PROJECT I.D. 1206-07-03, SPES-F, NH 04 ( )
UNITED STATES HIGHWAY 18/151 (Verona Road)
CTH PD to USH 12/14 (Beltline)
UNITED STATES HIGHWAY 12/14 (Beltline)
Whitney Way to Todd Drive
Dane County, Wisconsin

FINAL ENVIRONMENTAL IMPACT STATEMENT
And FINAL Section 4(f) Determination

(SUBMITTED PURSUANT TO 42 U.S.C. 4332 (2)(C) AND 49 U.S.C. 303)

BY THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
AND
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
AND
COOPERATING AGENCIES

Wisconsin Department of Natural Resources (WDNR) - (Pursuant to 23 U.S.C. 139)

APPROVALS

6/21/2011
Date [redacted] For the Wisconsin Department of Transportation

6/28/11
Date [redacted] For the Federal Highway Administration

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ABSTRACT

US 18/151 (Verona Road) is a principle arterial that serves through movements to and from southwestern Wisconsin. It is classified as a Backbone Route in the Corridors 2030 state highway plan. This 2 mile section of US 151 is the only urbanized roadway portion of the Backbone corridor spanning from Fond du Lac, Wisconsin to Dubuque, Iowa. The growing Madison metropolitan area and associated traffic volumes are causing increasing congestion on US 18/151 and on US 12/14. This project seeks to:

- Enhance the mobility of motorized travel in the US 151 backbone corridor to operation levels that are consistent with a Corridors 2030 Backbone Route.
- Improve travel safety on the US 18/151 corridor to levels consistent with a Corridors 2030 Backbone Route.
- Preserve the mobility of motorized travel in the US 12/14 (Beltline) corridor near the US 18/151 interchange to levels that are consistent with a Corridors 2030 Connector Route.
- Enhance nonmotorized travel accommodations and connectivity in the US 18/151 and the US 12/14 corridors.

NATIONAL ENVIRONMENTAL POLICY ACT STATEMENT

The National Environmental Policy Act (NEPA), 42 USC 4321-4347, became effective January 1, 1970. This law requires that all federal agencies have prepared for every recommendation or report on proposals for legislation and other major federal actions significantly affecting the quality of the human environment a detailed Environmental Impact Statement (EIS). The Federal Highway Administration (FHWA) is therefore required to have prepared an EIS on proposals that are funded under its authority if the proposal is determined to be a major action significantly affecting the quality of the human environment.

EISs are required for many transportation projects as outlined in NEPA. The processing of an EIS is carried out in two stages. Draft EISs are first written and forwarded for review and comment to federal, state, and local agencies with jurisdiction by law or special expertise and are made available to the public. This availability to the public must occur at least 15 days before the public hearing and no later than the time of the first public hearing notice or notice of opportunity for a hearing. Normally, 45 days plus mailing time will be allowed for comments to be made on the Draft EIS unless a time extension is granted by the Director of the Bureau of Equity and Environmental Services (Wisconsin Department of Transportation). Supplemental Draft EISs are prepared whenever there are changes, new information, or further developments on a project that result in significant environmental impacts not identified in the most recently distributed version of the DEIS [40 CFR 1502.9(c)]. They have the same review period and hearing requirements as a Draft EIS. After this period has elapsed for a Draft EIS or Supplement Draft EIS, preparation of the Final EIS can begin.

Final EISs are prepared to reflect the distribution of the Draft Statement by including the following:

1. Basic content of the Draft Statement (or Supplemental Draft Statement), as amended, due to internal agency comments, editing, additional alternatives being considered, and changes due to the time lag between the Draft, Supplemental Draft, and Final EIS.
2. Summary of public hearing environmental comments.
3. Copies of comments received on the Draft Statement or Supplemental Draft Statement.
4. Evaluation and disposition of each substantive comment.

Administrative action cannot take place sooner than 90 days after circulation of the Draft Statement or Supplemental Draft Statement to the Environmental Protection Agency (EPA) or 30 days after submittal of the Final Statement to the EPA. The Draft, Supplemental Draft, and Final EIS are full-disclosure documents, which provide a full description of the proposed project, the existing environment, and an analysis of the anticipated beneficial or adverse environmental effects.

The name, address, and telephone number of the individual from whom additional information can be obtained is listed on the cover of this document.

GENERAL REVIEWER INFORMATION

New material in the Final EIS is either highlighted with shading or noted with a vertical line in the margin.

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ES EXECUTIVE SUMMARY

ES.1 STUDY AREA

The Wisconsin Department of Transportation (WisDOT) is planning to improve the Dane County US 18/151 (Verona Road) corridor near the Cities of Madison and Fitchburg, Wisconsin.

In March of 2004, a Draft Environmental Impact Statement (DEIS) was released that presented three main alternatives. In October 2010, a Supplemental Draft Environmental Statement (SDEIS) was released that presented the Preferred Alternative as a staged implementation of two of the alternatives presented in the DEIS. This Final Environmental Impact Statement (FEIS) presents the Preferred Alternative that was presented in the SDEIS with several refinements that respond to comments received during the SDEIS availability period.

This FEIS addresses US 18/151 (Verona Road) in the southwest quadrant of the Madison metropolitan area in Dane County, Wisconsin. The study corridor is bounded by US 12/14 (Beltline) to the north and County PD to the south. The study also addresses portions of the Beltline that influence the Verona Road interchange, which includes the Beltline section from Todd Drive to Whitney Way. Side-road intersections that connect with Verona Road include Summit Road, Raymond Road, and Williamsburg Way. Figure ES.1-1 presents a corridor location schematic.

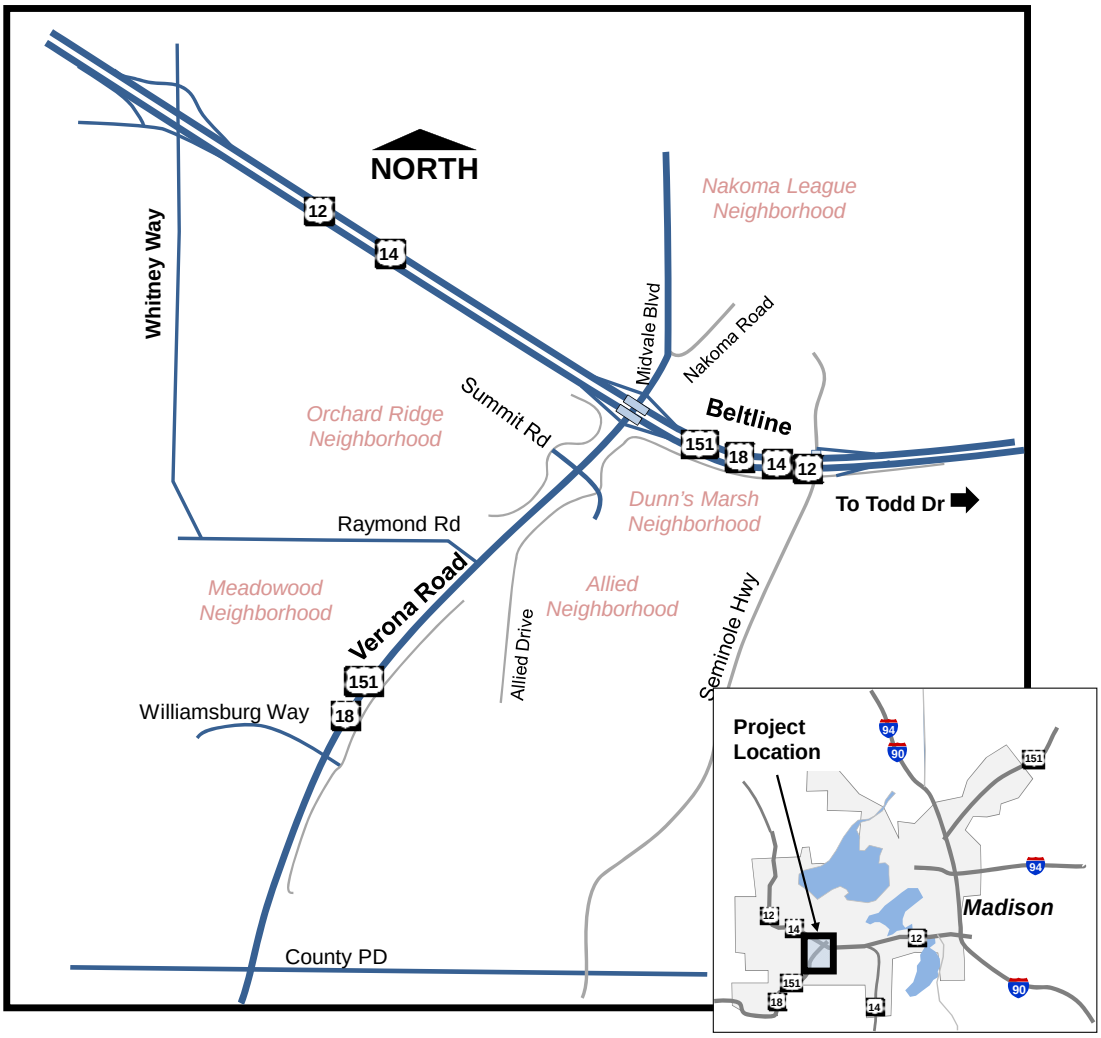


Figure ES.1-1 Study Corridor Location

ES.2 PURPOSE AND NEED

The purpose of this WisDOT project is to:

- Enhance the mobility of motorized travel in the US 151 backbone corridor to operation levels that are consistent with a Corridors 2020/Connections 2030 Backbone Route.
- Improve travel safety on the Verona Road corridor to levels consistent with US 151's classification as a Corridors 2020/Connections 2030 Backbone Route.
- Preserve the mobility of motorized travel in the US 12/14 (Beltline) corridor near the US 18/151 (Verona Road) interchange to levels that are consistent with a Corridors 2020/Connections 2030 Connector Route.
- Enhance nonmotorized travel accommodations and connectivity in the Verona Road and the Beltline corridors.

Primary components of the Purpose and Need for the Verona Road corridor include the following:

A. US 151 (Verona Road) System Continuity and Consistency with the Corridors 2020/Connections 2030 State Highway Plan

US 151 (Verona Road) is classified as a Backbone route in the Corridors 2030 State Highway Plan. This is the same classification as the Interstate Highways. While making up only 3 percent of Wisconsin highways, Corridors 2030 routes carry 37 percent of all auto travel and 54 percent of all truck travel. US 151 (Verona Road) serves this interregional purpose within the state. In 2008, the US 151 Backbone route became a full four-lane expressway/freeway facility from Fond du Lac, Wisconsin, to Dubuque, Iowa, except for the 2-mile section that is a focus of this study (see note about Backbone bypass around Madison).[1] Figure ES.2-1 shows the Corridors 2030 Backbone routes.

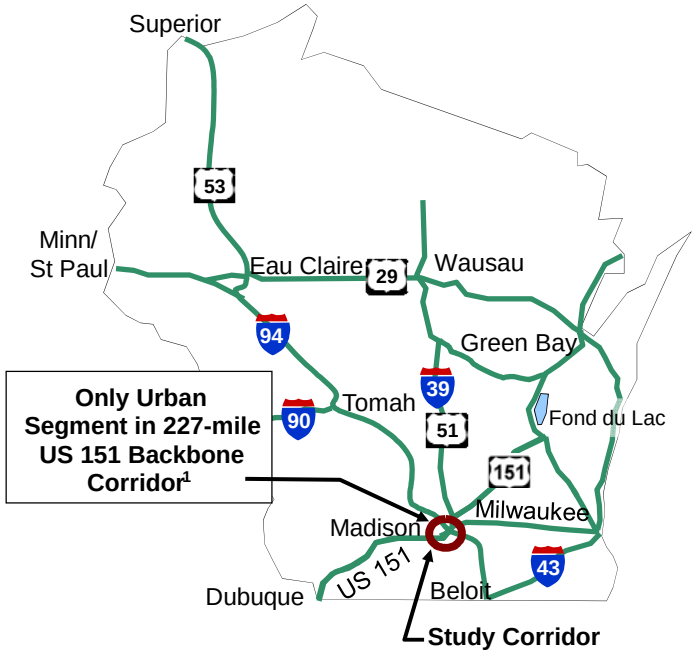
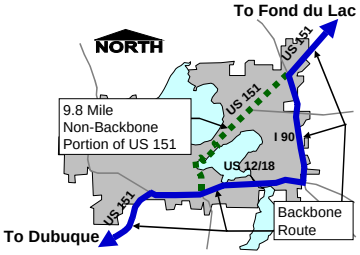


Figure ES.2-1 Study Corridor and Wisconsin Corridors 2030 Backbone Routes

[1] The Backbone route does not follow US 151 through downtown Madison. Instead, the Backbone route bypasses downtown Madison on Interstate 90/94 and US 12/14 (the Beltline) between the I 90/94-US 151/East Washington Avenue and Verona Road interchanges.



B. Verona Road Capacity

WisDOT policy states:

> *"The highest level of service thresholds are applied to the Corridors 2020/Connections 2030 system in recognition of its importance from a mobility and economic development perspective. On Corridors 2020/Connections 2030 routes, only „minimal" congestion is allowed, except on Connectors within urbanized areas, where slightly higher congestion levels are permitted."*

This 2-mile section of Verona Road carries traffic volumes and trip types that are characteristic of freeway/expressway travel. In 2006, traffic volumes on sections of Verona Road were 50,750 to 59,300 vehicles per day (vpd), and they are projected to grow to 52,900 to 68,800 vpd by the year 2030.

Increasing traffic volumes and associated congestion are compromising the mobility of the corridor. The Verona Road/Beltline interchange already operates at extremely congested conditions during the morning and evening peak hours with average intersection delays exceeding 100 seconds per vehicle, corresponding to level of service (LOS) F.[2]

C. Safety

As traffic volumes on the Verona Road corridor grow, congestion-related crashes are increasing. Between 2006 and 2008, there were 342 crashes on Verona Road from the Beltline to County PD, producing a crash rate of 201 crashes per hundred million vehicle miles traveled (HMVMT). These crashes are a product of the vehicle conflict points inherent with the six signalized intersections in this corridor.

Additionally, pedestrian and bicycle safety on Verona Road and through the Beltline interchange decreases as traffic and turning movements grow. While WisDOT has made efforts to retrofit bicycle and pedestrian amenities in the corridor, there are few longitudinal accommodations and crossing opportunities are challenging.

D. Neighborhood Connectivity–Transit/Nonmotorized Travel

Verona Road, the Verona Road/Beltline interchange, and the Beltline separate the Allied-Dunn's Marsh neighborhood from other Madison neighborhoods north and west. There is one main motor vehicle entrance to the neighborhood on Verona Road, and two main entrances to the neighborhood on Seminole Highway. The Verona Road corridor and its heavy traffic volumes contribute to the physical isolation of the neighborhood.

E. Metropolitan Traffic Movements and Local Access

Verona Road regularly experiences congestion during the morning and evening rush hours. This congestion affects not only regional traffic but also metropolitan traffic that originates and ends within the Madison metropolitan area. Because of this congestion, several metropolitan trips are diverted to local and neighborhood streets. Area residents regularly express concerns over nonlocal traffic cutting through neighborhoods to avoid the Beltline and Verona Road. Fish Hatchery Road and Seminole Highway both regularly experience diverted traffic that would ordinarily use Verona Road.

[2] Levels of Service are measures that describe the operation of a roadway and its congestion levels. They range from A (not congested) to F (very congested).

ES.3 ALTERNATIVES

The study examined many general transportation strategies at a preliminary screening level. These are described in Table 2.1-1 and include:

- Transportation Demand Management (TDM)
- Transit
- Roadway Off-Alignment
- Roadway On-Alignment

From these, the March 2004 DEIS presented three main alternatives, No Build, Urban Roadway Alternative, and the Freeway Alternative. The Preferred Alternative in this FEIS is a staged implementation of two of the alternatives presented in the DEIS. The following paragraphs summarize the key components of the two alternatives in the FEIS.

The Preferred Alternative is broken into three stages, with different years of implementation. The following paragraphs detail the characteristics of each stage.

A. Stage 1 (Construction Estimated to Begin in 2013)

Stage 1 entails reconstructing the current Verona Road/Beltline diamond interchange into a single-point urban interchange and extending the six-lane Beltline section west through the Whitney Way interchange. The Beltline modifications will include expanding the Whitney Way westbound off-ramp to two lanes. To aid weaving movements and coordinate construction activities, a parallel lane will be added to the Whitney Way eastbound on-ramp and westbound on-ramp traffic. The Beltline reconstruction will extend past Seminole Highway to correct the substandard height on the Seminole Highway overpass and will include partial reconstruction of the overpass.

The Verona Road single-point interchange will align the Beltline ramps to meet at a single point, which allows more efficient signal operation. Four lanes southbound and three lanes northbound will be provided on Verona Road from Nakoma Road on Midvale Boulevard to Summit Road to increase capacity. Figure ES.3-1 shows Stage 1 interchange and jug-handle improvements.

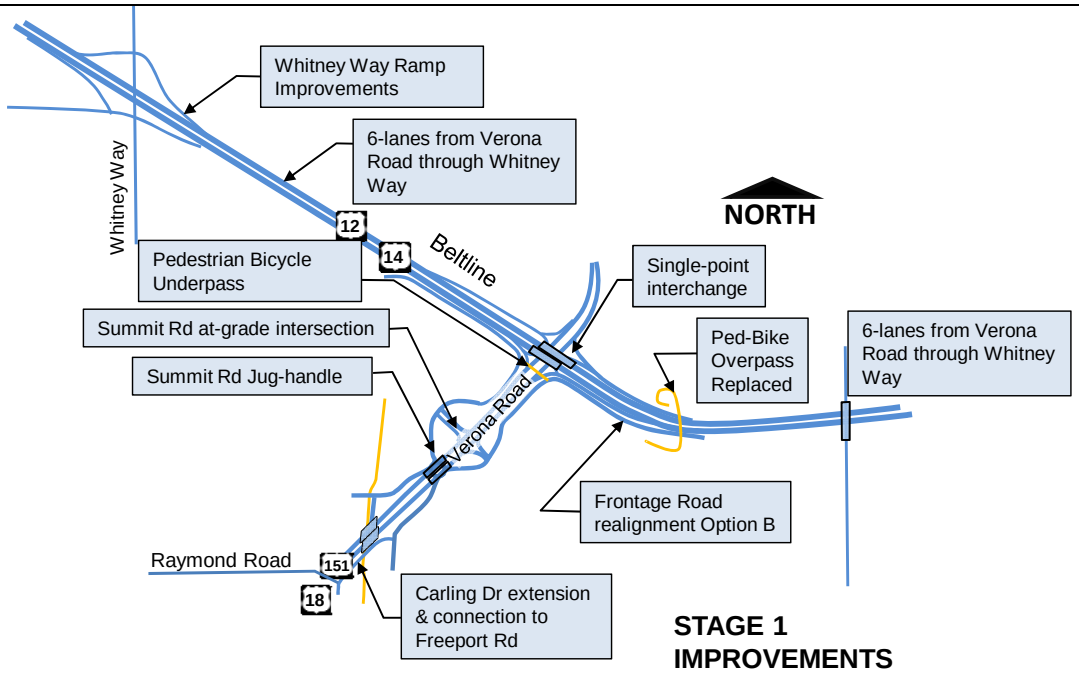


Figure ES.3-1 Stage 1 Improvements

A jug-handle grade-separated intersection will be constructed within the existing right-of-way of the current Summit Road intersection. A jug-handle intersection only allows right turns in and right turns out. Vehicles that need to cross Verona Road or turn left from Summit Road would travel underneath Verona Road to the other side of the roadway. Some comments received during the SDEIS review period expressed concern with the neighborhood impacts associated with the proposed jug-handle routing increased traffic volumes from Allied Drive through the Atticus Way jug-handle connection. To address these concerns, the Preferred Alternative has Allied Drive connect directly with the jug-handle and the West Frontage Road directly underneath Verona Road with a roundabout. This refinement decreases neighborhood impacts and strengthens the connection between the west and east sides of Verona Road. Bike lanes and sidewalks will be provided through the jug-handle and a path would be provided around the roundabout (see Figure ES.3-2).

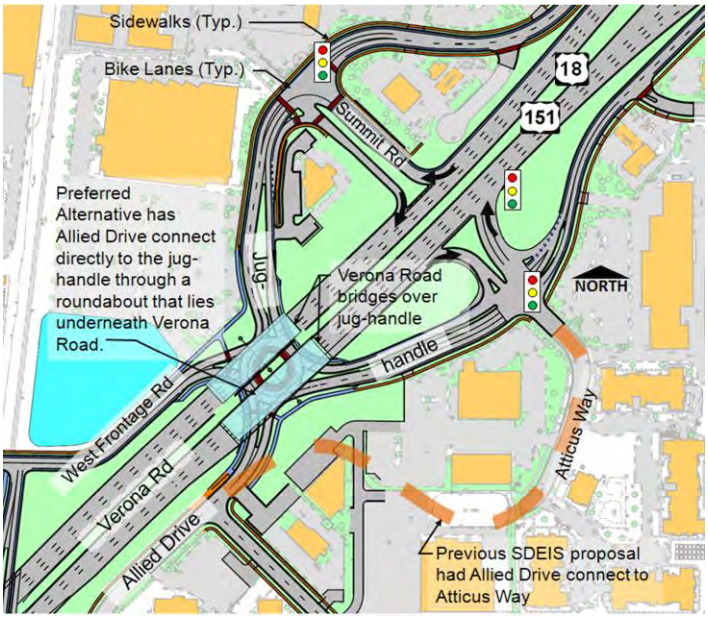


Figure ES.3-2 Stage 1 Summit Road Jug-Handle

The reconstruction of the Verona Road interchange will require expansion of the interchange footprint. This will require relocating the frontage roads in the southwest and southeast quadrants of the interchange. The frontage road in the southwest quadrant will be shifted slightly to the southwest. Two frontage road alignments were investigated, Option A and Option B. Option A bows to the south to avoid businesses where Option B parallels the Beltline. Option B was selected as the Preferred Alternative in response to comments received during the SDEIS review period.

Carling Drive will be extended to the north and connect with Allied Drive to provide one additional connection between the Nakoma Heights area and the Allied neighborhood. Additionally, a connection will be provided underneath Verona Road that connects the Carling Drive extension to Freeport Road. This connection will use Verona Road's existing railroad bridge to travel underneath Verona Road and will shift the Southwest Commuter Path, which also travels under Verona Road at this bridge, about 20 feet west. When Stage 1 construction is completed, the City of Madison will evaluate how the Freeport connection affects neighborhood traffic circulation and determine if the connection will remain. Raymond Road and Williamsburg Way will continue as a signalized intersection. County PD will have dual left-turn lanes installed on the west and east approaches in anticipation of Stage 1 work.

Pedestrians and cyclists will generally have better access along and across Verona Road. All frontage roads will have bike lanes and sides of the frontage road that serve private property will also have sidewalks. With the addition of the jug-handle, there will be an additional grade separation of Verona Road which allows cyclists and pedestrians an opportunity to avoid US 151 traffic by traveling underneath it. In response to public comments, the Preferred Alternative now includes a new pedestrian and bicycle underpass just south of the interchange that provides an east-west connection across Verona Road. The grade-separated crossing of the Beltline, located east of the Verona Road interchange, will be reconstructed to meet current standards. Noise walls are reasonable and feasible in the southeast quadrants of the interchange. The Department is committed to construction of the Stage 1 noise barriers and will work with the City of Madison and affected residents/owners through additional public involvement to determine if the barriers are to be incorporated into construction plans.

B. Stage 2 (Construction ~ 2017)

As part of Stage 2, the County PD and Verona Road intersection will be converted to a diamond interchange. Verona Road will travel over County PD. North of the interchange, the off- and on-ramps will be constructed in a way that accommodates the Stage 3 one-way pair system of local roads. Stage 2 will also include a third lane in both directions on Verona Road from the County PD interchange through the Williamsburg Way intersection to the Raymond Road intersection. This third lane is necessary to maintain satisfactory operations at the Williamsburg Way signalized intersection. Carriage Street access to and from US 151 will be removed. Access to Carriage Street from Anton Drive will remain. The configuration and control for the Williamsburg Way intersection will be further evaluated prior to the implementation of Stage 2.

Bike lanes will be constructed on County PD through the interchange. Additionally, sidewalks will be constructed on the north and south sides of County PD. The Military Ridge Trail (south of County PD and east of Verona Road) will be reconstructed within the existing Verona Road right-of-way and cross County PD immediately east of the interchange to avoid Section 6(f) impacts. This will include an at-grade crossing of the east leg of County PD alongside the proposed northbound on- and off-ramps. If requested and approved by the Wisconsin Department of Natural Resources (WDNR) and National Park Service (NPS), WisDOT is willing to accommodate a rerouting of the trail to the east, where it would share a County PD crossing with the proposed Cannonball Trail. This crossing may initially be a midblock at-grade crossing with special median treatments that provide refuge for pedestrians and cyclists. It would also include a new connection to and from the existing signalized intersection of County PD and Commerce Park Drive. WisDOT will evaluate path usage on the Cannonball Trail and determine whether a grade-separated crossing is warranted as part of Stage 2 construction. Figure ES.3-3 shows Stage 2 Improvements. During the design of the Stage 2 interchange, WisDOT will evaluate the feasibility and utility of a path facility on the south legs of the County PD interchange that allows cyclists and pedestrians to connect directly with Nesbitt Road without crossing to the north side of County PD.

With Stage 2, noise walls will be installed on the east side of Verona Road between Williamsburg Way and Raymond Road.

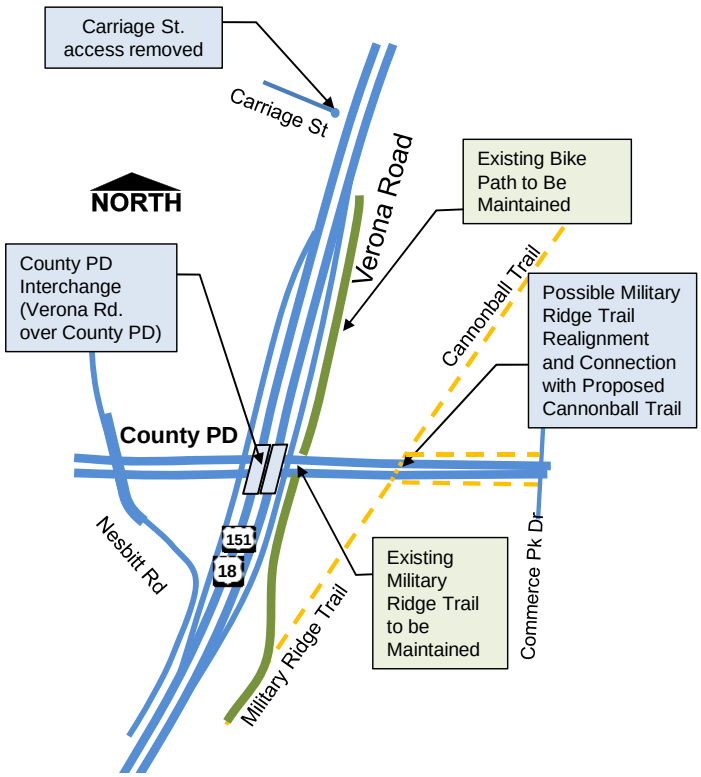


Figure ES.3-3 Stage 2 County PD Interchange

C. Stage 3 (Construction near 2030)

Stage 3 will be constructed when operation and safety needs warrant the infrastructure investment. It is anticipated this will occur near 2030. Stage 3 will separate local traffic from metropolitan and regional traffic by providing a depressed freeway down the center of Verona Road. A US 151 freeflow system interchange with depressed US 151 ramps would be constructed east of the Verona Road Single-Point interchange. The design speed of the freeflow ramps will be at freeway speeds [60 miles per hour (mph)]. The single-point interchange built with Stage 1 will remain, but it will no longer serve US 151 regional movements, just Verona Road local movements. Travelers destined for Verona Road businesses, such as Home Depot, will use this interchange. Regional travelers will use the freeflow ramps.

Local traffic would be accommodated by a pair of one-way frontage roads on each side of the depressed freeway. Local traffic would travel on the one-way pair system acting as an arterial (essentially the same as the current Verona Road except with a wider median) while metropolitan and regional traffic would travel on the freeway system (see Figure ES.3-4).

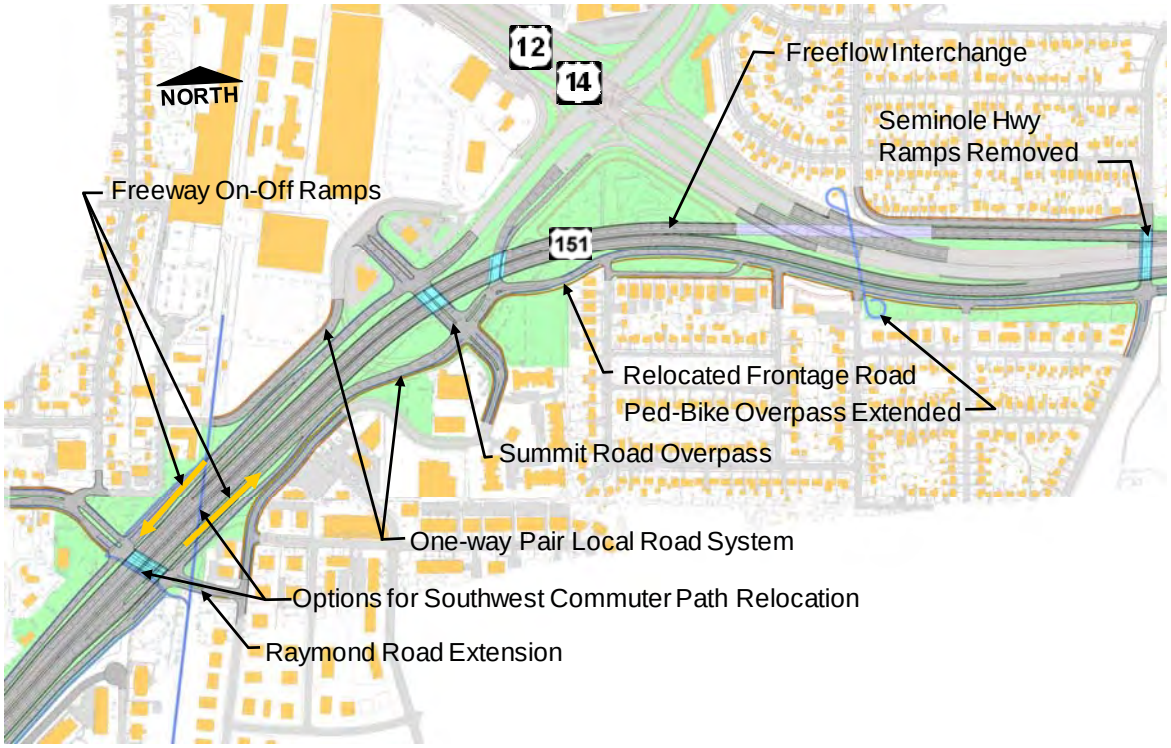


Figure ES.3-4 Stage 3 Freeflow Interchange

The Beltline interchange ramps at Seminole Highway would be closed and removed to decrease weaving these ramps cause on the Beltline. Seminole Highway's bridge over the Beltline would remain (see Figure ES.3-5).

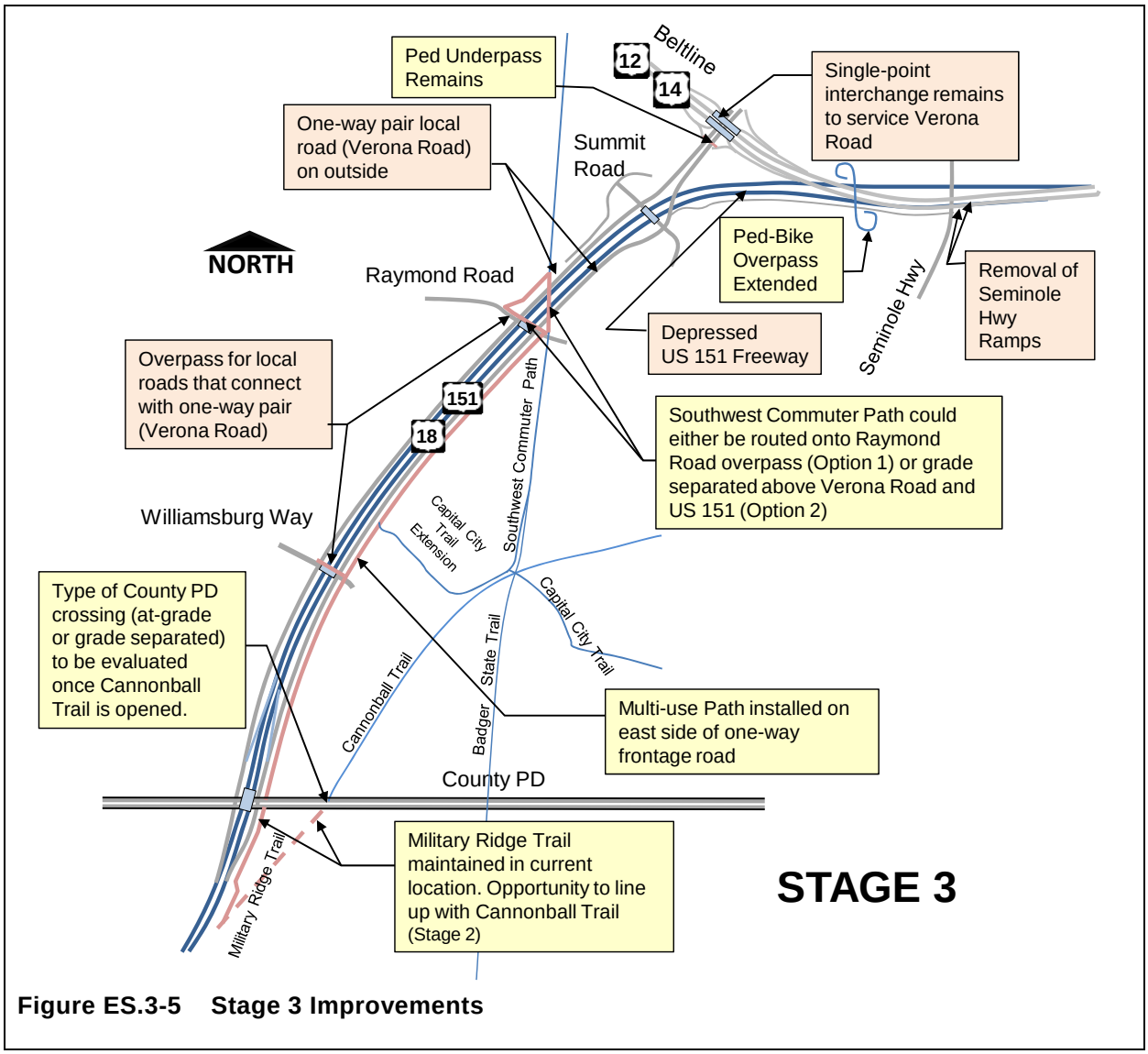


Figure ES.3-5 Stage 3 Improvements

The Summit Road Jug-Handle, built in Stage 1, will be reconstructed to provide a grade-separated crossing over the US 151 freeway. Raymond Road will also travel over the US 151 freeway and be extended to Allied Drive to provide one additional connection into the Allied neighborhood. Williamsburg Way will also be grade-separated over the US 151 freeway. All side roads will have direct access to the Verona Road one-way pair.

South of the intersection, a set of interchange ramps will be added to provide access to southbound US 151 from southbound Verona Road and from northbound US 151 to northbound Verona Road.

The one-way-pair local road system will have bike lanes. Additionally, the bike path on the east side of Verona Road that connects the Southwest Commuter Path with County PD is expected to remain. The Capital City Trail extension underpass will be eliminated, and path users will be redirected to the new Williamsburg Way overpass that crosses the US 151 freeway. The Southwest Commuter Path underpass could either be routed onto the Raymond Road overpass or have its own dedicated grade separation. The bicycle/pedestrian bridge west of the Verona Road/Beltline interchange will remain as it is today. The eastern bridge, between the US 18/151 (Verona Road) interchange and Seminole Highway, will be extended from its Stage 1 reconstruction. Bicycle and pedestrian accommodations are described in

more detail in Section 4.8 in the Community and Residential factor sheet. Figure ES.3-6 shows Stage 3 bicycle/pedestrian facilities.

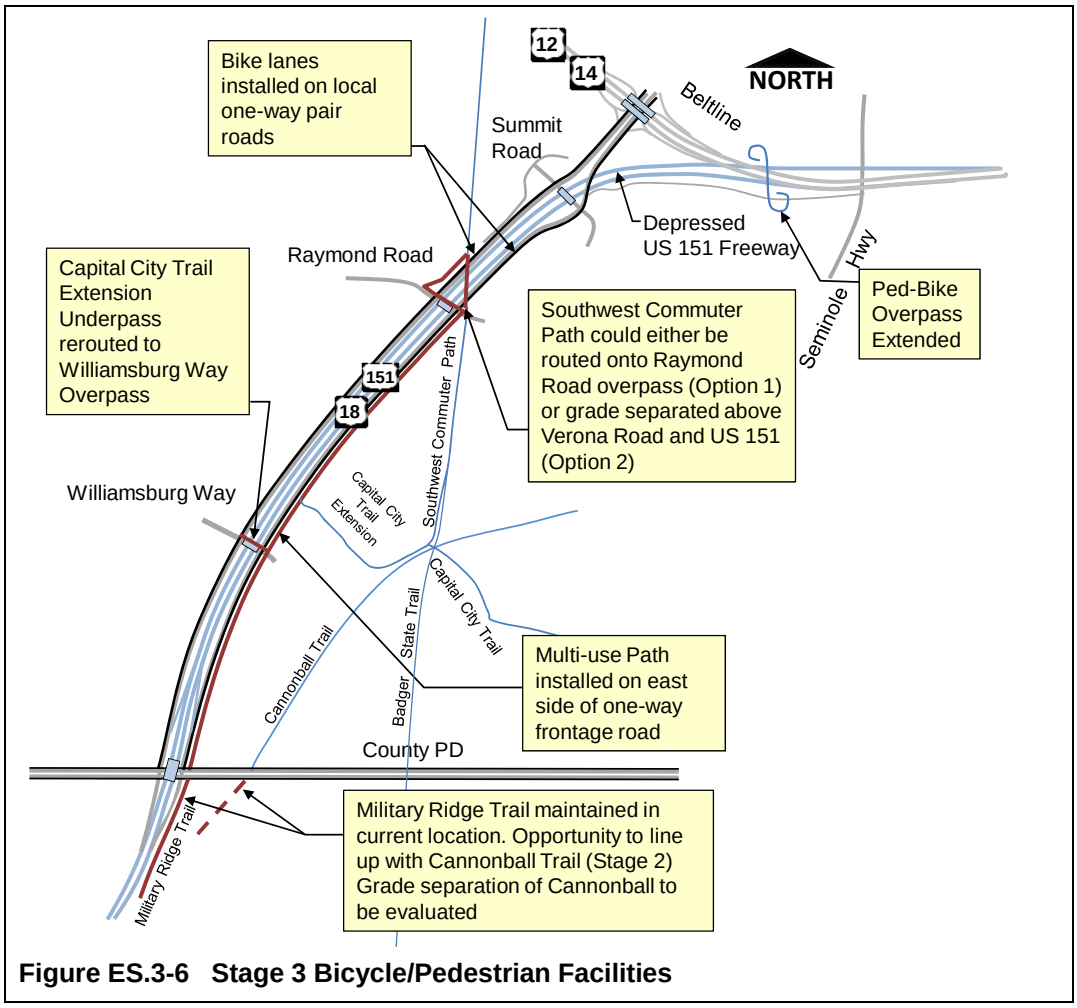


Figure ES.3-6 Stage 3 Bicycle/Pedestrian Facilities

There are several reasons that support the selection of this staged Preferred Alternative.

A. Purpose and Need are Satisfied

The Preferred Alternative satisfies each component of the project purpose and need. Operational, capacity, and neighborhood connectivity needs are addressed in every stage, while US 151 backbone system continuity is addressed in Stages 2 and 3.

B. Improvements Coincide with Need

The Preferred Alternative addresses capacity and safety needs in a staged manner where construction of the improvement coincides with the roadway need.

C. Impacts are Staged Until Improvement is Needed

The Preferred Alternative stages the impacts. Property acquisitions that are not needed until the full freeway conversion can remain and continue to serve the residing business or residence.

D. Local Government and State and Federal Agency Comments are Addressed

The staging of the Preferred Alternative addresses key comments received from local governments as well as state and federal agencies during the DEIS and SDEIS comment periods.

ES.4 IMPACTS

All the concepts and alternatives listed above have costs and impacts as well as changes to traffic operations. Table ES.4-1 summarizes the direct impacts associated with the project, while the following paragraphs describe effect categories.

Environmental Issue	Unit Measure	Verona Road Detailed Alternatives				
			Preferred Alternative			
		No Build	Stage 1	Stage 2	Stage 3	Stages 1, 2, and 3 ***
Project Length	Mi	2.2	2.2	2.4	3.1	Varies
Cost $ *						
Design and Construction Engineering	Millions $	0	15.4-17.0	8.0-8.8	32.2-35.6	55.6-61.4
Construction	Millions $	3.6	73.5-81.3	38.1-42.1	154-170	265.6-293.4
Real Estate and Utilities	Millions $	0.7	20.6-22.8	0.6-1.8	20.7-22.9	41.9-47.5
Total **	Million $	4.3	109.5-121.1	46.7-52.7	206.9-228.5	363.1-402.3
Anticipated Year of Construction		2015	2013	2017	2030	Varies
Anticipated Cost in Year of Construction**	Million $	5	113.8-126.0	52.6-59.3	301.4-332.9	467.9-518.2
Land Conversions						
Total Area Converted to R/W	Acres	0	11.9	0.5	11.7	24.1
Wetland Area Converted to R/W	Acres	0	0	0	0	0
Upland Area Converted to R/W	Acres	0	0	0	0	0
Other/Institutional Area Converted to R/W	Acres	0	0	0.01	0	0.01
Real Estate						
Number of Farms Affected	Number	0	0	0	0	0
Total Area From Farm Operations Required	Acres	0	0	0	0	0
AIS Required?	Yes/No	No	No	No	No	No
Farmland Rating	Score	0	N/A	N/A	N/A	N/A
Residential Buildings Acquired	Number	0	10	0	6	16
Business Buildings Acquired	Number	0	10	0	18	28
Total Buildings Acquired (Res&Bus)	Number	0	20	0	24	44
Households Relocated	Number	0	31	0	33	64
Businesses Relocated	Number	0	15	0	21	36
Total Relocations Required (Res&Bus)	Number	0	46	0	54	100

Environmental Issue	Unit Measure	Verona Road Detailed Alternatives				
			Preferred Alternative			
		No Build	Stage 1	Stage 2	Stage 3	Stages 1, 2, and 3 ***
Fee Acquisition Residential Parcels	Number	0	16	0	15	31
Fee Acquisition Business/Institutional Parcels	Number	0	33	11	23	67
Fee Acquisition Total Parcels	Number	0	49	11	38	98
Flood Plain	Yes/No	No	No	No	No	No
Stream Crossings	Number	0	0	0	0	0
Endangered Species	Yes/No	No	No	No	No	No
Historic Properties	Number	0	0	0	0	0
Archeological Sites	Number	0	0	0	0	0
106 MOA Required?	Yes/No	No	No	No	No	No
4(f) Evaluation Required?	Yes/No	No	No	No	Yes	Yes
Environ Justice An Issue?	Yes/No	No	Yes	No	Yes	Yes
Level of Controversy	Low/Med /High	No	Medium	Low	High	Medium
Air Quality Permit?	Yes/No	No	No	No	No	No
Design Year Noise Sensitive Receptors						
No Impact	Number	1,212[2]	640		590	656[1]
Impact	Number	0[2]	530		450	460[1]
Exceed dBA Levels	Number	630[2]	530		450	460[1]
Haz Mat Phase 2 Sites	Number	No	8	3	10	19

[1] The combined noise receptor totals for Stages 1, 2, and 3 are the receptor numbers for Stage 3 plus the receptors for the Whitney Way area.

[2] Based on an analysis of the conditions existing in 2009. Because this is the No Build Alternative and not a retrofit project, there are no impacts (according to Wisconsin Administrative Code Chapter TRANS 405), but there are receptors that exceed the 66 dBA level.

* Cost is presented in both 2010 dollars and in anticipated year of construction. Each represents the average year of the total expenditure estimated. A 2 percent yearly inflation rate was assumed.

** Total project cost represents the probabilistic outcome of the sum of project budget elements, which is not equal to the sum of probabilistic outcomes of the individual budget elements.

*** Stages 1 and 2 should be viewed as a single improvement effort as Stage 2 will most likely be constructed with little or no time gap following Stage 1 completion in 2015. Stage 3 costs will not be incurred for 10 or more years after Stage 2 is constructed. Prior to encumbering and spending Stage 3 funds, a reevaluation of the FEIS will be completed. The scope and budget may change as a result, perhaps significantly compared to this Stage 3 estimate. For this reason, Stage 3 is considered to be a separate effort from the Stage 1 and 2 improvements from a cost and schedule management perspective.

Table ES.4-1 Summary of Direct Effects

A. Traffic Operation Impacts

The No Build Alternative provides no improvement to traffic operations. Stage 1 of the Preferred Alternative would be able to accommodate moderate traffic volume increases of about 30 percent before falling to congested levels of service. Stage 2 addresses the congestion levels at the Verona Road/County PD intersection. Stage 3 would provide the most relief for area traffic congestion for the Verona Road/Beltline interchange. Table ES.4-2 shows the through movement 2030 PM peak-hour LOS for the No Build and Preferred Alternatives.

Northbound Direction		**Preferred Alternative**			
Intersection	**No Build**	**Stage 1**	**Stage 2**	**Stage 3 Local System**	**Stage 3 US 151**
Verona Road/Beltline Interchange (US 151 NB to EB Movement)	A	A	A	C	B
Summit Road	F	B	C	D*	B
Raymond Road	F#	A	A	C	C
Williamsburg Way	B	B	B	A	C
County PD	D	E	NA	C	B

Southbound Direction		**Preferred Alternative**			
Intersection	**No Build**	**Stage 1**	**Stage 2**	**Stage 3 Local System**	**Stage 3 US 151**
Verona Road/Beltline Interchange (US 151 WB to SB Movement)	E	C	D	C	B
Summit Road	F	NA	NA	D*	B
Raymond Road	C	B	D	B	C
Williamsburg Way	F	F	C	B	C
County PD	F	F	NA	C	B

NA = Converted to freeflow movement which does not experience any intersection delay because of stop lights, queuing etc.
* LOS result of additional 28,000 vpd drawn to improved local system from Whitney Way and other arterial streets
# Northbound LOS F operations caused by queue spillback from Summit Road

Table ES.4-2 Verona Road Through Movement 2030 PM Peak-Hour LOS

B. Socioeconomic Impacts

1. Neighborhoods

The transportation improvements proposed in the US 18/151 (Verona Road) SDEIS will impose adversely high and disproportionate impacts on minority populations and low-income populations residing in the study area.

There are several neighborhoods that will be affected by the three stages of the Preferred Alternative. They include Orchard Ridge and Meadowood in the southwest quadrant of the Verona Road/Beltline interchange, Allied and Dunn's Marsh in the southeast quadrant of the interchange, the Nakoma League in the northeast quadrant of the interchange, and Summit Woods in the northwest quadrant of the interchange. Figure ES.4-1 shows these neighborhoods.

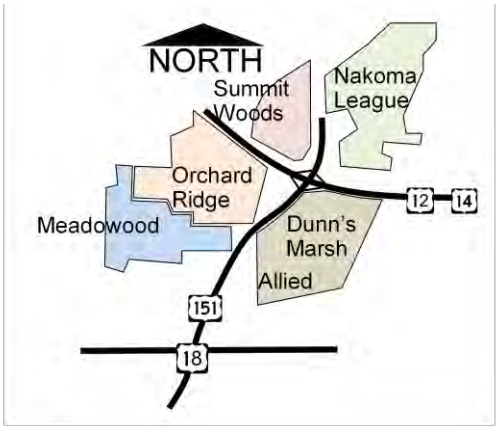


Figure ES.4-1 Adjacent Neighborhoods

The Allied and Dunn's Marsh neighborhoods have a higher density of minority and low-income residents compared to area wide Madison and Fitchburg populations. Extra efforts have been made throughout the study process to involve these area neighborhoods and businesses through the public participation process. Enhancements to these neighborhoods are incorporated in the alternatives and include increasing neighborhood connectivity, decreasing neighborhood traffic problems, and minimizing adverse effects of the improvements. These enhancements led to the development of the Preferred Alternative.

In Stage 1, neighborhood connectivity is improved by extending Carling Drive, which provides an additional connection between Allied Drive and the Nakoma Heights area. Stage 1 will also provide three new connections underneath Verona Road, one connecting Carling Drive to Freeport Road (which could be temporary[3]), one connecting the west frontage road with the east frontage road near Summit Road (as part of the jug-handle), and a new pedestrian underpass connection just south of the Single Point Urban Interchange (SPUI). The second connection replaces the existing at-grade signalized connection at Summit Road. Stage 3 depresses the US 151 freeway, decreasing its visual impact on the neighborhood. It also adds another neighborhood connection by extending Raymond Road over US 151 and connecting it to Allied Drive. The Stage 1 and Stage 3 extensions have the potential to decrease the isolation of the Allied and Dunn's Marsh neighborhoods.

In terms of economic impacts, Stages 1 and 3 of the Preferred Alternative will relocate businesses. Staged implementation of the Preferred Alternative helps the community proactively plan for these business relocations. All stages of the Preferred Alternative strive to minimize commercial and residential relocations in an effort to minimize economic impacts and preserve as much affordable housing in the area as possible. Table ES.4-3 identifies business relocations, residential building relocations, residential unit relocations, manufacturing relocations, and right-of-way impacts associated with each of the three US 18/151 (Verona Road) stages of the Preferred Alternative.

	No-Build	Preferred Alternative			
		Stage 1	Stage 2	Stage 3	Stages 1, 2, and 3
Business Buildings Acquired	0	10	0	18	28
Business Relocations	0	15	0	21	36
Residential Buildings Acquired	0	10	0	6	16
Residential Household Relocations	0	31	0	33	64
Right-of-Way Area Required (Acres)	0	11.9	0.5	11.7	24.1

Table ES.4-3 Verona Road Preferred Alternatives' Right-of-Way Effects

Each of the relocated residential tenants, business tenants, and property owners will be eligible for relocation benefits in accordance with the Uniform Relocation Act of 1972. These statutes are in place to ensure landowners and tenants are treated fairly when the public interest requires property purchase and relocation. All landowners are compensated the fair market value of their property as determined by an appraiser. For those occupying the buildings, whether tenants or owners, relocation assistance is provided by an assigned WisDOT relocation agent. The relocation agent aids the tenant in finding a comparable dwelling or residential building that meets the tenant's needs. The relocation agent is also able to provide relocation benefits to compensate for the costs of relocation.

2. Bicycle/Pedestrian Impacts

The Preferred Alternative should positively impact bicycle and pedestrian travel. In Stage 1, bicycle lanes are provided along the reconstructed frontage roads that border Verona Road and the Beltline. With the Carling Drive extension and Freeport Road connection, the frontage roads' connectivity is increased. In response to public comments, the Preferred Alternative now includes a new pedestrian and bicycle underpass just south of the interchange that provides an east-west connection across Verona Road. The Nakoma Road/Midvale Boulevard intersection will have crosswalks. Additionally, the Summit Road Jug-Handle provides another grade-separated crossing of Verona Road where pedestrians and bicyclists do not have to interact with Verona Road traffic but cross underneath it. Pedestrians and bicyclists will continue to be able to cross Verona Road at the at-grade signalized intersections at Raymond Road and Williamsburg Way. The Beltline bridge pedestrian overpass structures just east and west of the Verona Road/Beltline interchange will remain and the structure to the east is replaced during Stage 1 and improved to meet current standards.

[3] Once Stage 1 construction is complete, the City of Madison will evaluate neighborhood traffic circulation and determine if the connection will remain.

The Stage 2 County PD interchange provides bicycle lanes on County PD through the interchange. With Stage 2 of the Preferred Alternative, the Military Ridge Trail will be reconstructed within the existing Verona Road right-of-way and cross County PD immediately east of the interchange to avoid any Section 6(f) impacts. This will include an at-grade crossing of the east leg of County PD alongside the proposed northbound on- and off-ramps. This then will connect to the East Verona Road Trail north of County PD. No Section 4(f) impacts are applicable because of a prior agreement with the WDNR, the City of Fitchburg, WisDOT, and FHWA that was signed in 1991 and is included as Appendix F in this document. If requested and approved by the WDNR and NPS, WisDOT is willing to accommodate a rerouting of the trail to the east where it would share a County PD crossing with the Cannonball Trail. WisDOT will evaluate path usage on the Cannonball Trail and determine whether a grade-separated crossing or an at-grade crossing is necessary as part of Stage 2 construction.

In Stage 3, bicycle lanes are provided on the one-way pair local road system that borders the US 151 freeway. The bicycle lanes will extend the length of the corridor. Additionally, a separate bicycle path connecting the Military Ridge Trail to the Capital City Trail will be constructed on the east side of Verona Road. Crossing the Verona Road interchange on foot or on bicycle should be similar to Stage 1, but reduced traffic volumes because of the freeflow ramps should reduce crossing times. The Capital City Trail extension underpass will be removed and bicyclists will be rerouted to the Williamsburg Way overpass instead. The Southwest Commuter Path crossing of US 151 will either be a dedicated grade separation of the US 151 freeway or routed onto the adjacent Raymond Road overpass.

3. Degree of Controversy

During the DEIS phase, the proposed alternatives had a high degree of controversy. In response to public comments after the DEIS publication, the project was broken into three stages. This reduced the magnitude of near-term impacts and postponed the larger impacts into the future when more substantial transportation investments are needed. This modification, prompted by public and agency input, has decreased the amount of controversy. Some concerns have still been voiced by adjacent neighborhoods. The following paragraphs summarize some of the concerns voiced by neighborhood residents. Comments received in response to the SDEIS are addressed in Section 5.

a. Some neighborhood residents have strongly advocated for the removal of the US 151 designation from Verona Road and the construction of a “South Reliever,” a conceptual corridor that runs east-west between Interstate 39 and Verona. They feel an alternate US 151 corridor would decrease traffic levels on Verona Road. (This alternative was evaluated. Traffic modeling indicated that a South Reliever would not reduce future traffic volume, but would only reduce the magnitude of the future traffic volume increase. See Appendix L).

b. Many have expressed a strong desire for the project to construct noise walls. Many of these advocates live in areas where no noise walls are proposed yet noise levels remain relatively high. Noise walls are included with this project in all areas that meet the reasonableness criteria of Wisconsin Administrative Code Trans 405.

c. Some have expressed concerns over air quality and the effects to adjacent neighborhoods.

d. Some small business owners have expressed concerns associated with the non-typical traffic movements associated with the Summit Road jug-handle.

e. Some concerns were expressed over the realignment of the frontage road in the southeast quadrant of the interchange and how close the road came to Britta Park. This led to the development and evaluation of the Option B frontage road alternative.

f. A few residents expressed concerns over the quantity and quality of stormwater reaching Dunn’s Marsh, the University of Wisconsin Arboretum, and other water bodies. The Preferred

Alternative will implement stormwater management measures that improve stormwater quality; see Factor Sheet K and Appendix E.

g. Some have expressed concerns regarding traffic speed on frontage roads and around the proposed jug-handle at Summit Road.

h. Some concerns were expressed over the marginal traffic capacity, safety, and noise reduction benefits associated with this alternative in the face of current congestion and high projected traffic growth. These advocate for implementing Stage 3 sooner rather than later.

C. Environmental Justice

1. Definition

Executive Order 12898, issued February 11, 1994, requires federal agencies to address Environmental Justice in Minority and Low-Income populations if they are affected by a federal action. The term Environmental Justice means identifying and addressing disproportionately high and adverse human health and environmental effects including the interrelated social and economic effects of programs, policies, and activities on minority and low-income populations.

The concept of Environmental Justice is intimately tied to Title VI of the Civil Rights Act that prohibits discrimination on the basis of race, color, or national origin.

Efforts to address Environmental Justice do not create any rights, benefits, or trust responsibilities, substantive or procedural, enforceable by law or equity, by a party against FHWA, its officers, or any person. Furthermore, efforts to address Environmental Justice by FHWA, its operating administrators, its officers, or any other person do not create any right to judicial review for compliance or noncompliance with the goals of achieving Environmental Justice.

a. Efforts to address Environmental Justice on individual projects include:

(1) Identifying and evaluating environmental, public health, and interrelated social and economic effects of the subject project.

(2) Proposing measures to (a) avoid, minimize and/or mitigate disproportionately high and adverse environmental, public health, and interrelated social and economic effects and (b) provide offsetting benefits and opportunities to enhance communities, neighborhoods, and individuals affected by the subject project, when permitted by law and consistent with EO 12898.

(3) Considering alternatives to the proposed project, where such alternatives would result in avoiding and/or minimizing disproportionately high and adverse human health or environmental impacts consistent with EO 12898.

(4) Providing public involvement opportunities and considering the results thereof, including providing meaningful access to public information concerning the human health or environmental impacts, and soliciting input from affected minority and low-income populations in considering alternatives during the development of alternatives and decisions.

(5) Evaluating the alternatives or measures to avoid, minimize, or mitigate the disproportionately high and adverse impacts to determine if they are “practicable” from a social, economic (including cost), and environmental impacts perspective.

2. Low Income and Minority Populations Surrounding Verona Road

The area surrounding Verona Road has higher percentages of minority, low income, and disadvantaged populations. Table ES.4-4 compares the demographic profile of neighborhoods surrounding the Verona Road interchange with that of the Madison area. These neighborhoods include Summit Woods, Allied, Dunn's Marsh, Orchard Ridge, and part of Meadowood. The table also shows the Allied-Belmar neighborhood, which has higher percentages of minority, disabled, and low income residents.

	Madison (City and Town of) and Fitchburg	**Neighborhoods Surrounding Verona Road Interchange**	**Allied-Belmar Neighborhood**
Total Population[1]	*235,560*	*12,483*	*2,412*
% Disabled[2]	13%	28%	35%
% Elderly[1]	9%	10%	2%
% Minority[1]	17%	25%	61%
% Below Poverty Level[3]	14%	10%	26%
Population Age 16 and Over in Labor Force[2]	145,027	7,103	1,166
Population Age 16 and Over Not in Labor Force[2]	52,306	2,663	465

[1]Source: US Census 2000 Summary File 1 (100 percent data)
[2]Source: US Census 2000 Summary File 3 (in-depth population and housing data collected on a sample basis from the Census 2000 long form questionnaire)
[3]Source: US Census 2000 Summary File 3
Note: See Figure E.1-1 and Table E.1-1 in Section 4.8 for more information and a delineation of the neighborhoods surrounding Verona Road

Table ES.4-4 Demographic Profile of Neighborhood Areas Influenced by Verona Road Preferred Alternative

3. Environmental Justice Impacts

Because of the high percentage of minority and low income residents that reside adjacent to the project, this project will disproportionately impact these populations. These impacts are predominately residential relocations, with Stage 3 having greater impacts than Stage 1. One reason WisDOT staged the improvement was to delay residential relocation impacts to environmental justice populations. Table ES.4-5 summarizes the residential impacts to environmental justice populations.

	Stage 1	Stage 2	Stage 3	Madison-Fitchburg
Residential Relocations[1]	9 Buildings 30 Households	0	6 Buildings 33 Households	Not Applicable
% of persons affected with a disability[1]	27%	0	33%	13% of the population has a disability
% of elderly persons affected[1]	10%	0	7%	9% of the population is elderly
% of minority persons affected[1]	16%	0	28%	17% of the population is racially or ethnically a minority
% of persons below poverty level affected[1]	6%	0	8%	14% of the population is below poverty level

[1]Based on US Census 2000 data at the block group level applied to the location of the displaced household.

Table ES.4-5 Characteristics of US 151 Alternatives' Residential Relocations

In addition to these impacts, Stage 1 will relocate 15 businesses and Stage 3 will relocate 21 businesses within these neighborhoods. This represents up to 95 and 126 job displacements, respectively.

4. Efforts to Minimize and Mitigate Impacts

Throughout the study process, efforts have been made to engage and interact with minority and low income populations in the study area. This includes numerous focus groups, design workshops, special interaction activities with school children, presentations at community events, presentations to agencies working in the neighborhoods with these populations, and individual meetings. Numerous changes to the DEIS alternatives were incorporated into the SDEIS Preferred Alternative to reduce or delay the neighborhood effects. The Preferred Alternative was further refined after the SDEIS comment period to minimize and mitigate impacts. Measures include the following:

a. Extra efforts were made to obtain community input throughout the process. These included special meetings, attendance at events, and special outreach consultants. Over 500 meetings have been held during the EIS process to understand community needs and incorporate them in the alternatives.

b. The Preferred Alternative was staged so that relocation impacts would not be immediately borne by the neighborhood. Instead, road improvements with the greatest impacts are constructed when congestion impacts warrant them. This allows the WisDOT and the community to plan in anticipation of future improvements, potentially reducing their severity at the time of implementation.

c. The Preferred Alternative's footprint was designed to fit inside the roadway R/W to the extent possible. A major factor for the selection of the Summit Road Jug-Handle was its modest impact to adjacent commercial and residential areas.

d. The Summit Road jug-handle was realigned to avoid impacting Avalon Village and improve connectivity between Allied Drive and the west side of Verona Road.

e. A new pedestrian underpass will be constructed on the south leg of the Verona Road interchange to provide pedestrians and cyclists a more direct and less hazardous crossing of Verona Road.

f. A noise wall will be constructed in the southeast quadrant of the Verona Road interchange to reduce noise impacts to adjacent neighborhoods.

g. Frontage Road Option B was selected to reduce traffic impacts to a local community park (Britta Park)

h. Where frontage road alignments had to be adjusted to accommodate the single-point interchange, the frontage road was aligned in a way to maintain business viability to the extent possible.

i. WisDOT partnered with the City of Madison to fund the *Allied-Dunn"s Marsh–Belmar Neighborhood"s Physical Improvement Plan* that looked at neighborhood infrastructure needs in anticipation of planned US 151 improvements.

j. Substantially in advance of the SDEIS, WisDOT purchased three fire-damaged apartment buildings as part of another project to evaluate an unsafe access to the off-ramp.

k. Stage 1 extends Carling Drive to Allied Drive. Currently there is only one road connecting the Nakoma Heights area and the Allied Drive area. This roadway extension adds one other connection and increases neighborhood cohesion.

l. Stage 1 constructs a roadway underneath Verona Road from the Carling Drive extension to Freeport Road. This road connection has several functions. It will provide an alternate access for the Allied neighborhood during road construction. It also helps connect the Allied neighborhood with adjacent neighborhoods west of Verona Road. The road connection should also help increase security levels of the Southwest Commuter Path. (Note: After construction, the City of Madison will evaluate this connection's effect on neighborhood traffic circulation and determine if the connection will remain.)

m. Stage 1's jug-handle provides an additional grade-separated crossing of Verona Road for the Allied and Dunn's Marsh neighborhoods. For pedestrian and bicycle traffic, this grade-separated crossing is substantially safer than the current signalized intersection where pedestrians and cyclists must cross in two stages. For motor vehicle traffic, this grade-separated crossing decreases the delay and congestion associated with neighborhood residents patronizing establishments on the west side of Verona Road. It also provides a much more direct connection from Allied Drive to the west side of Verona Road. This additional crossing also reduces walking distances.

n. Stage 2 constructs a noise wall on the east side of Verona Road from Raymond Road to Williamsburg Way to reduce noise levels for the Nakoma Heights and Allied residents.

o. Stage 3 constructs a noise wall in the southeast quadrant of the Verona Road interchange to reduce noise levels for Dunn's Marsh neighborhood residents. As part of Section 4(f) mitigation, this noise wall is being extended farther than what is currently justified by Trans 405 to offset noise and visual impacts to Britta Park.

p. Stage 3 extends Raymond Road into the Allied neighborhood. This roadway extension helps integrate the Allied neighborhood with neighborhoods west of Verona Road and decreases neighborhood isolation. It is called for in the *Allied-Dunn"s Marsh–Belmar Neighborhood"s Physical Improvement Plan.*

q. Stage 3 implements a depressed freeway section. Considerations that factored into the selection of the depressed freeway section over the elevated freeway section were the reduced visual and noise effects to adjacent neighborhoods.

r. All frontage road and neighborhood roads being constructed in Stages 1 and 3 will include bicycle lanes and sidewalks.

Additionally, WisDOT will involve adjacent residents to a considerable degree in developing context sensitive features, aesthetic treatments, and landscaping during the design phase of the project.

D. Natural and Cultural Resources and Physical Environment Effects

1. Natural Environment

Since this is primarily an urban corridor, there are few direct impacts to forests, upland habitat, or agricultural land with any of the stages of the Preferred Alternative. There also are no direct impacts to streams and floodplains, although increased stormwater runoff will affect water bodies near the corridor. Some urban landscaping will be removed. For the most part, this landscaping consists of median grasses with a few ornamental trees and shrubs. There are no known endangered resources within the project limits. Provisions are being made for several stormwater management measures. These include expanding existing detention basins, such as Dunn's Marsh, Quarry Ridge Basin, a potential basin near Toppers Lane, a basin south of the former Cub Foods parking lot, and other unnamed basins. These basin modifications are likely to require 5 to 10 acres of upland habitat, which are mostly grasses and shrubs.

2. Parkland Changes

The No Build Alternative would have no effects on existing parks.

In Stage 3, there will be adverse impacts to Britta Park, a 4(f) resource. Britta Park is a long narrow greenspace located between Britta Parkway and Britta Drive in the southeast quadrant of the Verona Road/Beltline interchange. Though small (0.77 acres), the Britta Park greenspace is a designated City of Madison park. It does not contain ball fields, playground equipment, or other amenities, yet the open space is used by neighboring residents. Stage 1 will not directly affect the Britta Park property boundary. Stage 3 will require the acquisition of approximately 0.47 to 0.59 acres of land from the park boundary. The effective size of Britta Park would decrease by 60 to 75 percent. Additionally, whereas Britta Park currently is in the center of two local streets, with Stage 3 it will be south of a rerouted frontage road. A solid wall will separate the park visually from the freeflow US 151 ramps associated with Stage 3. Figure ES.4-2 shows the before and after configurations for Britta Park for Stage 3. There have been numerous discussions with City of Madison Park staff. Several measures will be applied to the park to offset and minimize impacts to residences adjacent to the park. Mitigation elements being explored include:

a. Maintaining the Britta Park greenspace and landscaping it to provide a screening element for adjacent homes. These homes were previously screened from both the frontage road and freeway by a row of commercial buildings being relocated in Stage 3.

b. Providing a screening wall that separates the relocated frontage road from the US 151 freeflow ramps as well as the Beltline. This screening wall will also function as a noise mitigation barrier. The noise barriers will reduce noise levels in the area. Britta Parkway will remain as a one-way with new sidewalk and mounding to maintain existing tree canopy and understory.

c. Paying the fair market value for the land needed.

d. Enhancing recreational equipment in nearby De Volis Park (discussed later in Preliminary Coordination).

There is also an opportunity to create a green space buffer from Britta Park to Seminole Highway using remnants of relocated properties.

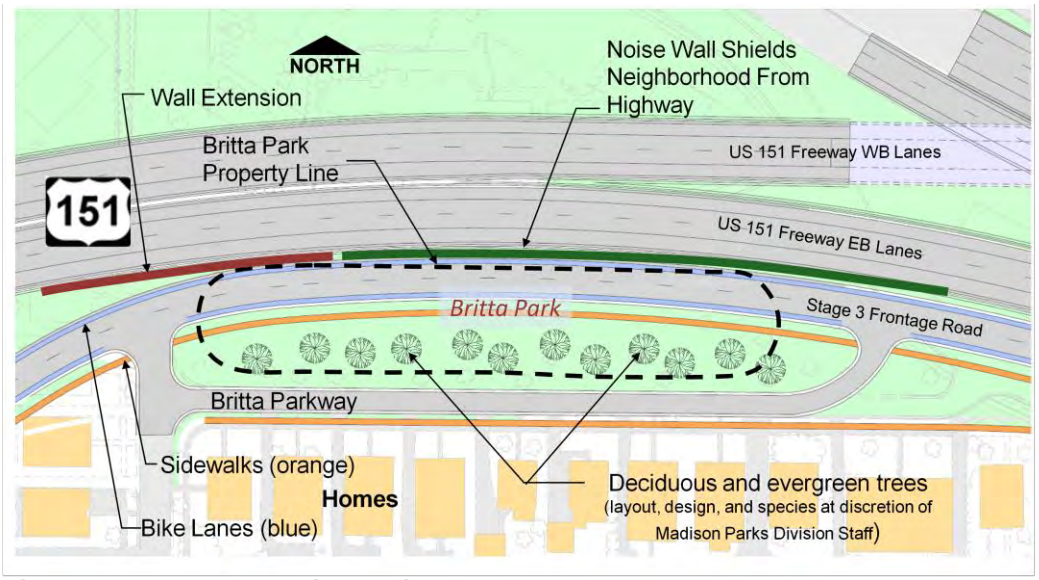


Figure ES.4-2 Stage 3 Britta Park Impacts

Further coordination with City of Madison Parks staff in the spring of 2010 and winter 2011 provided these requests for consideration with Stage 1:

a. WisDOT should consider extending the proposed noise wall beyond Nieman Place to the limits of Britta Park to provide a visual barrier and screening.

b. WisDOT should consider extensive landscaping and public art in the open areas.

See Section 4.8 Detailed Evaluation Sheet O.

3. Stormwater

The No Build Alternative will not increase impervious surface area in the project corridor. All three stages of the Preferred Alternative (Stage 1, Stage 2, and Stage 3) increase impervious surface area, thus increasing the amount of stormwater runoff. This then increases the amount of stormwater directed mainly to Dunn's Marsh and the Quarry Ridge Basin south of County PD. Stage 1 10-year peak discharges increase from 4.3 to 5.7 percent, depending on the subbasin. Stage 2 10-year peak discharges increase about 13 percent. Stage 3 10-year peak discharges increase up to 33 percent. Stormwater management measures being considered include creating a stormwater basin south of the former Cub Foods parking lot, expanding the Quarry Ridge Basin, enlarging an unnamed basin between Verona Road and Nesbitt Road, creating a new detention basin near Toppers Lane, and creating a basin near Dunn's Marsh.

4. Cultural Resources

Archaeological surveys revealed no sites of concern. Historical surveys identified one important historical site within the Area of Potential Effects (APE) for Verona Road; the University of Wisconsin Arboretum is eligible for the National Register of Historic Places (NRHP). Stage 1, Stage 2, and Stage 3 avoid direct impacts to this resource.

5. Hazardous Materials, Air Quality, and Noise

The initial Hazardous Materials Assessment for the study area revealed 27 sites of concern on or directly adjacent to the Stage 1, Stage 2, and Stage 3 study corridors. More detailed investigations are currently being performed by WisDOT for Stage 1 improvements, and eight sites are currently

recommended for Phase 2, 2.5, or 3 investigations. Construction of a stormwater detention pond is proposed at a closed remediation site. The soil and groundwater at this parcel have been impacted with petroleum-related contamination and contamination also extends off-site into the adjacent City of Madison R/W. The WDNR granted Final Closure on January 19, 2010.

The design and construction of the stormwater detention pond and any required dewatering and soil excavation will be coordinated with WisDOT Bureau of Technical Services and WDNR. Management of soil and groundwater, potentially including material disposal, treatment, or reuse on the project, will be approved by WisDOT Bureau of Technical Services and WDNR prior to construction.

The need for further investigation along Stage 2 and Stage 3 will be determined during the design phases for those improvements. Evaluations completed to date indicate that approximately three sites may need additional investigation adjacent to Stage 2 improvements, and approximately ten sites adjacent to Stage 3 improvements may need additional investigation.

Air quality modeling indicates that no receptor location will be exposed to more than 75 percent of any ambient air quality standard for carbon monoxide.

Traffic noise modeling indicates noise abatement is feasible and reasonable in the following residential areas:

a. Northeast quadrant of the Verona Road/Beltline Interchange (Stage 1 and Stage 3).

b. Southeast quadrant of the Verona Road/Beltline Interchange (Stage 1 and Stage 3).

c. East of Verona Road between Raymond Road and Williamsburg Way (Stage 2).

Additionally, areas along the Verona Road corridor south of the Beltline interchange would see a reduction in noise levels in Stage 3 because of the depressed freeway. Figure ES.4-3 conceptually illustrates these locations.

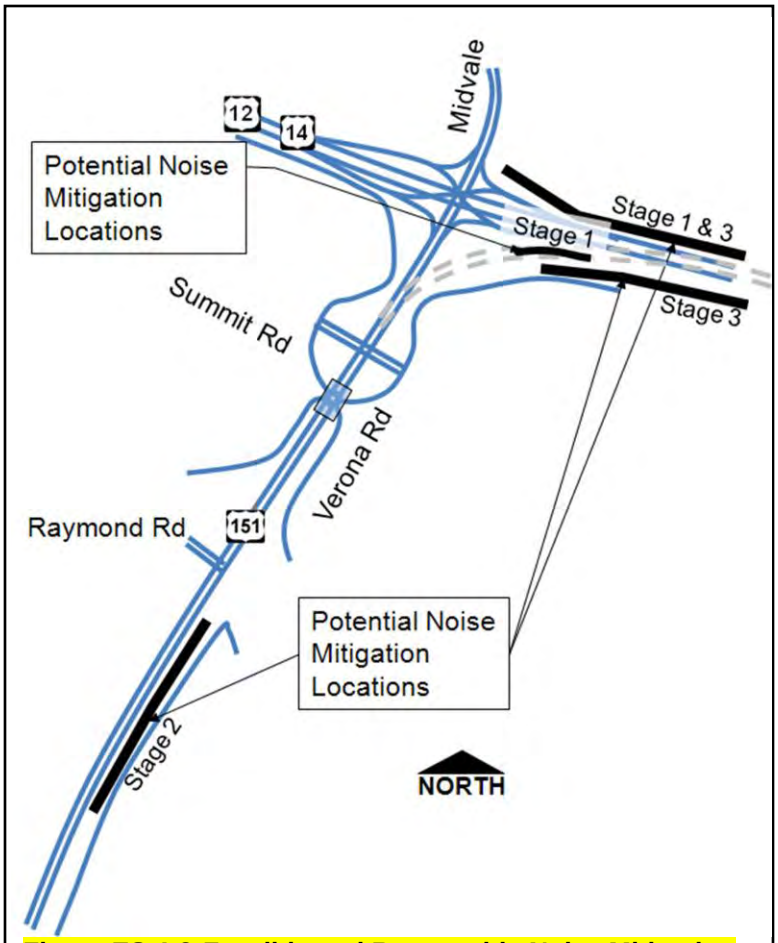


Figure ES.4-3 Feasible and Reasonable Noise Mitigation

6. Indirect and Cumulative Effects

The Council on Environmental Quality (CEQ) has defined indirect effects as project impacts "caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." A project's potential indirect effects could occur some time after the project is constructed in an area that is outside of a project's actual R/W.

For this US 151 study the project methodology selected for the indirect effects analysis was an expert panel using a modified two-step Delphi process. This method was supplemented by surveying available local land use plans, local transportation plans, and public comment on the project gathered for both the 2004 DEIS and subsequent comments on the Preferred Alternative gathered for the SDEIS.

Table ES.4-6 summarizes potential indirect effects identified by the indirect effects expert panel and through public input from neighborhood businesses, residents, the City of Madison, and the City of Fitchburg. It also includes a general assessment of the level of impact resulting from each Stage of the Verona Road Preferred Alternative.

Potential Project Indirect Effects	Verona Road Preferred Alternative		
	Stage 1	Stage 2	Stage 3
New Development	Slight increase in commercial; small impact on other types	Slight increase in commercial; small impact on other types	Substantial increase in commercial; slight increase in residential, industrial, and institutional
Infill Development	Increase	NA	Increase
Farmland	Very low impact	Very low impact	Very low to moderate impact
Woodland	No or very low impact	Very low impact	Very low to moderate impact
Wetlands and other Water Resources	Low impact	Low impact	Low to moderate impact
Rare/Endangered Species	Very low impact	Very low to moderate Impact	Low to moderate impact
Historic Sites	No Impact	No Impact	No impact
Electric and Natural Gas	Local temporary impacts	Local temporary impacts	Local temporary impacts
Noise	Moderate to high (near project area)	Moderate (near project area)	Low to moderate (near project area)
Air Quality	Low Impact	No to very low impact	No to very low impact
Affordable Housing	Moderate impact of affordable housing	No impact	Moderate impact for low-income housing near project
Neighborhood Business/Economy	Low to moderate near project area; Low in ICE study area	No to very low impact	Moderate to high impact near project area; low to moderate in broad study area
Neighborhood Access	Low impact	Low impact	Low to moderate impact
Parks	Very low impact	No impact	Moderate to high impact (character and access changes to Britta Park)
Transit	Low impact	No impact	Moderate impact

Table ES.4-6 Summary of Potential Indirect Effects of Verona Road Preferred Alternative

The Council on Environmental Quality (CEQ) defines a cumulative effects as:

> *…The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. (40 CFR §1508.7.)*

Cumulative effects to natural, cultural, historic resources and/or human communities are not just the result of the transportation project itself but also other collective actions and projects that occur in a study area over time.

The study used the analytic frameworks recommended in the WisDOT's *Guidance for Conducting a Cumulative Effects Analysis Technical Reference* to document cumulative effects of this project.

Table ES.4-7 provides a summary of the cumulative effects likely to occur with implementation of the Preferred Alternative. The table also includes a basic assessment of the likely relative significance on each resource when compared with other past, present, and likely future actions. The analysis found that while the project is likely to result in direct and/or indirect effects on these resources, the significance of the project's impacts on these resources is in most cases of very minor significance, particularly in relation to other past, present, and foreseeable future actions that cumulatively affect these resources. More detailed analysis of the magnitude or significance of each project alternative on a given resource is provided in the following paragraphs.

Potential Project Impacts	Verona Road Preferred Alternative		
	Stage 1	Stage 2	Stage 3
Farmland and Woodlands	Very minor significance	Very minor significance	Minor significance
Wetlands and other Water Resources	Very minor significance	Very minor to minor significance	Minor significance
Air Quality	Minor significance	No or very minor Significance	No or very minor significance
Affordable Housing	Minor to moderate significance	No significance	Moderate significance
Disadvantaged Populations	Minor significance	No significance	Moderate significance

Table ES.4-7 Summary of Potential Cumulative Effects

See Section 4.6 and Appendix C for more information regarding the indirect and cumulative effects of this project.

E. Construction Impacts

1. Borrow and Construction Materials

Preliminary estimates indicate that Stage 1 of the Preferred Alternative will require 250,000 cubic yards (CY) of excavation and 125,000 CY of select borrow. Stage 2 of the Preferred Alternative will require 50,000 CY of excavation and 275,000 CY of select borrow. Stage 3 of the Preferred Alternative will require 1.7 million CY of excavation and an unknown amount of select borrow. These quantities could vary by ± 25 percent or more. Selection of borrow material sites is the responsibility of the construction contractor subject to approval by WisDOT. There are commercial quarries and material sites in the vicinity of County PD and south that may be cost-effective sites for the construction contractor. Similarly, for all three stages, waste sites will be required for material excavated and not used on the project. The selection of waste sites is the responsibility of the contractor. It is likely areas south of County PD will be most cost-effective for the construction contractor.

Federal Rule 23CFR 635.407 requires that the contractor be allowed to select borrow sites. It is therefore the contractor's responsibility to choose a borrow site and obtain necessary environmental clearance (including permits) for the selected site. Those responsibilities are detailed in Section 208.2.2 (Borrow, Source) and Section 107.3 (Permits and Licensing) of the State of Wisconsin *Standard Specifications for Highway and Structure Construction* manual. An exception to that rule can be made only when there is a public interest finding initiated by the state DOT and approved by FHWA. As mentioned, it is anticipated that borrow will be obtained locally from existing sites that are properly zoned.

2. Construction Staging and Traffic Impacts

Verona Road is important to the regional and local transportation systems as well as to local residents and businesses. Because US 151 is a Backbone Route in the state highway plan and many businesses are located within the project area, access through the corridor will be maintained during construction. WisDOT will do what is practical to maintain reasonable traffic flow during the 3 years of construction, yet substantial delays will be unavoidable. Efforts to minimize traffic disruption will include evening operations, construction during off-peak hours, temporary pavements, and other mitigation measures. In order to construct the proposed roadway and structures and maintain traffic through the corridor, construction activities will occur adjacent to live traffic. Because of the project complexity, there will be traffic delays during construction. During construction, both the Beltline and Verona Road will generally maintain four through lanes of traffic at all times (two in each direction). There will be periods, during beam placement, demolition activities, and other activities, where there will be temporary lane and/or ramp closures. These periods will generally be during the evening and off-peak hours and will be temporary in nature.

While major detours are not anticipated, there will likely be alternate routes. An alternative route on the State Trunk Highway system is not available. Detours of Verona Road and the Beltline are not anticipated but alternate routes for each will be promoted to reduce traffic within the work zone. Traffic could be routed to the interchanges at Fish Hatchery Road (County D), South Whitney Way, US 14, and County M to alleviate some congestion. McKee Road (County PD) and Raymond Road, respectively, could serve as possible alternative connections. Whitney Way and Raymond Road are City of Madison streets and special measures and coordination would be needed for their use.

3. Construction Noise

Construction of the Preferred Alternative will create noise impacts for adjacent residents. The noise generated by construction equipment will vary greatly depending on equipment type/model/make, duration of operation, and specific type of work effort. However, typical noise levels may occur in the 67 to 107 dBA range at a distance of 50 feet (15.2 meters).

Section 4.8 Detailed Evaluation Sheet M describes these impacts in more detail and shows typical noise levels for a variety of construction equipment. Adverse effects related to construction noise are anticipated to be of a localized, temporary, and transient nature.

ES.5 LIST OF ABBREVIATIONS

The most commonly used abbreviations and acronyms are included here for the reader's convenience.

106 (Section 106)	Section 106 of the National Historic Preservation Act, requires Federal agencies to take into account the effects of their undertakings on historic properties
4(f) (Section 4(f))	Section 4(f) of the Department of Transportation Act dealing with impacts on historic places, parks, and wildlife refuges.
AADT	annual average daily traffic
ADT	average daily traffic
AIS	Agricultural Impact Statement
BTS	WisDOT Bureau of Technical Services
DATCP	Wisconsin Department of Agriculture, Trade, and Consumer Protection
decibel (dB)	a unit of measurement for sound level
DEIS	Draft Environmental Impact Statement
DHV	design hourly volume
DOE	Determination of Eligibility, for the National Register of Historic Places
EIS	Environmental Impact Statement
Endangered Species	Species identified by either the state or the federal government as likely to be in danger of becoming extinct through a significant portion of or all of its range.
USEPA	United States Environmental Protection Agency
ESS	WisDOT Bureau of Technical Services, Environmental Services Section
FDM	Facilities Development Manual
FEIS	Final Environmental Impact Statement
FHWA	Federal Highway Administration
GIS	Geographic Information System
HazMat	hazardous materials
LOS	Level of Service, refers to the overall quality of traffic flow at an intersection or mainline section.
mi	mile
MOA	Memorandum of Agreement
MPO	Metropolitan Planning Organization
NAC	Noise Abatement Criteria
NEPA	National Environmental Policy Act
NHS	National Highway System
NRHP	National Register of Historic Places
NPS	National Park Service
ROD	Record of Decision

R/W	right-of-way
SDEIS	Supplemental Draft Environmental Impact Statement
SHPO	State Historic Preservation Officer
SPUI	Single-Point Urban Interchange
TDM	Transportation Demand Management
Threatened Species	Species identified by either the state or federal government as likely to be in danger of becoming endangered in the foreseeable future
TMDL	A Total Maximum Daily Load, or TMDL, is a calculation of the maximum amount of a pollutant that a waterbody can receive and still safely meet water quality standards.
TPC	Transportation Projects Committee
US 18/151	United States Highway 18 and 151, also known as Verona Road
US 12/14	United States Highway 12 and 18, also known as the Beltline
USACE	United States Army Corps of Engineers
WisDOT	Wisconsin Department of Transportation
WDNR	Wisconsin Department of Natural Resources