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MINUTES

Henderson Flood Feasibility Study - PMT #3
Wednesday, February 30, 2017
1:00 p.m.
Henderson City Offices

Meeting Chair: Mark Benson
Minutes by: Bob Rogers
Present: See attached PMT meeting roster

Meeting Attendees: See attached meeting roster

- I. Welcome / Introductions
- II. Follow up from PMT Meeting #2
 - A. New proposed 10-ton "Better Detour Routes"
 - **Bob presented a revised figure depicting the "Improved Detour Routes". Sibley County provided costs of approximately \$450K/mi. At the meeting MnDOT indicated that TH 19 could be approximately \$4.5M/mi for a full reconstruction in some areas. SEH to review information provided by MnDOT and determine average cost per mile for 10 ton upgrade.**
 - B. Roadway shutdown/clean-up costs
 - **Updated closure costs were received from MnDOT.**
 - C. Traffic projections update
 - **Based on feedback from the previous PMT meeting, traffic projections were adjusted to account for closures of TH 93 in Le Sueur.**
 - D. Flood closures/modelling update
 - **Graham provided an update of the cost of closure calculations when taking into consideration of vehicle miles traveled and vehicle hours traveled for the study area under the various closure scenarios. The PMT discussed how the user costs are calculated on a per/day of closure. The final daily cost of closures when all three routes are closed is \$87,000.**
- III. Technical Analysis Update
 - A. Flood Elevations Map
 - **Rachel discussed how the flood elevations have been updated based on additional data and a refined methodology that follows the 2010 river crest elevations and SRH-2D modeling. The future build condition has been set with the roadway shoulder construction being 1-foot above the 2010 flood elevations.**
 - B. Roadway Design Alternatives
 - **A set of roadway typical sections was presented for each of the three roadway build alternatives (e.g. TH 19, TH 93, and CSAH 6).**
 - **The potential impacts associated with raising the Highway 93 roadway were presented along with a preliminary cost estimate, which is subject to change with additional design refinements that are expected in the coming weeks.**
 - **Rachel explained that the TH 93 option did show a potential stage increase in the base flood elevations based on the HECRAS 1-D model, which focuses more on river**

conveyance. Nikki indicated that the 2-D model (looking at conveyance and storage) is currently being run for TH 93. The TH 19 & CSAH 6 options will also be modeled.

- Additional coordination with resource agencies will occur to discuss potential mitigation techniques if a rise is identified.
- Nikki indicated that the 2D river model has been updated in terms of existing conditions (e.g. areas previously farmed, which are now forested). The model was calibrated to match the 2010 flood event.
- A regulatory review and cost estimate for potential mitigations of each of the build alternatives will be discussed with the MNDNR (and other resources agencies) and the estimated costs will be included in the benefit/cost analysis.
- The PMT discussed how the stop-wall closures could be eliminated under each of the build alternatives and the potential impacts to surrounding residential properties. Rachel indicated that modification to the USACE levy system may require extensive analysis to show that the proposed roadway improvements would not adversely any portion of the levy system.
- Potential improvements to either TH 19 or TH 93 would be led by MnDOT, whereas Sibley County would likely lead any improvements along CSAH 6.
- Nikki indicated that replace bridges (e.g. Rush River bridge on TH 93 and High Island Creek bridge on CSAH 6) should be modified to assume a 2:1 slope from the ground/river bottom elevation with 2' vertical abutments, which would lengthen the existing bridge open whereby providing a widened waterway opening.
- The PMT discussed the TH 19 bridge option that included an approximately 2,500' bridge length with 100' pier spacing. Across the main river channel, the bottom of the bridge beam set 1' above the 2010 river crest elevation. Further review of the east tie-in location will be reviewed to assess potential impacts on the RSS slope from the recent railroad bridge replacement project.

C. Benefit-Cost (B/C) Analysis

- Graham provided a summary of the benefit-cost methodology used in the analysis. The CSAH 6 option has the lowest costs, but also the lowest benefits to system users. The TH 19 option has the highest costs and highest benefits. TH 93 has a cost similar to CSAH 6, but much higher benefits for users. Therefore, the preliminary B/C ratios indicate that TH 93 has the most favorable B/C followed by TH 19 with CSAH 6 having the lowest B/C ratio.

IV. Next Steps

- Agency coordination with MNDNR, USFWS, USACE, High Island Watershed Management Organization.
- Additional agency coordination will be occurring on potential impacts
- SEH will update all materials, including the modeling results, and send out a .pdf packet to PMT members to review
- Next PMT Meeting is proposed to be Tuesday, April 11th at 2:00 p.m.
- An open house meeting is being targeted for Wednesday, May 17th. The details of the meeting time/location will be defined in the coming weeks with input from Henderson staff.
- Rachel provided an update on the Sibley County CR 5/CR6 intersection project including ongoing agency coordination and design options.

V. Next PMT Meeting

- Tuesday, April 11th at 2:00 in Henderson

SEH believes that this document accurately reflects the business transacted during the meeting. If any attendee believes that there are any inconsistencies, omissions or errors in the minutes, they should notify the writer at once. Unless objections are raised within seven (7) days, we will consider this account accurate and acceptable to all.

If there are errors contained in this document, or if relevant information has been omitted, please contact Mark Benson, SEH Project Manager at 651-490-2194.