CORRESPONDENCE/MEMORANDUM _____ **State of Wisconsin**

Date: March 26, 2019

To: Beth Cannestra
Director, Bureau of Project Development
Attn: Dave Stertz
Oversight and Standard Chief

From: Matthew Bronson, P.E.
North Central Region

Subject: DESIGN STUDY REPORT
Project I.D. 6270-00-04
V Iola, Main Street
S Br Little Wolf, B-68-29
STH 49
Waupaca County

Having considered the economic and social effects of this project, its impact on the environment, and its consistency with the goals of community planning, we request your approval of the attached design study report.

Region Project Development Chief — Date: 3/26/2019

Concur:

for Bureau of Project Development,
Project Services Chief — Date: 3/26/2019

DESIGN STUDY REPORT

Project I.D. 6270-00-04
V Iola, Main Street
S Br Little Wolf, B-68-29
STH 49
Waupaca County

3/26/19

Prepared By:
AECOM
200 Indiana Avenue
Stevens Point, WI 54481

March 2019

DESIGN STUDY REPORT

1.0 PROJECT DESCRIPTION AND NEED

1.1. Federal Oversight Project (Yes or No): No

1.2. Project Length & Termini

Project Length: 0.042 Miles (Approximately 220 feet)

Termini/Limits:

The proposed project is located in the NW quarter of the SE quarter of Sections 35, Township 24 North, Range 11 East, Waupaca County, Wisconsin. The project is located in the Village of Iola between Depot Street and STH 161 with limits of construction between Station 9+28 and Station 11+50.

1.3. Functional Classification/Access Control

Roadway Name	Functional Class (Arterial, Collector or Local)	Rural, Urban or Transitional	Corridors 2020 or Backbone (No or State which)	NHS Route (Yes or No)	Long Truck Route(No or state Federal or State)	Access Control Tier	On Ped. Trans. Plan (Yes or No)	On Bike Trans. Plan (Yes or No)
STH 49	Minor Arterial	Urban	No	No	State, 65' Restricted Truck Route	3	Yes	Yes

1.4. Need for the Project

The following needs have been identified:

Structural and functional deficiencies

1. *Classification of Structurally Deficient*

   National Bridge Inventory (NBI) condition ratings are assigned to primary bridge components during safety inspections by the bridge inspector to describe the existing, in-place status of a component. They are the primary consideration in classifying structural deficiencies. B-68-29 currently has a deck and superstructure (the arch of this bridge) rating of four (poor condition) on a scale of zero to nine, with zero being the lowest/worst condition and nine being the highest/best condition on the NBI Rating System, resulting in a classification of structurally deficient.

2. *Element Deterioration*

   The concrete is cracking, pieces of concrete are breaking off, and the steel is exposed in spots. The masonry is cracking with heavy efflorescence (the migration of salt to the surface). Rust is forming on the sub-standard bridge rails (do not meet current safety criteria or current crash standards). The approach roadway also has some cracks.

3. *Stream Condition*

   The water is eroding the river bed around the structure foundation.

4. *Bridge Sufficiency*

   The current structural sufficiency rating is 54.8. These are based on a scale of 100. A bridge sufficiency rating is the relative rating of the condition of the bridge through the use of the bridge inventory and inspection data. It incorporates both structural and functional data. Bridges with a sufficiency rating of 50 or less are eligible for replacement through the Federal Highway Administration's (FHWA) Highway Bridge Replacement and Reconstruction (HBRR) program.

Route importance and system linkage

WIS 49 starts in the south in Waupaca, WI and extends north to WIS 29, which crosses nearly the entire state of Wisconsin west to east. This bridge is important to the local residents as they travel for work, commerce, and recreation. This bridge is also important as it serves as part of the Long Truck Route.

Transportation Demand

The average daily traffic (AADT) forecast for 2020 is 4,700 vehicles and the 2040 AADT forecast is 6,000 vehicles.

Multimodal Interrelationships

There are no bicycle facilities on WIS 49, but there is a sidewalk on each side of the roadway (the sidewalk on the east side does not currently extend north of the bridge). Iola Riverwalk Trail (a multi-use path) is located along the South Branch Little Wolf River, south of Mill Street, starting at Town Line Road and terminating at WIS 49 just north of the existing bridge. The trail ties together several downtown assets that draw tourists to downtown Iola, including the Veterans Memorial Park, the Iola Historical Society complex, the historic old grain mill, and the shops and restaurants on North Main Street. The trail provides walking, biking and fishing opportunities. Eventually, this trail will be part of a larger system connecting the Village of Scandinavia and the Tomorrow River State Trail.

See Attachment 1 and Attachment 2 for Project Location Maps.

2.0 PRESENT FACILITY

2.1. Posted Speed

Roadway or Roadway Segment	Posted Speed	Advisory Speed
STH 49	25 MPH	N/A

2.2. Geometrics

2.2.1. * Horizontal Alignment Features Outside of Desirable or Minimum Design Standards.

* Horizontal Feature (Curve, P.I. Deflection, etc.)	Location (Stationing)	* Size (Radius, P.I. Deflection, etc.)*	* Super-Elevation (s.e.)	Speed Rating
None				

*Controlling Criteria

Comments: None

2.2.2. * Vertical Alignment Features/SSD Outside Desirable or Minimum Design Standards.

* Vertical Feature (Curve, Vertical Grade Deflection, etc.)	Location (Stationing)	Sag or Crest	* % Grades	K Value/ Grade Deflection	Speed Rating	* SSD** Met (Yes or No/ Length)	DSD Met (Yes or No/ Length)
None							

*Controlling Criteria **SSD = Stopping Sight Distance

Comments: The project is located within a low speed urban area and does not meet any of the criteria for Sight Distance Category 2 or Category 3 which require Decision Sight Distance (DSD) criteria be met. All vertical curves meet desirable design standards. See Attachment 3: Vertical Curve Deficiency Analysis for the detailed report.

2.2.3 * Grades and Vertical Clearance Outside Desirable or Minimum Design Standards.

Location (Stationing, Overpass Structures, etc.)	* % Grade	* Vertical Clearance
B-68-0029	0.41	No restrictions

*Controlling Criteria

Comments: None

2.3 Side-Roads/Intersections/Interchanges

2.3.1 Side-roads

Roadway Name	Functional Class	Posted Speed (MPH)	Existing Traffic*** (AADT)	Approach Grades	Pedestrian Facilities (Yes or No)	Bicycle Facilities (Yes or No)
None						

***If Existing Traffic volumes are not available, then state at a minimum whether AADT is assumed to be <100 or >100.

Comments: None

2.3.2 Intersections

Intersecting Roadway Names	Intersect. Type	Intersect. Angle	Traffic Control	* SSD** Met [(Y/N) / Length]	ISD** Met [(Y/N) / Length]	DSD** Met [(Y/N) / Length]	Vision Triangle (Y/N)	Corner Clearance To Driveways Present (Y/N)
None								

*Controlling Criteria

**SSD=Stopping Sight Distance, ISD=Intersection Sight Distance, and DSD=Decision Sight Distance (See FDM 11-25-1).

Comments: None

Has intersection control evaluation (ICE) worksheet been coordinated (Yes or No)? No, not required.

2.3.3 Interchanges

Intersecting Roadway Names	Interchange Type	Ramp Types	Ramp Design Speed	Horizontal Curve on Ramp	Vertical Curve on Ramp	Ramp Grades	* SSD** [(Met (Y/N) / Length]	DSD** [Met (Y/N) / Length]
None								

*Controlling Criteria

**SSD = Stopping Sight Distance & DSD = Decision Sight Distance (See FDM 11-25-1).

Comments: There are no interchanges within the project limits.

2.4 Cross Section (See Proposed Typical Cross Section in Attachment 6 and Preliminary Plan Sheets in Attachment 7)

Number of roadways: 1 Roadway

Number of lanes: 2 Lanes

Median width: None

* Lane width: 12 Feet/Travel, 8 Feet/Parking

* Shoulder width (Total and Paved or Curb & Gutter): 30 Inch Curb and Gutter

Bicycle Facility Type: None

Sidewalk and curb ramps: Sidewalk on west side is continuous, sidewalk on east side does not continue north of the structure. No curb ramps present.

* Cross slope: 2%

* Super-elevation: None

* Horizontal clearance: Lateral Clearance: 6.5 Feet Right and 10 Feet Left

Clear Zone: N/A

* Vertical clearance: No restrictions

Side-slopes and Ditch sections: Side slopes vary between 2:1 and 400:1 (0.25%).

*Controlling Criteria

Comments: See Attachment 4 for a detailed report on Side Slope Deficiency Analysis.

2.5 Pavement Structure/Condition

Roadway	Pavement Types & Thicknesses	Physical Description
STH 49	South Bridge Approach: 4 Inches of HMA Pavement over approximately 9 Inches of Concrete Pavement over an unknown thickness of Base Aggregate Dense 1-1/4 Inch North Bridge Approach: 4 Inches of HMA Pavement over 8 Inches of Base Aggregate Dense 1-1/4 Inch	Some longitudinal cracking along the wheel path and centerline with limited lateral cracking approximately every 25 to 50 feet.

2.6 Right Of Way

2.6.1 Encroachments

Location (Station & Distance Left or Right)	Encroachment Type
STA. 8+97, 36.1' LT	Private Business Sign
STA. 10+26, 55.4' LT – STA. 10+40, 40.4' LT	Wooden Pedestrian Bridge
STA. 11+11, 26.8' RT – STA. 11+28, 26.7' RT	Building Concrete Slab
STA. 11+28, 26.7' RT – STA. 11+79, 27.0' RT	Paver Pedestrian Path

Comments: See Attachment 8: Encroachment Inspection Report for a detailed report.

2.6.2 Unique Right of Way Issues:

The J. & C. Wipf Mills property (AHI #71388) located at 280 N. Main Street which is positioned on the northeast quadrant of the project was listed on the National Register of Historic Places (National Register) in 1987. The project will require temporary and fee right of way along this property in order to complete the work.

2.7 Structures

Existing Structure I.D. #	Feature Crossed	Structure Type	Sufficiency Rating	* Clear Roadway Width	Railing Type	* Structurally Deficient or Functionally Obsolete	* Inventory Load Rating
B-68-0029	South Branch Little Wolf River	Concrete Spandrel Arch	54.8	44'	Type F	Structurally Deficient	HS20

*Controlling Criteria

Comments: None

2.8 Utilities

Utility Name	Type of Utility	General Location	Underground/ Overhead/Both
Alliant Energy	Electric	Aerial utility lines pass through Veteran's Memorial Park along the south east side of corridor and cross STH 49 along the south side of the existing bridge structure before heading north along STH 49 along the west side of the corridor.	Overhead
Alliant Energy	Gas	Utility line runs along the west side of the corridor and extends north to the south side of the existing bridge structure where the utility terminates.	Underground
Mediacom	Communications	On poles with Alliant Energy Electric, please refer to the General Location for Alliant Energy Electric for more detail regarding the location of overhead lines.	Overhead
Village of Iola	Sanitary Sewer	Nearest sanitary sewer is near the Depot Street intersection approximately 200' south of the project limits.	Underground
Village of Iola	Water	South end of existing bridge structure and runs along south side of waterway to the west.	Underground

Comments: None

2.9 Railroad Crossings

Location (Sta.)	Railroad Name	No. of Tracks	Function	Crossing Type
None				

Comments: None

2.10 Special Soils Conditions

According to the USGS Soil Survey the soils within the project limits appear to primarily consist of Cathro and Markey mucks with some Plainfield loamy sand and Rosholt sandy loam located further away from the bridge and likely outside the project limits.

2.11 Unique Project Features

The Iola Veterans Memorial Park located along the east side of the STH 49 roadway corridor, south of the bridge, the J. & C. Wipf Mills property (AHI #71388) found on the national historic register is located along the east side of the corridor, north of the bridge and there is the Iola River Walk trail that enters the project on the west side of the STH 49 roadway corridor, north of the bridge.

3.0 TRAFFIC

3.1 Traffic Volumes/Conditions

3.1.1 See attached Traffic Forecast Report – Attachment 5

3.1.2 Highway Capacity Analysis

Location (Roadway Segment or Intersection)	Existing Level of Service	Design Year Level of Service Under Existing Roadway	Design Year Level of Service Under Proposed Roadway
049N122 005 to 049N123 000 (CTH G to STH 161/Mill St)	B	B	B

Comments:

The project is not anticipated to affect corridor level of service (LOS) rating.

3.2 Crash Analysis

3.2.1 Project Crash Information

Roadway	Crash Rate [1] (Year.)	Statewide Crash Rate [1] (Year)	Number & Severity of Crashes			
			Fatal	Injury	Property Damage	Total No. Crashes
049N122 005 to 049N123 000 (CTH G to STH 161/Mill St)	0 (2013-2017)	302 (2013-2017)	0	0	0	0

[1] Crash rate based on 100 million vehicles miles traveled (100 MVMT)

Comments: The short segment containing the Little Wolf River Bridge had one crash, which was discarded during validation, involving a hit and run of a parked vehicle with most of the crash report left blank. There are no safety concerns with this segment.

3.2.2 Significant Crash Locations or Patterns

Location or Pattern	Year	Number & Severity of Crashes				Crash Rate[2]	Possible Factors Contributing to Crashes
		Fatal	Injury	Property Damage	Total		
None							

[2] Crashes per million entering vehicles (MEV)

Comments: There were no flagged segments before or after crash validation. A Safety Screening Analysis (SSA) was complete for the project but resulted in no recommendations based on crash history. See Attachment 9: Safety Screening Analysis (SSA) Worksheet for a detailed report.

4.0 PROPOSED DESIGN CRITERIA

4.1 Design Class

Roadway or Roadway Segment	Design Class
STH 49	Urban Design Class 2b

4.2 * Design Speed

Roadway or Roadway Segment	Design Speed	Posted Speed
STH 49	30	25

* Controlling Criteria

4.3 Design Criteria Outside Of Desirable Standards

The proposed bridge (B-68-0133) will have a longitudinal grade of 0.4% which is flatter than the desirable 0.5% but greater than the minimum 0.3%. The existing bridge is on a 0.41% grade.

4.4 Exceptions To Standards

None.

4.5 Typical Cross Section Elements Considered

Two (2)-12 foot travel lanes with 8 foot parking lanes and 30 inch curb & gutter. Sidewalk was considered on both sides of the road to match existing and it was also considered to not install parking lanes to save the municipal expense. Due to the historic nature of the J. & C. Wipf Mills property (AHI #71388) along the east side of the north approach, adding sidewalk beyond the bridge limits was not considered practical.

5.0 PROPOSED DESIGN IMPROVEMENT

5.1 Improvement Type

303 – State Highway Rehabilitation
BRRPL – Bridge Replacement, Preservation

5.2 Geometrics

5.2.1 * Horizontal alignment

The proposed horizontal alignment is a best fit alignment to best match the center of the existing bridge and adjacent roadway approach pavement. See preliminary plans in Attachment 7 for more detailed information.

5.2.2 * Vertical alignment/Stopping sight distance

The desirable stopping sight distance (SSD) for a 30 MPH design speed is 200 feet which requires a desirable K of 31 for crest curves and a desirable K of 37 for sag curves. The proposed sag vertical curve meets these desirable design criteria. See preliminary plans in Attachment 7 for more detailed information pertaining to the proposed vertical alignments.

5.2.3 * Grades

The proposed bridge (B-68-0133) will have a 0.4% longitudinal grade, which is less than the desirable 0.5% but greater than the minimum 0.3%. See preliminary plans in Attachment 7 for more detailed information pertaining to the proposed grades.

* Controlling Criteria

5.3 Sideroads/Intersections/Interchanges

5.3.1 Side-roads

Roadway Name	Functional Class	Design Speed (MPH)	Design Year Traffic (AADT)	Design Class	Approach Grades	Ped. Facilities (Y / N)	Bike Facilities (Y / N)
None							

Comments:

5.3.2 Intersections

Intersecting Roadway Names	Intersect. Type	Intersect. Angle	Traffic Control	* SSD** Met [(Y/N) / Length]	ISD** Met [(Y/N) / Length]	DSD** Met [(Y/N)/ Length]	Vision Triangles Proposed (Y / N)	Corner Clearance To Driveways Met (Y / N)
None								

* Controlling Criteria

**SSD = Stopping Sight Distance, ISD = Intersection Sight Distance & DSD = Decision Sight Distance (See FDM 11-25-1).

Comments:

Has intersection control evaluation (ICE) worksheet been coordinated (Yes or No)? No

5.3.3 Interchanges

Name of Intersecting Roadways	Interchange Type	Ramp Type	Ramp Design Speed	Ramp Grades	* SSD** Met [(Y/N) / Length]	DSD** Met [(Y/N) / Length]	Vision Triangle (Yes or No)
None							

* Controlling Criteria

**SSD = Stopping Sight Distance & DSD = Decision Sight Distance (See FDM 11—25-1).

Comments:

5.4 Roundabouts

None.

5.5 Cross Section/Pavement Structure (See Proposed Typical Cross Section in Attachment 6 and Preliminary Plan Sheets in Attachment 7)

Number of roadways: 1 Roadway

Number of lanes: 2 Lanes

Median width/Type: None

* Lane width/Type (Driving, Parking, Bike Lane, etc.): 12 Feet/Travel, 8 Feet/Parking

* Shoulder width (Total & Paved or Curb & Gutter): 30 Inch Curb and Gutter

Bike facilities proposed: None

Pedestrian facilities / sidewalk proposed: 5 Foot sidewalk on West side of the corridor will be continuous through the project limits and a 7 Foot sidewalk on the East side of the corridor will end just north of proposed bridge at a proposed crosswalk.

* Cross slope: 2%

* Super-elevation: None

* Horizontal clearance: 8 Feet (Lateral Clearance: 7.5 Feet Right and 10 Feet Left)

* Vertical clearance: No restrictions

Pavement Structure: 6.00 Inch HMA Pavement (4-Inch lower layer of HMA Pavement Type 3 LT 58-28 S, 2-Inch upper layer of HMA Pavement Type 4 LT 58-28 S) over 12 Inch Base Aggregate Dense 1 ¼-Inch.

Clear Zone: N/A

Side-slope / Ditch Sections: Side slopes vary between 2:1 and 400:1 (0.25%).

* Controlling Criteria

5.6 Street Lighting

Location	Type	Break-away Requirements
STA. 8+50±, 32'± RT	Round Tapered Aluminum (RTA) Pole With Arms	4-Bolt Cast Aluminum Base Flange (Not Break-Away Compliant)
STA. 9+50±, 32'± RT	Round Tapered Aluminum (RTA) Pole With Arms	4-Bolt Cast Aluminum Base Flange (Not Break-Away Compliant)
STA. 10+50±, 32'± RT	Round Tapered Aluminum (RTA) Pole With Arms	4-Bolt Cast Aluminum Base Flange (Not Break-Away Compliant)
STA. 11+50±, 32'± RT	Round Tapered Aluminum (RTA) Pole With Arms	4-Bolt Cast Aluminum Base Flange (Not Break-Away Compliant)

Comments: According to FDM 11-20.1.9.1 Lateral Clearance for Urban Roadways, the desirable required lateral clearance for a fixed object along an urban street is 4 feet from face of curb; however, the minimum required lateral clearance is 2 feet from face of curb. Given the proposed ornamental light poles are not break-away compliant, the light poles will be installed at a minimum of 2 feet from the back of curb and gutter or the sidewalk thus meeting the minimum design requirement.

5.7 Structures

5.7.1 Bridge Structures

Structure I.D. #	Location	Structure Type	Length	* Clear Width	No. of Spans	* Vertical Clearance	* Horizontal Clearance
B-68-0133	STA. 10+00	Concrete Flat Slab	38.5 Feet	44 Feet	1	N/A	10 Feet to Parapet
	Proposed Improvement:	Remove and replace structure B-68-0029					

* Controlling Criteria

Comments:

5.7.2 Box Culverts and Multiple Pipe Structures

Structure I.D. #	Location	Type	Length	No. Pipes
None				
	Proposed Improvement:			

5.7.3 Retaining Walls and Noise Barrier Structures

Structure I.D. #	Location	Type	Length	Height
None				
	Proposed Improvement:			

5.7.4 Sign Bridge Structures

Structure I.D. #	Location	Type	Length	Clear Roadway Width	* Vertical Clearance	* Horizontal Clearance	Clear Zone Under
None							
	Proposed Improvement:						

* Controlling Criteria

5.7.5 Tunnel Structures

Structure I.D. #	Location	Type (Veh.,Ped., Bicycle, etc.)	Length	Lighting Type	* Vertical Clearance	* Horizontal Clearance
None						
	Safety Features			Coordination with Local Emergency Responders		
	Proposed Improvement:					

* Controlling Criteria

5.8 Permanent Traffic Control

Will permanent signs be installed (Yes or No)? No

Are non-standard sign layout details needed (Yes or no)? No

Comments:

5.9 Transportation Management Plan

See the Wisconsin TMP System (Wisconsin Traffic Operations and Safety Laboratory (TOPS) – The WisTransPortal System, https://transportal.cee.wisc.edu/tmp/) for the Transportation Management Plan (TMP).

5.10 Safety Enhancements/Mitigation Measures

Adding a designated cross walk with ADA accessible curb ramps to provide a pedestrian crossing from the east sidewalk termination to the continuous sidewalk along the west side of the corridor. This will also provide a safe route for pedestrians to travel between the entrance to the Iola River Walk trail on the west side of the corridor and the Veterans Memorial Park located on the east side of the corridor. In addition, street lighting will be added between Depot Street and Mill Street to improve visibility along the corridor for all users.

5.11 Real Estate

5.11.1 Real Estate Acquisition

Plat I.D.: 6270-00-04-4.01

Relocations		Land	Permanent	Temporary	Construction
Type	Number	(Acres)	Easements	Easements	Permits
None	N/A	0.007	---	0.014	None
None	N/A	0.010	---	---	None
None	N/A	0.005	---	0.008	None

Comments:

5.11.2 Encroachment Actions

Encroachment Location	Encroachment Type	Recommendation
STA. 08+97 LT	Private Business Sign	Refer to Operations to resolve with BHM
STA. 10+26 LT – STA. 10+40 LT	Wooden Pedestrian Bridge	No Action; No Safety Concerns
STA. 11+11 RT – STA. 11+28 RT	Concrete Slab	No Action; No Safety Concerns
STA. 11+28 RT – STA. 11+79 RT	Paver Pedestrian Path	No Action; No Safety Concerns

Comments:

5.12 Utilities

Is Project Trans 220 Utility Project (Yes or No)? Yes

Describe any special design features to accommodate utilities:

Street lighting was proposed along the northbound side of the roadway corridor to avoid potentially costly overhead utility relocations.

The overhead electric service crossing STH 49 at approximately Station 11+35 will be relocated underground to allow for the installation of street lighting in compliance with Section 106.

Major Utility Agreements:

None.

5.13 Railroads

Describe improvements to Railroad Facilities:

None.

Railroad Agreements:

None.

5.14 Financing And Scheduling

Construction I.D.	Cost Estimate (excluding E&C)	Type of Funding			Proposed Timeframe For Construction	Ties to Other Work or Projects	Incentive/ Disincentive Clauses (Yes or No)
		% Fed.	% State	% Local			
6270-00-74	~$650,000	No	Yes	Yes	2020	No	No

Describe Incentive/Disincentive Clauses:

None.

Non-participating Work:

None.

Deferred Construction Work (Preventative Maintenance projects)

None.

5.15 Unique Or Non-standard Features

5.15.1 Hazardous Waste

Four sites with known and/or potential hazardous materials concerns were identified within and adjacent to the project area. Based on the information obtained during the Phase 1, Phase 2.5 and Phase 3 investigations were performed at two of the sites (Site 2 and 3). Site 2 has no documented storage tanks or releases but the site was used for industrial purposes for many years which has an elevated potential of having stored petroleum products and or other hazardous materials on site. Site 2 also poses the possibility for industrial byproducts having been used as fill material in and around the site. Site 3 has documented historical investigations for residual soil and groundwater contamination. The storage building associated with the former Site 3 service station was located approximately 40 feet southwest of the existing bridge B-68-0029. No additional hazardous materials investigations are warranted at the remaining two sites.

The Phase 2.5 Environmental Sampling Investigation performed on Site 3 concluded that no further investigation is warranted; however, a notice to contractor “Contamination Beyond Project Limits” is warranted for the contract special provisions because the Depot Street Station (Site 3) is a closed LUST site.

The Phase 3 Contaminated Site Assessment performed on Site 2 concluded that no further investigation is warranted; however preparation of an NR 718.12 exemption request for the beneficial reuse of lead contaminated soil within construction limits is recommended. Excavated lead contaminated soil not onsite is suitable for transfer and disposal as non-hazardous solid waste at a regional licensed landfill. If dewatering is required, no volatile organic compound contaminated groundwater should be encountered or require special management. A special provision for managing excavated lead contaminated soil during construction should be included in the contract.

5.15.2 Environmental Commitments

STH 49 will be closed for construction so coordination was completed during design with the village of Iola to provide a detour and accommodations for vehicles, trucks, bicycle and pedestrians throughout construction. In addition, a historic property was identified on the northeast corner of the bridge and right of way is required so a stone-like pattern is being applied to the newly constructed bridge and no sidewalk is going to be constructed in front of the property. Furthermore, street lighting is going to be placed as indicated on the plans and have a similar appearance to the existing street lights further to the south along STH 49/Main Street. Impacts to the Iola River Walk trail are only temporary and will be restored following project completion. Work will not be permitted in the waterway from March 1st through June 15th. A 404 permit will be obtained given the riprap impacts from the project. During construction Wood and Blanding Turtles and Pugnose Shiners will need to be isolated from the construction zone. All substructure work will be isolated from the active stream flow and implemented in the ECIP. Any erosion mat used along the stream banks will be biodegradable and non-netted mat.

For more detailed information see Attachment 10 – Environmental Mitigations and Commitments.

5.15.3 Community Sensitive Design/Public Involvement

Coordination with the village of Iola and SHPO was completed in order to meet the needs of the community and mitigate impacts to an adjacent historical property, respectively. Project construction is being scheduled to avoid conflicts with the Iola Car Show, a major event drawing regional traffic into the area. Additional detail can be referenced in the Public Involvement Documentation included as Attachment 11.

5.15.4 Value Engineering

N/A

6.0 SYNOPSIS

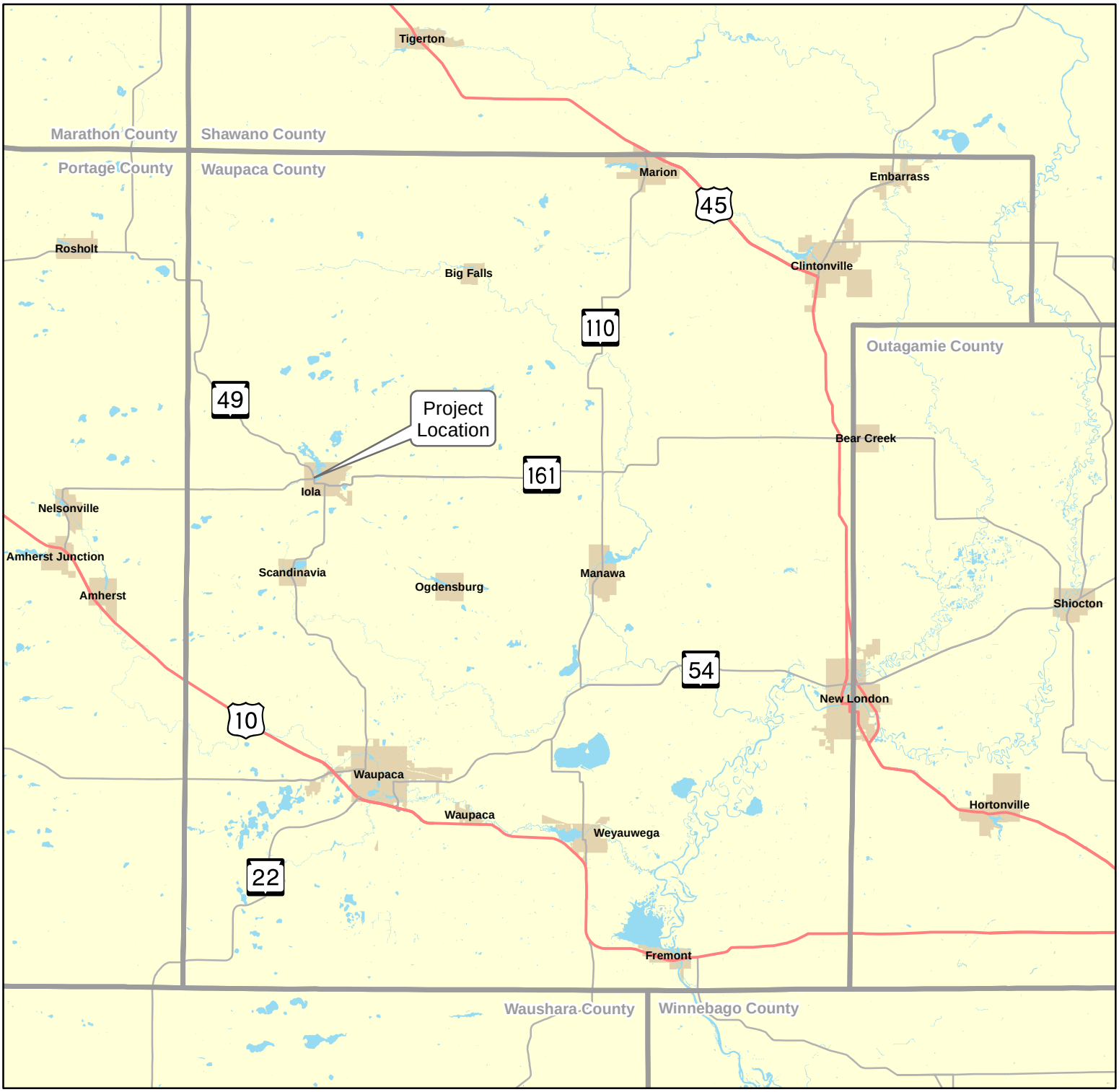
	Completion/Approval Dates	Status of Coordination or Other Information as Needed
Concept Definition Report	11/18/2013	Complete
Scoping Document	02/27/2013, 03/01/2016	Complete
Public Involvement Plan	10/16/2017	In Progress
Final Aesthetic & Visual Level of Impact Worksheet	N/A	
Speed Limit Change Declaration	N/A	
Environmental Document (Type: CEC)	01/31/2019	Complete
Public Hearing/Public Information Meetings	02/06/2018	Complete
SHPO Involvement	10/08/2018	Complete
DNR Involvement	10/30/2017, 02/19/2018	Initial Review
Agricultural Impact Statement	N/A	
Pavement Design Report	11/28/2017	Complete
Roundabout Review	N/A	
Transportation Management Plan (Type: 2)	03/2019	In Progress
Permits Required (Types: 401)	TBD	Ongoing
Local Project Agreements	10/13/2017	Complete
Value Engineering Study	N/A	
Status of Statutory Actions	N/A	

7.0 ATTACHMENTS

1. Project Location Map (County)
2. Project Location Map (Project Area)
3. Vertical Curve Deficiency Analysis
4. Side Slope Deficiency Analysis
5. Traffic Forecast Report (TFR)
6. Existing & Finished Typical Cross Sections
7. Preliminary Plan Sheets
8. Encroachment Inspection Report
9. Safety Screening Analysis (SSA) Worksheet
10. Environmental Mitigations & Commitments
11. Public Involvement Documentation

ATTACHMENT 1

PROJECT LOCATION MAP (COUNTY)



N

0 2.5 5 Miles

Exhibit 1:
Project Location Map (County)
STH 49 (Main Street)
WisDOT I.D. 6270-00-04

Waupaca County

ATTACHMENT 2

PROJECT LOCATION MAP (PROJECT AREA)

N

0 100 200 Feet

Exhibit 2:
Project Location Map (Project Area)
STH 49 (Main Street)
WisDOT I.D. 6270-00-04

Waupaca County

ATTACHMENT 3

VERTICAL CURVE DEFICIENCY ANALYSIS

PROJECT I.D. 6270-00-04
V IOLA, MAIN STREET
S BR LITTLE WOLF, B-68-29
STH 49
WAUPACA COUNTY

VERTICAL CURVE DEFICIENCY ANALYSIS

Input Parameters							*For Curves*				*For Deflections*	
Vertical Feature	PI Station	Sag/Crest	Grades In/Out (%)	K value/ Deflection	Speed Rating[1]	SSD	Minimum Criteria Desirable K for 25 MPH	Meets Criteria?	Desirable Criteria Desirable K for 30 MPH	Meets Criteria?	Max. Allow. Deflection	Meets Criteria?
25 MPH Posted Speed Limit												
Curve	11+00.00	Sag	-0.41/0.86	86.11	45	Yes / EX (~580') > DES (220')	26	YES	31	YES		

[1] - Based on Desirable K values

ATTACHMENT 4

SIDE SLOPE DEFICIENCY ANALYSIS

PROJECT I.D. 6270-00-04
V IOLA, MAIN STREET
S BR LITTLE WOLF, B-68-29
STH 49
WAUPACA COUNTY

SIDE SLOPE DEFICIENCY ANALYSIS

Left Side		
Begin Station	**End Station**	**Slope**
9+28	9+74	4:1
9+74	9+85	2:1[GR]
9+85	10+10	*Bridge*
10+10	10+27	2:1[GR]
10+27	11+50	2:1

Right Side		
Begin Station	**End Station**	**Slope**
9+28	9+74	4:1
9+74	9+85	2:1[GR]
9+85	10+10	*Bridge*
10+10	10+27	2:1[GR]
10+27	11+50	4:1

Notes:
All slopes are behind curb and gutter and/or sidewalk.
4:1 = Slopes are 4:1 or flatter
3:1 = Slopes are between 3:1 and 4:1
2:1 = Slopes are steeper than 3:1
[GR] = Guardrail-Protected Slopes

ATTACHMENT 5

TRAFFIC FORECAST REPORT (TFR)

WisDOT TRAFFIC FORECAST REPORT

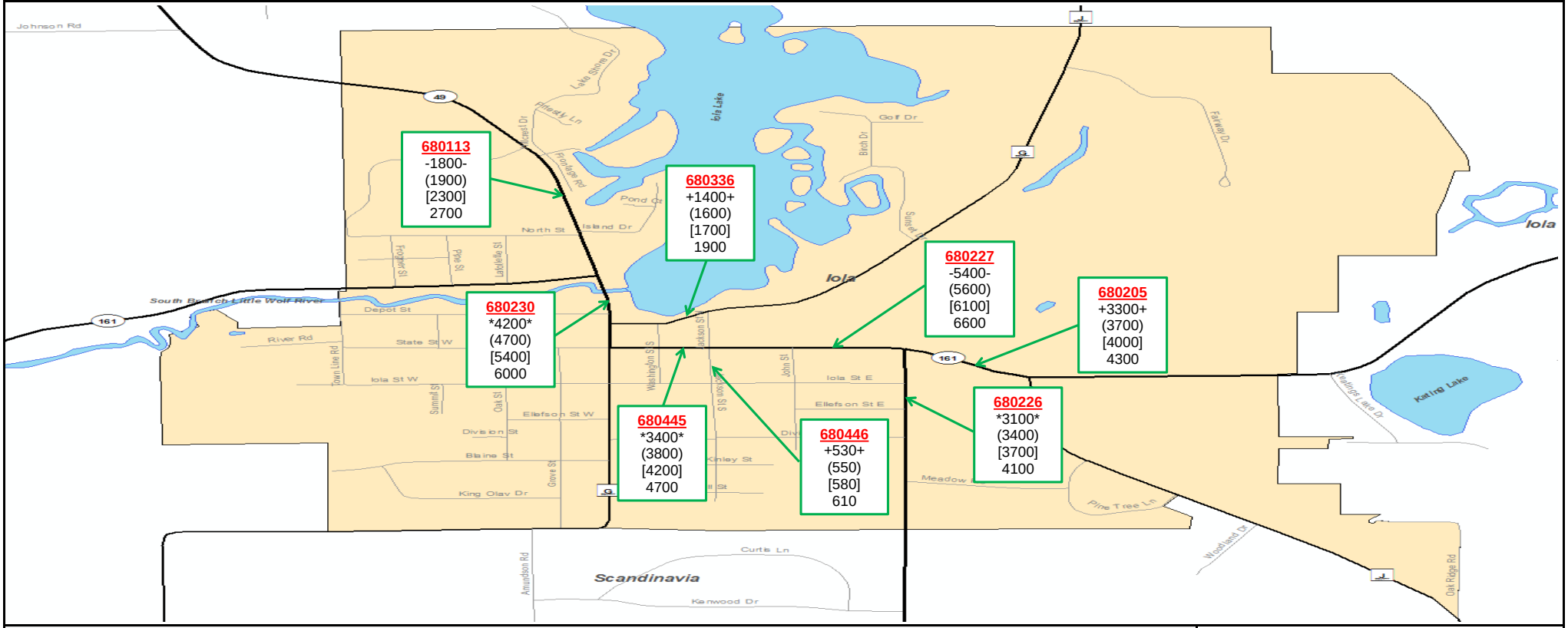
PROJECT ID(S): 6270-00-04/74
ROUTE(S): STH 49

Region/COUNTY(IES): NC / WAUPACA
LOCATION: Little Wolf River Bridge on STH 49
COMPLETED: 04/20/2018

Traffic Forecasting Section; Bureau of Planning and Economic Development; Division of Transportation Investment Management

Developed by: Matthew G. Miller
Phone: (608) 266-2571
FAX #: (608) 267-0294
E-Mail: Matthew.Miller@dot.wi.gov

Design Values (%)											Truck Classification						
Site(s)	Route(s)	Volume(s)	Site Growth %	K250	K100	K30	P	D(Dsgn. Hr.)	T(DHV)	T(PHV)	AADTT	2D	3AX	2S1+2S2	3-S2	DBL-BTM	Total %
680113	STH 49	2670	2.08%	9.8	10.8	12.1	15.3	60/40	11.7	6.2	240	11.2	0.5	1.4	0.7	0.1	13.9%
680230	STH 49	6050	1.59%	9.4	10.1	10.9	12.9	60/40	5.6	3.0	280	2.1	1.3	1.1	2.1	0.2	6.6%



Full Vehicle Classification														
Site(s)	Route(s)	MC	CARS	SU2-4	BUSES	SU2-6	SU3	SU4+	ST4-	ST5	ST6+	MU5-	MU6	MU7+
680113	STH 49	1.5	55.8	28.8	1.2	10.0	0.4	0.1	1.4	0.7	0.1	0.1	0.0	0.0

N

SITE ID = Colored, **bolded**, and underlined

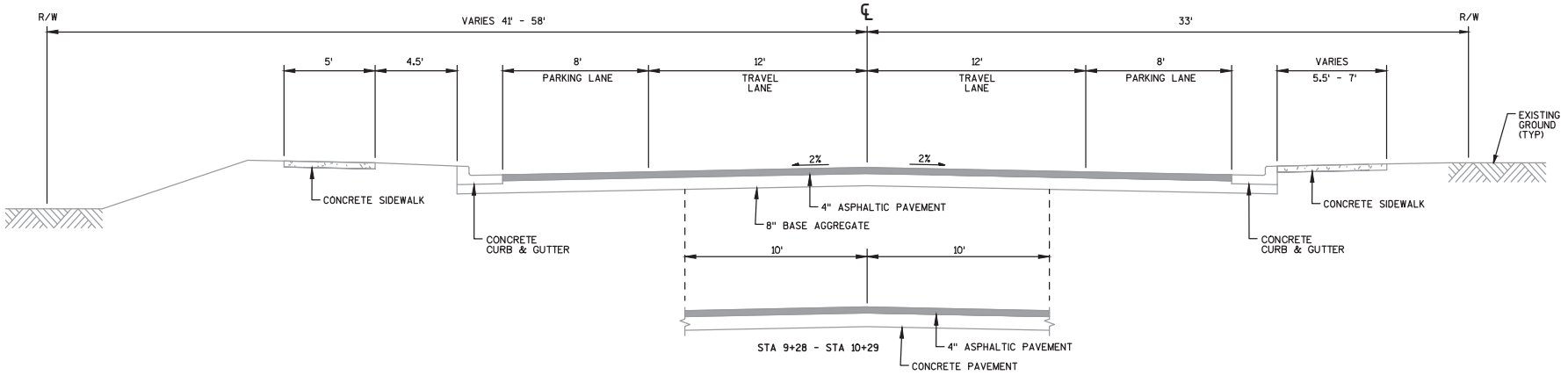
Symbol	Count	Symbol	Forecast
-000-	2015 Count	(000)	2020 AADT
000	2012 Count	[000]	2030 AADT
+000+	2009 Count	000	2040 AADT

NOTES ON THE FORECAST:

1. This projection assumes that no major new traffic generators will be added to the development already included in the 2010/2045 Northeast Regional Travel Demand Model.
2. Truck classification percentages derived from 2015 short axle counts at site # 680113.
3. STH 49 is a Factor Group IV (Rural-Other) roadway (indicating low to moderate fluctuation in traffic from a seasonal perspective). It is functionally classified as a Rural Minor Arterial (6) for count purposes.
4. The 2010/2045 Northeast Regional Travel Demand Model was used to complete this forecast. The Traffic Analysis Forecasting Information System output was used as a comparison tool to check against the model output. Adjustments were made as needed.
5. Roadway improvements coded within the existing plus committed (E+C) network of the 2010/2045 Northeast Regional Travel Demand Model were assumed to be in place for the purposes of developing this forecast.

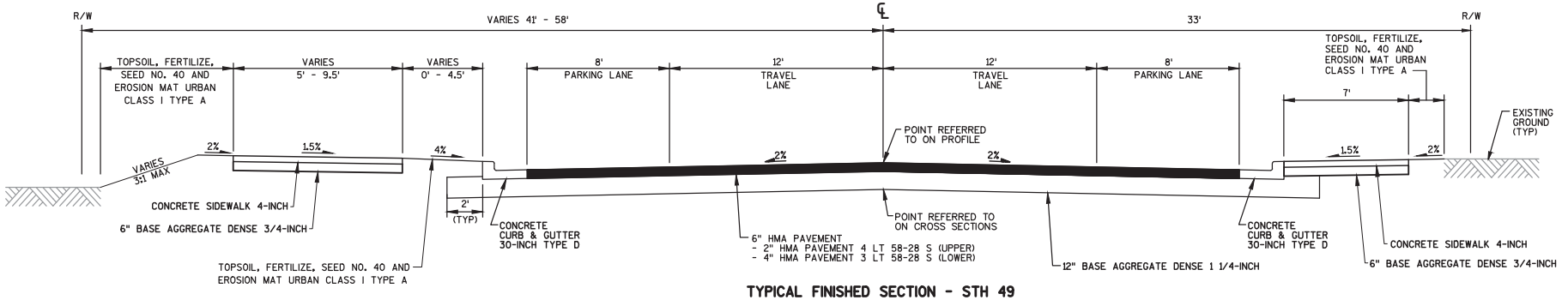
ATTACHMENT 6

EXISTING & FINISHED TYPICAL CROSS SECTIONS



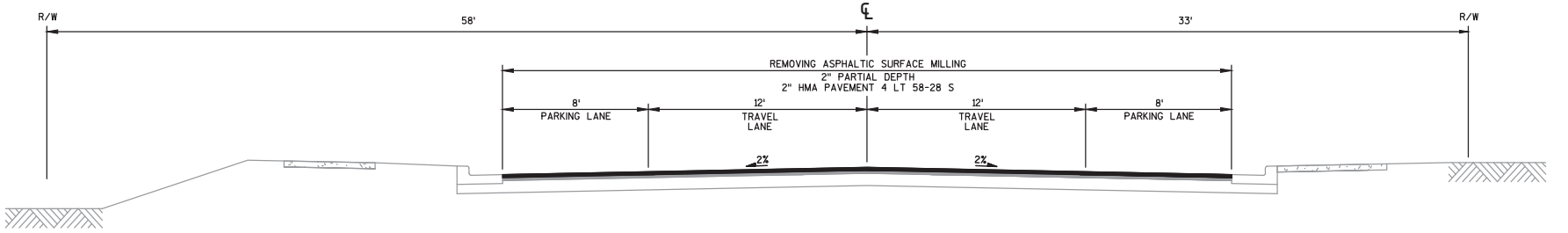
TYPICAL EXISTING SECTION - STH 49

STA 9+28 - STA 11+50



TYPICAL FINISHED SECTION - STH 49

STA 9+28 - STA 10+85



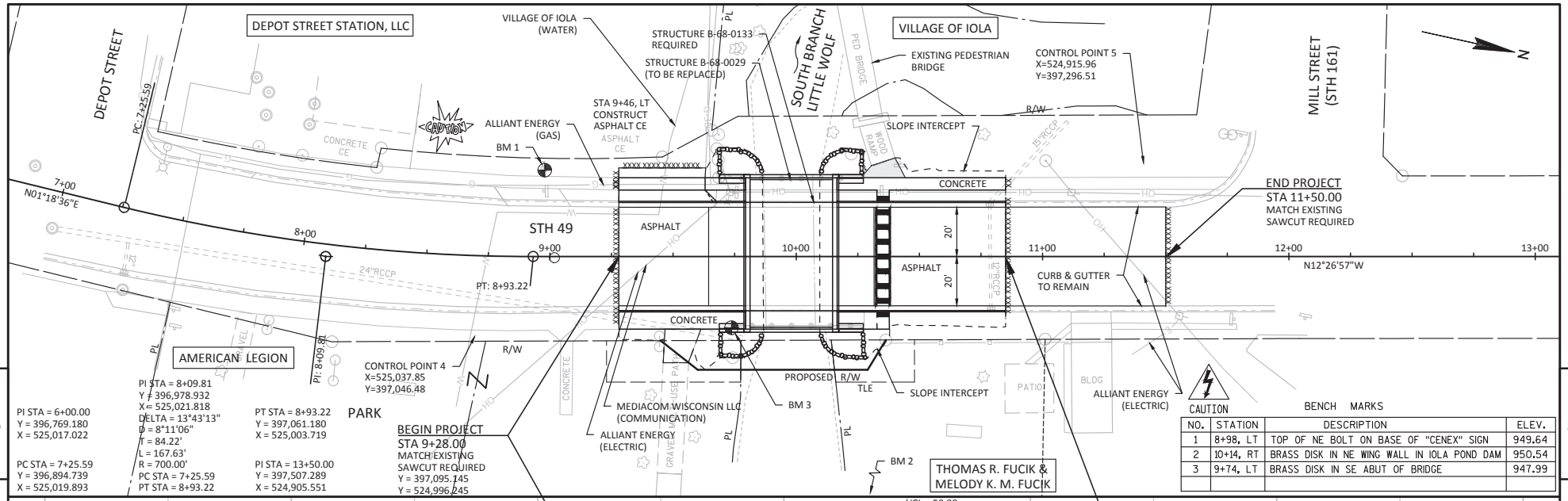
TYPICAL FINISHED SECTION - STH 49

STA 10+85 - STA 11+50

PROJECT NO:6270-00-74	HWY: STH 49	COUNTY: WAUPACA	TYPICAL SECTION	SHEET	E

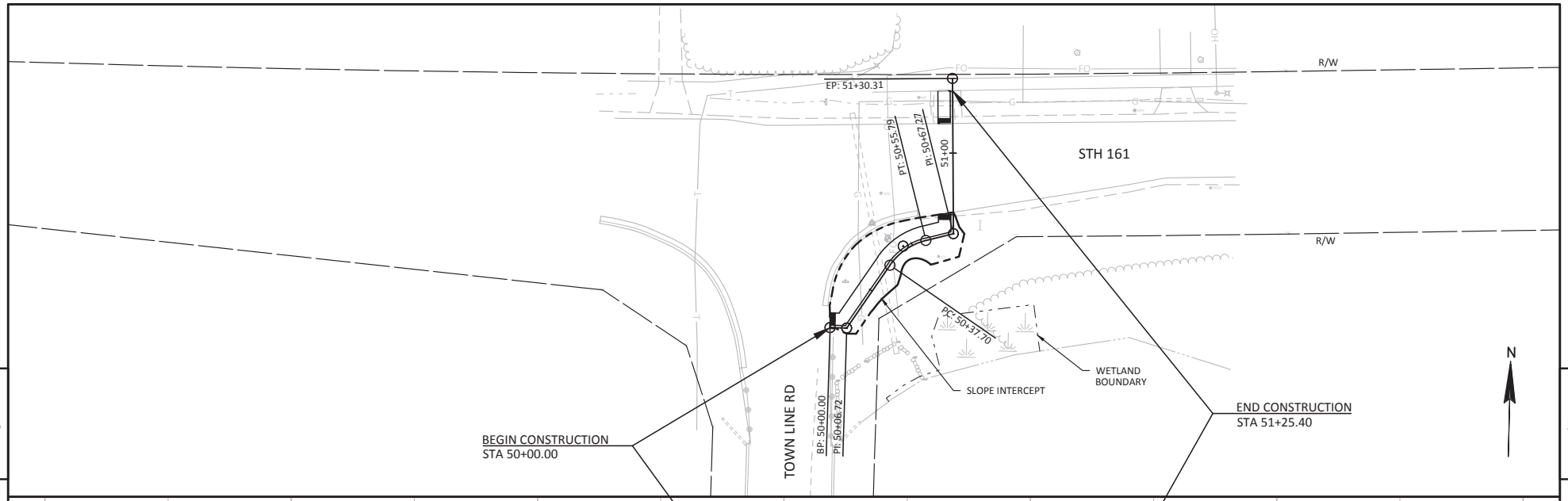
ATTACHMENT 7

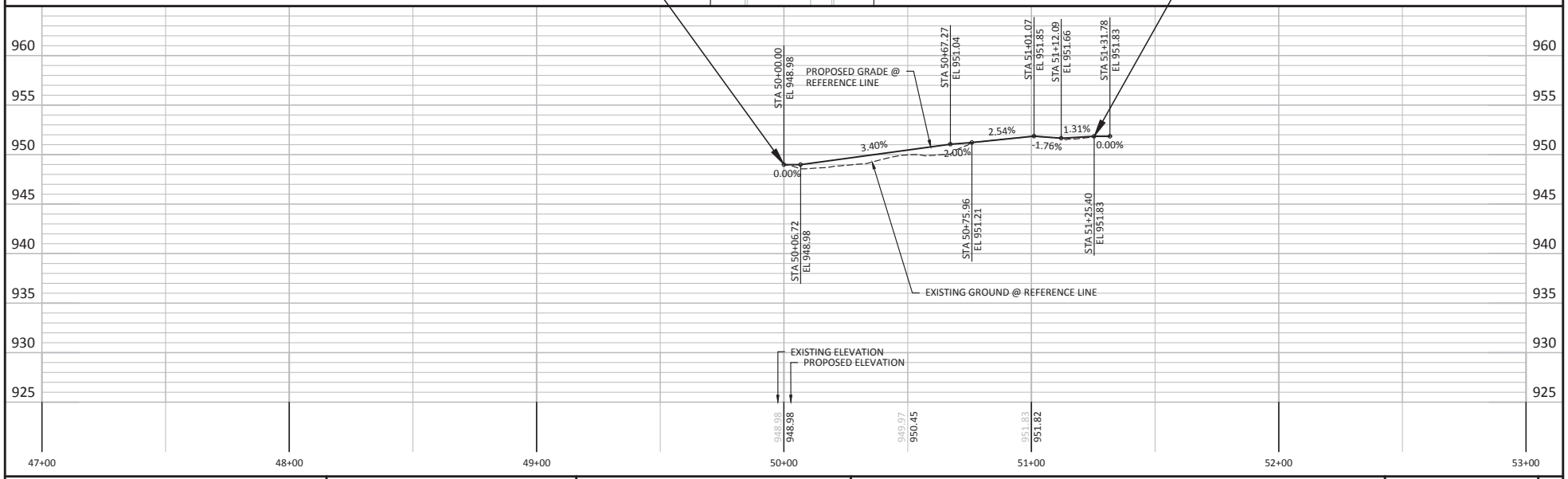
PRELIMINARY PLAN SHEETS



PROJECT NO: 6270-00-74	HWY: STH 49	COUNTY: WAUPACA	PLAN AND PROFILE:	SHEET	E

FILE NAME : P:\60548152\900_WORK\910_CAD\60548152\SHEETSPLAN\0501-PP.DWG
LAYOUT NAME - ****
PLOT DATE : 3/18/2019 8:35 AM PLOT BY : DOLAN, ISAAC PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44





PROJECT NO: 6270-00-74	HWY: STH 49	COUNTY: WAUPACA	PLAN AND PROFILE:	SHEET	E

FILE NAME : P:\60548152\900_WORK\910_CAD\60548152\SHEETSPLAN\0501-PP.DWG
LAYOUT NAME - ****
PLOT DATE : 3/18/2019 8:35 AM
PLOT BY : DOLAN, ISAAC
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

ATTACHMENT 8

ENCROACHMENT INSPECTION REPORT

Wisconsin Department of Transportation

V IOLA, MAIN STREET
S BR LITTLE WOLF, B-68-29
STH 49
WAUPACA COUNTY

ENCROACHMENT INSPECTION REPORT

PROJECT ID 6270-00-04

DATE: March 19, 2019

PREPARED FOR:
Wisconsin Department of Transportation – North Central Region
Wisconsin Rapids Office,
1681 Second Avenue South
Wisconsin Rapids, WI 54495
Phone: (715) 423-0334
Contact Person(s): Wendy Arneson, P.E. – Project Manager

PREPARED BY:
AECOM
200 Indiana Avenue
Stevens Point, WI 54481
Contact Person(s): Ryan Barz, P.E. – Project Manager
Isaac Dolan, P.E. – Project Engineer
Don Buza, R.L.S. – Right of Way Plat Specialist

V IOLA, MAIN STREET
S BR LITTLE WOLF, B-68-29
STH 49
WAUPACA COUNTY
PROJECT ID 6270-00-04

ENCROACHMENT INSPECTION REPORT

ENCROACHMENT NUMBER: 1

ENCROACHMENT TYPE: PRIVATE BUSINESS SIGN

LOCATION: STA. 08+97 LT

EXISTING R/W WIDTH AT ENCROACHMENT: 40.0 FEET

DISTANCE FROM EXISTING C/L TO FRONT OF ENCROACHMENT: 33 FEET

APPROXIMATE HEIGHT ABOVE GROUND: 18 FEET

APPROXIMATE SIZE (L x W): 2.5’ x 6.0’

PROPERTY OWNER: DEPOT STREET STATION LLC

PHYSICAL PROPERTY ADDRESS: 110 DEPOT STREET

RECOMMENDATION: REFER TO OPERATIONS TO RESOLVE WITH BHM

ENCROACHMENT INSPECTION REPORT

ENCROACHMENT NUMBER: 2

ENCROACHMENT TYPE: WOODEN PEDESTRIAN BRIDGE

LOCATION: STA. 10+26 LT - STA. 10+40 LT

EXISTING R/W WIDTH AT ENCROACHMENT: 57.5 FEET

DISTANCE FROM EXISTING C/L TO FRONT OF ENCROACHMENT: 37.0 – 40.2 FEET

APPROXIMATE HEIGHT ABOVE GROUND: 4 FEET

APPROXIMATE SIZE (L x W): 10.0’ x 80.0’

PROPERTY OWNER: VILLAGE OF IOLA

PHYSICAL PROPERTY ADDRESS: NOT AVAILABLE

RECOMMENDATION: NO ACTION; NO SAFETY CONCERNS

ENCROACHMENT INSPECTION REPORT

ENCROACHMENT NUMBER: 3

ENCROACHMENT TYPE: BUILDING CONCRETE SLAB

LOCATION: STA. 11+11 RT – STA. 11+28 RT

EXISTING R/W WIDTH AT ENCROACHMENT: 33.0 FEET

DISTANCE FROM EXISTING C/L TO FRONT OF ENCROACHMENT: 26.7 – 26.8 FEET

APPROXIMATE HEIGHT ABOVE GROUND: 0 FEET

APPROXIMATE SIZE (L x W): 17.0’ x 8.4’

PROPERTY OWNER: THOMAS R. & MELODY K. FUCIK

PHYSICAL PROPERTY ADDRESS: 300 N. MAIN STREET

RECOMMENDATION: NO ACTION; NO SAFETY CONCERNS

ENCROACHMENT INSPECTION REPORT

ENCROACHMENT NUMBER: 4

ENCROACHMENT TYPE: PAVER PEDESTRIAN PATH

LOCATION: STA. 11+28 RT – STA. 11+79 RT

EXISTING R/W WIDTH AT ENCROACHMENT: 33.0 FEET

DISTANCE FROM EXISTING C/L TO FRONT OF ENCROACHMENT: 26.7 – 27.0 FEET

APPROXIMATE HEIGHT ABOVE GROUND: 0 FEET

APPROXIMATE SIZE (L x W): 51.0’ x 2.5’

PROPERTY OWNER: THOMAS R. & MELODY K. FUCIK

PHYSICAL PROPERTY ADDRESS: 300 N. MAIN STREET

RECOMMENDATION: NO ACTION; NO SAFETY CONCERNS

Project I.D. 6270-00-04
V IOLA, MAIN STREET
S BR LITTLE WOLF, B-68-29
STH 49
WAUPACA COUNTY

ENCROACHMENT INSPECTION REPORT

NUMBER	STATION	DISTANCE FROM CL (FT)	DISTANCE OF ENCROACHMENT FROM R/W (FT)	LT/RT	DESCRIPTION	PROPERTY OWNER	
						NAME	PHYSICAL ADDRESS
1	08+97	33	7	LT	PRIVATE BUSINESS SIGN	DEPOT STREET STATION LLC	110 DEPOT STREET, IOLA, WI 54945
2	10+26-10+40	37.0-40.2	20.5-17.3	LT	WOODEN PEDESTRIAN BRIDGE	VILLAGE OF IOLA	N/A
3	11+11-11+28	26.7-26.8	6.3-6.2	RT	BUILDING CONCRETE SLAB	THOMAS R. & MELODY K. FUCIK	300 N. MAIN STREET, IOLA, WI 54945
4	11+28-11+79	26.7-27.0	6.3-6.0	RT	PAVER PEDESTRIAN PATH	THOMAS R. & MELODY K. FUCIK	300 N. MAIN STREET, IOLA, WI 54945

ATTACHMENT 9

SAFETY SCREENING ANALYSIS (SSA) WORKSHEET

Safety Screening Analysis (SSA) Worksheet

Project ID:	6270-00-04
Highway:	STH 49
Project Limits:	Little Wolf River Bridge
Project Description:	
Design Year:	

Identify Investigation Flags (IF) from MetaManager Safety Analysis (Meta-SA)		Conduct Manual Safety Analysis (Man-SA) to validate MetaManager Safety Analysis (Meta-SA)	

source			(from STN Log)		PDP_Mile' in MetaManager	RATEFLAG' in MetaManager	MMGR_KAB_CRSH_RT' in MetaManager	RORFLAG' or 'INTFLAG' or 'CRSHSPOT' or 'MMGR_DRV_FL' in MetaManager		(pull from col. 19 in SS-CC worksheet)	(pull from col. 8 in SS-CC worksheet)						
destination															Col. 20 of the Design Criteria Evaluation worksheet		
notes						(Insert value if ≥ 1.0, otherwise leave blank)	(Insert value if ≥ 1.0, otherwise leave blank)	(Insert column name and value(s) if ≥ 1.0, otherwise leave blank)	Yes = Crash Rate Flag or KAB Crash Rate Flag ≥ 1.0	SS-CC = Sub-Standard Controlling Criteria		Using engineering judgement, validate the crashes that produced the Investigation Flag. If additional crashes are identified or if crashes were identified to be removed, explain why in column 13.	Identify the most likely cause(s) of the crashes including roadway, human and vehicle factors. If crashes were added or removed, explain why. This information should include a justification for how it was determined whether the existing SS-CC contributed to the Investigation Flag.	Yes if improving the eligible SS-CC would help to reduce the frequency or severity of the crashes that generated the IF No if improving the eligible SS-CC would NOT help to reduce the frequency or severity of the crashes that generated the IF N/A (not applicable) if there is no eligible SS-CC in the roadway segment (i.e., col. (10) = No	Yes = PES Applies * if col. (14) = No * OR, if there is an eligible SS-CC but there is no IF No = PES does not Apply * if col. (14) = Yes N/A (not applicable) * if there is no eligible SS-CC in the roadway segment (i.e., col. (10) = No	Yes * if there is no eligible SS-CC and no countermeasures have been employed to address the causes of the IF * OR,if a PES Applies and no countermeasures have been employed to address the causes of the IF * OR, if a PES does not Apply and improving the SS-CC is not sufficient to address the causes of the crashes No * if there is no IF * OR, if a PES Applies and other countermeasures have been employed to address the causes of the IF * OR, if a PES does not apply and improving the SS-CC is a sufficient countermeasure	What are proposed countermeasures for IF? Consider countermeasures such as geometric improvements, education, enforcement, other low-cost safety treatments, etc., either singly or in combination Explain if Existing Dimension in col. (14) of Design Criteria Evaluation Worksheet needs to be improved
col. No.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Heading:	PDP ID	From RP	RP Description	To RP	Length	Crash Rate Flag	KAB Crash Rate Flag	Possible Contributing Factors identified in MetaManager	Did MetaManager generate Investigation Flag? (Yes / No)	Are there existing SS-CC in the roadway segment that are eligible for a PES? (Yes / No)	Which SS-CC Exist?	If Crash Rate Flag or KAB Crash Rate Flag ≥ 1.0, was the flag verified? (Yes / No / N/A)	What are possible causes of the crash trend?	Does the existing eligible SS-CC contribute to the Investigation Flag (i.e. crashes)? (Yes / No / N/A)	Does PES Apply for eligible SS-CC? (Yes / No / N/A)	Does roadway segment contain un-addressed Investigation Flags? (Yes / No)	Proposed Recommendation from SSA
	10679	049N122 005	CTH G	049N123 000	0.13				No			N/A	No crashes	No crashes	No	No	No recommendations based on crash history.

ATTACHMENT 10

ENVIRONMENTAL MITIGATIONS & COMMITMENTS

VII. Mitigation & Commitments – List any environmental mitigation measures or commitments that will be incorporated into the project. Any items listed below must be incorporated into the project plans and contract documents. *Attach a copy of this page to the design study report (DSR) and the plans, specifications, and estimate (PS&E) submittal package.*

Environmental Factor	Commitment (If none, include 'No special or supplemental commitments required.')
General Economics	No commitments required.
Business	No commitments required.
Agriculture	No commitments required.
Community or Residential	WIS 49 will be closed for construction. A Type 2 Traffic Management Plan (TMP) is anticipated. The Construction Project Engineer will assure the detour route is signed and maintained during construction. Iola River Walk: The Iola River Walk will be open during construction except for its connection to WIS 49. A pedestrian detour utilizing State Street, Town Line Road, and WIS 161 will be established during construction. New facilities will be built at the Town Line Road/WIS 161 intersection. It is intended that all construction there will be in existing right of way. The Village of Iola has been told that the existing stonework can be salvaged to them if they are interested.
Indirect Effects	No commitments required.
Cumulative Effects	No commitments required.
Environmental Justice	No commitments required.
Historic Resources	An historic property (J. & C. Wipf Mills) has been identified on the NE corner of the bridge (see Exhibits 8). Right of way will be needed from this property. The SHPO has agreed to a No Adverse Effect determination if the following conditions are met: • An applied stone-like pattern on the concrete slab and parapet. • There will be no change to the mill property's appearance or its visual relationship to the roadway and bridge. • The sidewalk extension will be added at the southwest corner of the mill property beyond an existing fence line and not in the vicinity of any buildings, structures, or any other physical features that are associated with the property and contribute to its significance. • Street lighting will be placed as indicated on the plans and have a similar appearance to the existing street lights further to the South along WIS 49/Main Street. • The new bridge will not have additional travel lanes. • There will be no impacts to the existing fence that runs parallel to the roadway between the office building and the bridge. • Use of, and access to, the mill property will not be changed or otherwise affected in any way.
Archaeological/Burial Sites	In the even that human remains or archaeological materials are exposed during construction, work in the vicinity of the find will cease and the Forest County Potawatomi Community be contacted in addition to the required State Agencies for consultation on treatment and handling protocols prior to removal.
Tribal Coordination/Consultation	No commitments required.

Section 4(f) and 6(f) or Other Unique Areas	Iola River Walk: • Use of the Iola Riverwalk Trail is temporary during construction, and limited to the facility's eastern terminus. • A bicycle/pedestrian traffic control plan is anticipated. The pedestrian route will follow Main Street, W. State Street, Town Line Road, and WIS 161 (Mill Street). A small piece of sidewalk in the southeast corner of the Town Line Road/WIS 161 (Mill Street) intersection will be added as part of this project for pedestrian accommodations. •The WIS 49 project enhances the utility of the specially funded resource by providing a marked crosswalk and connection to the Iola Riverwalk Trail on the east side of the bridge. •Any disturbed areas will be restored and landscaped. Veterans Memorial Park: Any disturbed areas will be restored and landscaped. Additionally, the sidewalk in front of the gravel driveway entrance to the park will be poured thicker to accommodate occasional maintenance vehicles.
Aesthetics	A stone-like pattern will be applied to the concrete slab and parapet.
Wetlands	Wetlands and aquatic bed are present. The WDNR and USACE will be contacted to determine appropriate wetland mitigation requirements for any proposed fill placed in the river for bridge reconstruction and pedestrian detour construction activities. The WisDOT Project Manager will contact the Regional Environmental Coordinator (REC) to make sure the commitments are met.

Rivers, Streams and Floodplains	Removing Structure: Due to the characteristics of this section of the South Branch of the Little Wolf River, STSP 203-020, *Removing Old Structure Over Waterway With Minimal Debris*, will be adequate for this project. Design engineer must coordinate with WDNR early in the design phase of the project if the bridge must be dropped into the waterway before removal. Fisheries/Stream Work: The South Branch Little Wolf River is a recognized trout stream; however a warm water fishery is present at the bridge location. In order to protect migrating or spawning fish, and potentially developing fish eggs, there can be no instream work from March 1 through June 15. Invasive Species and Viral Hemorrhagic Septicemia: Adequate precautions should be taken to prevent transporting or introducing invasive species and viruses via construction equipment, as provided under chapter NR 40 Wis. Adm. Code. Any equipment coming into contact with surface waters must be properly cleaned and disinfected to address the spread of invasive species and viruses. Special provisions must require contractors to implement the following measures before and after mobilizing in-water equipment to prevent the spread of VHS, Zebra Mussel, and other invasive species. Contractors must follow *STSP 107-055 Environmental Protection, Aquatic Exotic Species Control*, or protocol found here: http://dnr.wi.gov/topic/fishing/documents/vhs/disinfection_protocols.pdf. The Construction Project Engineer will assure fulfillment of the above commitments. Floodplains: The project is within the 100-year floodplain; however, the work will not negatively impact it. 404 Permit: Because of the in-stream riprap placement, a 404 permit will be applied for. Any required mitigation will be completed. Additionally, a 401 Water Quality Certification will be obtained prior to construction. The Design Engineer will ensure fulfillment of this commitment.
Lakes or other Open Water	No commitments required.
Groundwater, Wells and Springs	No commitments required.
Upland Wildlife and Habitat	No commitments required.
Coastal Zones	Not applicable.
Threatened and Endangered Species	Wood and Blanding's Turtles: Prior to construction, the project limits must be protected with exclusionary fencing and surveyed for turtles. Any turtles found within the project limits must be safely relocated beyond the construction zone in the direction of travel and documented. Pugnose Shiner: The combined efforts of in-stream timeout dates, isolating the construction zone, and properly maintained erosion control will be sufficient protection for the Pugnose Shiner. The Construction Project Engineer will assure fulfillment of these commitments.
Air Quality	No commitments required.
Construction Stage Sound Quality	No commitments required. WisDOT Standard Specification 107.8(6) and 108.71 will apply. The Construction Project Engineer will assure fulfillment of these commitments.
Traffic Noise	No commitments required.

Hazardous Substances or Contamination	Having completed a Phase 2.5 and Phase 3 investigation for the improvement under consideration, the Region has determine that further investigation of two sites is merited. Those investigations are in the process of being scheduled. The WDNR and possibly affected parties will be notified of the results. The Region will work with all concerned to ensure that the disposition of any lead contamination is resolved to the satisfaction of the WDNR, WisDOT Hazardous Waste Unit, and FHWA before acquisition of any questionable site, and before advertising the project for letting. Proper detailed documentation will be coordinated with WDNR, FHWA, and other parties as needed.
Storm Water	No commitments required.
Erosion Control	• Proper erosion control measures will be used and maintained during all phases of construction. An erosion control implementation plan (ECIP) will be developed by the contractor and submitted to WDNR office 14 days prior to the preconstruction conference. Erosion control devices will be specified on the construction plans. • All substructure work will be isolated from the active stream flow. An isolation method that is most appropriate for the streambed conditions present at the site will be used, and specified how it will be implemented in the ECIP. If necessary, the stream will be by-passed around the isolated work area. Wherever the by-pass discharges, erosion control devices will be employed that prevent soil scouring. • All demolition material from this project inadvertently falling onto the bed and banks of these waterways, and associated wetlands, will be removed as soon as possible. Disposal of waste or excess materials in floodplains, wetlands, or waterways is not permitted. • If erosion mat is used along stream banks, biodegradable non-netted mat will be used (e.g. Class I Type A Urban, Class I Type B Urban, or Class II Type C). Fine mesh matting will be avoided that is tied or bonded at the mesh intersection such that the openings in the mesh are fixed in size. • All temporary stock piles will be in an upland location and protected with erosion control measures (e.g. silt fence, rock filter-bag berm, etc.). Materials will not be stockpiled in wetlands, waterways, or floodplains. • No equipment will be operated on the bed or banks of these waterways except for within the isolated work area. • If dewatering is required for any reason, the water will be pumped into a properly selected and sized dewatering basin before the clean/filtered water is allowed to enter any waterway or wetland. The basin will remove suspended solids and contaminants to the maximum extent practicable. A properly designed and constructed dewatering basin will take into consideration maximum pumping volume (gpm or cfs) and the sedimentation rate for soils to be encountered. Dewatering technique will not be housed in a wetland. • The removal of vegetative cover and exposure of bare ground will be restricted to the minimum amounts necessary to complete construction. Restoration of disturbed soils will take place as soon as conditions permit. If sufficient vegetative cover will not be achieved because of late season construction, the site is properly winterized. • After the site achieves sufficient vegetative cover (i.e. greater than 70% density), all temporary erosion control measures will be removed and disposed of properly. • Riprap to be placed at bridge abutments as detailed on structure plans.

	The Construction Project Engineer will assure fulfillment of these commitments.
Other: Funding	Both project design and construction are anticipated to be constructed only with state and local funding.

ATTACHMENT 11

PUBLIC INVOLVEMENT DOCUMENTATION

LOCAL OFFICIALS MEETING *MINUTES*

Date	December 19, 2017
Project I.D.	6270-00-04
Title	V Iola, Main Street S Br Little Wolf, B-68-29
Highway	WIS 49
County	Waupaca County

1. Introductions – *See attendance sheet*

2. Project Description

3. Need
   a. Structurally deficient masonry arch

4. Purpose
   a. Maintain WIS 49 by eliminating structural and functional deficiencies of existing structure

5. Proposed Improvements
   a. Replace arch with new bridge or culvert
      i. *Beth explained the three structure types that are being considered. Conceptual drawings of each were shared with the group. The village did not like the look of the box culvert. The arch was their favorite regarding how it looks, but they understood the additional cost factors into the selection. Cost, right of way, and environmental impacts will all be considered in determining the best structure for this location.*
   b. Maintain existing roadway width
      i. Village agreed and were aware of the extra cost that they would incur for the additional width
   c. Replace sidewalk on east and west side, and add pedestrian crossing north of structure
      i. Village liked the pedestrian crossing
   d. Resurface asphalt from proposed structure to WIS 161
   e. *Proposed structure may affect pedestrian bridge. That won't be known until structure design is further along.*
      i. The village would like a combination railing. It was explained that the cost and future maintenance for any of the six combination railings would be covered by state/federal funds. The village preferred the railing with the curved arches in it. Tentatively show C3 railing.
      ii. *It was explained that concrete formliners and stain can be used on the concrete parapets and wingwalls, but the installation cost and future maintenance would be the*

responsibility of the village. The estimated cost of using formliners with multi-colored stain is $10,000 - $12,000. The village would like to do a field stone look with multi-colored stain. Some individuals expressed a desire to use the formliners on the inside of the parapets, but Beth explained that WisDOT considers that a snag hazard in crash situations. This should be verified with WisDOT BOS because the railing is on the sidewalk not next to the travel lane.

6. Proposed Traffic Control
    a. Detour – *traffic will be detoured because the existing structure is not adequate to remove half at a time and maintain traffic on STH 49.Village was in agreement that traffic should be detoured. Would like the project to start after the car show in July.*
    b. Route To Be Determined
        i. The village would prefer to keep STH 49 traffic coming through the village instead of detouring traffic on state highways. AECOM will evaluate the turning movements and stop conditions at intersections and prepare a detour tech memo, but the route desired is State Street, Townline Road, and STH 161. An agreement will need to be prepared between the state and village regarding the local detour route.
        ii. The school district is not concerned about busses using alternate routes.

7. Utilities
    a. Water main on south side may be in conflict
    b. Gas may be in conflict
    c. Power pole with street light likely in conflict
    d. Ryan mentioned the storm sewer outfall at the southeast corner of the bridge may need to be modified due to the proposed structure and wingwall. The village indicated they have seen children climb in this pipe and a pipe grate may be appropriate.
    e. The village is interested in extending street lighting from Depot Street to STH 161. Roxann indicated the existing state/municipal agreement indicates that standard street lighting installed with the project would be 50/50 state/local funding. If the village would like decorative lighting other than the standard, they would be responsible for the upgrade cost. The village would like the lights to be somewhat similar to the existing lights that were installed around 1960.

8. Right of Way
    a. The existing right of way is wide on the west side, but very tight on the east side. There may be easements and/or acquisition required to accommodate the new structure and riprap.
        i. The Village indicated the current land owners should be good to work with for the acquisition.

9. Public Outreach
    a. A public involvement meeting is planned for January 2018. This will be held at the village hall. A date will need to be determined.

b. Ryan mentioned that John Bertelson, Jr. with the Iola Lake District had indicated an interest in salvaging the stone from the existing structure. The meeting attendees were not real interested in this idea, but the conversation can be ongoing. It can be easily specified to require the contractor to salvage the rock to the village or others if there is interest.

10. Current Project schedule
    a. Complete Final Design – November 1, 2019
    b. Construction – 2020
        i. Construction is anticipated to be 2-3 months long. It will need to start after the Iola Car Show in July. We may want to consider a completion date contract to set an end date for the construction.

11. Questions/Comments/Concerns
    a. The attendees indicated that the village land on the west side was donated and did not use federal funds to purchase. The legion representative said the legion purchased the property on the east side without federal funds.
    b. There is a gravel driveway into the Legion park close to the bridge. A curb cut is not needed here, but the sidewalk should be poured thicker to accommodate occasional maintenance vehicles.
    c. The Legion indicated that silt builds up between the bridge and dam. The Legion recently obtained DNR approval and dredged the river in that area. The Legion is considering adding riprap along the south river bank between the dam and bridge.
    d. The stone wall running parallel on the west side of STH 49 is likely buried in the slope.
    e. The state/municipal agreement will be updated once the structure design is further along and the aesthetic costs can be more accurately estimated.
    f. Separate from this project, Joel and Roxann will work together regarding crosswalks across STH 161 at Townline Road and Pine Street.

For more information contact:

Wendy Arneson

WisDOT Project Manager

(715) 421-7391

wendy.arneson@dot.wi.gov

Ryan Barz

AECOM Project Manager

(715)342-3012

ryan.barz@aecom.com

Memorandum

Date:	March 5, 2018
To:	File
From:	Ryan Barz, AECOM
Subject:	**Public Involvement Meeting Minutes** **Project I.D. 6270-00-04** **STH 49** **Village of Iola, Main Street** **WIS 49 over the South Branch Little Wolf River** **Waupaca County, Wisconsin** **AECOM Project No. 60548152**
Distribution:	Preston Bohn – North Central Region DOT Project Leader

On Tuesday, February 6, 2018, a public information meeting was held at the Iola Community Center, 180 S. Main Street, Iola, Wisconsin. The meeting was held from 5:30 p.m. to 7:00 p.m. in an open house format with a presentation at 5:30 p.m. The purpose of the meeting was to update the public on the project, present information about the preliminary design of the proposed improvements, and to receive public comments.

The proposed scope includes removing the existing bridge and replacing it with a structure that meets current design and safety standards. The new bridge includes two 12-foot travel lanes, decorative railing, on-street parking, sidewalk on both sides of the road, and curb and gutter.

The project includes resurfacing the approaches on either side of the bridge. Aesthetic improvements (concrete form liners and staining) will be included and funded locally.

The meeting was announced through a news release and in a letter to adjacent property owners. Approximately 10 people attended the meeting.

A presentation was given by AECOM Ryan Barz and WisDOT Roxann Cuty. Exhibits included a handout with a summary of the need for the project and proposed improvements, a full-size aerial showing the proposed improvements, and map of the proposed detour route. The project displays were available for people to review and the design team was available to answer questions. Written comment forms were also available for people to record and submit their questions and/or concerns about the project.

A summary of the comments received are listed below:

VERBAL COMMENTS

1. Will the roadway profile be raised? – No, the roadway profile will be very similar to existing.
2. What will be the limits of the road closure? – The closure will be north of the gas station entrance and just south of the intersection with WIS 161.
3. The mill has events that use on street parking. Can the limits be modified to maintain more on street parking? – The construction limits are required to construct the project and will likely not be able to be further reduced.
4. What is the life expectancy of the proposed bridge? – The life expectancy of the replacement structure is 75 years with routine maintenance.
5. Will the existing bridge last until the proposed 2020 construction? – Yes.
6. Could the proposed structure be an arch instead? – An arch was considered, but the slab span bridge was selected based on cost, maintenance requirements, environmental impacts, and input from village officials.
7. What are the village responsibilities regarding aesthetics? - The cost for the decorative metal railing is considered part of a standard bridge railing and will be no extra cost to the Village. The formliner pattern on the outside of the bridge and the staining will be the responsibility of the Village. The maintenance that accompanies the formliner pattern will also be the responsibility of the Village. The Bureau of Structures is working with the Village to find a stone pattern that may possibly be used on the inside of the rail as well as the outside.
8. What is a formliner? – A formliner is the pattern that is applied to the concrete that makes the finished product look like stone, brick, or something similar.
9. The mill property owners asked if field stone be used for riprap around the bridge instead of fractured riprap? – Rounded field stone would not properly protect the river bank and bridge like the fractured riprap does. The rounded stone would be more likely to wash down stream. This would likely not be allowed.
10. Will the adjacent WIS 49 project from Scandinavia to Iola be constructed at the same time in 2020? – WisDOT was to investigate as project schedules are changing.
11. Will the pipe that conveys water from the pond past the mill be affected by the project – No it will not.
12. Will water flow at the dam and bridge be affected? – No, flow will be maintained at the bridge during construction.
13. The mill property owners commented they did not like the formliners presented as options and wanted to know if it was possible to make it look more like the current structure. – The aesthetics are up to the Village Board to decide. It was suggested that any aesthetics input be taken to the Village Board.

WRITTEN COMMENTS

1. None.