Bicycle and walking paths intended for less intense use may be 8-foot wide and surfaced with pavement, crushed limestone or similar materials. Walking paths that require minimum impact, such as



MAP 6.1 FUTURE BIKE/PED FACILITIES NOT TO SCALE

- Off-Street Facility**
 - Existing
 - Proposed
- On-Street Facility**
 - Proposed



in a natural area, are generally 6 to 8 feet wide, with a soft surface such as grass or woodchips.

- For any planned road expansion, on-street bike lanes should be considered.

As new neighborhoods are developed, the Village will need to determine whether on-street or off-street facilities are more appropriate, based on the neighborhood street layout and expected traffic volumes.