

**Factor Sheet A-1**

Alternative: Preferred Alternative	Total Length of Center Line of Existing Roadway: 2.86 miles
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None Identified	

**1. Briefly describe the existing economic characteristics of the area around the project:**

The proposed action is located in Dane County in south central Wisconsin. Dane County has a population of 488,073 in the 2010 census. Dane County is bordered by Columbia County (north), Dodge County (northeast), Jefferson County (east), Rock County (southeast), Green County (southwest), Iowa County (west), and Sauk County (northwest). The county has a total land area of 1,238 square miles, 2.3 percent of the total land area for the state. The proposed action is within the city limits of Madison and Verona as well as the towns of Middleton, Verona, and Madison. *Table F – Economic Characteristics for Dane County* shows the economic characteristics for Dane County as a whole.

*Table F - Economic Characteristics for Dane County*

Year 2010	Dane County
Total number of people employed	253,764
Top 3 employers by industry	1) Education, Health 2) Trade, Transportation, Utilities 3) Professional, Business Service
Top 3 employers in Dane County	4) University of Wisconsin-Madison 5) UW Health, Hospitals and Clinics 6) Epic Systems Corp.

Sources: Dane County Workforce Profile 2011. InfoUSA January, 2010  
 WI Department of Workforce Development, QCEW, June 2011

The current land use consists of a mix of residential, commercial, agricultural, and park, open space, and recreational properties. There are several residential developments adjacent to County M. Two golf courses and a turf grass research facility are the only businesses on or abutting County M north of County PD; other land uses include vacant green space lands, a pond, and a substation.

Commercial development is limited to the extreme southern end of the corridor with a gas station, restaurant, carpet care, dental office, art center, wine cellar, and day care facility located south of Bering Drive/Prairie Oaks Drive.

The lands approximately two miles north of the project contain several big-box and chain retail stores for regional shopping trips. There is a full range of retail business, restaurants, and service businesses. County PD, east of the project area contains several service businesses and restaurants.

Economic Activity	Description
a. Agriculture	<p>Dane County is one of the most productive regions for agriculture in the state of Wisconsin. As of 2010, 3,331 farms, averaging 161 acres apiece, totaled 535,756 acres of land in active farming use, representing 70 percent of the total land of the county.</p> <p>The proposed action will require land acquisition from eight farms located on County M totaling 29.2 acres. The acquisitions will range in size from less than 1 acre to 6.9 acres. Illustrations of the impacted farmland can be found in <i>Attachment R: Agricultural Impact Notice</i>.</p>

b. Retail business	<p>University Research Park's Phase 2 development at Junction Road and County M is scheduled for completion in the near future. Plans for the development can be found in <i>Exhibit 7: Pioneer Neighborhood Development Plan and University Research Park</i>.</p> <p>Orchard Pointe is a 200,000-square-foot retail center located on County PD, 2.4 miles east of the project area. This area includes a Super Target, two small strip retail buildings and two out lots with a restaurant and a bank. To the north, another large retail center is located at the NE quadrant of County M and Mineral Point Road, approximately 1.2 miles from Prairie Hill Road. This area includes another Target store, a large grocery store, and several strip retail businesses. Smaller commercial development is proposed within a neighborhood center along Midtown Road, 0.2 miles east of the project area.</p> <p>A dentist office and a gas station are located south of Bering Drive/Prairie Oaks Drive on the southern end of the project. One driveway on County M north, (right-in/right-out) provides cross access to both business.</p>
c. Wholesale business	No wholesale business development is identified in the immediate project area.
d. Heavy industry	No heavy industrial development is identified in the immediate project area.
e. Light industry	No light industrial development is identified in the immediate project area.
f. Tourism	<p>Golfweek Magazine ranked University Ridge in the top 100 golf courses in the United States and among Wisconsin's best golf courses. The course is rated as the 6th best Campus Golf Course in the country. University Ridge is the home course for the University of Wisconsin men and women's golfers and is the location of the annual WIAA High School State Championships and the 2016 PGA Tour Champions Event from June 20-26.</p>
g. Recreation	<p>Two golf courses (Hawks Landing Golf Club and University Ridge) are located within the project area. Hawks Landing Golf Club is a full-service privately owned golf course that is occasionally used by the public while University Ridge is a course open to the public. Flagstone Park is located south of Midtown Road off County M, within the project area. The park has eleven acres and features a basketball court, playground and a mowed open field. Dane County Parkland is located along the eastern side of County M adjacent to Flagstone Park. Access to the Ice Age National Scenic Trail is provided near Flagstone Park and winds through the Dane County Parkland.</p>
h. Forestry	There are woodlands within the project area that are under private ownership. It is unknown if wood harvesting activity takes place in these areas.

According to commodity flow data compiled by Global Insight in 2007, approximately 8.1 million tons of goods were shipped into Dane County and 8.5 million tons of goods were shipped out of the county. Inbound commodities were valued at \$17.7 billion and outbound commodities were valued at \$20.8 billion.

**2. Discuss the economic advantages and disadvantages of the proposed action and whether advantages would outweigh disadvantages. Indicate how the project would affect the characteristics described in item 1 above:**

The proposed action will have several economic benefits in comparison to the existing conditions:

- Improve traffic flow and address congestion for local and regional travelers that are in the area for shopping, recreation and jobs
- Improve the flow of goods and services between communities
- Accommodate future neighborhood development identified in neighborhood plans
- Accommodate future forecasted traffic volumes

Disadvantages identified by the proposed action:

- Land acquisition
- Temporary disruptions during construction
- Cause slight indirection or delay due to right-in/right-out movements
- Requires a major capital investment that could not be expended elsewhere

The proposed action will improve the flow of goods and services between communities.

**3. What effect will the proposed action have on the potential for economic development in the project area?**

- The proposed project will have no effect on economic development.  
 The proposed project will have an effect on economic development.  
 Increase, describe:

Urban service areas are those areas in and around existing communities which are most suitable for urban development and capable of being provided with a full range of urban services. The urban service area boundaries represent the outer limits of planned urban growth over a long-term planning period. The project corridor is within this urban service area. Because of the amount of vacant and agricultural land in the project area, substantial development is planned and outlined in the various plans listed on page 2:54.

One planned development adjacent to the project corridor is the University Research Park Phase II development at Junction Road and County M. This University of Wisconsin project promotes the new urbanist design, which strives for environmentally friendly, walkable neighborhoods with small lot sizes. The planned site is approximately 270 acres bordered by Mineral Point and South Pleasant View Roads and County M. The expansion will include 64-sites for science and technology buildings and a mix of commercial and residential land uses. (*Exhibit 7: Pioneer Neighborhood Development Plan and University Research Park*). The development will support approximately 8,000 jobs at full build-out.

Epic Systems Corporation is located on the far west side of the City of Verona south of County PD, approximately 1.5 miles west of County M. The company currently employs 9,400+ and attracts approximately 1,000 contractors and an additional 1,000 visitors per day at the Verona campus. This development is projected to continue to grow and upon full build-out, the Verona campus could reach 11,000 employees.

The neighborhood plans for the areas adjacent to the corridor outline planned areas for economic development.

The proposed action will provide a roadway corridor that is capable of handling the traffic that will increase as a result of this planned development. Travel in and near the area is expected to be more efficient, safer, and more convenient for people in motor vehicles, on buses, on bicycles, and walking due to the construction of additional travel lanes, dedicated bicycle lanes, a multi-use path, and sidewalks.

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**Factor Sheet A-3**

Alternative: Preferred Alternative	Total Length of Center Line of Existing Roadway 2.86 miles
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

**1. Total acquisition interest, by type of agricultural land use:**

Type of Land Acquired From Farm Operations	Type of Acquisition (acres)		Total Area Acquired (acres)
	Fee Simple	Easement	
Crop land and pasture	11.6	9.1	20.7
Woodland	1.5	1.4	2.9
Land of undetermined or other use (e.g., wetlands, yards, roads, etc.)	3.6	2	5.6
<b>Totals</b>	<b>16.7</b>	<b>12.5</b>	<b>29.2</b>

**2. Indicate number of farm operations from which land will be acquired:**

Acreage to be Acquired	Number of Farm Operations
Less than 1 acre	1
1 acre to 5 acres	4
More than 5 acres	3

Effects to farm operations are expected to be minor and will include strip acquisition of property for right of way conversion of County M.

**3. Is land to be converted to highway use covered by the Farmland Protection Policy Act?**

- No
  - The land was purchased prior to August 6, 1984 for the purpose of conversion.
  - The acquisition does not directly or indirectly convert farmland.
  - The land is clearly not farmland
  - The land is already in, or committed to urban use or water storage.
- Yes (This determination is made by the Natural Resources Conservation Service (NRCS) via the completion of the Farmland Impact Conversion Rating Form, NRCS Form AD-1006)
  - The land is prime farmland, which is not already committed to urban development or water storage.
  - The land is unique farmland.
  - The land is farmland, which is of statewide or local importance as determined by the appropriate state or local government agency.

**4. Has the Farmland Impact Conversion Rating Form (AD-1006) been submitted to NRCS?**

- No - Explain.
- Yes
  - The Site Assessment Criteria Score (Part VI of the form) is less than 60 points for this project alternative.  
**Date Form AD-1006 completed.** January 20, 2012 - (See Attachment H – NRCS Coordination)  
 Since the site assessment scores are less than 60 points, the project is not subject to the Farmland Protection Policy Act.
  - The Site Assessment Criteria Score is 60 points or greater.  
 Date Form AD-1006 completed. \_\_\_\_\_

**5. Is an Agricultural Impact Statement (AIS) Required?**

- No
  - Eminent Domain will not be used for this acquisition
  - The project is a "Town Highway" project
  - The acquisition is less than 1 acre
  - The acquisition is 1-5 acres and DATCP chooses not to do an AIS. An AIS is not required for this project.
  - Other: DATCP has discretion over whether or not to prepare an AIS for projects that are completely within city or village boundaries. Since the county doesn't have eminent domain authority over the Board of Regents and the project is located within the city of Madison, this project does not require an AIS. A letter documenting this decision can be found in *Attachment B – Other Agency Coordination*, Department of Agriculture, Trade, and Consumer Protection Letter.
- Yes
  - Eminent Domain may be used for this acquisition.
  - The project is not a "Town Highway" project
  - The acquisition is 1-5 acres and DATCP chooses to do an AIS.
  - The acquisition is greater than 5 acres

**6. Is an Agricultural Impact Notice (AIN) Required?**

- No, the project is not a State Trunk Highway Project - AIN not required but complete questions 7-16.
- Yes, the project is a State Trunk Highway Project - AIN may be required. (See *Attachment R – Agricultural Impact Notice*).

Is the land acquired "non-significant"?

- Yes - (All must be checked) An AIN is not required but complete questions 7-16.
  - Less than 1 acre in size
  - Results in no severances
  - Does not significantly alter or restrict access
  - Does not involve moving or demolishing any improvements necessary to the operation of the farm
  - Does not involve a high value crop
- No
  - Acquisition 1 to 5 acres - AIN required. Complete Pages 1 and 2, Form DT1999, (Pages 1 and 2, Figure 1, Procedure 21-25-30.)  
**See Attachment R – Agricultural Impact Notice**
  - Acquisition over 5 acres - AIN required. Complete Pages 1, 3 and 4, Form DT1999. (Pages 1, 3 and 4, Figure 1, Procedure 21-25-30)

**If an AIN is completed, do not complete the following questions 7-16.**

Factor Sheet B-1: City of Madison

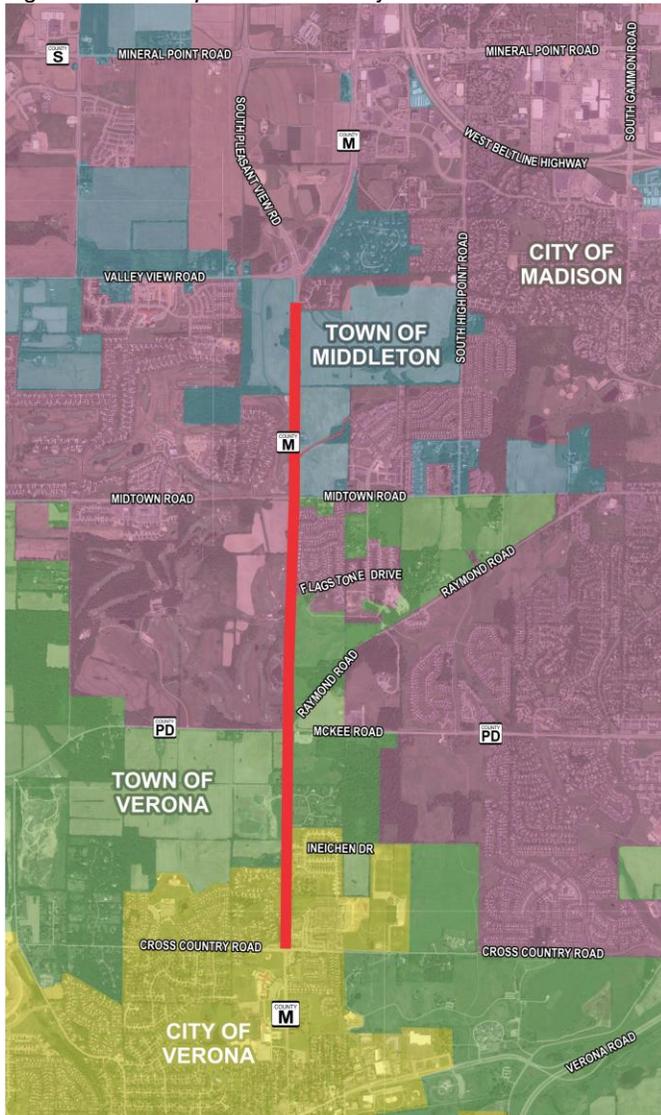
Alternative: Preferred Alternative	Total Length of Center Line of Existing Roadway 2.86 miles
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

1. Give a brief description of the community or neighborhood affected by the proposed action:

Name of Community/Neighborhood:  
City of Madison

The City of Madison is the capital of Wisconsin and the state's second largest city with a population of 233,209 according to Census 2010. Madison is a center for government-based activities and a national leader in medical research. Several large worldwide companies have main branches or headquarters in the city. Madison is home to the University of Wisconsin-Madison, Dane County's largest employer. The red line identifies the project area in *Figure 27 - Municipalities in the Project Area*. The City of Madison and City of Verona have a boundary agreement at County PD. This factor sheet includes elements of the proposed action north of County PD. See additional B-1 Factor Sheets on following pages for additional community descriptions.

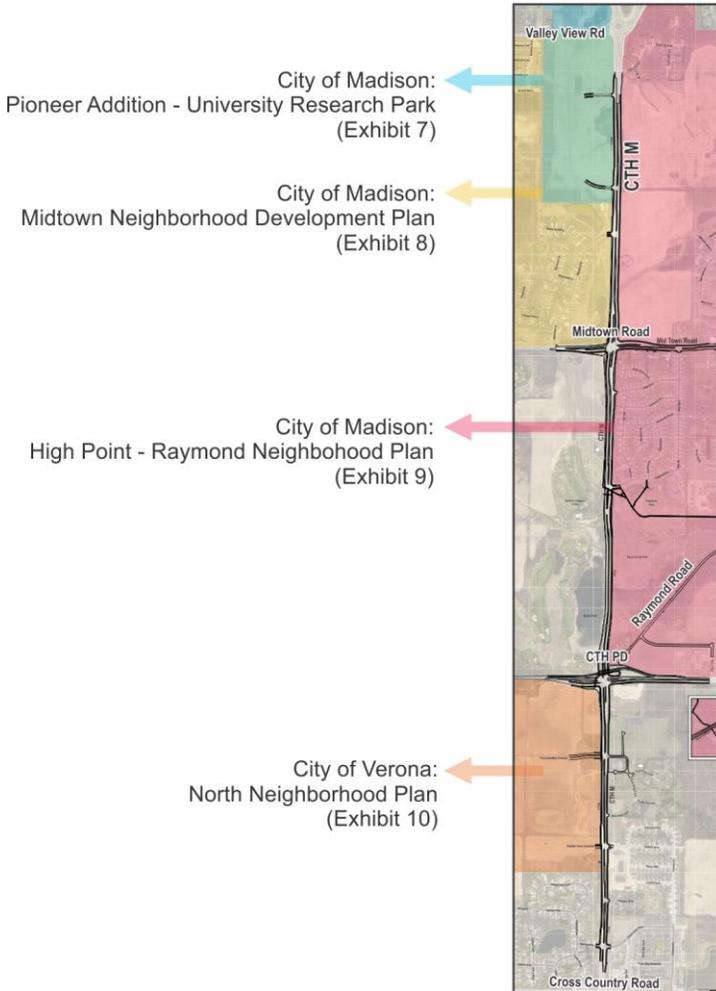
Figure 27 - Municipalities in the Project Area



Between 2000 and 2010, the city added 25,155 residents, an increase of 12.1%. During this same period, Dane County grew by 61,547 or 14.4% while the state of Wisconsin grew by 323,311 or 6.0%. Between 2010 and 2035, the City of Madison is projected to grow by 24.6 percent to 290,500 residents while Dane County's population is projected to grow by 34 percent to 653,900.

High Point-Raymond, Midtown and Pioneer Neighborhoods are adjacent to County M and are located within the City of Madison. *Figure 26 - Neighborhood Plans Adjacent to County M Project Area* shows the location of the neighborhood plans in relation to County M. The neighborhood plans can be found in *Exhibit 7 – Pioneer Neighborhood Development Plan with University Research Park – City of Madison*, *Exhibit 8: Midtown Neighborhood Development Plan – City of Madison*, and *Exhibit 9: High Point – Raymond Neighborhood Development Plan – City of Madison*,

Figure 26 - Neighborhood Plans Adjacent to County M Project Area



The proposed action will accommodate planned growth and future roads serving these neighborhoods. Traffic flow and safety are expected to improve in this area for all users in vehicles, bicyclists, and pedestrians.

Neighborhood	Size of Neighborhood (ac)	Acreage/Percent in Municipality	Population of Neighborhood upon build out	Percent Build-out completed	Existing Parkland	Proposed Additional Parkland
<b>High Point-Raymond Neighborhood</b>	1,290 acres	60.7 acres – 4.7%	11,356	47.3%	93.1 acres	19.1 acres
<b>Midtown Neighborhood</b>	574 acres	550 acres - 95.7%	7,847	30.3%	18.3 acres	29.3 acres
<b>Pioneer Neighborhood</b>	1,403 acres	841.5 acres – 60%	10,758	1.6%	6.6 acres	39.3 acres

Source: City of Madison

Incorporated  
 Yes  No

Total Population:  
233,209 (2010)

#### Demographic Characteristics

Census Year 2010	% of Population
Group A: Owner-occupied housing	50,555 – 46.5%
Group B: White Population	184,030 – 78.9%
Group C: 65 years of age and over	22,383 – 9.6%
Group D: Households with individuals under 18 years old	220 – 19.6%

#### 2. Identify and discuss existing modes of transportation and their importance within the community or Neighborhood:

The primary mode of transportation within the community includes automobile and truck travel for local and regional trips on local roadways. Average Annual Daily Traffic (AADT) in 2013 on County M in the City of Madison reached 19,700 vehicles per day north of Midtown Road, and 20,500 vehicles per day south of Midtown Road in 2015. Midtown Road east of County M reached 6,000 vehicles per day. West of County M, Midtown Road carried 5,600 vehicles per day. The AADT in 2012 on County PD reached 12,000 vehicles per day east of County M and 9,500 vehicles per day west of County M.

City-wide, residents and commuters rely heavily on bicycles. In 2015, Dane County reported having 116 miles of bike routes, 133 miles of bike lanes, 55 miles of bike paths and 5 miles of wide curb lanes. There are numerous touring, racing, and off-road bicycle clubs in Dane County as well as various bicycle organizations. Bicycle facilities in and near the project area are sub-standard, incomplete, or not safe so few pedestrians and bicyclists currently use the corridor.

The Ice Age National Scenic Trail crosses the County M corridor near Flagstone Drive and the OJ Noer Turf Grass Research Facility. This is a pedestrian facility and predominately an off-road hiking path.

Dane County Regional Airport is the second largest airport in the state and is located approximately ten nautical miles northeast of the project area. The airport is a joint civil-military commercial airport with three runways in operation. Middleton Municipal Airport is located approximately five miles northwest of the project, in the city of Middleton. The airport has two runways in operation.

#### 3. Identify and discuss the probable changes resulting from the proposed action to the existing modes of transportation and their function within the community or neighborhood:

Minor changes in automobile and truck traffic patterns on the local road system are anticipated due to the implementation of the Proposed Action. The changes are anticipated to reduce travel times to and from most locations within the project area.

Bicycle and pedestrian facilities were recently completed north of the project area through the County M corridor. These facilities are constructed between the Valley View Roundabout at the north project limits to Mineral Point Road north of the project. Bicycle and pedestrian accommodations via a stand-alone multi-use path along County M will connect from Mineral Point Road north of the project limits to the City of Verona at the south limits. The connections and improved facilities will provide a safer, more efficient bicycling/running/walking experience. These facilities when completed will likely increase the amount of persons using these modes of transportation for leisure and for commuting to and from work.

Currently, there are no Metro Transit bus routes that use this corridor but additional routes to city service are anticipated in the future. A few school bus routes use the County M corridor, but there are no scheduled stopping points on County M. This is not likely to change.

#### 4. Briefly discuss the proposed action's direct and indirect effect(s) on existing and planned land use in the community or neighborhood:

See Attachment K – Indirect Effects Prescreening. The project will not likely result in significant direct or indirect effects as defined by NEPA.

**5. Address any changes to emergency or other public services during and after construction of the proposed project:**

No changes to emergency services or other public services are expected from the construction. All traffic movements will remain open and maintained during all phases of the proposed action. Coordination with emergency services will be necessary throughout the construction process as traffic congestion will remain at high levels through construction at peak hour times and delays due to construction equipment are possible.

Upon completion of the proposed action, emergency response times are expected to improve as traffic will flow closer to posted speeds and traffic queues in the peak hours will reduce along all intersections of County M.

**6. Describe any physical or access changes that will result. This could include effects on lot frontages, side slopes or driveways (steeper or flatter), sidewalks, reduced terraces, tree removals, vision corners, etc.:**

The lands needed for construction of the road widening and sidewalks will result in the shortening of lot frontages in a few areas. Removal of brush and trees will be required in some locations. The disturbed areas in the curb terrace and near the sidewalk or road edge will be restored. Slopes will closely matching existing; however, areas of cut and fill will be expanded into adjacent properties.

Access changes as a result of the proposed construction include:

- Raymond Road connection to County PD will be removed. A new roadway to connect Raymond Road to Meriter Way will change the existing right-in, right-out access to full access at County PD
- Private residential driveways typically will be right-in/right-out. Most of the driveways are on Midtown Road. Left turn lanes and a median break are provided at the intersection of Midtown Road and Mica Drive and also the intersection of Midtown Road and Waldorf Boulevard. These locations will provide a location for U-Turns and access to the opposite lane direction of Midtown Road for these residents. Driveways on Raymond Road will continue to have full access to Raymond Road.

Access changes can also be found in *Figure 10 - Access Changes* located in Basic Sheet 2.

**7. Indicate whether a community/neighborhood facility will be affected by the proposed action and indicate what effect(s) this will have on the community/neighborhood:**

Flagstone Park is the only City of Madison neighborhood facility along the corridor. No impacts to the park will occur as a result of the proposed action. The Ice Age National Scenic Trail runs through the Dane County parkland south of Flagstone Park. The proposed action will acquire some land from the Dane County parkland area, but will not change the function of the open space or the Ice Age National Scenic Trail.

**8. Identify and discuss factors that residents have indicated to be important or controversial:**

A concern regarding access to Raymond Road from County PD received a lot of feedback. The proposed action design plans to convert Raymond Road to a cul-de-sac. Residents felt the need to keep a connection to Raymond Road from County PD for emergency response and to avoid indirect access to a growing neighborhood. The revised design includes a new road connecting Raymond Road to Meriter Way, which provides access to County PD east of the County M & County PD intersection. This new access point provides full access to both eastbound and westbound County PD whereas the old access near the County M/County PD intersection was restricted to right-in and right-out access to only westbound County PD. See *Figure 7 – Preferred Alternative, South Phase*. This solution has received positive feedback from the locals in this area at public meetings. It also is consistent with the proposed plans within the High Point – Raymond Neighborhood Development Plan.

Alternatives for each of the major County M intersections were presented to residents at public meetings so their comments and concerns could be incorporated into the decision making process. Each alternative is discussed in Basic Sheet 2. The preferred alternatives received general support from the public.

Public meeting participants also indicated issues such as; assessments, project funding, traffic staging during construction, sidewalk location and maintenance, safety issues, Madison Metro ridership, noise, emergency response times, Ice Age National Scenic Trail, signage, maintenance of the intersections, and access. There was concern about the construction of sound walls, their aesthetics, and who would pay for them.

WisDOT's policies and procedures for evaluating noise barrier feasibility and reasonableness are set forth in Chapter 23 of the FDM and in Wisconsin Administrative Rules TRANS 405. The factors for determining noise barrier feasibility and reasonableness indicated that sound walls were not warranted and are not being proposed in any location along the corridor because costs exceed \$30,000 per benefited receptor. To be considered a benefit, an impacted receptor location must receive a minimum of eight decibel

noise reduction.

See Basic Sheet 2, question 10 for an expanded summary of public concerns.

**9. List any Community Sensitive Design considerations, such as design considerations and potential mitigation measures.**

Specific mitigation elements of the design and environmental commitments for the preferred alternative are directly related to input and feedback from project stakeholders throughout the process. These include:

Ice Age National Scenic Trail – The project will include trail sign enhancement, fencing for access control, and route locating as part of the proposed improvement. These details are further discussed in Factor Sheet B-8 Ice Age National Scenic Trail, design considerations were requested by the National Ice Age Trail Alliance and are included as a result of coordination with the Ice Age Trail Alliance and National Park Service.

University Ridge Golf Course – The preferred alternative was designed to minimize encroachment of the highway onto land adjacent to one of the greens for the golf course. The project team worked with University Ridge Staff to develop a design that would avoid having to re-route a golf cart path between the highway and golf green. The proposed improvement also will include fencing to separate golfers and spectators from the highway facility. These elements are further discussed in Factor Sheet B-8 University Ridge Golf Course and are included in the proposed improvement as a result of coordination with staff from University Ridge.

OJ Noer Turf Research Facility – The preferred alternative maintains full access to the OJ Noer Turf Research facility (left-in and left-out access). The design also avoids and minimizes impact to turf research plots and associated irrigation facilities. These design elements were coordinated with staff from the OJ Noer Turf Research facility. The design was left flexible and open to the addition of fencing to separate the adjacent multi-use path from the turf research facility.

Hawks Landing Golf Course – The preferred alternative minimizes permanent impacts to one of the tee boxes for the golf course. The tee box is located adjacent to the existing highway right of way and relocation of this tee box is not feasible. The preferred alternative design includes a box culvert underpass that will be adjacent to the tee box and maintain vertical and horizontal separation from the tee box.

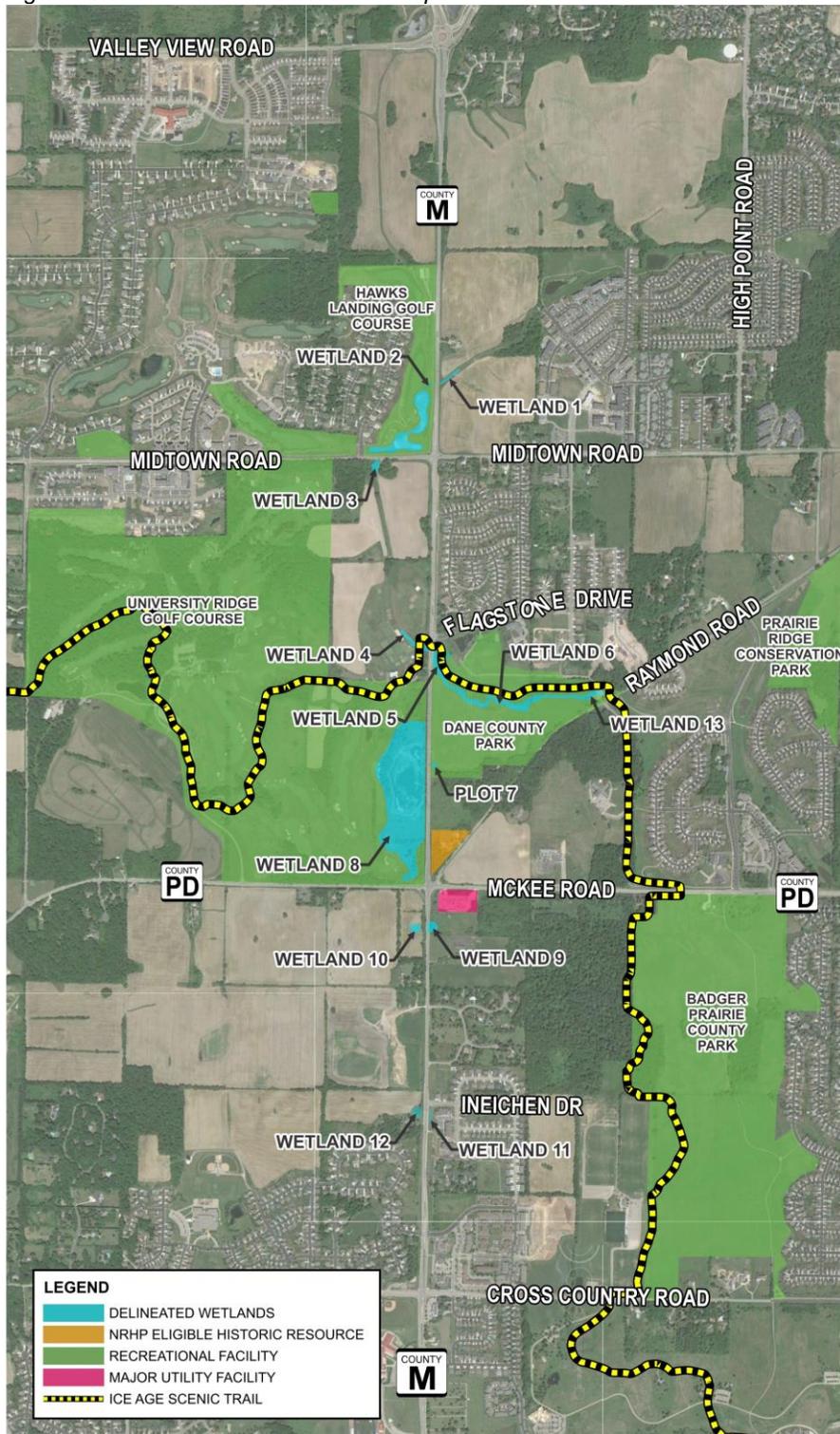
**Community Sensitive Design**

Aesthetics – The preferred alternative could include aesthetic enhancements to structures, including bridges and retaining walls, which are used to improve safety and mobility while limiting impacts to the surrounding environment. These aesthetic enhancements will be included provided the local municipalities enter into a state municipal agreement (SMA) through which they will be responsible for maintenance of the aesthetic enhancements. An SMA was signed for this project on April 9, 2015. The aesthetic design will match the aesthetic structural elements found within the project corridor and throughout the City of Madison. These include decorative crash tested parapet walls, retaining wall form liners, and concrete staining. The City of Verona and Dane County provided input and concurrence on the use of the City of Madison standard aesthetics.

**10. Indicate the number and type of any residential buildings that will be acquired because of the proposed action. If either item a) or b) is checked, items 11 through 18 do not need to be addressed or included in the environmental document. If item c) is checked, complete items 11 through 18 and attach the Conceptual Stage Relocation Plan to the environmental document:**

- a.  None identified.
- b.  No occupied residential building will be acquired as a result of this project. Provide number and description of non-occupied buildings to be acquired.
- c.  Occupied residential building(s) will be acquired – One single family occupied residence. See Town of Verona Factor Sheet

Figure 28 - Environmental Constraints Map



**Factor Sheet B-1: City of Verona**

Alternative: Preferred Alternative	Total Length of Center Line of Existing Roadway 2.86 miles
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

**1. Give a brief description of the community or neighborhood affected by the proposed action:**

Name of Community/Neighborhood:  
 City of Verona

Nicknamed "Hometown USA", the City of Verona is known for a strong sense of community, and business friendly climate. Verona is a center for recreation in the region as it serves a crossroads for the Military Ridge State Trail and the National Ice Age National Scenic Trail. Hundreds of acres of parkland are located around the city. A map of the city limits can be found in Factor Sheet B-1: City of Madison on *Figure 27 - Municipalities in the Project Area*.

Verona is one of the fastest growing cities in the State of Wisconsin. Between 2000 and 2010, the city added 3,567 residents, an increase of 50.1%. During this same period, Dane County grew by 61,547 or 14.4% while the state of Wisconsin grew by 323,311 or 6.0%.

The City of Verona is home to the Epic Systems Corporation world headquarters, located 1.25 miles west of County M on Cross Country Road. Epic Systems Corporation is a powerhouse tech company with over 9,400+ employees as of 2015 and is situated on 811 acres across five campuses. Epic Systems Corporation is among the largest employers in Dane County.

The North Neighborhood, Gateway Estates, Harmony Hills, and Prairie Oaks Neighborhoods are located within the City of Verona. *Figure 26 - Neighborhood Plans Adjacent to County M Project Area* shows the location of the neighborhood plans in relation to County M. The neighborhood plan for the North Neighborhood can be found in *Exhibit 10: North Neighborhood Plan – City of Verona*.

Neighborhood	Size of Neighborhood (ac)	Acreage/Percent in Municipality
North Neighborhood – City of Verona	1,600 acres	66 acres – 4.2 percent
Gateway Estates Neighborhood	57 acres	57 acres – 100 percent
Harmony Hills Neighborhood	75 acres	45 acres – 60 percent
Prairie Oaks Neighborhood	36 acres	36 acres – 100 percent

A future neighborhood collector street is proposed between County M and Nine Mound Road (west of County M). This street is included in the City of Verona's adopted North Neighborhood plan. The realignment of Stony Ridge Circle on the east side of County M is included in the proposed action and will line up with the planned location of this new street. The realignment of Stony Ridge Circle will allow for street connectivity and full access to County M for the existing neighborhood on Stony Ridge Circle and the planned new collector street.

Incorporated  
 Yes    No

Total Population  
 10,619 (2010)

Demographic Characteristics

Census Year 2010	% of Population
Group A: Owner-occupied housing	67.3%
Group B: White Population	93.3%
Group C: 65 years of age and over	9.8%
Group D: Households with individuals under 18 years old	36.4%

## **2. Identify and discuss existing modes of transportation and their importance within the community or**

### **Neighborhood:**

The primary mode of transportation within the community includes automobile and truck travel for local and regional trips on local roadways. Average Annual Daily Traffic (AADT) on County M in the City of Verona reached 14,300 vehicles per day south of County PD in 2012. Cross Country Road east of County M reached 5,800 vehicles per day while west of County M, Cross Country Road held 4,700 vehicles per day.

County M is a critical north/south roadway connecting the City of Madison and the City of Verona. This road is one of the few north/south connectors with the next closest road (US 18/151/Verona Road located over three miles away. US 18/151 is identified as a Backbone Route in WisDOT's Connections 2030 Plan and the only other major roadway connecting Madison to Verona.

US 18/151/Verona Road is operating at unacceptable levels with higher crash rates than other comparable highways across the state. As traffic volumes on this corridor grow, congestion and crashes are expected to increase and delays are expected to become longer.

County PD is a critical east/west roadway also connecting the Verona with Madison and also the City of Fitchburg. County PD is the primary access to the Epic Systems Campus on the north side of Verona, west of the County M corridor.

As a result of the proposed action, the roadway expansion and increased capacity will provide better access to local neighborhoods and businesses, and enhanced mobility for local and regional travelers.

Residents and commuters rely heavily on bicycles. In 2015, Dane County reported having 116 miles of bike routes, 133 miles of bike lanes, 55 miles of bike paths and 5 miles of wide curb lanes. There are numerous touring, racing, and off-road bicycle clubs in Dane County as well as various bicycle organizations.

Within the City of Verona, a short bicycle path is located within the Harmony Hills Neighborhood along Ineichen Drive and continues south along Lucerne Drive to Harmony Hill Park. Additional bicycle facilities in and near the project area are lacking and few pedestrians and bicyclists use the County M or County PD corridor.

The 40-mile Military Ridge State Trail bisects the City of Verona and connects the City of Fitchburg to the east and the communities of Dodgeville, Ridgeway, Barneveld, Blue Mounds, Mount Horeb, Klevenville, and Riley to the west. Most of the trail follows the former Chicago and North Western Railroad corridor that has a gentle grade of only 2-5 percent. Approximately 94 percent of the trail is crushed stone, while another 6 percent is asphalt.

Dane County Regional Airport is the second largest airport in the state and is located approximately ten nautical miles northeast of the project area. The airport is a joint civil-military commercial airport with three runways in operation. Dane County Regional Airport is an important transportation hub for employees at Epic Systems Corporation with many employees using the airport on a weekly basis to access off-site project locations. Middleton Municipal Airport is located approximately five miles northwest in the City of Middleton. The airport has two runways in operation.

## **3. Identify and discuss the probable changes resulting from the proposed action to the existing modes of transportation and their function within the community or neighborhood:**

Minor changes in automobile and truck traffic patterns on the local road system are anticipated due to the implementation of the Proposed Action. The changes are anticipated to reduce travel times to and from most locations within the project area.

Bicycle and pedestrian facilities were recently completed north of the project area. These facilities are constructed between the Valley View Roundabout at the north project limits to Mineral Point Road north of the project. Bicycle and pedestrian accommodations via a stand-alone multi-use path along County M will connect from Mineral Point Road on the north to the City of Verona and the existing bike path network in the Harmony Hills neighborhood. The connections and improved facilities will provide a safer, more efficient bicycling/running/walking experience. These facilities when completed will likely increase the amount of persons using these modes of transportation for leisure, travel to Verona schools, and for commuting to and from work. A proposed multi-use path system is also proposed along the County PD corridor. The path will be completed with this project within the project limits. A future, as yet not programmed project on County PD west of the project will extend this path system to Epic Systems Corporation.

Currently, there are no bus routes that use this corridor but additional routes to city service are anticipated in the future. The City of Verona and Epic Systems Corporation are currently working with Metro Transit to improve the commuter express service to the Epic Systems campus and a future route would likely use County M. A few school bus routes use the County M corridor, but there are no scheduled stopping points on County M. This is not likely to change.

**4. Briefly discuss the proposed action's direct and indirect effect(s) on existing and planned land use in the community or neighborhood:**

See Attachment K – Indirect Effects Prescreening. The project will not likely result in significant direct or indirect effects as defined by NEPA.

**5. Address any changes to emergency or other public services during and after construction of the proposed project:**

No changes to emergency services or other public services are expected from the construction. All traffic movements will remain open and maintained during all phases of the proposed action. Coordination with emergency services will be necessary throughout the construction process as traffic congestion will remain at high levels through construction at peak hour times and delays due to construction equipment are possible.

Upon completion of the proposed action, emergency response times are expected to improve as traffic will flow closer to posted speeds and traffic queues in the peak hours will reduce along all intersections of County M.

**6. Describe any physical or access changes that will result. This could include effects on lot frontages, side slopes or driveways (steeper or flatter), sidewalks, reduced terraces, tree removals, vision corners, etc.:**

The lands needed for construction of the road widening and sidewalks will result in the shortening of lot frontages in a few areas. Removal of brush and trees will be required in some locations. The disturbed areas in the terrace and near the sidewalk or road edge will be restored. Slopes will closely matching existing; however, areas of cut and fill will be expanded into adjacent properties.

There are no access changes because of the proposed action in the City of Verona (*See Figure 8 - Preferred Alternative, South Phase and Figure 10 - Access Changes*).

- Full access maintained at Bering Drive/Prairie Oaks Drive and left-turn lanes maintained
- Full access for Harmony Drive maintained and a left-turn lane provided
- Full access for Ineichen Drive maintained and a left-turn lane provided
- Private driveways typically will be right-in/right-out

**7. Indicate whether a community/neighborhood facility will be affected by the proposed action and indicate what effect(s) this will have on the community/neighborhood:**

The existing multi-use path along Ineichen Drive will be modified at its current terminal at County M to include a crossing of County M and connection to the proposed full corridor path system. This modification will include construction activities which will have short term effects on the use of the path.

**8. Identify and discuss factors that residents have indicated to be important or controversial:**

There were several residents with home-sites on Harmony Drive in attendance. All participants supported maintaining full access to this cul-de-sac as the only access to the street is via County M. After Public Information Meeting #1, the intersection was analyzed and full access will be provided at this location. See *Figure 9 – Access Changes* for a map of this area.

The City of Verona's North Neighborhood Plan identifies a proposed east/west collector road that connects County M (at Stony Ridge Circle) to Nine Mound Road. The city, with input from residents, has identified a desire to locate this future road approximately 300 feet north of the existing Stony Ridge Circle north intersection with County M. The realigned road will provide full access to County M for the West Madison Bible Church and the existing residential neighborhood. Existing Stony Ridge Circle will be reconstructed as a cul-de-sac. (*See Exhibit 10: North Neighborhood Plan – City of Verona for more information*).

The desire for improved bicycle and pedestrian accommodations connecting Madison to Verona is important not only for recreation but also for those wishing to use this form of transportation as a way to commute to and from work. The connection will provide continuity between the trail network and improved facilities will provide a safer, more efficient bicycling/running/walking experience. These facilities when completed will likely increase the amount of persons using these modes of transportation for leisure and for commuting to and from work.

Participants also indicated issues such as; assessments, sound wall, project funding, traffic staging during construction, sidewalk location and maintenance, safety issues, Madison Metro ridership, noise, emergency response times, Ice Age National Scenic Trail, signage, maintenance of the intersections, and access.

**9. List any Community Sensitive Design considerations, such as design considerations and potential mitigation measures.**

Specific mitigation elements of the design and environmental commitments for the preferred alternative are directly related to input and feedback from project stakeholders throughout the process. These include:

Intersection Design – The selection of the Westbound Underpass considered the City of Verona’s community planning for development in the southwest quadrant of the County M and County PD intersection. Designs that were not compatible with this planned development were not selected as the preferred alternative.

**Community Sensitive Design**

Aesthetics – The preferred alternative could include aesthetic enhancements to structures, including bridges and retaining walls, which are used to improve safety and mobility while limiting impacts to the surrounding environment. These aesthetic enhancements will be included provided the local municipalities enter into a state municipal agreement (SMA) through which they will be responsible for maintenance of the aesthetic enhancements. An SMA was signed for this project on April 9, 2015. The aesthetic design will match the aesthetic structural elements found within the project corridor and throughout the City of Madison. These include decorative crash tested parapet walls, retaining wall form liners, and concrete staining. The City of Verona and Dane County provided input and concurrence on the use of the City of Madison standard aesthetics.

**10. Indicate the number and type of any residential buildings that will be acquired because of the proposed action. If either item a) or b) is checked, items 11 through 18 do not need to be addressed or included in the environmental document. If item c) is checked, complete items 11 through 18 and attach the Conceptual Stage Relocation Plan to the environmental document:**

- a.  None identified.
- b.  No occupied residential building will be acquired as a result of this project. Provide number and description of non-occupied buildings to be acquired.
- c.  Occupied residential building(s) will be acquired – One single family occupied residence. See Town of Verona Factor Sheet

**Factor Sheet B-1: Town of Verona**

Alternative: Preferred Alternative	Total Length of Center Line of Existing Roadway 2.86 miles
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

**1. Give a brief description of the community or neighborhood affected by the proposed action:**

Name of Community/Neighborhood:  
 Town of Verona

The Town of Verona lies on the southwestern edge of Madison, and is home to several large parks and recreational opportunities. The Ice Age National Scenic Trail runs through the northern end of the town. A map of the town limits can be found in Factor Sheet B-1: City of Madison on *Figure 27 - Municipalities in the Project Area*.

The Town of Verona has experienced a decline in population. As of the 2000 census, there were 2,153 residents compared to the 1,948 reported in the 2010 counts, a loss of approximately 9.5 percent. During this same period, Dane County grew by 61,547 or 14.4%.

Incorporated  
 Yes  No

Total Population  
 1,948 (2010)

Demographic Characteristics

Census Year 2010	% of Population
<b>Group A: Owner-occupied housing</b>	1,722 – 88.4%
<b>Group B: White Population</b>	1,876 – 96.3%
<b>Group C: 65 years of age and over</b>	278 – 14.3%
<b>Group D: Households with individuals under 18 years old</b>	220 – 28.2%

**2. Identify and discuss existing modes of transportation and their importance within the community or neighborhood:**

The primary mode of transportation within the community includes automobile and truck travel for local and regional trips on local roadways. Average Annual Daily Traffic (AADT) on County M in the Town of Verona reached 14,300 vehicles per day south of County PD in 2012 and 20,500 north of County PD in 2015.

County M is a critical north/south roadway connecting the City of Madison and the City of Verona through the Town of Verona. This road is one of the few north/south connectors with the next closest road (US 18/151/Verona Road located over three miles away. US 18/151 is identified as a Backbone Route in WisDOT’s Connections 2030 Plan and the only other major roadway connecting Madison to Verona. US 18/151/Verona Road is operating at unacceptable levels with higher crash rates than other comparable highways across the state. As traffic volumes on this corridor grow, congestion and crashes are expected to increase and delays are expected to become longer.

As a result of the proposed action, the roadway expansion and increased capacity will provide better access to local neighborhoods and businesses, and enhanced mobility for local and regional travelers.

Residents and commuters rely heavily on bicycles. In 2015, Dane County reported having 116 miles of bike routes, 133 miles of bike lanes, 55 miles of bike paths and 5 miles of wide curb lanes. There are numerous touring, racing, and off-road bicycle clubs in Dane County as well as various bicycle organizations. Bicycle facilities in and near the project area are sub-standard and few pedestrians and bicyclists use the corridor. There are no specific bicycle facilities in the Town of Verona. A portion of the Ice Age National Scenic Trail is in the Town of Verona and crosses the County M corridor near Flagstone Drive and the OJ Noer Turf Grass Research Facility.

Dane County Regional Airport is the second largest airport in the state and is located approximately ten nautical miles northeast of the project area. The airport is a joint civil-military commercial airport with three runways in operation. Middleton Municipal Airport is located approximately five miles northwest of the City of Middleton. The airport has two runways in operation.

**3. Identify and discuss the probable changes resulting from the proposed action to the existing modes of transportation and their function within the community or neighborhood:**

The implementation of the Proposed Action will not be likely to cause substantial changes in the mode of travel used in the Town of Verona. There will be some minor changes in automobile and truck traffic patterns on the local road system. The changes are anticipated to reduce travel times to and from most locations within the project area.

The proposed multi-use path will cross through a portion of the Town of Verona and will likely increase the number of pedestrians and bicyclists that use the facility. Bicycle and pedestrian facilities were recently completed north of the project area through the County M corridor. These facilities are constructed between the Valley View Roundabout at the north project limits to Mineral Point Road north of the project. Bicycle and pedestrian accommodations via a stand-alone multi-use path along County M will connect from Mineral Point Road on the north to the City of Verona. The connections and improved facilities will provide a safer, more efficient bicycling/running/walking experience. These facilities when completed will likely increase the amount of persons using these modes of transportation for leisure and for commuting to and from work.

The town of will not be responsible for maintaining multi-use paths. Multi-use paths will be maintained by the City of Verona (south of County PD) and City of Madison (north of County PD).

**4. Briefly discuss the proposed action's direct and indirect effect(s) on existing and planned land use in the community or neighborhood:**

See Attachment K – Indirect Effects Prescreening. The project will not likely result in significant direct or indirect effects as defined by NEPA.

**5. Address any changes to emergency or other public services during and after construction of the proposed project:**

No changes to emergency services or other public services are expected from the construction. All traffic movements will remain open and maintained during all phases of the proposed action. Coordination with emergency services will be necessary throughout the construction process as traffic congestion could reach high levels at peak hour times and delays for construction equipment are possible.

Upon completion of the proposed action, emergency response times are expected to improve as traffic will flow closer to posted speeds and traffic queues in the peak hours will reduce along all intersections of County M.

**6. Describe any physical or access changes that will result. This could include effects on lot frontages, side slopes or driveways (steeper or flatter), sidewalks, reduced terraces, tree removals, vision corners, etc.:**

The lands needed for construction of the road widening and sidewalks will result in the shortening of lot frontages in a few areas. Removal of brush and trees will be required in some locations. The disturbed areas in the terrace and near the sidewalk or road edge will be restored. Slopes will closely matching existing; however, areas of cut and fill will be expanded into adjacent properties. Storm water management ponds are anticipated along County M within Town of Verona. These ponds will control stormwater rates and assist in providing stormwater quality improvements.

Access changes because of the proposed construction include:

- Right-in/right-out access only at the south intersection of Stony Ridge Circle and County M
- Existing north intersection of Stony Ridge Circle and County M will be a cul-de-sac
- A new full access intersection on County M will be constructed approximately 300 feet north of the existing Stony Ridge north intersection. This new intersection will provide full access to the neighborhood along Stony Ridge Circle and will line up with the planned east-west collector through the City of Verona's North Neighborhood.
- Raymond Road connection to County PD will be removed. A new roadway to connect Raymond Road to Meriter Way will change the existing right-in, right-out access to full access at County PD
- Private driveways along County M and County PD will be right-in/right-out. Nearby median breaks with left turn lanes will provide a location for a legal U-turn and left out access for the affected driveways. Driveways on Raymond Road will maintain their full access to Raymond Road.

**7. Indicate whether a community/neighborhood facility will be affected by the proposed action and indicate what effect(s) this will have on the community/neighborhood:**

No impacts to community/neighborhood facilities in the Town of Verona are caused because of the proposed action.

**8. Identify and discuss factors that residents have indicated to be important or controversial:**

The desire for improved bicycle and pedestrian accommodations connecting Madison to Verona is important not only for recreation but also for those wishing to use this form of transportation as a way to commute to and from work. The connection will provide continuity between the trail network and improved facilities will provide a safer, more efficient bicycling/running/walking experience. These facilities when completed will likely increase the amount of persons using these modes of transportation for leisure and for commuting to and from work.

Participants also indicated issues such as; assessments, sound wall, project funding, traffic staging during construction, sidewalk location and maintenance, safety issues, Madison Metro ridership, noise, emergency response times, Ice Age National Scenic Trail, signage, maintenance of the intersections, and access.

**9. List any Community Sensitive Design considerations, such as design considerations and potential mitigation measures.**

Specific mitigation elements of the design and environmental commitments for the preferred alternative are directly related to input and feedback from project stakeholders throughout the process. These include:

Ice Age National Scenic Trail – The project will include trail sign enhancement, fencing for access control, and route locating as part of the proposed improvement. These details are further discussed in Factor Sheet B-8 Ice Age National Scenic Trail, design considerations were requested by the National Ice Age Trail Alliance and are included as a result of coordination with the Ice Age Trail Alliance and National Park Service.

Dane County Park – The project will include restoration of disturbed areas with native prairie vegetation and realigning of an existing wetland scrape that will be impacted by the project. These elements are further discussed in Factor Sheet B-8 Dane County Parkland and are included in the proposed improvement as a result of coordination with staff from Dane County Parks.

Access – The Town of Verona had concerns about access to Raymond Road with the proposed removal of the Raymond Road connection at County Highway PD. The inclusion of the new roadway between Raymond Road and Meriter Way is included in the preferred alternative as mitigation for this access change.

**Community Sensitive Design**

Aesthetics – The preferred alternative could include aesthetic enhancements to structures, including bridges and retaining walls, which are used to improve safety and mobility while limiting impacts to the surrounding environment. These aesthetic enhancements will be included provided the local municipalities enter into a state municipal agreement (SMA) through which they will be responsible for maintenance of the aesthetic enhancements. An SMA was signed for this project on April 9, 2015. The aesthetic design will match the aesthetic structural elements found within the project corridor and throughout the City of Madison. These include decorative crash tested parapet walls, retaining wall form liners, and concrete staining. The City of Verona and Dane County provided input and concurrence on the use of the City of Madison standard aesthetics.

**10. Indicate the number and type of any residential buildings that will be acquired because of the proposed action. If either item a) or b) is checked, items 11 through 18 do not need to be addressed or included in the environmental document. If item c) is checked, complete items 11 through 18 and attach the Conceptual Stage Relocation Plan to the environmental document:**

- a.  None identified.
- b.  No occupied residential building will be acquired as a result of this project. Provide number and description of non-occupied buildings to be acquired.
- c.  Occupied residential building(s) will be acquired. Provide number and description of buildings, e.g., single family homes, apartment buildings, condominiums, duplexes, etc.

**11. Anticipated number of households that will be relocated from the occupied residential buildings identified in item 10c, above:**

Total Number of Households to be Relocated. 1
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(Note that this number may be greater than the number shown in 10c) above because an occupied apartment building may have many households.)

a. Number by Ownership

Number of Households Living in Owner Occupied Building 1	Number of Households Living in Rented Quarters 0
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b. Number of households to be relocated that have.

1 Bedroom 0	2 Bedroom 0	3 Bedroom 1	4 or More Bedrooms 0
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c. Number of relocated households by type and price range of dwelling.

Number of Single Family Dwelling: 1	Price Range: \$200,000 – \$205,000
Number of Multi-Family Dwellings: 0	Price Range:
Number of Apartment: 0	Price Range:

**12. Describe the relocation potential in the community:**

a. Number of Available Dwellings

1 Bedroom n/a	2 Bedrooms n/a	3 Bedrooms 7	4 or More Bedrooms n/a
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b. Number of Available and Comparable Dwellings by Location

It is estimated that 7 three and four bedrooms single family homes are available in the Town of Verona and surrounding townships.
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c. Number of Available and Comparable Dwellings by Type and Price. (Include dwellings in price ranges comparable to those being dislocated, if any.)

Single Family Dwellings 7	Price Range Median Price: \$550,000
Multi-Family Dwellings: N/A	N/A
Apartments: N/A	N/A

**13. Identify all the sources of information used to obtain the data in item 12:**

- WisDOT Real Estate Conceptual Stage Relocation Plan
- Newspaper Listing(s)
- Multiple Listing Service (MLS)
- Other – Identify

**14. Indicate the number of households to be relocated that have the following special characteristics:**

- None identified.
- Yes - \_\_\_\_\_ total households to be relocated.

**15. Describe how relocation assistance will be provided in compliance with the WisDOT Relocation Manual or FHWA regulation 49 CFR Part 24:**

- Residential acquisitions and relocations will be completed in accordance with the “Uniform Relocation Assistance and Real

Property Acquisition Policies Act of 1970 (Uniform Act), as amended.” In addition to providing for payment of “Just Compensation” for property acquired, additional benefits are available to eligible displaced persons required to relocate from their residence. Some available benefits include relocation advisory services, reimbursement of moving expenses, replacement housing payments, and down payment assistance. In compliance with State law, no person would be displaced unless a comparable replacement dwelling would be provided. Federal law also requires that decent, safe, and sanitary replacement dwelling must be made available before any residential displacement can occur.

Compensation is available to all displaced persons without discrimination. Before initiating property acquisition activities, property owners would be contacted and given an explanation of the details of the acquisition process and Wisconsin’s Eminent Domain Law under Section 32.05, Wisconsin Statutes. Any property to be acquired would be inspected by one or more professional appraisers. The property owner would be invited to accompany the appraiser during the inspection to ensure the appraiser is informed of every aspect of the property. Property owners will be given the opportunity to obtain an appraisal by a qualified appraiser that will be considered by WisDOT in establishing just compensation. Based on the appraisal(s) made, the value of the property would be determined, and that amount offered to the owner.

Identify other relocation assistance requirements not identified above.

**16. Identify any difficulties or unusual conditions for relocating households displaced by the proposed action:**

There appears to be no unusual circumstances regarding the potential relocation. This project will have a minimal effect on the communities that remain after the relocation process. In addition, no disruption effects should exist, with the possible exception of the construction period. No known concentrations of predominant ethnic minority, elderly, or handicapped people are located within the study area.

**17. Indicate whether Special Relocation Assistance Service will be needed. Describe any special services or housing programs needed to remedy identified difficulties or unusual conditions noted in item #14 above:**

None identified

Yes - Describe services that will be required

**18. Describe any additional measures that will be used to minimize adverse effects or provide benefits to those relocated, those remaining, or to community facilities affected:**

No additional measures. *See Attachment A – Conceptual Stage Relocation Plan.*

**Factor Sheet B-1: Town of Middleton**

Alternative: Preferred Alternative	Total Length of Center Line of Existing Roadway 2.86 miles
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

**1. Give a brief description of the community or neighborhood affected by the proposed action:**

Name of Community/Neighborhood  
 Town of Middleton

The Town of Middleton is located in Dane County, bordering the City of Middleton on the west. The Wisconsin Statewide Comprehensive Outdoor Recreation Plan identifies the Town of Middleton as a Southern Gateway, meaning it is a varied region with a wide variety of recreational opportunities. Numerous parks fill the town, as well as a number of nature areas and conservancies. The town has focused on the preservation or development of high quality natural areas, parks, and trails. Residents and others utilize the town’s trails and roads for bicycling, hiking, and other activities. A map of the town limits can be found in Factor Sheet B-1: City of Madison on *Figure 27 - Municipalities in the Project Area*.

The Town of Middleton has a population of 5,877 in 2010. Between 2000 and 2010, the town added 1,283 residents, an increase of 21.8%. During this same period, Dane County grew by 61,547 or 14.4%.

The Town of Middleton continues to enjoy the semi-rural character and is home to several small businesses. The largest employers in the Town of Middleton employ no more than 49 employees.

Portions of the High Point-Raymond and Pioneer Neighborhoods are located in the Town of Middleton. The High Point-Raymond Neighborhood Development Plan identifies three new roads to be constructed east of County M between Valley View Road and Midtown Road to accommodate future (predominately-residential) developments. The access located approximately 500 feet north of County PD will include right-in/right-out access while the other planned locations will be constructed as full access with median breaks. Approximately 37 percent of Pioneer Neighborhood is located within the Town of Middleton.

The Town of Middleton has continued to shrink in area over the years, losing land through annexations to the cities of Madison and Middleton. The Town has been reduced in size from the original 23,040 acres to approximately 10,514 acres, which is less than half the area of a typical 36-square mile township.

Forty-one percent of the Town of Middleton is considered to be prime farmland according to the Natural Resources Conservation Service (NRCS) soil map data. Six percent of the Town of Middleton is potential prime farmland according to NRCS. Potential prime farmland is land that is suitable for farming when improved, for example by drainage, irrigation, or protection from flooding.

The Wisconsin Department of Revenue classifies two hundred-seventy parcels within the Town of Middleton as agriculture. These parcels comprise a total of 3,822 acres. Agricultural lands comprise 36 percent of the Town’s total land area, and 0.3 percent of the total assessed land value.

Neighborhood	Size of Neighborhood (ac)	Acreage/Percent in Municipality
High Point-Raymond Neighborhood	1,290 acres	643 acres – 49.8 percent
Midtown Neighborhood	574 acres	24 acres – 4.3 percent
Pioneer Neighborhood	1,403 acres	518.5 acres – 37.0 percent

Incorporated  
 Yes  No

Total Population  
 5,877 (2010)

## Demographic Characteristics

Census Year 2010	% of Population
Group A: Owner-occupied housing	96.3%
Group B: White Population	95.2%
Group C: 65 years of age and over	8.8%
Group D: Households with individuals under 18 years old	42.1%

### 2. Identify and discuss existing modes of transportation and their importance within the community or Neighborhood:

The primary mode of transportation within the community includes automobile and truck travel for local and regional trips on local roadways. Average Annual Daily Traffic (AADT) on County M in the Town of Middleton reached 19,700 vehicles per day between Valley View Road and Midtown Road in 2013. According to the City of Madison Average Weekday Traffic Volume 2010, Valley View Road carried 3,000 cars a day, while Midtown Road reached 5,300 vehicles per day.

Residents and commuters rely heavily on bicycles. In 2015, Dane County reported having 116 miles of bike routes, 133 miles of bike lanes, 55 miles of bike paths and 5 miles of wide curb lanes. According to surveys done by the Town of Middleton Trails Planning Team, 53 percent of the population uses the trails. Out of those who use the trails, 86 percent would like to use them, or do use them for walking and 62 percent would like to use them, or do use them for biking. There are numerous touring, racing, and off-road bicycle clubs in Dane County as well as various bicycle organizations. Bicycle facilities in and near the project area are sub-standard and few pedestrians and bicyclists use the corridor.

The 40-mile Military Ridge State Trail bisects the City of Verona and connects the City of Fitchburg to the east and the communities of Dodgeville, Ridgeway, Barneveld, Blue Mounds, Mount Horeb, Klevenville, and Riley to the west. Most of the trail follows the former Chicago and North Western Railroad corridor that has a gentle grade of only 2-5 percent. Approximately 94 percent of the trail is crushed stone, while another 6 percent is asphalt. The Ice Age National Scenic Trail crosses the County M corridor near Flagstone Drive and the OJ Noer Turf Grass Research Facility.

Dane County Regional Airport is the second largest airport in the state and is located approximately ten nautical miles northeast of the project area. The airport is a joint civil-military commercial airport with three runways in operation. Middleton Municipal Airport is located approximately five miles northwest of the City of Middleton. The airport has two runways in operation.

### 3. Identify and discuss the probable changes resulting from the proposed action to the existing modes of transportation and their function within the community or neighborhood:

The implementation of the Proposed Action will not be likely to cause substantial changes in the mode of travel used. There will be some minor changes in automobile and truck traffic patterns on the local road system. The changes are anticipated to reduce travel times to and from most locations within the project area.

Bicycle and pedestrian facilities were recently completed north of the project area through the County M corridor. These facilities are constructed between the Valley View Roundabout at the north project limits to Mineral Point Road north of the project. Bicycle and pedestrian accommodations via a stand-alone multi-use path along County M will connect from Mineral Point Road on the north to the City of Verona. The connections and improved facilities will provide a safer, more efficient bicycling/running/walking experience. These facilities when completed will likely increase the amount of persons using these modes of transportation for leisure and for commuting to and from work.

The town of will not be responsible for maintaining multi-use paths. Multi-use paths will be maintained by the City of Verona (south of County PD) and City of Madison (north of County PD).

### 4. Briefly discuss the proposed action's direct and indirect effect(s) on existing and planned land use in the community or neighborhood:

See Attachment K – Indirect Effects Prescreening. The project will not likely result in significant direct or indirect effects as defined by NEPA.

**5. Address any changes to emergency or other public services during and after construction of the proposed project:**

No changes to emergency services or other public services are expected from the construction of the intersections. All traffic movements will remain open and maintained during all phases of the proposed action. Coordination with emergency services will be necessary throughout the construction process as traffic congestion could reach high levels at peak hour times and delays for construction equipment are possible.

Upon completion of the proposed action, emergency response times are expected to improve as traffic will flow closer to posted speeds and traffic queues in the peak hours will reduce along all intersections of County M.

**6. Describe any physical or access changes that will result. This could include effects on lot frontages, side slopes or driveways (steeper or flatter), sidewalks, reduced terraces, tree removals, vision corners, etc.:**

The lands needed for construction of the road widening and sidewalks will be graded, with a sub base installed under the roadway. Removal of brush and trees will be required in some locations. The disturbed areas in the terrace and near the sidewalk or road edge will be sodded.

Access changes as a result of the proposed construction include:

- Full access for University Research Park expansion
- Private driveways typically will be right-in/right-out

**7. Indicate whether a community/neighborhood facility will be affected by the proposed action and indicate what effect(s) this will have on the community/neighborhood:**

No impacts to community/neighborhood facilities in the Town of Middleton as a result of the proposed action.

Within the Town of Middleton, minor impacts will be made as a result of the proposed action. Intersection improvements and additional right of way will need to be acquired to accommodate intersection geometry and the proposed multi-lane and pedestrian facilities. Travelers may experience small travel delays during construction however; impacts are anticipated to be minor.

**8. Identify and discuss factors that residents have indicated to be important or controversial:**

The desire for improved bicycle and pedestrian accommodations connecting Madison to Verona is important not only for recreation but also for those wishing to use this form of transportation as a way to commute to and from work. The connection will provide continuity between the trail network and improved facilities will provide a safer, more efficient bicycling/running/walking experience. These facilities when completed will likely increase the amount of persons using these modes of transportation for leisure and for commuting to and from work.

Participants also indicated issues such as; assessments, sound wall, project funding, traffic staging during construction, sidewalk location and maintenance, safety issues, Madison Metro ridership, noise, emergency response times, Ice Age National Scenic Trail, signage, maintenance of the intersections, and access.

**9. List any Community Sensitive Design considerations, such as design considerations and potential mitigation measures.**

Specific mitigation elements of the design and environmental commitments for the preferred alternative are directly related to input and feedback from project stakeholders throughout the process.

**Community Sensitive Design**

Aesthetics – The preferred alternative could include aesthetic enhancements to structures, including bridges and retaining walls, which are used to improve safety and mobility while limiting impacts to the surrounding environment. These aesthetic enhancements will be included provided the local municipalities enter into a state municipal agreement (SMA) through which they will be responsible for maintenance of the aesthetic enhancements. An SMA was signed for this project on April 9, 2015. The aesthetic design will match the aesthetic structural elements found within the project corridor and throughout the City of Madison. These include decorative crash tested parapet walls, retaining wall form liners, and concrete staining. The City of Verona and Dane County provided input and concurrence on the use of the City of Madison standard aesthetics.

**10. Indicate the number and type of any residential buildings that will be acquired because of the proposed action. If either item a) or b) is checked, items 11 through 18 do not need to be addressed or included in the environmental document. If item c) is checked, complete items 11 through 18 and attach the Conceptual Stage Relocation Plan to the environmental document:**

- a.  None identified.
- b.  No occupied residential building will be acquired as a result of this project. Provide number and description of non-occupied buildings to be acquired.
- c.  Occupied residential building(s) will be acquired – One single family occupied residence. See Town of Verona Factor Sheet

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**Factor Sheet B-5**

Alternative: Preferred Alternative	Total Length of Center Line of Existing Roadway: 2.86 miles
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

**Section 106 Form or other documentation, with all necessary approvals, must be attached to the Environmental Document for all projects.**

**1. Parties contacted:**

Parties Contacted	Date Contacted	Comments Received		
		No	Yes	Check if Attached
Marie H. Bigley	March, May, September, November – 2011, February, July - 2012 April – 2013 April – 2014		X	<input checked="" type="checkbox"/> See Attachment S – Schroeder-Stickelberg- Thompson Farmstead Correspondence

**2. Property Name:** Schroeder-Stickelberg-Thompson Farmstead

**3. Location:** 8300 Raymond Road, Town of Verona, Dane County, WI

**4. Use: Historic:** Domestic/single dwelling = house, Agricultural/animal facility = barn  
**Current:** Vacant/Not in use

**5. Property type:**

- Bridge
- Buildings (seven buildings)
- Historic District
- Other: (one structure - windmill, one object – animal trough)

**6. Property Designations:**

- National Historic Landmark (NHL)
- National Register of Historic Places (NRHP) (Note: Not listed – just eligible)
- State Register of Historic Places
- Local Registry
- Tribal Registry

**7. A Determination of Eligibility (DOE) has been prepared:**

- No - Property is already on NRHP or NHL.
- Yes - (See Attachment M - Determination of Eligibility Form for Schroeder-Stickelberg-Thompson Farmstead).
- Other: \_\_\_\_\_

**8. Describe the significance of the structures and/or buildings:**

The property was identified as potentially eligible for the National Register as part of a survey of the historic and architectural resources along the County M project corridor. Site visits were conducted in March, May, and September of 2011, and July of 2012.

The Schroeder-Stickelberg-Thompson Farmstead consists of seven contributing buildings (a side-gabled house, bank barn with attached silo, milk house, garage, machine shed, privy, chicken coop), one contributing structure (windmill), and one contributing object (animal trough).

The Schroeder-Stickelberg-Thompson Farmstead was initially identified as potentially eligible for National Register listing under Criterion C: Architecture as a representative of a distinct property type: a mid-nineteenth to mid-twentieth-century farmstead. The period of significance for the property is from c. 1875 to c. 1940, the first and last years of contributing building construction. Because the property contains an intact collection of historic outbuildings and because of the remarkably high degree of integrity of the historic farmhouse in comparison with nearby farmsteads, the Schroeder-Stickelberg-Thompson Farmstead is considered eligible for listing under Criterion C.

**9. In compliance with the requirements of Section 106, of the National Historic Preservation Act, the proposed project's effects on the historic property, (e.g., structure or building) have been evaluated in the following report, a copy of which is:**

- In the project file, or
- Attached to this document:
  - Documentation for determination of no historic properties affected (Reported on the Section 106 Review Form).
  - Documentation for determination of no adverse or conditional no adverse effect to historic properties.
  - Documentation for Consultation about adverse effect(s). A Memorandum of Agreement has been completed.
    - No. Consultation about effects is continuing.
    - Yes, a copy of the MOA is attached to this document. Summarize MOA stipulations below:

A Memorandum of Agreement has been prepared providing measures to mitigate the adverse effects to the Schroeder-Stickelberg-Thompson Farmstead. Stipulations included in the MOA are:

- Within three months of the MOA execution and before project letting, WisDOT or its agent will complete a field survey of up to seven of the best-preserved and finest representative historic farmsteads throughout the Town of Verona. This was completed in December 2015.
- Survey boundaries will be Midtown Road to the north, Fitchrona Road to the east, Schaller Road to the south, and Spring Rose Road to the west.
- A windshield survey of all farmsteads within the survey boundaries will be conducted to establish an architectural context and to identify up to seven of the best-preserved historic farmsteads in the Town of Verona. These farmsteads will be included with appropriate historic context information in a formal reconnaissance-level survey report.
- Reconnaissance survey procedures will follow the farmstead survey methodology outlined in the WisDOT Survey Manual and will include:
  - One sketch map per surveyed farmstead
  - One set of digital photographs of all historic resources per surveyed farmstead
  - WisDOT or its agent will submit copies of the survey and historic context report, sketch maps, and digital images to SHPO and the Dane County Historical Society.
  - Records for each of the surveyed farmsteads will be created and added to the Wisconsin Historic Preservation Database (WHPD).

*See Attachment F – Documentation for Consultation and Attachment Q – Memorandum of Agreement. Correspondence with the property owner can be found in Attachment S – Schroeder-Stickelberg-Thompson Farmstead Correspondence.*

A determination of effect is not required in the draft EA. All environmental commitments will be listed on Basic Sheet 8.

**10. Do FHWA requirements for Section 4(f) apply to the project's use of the historic property?**

- No
  - Project is not federally funded.
  - No right of way or Permanent Limited Easements will be acquired from the property and the project will not substantially impair the characteristics that qualify the property for the NRHP.
  - Right of way will be acquired from the NRHP property but a de minimis finding has been proposed.
  - Other – Explain:
- Yes – Complete Factor Sheet B-8, Section 4(f) and 6(f) or other Unique Areas.

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## Factor Sheet B-8: University Ridge Golf Course

Alternative: Preferred Alternative	Total Length of Center Line of Existing Roadway 2.86 miles
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

1. **Property Name:** University Ridge Golf Course

2. **Location:** 9002 County Road PD, Madison, WI 53593

3. **Ownership or Administration:** Administration

4. **Type of Resource:**

- Public Park  
 Recreational lands. - (Golf Course)  
 Ice Age National Scenic Trail  
 NRCS Wetland Reserve Program  
 Wildlife Refuge  
 Waterfowl Refuge  
 Historic/Archaeological Site eligible for the National Register of Historic Places (NRHP).  
 Other – Identify:

5. **Do FHWA requirements for Section 4(f) apply to the project's use of the property?**

No - Check all that apply:

- Project is not federally funded.  
 No land will be acquired in fee or PLE and the alternative will not affect the use.  
 Property is not on or eligible for the NRHP.  
 Property is on or eligible for the NRHP however includes a *de minimis* effect finding.  
 Interstate Highway System Exemption.

Yes - Check all that apply:

Indicate which of the Programmatic/Negative Declaration Section 4(f) Evaluation(s) applies.

- Historic Bridge.  
 Park minor involvement.  
 Historic site minor involvement.  
 Independent bikeway or walkway.  
 Great River Road.  
 Net Benefit to Section 4(f) Property. Explain: \_\_\_\_\_

Other - Explain: Property is a golf course, owned by a public agency for the purpose of recreation. FHWA determined that the impacts to the golf course qualifies as *de minimis* since the use of the Section 4(f) property does not adversely affect the activities, features, or attributes that qualify the resource for protection under Section 4(f).

Full Section 4(f) evaluation approved on \_\_\_\_\_.

6. **Was special funding used to acquire the land or to make improvements on the property?**

No - Special funding was not used for the acquisition of this property.

Yes:

- s.6(f) LWCF (Formerly LAWCON)  
 Dingell-Johnson (D/J funds)  
 Pittman-Robertson (P/R funds)

Other – Describe:

**7. Describe the significance of the property:**

For other unique areas, include or attach statements of significance from officials having jurisdiction.

The University Ridge Golf Course property is considered a Section 4(f) resource because it is owned, operated and managed by a public agency for the primary purpose of public recreation.

The overall University of Wisconsin property is approximately 560 acres and is located in the northwest quadrant of the County M & County PD intersection. This property has several different uses including:

*Table G - University of Wisconsin Property Uses*

	Approximate Acreage	Right of way Needed	Section 4(f) Protected
University Ridge Golf Course	370	Yes	Yes
OJ Noer Turf Grass Research and Education Facility	30	Yes	No
Thomas Zimmer Cross Country Course	90	No	N/A – No right of way needed
Other (Agricultural, Woodland Buffer, etc.)	70	Yes	No

The property is located along the west side of existing County M from County PD to Midtown Road. The University Ridge Golf Course qualifies as a Section 4(f) property because it is a golf course that is owned, operated, and managed by a public agency (University of Wisconsin – Madison Board of Regents), and is open to the public with its main function as recreation. See the course's website (<http://www.universityridge.com/>) for more information.

The course derived its name from the landscape features left by the last retreating glacier. The course sits on the terminal moraine, where the Wisconsin Glacier stopped, forming the backbone of the ridge that separates the land into groups of rolling hills and valleys. The natural ridge dictated course construction with the designers following the contours of the land creating a natural setting that overlooks the City of Madison. Course designer Robert Trent Jones, Jr., considered to be among one of world's foremost golf course architects, had broad versatility in mind when designing the course. At the same time, he was extremely conscious of preserving the integrity of the land to bring out its natural beauty. Over the last decade University Ridge has received national attention and has become a top 50 public course in the country. The superior service and pristine course conditions have brought forth numerous awards and other recognitions. University Ridge has been a top-10 golf course in Wisconsin since the doors opened in 1991.

**8. Describe the proposed alternative's effects on this property:**

a. Describe any effects on or uses of land from the property. For other areas, include or attach statements from officials having jurisdiction over the property, which discusses the alternative's effects on the property: **(A map, sketch, plan, or other graphic which clearly illustrates use of the property and the project's use and effects on the property must be included.)**

- Acquisition of 3.5 acres of strip right of way from overall 370 acre portion of the UW owned property that supports the golf course (including fairways, greens, tees, cart paths, maintenance paths, maintenance sheds, club house, and maintenance buildings).
  - 2.0 acres of fee
  - 1.5 acres of TLE
- Removal of several trees and shrubs that border the County M right of way (east property line). These trees and shrubs are naturally occurring and not part of the planned golf course landscaping.
- Relocation of the University Ridge welcome/gateway sign at the intersection of County M and County PD.
- Impacts from the proposed action will not alter or affect the use golf course features, attributes or activities including the property's natural pond.
- The Official with Jurisdiction over the golf course property, University of Wisconsin Board of Regents, is supportive of the proposed action and concurs that impacts from the proposed action will not result in any adverse effect to the activities, features, or attributes that qualify the property for protection under Section 4(f).

*(See Exhibit 11A - Section 4(f) Property Right of Way Map and 11B – University Ridge Golf Course.)*

b. Discuss the following alternatives and describe whether they are feasible and prudent and why:

1. Do nothing alternative.

County M & County PD is currently a signalized intersection. County M northbound and southbound lanes have three lanes, one lane for a dedicated through movement as well as exclusive left-turn and right-turn only lanes. County PD eastbound has two lanes including an exclusive left-turn lane as well as a shared through/right-turn lane. County PD westbound has two lanes including an exclusive right-turn lane and a shared through/left-turn lane. There are no pedestrian or bicycle facilities at the County PD intersection.

The intersection at County PD is experiencing a large increase in vehicular traffic in recent years as southwest Madison and the Verona area continues to grow. Jobs have increased in the area and commuters traveling to/from the City of Madison utilize County PD and County M. There is long delay on the south to west movement in the AM (peak hour) and the east to north movement in the PM (peak hour). This intersection currently operates at LOS F and delays will likely increase in future years as traffic continues to grow.

The do nothing alternative would not improve the intersection functionality and would not address the operational or safety concerns of the intersection. The existing at-grade signalized intersection would remain and would not improve capacity. The intersection would continue to operate at LOS F, with increased congestion as traffic increases in future years. Substandard bike and pedestrian facilities would not improve. This alternative would not affect University Ridge Golf Course in any way.

2. Improvement without using the Section 4(f) lands.

As described in the Basic Sheets, the project purpose is to provide a safe and serviceable corridor that is convenient for area businesses, residents and all users in the traveling public, including, motor vehicles, bicyclists, pedestrians, and transit. The project need is to provide well-designed intersections that minimize impacts to the local surrounding landscape and deliver acceptable operating conditions for existing and future traffic volumes while accommodating future planned growth along the corridor and in the immediate area.

The purpose and need cannot be accomplished without expanding the roadway to at least four-lanes and substantial intersection improvements. The roundabout alternative at County M & County PD intersection will be constructed as a two-lane feature with bypass lanes and pedestrian facilities and will address operational and safety concerns within the corridor. The roundabout will be designed for a four-lane divided arterial roadway with the capability to expand to a three-lane facility as traffic volumes increase in the future. The intersection will improve the level of service.

County M is located between University Ridge Golf Course (northwest) a historic farmstead and Dane County Parkland (northeast). All properties are protected by Section 4(f) lands. Every attempt was made to minimize the land required for roadway, intersection, and pedestrian facilities, but it was not possible to renovate this corridor to meet the project needs without the use of the Section 4(f) lands.

3. Alternatives on new location.

One alternative was produced and analyzed that involved realigning existing County PD to the south. This alternative was not feasible due to the large amount of farmland acquisition required in the southwest quadrant of County M & County PD intersection.

In the southeast quadrant, several acres of prime wetlands would be impacted and a planned expansion of WE Energies at this location would be affected. Roadway expansion within the fenced area of this facility would result in the need to relocate the entire substation. This substation serves approximately 11,000 residential and commercial customers in Verona and Madison and is expected to increase by 400 to 500 customers annually. This substation also serves Epic Systems Corporation, which has 9,400+ employees and whose electric usage is equivalent to approximately 2,800 homes. Relocation of this substation is neither feasible nor prudent due to the extensive costs (estimated upwards of \$50 million).

In addition to the physical limitations to the existing intersection, there would be high cost in realigning County PD. Regardless of the type of intersection that was chosen, impacts to either a farmstead that is eligible for the National Register of Historic Place, an electric substation or the University Ridge Golf Course had to occur if a four-lane facility is to be constructed.

**9. Indicate which measures will be used to minimize adverse effects, mitigate for unavoidable adverse effects or enhance beneficial effects:**

- Replacement of lands used with lands of reasonably equivalent usefulness and location, and of at least comparable value.
- The Small Conversion Policy for Lands Subject to Section 6(f) will be used.
- Replacement of facilities impacted by the project including sidewalks, paths, lights, trees, and other facilities. (Trees will be replaced)
- Restoration and landscaping of disturbed areas.
- Incorporation of design features and habitat features where necessary to reduce or minimize impacts to the Section 4(f) property.
- Payment of the fair market value of the land and improvement taken.
- Improvements to the remaining Section 4(f) site equal to the fair market value of the land and improvements taken.
- Such additional or alternative mitigation measures determined necessary based on consultation with officials having jurisdiction. The additional or alternative mitigation measures are listed or summarized below:
- Property is a historic property or an archeological site. The conditions or mitigation stipulations are listed or summarized below:
- Other – Describe:

**10. Briefly summarize the results of coordination with other agencies that were consulted about the project and its effects on the property:** (For historic and archeological sites, refer to Factor Sheet B-5 and/or B-6 for documentation. For other unique areas, attach correspondence from officials having jurisdiction that documents concurrence with impacts and mitigation measures.)

Coordination with University Ridge Golf Course has occurred throughout the planning process and is ongoing. A letter to the official with jurisdiction for the golf course property was sent December 6, 2012 to satisfy requirements of CFR Title 23, Chapter I, Subchapter H Part 774, Section 774.5). The letter served to initiate official consultation with the official with jurisdiction of the property and request comment regarding the potential de minimis impact determination to the property.

Three Public Information Meetings were held inform the public of the proposed design and to gather input. The University Ridge Golf Course has been invited and encouraged to attend public meetings. The dates of the three information meetings were:

- December 8, 2011 – Public Information Meeting #1
- May 24, 2012 – Public Information Meeting #2
- March 12, 2014 – Public Information Meeting #3

Staff from University of Wisconsin Facilities Planning and Management and staff from University Ridge golf course met with the design team to discuss alternative designs for the intersection of County M and County M. Staff indicated the westbound underpass alternative was desirable from an aesthetic view point as the underpass structure would have less visual impact than an overpass structure. They indicated that the roadway design needs to avoid impacting the cart path adjacent to the green. They also noted a desire to work with the design team on final details of landscaping. There is a desire to provide some screening between the roadway and golf course; however trees are not desirable due to the impacts of the shade on the growing conditions of the turf on the green. An earthen berm is preferred; however this will have to be balanced with impacts to the surrounding wetlands.

*(See Attachment T – Section 4(f) Documentation).*

**Factor Sheet B-8: Dane County Parkland**

Alternative: Preferred Alternative	Total Length of Center Line of Existing Roadway 2.86 miles
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

- 1. **Property Name:** Dane County Parkland, Dane County Parks Division
- 2. **Location:** Mailing address: 1 Fen Oak Court, Room 208, Madison, WI 53718
- 3. **Ownership or Administration:** Administration

Dane County Parklands were purchased with Knowles-Nelson Stewardship funding and therefore land needed from this park needs to be converted following the WDNR process. The project seeks to place the multi-use path along the park on PLE rather than fee acquisition. This will reduce the amount of replacement lands needed for the park as required by WDNR requirements. Any land that is taken for permanent road right of way use from this property must be replaced with a similar viable unit (size and/or appraisal value). Approximately 0.8 acres of parkland are needed for permanent right of way for the expansion of County M. Lands required for temporary and permanent limited easements will not be replaced. Acquisition is required from Dane County beginning at the southern edge of the parcel to Flagstone Park. Land adjacent to the park that is currently owned by the city of Madison (formerly owned by the Audubon Society) has been identified as a replacement area.

This property is part of the larger Ice Age Trail Junction Natural Resource Area in the City of Madison and Town of Verona.

- 4. **Type of Resource:**
  - Public Park.
  - Recreational lands (Golf Course)
  - Ice Age National Scenic Trail
  - NRCS Wetland Reserve Program
  - Wildlife Refuge
  - Waterfowl Refuge.
  - Historic/Archaeological Site eligible for the National Register of Historic Places (NRHP).
  - Other – Identify:

5. **Do FHWA requirements for Section 4(f) apply to the project's use of the property?**

- No - Check all that apply:
  - Project is not federally funded.
  - No land will be acquired in fee or PLE and the alternative will not affect the use.
  - Property is not on or eligible for the NRHP.
  - Property is on or eligible for the NRHP however includes a *de minimis* effect finding.
  - Interstate Highway System Exemption.
  - Other - Explain:

Yes - Check all that apply:

- Indicate which of the Programmatic/Negative Declaration Section 4(f) Evaluation(s) applies.
  - Historic Bridge.
  - Park minor involvement. FHWA determined that this impact to a public park qualifies as *de minimis* since the transportation use of the Section 4(f) property does not adversely affect the activities, features or attributes that qualify the resource for protection under Section 4(f).
  - Historic site minor involvement.
  - Independent bikeway or walkway.
  - Great River Road.
  - Net Benefit to Section 4(f) Property. Explain: \_\_\_\_\_

Full Section 4(f) evaluation approved on .

**6. Was special funding used to acquire the land or to make improvements on the property?**

No - Special funding was not used for the acquisition of this property.

Yes:

s.6(f) LWCF (Formerly LAWCON).

Dingell-Johnson (D/J funds).

Pittman-Robertson (P/R funds).

Other – Describe: Knowles-Nelson Stewardship funding

Any land that is taken for permanent road right of way use from this property must be replaced with a similar viable unit (size and/or appraisal value). Approximately 0.8 acres of parkland is needed for permanent right of way for the expansion of County M. Lands required for temporary and permanent limited easements will not be replaced. Acquisition is required from Dane County beginning at the southern edge of the parcel to Flagstone Park.

The Heitke LUIHNC acquisition property is conservation land funded through the Knowles-Nelson Stewardship Program and land needed from this park needs to be converted following the WDNR process. There are no permanent impacts to this property as a result of the County M roadway project. The construction of the MMSD sewer, storm sewer, and restoration reconstruction of Raymond Road will require temporary grading easements to complete the work. MMSD will acquire an easement for their sewer connection separate from this project. As this work will result in temporary disturbance and there will be no above ground modifications that affect the recreational use of the land, WDNR will not require mitigation and replacement lands for this work. Additional temporary easement is required for the reconstruction of the Badger Mill creek crossing on Raymond Road at the north project limits. This temporary grading easement will also not require replacement lands due to the temporary nature of the work.

**7. Describe the significance of the property:**

The 47.8 acre property is located along the east side of County M between County PD and Flagstone Drive and it abuts Flagstone Park, a city of Madison neighborhood park. The park also borders Raymond Road at the east end of the park. A portion of the Ice Age National Scenic Trail is located on this land. Title search information does not show a specific easement location for the IANST through the Dane County parkland. The rest of the parkland is naturally occurring and restored landscape. There is a small wooded area on the east side of the property; the rest is open prairie. The park qualifies for Section 4(f) because the property is used for recreational purposes.

*(See Attachment T – Section 4(f) Documentation).*

**8. Describe the proposed alternative's effects on this property:**

a. Describe any effects on or uses of land from the property. For other areas, include or attach statements from officials having jurisdiction over the property which discusses the alternative's effects on the property: **(A map, sketch, plan, or other graphic which clearly illustrates use of the property and the project's use and effects on the property must be included.)**

- Acquisition of approximately 4.8 acres
  - 0.85 acre of FEE
  - 0.85 of PLE (0.25 acres for MMSD easement not included)
  - 3.0 acres of TLE (0.45 acres for MMSD easement not included)
- Realignment of IANST
- Extension of culvert pipes from City of Madison owned stormwater pond to accommodate relocation of IANST and construction of the paved Ice Age Junction Path extension.
- Grading and restoration of open prairie and a fire break/maintenance path, and dispersed recreational use along the County M edge of the property. Some hikers use the maintenance/fire break path for recreation use.
- Relocation of a small pond/wetland scrape.
- The Official with Jurisdiction over the parkland (Dane County Parks), is supportive of the proposed action and concurs that impacts from the proposed action will not result in any adverse effect to the activities, features, or attributes that qualify the property for protection under Section 4(f).

*(See Exhibit 11A – Section 4(f) Property Right of Way Map and 11C – Dane County Parkland.)*

An initial review of the project impacts and proposed construction plans indicate that the impacts to the property will be minimal and will not alter or affect the park's use.

b. Discuss the following alternatives and describe whether they are feasible and prudent and why:

1. Do nothing alternative.

County M is experiencing an increase in vehicular traffic in recent years as southwest Madison and the Verona area continues to grow. The do nothing alternative would not improve the roadway functionality and would not address the operational or safety concerns of the corridor. Without expanding the roadway to at least four-lanes, the amount of traffic this route carries would not allow the LOS to reach an acceptable design year standard and therefore, would not meet the needs of the project. This alternative does nothing to help the traffic concerns, but is useful for comparison. The Dane County Park would not be affected by this alternative in any way.

2. Improvement without using the Section 4(f) lands.

County M is located between University Ridge Golf Course and Morse Pond (west) and Dane County Parkland (east). Both properties are considered Section 4(f) lands. Every attempt was made to minimize the land required for roadway and pedestrian facilities. Only the no-build alternative would avoid using Section 4(f) lands.

As described in the Basic Sheets, the project purpose is to provide a safe and serviceable corridor that is convenient for area businesses, residents and all users in the traveling public, including, motor vehicles, bicyclists, pedestrians, and transit. The project need is to provide well-designed intersections that minimize impacts to the local surrounding landscape and deliver acceptable operating conditions for existing and future traffic volumes while accommodating future planned growth along the corridor and in the immediate area.

The purpose and need cannot be accomplished without expanding the roadway to at least four-lanes. Expanding the roadway to four or more lanes will require acquisition from at least one Section 4(f) property. Morse Pond is located within the University Ridge Golf Course boundaries, and although the pond itself is not a Section 4(f) property, the location of the pond makes shifting the roadway further west, nearly impossible without filling in the kettle pond.

3. Alternatives on new location.

*Figure 5 - North/South Connector Routes* (Basic Sheet 2) shows the various north/south corridors in the area and the constraints of each route. Constraints include indirect routes, residential neighborhoods, and limited roadway capacity. The constraints of these route locations, and the distance west of the County M corridor, make alternate locations for an expanded arterial or additional arterial corridor infeasible.

**9. Indicate which measures will be used to minimize adverse effects, mitigate for unavoidable adverse effects or enhance beneficial effects:**

- Replacement of lands used with lands of reasonably equivalent usefulness and location, and of at least comparable value.
- The Small Conversion Policy for Lands Subject to Section 6(f) will be used.
- Replacement of facilities impacted by the project including sidewalks, paths, lights, trees, and other facilities.
- Restoration and landscaping of disturbed areas.
- Incorporation of design features and habitat features where necessary to reduce or minimize impacts to the Section 4(f) property.
- Payment of the fair market value of the land and improvement taken.
- Improvements to the remaining Section 4(f) site equal to the fair market value of the land and improvements taken.
- Such additional or alternative mitigation measures determined necessary based on consultation with officials having jurisdiction. The additional or alternative mitigation measures are listed or summarized below:
- Property is a historic property or an archeological site. The conditions or mitigation stipulations are listed or summarized below:
- Other – Describe: WDNR process due to Dane County Parklands being purchased with Knowles-Nelson Stewardship funding

**10. Briefly summarize the results of coordination with other agencies that were consulted about the project and its effects on the property:**

Coordination with Dane County Parks occurred throughout the planning process and is ongoing. Coordination with WDNR regarding WDNR process due to Dane County Parklands being purchased with Knowles-Nelson Stewardship funding (See *Attachment T – Section 4(f) Documentation*).

WDNR is to make a determination of the impacts of placing the proposed 10-foot multi-use path between County M and Dane County Park land on a permanent easement. (*See Attachment C – WDNR Coordination*). A letter to the official with jurisdiction for the parkland was sent December 6, 2012 to satisfy requirements of CFR Title 23, Chapter I, Subchapter H Part 774, Section 774.5). The letter served to initiate official consultation with the official with jurisdiction of the property and request comment regarding the potential de minimis impact determination to the property.

A letter was received from Dane County Parks on January 23, 2013 providing comments on the proposed project. This letter outlined four comments and proposed mitigation measures to be considered in this review. They included:

1. Maintain and restore the existing driveway on County M for staff access to manage prairie restoration areas. Dane County Parks would prefer this driveway entrance to be gated and not paved to discourage general public use.
2. Provide financial resources that will allow the Dane County Parks Naturalist to restore and reseed prairie areas that are disturbed during County M reconstruction activities.
3. Maintain the existing water storage area immediately south of the box culvert. The pond/wetland area was created through a partnership between Dane County Highway and the Dane County Naturalist and is used extensively by frogs. If this area is unable to be avoided by the proposed County M improvement project, consider creation of a wetland scrape in the southeast corner of the parcel as a mitigation measure.
4. Dane County Parks supports the addition of the proposed bicycle/pedestrian side path along County M that will provide connectivity to the Ice Age Junction Trail.

Several public information meetings were held inform the public of the proposed design and to gather input. Dane County Parks has been invited and encouraged to attend public meetings. The dates of the three information meetings were:

- December 8, 2011 – Public Information Meeting #1
- May 24, 2012 – Public Information Meeting #2
- March 12, 2014 – Public Information Meeting #3

A meeting was held on September 24, 2014 to address County M impacts and right of way needs from Dane County Parks and the IANST for interested parties. A summary of the meeting discussion regarding the Dane County Parkland is provided below:

The project will require real estate acquisition from Dane County Parks land. The permanent easement estimate is for construction and maintenance of the 10-foot multi-use path along the east side of County M. The path will be constructed on a 15-foot easement along the edge of the County M highway right of way. Dane County Parks requested that the prairie area be protected/isolated from the construction by temporary fencing (orange safety fence is acceptable).

ATC will be relocating their overhead power transmission poles into the terrace area between the multi-use path and County M roadway. The poles will be located in the County M highway right of way. This location will minimize the amount of aerial easement that ATC requires from Dane County Parks for their facilities. ATC currently owns aerial easements however these will have to be shifted to the east an equal distance as the relocated overhead power lines.

Dane County Parks would like to see the restored prairie area that is disturbed by grading be returned to a restored prairie condition. The restoration work shall be completed under the guidance of Dane County Parks. This was discussed at the September 24, 2014 meeting and it was determined that a more cost effective solution would be to utilize Dane County approved restoration contractors, under the guidance of Dane County staff. Dane County staff shall be consulted on the design and specifications of the restoration work.

The group discussed impacts to the small pond at the east (outlet) end of the County M culvert crossing. The slope intercepts for the current roadway design would fill most of this pond. Dane County Parks expressed a preference for grading and reestablishing the small pond near its current location with the project. This would be an aesthetic benefit for both the multi-use path and the IANST. This alternative was preferred to constructing a retaining wall to maintain the pond in its current location. Another alternative would be to construct a wetland scrape along the southeast edge of the park property. This was the alternative originally noted in the letter provided by Dane County Parks on January 23, 2013.

(*See Attachment T – Section 4(f) Documentation*).

## Factor Sheet B-8: Ice Age National Scenic Trail

Alternative: Preferred Alternative	Total Length of Center Line of Existing Roadway 2.86 miles
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

- Property Name:** Ice Age National Scenic Trail
- Location:** County M & Flagstone Drive and Raymond Road at Badger Mill Creek Crossing
- Ownership or Administration:** Administration by Ice Age Trail Alliance

An easement is in place on land owned by the University of Madison Board of Regents near the OJ Noer Turf Grass Research Facility that allows public use of the Ice Age National Scenic Trail.

**4. Type of Resource:**

- Public Park  
 Recreational lands  
 Ice Age National Scenic Trail  
 NRCS Wetland Reserve Program  
 Wildlife Refuge  
 Waterfowl Refuge  
 Historic/Archaeological Site eligible for the National Register of Historic Places (NRHP)  
 Other – Identify

**5. Do FHWA requirements for Section 4(f) apply to the project's use of the property?**

- No - Check all that apply:
- Project is not federally funded.
  - No land will be acquired in fee or PLE and the alternative will not affect the use.
  - Property is not on or eligible for the NRHP.
  - Property is on or eligible for the NRHP however includes a *de minimis* effect finding.
  - Interstate Highway System Exemption.
  - Other - Explain: FHWA determined that an impact to a public park qualified as *de minimis* since the transportation use of the Section 4(f) property does not adversely affect the activities, features, or attributes that qualify the resource for protection under Section 4(f).
- Yes - Check all that apply:
- Indicate which of the Programmatic/Negative Declaration Section 4(f) Evaluation(s) applies.
    - Historic Bridge.
    - Park minor involvement.
    - Historic site minor involvement.
    - Independent bikeway or walkway.
    - Great River Road.
    - Net Benefit to Section 4(f) Property. Explain: \_\_\_\_\_
  - Full Section 4(f) evaluation approved on \_\_\_\_\_.

**6. Was special funding used to acquire the land or to make improvements on the property?**

- No - Special funding was not used for the acquisition of this property.  
 Yes:

- s.6(f) LWCF (Formerly LAWCON).
- Dingell-Johnson (D/J funds).
- Pittman-Robertson (P/R funds).
- Other – Describe: Land and Water Conservation (LWCF) Act Funds

**7. Describe the significance of the property:** For other unique areas, include or attach statements of significance from officials having jurisdiction.

The Ice Age National Scenic Trail, established in 1980, is a 1,200 mile path consisting mostly of hiking trails that stretches across Wisconsin. It is one of only eleven National Scenic Trails in the United States. Its western end is located in Interstate State Park on the St. Croix River in Polk County. The eastern end is located in Potawatomi State Park on Green Bay in Door County.

NPS designated National Scenic Trails are established to provide access to natural beauty and allow for the pursuit of outdoor recreation. The trail is maintained by the Ice Age Trail Alliance, and its inclusion as a National Scenic Trail also puts it under the jurisdiction of the U.S. National Park Service.

The IANST is located along the west side of County M, near and on the University of Wisconsin Board of Regents OJ Noer Turf Grass Research and Education Facility, continuing through the University Ridge Golf Course. The IANST is located on University of Wisconsin property via easement. The IANST crosses County M just south of Flagstone Drive.

On the east side of County M, the IANST travels through Dane County Parkland (though no specific easement exists). The IANST crosses Raymond Road at the existing Badger Mill Creek culvert and continues south towards County PD.

*(See Exhibit 11A - Section 4(f) Property Right of Way Map and 11D – Ice Age National Scenic Trail.)*

Every attempt was made to avoid impacts to the Ice Age National Scenic Trail easement; however, no prudent and feasible alternative was possible at these locations. Every action has taken place to minimize the amount of land needed for the construction project to occur.

Because the Ice Age National Scenic Trail exists on a easements owned by the University of Wisconsin Board of Regents and 0.3 acres of this land will be needed for the roadway expansion, an amendment to the existing easement the Ice Age Trail Alliance has with the University of Wisconsin is necessary to insure connectivity. *(See Attachment T – Section 4(f) Documentation)* for exhibits and concurrence letters.

**8. Describe the proposed alternative's effects on this property:**

a. Describe any effects on or uses of land from the property. For other areas, include or attach statements from officials having jurisdiction over the property, which discusses the alternative's effects on the property: **(A map, sketch, plan, or other graphic which clearly illustrates use of the property and the project's use and effects on the property must be included.)**

- On the University of Wisconsin owned property, the IANST has an easement over the land owned in fee by the University of Wisconsin Board of Regents. The proposed action will require fee acquisition of 0.3 acres of the IANST easement over the underlying OJ Noer Turf Grass Research and Education Facility land. The affected portion of the IANST is not located on the University Ridge Golf Course but is on the turf research facility adjacent to the golf course.
- Alteration and realignment of the existing IANST crossing to improve roadway safety by eliminating this at-grade crossing.
- Construction of a pedestrian trail underpass beneath County M will remove the need for pedestrians and trail users to cross County M at Flagstone Drive at-grade.
- Alteration and realignment of the existing IANST along County M within the University property and Dane County parkland
- Realign the trail along the west side of County M within University Property. The trail will continue to follow the toe of the County M highway embankment.
- The OJ Noer Turf Grass Research and Education Facility will allow trail users to utilize the bridge over the Badger Mill Creek drainage swale. This will require an updated easement between IANST and the University Board of Regents for the trail realignment, which the project sponsor will assist in facilitating.
- Realign the trail along the east side of County M (unnamed Dane County Parkland) to promote the use of the proposed County M pedestrian underpass
- Alteration and realignment of the existing IANST at the crossing of Raymond Road at Badger Mill Creek
- The IANST will have access to a sidewalk alongside Raymond Road, over a replacement structure for the Badger Mill Creek culvert. Trail users will be able to cross Raymond road near or within the marked and signed Raymond Road crossing in place for the crossing of the Ice Age Junction Multi-use Path.
- The Official with Jurisdiction over the IANST (National Park Service) and their local partner (Ice Age Trail Alliance) is supportive of the proposed action and concur that impacts from the proposed action will not result in any adverse effect to

the activities, features, or attributes that qualify the property for protection under Section 4(f).

(See Exhibit 11A - Section 4(f) Property Right of Way Map and 11D – Ice Age National Scenic Trail.)

b. Discuss the following alternatives and describe whether they are feasible and prudent and why:

1. Do nothing alternative.

This approach does not address the operational or safety concerns with the intersection or corridor or meet the project's purpose and need. The intersection would continue to operate at LOS F, with increased congestion as traffic increases in future years. There would continue to be substandard bicycle and pedestrian facilities.

2. Improvement without using the Section 4(f) lands.

The expansion of the roadway will require land from the Ice Age National Scenic Trail's easement on University of Wisconsin Board of Regents owned land. Avoiding the trail is not possible at this location as the trail crosses the roadway.

3. Alternatives on new location.

The Ice Age National Scenic Trail crosses County M at-grade at the Flagstone Drive intersection connecting the Dane County Parkland parcel to the east and the University Ridge Golf Course Property to the west. The expansion of the roadway will affect the Ice Age National Scenic Trail at this location regardless of where the roadway is constructed. Realigning the Ice Age National Scenic Trail and providing a new connection under County M is necessary at Flagstone Drive.

**9. Indicate which measures will be used to minimize adverse effects, mitigate for unavoidable adverse effects or enhance beneficial effects:**

- Replacement of lands used with lands of reasonably equivalent usefulness and location, and of at least comparable value.
- The Small Conversion Policy Lands Subject to Section 6(f) will be used.
- Replacement of facilities impacted by the project including sidewalks, paths, lights, trees, and other facilities.
- Restoration and landscaping of disturbed areas.
- Incorporation of design features and habitat features where necessary to reduce or minimize impacts to the Section 4(f) property.
- Payment of the fair market value of the land and improvement taken.
- Improvements to the remaining Section 4(f) site equal to the fair market value of the land and improvements taken.
- Such additional or alternative mitigation measures determined necessary based on consultation with officials having jurisdiction. The additional or alternative mitigation measures are listed or summarized below:
- Property is a historic property or an archeological site. The conditions or mitigation stipulations are listed or summarized below:
- Other – Describe:

**10. Briefly summarize the results of coordination with other agencies that were consulted about the project and its effects on the property: (For historic and archeological sites, refer to Factor Sheet B-5 and/or B-6 for documentation. For other unique areas, attach correspondence from officials having jurisdiction that documents concurrence with impacts and mitigation measures.)**

Coordination with the Ice Age Scenic National Trail has occurred throughout the planning process and is ongoing.

A letter to the officials with jurisdiction for the Ice Age National Scenic Trail (IANST) was sent December 6, 2012 to satisfy requirements of CFR Title 23, Chapter I, Subchapter H Part 774, Section 774.5). The letter served to initiate official consultation with the official with jurisdiction of the property and request comment regarding the potential de minimis impact determination to the property.

A letter was received from the Director of Land Conservation at the Ice Age Trail Alliance (IATA) on January 27, 2013. The letter submitted official comments regarding the County M expansion project. The Ice Age Trail Alliance strongly supports an underpass crossing for the Ice Age National Scenic Trail at Flagstone Drive. The group also suggests that in order for the underpass to be useful for the Ice Age National Scenic Trail, it is vital the project include a mechanism for connecting the IANST with IATA's easement on the UW's Turf Grass Facility property. This will likely require an easement amendment. IATA requests that the necessary work required to be complete an easement amendment (or similar legal instrument) are performed by the City or the planners as part of the overall project.

A letter was received from Dane County Parks on January 23, 2013 providing comments on the proposed project regarding the IANST on their property. This letter outlined three comments and proposed mitigation measures to be considered within the de minimis impact review. They included:

1. Dane County Parks supports the construction of the proposed bicycle pedestrian underpass at the intersection of Flagstone Drive and County M. Both trails will greatly benefit from a separated grade crossing.
2. Install a dodge way and signage on the west side of the proposed underpass at the Ice Age National Scenic Trail to deter bicycle use. Coordinate design and installation with the Ice Age Trail Alliance.

A “dodge way” is a physical access control device that requires one to move off a parallel path to gain access. In this instance, a split rail fence design is anticipated that will require people who access the IANST to have to walk around and through a fence layout that is not parallel to the path or direction of travel. It is intended to make it inconvenient and therefore more obvious to bicyclists that bicycle use is not allowed on the IANST.

3. Amend the existing easement the Ice Age Trail Alliance has with the University of Wisconsin-Madison as necessary to insure connectivity to the proposed underpass. Related, investigate a revised alignment of the Ice Age National Scenic Trail from the proposed underpass that would utilize the existing covered bridge at the O.J. Noer Turfgrass Facility.

Three Public Information Meetings were held inform the public of the proposed design and to gather input. IATA has been invited and encouraged to attend public meetings. The dates of the three information meetings were:

- December 8, 2011 – Public Information Meeting #1
- May 24, 2012 – Public Information Meeting #2
- March 12, 2014 – Public Information Meeting #3

A meeting was held on September 24, 2014 to address County M impacts and right of way needs from Dane County Parks and the IANST for interested parties. A summary of the meeting discussion regarding the Ice Age National Scenic Trail is provided below:

The Ice Age Trail Alliance (IATA) is still agreeable to utilizing the multi-use path grade separation (box culvert) to cross below County M. They want to minimize the length of trail that is concurrent with the multi-use path and connections to the multi-use path should be as close to perpendicular as possible to prevent use of the IANST by bicycles.

The group discussed design concepts for the multi-use path box culvert. The group wanted to see options for reducing the skew of the crossing. This will shorten the tunnel and possibly allow a natural light skylight to be incorporated in the design (tunnel must cross below a raised median). The reduced skew would put the west end closer to the IANST alignment through the OJ Noer Turf Research land. The skew was designed this way to limit the amount of impact to OJ Noer. Reducing the skew (squaring up the path) may require more right of way from OJ Noer. The project team will explore design alternatives that will reduce the skew.

The design standards for the box culvert include:

1. Minimum of 9 feet high above the 10-foot wide path section (the clearance can be reduced along the edges for lights and structure haunches)
2. Minimum 14 feet wide
3. The preference is to have the path at an elevation of 1 foot above the 100 year flood elevation for the drainage way. At the 100-year flood elevation would be acceptable. Anything lower should be discussed. There are issues, especially with path clean up and maintenance if it is any lower.

IATA wants to include dodge ways at the locations where the trail breaks off from the multi-use path. They don't have a standard design, but are happy with the one constructed where the IANST crosses Woods Road (on the west side of the University Ridge Golf Course property, approximately 0.8 miles west of County M) which is a split rail fence design. Design team will investigate these details for including in the plan. Signage could be considered for inclusion in the plans. IANST signs should be 18x24 inches. National Parks Service offered to help by providing the sign design and logos and review of the placement. Trail markers should also be included.

IATA indicated that standard pedestrian standards for grade should be used if possible.

The group discussed how to address the IANST easement. IATA preferences are:

1. Be located outside the County M right of way. Being located within the highway right of way requires the IATA to obtain permits for any trail maintenance work needed within the right of way
2. IATA does not want a separate easement from UW due to insurance and other regulatory issues required for each easement.
3. The easiest alternative in IATA view is to update the current easement to relocate it outside the potential right of way location. Project team and City of Madison will follow up with real estate staff to see if this is a possibility.
4. Another alternative that should be explored is to have the City of Madison purchase easement along the County M right of way for IANST use. This will also have to be run by UW and real estate staff.

NOTE: The IANST did not use federal LWCF funds for purchasing the easement along County M.

IATA would like to utilize the OJ Noer bridge to cross the drainage way. The University of Wisconsin Board of Regents, based on input and comment from staff at the OJ Noer research facility, has granted approval for the IATA to route the IANST onto the facilities maintenance bridge that crosses Badger Mill Creek.

The group discussed the impacts to the IANST at the Raymond Road crossing. The City of Madison will reconstruct this crossing. The IANST crosses Raymond Road near where the drainage way crosses Raymond Road. The City of Madison will be reconstructing this structure which will affect the IANST crossing. IATA was agreeable to shifting their trail east to get up onto Raymond Road. This shift should be minimized to keep the IANST within Dane County Park land and still provide a wooded buffer between it and the future extension of Jeffy Trail (a new City of Madison Street that is budgeted for completion in 2016). The IANST will utilize the sidewalk on the Raymond Road bridge before crossing Raymond Road and continuing on parallel to the multi-use path (Ice Age Junction Path). It is recommended that the IAT use the multi-use path crossing to keep roadway crossings to a minimum.

The IANST can use the recently constructed multi-use path bridge to cross the waterway. IATA would prefer to provide spur trail markings here for a future trail head parking area but keep the IANST separate from the multi-use path as long as possible. They anticipate a high volume of bike traffic on the multi-use path.

*(See Attachment T – Section 4(f) Documentation).*

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## Factor Sheet B-8: Schroeder-Stickelberg-Thompson Farmstead

Alternative: Preferred Alternative	Total Length of Center Line of Existing Roadway 2.86 miles
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

1. **Property Name:** Schroeder-Stickelberg-Thompson Farmstead

2. **Location:** 8300 Raymond Road, Verona, WI 53719

3. **Ownership or Administration:** Ownership

4. **Type of Resource:**

- Public Park  
 Recreational lands  
 Ice Age National Scenic Trail  
 NRCS Wetland Reserve Program  
 Wildlife Refuge  
 Waterfowl Refuge  
 Historic/Archaeological Site eligible for the National Register of Historic Places (NRHP)  
 Other – Identify:

5. **Do FHWA requirements for Section 4(f) apply to the project's use of the property?**

No - Check all that apply:

- Project is not federally funded.  
 No land will be acquired in fee or PLE and the alternative will not affect the use.  
 Property is not on or eligible for the NRHP.  
 Property is on or eligible for the NRHP however includes a *de minimis* effect finding.  
 Interstate Highway System Exemption.  
 Other - Explain: \_\_\_\_\_

Yes - Check all that apply:

- Indicate which of the Programmatic/Negative Declaration Section 4(f) Evaluation(s) applies.  
 Historic Bridge.  
 Park minor involvement.  
 Historic site minor involvement.  
 Independent bikeway or walkway.  
 Great River Road.  
 Net Benefit to Section 4(f) Property. Explain: \_\_\_\_\_

Full Section 4(f) evaluation approved on May 17, 2016 (FHWA Completed Legal Sufficiency Review). See Attachment T – Section 4(f) Documentation.

6. **Was special funding used to acquire the land or to make improvements on the property?**

No - Special funding was not used for the acquisition of this property.

Yes:

- s.6(f) LWCF (Formerly LAWCON)  
 Dingell-Johnson (D/J funds)  
 Pittman-Robertson (P/R funds)  
 Other – Describe:

## 7. Describe the significance of the property:

This property is privately owned historic farmstead which is eligible for listing on the National Registry of Historic Places (NRHP). The property is located at 8300 Raymond Road in the northeast quadrant of the County M & County PD intersection. This property contains a farmhouse (c.1875 – c.1890), windmill, animal trough and seven contributing buildings. These contributing buildings include:

- Chicken coop (c.1910)
- Privy (outhouse) (c.1900)
- Milk house (c.1940)
- Barn (c.1910)
- Silo (c.1910)
- Garage (c.1940)
- Machine shed (c.1940)

The historic farmstead is located in a rural setting bordered by wooded area on the south side of the property (in the northeast quadrant of the County M – County PD intersection). There is a newer home owned by the same owner that is currently occupied as a single family home, but it is located outside the historic boundary. The driveway to this modern home does cross the historic boundary. This site qualifies as a Section 4(f) resource as it is eligible for inclusion in the National Register of Historic Places.

*(See Attachment M - Determination of Eligibility Form – Schroeder-Stickelberg-Thompson Farmstead).*

## 8. Describe the proposed alternative's effects on this property:

a. Describe any effects on or uses of land from the property. For other areas, include or attach statements from officials having jurisdiction over the property which discusses the alternative's effects on the property: **(A map, sketch, plan, or other graphic which clearly illustrates use of the property and the project's use and effects on the property must be included.)**

- Acquisition of 0.60 acres of strip right of way
  - 0.15 acres of fee (permanent right of way)
  - 0.45 acres of Temporary Limited Easement (TLE) – (temporary occupancy)
- Relocation of the historic farmsteads southern Raymond Road driveway access.
- Removal of the historic farmsteads County M driveway access
- Removal of trees along County M right of way (western property line)
- Existing private utilities within the project limits on this property will need to be relocated. This relocation will require new utility easements along the SST farmstead.

*(See Exhibit 11E - Section 4(f) Property Right of way Map – Schroeder-Stickelberg-Thompson Farmstead.)*

b. Discuss the following alternatives and describe whether they are feasible and prudent and why:

1. Do nothing alternative.

This approach does not address the operational or safety concerns with the intersection or corridor or meet the project's purpose and need. The intersection would continue to operate at LOS F, with increased congestion as traffic increases in future years. There would continue to be substandard bicycle and pedestrian facilities. This alternative does not address the traffic concerns, but is valuable to use as a comparison. No changes to the farmstead would be caused by this alternative.

2. Improvement without using the Section 4(f) lands.

The existing intersection at County PD is experiencing an increase in traffic. There are several design challenges with improving the intersection. The Schroeder-Stickelberg-Thompson Farmstead resides in the northeast quadrant of the County M – County PD intersection. The property on the northwest quadrant is owned by University Ridge Golf Course, another Section 4(f) eligible property. It will not be possible to construct an alternative to meet the LOS and capacity requirements without expanding the right of way into one or both of these properties. The Alliant Energy electrical power substation on the southeast quadrant of the intersection limits the extent to which the roadway and intersection can be shifted. Finally, the improvement alternatives other than the no-build alternative would have an adverse effect on the historical setting of the farmstead, thus be considered a use of a Section 4(f) resource, even without any land acquisition.

3. Alternatives on new location.

An alternative was drawn and analyzed that requires shifting County PD to the south to avoid the University Ridge Property and the Schroeder-Stickelberg-Thompson Farmstead as much as possible. The alternative would require a large amount of farmland acquisition in the southwest quadrant of County M and County PD intersection. Alliant Energy owns and maintains a large electrical power substation in the southeast quadrant of the County M and County PD intersection. This substation severely limited shifting of County PD away from the Schroeder-Stickelberg-Thompson farmstead. , Roadway expansion within the fenced area of the substation (SE quadrant) would result in the need to relocate the entire substation. This substation serves approximately 11,000 residential and commercial customers in Verona and Madison and is expected to increase by 400 to 500 customers annually. This substation also serves Epic Systems Corporation, which has 9,400+ employees and whose electric usage is equivalent to approximately 2,800 homes. Relocation of this substation is neither feasible nor prudent due to the extensive costs (estimated upwards of \$50 million).

Even if the intersection avoids these properties, it is not possible to expand the roadway corridors to four-lanes without affecting one of these properties

**9. Indicate which measures will be used to minimize adverse effects, mitigate for unavoidable adverse effects or enhance beneficial effects:**

- Replacement of lands used with lands of reasonably equivalent usefulness and location, and of at least comparable value.
- The Small Conversion Policy for Lands Subject to Section 6(f) will be used.
- Replacement of facilities impacted by the project including sidewalks, paths, lights, trees, and other facilities.
- Restoration and landscaping of disturbed areas.
- Incorporation of design features and habitat features where necessary to reduce or minimize impacts to the Section 4(f) property.
- Payment of the fair market value of the land and improvement taken.
- Improvements to the remaining Section 4(f) site equal to the fair market value of the land and improvements taken.
- Such additional or alternative mitigation measures determined necessary based on consultation with officials having jurisdiction.  
The additional or alternative mitigation measures are listed or summarized below:
- Property is a historic property or an archeological site. The conditions or mitigation stipulations are listed in the MOA (See *Attachment Q – Memorandum of Agreement*)
- Other – Describe:

**10. Briefly summarize the results of coordination with other agencies that were consulted about the project and its effects on the property: (For historic and archeological sites, refer to Factor Sheet B-5 and/or B-6 for documentation. For other unique areas, attach correspondence from officials having jurisdiction that documents concurrence with impacts and mitigation measures.)**

The project team met with the property owner of the Schroeder-Stickelberg-Thompson Farmstead on several occasions throughout the design process. Documentation of all meetings can be found in *Attachment F – Documentation for Consultation* and *Attachment S - Schroeder-Stickelberg-Thompson Farmstead Correspondence*.

- November 18, 2011 – Phone Call
  - December 8, 2011 – Public Information Meeting #1
  - February 7, 2012 – Phone Call
  - May 24, 2012 – Public Information Meeting #2
  - April 29, 2013 – Consultation Meeting #1
  - May 15, 2013 – In Person Utility Meeting on Property
  - March 12, 2014 – Public Information Meeting #3
  - April 14, 2014 – Documentation for Consultation Meeting #2
- A second consultation meeting was held to address the updated preferred alternative and its impacts to the farmstead.

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## Factor Sheet B-8: Hawks Landing Golf Course

Alternative: Preferred Alternative	Total Length of Center Line of Existing Roadway 2.86 miles
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

1. **Property Name:** Hawks Landing Golf Course

2. **Location:** 88 Hawks Landing Circle Verona, WI 53593

3. **Ownership or Administration:** Ownership

4. **Type of Resource:**

- Public Park  
 Recreational lands (Golf Course)  
 Ice Age National Scenic Trail  
 NRCS Wetland Reserve Program  
 Wildlife Refuge  
 Waterfowl Refuge  
 Historic/Archaeological Site eligible for the National Register of Historic Places (NRHP)  
 Other – Identify:

5. **Do FHWA requirements for Section 4(f) apply to the project's use of the property?**

- No - Check all that apply:  
 Project is not federally funded.  
 No land will be acquired in fee or PLE and the alternative will not affect the use.  
 Property is not on or eligible for the NRHP.  
 Property is on or eligible for the NRHP however includes a *de minimis* effect finding.  
 Interstate Highway System Exemption.  
 Other - Explain: The facility is a privately owned recreational use (golf course) that is occasionally used by the public.

- Yes - Check all that apply:  
 Indicate which of the Programmatic/Negative Declaration Section 4(f) Evaluation(s) applies.  
 Historic Bridge.  
 Park minor involvement.  
 Historic site minor involvement.  
 Independent bikeway or walkway.  
 Great River Road.  
 Net Benefit to Section 4(f) Property. Explain: \_\_\_\_\_  
 Full Section 4(f) evaluation approved on

6. **Was special funding used to acquire the land or to make improvements on the property?**

- No - Special funding was not used for the acquisition of this property.  
 Yes:  
 s.6(f) LWCF (Formerly LAWCON).  
 Dingell-Johnson (D/J funds).  
 Pittman-Robertson (P/R funds).  
 Other – Describe:

**7. Describe the significance of the property:**

For other unique areas, include or attach statements of significance from officials having jurisdiction.

Hawks Landing Golf Course is privately owned golf course, tennis, swimming pool facility located in the City of Madison, established in 2001. This facility is occasionally used by the public. The development includes single-family homes and condominiums situated on 530 acres of rolling hills. A golf course spanning 206 acres meanders through the development.

For the purpose of this document, Hawks Landing Golf Course is discussed as a Unique Area. Since the golf course is privately owned, it does not qualify as a Section 4(f) property.

**8. Describe the proposed alternative's effects on this property:**

- a. Describe any effects on or uses of land from the property. For other areas, include or attach statements from officials having jurisdiction over the property which discusses the alternative's effects on the property: **(A map, sketch, plan, or other graphic which clearly illustrates use of the property and the project's use and effects on the property must be included.)**

Right of way is anticipated to be acquired in the extreme southeast corner of the parcel in order to meet the design needs of the expanding at-grade traffic signal intersection at County M & Midtown Road. The 0.7 acres (0.15 acres FEE, 0.55 acres TLE) required is to be taken from open land and will not affect the golf course or its operation. The intersection improvement will move the road closer to the tee boxes, and a multi-use path will be constructed in this area.

*(See Exhibit 11A - Section 4(f) Property Right of Way Map and 11F – Hawk's Landing.)*

- b. Discuss the following alternatives and describe whether they are feasible and prudent and why:

- 1. Do nothing alternative.

This approach does not address the operational or safety concerns with the intersection or corridor or meet the project's purpose and need. The intersection would continue to operate at LOS F, with increased congestion as traffic increases in future years. There would continue to be substandard bicycle and pedestrian facilities. This would not change the golf course or operation in any way.

- 2. Improvement without using the Section 4(f) lands.

The existing intersection at Midtown Road is experiencing an increase in traffic. There are several design challenges with improving the intersection. Agricultural land is located in the northeast and southwest quadrants, but a residence located close to the intersection in the southeast quadrant limits the intersection location possibilities. It will not be possible to construct an alternative to meet the LOS and capacity requirements without expanding the right of way into one or both of these properties.

All options developed for this intersection would have very similar impacts to the golf course as the proposed action (signalized intersection).

**9. Indicate which measures will be used to minimize adverse effects, mitigate for unavoidable adverse effects or enhance beneficial effects:**

- Replacement of lands used with lands of reasonably equivalent usefulness and location, and of at least comparable value.
- The Small Conversion Policy for Lands Subject to Section 6(f) will be used.
- Replacement of facilities impacted by the project including sidewalks, paths, lights, trees, and other facilities.
- Restoration and landscaping of disturbed areas.
- Incorporation of design features and habitat features where necessary to reduce or minimize impacts to the Section 4(f) property.
- Payment of the fair market value of the land and improvement taken.
- Improvements to the remaining Section 4(f) site equal to the fair market value of the land and improvements taken.
- Such additional or alternative mitigation measures determined necessary based on consultation with officials having jurisdiction.

The additional or alternative mitigation measures are listed or summarized below:

- Property is a historic property or an archeological site. The conditions or mitigation stipulations are listed or summarized below:
- Other – Describe: Every attempt was made to minimize the adverse effects and lessen the impact to the Hawks Landing property. Since this property is identified only as a "unique area", Section 4(f) and Section 6(f) measures for replacement lands do not exist and are not needed for Section 4(f) property.

**10. Briefly summarize the results of coordination with other agencies that were consulted about the project and its effects on the property:**

Coordination is required between the City of Madison and Hawks Landing Golf Course. The golf course expressed concerns regarding the proximity of the proposed roadway to the existing tee boxes. Minimizing the acquisition in this area was a prime consideration when choosing from the alternatives and developing preliminary designs.

Hawk's Landing Golf Course is located in the northwest quadrant of the County M & Midtown Road intersection. The owner of the residence in the southeast quadrant of the same intersection approached the City of Madison and design team and indicated a preference to be relocated rather than continue to reside at the property after improvements were made to the intersection. The updated proposed action design includes a shift of the intersection to the east and requires removal/relocation of the residence. The design completely avoids the Hawk's Landing Golf Course tee box and minimizes impacts to the property.

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## Factor Sheet B-8: Temporary Occupancy – Ice Age Junction Path

Alternative: Preferred Alternative	Total Length of Center Line of Existing Roadway 2.86 miles
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

- Property Name:** Ice Age Junction Path – Temporary Occupancy
- Location:** Near County M & Flagstone Drive intersection and at Ice Age Junction Path crossing of Raymond Road
- Ownership or Administration:** Ownership

## 4. Type of Resource:

- Public Park.  
 Recreational lands. - Path  
 Ice Age National Scenic Trail.  
 NRCS Wetland Reserve Program.  
 Wildlife Refuge.  
 Waterfowl Refuge.  
 Historic/Archaeological Site eligible for the National Register of Historic Places (NRHP).  
 Other – Identify:

## 5. Do FHWA requirements for Section 4(f) apply to the project's use of the property?

- No - Check all that apply:  
 Project is not federally funded.  
 No land will be acquired in fee or PLE and the alternative will not affect the use.  
 Property is not on or eligible for the NRHP.  
 Property is on or eligible for the NRHP however includes a *de minimis* effect finding.  
 Interstate Highway System Exemption.  
 Other - Explain: \_\_\_\_\_
- Yes - Check all that apply:  
 Indicate which of the Programmatic/Negative Declaration Section 4(f) Evaluation(s) applies.  
 Historic Bridge.  
 Park minor involvement.  
 Historic site minor involvement.  
 Independent bikeway or walkway.  
 Great River Road.  
 Net Benefit to Section 4(f) Property. Explain: \_\_\_\_\_  
 Full Section 4(f) evaluation approved on \_\_\_\_\_.

## 6. Was special funding used to acquire the land or to make improvements on the property?

- No - Special funding was not used for the acquisition of this property.  
 Yes:  
 s.6(f) LWCF (Formerly LAWCON).  
 Dingell-Johnson (D/J funds).  
 Pittman-Robertson (P/R funds).  
 Other – Describe:

## 7. Describe the significance of the property:

For other unique areas, include or attach statements of significance from officials having jurisdiction.

The Ice Age Junction Path (linear resource), owned and maintained by the City of Madison (project sponsor), is a paved multi-use facility on the west side of Madison that will eventually provide connectivity for the west side of Madison. When complete, this path will provide a connection from the Military Ridge State Trail in the city of Verona to the cities of Middleton and Madison. Currently, one portion of this existing path ends near the County M & Flagstone Drive intersection.

As part of the proposed action, an extension to this path will be constructed tying into a stub of the existing path that currently is a dead end. An existing spur path through Flagstone Park provides path users an outlet to Flagstone Drive, a residential street suitable for bicycle access. Since this stub currently does not connect to any access point, the proposed action will not impact trail

users during construction. The proposed project will complete this connection and provide connectivity to the overall Ice Age Junction Path once construction of the proposed action is complete.

The proposed action will also impact the path where it crosses Raymond Road. Raymond Road will be reconstructed to accommodate new sewer utilities and a new culvert over Badger Mill Creek. Path sections removed as a result of the sewer construction and Raymond Road reconstruction will be re-paved in kind. Pavement crosswalk markings, crossing warning signs on Raymond Road, and detectable warning fields for pedestrians at the crossing will be replaced in kind. The Raymond Road profile will be adjusted as necessary to provide the appropriate sight distance and improve safety for the crossing. During construction, path users will be re-routed to a temporary path to minimize or eliminate the need to close the path.

**8. Describe the proposed alternative's effects on this property:**

- a. Describe any effects on or uses of land from the property. For other areas, include or attach statements from officials having jurisdiction over the property which discusses the alternative's effects on the property: **(A map, sketch, plan, or other graphic which clearly illustrates use of the property and the project's use and effects on the property must be included.)**

There will be temporary occupancy of the path during construction. Temporary occupancy may result when the existing trail is connected to the new extension near Flagstone Drive and if any unanticipated construction related emergencies occur. Temporary occupancy is required at the Raymond Road path crossing. This temporary occupancy of the land would not be adverse for Section 4(f) purposes. Any temporary occupancy of the path would not constitute a Section 4(f) use as the following conditions listed in 23 Code of Federal Regulations (CFR) 774.13 (d) would be satisfied:

- Currently the Ice Age Junction Path ends at the Flagstone Park at the intersection of Flagstone Drive and Quartz Lane. Any temporary occupancy will occur on a short (approx. 25 feet) dead end stub on the Ice Age Junction Path near Flagstone Drive. See *Figure 29 - Ice Age Junction Path Impacts - At Flagstone Drive* below. The remainder of the previously constructed Ice Age Junction Path will remain open and there will be no interruption.
- The path crossing at Raymond Road will be reconstructed in kind. See *Figure 30 - Ice Age Junction Path Impacts - At Raymond Road* below. Closures of the path to accommodate construction activities will be minimized or eliminated by use of a temporary path connection.
- All work on this Section 4(f) resource is minor (landscaping, short path section construction, & connecting to existing path ends) and any change to the Section 4(f) recreational facility is minimal.
- There are no anticipated permanent adverse physical impacts or interference with the Section 4(f) resource's (Path) protected activities, features, or attributes.
- Any open land or the trail that may be disturbed will be landscaped or restored to a condition as good as or better than what exists currently.
- The City of Madison is the project sponsor and the path owner and agrees there will be no permanent adverse physical impacts to the trail nor will there be interference with the protected activities, features, or attributes of the Section 4(f) property.



**9. Indicate which measures will be used to minimize adverse effects, mitigate for unavoidable adverse effects or enhance beneficial effects:**

- Replacement of lands used with lands of reasonably equivalent usefulness and location, and of at least comparable value.
- The Small Conversion Policy for Lands Subject to Section 6(f) will be used.
- Replacement of facilities impacted by the project including sidewalks, paths, lights, trees, and other facilities.
- Restoration and landscaping of disturbed areas.
- Incorporation of design features and habitat features where necessary to reduce or minimize impacts to the Section 4(f) property.
- Payment of the fair market value of the land and improvement taken.
- Improvements to the remaining Section 4(f) site equal to the fair market value of the land and improvements taken.
- Such additional or alternative mitigation measures determined necessary based on consultation with officials having jurisdiction. The additional or alternative mitigation measures are listed or summarized below:
- Property is a historic property or an archeological site. The conditions or mitigation stipulations are listed or summarized below:
- Other – Describe: There are no anticipated permanent adverse physical impacts, or interference with the Section 4(f) resource's (Path) protected activities, features, or attributes.

**10. Briefly summarize the results of coordination with other agencies that were consulted about the project and its effects on the property:**

**(For historic and archeological sites, refer to Factor Sheet B-5 and/or B-6 for documentation. For other unique areas, attach correspondence from officials having jurisdiction that documents concurrence with impacts and mitigation measures.)**

On July 7, 2015, the City of Madison (official with jurisdiction over the Ice Age Junction Path) responded in writing documenting their involvement with the project. The representative attended project design and development meetings and participated in design efforts to minimize temporary impacts. The official has reviewed and been actively engaged in the project's public involvement process. The City of Madison agrees that the proposed action will have no permanent adverse physical impacts that are eligible for Section 4(f) protection.

## Factor Sheet B-8: Temporary Occupancy – City of Verona Unnamed Path

Alternative: Preferred Alternative	Total Length of Center Line of Existing Roadway 2.86 miles
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

- Property Name:** City of Verona Unnamed Path – Temporary Occupancy
- Location:** Along the south side of Ineichen Drive extending from County M east to and through Harmony Hills Park
- Ownership or Administration:** Ownership

## 4. Type of Resource:

- Public Park.  
 Recreational lands. - Path  
 Ice Age National Scenic Trail.  
 NRCS Wetland Reserve Program.  
 Wildlife Refuge.  
 Waterfowl Refuge.  
 Historic/Archaeological Site eligible for the National Register of Historic Places (NRHP).  
 Other – Identify:

## 5. Do FHWA requirements for Section 4(f) apply to the project's use of the property?

- No - Check all that apply:  
 Project is not federally funded.  
 No land will be acquired in fee or PLE and the alternative will not affect the use.  
 Property is not on or eligible for the NRHP.  
 Property is on or eligible for the NRHP however includes a *de minimis* effect finding.  
 Interstate Highway System Exemption.  
 Other - Explain: \_\_\_\_\_
- Yes - Check all that apply:  
 Indicate which of the Programmatic/Negative Declaration Section 4(f) Evaluation(s) applies.  
 Historic Bridge.  
 Park minor involvement.  
 Historic site minor involvement.  
 Independent bikeway or walkway.  
 Great River Road.  
 Net Benefit to Section 4(f) Property. Explain: \_\_\_\_\_  
 Full Section 4(f) evaluation approved on \_\_\_\_\_.

## 6. Was special funding used to acquire the land or to make improvements on the property?

- No - Special funding was not used for the acquisition of this property.  
 Yes:  
 s.6(f) LWCF (Formerly LAWCON).  
 Dingell-Johnson (D/J funds).  
 Pittman-Robertson (P/R funds).  
 Other – Describe:

## 7. Describe the significance of the property:

For other unique areas, include or attach statements of significance from officials having jurisdiction.

The unnamed path (linear resource) is owned and maintained by the City of Verona (project participant), and is a paved multi-use facility for recreational use.

At the County M & Ineichen Drive intersection, this path currently connects to Ineichen Drive and then ends. As part of the proposed action, an extension to this path will be constructed to provide access across County M connecting to the proposed multi-use path in this area. Once completed, this extension will provide connectivity from this path to other multi-use facilities in the area.

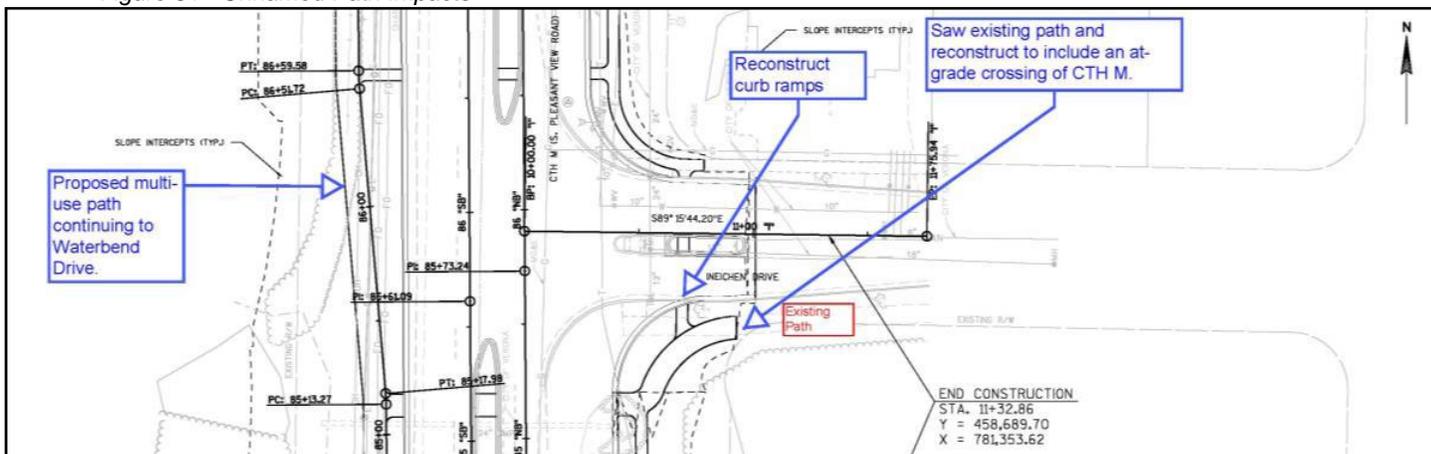
**8. Describe the proposed alternative's effects on this property:**

- a. Describe any effects on or uses of land from the property. For other areas, include or attach statements from officials having jurisdiction over the property which discusses the alternative's effects on the property: **(A map, sketch, plan, or other graphic which clearly illustrates use of the property and the project's use and effects on the property must be included.)**

There may be temporary occupancy of the path end during construction. Temporary occupancy may result when the existing path is connected to the new extension and if any unanticipated construction related emergencies occur. However, this temporary occupancy of the land would not be adverse for Section 4(f) purposes. Any temporary occupancy would not constitute a Section 4(f) use as the following conditions listed in 23 Code of Federal Regulations (CFR) 774.13 (d) would be satisfied:

- Currently this unnamed city of Verona Path ends at the County M & Ineichen Drive intersection. The remainder of the previously constructed Path will remain open and there will be no interruption.
- All work on and adjacent to this Section 4(f) resource is minor (i.e. landscaping & connecting the existing path termini) and if any change to the Section 4(f) recreational facility would occur, it would be minimal. See *Figure 31 - Unnamed Path Impacts* below.
- There are no anticipated permanent adverse physical impacts, or interference with the Section 4(f) resource's (Path) protected activities, features, or attributes.
- Any open land or the trail that may be disturbed will be landscaped or restored to a condition as good as or better than what exists currently.
- The City of Verona is the project participant and the path owner and agrees there will be no permanent adverse physical impacts to the trail nor will there be interference with the protected activities, features, or attributes of the Section 4(f) property.

Figure 31 - Unnamed Path Impacts



- b. Discuss the following alternatives and describe whether they are feasible and prudent and why:

This temporary occupancy is a result of the preferred alternative, thus other alternatives are irrelevant.

**9. Indicate which measures will be used to minimize adverse effects, mitigate for unavoidable adverse effects or enhance beneficial effects:**

- Replacement of lands used with lands of reasonably equivalent usefulness and location, and of at least comparable value.
- The Small Conversion Policy for Lands Subject to Section 6(f) will be used.
- Replacement of facilities impacted by the project including sidewalks, paths, lights, trees, and other facilities.
- Restoration and landscaping of disturbed areas.
- Incorporation of design features and habitat features where necessary to reduce or minimize impacts to the Section 4(f) property.
- Payment of the fair market value of the land and improvement taken.
- Improvements to the remaining Section 4(f) site equal to the fair market value of the land and improvements taken.
- Such additional or alternative mitigation measures determined necessary based on consultation with officials having jurisdiction. The additional or alternative mitigation measures are listed or summarized below:
- Property is a historic property or an archeological site. The conditions or mitigation stipulations are listed or summarized below:
- Other – Describe: There are no anticipated permanent adverse physical impacts, or interference with the Section 4(f) resource's (Path) protected activities, features, or attributes.

**10. Briefly summarize the results of coordination with other agencies that were consulted about the project and its effects on the property:  
(For historic and archeological sites, refer to Factor Sheet B-5 and/or B-6 for documentation. For other unique areas, attach correspondence from officials having jurisdiction that documents concurrence with impacts and mitigation measures.)**

On July 10, 2015, the City of Verona (official with jurisdiction over the recreational path) responded in writing documenting their involvement with the project. The representative attended project design and development meetings and participated in design efforts to minimize temporary impacts. The official has reviewed and been actively engaged in the project's public involvement process. The City of Verona agrees that the proposed action will have no permanent adverse physical impacts that are eligible for Section 4(f) protection.

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## Factor Sheet B-9

Alternative: Preferred Alternative	Total Length of Center Line of Existing Roadway 2.86 miles
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

**1. Landscape Characteristics:****a. Identify and briefly describe the visual character of the landscape:**

The project is located in an area with gently rolling hills. The landscape is filled with a wide variety of elements due to the surrounding land uses. Residential developments are scattered throughout the project area. Agricultural land, open prairies, and forested land surround the corridor. Morse Pond and well-groomed golf courses are also in view of the County M corridor.

**b. Indicate the visual quality of the view-shed and identify landscape elements that would be visually sensitive:**

The visual quality of the view-shed is nondescript. There are no visually sensitive landscape elements.

**2. User/viewer Characteristics:****b. Identify and discuss the viewers who will have a view of the improved transportation facility:**

There are several sets of viewers of the improvements associated with the improved transportation facility. County M is lined with residential developments, so viewers are primarily residents. A daycare and church are located on the south portion of the project and patrons will have a view of County M and intersecting roadways. Users of Flagstone Park and patrons of the two golf courses will also be a part of the corridor's view-shed. Owners of the historical farmstead (Schroeder-Stickelberg-Thompson Farmstead) will have a direct view of the project.

**c. Identify and discuss users of the transportation facility who will have a view from the facility:**

All users of the facility include motorists, passengers, bicyclists, and pedestrians will have a direct view of the facility. The corridor carries local and regional traffic.

**3. Effects:****a. Describe whether and how the project would affect the visual character of the landscape:**

The roadway will be widened and the rural cross-section changed to an urban cross-section with curb and gutter. The footprint of the intersections will also increase due to the design of the signalized intersection at County M & Midtown Road, and the Westbound Underpass at County M & County PD. Utility poles will be removed and replaced with larger poles. This will change the view-shed for both travelers and adjacent landowners. The profile will be adjusted slightly, but should not change the character of the landscape.

**b. Indicate the effects the project would have on the viewer groups:**

The project will have some minor effects on the view groups as the roadway will be widened and slopes will change slightly. The roadway will be closer to some holes of the golf courses and to some residences. Several mature trees will be removed, which will have an impact on the scenery.

**4. Mitigation:****a. Have aesthetic commitments been made?**

- No  
 Yes - Discuss:

Staff from University of Wisconsin Facilities Planning and Management and staff from University Ridge golf course met with the design team to discuss alternative designs for the intersection of County M & County PD. Staff indicated a desire to work with the design team on final details of landscaping. University Ridge and UW Facilities Planning and Management also prefer tree plantings and a split rail fence along the edge of the new roadway.

The intersection improvement will move the road closer to the tee box at Hawks Landing Golf Course and a multi-use path will be constructed in this area. Ongoing discussions regarding visual screening of this tee box are occurring.

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## Factor Sheet C-1

Alternative: Preferred Alternative	Total Length of Center Line of Existing Roadway 2.86 miles
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

**1. Describe Wetlands:**

MSA Professional Services conducted a wetland inventory on August 19, and 25-27, 2011 and authored a final Wetland Delineation Report on September 28, 2011. The Wetland Delineation Report was reviewed and concurred to by WDNR. Thirteen locations were investigated. Location #7 was evaluated but not determined to be a wetland. The remaining twelve areas were considered wetlands. A portion of eight wetland areas totaling approximately 2.05 acres will be impacted because of the proposed action. The impacts range in size between 0.03 – 0.55 acres. (See Exhibit 12: Delineated Wetlands).

Most of the wetlands delineated are fabricated ditches and/or small depression features. Two wetlands, wetland 5 and wetland 6, are considered high quality in terms of species diversity. Wetland 13 is contiguous extension of Wetlands 5 and 6. Only one of these high quality wetlands (Wetland 4 near transect point 5B) will be affected.

**Wetland 1 – (approximately 900 feet north of Midtown Road)**

Section-Township-Range: 34-T7N-R8E

Location Map: Near Wetland Transect Point 1B

Wetland Type(s) <sup>1</sup> M

Total Wetland Loss: 0.04 acres

Wetland is (Check all that apply)<sup>2</sup>

- Isolated from stream, lake or other surface water body  
 Not contiguous (in contact with a stream, lake, or other water body, but within 5-year floodplain)  
 If adjacent or contiguous, identify stream, lake or water body by Section-Township-Range,

Badger Mill Creek Section 34, Township 7N, R8E is an intermittent creek that runs through this wetland.

**Wetland 3 – (south of Midtown Road approximately 800 feet west of County M)**

Section-Township-Range: 3-T6N-R8E

Location Map: Near Wetland Transect Point 3B

Wetland Type(s) <sup>1</sup> M

Total Wetland Loss: 0.12 acres

Wetland is (Check all that apply)<sup>2</sup>

- Isolated from stream, lake or other surface water body  
 Not contiguous (in contact with a stream, lake, or other water body, but within 5-year floodplain)  
 If adjacent or contiguous, identify stream, lake or water body by Section-Township-Range

Badger Mill Creek Section 3, Township 6N, R8E is an intermittent creek that runs through this wetland.

**Wetland 4 (1 of 2 impacted locations)**

Section-Township-Range: 3-T6N-R8E

Location Map: Near Wetland Transect Point Wetland 4

Wetland Type(s) <sup>1</sup>RPE

Total Wetland Loss: 0.03 acres

Wetland is (Check all that apply)<sup>2</sup>

- Isolated from stream, lake or other surface water body  
 Not contiguous (in contact with a stream, lake, or other water body, but within 5-year floodplain)  
 If adjacent or contiguous, identify stream, lake or water body by Section-Township-Range

Badger Mill Creek Section 34, Township 7N, R8E is an intermittent creek that runs through this wetland.

**Wetland 4 (2 of 2 impacted locations)**

Section-Township-Range: 3-T6N-R8E

Location Map: Near Wetland Transect Point Wetland 5B

Wetland Type(s)<sup>1</sup> SM

Total Wetland Loss: 0.26 acres

Wetland is (Check all that apply)<sup>2</sup>

- Isolated from stream, lake or other surface water body
- Not contiguous (in contact with a stream, lake, or other water body, but within 5-year floodplain)
- If adjacent or contiguous, identify stream, lake or water body by Section-Township-Range

Wetland is part of Badger Mill Creek Section 34, Township 7N, R8E.

**Wetland 8 (1 of 2 impacted locations) - northwest quadrant of County M & County PD intersection**

Section-Township-Range: 3-T6N-R8E

Location Map: Near Wetland Transect Point Wetland 8B

Wetland Type(s)<sup>1</sup> M

Total Wetland Loss: 0.55 acres

Wetland is (Check all that apply)<sup>2</sup>

- Isolated from stream, lake or other surface water body
- Not contiguous (in contact with a stream, lake, or other water body, but within 5-year floodplain)
- If adjacent or contiguous, identify stream, lake or water body by Section-Township-Range

**Wetland 8 (2 of 2 impacted locations) – northwest quadrant of County M & County PD intersection**

Section-Township-Range 3-T6N-R8E

Location Map: Near Wetland Transect Point Wetland 8C

Wetland Type(s)<sup>1</sup> M

Total Wetland Loss: 0.52 acres

Wetland is (Check all that apply)<sup>2</sup>

- Isolated from stream, lake or other surface water body
- Not contiguous (in contact with a stream, lake, or other water body, but within 5-year floodplain)
- If adjacent or contiguous, identify stream, lake or water body by Section-Township-Range

**Wetland 9 – approximately 400 feet south of County PD on the east side of County M**

Section-Township-Range: 3-T6N-R8E

Location Map: Near Wetland Transect Point Wetland 9B

Wetland Type(s)<sup>1</sup> M

Total Wetland Loss: 0.23 acres

Wetland is (Check all that apply)<sup>2</sup>

- Isolated from stream, lake or other surface water body
- Not contiguous (in contact with a stream, lake, or other water body, but within 5-year floodplain)
- If adjacent or contiguous, identify stream, lake or water body by Section-Township-Range

**Wetland 10 - approximately 400 feet south of County PD on the west side of County M**

Section-Township-Range: 10 T6N-R8E

Location Map: Near Wetland Transect Point Wetland 10B

Wetland Type(s)<sup>1</sup> M

Total Wetland Loss: 0.20 acres

Wetland is (Check all that apply)<sup>2</sup>

- Isolated from stream, lake or other surface water body
- Not contiguous (in contact with a stream, lake, or other water body, but within 5-year floodplain)
- If adjacent or contiguous, identify stream, lake or water body by Section-Township-Range

**Wetland 11** - approximately 100 feet south of Ineichen Drive on the east side of County M

Section-Township-Range: 10 T6N-R8E

Location Map: Near Wetland Transect Point Wetland 11B

Wetland Type(s)<sup>1</sup> M

Total Wetland Loss: 0.03 acres

Wetland is (Check all that apply)<sup>2</sup>

- Isolated from stream, lake or other surface water body
- Not contiguous (in contact with a stream, lake, or other water body, but within 5-year floodplain)
- If adjacent or contiguous, identify stream, lake or water body by Section-Township-Range

**Wetland 12** – approximately 50 feet south of Ineichen Drive on the west side of County M

Section-Township-Range: 10-T6N-R8E

Location Map: Near Wetland Transect Point Wetland 12B

Wetland Type(s)<sup>1</sup> SS/SM

Total Wetland Loss: 0.07 acres

Wetland is (Check all that apply)<sup>2</sup>

- Isolated from stream, lake or other surface water body
- Not contiguous (in contact with a stream, lake, or other water body, but within 5-year floodplain)
- If adjacent or contiguous, identify stream, lake or water body by Section-Township-Range

<sup>1</sup>Use wetland types as specified in the “WisDOT Wetland Mitigation Banking Technical Guideline, Table 3-C”

<sup>2</sup>If wetland is contiguous to a stream, complete Factor Sheet C-2, Rivers, Streams and Floodplains Impact Evaluation. If wetland is contiguous to a lake or other water body, complete Factor Sheet C-3, Lake or Water Body Impact Evaluation.

**1. Are any impacted wetlands considered “wetlands of special status” per WisDOT Wetland Mitigation Banking Technical Guideline, page 10?**

- No
- Yes:
- Advanced Identification Program (ADID) Wetlands
- Other – Describe: \_\_\_\_\_

**2. Describe proposed work in the wetland(s), e.g., excavation, fill, marsh disposal, other:**

The proposed improvements along County M will impact a total of 2.05 acres of wetland from nine areas scattered throughout the corridor. Most of the impacts from fill are associated with road embankment expansion.

**3. List any observed or expected waterfowl and wildlife inhabiting or dependent upon the wetland:** (List should include permanent, migratory and seasonal residents).

Most of the wetlands delineated are isolated to fabricated ditches and small depression features. Only one wetland could be considered a high quality wetland in terms of species diversity.

Dane County Parks constructed a wetland scrape near the outlet of the culvert carrying Badger Mill Creek below County M south of Flagstone Drive. This scrape is off alignment with the drainage channel. The recommended alternative will impact the scrape, filling most of it. Dane County Parks has indicated a desire to reconstruct the scrape with the reconstruction of the box culvert crossing and addition of the multi-use path improvements. They indicated that aligning the scrape with the drainage channel, moving the scrape further from County M and placing it more along the multi-use path would be an improvement to the function of the scrape for aquatic organisms and enhance the natural setting of the path.

Other affected wetlands are small and lack vegetation diversity. These wetlands will have limited wildlife use including songbirds, small mammals, reptiles, and amphibians when standing water is present. The larger wetland areas with more vegetation diversity and/or connections to other habitat areas will support waterfowl, larger mammals such as deer and furbearers, a variety of songbirds and other wildlife typically found in Dane County.

**4. Federal Highway Administration (FHWA) Wetland Policy:**

- Not Applicable - Explain
- Individual Wetland Finding Required - Summarize why there are no practicable alternatives to the use of the wetland.
- Statewide Wetland Finding: **NOTE: All three boxes below must be checked for the Statewide**

**Wetland Finding to apply.**

- Project is either a bridge replacement or other reconstruction within 0.3 mile of the existing location.
- The project requires the use of 7.4 acres or less of wetlands.
- The project has been coordinated with the WDNR and there have been no significant concerns expressed over the proposed use of the wetlands.

**5. Erosion control or storm water management practices which will be used to protect the wetland are indicated on form: (Check all that apply)**

- Factor Sheet D-6, Erosion Control Impact Evaluation.
- Factor Sheet D-5, Stormwater Impact Evaluation.
- Neither Factor Sheet - Briefly describe measures to be used

**6. U S Army Corps of Engineers (COE) Jurisdiction - Section 404 Permit (Clean Water Act)**

- Not Applicable - No fill to be placed in wetlands or wetlands are not under COE jurisdiction.
- Applicable - Fill will be placed in wetlands under the jurisdiction of the COE.

Indicate area of wetlands filled: Acres: A total of 2.05 acres of wetland will be filled as a result of the County M improvements.

Type of 404 permit anticipated:

- Individual Section 404 Permit required.
- General Permit (GP) or Letter of Permission (LOP) required to satisfy Section 404 Compliance.

Indicate which GP or LOP is required:

- Non-Reporting GP
- Provisional GP
- Provisional LOP
- Programmatic GP

Expiration date of 404 Permit, if known \_\_\_\_\_

**7. Section 10 Waters (Rivers and Harbors Act). For navigable waters of the United States (Section 10) indicate which 404 permit is required:**

- No Section 10 Waters.  
Indicate whether Pre-Construction Notification (PCN) to the USACE is:
  - Not applicable.
  - Required: Submitted on: (Date)

Status of PCN

USACE has made the following determination on: (Date)

USACE is in the process of review, anticipated date of determination is: (Date)

**8. Wetland Avoidance and Impact Minimization: [Note: Required before compensation is acceptable]**

A. Wetland Avoidance:

1. Describe methods used to avoid the use of wetlands, such as using a lower level of improvement or placing the roadway on new location, etc.:

All alternatives, other than the no build, require use of, and impacts to, adjacent wetlands. All alternatives affected the wetlands similarly with only slight variations in acreage of wetland impacts. All of the alternatives developed have a curved County M alignment north of County PD to minimize impacts to Morse Pond and surrounding wetlands.

2. Indicate the total area of wetlands avoided:  
0.4 acres

B. Minimize the amount of wetlands affected:

1. Describe methods used to minimize the use of wetlands, such as a steepening of side slopes or use of retaining walls, equalizer pipes, upland disposal of hydric soils, etc.:

Use of wetlands for improvements will be minimized through a combination of roadway geometrics and structures. The alignment of County M is shifted along Morse Pond and designed to fit between Section 4(f) properties north of County PD and minimize impacts to Morse Pond. Fill slopes adjacent to wetland areas will be constructed at 3:1 to minimize fill into wetlands. These 3:1 fill slopes are outside the roadway clear zone (20 feet) on the back side of proposed sidewalk.

2. Indicate the total area of wetlands saved through minimization:  
0.7 acres

**9. Compensation for Unavoidable Wetland Loss:**

According to Section 401 (b) (1), of the Clean Water Act, unavoidable wetland losses must be mitigated on-site, if possible. If no on-site opportunities exist, near/off-site wetland compensation sites must be considered. If neither exists, the losses may be debited to an existing wetland mitigation bank site. Compensation ratios are based on WisDOT Wetland Mitigation Banking Technical Guideline. (Ratios calculated within floristic province drainage areas)

	Type	Acre(s) Loss	Ratio	Compensation Type and Acreage			
				On-site	Near/off site	Consolidation Site	Bank site
RPF(N)	Riparian wetland (wooded)	0					
RPF(D)	Degraded riparian wetland (wooded)	0					
RPE(N)	Riparian wetland (emergent)	0.03					
RPE(D)	Degraded riparian wetland (emergent)	0					
M(N)	Wet and sedge meadows, wet prairie, vernal pools, fens	0					
M(D)	Degraded meadow	1.69					
SM	Shallow marsh	0.33					
DM	Deep marsh	0					
AB(N)	Aquatic bed	0					
AB(D)	Degraded aquatic bed	0					
SS	Shrub Swamp, shrub carr, alder thicket	0					
WS(N)	Wooded swamp	0					
WS(D)	Degraded wooded swamp	0					
Bog	Open and forested bogs	0					

D = Degraded N= Non-degraded Total 2.05 acres

**10. If on-site compensation is proposed, describe how a search for a compensation site was conducted:**

On-site wetland compensation will be included with the project and will be located near the Badger Mill Creek crossing of County M south of Flagstone Drive. The wetland scrape that Dane County constructed will be replaced beyond the proposed slope intercepts.

**11. Summarize the coordination with other agencies regarding the compensation for unavoidable wetland losses: Attach appropriate correspondence:**

The US Army Corps of Engineers (USACOE) recommends a pre-application meeting during the design phase in order to obtain information regarding the data, studies or other information that will be necessary for the permit evaluation process. Design development should be sufficient in late winter 2016 for a pre-application meeting. The wetland delineation report was submitted to USACOE 9/11/12. No comment on the report was received.

## Factor Sheet C-2

Alternative: Preferred Alternative

Total Length of Center Line of Existing Roadway 2.86 miles

Preferred

 Yes  No  None identified1. **Stream Name:** Badger Mill Creek2. **Stream Type:** (Indicate Trout Stream Class, if known) Unknown Warm water (Summer temperatures 65-70 degrees Fahrenheit while mean temperatures in the winter is greater than 41 degrees Fahrenheit. Cold water

If trout stream, identify trout stream classification: Badger Mill Creek (which is a tributary to the Sugar River is classified as a trout stream by WDNR within the project limits. Downstream of the inline regional stormwater treatment ponds owned and maintained by the City of Madison, Badger Mill Creek is a Class II Trout Stream and designated a Cold Water Community. The stream is not on the 303(d) list of impaired waters. The Dane County Water Body Classification project lists both streams as Class 2 streams with management objectives of protection and restoration.

 Wild and Scenic River3. **Size of Upstream Watershed Area: (Square miles or acres)**

The Badger Mill Creek Watershed is 24.6 square miles.

4. **Stream flow characteristics:** Permanent Flow (year-round) Temporary Flow (dry part of year)5. **Stream Characteristics:**

A. Substrate:

1.  Sand2.  Silt3.  Clay4.  Cobbles5.  Other-describe:

B. Average Water Depth: unknown

C. Vegetation in Stream

 Absent Present - If known describe:

D. Identify Aquatic Species Present:

None that are known

E. If water quality data is available, include this information:

Not available

F. Is this river or stream on the WDNR's "Impaired Waters" list?

 No - The stream is not on the 303(d) list of impaired waters Yes - List: \_\_\_\_\_6. **If bridge or box culvert replacement, are migratory bird nests present?**

- Not Applicable
  - None identified
  - Yes – Identify Bird Species present
- Estimated number of nests is: \_

**7. Is a Fish & Wildlife Depredation Permit required to remove swallow nests?**

- Not Applicable
- Yes
- No - Describe mitigation measures:

**8. Describe land adjacent to stream:**

Badger Mill Creek begins ¼ mile east of County M, with residential development source waters, and crosses County M 900 feet north of Midtown Road, entering a stormwater management pond on the west side of County M. Adjacent land is agricultural but planned for residential development (High Point – Raymond Neighborhood Plan). Downstream of the pond, the creek passes through agricultural land, including the OJ Noer Turf Research Facility. It then crosses County M and passes through the Dane County Parkland that included restored prairie and forestland. The creek then crosses Raymond Road where it enters the Raymond Road regional stormwater management ponds. Badger Mill Creek, within the project limits, is classified as an intermittent stream, meaning it is dry most of the year and flows only after rainfall or snowmelt. (See Exhibit 13: Badger Mill Creek Subwatersheds).

**9. Identify upstream or downstream dischargers or receivers (if any) within 0.8 kilometers (1/2 mile) of the project site:**

Not known at this time.

**10. Describe proposed work in, over, or adjacent to stream. Indicate whether the work is within the 100-year floodplain and whether it is a crossing or a longitudinal encroachment: [Note: Coast Guard must be notified when Section 10 waters are affected by a proposal. Also see Wetland Evaluation, Factor Sheet C-1, Question 8.]**

The proposed action will expand the current two-lane facility with four to six-lanes. Traffic operations will improve throughout the corridor and will allow for future planned growth by consolidating driveways and local road access points while limiting access through strategic median breaks. The proposed action will provide improved facilities for bikes and pedestrians as well as provide a continuous four to five- travel lane facilities from the City of Verona to the City of Madison, connecting to similar typical sections at both termini.

The divided urban roadway will have a raised median throughout the corridor, curb and gutter, and street lighting. Restricted use lanes for buses and right-turns from County PD & Valley View Road allow for capacity expansion to six-lanes in the future, if needed. Bike lanes and a multi-use path will be constructed along the entire corridor and sidewalks with crosswalks will be constructed within developed areas and graded for within undeveloped areas.

The proposed work is not within the 100-year floodplain according to the National Flood Insurance Program (NFIP) flood insurance rate map, Dane County, WI and incorporated areas. The proposed project does not fall within the special flood hazard area.

Badger Mill Creek crosses the project limits through corrugated metal culverts and one concrete box culvert at four locations.

- (1) County M, 900 feet north of Midtown Road (corrugated metal culvert)
- (2) Midtown Road, 800 feet west of County M (corrugated metal culvert with flow control structure at the upstream end)
- (3) County M, 150 feet south of Flagstone Drive (corrugated metal culvert)
- (4) Raymond Road, 3,500 feet north of County PD (concrete box culvert)

Each crossing structure will be replaced to accommodate the increased roadway widths. The flow control structure on the upstream end of crossing (2) will remain. Crossing (4) is proposed to be a three sided structure with natural bottom.

**11. Discuss the effects of any backwater which would be created by the proposed action. Indicate whether the proposed activities would be in compliance with NR 116 by creating 0.01 ft. backwater or less:**

Compliance will be achieved. Less than 0.01 ft. increase in backwater will result from the proposed improvements.

**12. Describe and provide the results of coordination with any floodplain zoning authority:**

N/A

**13. Would the proposal or any changes in the design flood, or backwater cause any of the following impacts?**

- No impacts would occur.
- Significant interruption or termination of emergency vehicle service or a community's only evacuation route.
- Significant flooding with a potential for property loss and a hazard to life.
- Significant impacts on natural floodplain values such as flood storage, fish or wildlife habitat, open space, aesthetics, etc.

**14. Discuss existing or planned floodplain use and briefly summarize the project's effects on that use:**

N/A

**15. Discuss probable direct impacts to water quality within the floodplain, both during and after construction. Include the probable effects on plants, animals, and fish inhabiting or dependent upon the stream:**

The proposed action will not change the conditions, as there is already a road, crossings and drainage from the highway. The proposed roadway has curb and gutter, so no additional sediment will be washed into the creek.

Impacts to water quality within the floodplain could occur during construction in the form of erosion from exposed grades and slopes. After establishment of permanent vegetation, the primary impact on water quality will come from stormwater runoff from the pavement surface. Deicing agents, motor oil, and particulate matter from tire wear will likely be present to some degree in the street runoff.

**16. Are measures proposed to enhance beneficial effects?**

- No
- Yes. Describe: \_\_\_\_\_

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## Factor Sheet C-3

Alternative: Preferred Alternative	Total Length of Center Line of Existing Roadway 2.86 miles
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

1. **Name of Lake or Water body:** Morse Pond

2. **Location of Lake or Water body:** Township-Range: Section 3, Township 6N, Range 8E

Morse Pond is located on the University Ridge Golf Course property approximately 900 feet north of the County M & County PD intersection.

3. **Lake or Water body Type:**

- Lake  
 Pond  
 Bog  
 Impoundment  
 Flowage  
 Other – Describe:

Morse Pond is a kettle pond with no natural outlet.

4. **Area of Water body:**

Acres: 13 acres

5. **Hydrologic characteristics:**

- Permanent (year-round)  
 Temporary (dry part of year)

6. **Lake or Water body Characteristics:**

Substrate:

- Sand  
 Silt  
 Clay  
 Cobbles  
 Other - Describe

Maximum Depth:

- Feet Maximum depth of 6 feet

Vegetation in Lake or Water body:

- Absent  
 Present - If known – Describe:

7. **Identify Aquatic Species Present:**

Unknown

**8. If water quality data is available, include this information: (e.g., WDNR or local discharger might have such records)**

According to the WDNR website, as of September 12, 2012, water quality data is not available for Morse Pond. The Wisconsin Lakes Clarity - Trophic State is an indicator of water clarity derived from satellite images. Morse Pond had a Trophic State Index of 64 and a Secchi Depth of 2.5 feet.

**9. If bridge or box culvert replacement, are migratory bird nests present?**

- Not applicable
- None identified
- Yes – Identify bird species present: \_\_\_\_\_  
Estimated number of nests is:

**10. Is a U.S. Fish & Wildlife Depredation Permit required to remove swallow nests?**

- Not Applicable.
- Yes.
- No - Describe mitigation measures:

**11. Describe land adjacent to lake or water body:**

Morse Pond is surrounded by the University Ridge Golf Course to the north, west, and south. County M is directly east of the pond. Morse Pond is located north of the County M & County PD intersection and land use in the area is mainly rural residential and agricultural, and park/open space.

**12. Describe proposed work in, over, or adjacent to lake or water body;**

No direct impacts to Morse Pond will occur as a result of the proposed action. The proposed action will be located adjacent to Morse Pond to the east and will expand the current two-lane facility to six-lanes. The City of Madison has a strong desire to avoid impacting or changing the existing fill slope between County M and the pond. In order to shield the existing steep slopes (2:1), a beam guard will be provided such that the existing fill slopes can remain.

**13. Discuss probable direct impacts to water quality in the water body, both during and after construction. Indicate the probable effects on plants and animals inhabiting or dependent upon the lake or water body:**

Minimal impacts to Morse Pond will occur as a result of, or during, project construction. Proper erosion control methods following Wisconsin Adm. Code Trans 401 and the WisDOT/WDNR Cooperative Agreement will minimize any off-site sedimentation from the project site. Items such as inlet protection bags and silt fence will minimize off-site effects. To address unusual or severe storm events, an undistributed amount of erosion control items and emergency erosion control items will be included. The steep slopes adjacent to Morse Pond will require diligent erosion control measures. Soil disturbance necessary for construction activities has the potential to produce offsite sedimentation despite the most diligent use of erosion control best management practices, thus the potential for minimal sedimentation in Morse Pond.

**14. Are measures proposed to enhance beneficial effects:**

- No.
- Yes - Describe:

Grading on the slopes along Morse Pond will be limited through roadway design. Existing 2:1 slopes that are disturbed and/or matched will include the appropriate erosion mat for that slope.

**Factor Sheet D-1**

See Attachment U – Air Quality Methodology and Analysis Documentation for additional information.

Alternative: Preferred Alternative	Total Length of Center Line of Existing Roadway 2.86 miles
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

**1. Ozone:**

**A. Is the project located in a county which is designated non-attainment or maintenance for ozone?**

- No
- Yes – If Yes, one of the following boxes must be checked:
  - This project is included in the approved Regional Transportation Plan (RTP) and Transportation Improvement Program (TIP) endorsed by the region’s Metropolitan Planning Organization (MPO). The TIP was found to conform by the Federal Highway Administration and the Federal Transit Administration. Provide RTP Name, TIP name, MPO name, TIP number and conformity finding date(s):
 

RTP Name	TIP Name
MPO Name	TIP Number
Conformity Finding Date(s):	
  - This project is located outside of a Metropolitan Planning Organization’s boundaries and has received a positive conformity determination per the rural conformity section of the WisDOT/WDNR Memorandum of Agreement regarding determination of conformity. Provide conformity finding date.
  - This project is located outside of a Metropolitan Planning Organization’s boundaries and is exempt from conformity requirements per 40 CFR 93.126
  - This project has been determined to be Not Regionally Significant
  - Other, describe:

**2. Carbon Monoxide:**

**A. Is this project exempt from air quality analysis under Wisconsin Administrative Code – NR 411?**

- No – NR 411 exemptions do not apply.
- Yes – NR 411 exemption(s) apply – Identify exemption(s) and explain why project is exempt.

The preferred alternative is screened to determine whether project level evaluation of carbon monoxide (CO) emissions is required. The first screening step uses the indirect source permit exemption criteria previously established by DNR in Wisconsin Administrative Code Chapter NR 411, Construction and Operation Permits for Indirect Sources. Although NR 411 was suspended by the Wisconsin Legislature in March 2012 (based on DNR’s determination that automobile CO emissions have decreased dramatically and therefore Wisconsin no longer exceeds the CO NAAQS), WisDOT, in consultation with FHWA, has elected to continue using the exemption criteria as a screening tool for WisDOT projects.

The County M project is in Dane County, a metropolitan county. “Metropolitan county” means a county which has been designated as either a metropolitan statistical area or a primary metropolitan statistical area by the federal office of management and budget in Metropolitan Areas, 1993, incorporated by reference in s. NR 484.05 (3). The 20 Wisconsin counties which have been so designated are the counties of Brown, Calumet, Chippewa, Dane, Douglas, Eau Claire, Kenosha, La Crosse, Marathon, Milwaukee, Outagamie, Ozaukee, Pierce, Racine, Rock, Sheboygan, St. Croix, Washington, Waukesha and Winnebago.

The County M project adds more than two approach lanes, therefore NR 411 exemptions do not apply.

**B. Was an air quality analysis required?**

- No
- Yes – Identify the air quality modeling technique or program used to perform the analysis.  
Complete the Maximum Projected Carbon Monoxide (CO) Concentrations Table to illustrate the results:

A detailed carbon monoxide evaluation was performed for this proposed design using two EPA approved computer models: MOBILE6.2 and CAL3QHC. Receptor sites were placed at 16 locations near the roadway to represent humans on adjacent walking paths proposed as part of the project design.

**MAXIMUM PROJECTED CARBON MONOXIDE (CO) CONCENTRATIONS**

Receptor Location or Site Description (See Exhibit )	Carbon Monoxide (ppm) <sup>(1)</sup>			
	1 – Hour Peak <sup>(2)</sup>		8 – Hour Average <sup>(3)</sup>	
	Construction Year 2012	Construction Year Plus Ten Years 2022	Construction Year 2012	Construction Year Plus Ten Years 2022
A1	2.9	3.4	2.1	2.3
A2	2.7	2.8	1.9	2.2
A3	2.7	2.9	1.9	2.2
A4	2.1	2.2	1.5	1.6
A5	3.1	3.5	2.4	2.5
A6	3.8	4.1	2.5	2.8
A7	3.2	3.8	2.4	2.8
A8	2.3	2.5	1.7	1.9
A9	3.1	3.1	2.2	2.2
A10	3.3	3.2	2.4	2.5
A11	3.8	3.6	2.7	2.8
A12	3.9	4.3	2.8	3.1
A13	3.0	3.3	2.1	2.4
A14	3.5	3.9	2.7	2.7
A15	4.0	4.3	2.8	3.1
A16	4.1	4.5	2.7	3.0

<sup>(1)</sup> ppm = parts per million – parts of CO per million parts of gas.

The maximum one-hour concentration for year 2012 was estimated to be 4.1 parts per million (ppm) and for year 2022 was 4.5 ppm. The maximum eight-hour average concentration was estimated at 2.8 ppm for year 2012 and 3.1 ppm for year 2022. All of these predicted concentrations fall below the National Ambient Air Quality Standards thresholds of 35 ppm for one-hour concentrations and 8 ppm for eight-hour concentrations.

At the time of this analysis, construction year was expected to be 2012. The project now has an anticipated construction year of 2017. Because the maximum 2022 concentration level is drastically below the threshold, it is reasonable to assume that the 2027 (2017 construction year plus ten years) will be below the 35 ppm threshold.

**C. If an air quality analysis was performed, will a construction permit be required to address air quality before the project may proceed?**

A qualitative evaluation of Mobile Source Air Toxic effects was performed in December 2012 for this project per NEPA and FHWA guidance. Results did not indicate a need for a construction permit regarding air quality for this project. See *Attachment U – Air Quality Methodology and Analysis Documentation* for additional information.

- No
- Letter of concurrence from WDNR Bureau of Air Management requested. (See attached request letter – Exhibit )
- Letter of concurrence received from WDNR Bureau of Air Management. (See attached Exhibit )
- Yes – Indicate:            Date Permit Requested:    Date of Permit:

Factor Sheet D-2

Alternative: Preferred Alternative	Total Length of Center Line of Existing Roadway: 2.86 miles
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None Identified	

1. Identify and describe residences, schools, libraries, or other noise sensitive areas near the proposed action and which will be in use during construction of the proposed action. Include the number of persons potentially affected:

**TABLE 1  
NOISE SENSITIVE RECEPTORS NEAR THE PROPOSED ACTION  
NUMBER OF PERSONS POTENTIALLY AFFECTED**

County M Project Section		Number of Residences Adjacent to Proposed Improvements	Number of Persons Potentially Affected <sup>(1)</sup>
From	To		
Cross Country Road	County PD	27	108
County PD	Midtown Road	116	464
Midtown Road	Valley View Road	20	80
<b>TOTAL</b>			

<sup>(1)</sup>Assumes each residence includes a family of 4.

2. Describe the types of construction equipment to be used on the project. Discuss the expected severity of noise levels including the frequency and duration of any anticipated high noise levels:

The noise generated by construction equipment will vary greatly, depending on equipment type/model/make, duration of operation and specific type of work effort (see Table 2). However, typical noise levels may occur in the 67 to 107 dBA range at a distance of 50 feet.

**TABLE 2  
CONSTRUCTION EQUIPMENT SOUND LEVELS**

Distance from Construction Site (feet)	Range of Typical Noise Levels (dBA) <sup>(1)</sup>
25	82-102
50	75-95
100	69-89
200	63-83
300	59-79
400	57-77
500	55-75
1,000	49-69

<sup>(1)</sup> Point sources = 6 dBA reduction per doubling of distance.  
Source: EPA and WisDOT.

3. Describe the construction stage noise abatement measures to minimize identified adverse noise effects. Check all that apply:

- WisDOT Standard Specifications 107.8(6) and 108.7.1 will apply.
- WisDOT Standard Specifications 107.8(6) and 108.7.1 will apply with the exception that the hours of operation requiring the engineer's written approval for operations will be changed to 7P.M. until 7 A.M.
- WisDOT Standard Specifications 107.8(6) and 108.7.1 will apply with the exception that the hours of operation requiring the engineer's written approval for operations will be changed to \_\_\_\_\_ P.M. until \_\_\_\_\_ A.M.
- Special construction stage noise abatement measures will be required. Describe:

To reduce the potential impact of construction noise, the special provisions for this project will require that motorized equipment shall be operated in compliance with all applicable local, state, and federal laws and regulations relating to noise levels permissible within and adjacent to the project construction site. All motorized construction equipment will be required to have mufflers constructed in accordance with the equipment manufacturer's specifications or a system of equivalent noise reducing capacity. It will also be required that mufflers and exhaust systems be maintained in good working condition, free from leaks and holes.

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Factor Sheet D-3

Alternative: Preferred Alternative	Total Length of Center Line of Existing Roadway 2.86 miles
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None Identified	

Existing sound levels for this EA were collected in May 2012 and were monitored at four representative receptor sites adjacent to proposed construction areas and were chosen to represent areas of outdoor human activity. Results of the traffic noise modeling using this data and traffic forecasts are included in this factor sheet.

In November 2015, a new traffic forecast was released that generally reduced the projected traffic volume throughout the corridor. With these changes in the forecast volumes, the noise model would likely produce results that decibel levels drop the difference in future and existing sound levels by about one-third.

**1. Need for Noise Analysis:**

- A. Is the proposed action considered a Type I project? (A Type I project is defined as a project that involves construction of a roadway on new location or the physical alteration of an existing highway which substantially changes either the horizontal or vertical alignment or increases the number of through-traffic lanes).
  - No – Complete only Factor Sheet D-2, Construction Stage Sound Quality Impact Evaluation.
  - Yes – Complete Factor Sheet D-2, Construction Stage Sound Quality Impact Evaluation, and the rest of this sheet.

The proposed project includes construction of through traffic lanes on CTH M. Therefore, the proposed action meets the definition of a Type I project as described in 23 CFR 772.5.

**2. Traffic Data:**

- A. Indicate whether traffic volumes for sound prediction are different from the Design Hourly Volume (DHV) on Basic Sheet 6, Traffic Summary Matrix:
  - No
  - Yes – Indicate volumes and explain why they were used:

Automobiles	Veh/hr
Trucks	Veh/hr
Or Percentage (T)	%

Year 2035 forecast volumes were used for the traffic noise modeling. Refer to Basic Sheet 6, Traffic Summary Matrix.

- B. Identify and describe the noise analysis technique or program used to identify existing and future sound levels: (See *Attachment V: Noise Receptor Documentation*) for a location map of the receptors. A receptor location map must be included with this document.

**Traffic Noise Modeling**

Existing and future (year 2035) Build Alternative sound levels were predicted using the Federal Highway Administration (FHWA) Traffic Noise Model (TNM), Version 2.5 (February 2004) (Serial # 65265).

**Existing Sound Levels (Field Measurements)**

Existing sound levels were monitored at four representative receptor sites adjacent to proposed construction areas and were chosen to represent areas of outdoor human activity. Noise monitoring locations are described below in Table 1 and illustrated in *Attachment V – Noise Receptor Documentation*. Daytime sound levels were monitored in May 2012. Sound levels were measured using a Bruel & Kjaer Type 2238 Mediator integrating sound level meter. Sound levels were monitored at each location twice for a measurement period of 30 minutes. The field measurement results are presented below in Table 1.

**TABLE 1  
FIELD MEASUREMENT SUMMARY TABLE**

Receptor Identification	Location Description	Measurement Time		Leq <sup>1</sup>
		Start	End	
A14	Single-family residence (112 Monte Cristo Drive) (back yard facing CTH M)	12:39 PM	1:09 PM	54.3
		3:46 PM	4:16 PM	54.3

B9	Single-family residence (110 Ineichen Drive) (side yard facing CTH M)	11:43 AM	12:13 PM	65.4
		3:05 PM	3:35 PM	65.4
D12	Multi-family residence (2214 Talc Drive) (back yard facing CTH M)	10:57 AM	11:27 AM	65.8
		2:15 PM	2:45 PM	67.0
E16	Single-family residence (1701 Waterbend Drive) (back yard facing CTH M)	10:08 AM	10:38 AM	56.0
		1:36 PM	2:06 PM	52.6

The purpose of the field measurements is to validate the noise model runs used to predict existing sound levels for the proposed action. A discrepancy equal to or less than 3 dBA between predicted levels and field measurements is considered acceptable for noise model validation. Results of field measurements are compared to sound levels predicted by the noise model in Table 2. A positive difference indicates that the field measurements were greater than the sound levels predicted by the model. A negative difference indicates that the field measurements were less than the sound levels predicted by the model.

**TABLE 2  
MODEL VALIDATION**

Receptor Identification	Measured Leq (dBA) <sup>1</sup>	Modeled Leq (dBA) <sup>2</sup>	Difference (dBA) (Measured-Modeled)
A14	54.3	54.5	-0.2
B9	65.4	62.3	3.1
D12	66.4	65.2	1.2
E16	54.6	56.1	-1.5

<sup>1</sup> Average sound level of the two, 30 minute field measurements for each receptor location. See Table 1.

<sup>2</sup> Average predicted sound level using classified traffic counted during field measurements for each receptor location. The speeds used for the model predictions were posted speeds.

As shown in Table 2, predicted sound levels are within 3 dBA of the field measurements at three of the four receptor locations. Predicted levels at receptor B9 are 3.1 dBA less than the field measurement. Because predicted levels were within 3 dBA of the field measurements at three of the four receptor locations, it was determined best to use the prediction model without corrections.

A rough comparison of typical a-weighted sound levels is provided in Table 3.

**TABLE 3  
TYPICAL A-WEIGHTED SOUND LEVELS**

Sound Source	Sound Level	Subjective Response
	140 dBA	Threshold of pain
Military jet takeoff afterburner at 50 feet	130 dBA	
Rock and roll band	120 dBA	Uncomfortably loud
Jet flyover at 1,000 feet	110 dBA	
Power lawn mower operator	100 dBA	Very loud
Diesel truck (55 mph) at 50 feet	90 dBA	
High urban ambient sound Automobile (55 mph) at 50 feet	80 dBA	Moderately loud
TV audio, vacuum cleaner	70 dBA	
Normal conversation	60 dBA	
	50 dBA	Quiet
Lower limit ambient urban sound	40 dBA	
Unoccupied broadcast studio	30 dBA	Very quiet
	20 dBA	
	10 dBA	
	0 dBA	Threshold of hearing

Sources: *Noise Assessment Guidelines Technical Background*, HUD Report No. TE/NA 172

*Handbook of Noise Control*, C.M. Harris, 1979

*Highway Traffic Noise Prediction Model*, FHWA-RD-108. 1978.

- C. Identify sensitive receptors, e.g., schools, libraries, hospitals, residences, etc. potentially affected by traffic sound: (See attached receptor location map – *Attachment V– Noise Receptor Documentation.*)

Sensitive receptors within the project area potentially affected by traffic sound include primarily single-family residences. Commercial/office uses are located in the northeast quadrant of the CTH M/Cross Country Road intersection, and a daycare is located in the northwest quadrant of the CTH M/Cross Country Road intersection. University Ridge Golf Course (9002 County Road PD) is located along the west side of CTH M between CTH PD and Midtown Road. Hawks Landing Golf Club (88 Hawks Landing Circle) is located along the west side of CTH M between Midtown Road and Valley View Road. Modeled receptor locations are identified in *Attachment V– Noise Receptor Documentation.*

- D. If this proposal is implemented will future sound levels produce a noise impact?

- No  
 Yes - The impact will occur because:  
 The Noise Level Criteria (NLC) is approached (1 dBA less than the NLC for the applicable land use category) or exceeded.  
 Existing sound levels will increase by 15 dBA or more.

A traffic noise impact for Type I projects are described in Chapter 23, Section 30 of the WisDOT Facilities Development Manual (FDM) (Noise Impact Determination). A traffic noise impact occurs for a Type I project when the predicted equivalent sound levels at a receptor or common use area approach or exceed the Noise Level Criteria (NLC) for any Land Use Category listed in Table 4 applicable in the study area, or, when predicted future sound levels exceed existing levels by 15 dBA or more. "Approach" is defined as 1 dBA less than the NLC for the applicable Land Use Category.

The Noise Level Criteria (NLC) is approached or exceeded at 18 modeled receptor locations with the future Build Alternative. Existing and projected sound levels are tabulated in Table 5.

**TABLE 4  
NOISE LEVEL CRITERIA (NLC) FOR CONSIDERING BARRIERS**

Land Use Category	Leq(h) <sup>1</sup> (dBA) (Evaluation Location)	Description of Land Use Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B <sup>2</sup>	67 (Exterior)	Residential
C <sup>2</sup>	67 (Exterior)	Active sports areas, amphitheatres, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or non-profit institutional structures, radio studios, recording studios, recreation areas, schools, Section 4(f) sites, television studios, trails, and trail crossings
D <sup>3</sup>	52 (Interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or non-profit institutional structures, radio studios, recording studios, schools, and television studios
E <sup>2</sup>	72 (Exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A-D or F.
F	--	Agricultural, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical), warehousing.
G	--	Undeveloped lands that are not permitted.

<sup>1</sup> "Leq" means the equivalent steady-state sound level, which in a stated period of time contains the same acoustic energy as the time-varying sound level during the same period. "Leq(h)" means the hourly value of Leq.

<sup>2</sup> Includes undeveloped lands permitted for this activity category or publicly-owned recreation lands formally designated in a public agency's Master Plan.

<sup>3</sup> Use of interior noise levels shall be limited to situations where a determination has been made that exterior abatement measures will not be feasible and reasonable and after exhausting all outdoor mitigation options.

**TABLE 5  
EXISTING AND FUTURE SOUND LEVELS**

Receptor Location or Site Identification (See attached map)	Distance from C/L of Near Lane to Receptor in feet (ft.) <sup>4</sup>	Number of Families or People Typical of this Receptor Site	Sound Level L <sub>eq</sub> <sup>1</sup> (dBA)			Impact Evaluation		
			Noise Level Criteria <sup>2</sup> (NLC)	Future Sound Level	Existing Sound Level	Difference in Future and Existing Sound Levels (Col. e minus Col. f)	Difference in Future Sound Levels and Noise Level Criteria (Col. e minus Col. d)	Impact <sup>3</sup> or No Impact
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
A1 (DAY)	92 ft.	0	67	66	62	4	-1	I
A2 (R)	330 ft.	1	67	59	55	4	-8	N
A3 (R)	225 ft.	1	67	61	57	4	-6	N
A4 (R)	197 ft.	1	67	60	56	4	-7	N
A5 (R)	210 ft.	1	67	59	55	4	-8	N
A6 (R)	272 ft.	1	67	56	53	3	-11	N
A7 (R)	295 ft.	1	67	56	52	3	-12	N
A8 (R)	121 ft.	1	67	62	59	3	-5	N
A9 (R)	133 ft.	1	67	61	57	4	-6	N
A10 (R)	238 ft.	1	67	57	53	4	-10	N
A11 (R)	300 ft.	1	67	55	52	3	-12	N
A12 (R)	300 ft.	1	67	55	51	3	-13	N
A13 (R)	297 ft.	1	67	55	52	3	-12	N
A14 (R)	295 ft.	1	67	55	52	3	-13	N
A15 (R)	215 ft.	1	67	56	53	3	-11	N
A16 (R)	183 ft.	1	67	57	55	3	-10	N
A17 (R)	145 ft.	1	67	58	56	3	-9	N
A18 (R)	185 ft.	1	67	53	50	2	-14	N
A19 (R)	317 ft.	1	67	51	49	2	-16	N
A20 (R)	183 ft.	1	67	54	53	1	-13	N
A21 (R)	135 ft.	1	67	59	57	2	-8	N
A22 (R)	234 ft.	1	67	55	55	0	-12	N
B1 (C)	142 ft.	0	72	64	60	4	-8	N
B2 (C)	134 ft.	0	72	62	58	4	-10	N
B3 (C)	184 ft.	0	72	60	56	4	-12	N
B4 (R)	156 ft.	1	67	59	55	5	-8	N
B5 (R)	251 ft.	1	67	56	52	4	-11	N
B6 (R)	257 ft.	1	67	56	52	4	-12	N
B7 (R)	164 ft.	1	67	58	56	2	-9	N
B8 (R)	191 ft.	1	67	57	55	2	-10	N
B9 (R)	129 ft.	2	67	60	59	0	-8	N
B10 (R)	218 ft.	2	67	56	55	1	-11	N
B11 (R)	270 ft.	2	67	54	53	1	-13	N
B12 (R)	250 ft.	1	67	55	54	1	-12	N
B13 (R)	295 ft.	1	67	54	53	1	-13	N
B14 (R)	276 ft.	1	67	54	54	0	-13	N

R = residential  
C = commercial/business/office  
GC = golf course  
CH = church  
DAY = daycare

<sup>1</sup> Use whole numbers only.

<sup>2</sup> Insert the actual Noise Abatement Criteria from Wisconsin Administrative Code, Chapter Trans. 405.04, Table 1.

<sup>3</sup> An impact occurs when future sound levels exceed existing sound levels by 15 dB or more, **or**, future sound levels approach or exceed the Noise Level Criteria (NLC) ("approach" is defined as 1 dB less than the Noise Level Criteria, therefore an impact occurs when Column (h) is -1 db or greater).

I = Impact, N = No Impact.

<sup>4</sup> Distance from C/L of near lane of CTH M (future Build Alternative) unless otherwise noted.

<sup>5</sup> Distance from C/L of near lane of CTH PD (future Build Alternative).

**TABLE 5 CONTINUED  
EXISTING AND FUTURE SOUND LEVELS**

Receptor Location or Site Identification (See attached map)	Distance from C/L of Near Lane to Receptor in feet (ft.) <sup>4</sup>	Number of Families or People Typical of this Receptor Site	Sound Level L <sub>eq</sub> <sup>1</sup> (dBA)			Impact Evaluation		
			Noise Level Criteria <sup>2</sup> (NLC)	Future Sound Level	Existing Sound Level	Difference in Future and Existing Sound Levels (Col. e minus Col. f)	Difference in Future Sound Levels and Noise Level Criteria (Col. e minus Col. d)	Impact <sup>3</sup> or No Impact
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
B15 (R)	244 ft.	1	67	56	55	1	-11	N
B16 (CH)	337 ft.	0	67	56	53	2	-11	N
C1 (GC)	175 ft. <sup>5</sup>	0	67	60	56	4	-7	N
C2 (GC)	456 ft.	0	67	61	56	5	-6	N
C3 (GC)	363 ft.	0	67	59	55	4	-8	N
C4 (GC)	573 ft.	0	67	56	52	4	-12	N
C5 (GC)	650 ft.	0	67	52	50	2	-15	N
C6 (GC)	715 ft.	0	67	51	49	2	-16	N
C7 (GC)	628 ft.	0	67	51	50	1	-16	N
C8 (GC)	431 ft.	0	67	54	52	1	-13	N
C9 (GC)	414 ft.	0	67	54	53	1	-13	N
C10 (GC)	394 ft.	0	67	53	53	0	-14	N
D1 (C)	379 ft.	0	72	55	51	4	-17	N
D2-1 (R)	235 ft.	1	67	60	59	1	-7	N
D2-2 (R)	228 ft. <sup>5</sup>	1	67	50	51	0	-17	N
D2-3 (R)	269 ft. <sup>5</sup>	1	67	50	50	1	-17	N
D2-4 (R)	215 ft. <sup>5</sup>	1	67	49	49	0	-18	N
D3-1 (R)	223 ft.	1	67	58	58	0	-9	N
D3-2 (R)	223 ft.	1	67	59	58	1	-9	N
D3-3 (R)	153 ft.	1	67	62	61	1	-5	N
D3-4 (R)	153 ft.	1	67	63	61	2	-5	N
D3-5 (R)	132 ft.	1	67	63	62	1	-4	N
D3-6 (R)	132 ft.	1	67	64	62	2	-3	N
D3-7 (R)	153 ft.	1	67	62	61	1	-5	N
D3-8 (R)	153 ft.	1	67	63	61	2	-4	N
D3-9 (R)	164 ft.	1	67	61	60	1	-6	N
D3-10 (R)	164 ft.	1	67	62	60	2	-5	N
D3-11 (R)	167 ft.	1	67	61	60	1	-6	N
D3-12 (R)	167 ft.	1	67	62	60	2	-5	N
D4-1 (R)	190 ft.	1	67	60	59	1	-8	N
D4-2 (R)	190 ft.	1	67	60	59	1	-7	N
D4-3 (R)	122 ft.	1	67	64	63	2	-3	N
D4-4 (R)	122 ft.	1	67	66	63	3	-2	N
D4-5 (R)	107 ft.	1	67	66	64	2	-1	I
D4-6 (R)	107 ft.	1	67	67	64	3	0	I

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CH = church  
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<sup>1</sup> Use whole numbers only.

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<sup>3</sup> An impact occurs when future sound levels exceed existing sound levels by 15 dB or more, or, future sound levels approach or exceed the Noise Level Criteria (NLC) ("approach" is defined as 1 dB less than the Noise Level Criteria, therefore an impact occurs when Column (h) is -1 db or greater).

I = Impact, N = No Impact.

<sup>4</sup> Distance from C/L of near lane of CTH M (future Build Alternative) unless otherwise noted.

<sup>5</sup> Distance from C/L of near lane of Raymond Road (future Build Alternative).

**TABLE 5 CONTINUED  
EXISTING AND FUTURE SOUND LEVELS**

Receptor Location or Site Identification (See attached map)	Distance from C/L of Near Lane to Receptor in feet (ft.) <sup>4</sup>	Number of Families or People Typical of this Receptor Site	Sound Level L <sub>eq</sub> <sup>1</sup> (dBA)			Impact Evaluation		
			Noise Level Criteria <sup>2</sup> (NLC)	Future Sound Level	Existing Sound Level	Difference in Future and Existing Sound Levels (Col. e minus Col. f)	Difference in Future Sound Levels and Noise Level Criteria (Col. e minus Col. d)	Impact <sup>3</sup> or No Impact
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
D4-7 (R)	120 ft.	1	67	64	62	2	-3	N
D4-8 (R)	120 ft.	1	67	65	63	3	-2	N
D4-9 (R)	133 ft.	1	67	63	62	2	-4	N
D4-10 (R)	133 ft.	1	67	64	62	3	-3	N
D4-11 (R)	140 ft.	1	67	63	62	2	-4	N
D4-12 (R)	140 ft.	1	67	64	62	3	-3	N
D5 (R)	67 ft.	2	67	68	66	2	1	I
D6 (R)	65 ft.	2	67	69	66	2	2	I
D7 (R)	63 ft.	2	67	69	66	3	2	I
D8 (R)	65 ft.	2	67	68	66	2	1	I
D9 (R)	65 ft.	2	67	68	67	2	1	I
D10 (R)	84 ft.	2	67	67	66	2	0	I
D11 (R)	79 ft.	2	67	67	65	2	0	I
D12 (R)	77 ft.	2	67	68	66	3	1	I
D13 (R)	85 ft.	2	67	67	65	2	0	I
D14 (R)	97 ft.	2	67	65	64	2	-2	N
D15 (R)	94 ft.	1	67	66	64	2	-1	I
D16 (R)	154 ft.	1	67	62	61	1	-5	N
D17 (R)	114 ft.	1	67	65	63	2	-2	N
D18 (R)	77 ft.	1	67	68	66	2	1	I
D19 (R)	95 ft.	1	67	66	65	2	-1	I
D20 (R)	177 ft.	1	67	63	62	2	-4	N
D21 (R)	109 ft.	1	67	66	65	2	-1	I
D22 (R)	70 ft. <sup>5</sup>	1	67	66	63	3	-1	I
D23 (R)	77 ft. <sup>5</sup>	1	67	64	60	5	-3	N
D24 (R)	76 ft. <sup>5</sup>	1	67	64	59	5	-3	N
D25 (R)	52 ft. <sup>5</sup>	1	67	67	60	7	0	I
D26 (R)	89 ft. <sup>5</sup>	1	67	62	57	5	-5	N
D27 (R)	168 ft. <sup>5</sup>	1	67	58	54	4	-9	N
D28 (R)	173 ft. <sup>5</sup>	1	67	57	53	4	-10	N
D29 (R)	94 ft. <sup>5</sup>	1	67	61	56	5	-6	N
D30-1 (R)	235 ft. <sup>5</sup>	1	67	54	51	4	-13	N
D30-2 (R)	235 ft. <sup>5</sup>	1	67	55	51	4	-13	N
D30-3 (R)	188 ft. <sup>5</sup>	1	67	56	52	4	-11	N
D30-4 (R)	188 ft. <sup>5</sup>	1	67	56	52	4	-11	N
D30-5 (R)	200 ft. <sup>5</sup>	1	67	55	51	4	-12	N
D30-6 (R)	200 ft. <sup>5</sup>	1	67	55	51	4	-12	N

R = residential  
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CH = church  
DAY = daycare

<sup>1</sup> Use whole numbers only.

<sup>2</sup> Insert the actual Noise Abatement Criteria from Wisconsin Administrative Code, Chapter Trans. 405.04, Table 1.

<sup>3</sup> An impact occurs when future sound levels exceed existing sound levels by 15 dB or more, **or**, future sound levels approach or exceed the Noise Level Criteria (NLC) ("approach" is defined as 1 dB less than the Noise Level Criteria, therefore an impact occurs when Column (h) is -1 db or greater).

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<sup>4</sup> Distance from C/L of near lane of CTH M (future Build Alternative) unless otherwise noted.

<sup>5</sup> Distance from C/L of near lane of Midtown Road (future Build Alternative).

**TABLE 5 CONTINUED  
EXISTING AND FUTURE SOUND LEVELS**

Receptor Location or Site Identification (See attached map)	Distance from C/L of Near Lane to Receptor in feet (ft.) <sup>4</sup>	Number of Families or People Typical of this Receptor Site	Sound Level L <sub>eq</sub> <sup>1</sup> (dBA)			Impact Evaluation		
			Noise Level Criteria <sup>2</sup> (NLC)	Future Sound Level	Existing Sound Level	Difference in Future and Existing Sound Levels (Col. e minus Col. f)	Difference in Future Sound Levels and Noise Level Criteria (Col. e minus Col. d)	Impact <sup>3</sup> or No Impact
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
D30-7 (R)	200 ft. <sup>5</sup>	1	67	55	51	4	-12	N
D30-8 (R)	200 ft. <sup>5</sup>	1	67	55	51	4	-12	N
D30-9 (R)	200 ft. <sup>5</sup>	1	67	55	51	4	-12	N
D30-10 (R)	200 ft. <sup>5</sup>	1	67	55	51	4	-12	N
D30-11 (R)	200 ft. <sup>5</sup>	1	67	55	51	4	-12	N
D30-12 (R)	200 ft. <sup>5</sup>	1	67	55	51	4	-12	N
D30-13 (R)	188 ft. <sup>5</sup>	1	67	55	51	4	-12	N
D30-14 (R)	188 ft. <sup>5</sup>	1	67	55	51	4	-12	N
D30-15 (R)	245 ft. <sup>5</sup>	1	67	53	49	4	-14	N
D30-16 (R)	245 ft. <sup>5</sup>	1	67	53	49	4	-14	N
D31-1 (R)	67 ft. <sup>5</sup>	1	67	63	56	6	-4	N
D31-2 (R)	67 ft. <sup>5</sup>	1	67	63	57	7	-4	N
D31-3 (R)	103 ft. <sup>5</sup>	1	67	56	51	5	-11	N
D31-4 (R)	103 ft. <sup>5</sup>	1	67	56	51	5	-11	N
D31-5 (R)	126 ft. <sup>5</sup>	1	67	54	50	5	-13	N
D31-6 (R)	126 ft. <sup>5</sup>	1	67	55	50	5	-12	N
D31-7 (R)	142 ft. <sup>5</sup>	1	67	54	49	5	-13	N
D31-8 (R)	142 ft. <sup>5</sup>	1	67	54	49	5	-13	N
D31-9 (R)	195 ft. <sup>5</sup>	1	67	52	47	4	-15	N
D31-10 (R)	195 ft. <sup>5</sup>	1	67	52	47	5	-15	N
D31-11 (R)	209 ft. <sup>5</sup>	1	67	51	47	4	-16	N
D31-12 (R)	209 ft. <sup>5</sup>	1	67	52	47	4	-15	N
D31-13 (R)	230 ft. <sup>5</sup>	1	67	51	47	4	-16	N
D31-14 (R)	230 ft. <sup>5</sup>	1	67	51	47	4	-16	N
D31-15 (R)	230 ft. <sup>5</sup>	1	67	53	49	4	-15	N
D31-16 (R)	230 ft. <sup>5</sup>	1	67	53	49	4	-14	N
D31-17 (R)	209 ft. <sup>5</sup>	1	67	53	49	4	-14	N
D31-18 (R)	209 ft. <sup>5</sup>	1	67	53	49	4	-14	N
D31-19 (R)	195 ft. <sup>5</sup>	1	67	54	50	4	-14	N
D31-20 (R)	195 ft. <sup>5</sup>	1	67	54	50	4	-13	N
D31-21 (R)	142 ft. <sup>5</sup>	1	67	56	51	5	-12	N
D31-22 (R)	142 ft. <sup>5</sup>	1	67	56	51	5	-11	N
D31-23 (R)	126 ft. <sup>5</sup>	1	67	56	52	5	-11	N
D31-24 (R)	126 ft. <sup>5</sup>	1	67	57	52	5	-10	N
D31-25 (R)	103 ft. <sup>5</sup>	1	67	58	52	5	-9	N
D31-26 (R)	103 ft. <sup>5</sup>	1	67	58	53	6	-9	N

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<sup>3</sup> An impact occurs when future sound levels exceed existing sound levels by 15 dB or more, or, future sound levels approach or exceed the Noise Level Criteria (NLC) ("approach" is defined as 1 dB less than the Noise Level Criteria, therefore an impact occurs when Column (h) is -1 db or greater).

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**TABLE 5 CONTINUED  
EXISTING AND FUTURE SOUND LEVELS**

Receptor Location or Site Identification (See attached map)	Distance from C/L of Near Lane to Receptor in feet (ft.) <sup>4</sup>	Number of Families or People Typical of this Receptor Site	Sound Level L <sub>eq</sub> <sup>1</sup> (dBA)			Impact Evaluation		
			Noise Level Criteria <sup>2</sup> (NLC)	Future Sound Level	Existing Sound Level	Difference in Future and Existing Sound Levels (Col. e minus Col. f)	Difference in Future Sound Levels and Noise Level Criteria (Col. e minus Col. d)	Impact <sup>3</sup> or No Impact
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
E1-1 (GC)	118 ft.	0	67	65	63	2	-2	N
E1-2 (GC)	228 ft. <sup>5</sup>	0	67	57	55	2	-10	N
E1-3 (GC)	279 ft.	0	67	59	58	1	-8	N
E1-4 (GC)	251 ft.	0	67	59	58	1	-8	N
E1-5 (GC)	182 ft.	0	67	61	59	2	-6	N
E1-6 (GC)	165 ft.	0	67	61	59	2	-6	N
E2 (R)	208 ft. <sup>5</sup>	1	67	56	54	2	-11	N
E3 (R)	302 ft. <sup>5</sup>	1	67	55	52	3	-13	N
E4 (R)	392 ft. <sup>5</sup>	1	67	54	51	3	-13	N
E5 (R)	698 ft.	1	67	54	51	3	-13	N
E6 (R)	643 ft.	1	67	54	52	3	-13	N
E7 (R)	612 ft.	1	67	54	52	3	-13	N
E8 (R)	545 ft.	1	67	55	52	3	-12	N
E9 (R)	509 ft.	1	67	55	53	3	-12	N
E10 (R)	483 ft.	1	67	55	53	3	-12	N
E11 (R)	470 ft.	1	67	56	53	3	-11	N
E12 (R)	456 ft.	1	67	56	53	3	-11	N
E13 (R)	436 ft.	1	67	56	53	3	-11	N
E14 (R)	398 ft.	1	67	56	54	2	-11	N
E15 (R)	365 ft.	1	67	57	55	2	-10	N
E16 (R)	339 ft.	1	67	57	55	2	-10	N
F1 (C)	81 ft. <sup>5</sup>	0	72	61	57	4	-11	N
F2 (R)	81 ft. <sup>5</sup>	1	67	61	58	4	-6	N
F3 (R)	248 ft. <sup>5</sup>	1	67	55	52	3	-12	N
F4 (R)	183 ft. <sup>5</sup>	1	67	57	54	3	-11	N
F5 (R)	174 ft.	1	67	62	59	2	-5	N
F6 (R)	382 ft.	1	67	55	53	2	-12	N
F7 (R)	225 ft.	1	67	59	57	2	-8	N

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<sup>1</sup> Use whole numbers only.  
<sup>2</sup> Insert the actual Noise Abatement Criteria from Wisconsin Administrative Code, Chapter Trans. 405.04, Table 1.  
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I = Impact, N = No Impact.  
<sup>4</sup> Distance from C/L of near lane of CTH M (future Build Alternative) unless otherwise noted.  
<sup>5</sup> Distance from C/L of near lane of Midtown Road (future Build Alternative).

E. Will traffic noise abatement measures be implemented?

Not applicable – Traffic noise impacts will not occur.

No – Traffic noise abatement is not reasonable or feasible (explain why). In areas currently undeveloped, local units of government shall be notified of predicted sound levels for land use planning purposes. **A COPY OF THIS WRITTEN NOTIFICATION SHALL BE INCLUDED WITH THE FINAL ENVIRONMENTAL DOCUMENT.**

Yes – Traffic noise abatement has been determined to be feasible and reasonable. Describe any traffic noise abatement measures which are proposed to be implemented. Explain how it will be determined whether or not those measures will be implemented:

### **Noise Abatement Measures**

23 CFR 772.15(c) describes noise abatement measures that are to be considered when a traffic noise impact has been identified with a Type I highway project. These noise abatement measures include:

- Traffic management measures, including, but not limited to, traffic control devices and signing for prohibition of certain vehicle types, time-use restrictions for certain vehicle types, modified speed limits, and exclusive lane designations.
- Alteration of horizontal and vertical alignments.
- Acquisition of real property or interests therein (predominantly unimproved property) to serve as a buffer zone to preempt development which would be adversely impacted by traffic noise.
- Construction of noise barriers, including acquisition of property rights, either within or outside the highway right of way. Landscaping is not a viable noise abatement measure.
- Noise insulation of Activity Category D land use facilities listed in Table 4 (auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios).

Because mitigation techniques on this project are not feasible and reasonable as described below, noise abatement is not proposed.

### Traffic Control Measures

Traffic control measures include such items as prohibition of certain vehicle types (usually trucks) and time-use restrictions for certain vehicle types (usually trucks). These measures are not feasible or reasonable because they would be incompatible with the purpose and need for the proposed action, and inconsistent with the function of CTH M corridor as a principal arterial route connecting the city of Madison and the city of Verona.

### Buffer Zones

Buffer zones are undeveloped, open spaces adjacent to a roadway corridor. Land uses adjacent to the project corridor consist of primarily residential uses, park/open space uses, and agricultural uses. Because of the amount of land needed and because existing development already borders CTH M, creating a buffer zone is not practical, feasible, or reasonable. See below for a discussion of information for local officials and setback distances.

### Noise Barriers

WisDOT's policies and procedures for evaluating noise barrier feasibility and reasonableness are set forth in Chapter 23 of the FDM and in Wisconsin Administrative Rules TRANS 405. The factors for determining noise barrier feasibility and reasonableness as described in the WisDOT noise policy are summarized below.

#### *Noise Barrier Feasibility*

Noise barrier feasibility is determined based on a consideration of two factors: 1) acoustic feasibility and 2) engineering feasibility (FDM 23-35-10).

- **Acoustic feasibility:** For a noise abatement measure to be feasible, a minimum of one (1) impacted receptor or common use area shall achieve a 5 dBA reduction.
- **Engineering feasibility:** Other factors that must be considered include safety, barrier height, topography, drainage, utilities, and maintenance of the abatement measure, maintenance access to adjacent properties, and access to adjacent properties.

The feasibility of noise barrier construction is sometimes dependent on design details that are not known until the final design phase of the project. For the purpose of this traffic noise analysis, it was assumed that noise barriers were feasible with respect to engineering feasibility/constructability considerations. It was also assumed that utilities located within existing right of way could be relocated to accommodate modeled noise barriers, and existing and proposed drainage could be maintained. All modeled noise barriers were located within existing and/or proposed right of way limits.

### *Noise Barrier Reasonableness*

Noise barrier reasonableness decisions are based on a consideration of three reasonableness factors: 1) noise reduction design goal, 2) cost effectiveness, and 3) the viewpoint of benefited residents and property owners.

- **Noise reduction design goal:** To make a reasonableness determination, a noise barrier shall be designed (horizontal and vertical location) such that a minimum of one (1) receptor or common use area achieves the WisDOT noise reduction design goal of 9 dBA.
- **Cost effectiveness:** For a noise barrier to be reasonable, the total cost may not exceed \$30,000 per benefited receptor. In order to assess cost effectiveness, at least one benefited receptor behind the noise barrier must meet the noise reduction design goal described above (i.e., achieve the noise reduction design goal of 9 dBA). A noise barrier shall reduce noise levels by a minimum of 8 dBA for a receptor or common use area to be considered as benefited for the purposes of determining reasonableness.

The cost of a noise wall is calculated using the total noise wall area multiplied by \$18 per square foot. If the noise wall is placed on top of a berm, the cost of borrow, if required, is calculated using the latest borrow costs available.

### *Local participation and viewpoint of benefited receptors*

When a noise barrier has been determined feasible and reasonable (i.e., meets noise reduction design goal and cost effectiveness), a determination of whether or not the abatement measure is likely to be incorporated into the project shall occur. The determination of "likely to be incorporated" is done through at least one public information meeting and a vote of the benefited receptors.

For a proposed noise barrier project to be considered for construction, WisDOT must receive a vote of support for the project from a simple majority of all votes cast by the owners or residents of the benefited receptors. A benefited receptor is defined as a receptor or common use area adjacent to a proposed noise wall that receives a noise reduction equal to or greater than 8 dBA. Input received from benefited receptors is expressed in a vote as follows:

- For each benefited receptor that is an owner-occupied residence, the owner shall have one vote
- For each benefited receptor that is not an owner-occupied residence, the owner shall have one vote and one resident shall have one vote

### *Noise Barrier Analysis Results*

Noise barriers were evaluated at all modeled receptor locations that are predicted to approach or exceed Federal Noise Level Criteria (NLC). None of the modeled receptor locations are projected to experience a substantial increase in modeled noise levels from existing to future Build conditions (i.e., when predicted future sound levels exceed existing levels by 15 dBA or more). TNM was used to determine traffic noise reductions provided by various noise barrier lengths and heights. The locations of modeled noise barriers are illustrated in *Attachment V – Noise Receptor Documentation*. Noise barrier cost-effectiveness results are tabulated in Table 6 (Summary of Noise Abatement Analysis). The modeled noise barriers would not meet WisDOT's reasonableness criteria (i.e., noise barrier cost effectiveness), and are therefore not proposed as discussed below.

- **Modeled Barrier A: CTH M (Northwest Quadrant of CTH M/Cross Country Road Intersection) (Receptor A1)**

An approximately 575 foot long noise barrier was evaluated in the northwest quadrant of the CTH M/Cross Country Road intersection. A majority of the modeled barrier was located within existing right of way; approximately 119 feet was located along the right of way limits. A 22-foot tall noise barrier would result in a 9 dBA noise reduction for Receptor A1, which meets the 9 dBA noise reduction design goal. One benefited receptor representing a daycare (Receptor A1) is located adjacent to the modeled noise barrier. The total estimated cost to construct the noise barrier would be \$245,550. This estimated cost includes a real estate cost estimate of \$17,850, based on a 10-foot wide easement behind approximately 119 feet of the modeled noise barrier at \$15/sf. The cost effectiveness of modeled barrier A is \$245,550 per benefited receptor, which exceeds the WisDOT cost effectiveness threshold of \$30,000 per benefited receptor. Therefore, modeled barrier A is not considered reasonable and is not proposed.

- **Modeled Barrier B: CTH M (east side) from Flagstone Drive to Shale Drive (Receptors D3-1 to D14)**

An approximately 1,525 foot long noise barrier was evaluated along the east side of CTH M between Flagstone Drive and Shale Drive. The modeled barrier was located along existing right of way limits along the east side of an existing sidewalk. A 12-foot tall noise barrier would result in a 1 dBA to 10 dBA noise reduction, which meets the 9 dBA noise reduction design goal. Eighteen benefited residences (Receptors D5 through D14) are located adjacent to the modeled noise barrier. The total estimated cost to construct the noise barrier would be \$558,150. This estimated cost includes a real estate cost estimate of \$228,750, based on a 10-foot wide easement behind the entire modeled barrier length at \$15/sf. The cost effectiveness of modeled barrier B is \$31,008 per benefited receptor, which exceeds the WisDOT cost

effectiveness threshold of \$30,000 per benefited receptor. Therefore, modeled barrier B is not considered reasonable and is not proposed.

- **Modeled Barrier C: CTH M (east side) from Shale Drive to Midtown Road (Receptors D15 to D21)**

An approximately 695 foot long noise barrier was evaluated in the southeast quadrant of the CTH M/Midtown Road intersection. Approximately 270 feet of the modeled barrier was located within existing right of way; approximately 425 feet was located along the right of way limits. A 16-foot tall noise barrier would result in a 3 dBA to 9 dBA noise reduction, which meets the 9 dBA noise reduction design goal. Two benefited residences (Receptors D15 and D18) are located adjacent to the modeled noise barrier. The total estimated cost to construct the noise barrier would be \$263,910. This estimated cost includes a real estate cost estimate of \$63,750, based on a 10-foot wide easement behind approximately 425 feet of the modeled noise barrier at \$15/sf. The cost effectiveness of modeled barrier C is \$131,955 per benefited receptor, which exceeds the WisDOT cost effectiveness threshold of \$30,000 per benefited receptor. Therefore, modeled barrier C is not considered reasonable and is not proposed.

- **Modeled Barrier D: Midtown Road (south side) from CTH M to Mica Road (Receptors D22 to D27)**

An approximately 685 foot long noise barrier was evaluated along the south side of Midtown Road between CTH M and Mica Road. Approximately 230 feet of the modeled barrier was located within existing right of way; approximately 455 feet was located along or outside of existing right of way limits. Gaps were included in modeled barrier D to accommodate existing driveway connections from adjacent residences to Midtown Road. A 14-foot tall noise barrier would result in a 3 dBA to 9 dBA noise reduction, which meets the 9 dBA noise reduction design goal. One benefited residence (Receptor D25) is located adjacent to the modeled noise barrier. The total estimated cost to construct the noise barrier would be \$240,870. This estimated cost includes a real estate cost estimate of \$68,250, based on a 10-foot wide easement behind approximately 455 feet of the modeled noise barrier at \$15/sf. The cost effectiveness of modeled barrier D is \$240,870 per benefited receptor, which exceeds the WisDOT cost effectiveness threshold of \$30,000 per benefited receptor. Therefore, modeled barrier D is not considered reasonable and is not proposed.

**TABLE 6  
SUMMARY OF NOISE ABATEMENT ANALYSIS**

Modeled Noise Barrier	Height (feet)	Length (feet)	Estimated Barrier Cost (\$18/sf) <sup>1</sup>	# of Benefited Receptors <sup>2</sup>	Noise Reduction (dBA)	Estimated Cost per Benefited Receptor	Is modeled barrier feasible and reasonable?	If no, reason why?
A (daycare)	22	575	\$245,550	1	9	\$245,550	No	Modeled barrier does not meet WisDOT C/E threshold of \$30,000.
B (residential)	12	1,525	\$558,150	18	1-10	\$31,008	No	Modeled barrier does not meet WisDOT C/E threshold of \$30,000.
C (residential)	16	695	\$263,910,	2	3-9	\$131,955	No	Modeled barrier does not meet WisDOT C/E threshold of \$30,000.
D (residential) <sup>3</sup>	14	685	\$240,870	1	3-9	\$240,870	No	Modeled barrier does not meet WisDOT C/E threshold of \$30,000.

C/E = cost effectiveness

<sup>1</sup> Estimated barrier cost includes noise wall cost (\$18/sf) plus real estate cost estimates (\$15/sf). Does not include estimated costs to accommodate any necessary utility relocations.

<sup>2</sup> A noise barrier shall reduce noise levels by a minimum of 8 dBA for a receptor or common use are to be considered as benefited for the purposes of determining reasonableness.

<sup>3</sup> Modeled Barrier D included gaps to accommodate driveway connections from adjacent receptors to Midtown Road.

## Soundproofing

Only Land Use Category D properties identified in Table 2, Noise Level Criteria (NLC) For Considering Barriers, are eligible for consideration of soundproofing as a noise mitigation measure, if there are no “exterior areas of frequent human use” present.<sup>4</sup> A church is located along the east side of CTH M, south of CTH PD (Receptor B16, see *Attachment V – Noise Receptor Documentation*). There are no apparent exterior areas of frequent human use associated with this property. Modeled exterior sound levels at the façade of the church building under future Build conditions are 54 dBA (Leq). Building noise reduction factors are identified below in Table 7. Assuming an open window condition (10 dB noise reduction due to exterior of the structure), predicted interior sound levels for this church would be 44 dBA (Leq), below the NLC for Land Use Category D.

**TABLE 7  
BUILDING REDUCTION FACTORS**

Building Type	Window Condition	Noise Reduction Due to Exterior of the Structure
All	Open	10 dB
Light Frame	Ordinary Sash (closed)	20 dB
	Storm Windows	25 dB
Masonry	Single Glazed	25 dB
	Double Glazed	30 dB

Source: U.S. Department of Transportation. Federal Highway Administration. *Highway Traffic Noise: Analysis and Abatement Guidance*. Revised January 2011.

Need to also discuss daycare property (Land Use Category D) at sound end of corridor (northwest quadrant of CTH M/Cross Country Road intersection).

## Sound Level Information for Local Officials

Undeveloped lands that are not permitted are sited adjacent to CTH M. 23 CFR 772.17 requires that information be provided to local official related to future traffic noise impacts on currently undeveloped lands. The purpose of this is to promote compatibility between future development and anticipated highway sound levels and to avoid future traffic noise impacts on undeveloped lands not currently permitted.

Traffic noise levels were modeled at representative receptor locations at incremental setback distances along CTH M under future (2035) Build Alternative conditions (e.g., 50 feet, 100 feet, 150 feet, 200 feet, etc. from the centerline of the nearest lane on the future roadway). This analysis was based on existing topography in the project area, and assumed no intervening barriers or structures between the modeled receptor locations and future CTH M roadway. Results of the setback distance noise modeling analysis are tabulated in Table 8.

**TABLE 8  
SOUND LEVEL INFORMATION TO LOCAL OFFICIALS – SETBACK DISTANCES**

Distance from centerline of northbound CTH M between Prairie Hill Drive and Midtown Road	Future Sound Level (dBA, Leq)	Distance from centerline of southbound CTH M between CTH PD and Cross Country Road	Future Sound Level (dBA, Leq)
50 feet	72	50 feet	66
100 feet	66	100 feet	61
150 feet	63	150 feet	58
200 feet	61	200 feet	56
250 feet	59	250 feet	54
300 feet	58	300 feet	54
350 feet	57	350 feet	53

In an effort to prevent future traffic noise impacts on currently undeveloped lands adjacent to the project, the 66 dBA (Leq) setback distance along future CTH M between Prairie Hill Drive and Midtown Road would be greater than 100 feet. The 71 dBA (Leq) setback distance along future CTH M between Prairie Hill Drive and Midtown Road would be between 50 feet and 100 feet. The 66 dBA (Leq) and 71 dBA (Leq) setback distances along future CTH M between CTH PD and Cross Country Road would be between 50 feet and 100 feet. Modeled sound levels along future CTH M between CTH PD and Cross Country Road are projected to be below the 71 dBA (Leq) Noise Level Criteria for commercial/business uses. The distances referenced are measured from the centerline of the nearest lane on proposed CTH M under future Build conditions.

<sup>4</sup> WisDOT Facilities Development Manual, 23-35-15.3 (Soundproofing) and U.S. Department of Transportation. Federal Highway Administration. *Highway Traffic Noise: Analysis and Abatement Guidance*. Revised January 2011.  
Project ID# 5992-09-81

**Factor Sheet D-4**

Alternative: Preferred Alternative	Total Length of Center Line of Existing Roadway 2.86 miles
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None Identified	

**1. Briefly describe the results of the Phase 1 Hazardous Materials Assessment for this alternative. Do not use property identifiers (owner name, address or business name):**

The Phase 1 Hazardous Materials Assessment identified two adjacent parcels with reported spills, an environmental repair program site (ERP), and registered underground storage tanks on adjacent and nearby properties.

The Phase 1 Hazardous Materials Assessment identified the following sites that could have potential contamination within the area of potential effect for the proposed County M improvements:

Site Reference #	Land Use of Concern (Past or Present)	Contaminants of Concern	Phase 1 Recommendations	Phase 2 Recommended?
				Y/N
Spill	Roadway Intersection.	Hydraulic Oil	Documentation shows the 30 gallon hydraulic oil spill was contained and cleaned up. Since the spill was cleaned up, no additional investigation is necessary.	No
Field Reconnaissance Site	Electric Substation	Transformer Use	The parameters of concern will be different than a petroleum release site, including possible electric transformer oil which is known to contain PCBs.	Yes
ERP Site	Roadway Intersection	Petroleum	WDNR closed ERP site on 8/4/09. No additional investigation required- contaminated soil is located south of the intersection	No
Registered USTs/ASTs	Retail Use	Petroleum, four USTs in use, 12,000 to 20,000 gallon are located close to the project area right of way	USTs on the property have no reported leakage with annual testing and area outside of project area, therefore no additional investigation is required.	No

Based on the information reviewed and the Phase 1 field reconnaissance, additional environmental investigation does not appear necessary for most of the potential environmental concerns as related to the project design.

**2. Were any parcels not included in the Phase 1 assessment?**

No  
 Yes - How many:  
 Why were they not reviewed?

**3. Have Phase 2 or 2.5 Assessments been completed? Yes, discuss the results:**

Site Reference #	Phase 2/2.5 Recommendations	Remediation Recommended?		Is WisDOT a Responsible Party?	
		Yes	No	Yes	No
Field Reconnaissance Site	WDNR approval of arsenic detection in soil. Contractor to install total arsenic resistant gasket seals and trench plugs.		X		X

Of all the metals detected, only total arsenic detections exceeded the WAC NR 720 Table 2 RCLs for Direct Contact related to industrial and non-industrial land use soils. No other concerns were identified. Because only total arsenic exceeded the WAC NR 720 RCLs for the Direct Contact industrial/non-industrial levels, it is recommended that the WDNR approve these arsenic detections in the soil to be allowed to remain at this site. It would be cost prohibitive to have to dig out these lower levels of arsenic. If the WDNR does allow these total arsenic levels to remain, then special provision will be provided to the contractor for the installation of total arsenic resistant gasket seal and trench plugs, which will prevent any residual soil contamination from entering the utilities.

**4. Describe the results of any additional investigations performed by WisDOT or others: (Include the number of sites investigated, the level of investigation and results for each site)**

County M & Cross County Road (WisDOT, City of Verona): Soil contamination was reported to the WDNR on 7/26/99. ERP site was closed on 08/24/99. Phase 2 soil borings were completed and heavy petroleum was detected south of the intersection in an area beyond the current project.

County M & County PD (Wingra Stone): Approximately 30 gallons of hydraulic fluid were spilled from a truck hose. The WDNR closed the spill on 1/9/06 after a cleanup action.

**5. Describe proposed action to avoid hazardous materials contamination:**

The only action to avoid hazardous materials contamination involves installation of total arsenic resistant gasket seal and trench plugs in the contaminated area.

**6. Describe the remediation and waste management practices to be included in the design for areas where contamination cannot be avoided (e.g., waste handling plan, remediation of contamination, design changes to minimize disturbances):**

Arsenic resistant gasket seals and trench plugs will be included for all utilities within the contaminated area to prevent contaminant migration. The design includes a raised profile in this location such that only utility installation excavation should encounter any contaminated soils.

**7. List any parcels with known contamination, proposed for acquisition:**

Phase 2 subsurface investigation was conducted for parcel number 060810185705, the Aliant Energy Substation. As noted in question 3, total arsenic detections exceeded the WAC NR 720 Table 2 RCLs for Direct Contact related to industrial and non-industrial land use soils.

**8. Bridge Projects Only: Has the structure been inspected for the presence of asbestos containing materials (ACMs)?**

No - Explain

Yes:

Were regulated ACMs identified?

No

Yes:

State the standard language to be incorporated in the special provisions of the project:

**Factor Sheet D-5**

Alternative: Preferred Alternative	Total Length of Center Line of Existing Roadway 2.86 miles
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

**1. Indicate whether the affected area may cause a discharge or will discharge to the waters of the state (Trans 401.03).**

Special consideration should be given to areas that are sensitive to water quality degradation. Provide specific recommendations on the level of protection needed.

- No water special natural resources are affected by the alternative.
- Yes - Water special natural resources exist in the project area.
  - River/stream
  - Wetland
  - Lake
  - Endangered species habitat
  - Other – Describe

**2. Indicate whether circumstances exist in the project vicinity that require additional or special consideration, such as an increase in peak flow, total suspended solids (TSS) or water volume.**

- No additional or special circumstances are present.
- Yes - Additional or special circumstances exist. Indicate all that are present.
  - Areas of groundwater discharge
  - Stream relocations
  - Long or steep cut or fill slopes
  - Cold water stream
  - Large quantity flows
  - Increased backwater
  - Other - Describe any unique, innovative, or atypical stormwater management measures to be used to manage additional or special circumstances.
  - Areas of groundwater recharge
  - Overland flow/runoff
  - High velocity flows
  - Impaired waterway
  - Exceptional/outstanding resource waters

**3. Describe the overall stormwater management strategy to minimize adverse effects and enhance beneficial effects.**

All roadways constructed by the proposed action that include curb and gutter will have storm sewer systems installed. These storm sewer systems will be gravity systems and directed towards existing and proposed stormwater treatment ponds. All storm sewer stormwater north of Stony Ridge Circle and within the project limits will be directed into one of the following, which are all in the Badger Mill Creek drainage basin and ultimately end up in the City of Madison’s regional stormwater management ponds east of Raymond Road near the Raymond Road project limits:

- Existing stormwater pond on the northwest corner of the County M and Midtown Road intersection. This pond currently serves the Hawks Landing residential development and other developments east of County M. County M and Midtown Road stormwater drains to this pond currently via roadside vegetated swales. The City of Madison and Hawks Landing development maintain this pond and have recorded maintenance agreements. The pond was designed to accommodate impervious surface increases due to the expansion of County M and Midtown Road. This pond is in-line with the intermittent flow and non-navigable portion of Badger Mill Creek.
- Existing storm sewer below Mica Road and Shale Drive (County M and Midtown Road stormwater). These storm sewers drain to an existing stormwater pond near Flagstone Park off Flagstone Drive. This pond then drains to Badger Mill Creek near the Flagstone Drive intersection with County M. The City of Madison has reviewed both the existing storm sewer and pond capacity for the additional storm water flows proposed from the expansion of County M.
- Badger Mill Creek. The non-navigable portion of Badger Mill Creek between County M and Raymond Road will accept some stormwater from County M between Flagstone Drive and Shale Drive.
- Proposed storm sewer system below Raymond Road. A new storm sewer system trunk below Raymond Road will carry stormwater from County M and County PD to the City of Madison’s regional stormwater pond in-line with Badger Mill Creek on

the east side of Raymond Road. The City of Madison has reviewed the storm sewer system design for capacity, including the addition of stormwater runoff from development that occurs in accordance with the High Point-Raymond neighborhood plan.

The WDNR has indicated in the initial comment letter that this concept will address the post construction stormwater management requirements for this project. The regional ponds were designed to accommodate the increased flows resulting from additional pavement area to the proposed roadway widening.

Between Harmony Drive and the north intersection of Stony Ridge Circle, stormwater will stay within the existing closed basin watershed. Stormwater will be managed through the expansion of the existing City of Verona stormwater pond on the east side of County M, north of Ineichen Drive. The expansion of the pond will be on City of Verona owned land dedicated for stormwater management. An additional stormwater pond is proposed on the east side of County M north of Stony Ridge Circle. This pond will be less than an acre in size on undeveloped residential land. The location of this pond has been coordinated with the Town of Verona. The City of Verona will own and maintain this new pond.

South of Harmony Drive, stormwater will continue to be drained through an existing storm sewer network owned and maintained by the City of Verona.

There is a sensitive Kettle wetland located southwest of the intersection of County M with County PD. This kettle is currently farmed. Roadway stormwater will be routed to avoid any discharge to this wetland.

Badger Mill Creek intersects with County M at two locations within the project area. Culvert extensions or replacements are proposed in order to allow aquatic organisms to migrate up and downstream during low-flow conditions.

**4. Indicate how the stormwater management plan will be compatible with fulfilling Trans 401 requirements.**

The City of Madison has been granted an exception allowing direct discharge to Badger Mill Creek upstream of navigable section.

**5. Identify the stormwater management measures to be utilized.**

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Swale treatment (parallel to flow)<br>Trans 401.106(10) | <input type="checkbox"/> In-line storm sewer treatment, such as catch basins,<br>non-mechanical treatment systems. |
| <input type="checkbox"/> Vegetated filter strips<br>(perpendicular to flow)                 | <input checked="" type="checkbox"/> Detention/retention basins – Trans 401.106(6)(3)                               |
| <input checked="" type="checkbox"/> Constructed storm water wetlands                        | <input checked="" type="checkbox"/> Distancing outfalls from waterway edge   |
| <input type="checkbox"/> Buffer areas – Trans 401.106(6)                                    | <input type="checkbox"/> Infiltration – Trans 401.106(5)   |
| <input type="checkbox"/> Other  |  |
- Describe - \_\_\_\_\_

Dane County constructed a small wetland scrape near the culvert crossing for Badger Mill Creek near the intersection of Flagstone Drive and County M. This small wetland scrape will be filled in with the construction of County M and the new drainage and pedestrian underpass structures. To mitigate this impact, the project will reconstruct the wetland scrape adjacent to Badger Mill Creek near the existing location under guidance from Dane County Park staff.

**6. Indicate whether any Drainage District may be affected by the project.**

- No - None identified  
 Yes
- Has initial coordination with a drainage board been completed?
- No - Explain \_\_\_\_\_  
 Yes - Discuss results \_\_\_\_\_

**7. Indicate whether the project is within WisDOT's Phase I or Phase II stormwater management areas.**

*Note: See Procedure 20-30-1, Figure 1, Attachment A4, the Cooperative Agreement between WisDOT and WisDNR. Contact Regional Stormwater/erosion Control Engineer if assistance in needed to complete the following:*

- No - the project is outside of WisDOT's stormwater management area.  
 Yes - The project affects one of the following and is regulated by a WPDES stormwater discharge permit, issued by the WDNR:  
 A WisDOT storm sewer system, located within a municipality with a population greater than 100,000.

- A WisDOT storm sewer system located within the area of a notified owner of a municipal separate storm sewer system.
- An urbanized area, as defined by the U.S. Census Bureau, NR216.02(3).
- A municipal separate storm sewer system serving a population less than 10,000.

**8. Has the effect on downstream properties been considered?**

- No
- Yes – All storm sewer outfalls are directed into existing municipal swales or ponds. The existing ponds provide rate control for downstream locations. Between Ineichen Drive and Stony Ridge Circle (north intersection), a new stormwater pond is proposed that will provide rate control consistent with existing flow rates for an existing cross culvert that drains to an existing swale through private property.

**9. Are there any property acquisitions required for storm water management purposes?**

- No
- Yes - Complete the following:
  - Safety measures, such as fencing are not needed for potential conflicts with existing and expected surrounding land use.
  - Safety measures are needed for potential conflicts with existing and expected surrounding land use. Describe:

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**Factor Sheet D-6**

Alternative: Preferred Alternative	Total Length of Center Line of Existing Roadway 2.86 miles
Preferred <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None identified	

**1. Give a brief description of existing and proposed slopes in the project area, both perpendicular and longitudinal to the project. Include both existing and proposed slope length, percent slope and soil types.**

The existing centerline profile of County M consists of grades ranging from 0.5% to 5.0%. Most of the existing profile grades range from 0.5 to 2%, however there is a hill at the southern limits of the project with grades of 3% and 5%. There are also a couple flat areas with grades less than 0.5%; one spot is located near Morse Pond and another near the Flagstone Drive intersection. Existing centerline profile slopes on County PD range from 0.6% to 3.4%. Existing centerline profile slopes on Midtown Road range from 0.2% to 6.3%. Existing centerline profile slopes on Raymond Road range from 0.5% to 5%.

Existing perpendicular slopes vary throughout the project. The roadway cross section is predominantly rural with aggregate shoulders. For much of the project length, the existing County M roadbed is at least 5 feet above the adjacent lands. In many places, there are ditched sections on either side of the road with varying back slopes (as steep as 2:1 in a few areas, including the west side of the road just south of Ineichen Drive). In other areas, and particularly on the west side of County M, large fill slopes (over 15 feet high in a few locations) make up the area adjacent to the roadway. These fill slopes are as steep as 2:1 in certain areas such as those near Morse Pond on the west side of the road, however most fill slopes are typically 3:1 or 4:1.

Existing perpendicular slopes on County PD are fairly flat on the south side of the road west of the County M intersection. East of County M, the south side of County PD has some small ditches with flat slopes (4:1 to 6:1) near the Alliant Energy facility; east of this, there are larger fill slopes (as steep as 2.5:1). On the north side of County PD, there are fill slopes varying between 2:1 and 4:1 west of the County M intersection. East of the County M intersection, flat fill slopes are located on the north side of County PD before becoming larger 3:1 cut slopes towards the project limits at Meriter Way.

Existing perpendicular slopes on Midtown Road consist primarily of fill slopes (3:1 to 6:1) on the south side of the road west of the County M intersection. East of the County M intersection, there are some cut slopes on the south side of the road as steep as 2:1 in some places; further to the east, these slopes flatten out considerably. On the north side of Midtown Road, large fill slopes (as steep as 2:1) make up the areas west of the County M intersection. East of the intersection, there are some steep cut slopes on the north side of the road that flatten into long, gradual cut slopes.

Existing perpendicular slopes on Raymond Road range between 2:1 and 6:1 on the north or west side of the road. These are both cuts and fills and are typically less than 5 feet in height. The south or east side of Raymond Road has some short fill sections (less than 5 feet at 4:1). There are sections of high, wooded cut sections that have slopes as steep as 2:1. These cuts exceed 20 feet in some areas.

Per CGC's soil investigations, existing soil types beneath the roadway gravel base course / topsoil fill generally include the following:

- 2.5 to 21.5 feet of fill comprised of very loose to very dense granular materials with variable silt and clay content or soft to very stiff cohesive materials
- 2 to 15 feet of very soft to hard lean clay
- very loose to very dense sand with variable silt and gravel content to the maximum depth explored

All proposed County M roadway centerline profile slopes for the project will be greater than 0.4%, with the steepest being 4.8% (located at the hill just south of Ineichen Drive). Most of these slopes will range from 0.5% to 2%. On County PD, proposed roadway centerline profile slopes will range between 0.5% and 45%. On Midtown Road, proposed roadway centerline profile grades will range from 0.5% to 5.7%. Sidewalks adjacent to the 5.7% slope will be less than 5%. Proposed roadway centerline profile grades on Raymond Road will closely match the existing grades between 0.5% and 4%.

Proposed perpendicular slopes on County M, County PD, and Midtown Road will primarily consist of cut and fill slopes behind the sidewalk or curb and gutter where no sidewalk is constructed at either 3:1 or 4:1. Most slopes will be 4:1 except where the current slopes aren't currently mowed and where impacts to adjacent wetlands or other environmental areas need to be minimized.

**2. Indicate all natural resources to be affected by the proposal that are sensitive to erosion, sedimentation, or waters of the state quality degradation and provide specific recommendations on the level of protection needed.**

- No - there are no sensitive resources affected by the proposal.
- Yes - Sensitive resources exist in or adjacent to the area affected by the project.
  - River/stream
  - Lake
  - Wetland
  - Endangered species habitat
  - Other - Describe \_\_\_\_\_

**3. Are there circumstances requiring additional or special consideration?**

- No - Additional or special circumstances are not present.
- Yes - Additional or special circumstances exist. Indicate all that are present.
  - Areas of groundwater discharge
  - Overland flow/runoff
  - Long or steep cut or fill slopes
  - Areas of groundwater recharge (fractured bedrock, wetlands, streams)
  - Other - Describe any unique or atypical erosion control measures to be used to manage additional or special circumstances \_\_\_\_\_

**4. Describe overall erosion control strategy to minimize adverse effects and/or enhance beneficial effects.**

The proposed action will follow Wis. Adm. Code Trans 401 and the WisDOT/WDNR Agreement and minimize any off-site sedimentation from the project site and minimize any impact to waters of the state. To address unusual or severe storm events, an undistributed amount of erosion control items and emergency erosion control items will be included.

Soil disturbance necessary for construction activities has the potential to produce offsite sedimentation despite the most diligent use of erosion control best management practices.

**5. Erosion control measures reached consensus with the appropriate authorities as indicated below:**

- WDNR
- County Land Conservation Department
- American Indian Tribe
- US Army Corps of Engineers

Note: All erosion control measures (i.e., the Erosion Control Plan) shall be coordinated through the WisDOT-WDNR liaison process and TRANS 401 except when Tribal lands of American Indian Tribes are involved. WDNR's concurrence is not forthcoming without an Erosion Control Plan. In addition, TRANS 401 requires the contractor to prepare an Erosion Control Implementation Plan (ECIP), which identifies timing and staging of the project's erosion control measures. The ECIP should be submitted to the WDNR and to WisDOT 14 days prior to the preconstruction conference (Trans401.08(1)) and must be approved by WisDOT before implementation. On Tribal lands, coordination for 402 (erosion) concerns are either to be coordinated with the tribe affected or with the U.S. Environmental Protection Agency (EPA). EPA or the tribes have the 401 water quality responsibility on Trust lands. Describe how the Erosion Control/Storm Water Management Plan can be compatible.

**6. Identify the temporary and permanent erosion control measures to be utilized on the project. Consult the FDM, Chapter 10, and the Products Acceptability List (PAL).**

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Minimize the amount of land exposed at one time | <input checked="" type="checkbox"/> Detention basin              |
| <input checked="" type="checkbox"/> Temporary seeding                               | <input checked="" type="checkbox"/> Vegetative swales            |
| <input checked="" type="checkbox"/> Silt fence                                      | <input type="checkbox"/> Pave haul roads                         |
| <input checked="" type="checkbox"/> Ditch checks                                    | <input checked="" type="checkbox"/> Dust abatement               |
| <input checked="" type="checkbox"/> Erosion or turf reinforcement mat               | <input checked="" type="checkbox"/> Rip rap                      |
| <input checked="" type="checkbox"/> Ditch or slope sodding                          | <input type="checkbox"/> Buffer strips                           |
| <input type="checkbox"/> Soil stabilizer  | <input checked="" type="checkbox"/> Dewatering – Describe method |
| <input checked="" type="checkbox"/> Inlet protection                                | <input type="checkbox"/> Silt screen                             |
| <input checked="" type="checkbox"/> Turbidity barriers                              | <input checked="" type="checkbox"/> Temporary diversion channel  |
| <input checked="" type="checkbox"/> Temporary settling basin                        | <input checked="" type="checkbox"/> Permanent seeding            |
| <input checked="" type="checkbox"/> Mulching  |  |
| <input checked="" type="checkbox"/> Other - Describe: Erosion bales                 |  |