

OPERATIONAL PLANNING MEETING AGENDA  
May 11, 2016

Project ID 4310-06-00/71  
T Manitowoc Rapids, CTH R  
Manitowoc River Bridge & Approaches  
Manitowoc County

**I. Introduction:**

- A. Ayres Associates: Troy Robillard, Phil Verville III and Chris McMahon.
- B. 3 Party Contract with Ayres Associates, WisDOT, and Manitowoc County

**II. Reason for OPM**

- A. Present options and recommendations to the key stakeholders and determine the selected alternative to complete preliminary plans (a working meeting).
- B. Address the following issues:
  - Profile grade line
  - Sidewalk
  - Utilities
  - Structure length, width, and type
  - Structure railing/parapet type
  - Environmental issues
  - Flood History
  - Wetlands
  - Schedule

**III. Project Description**

- A. Background
  - Federal Bridge Replacement Program (SR=13.6 out of 100)
  - Funding
    - 80% Federal funding
    - 20% Local (Manitowoc County)
  - Adjacent County project
- B. Schedule
  - PS& E Submittal: May 1, 2018
  - Construction Let: November 13, 2018
  - Anticipated Construction: Summer 2019
  - PIM anticipated in Fall 2016
- C. Traffic
  - Construction year: ADT: 12,100
  - Design year: ADT: 14,000

D. Utilities:

- Large utility poles on north side replaced a few years ago  
Comcast has all their facilities overhead on the west side of Rapids Road. They are attached to the WPS Poles. They also have Fiber Optic lines attached to the poles. Everything they have is overhead.
- Underground gas crosses under existing bridge in river  
WPS will be contacted for potential gas facility conflicts
- Watermain and sanitary sewer facilities along Archer Street and North Rapids Frontage Road  
MPU will be contacted for any watermain relocations. The City of Manitowoc gave Ayres existing maps for sanitary and storm sewer.
- Others?

E. Right of Way:

- The existing right-of-way width varies from 97 feet to 220 feet.
- New right of way maybe needed dependent on alternatives.  
Robert E. Lee will be conducting title searches for properties south of the bridge and will pass on copies to Ayres. They can also get the title searches for the bridge area.

F. Environmental Issues:

- Wetland delineation completed by Robert E Lee.  
Report to be forwarded to WDNR.
- Hazmat Report – Unimart Contamination
- Possible environmental concerns could include:
  - Migratory birds
  - Northern Long Eared Bat  
NHI review revealed no known bats in the area when they looked at the site in January.
  - Fish restrictions  
March 1<sup>st</sup> to June 30<sup>th</sup>. The area is a spawning area for small mouth bass and pike.
  - Wetland impacts  
Alternatives drawn up need to show wetland impacts for each and submitted to WDNR for review.

The DNR notice a hit for a state threatened endangered species in the Manitowoc River, the eclipse mussel. Matt is going to see if he can schedule the DNR to do a mussel survey in the segment of the Manitowoc River prior to construction. If the WDNR cannot do the mussel survey, WDOT might have to contract to have it done.

Small boats use the river; therefore, navigational signs will be required during construction. The signing will probably consist of buoys to guide boat traffic through the area.

In northeast quadrant of the Broadway Street/CTH R intersection, is the Ice Age National Scenic Trail. The Trail is managed by a partnership among the National Park Service (NPS), the Wisconsin Department of Natural Resources and the Ice Age Trail Alliance. Due to funding used to construct the trail, the trail is considered Section 6f lands. Any impact would need to be coordinated with the WDNR and possible the NPS if the impacts are adverse.

The mill race to the south of the bridge will remain open.

Request for initial project review letter from WDNR needs to detail what is needed for the federally funded bridge project and the adjacent county roadway project. A separate letter for both projects are needed. One environmental document covering the entire corridor will be prepared.

G. Roadway Geometry:

- Typical Section;

**Present:**

An asphalt pavement urban cross section with sidewalk on both sides widening from two lanes to four lanes

**Proposed:**

4 – 12 foot lanes, 30-inch curb & gutter, 10 foot multi-use trail on east side

Prefer a 5-foot minimum terrace between the multi-use trail and the face of the curb.

**Proposed pavement structure:** Will confirm pavement structure once soil borings are obtained. City or County preferred typical section?

After soil borings are complete, Ayres will put together a recommend asphalt and concrete pavement section, based on the soils information. The City and County will then discuss estimated costs for the different pavement sections, and which one will be recommended for the bridge and roadway projects.

The City of Manitowoc prefers 8" to 9" of doweled concrete pavement.

- Horizontal alignment
  - 40 MPH design speed, 35 MPH posted speed.
    - Factors to consider:
      - Impacts to North Rapids Frontage Road and utility impacts.  
The closure of Archer Street was discussed based on of safety concerns. Guardrail will be needed to protect the blunt end of the barrier on the bridge that separates the roadway from the multi-use trail. The guardrail would inhibit the intersection sight distance for vehicles turning onto CTH R. The City of Manitowoc is open to discussions about closing off Archer Street. An additional PIM needs to be held at the Manitowoc County Highway Department to gather input from adjacent property owners and emergency services before the City will recommend how to proceed. Ayres to include in the PIM letter about the proposed option of closing of Archer Street.  
  
The additional PIM needs to be scheduled early to get this decision made so that the plans can move forward.
    - Bridge is currently along a horizontal curve  
A matrix was presented listing the positive and negatives for different alignments. See attached.

- Superelevation extends north of the project limits  
MC, County and City agreed that CTH R should be normal crown for the 35 mph speed, and the north project limits should extend to the south side of the Broadway Street intersection. Ayres to prepare an approach justification report, to be approved by WisDOT for this additional approach length. Ayres will need to gather additional topographic survey along CTH R, between Archer Street and Broadway Street.
- Proposed Vertical Profile
  - Proposed profile lowered on south side to minimize fill material needed, wetland impacts, and right of way impacts.

#### H. Structure:

- Existing: 390-foot long four span steel deck girder curved bridge, with a clear roadway width of 30 feet. The bridge is skewed 50 degrees. The bridge was built in 1956 and overlaid with concrete in 1981. It has a sufficiency rating of 13.6.
- The site is located in a detailed Flood Insurance Study (FIS) area. The 100-year design discharge flow is 14,000 cfs and a Drainage Area of 548 square miles. The bridge has a waterway area of 2,566 SF and a velocity of 5.46 fps during the 100-year storm event.
- The navigational clearance of the bridge is 11.95-feet. The clearance over the 100-year storm event is 3.15-feet.
- It is anticipated that a 3-span prestressed concrete girder curved bridge will be used at this site.

A 72W-Inch girder would allow a bridge length up to 450-feet and would work on the proposed profile. However, it would lower the navigational clearance to approximately 11-feet, which should be acceptable at this site.

A 54W-Inch girder would allow a bridge length up to 396-feet. The profile could also be lowered more, which would help the intersection to the north. However, this bridge would also lower the navigational clearance to approximately 11-feet, which should be acceptable at this site.

- Will try to get the shortest and shallowest bridge to work at the site.
- A causeway will likely be needed to construct the new structure.
- A cofferdam will be required for the north pier.

#### IV. Questions

- Contact for soil borings
- Highway Commissioner Marc Holsen, (920) 683 4353
- History of flooding at this site  
After the dam was taken out in the 1980s there has not been any flooding problems.
- Preferred typical section  
Four 12-foot lanes, 30-inch curb & gutter, 5 to 10-foot terrace, 10-foot multiuse trail.

- Preferred alignment/impacts/project limits  
Options showing more detailed cost and impacts to be provided to County after the PIM about the possibility of closing off Archer Street.
- Archer Street access maintained or closed.
- Where to end multi-use trail and transition back to sidewalk.  
End trail at south east quadrant of the Broadway Street intersection
- Limits of sidewalk location on west side and cross walk location to get from west side to multi-use trail on east side  
Concurrence on the sidewalk realignment that is proposed on the west side.

The City of Manitowoc might want some storm sewer crossings put in on CTH R during construction.

City will look into lighting for the bridge and approaches. Conduit will be put in the bridge for possible future lighting if lighting is not included in the project.