
Meeting Topic: Coordination with National Park Service for Culvert Construction

Date: Tuesday, February 11, 2020, 3:00 p.m. to 4:30 p.m. CST

Location: NICTD Office at Dune Park Station

Call-in Option: 712 451-0484 Passcode 814659

Attendees: NICTD: Nicole Barker, Brianna Anderson

Lake Shore Engineering: Greg Lorenzi

National Park Service: Daniel Mason, Agustin Perez Maldonado, Daniel Plath, Paul Labovitz

HDR: Richard Christopher, Janice Reid

Patrick Engineering: Glen Campbell, Karie Koehneke

AECOM: Donald Yetter

This meeting was held to communicate and coordinate details with the National Park Service (NPS) regarding culvert construction that will need to be performed as part of NICTD's Double Track Project (Project) on the segment between the US 12 grade crossing west of Michigan City and Mineral Spring Road. The following items were discussed:

1. During the previously completed preliminary design phase for the Project, the larger culverts were hydraulically modeled with the upstream culverts for US 12 on their north side and the downstream ones on their south side being included in the analysis. Patrick Engineering will provide the NPS the hydraulic and hydrology study/model and drainage basis of design report.
2. Limited amounts of riprap will need to be provided for some of the replacement culvert systems that will be wider than the existing ones being replaced. The NPS indicated that generally the use of riprap for streambank stabilization will be acceptable. They noted that with the high level of iron in the water, the riprap provides for some calcification.
3. For some work locations adjacent to NPS land, short-duration temporary construction activities on small portions of NPS land immediately adjacent to NICTD's right-of-way line will be needed. That effort will typically be needed for re-grading of ditches, constructing culverts up to NICTD's right-of-way line, and/or waterway realignment and/or widening to accommodate replacement culverts having slightly offset alignments and/or wider footprints compared to the ones being replaced. The NPS indicated that work would only require a Special Use permit from the NPS (in addition to the requisite 404, 401 and state permits).
4. The open-cut excavation method during short-duration track outages is being planned for the culvert construction on this Project. The AECOM Final Design Team anticipates that six to seven weekends will be required to perform all the Project's culvert construction, with that work being completed during the first year of construction. Although this construction method will impact NICTD passengers during those weekends, it will minimize the duration of in-stream work and the overall time required to complete culvert construction. It will also minimize construction impacts to adjacent properties.
5. There may be the need for an agreement between NICTD and the NPS to allow access to maintain culverts that extend to NICTD's property line. NICTD will check whether a provision for this may already exist or if one needs to be obtained as part of the Project.
6. NICTD will require an environmental inspector to be on site during any times that construction activities are being performed near areas of environmental resources.
7. The work of replacing or modifying each of the culverts was presented and discussed. Following is a summary of the information that was presented for each culvert as identified by its milepost

(MP) location:

- a. MP 35.98 replace 18" culvert with one 24" steel pipe under US 12 with no impact to NPS land
- b. MP 36.20 at Kintzele Ditch replace one 75" corrugated metal pipe (CMP) with three 84" steel pipes. The new culvert system will be built slightly west of the existing one. The work will have a minimal effect on the waterway velocity with the existing 10-year storm flow being 1.25 fps, and the proposed computed to be 1.29 fps
- c. MP 37.54 at Brown's Ditch work here will consist of replacing the 12'x12' box culvert's headways and repairing its wingwalls with no impact to NPS land.
- d. MP 38.20 one 24" existing will be replaced by three 36" steel pipes
- e. MP 38.57- existing 18" corrugated metal pipe (CMP) will be replaced by three 36" steel pipes. There is no adjacent NPS land at this location.
- f. MP 39.48 an existing 48" CMP will be replaced with one 48" steel pipe. Temporary access on NPS land will be needed for realigning the stream with the barrel of the new culvert.
- g. MP 39.93 at Wieland Ditch - an existing 50" X 74" concrete box culvert that telescopes down to a 39" CMP at its upstream end will be replaced by two 84" pipe. The invert of the new larger diameter pipes will be slightly lower than the existing system, however flow line will remain the same with have little to no effect on the waterway downstream at the Calumet Trail and therefore no impact on nearby NPS wetland restoration. Limited temporary construction will be required on NPS land for stream realignment and placement of rip rap. At this location, there may be habitat for endangered plant species. NICTD suggested that mitigation measures if required for potential impacts to these resources here if impacted by the project could include harvesting of seeds and replanting within the NPS land.
- h. MP 40.8 one 18" pipe will be replaced by three 24" pipes /no impact to NPS
- i. MP 41.4 existing 15" CMP will be replaced by three 36" pipes. Limited construction may be needed here on NPS property for stream re-alignment grading. There is the potential for there to be some threatened and endangered plants in this area (pyrola, et al.). Patrick Engineering will evaluate how to minimize the potential impacts to these environmental resources if they are found to exist here.
- j. MP 41.74 existing 24" CMP will be replaced by three 24" steel pipes/ no work anticipated on NPS. This location is just to the east of the NICTD's Furnessville substation.
- k. MP 42.0 existing 15" CMP will be replaced by three 24" steel pipes. Limited construction may be needed here on NPS property for stream re-alignment grading.
- l. MP 42.39 one 18" culvert will be replaced by three 24" pipes with stream re-alignment grading required on the north side of NICTD's right-of-way line.
- m. MP 42.6 an 84" CMP will be replaced by two 84" steel pipes. stream realigning will be required on to better align the new culvert system with the upstream culvert for US 12 and the downstream one for the Calumet Trail.
- n. MP 43.22 existing 27" HDPE culvert will be replaced by two 48" steel pipes. Although a second track is not being built at this location of the Double Track Project, the upgraded culvert system here will accommodate future climate change.
- o. MP 43.52 existing 52" steel pipe will be replaced by a 60" steel pipe with energy dissipation
- p. MP 43.92 no changes to this culvert
- q. MP 44.06 24" CPM - no change to this culvert
- r. MP 44.33 existing 18" CMP will be replaced by three 36" steel pipes. Limited construction will be needed here on NPS property for stream re-alignment grading and placement of rip-rap.
- s. MP 44.51 extend three existing 7' X 4' box culverts to NICTD's south right-of-way line / NPS

property line. There will be a need to perform pumping during this work because these culverts are always partially submerged.

- t. MP 44.65 existing 18" CMP will be replaced by two 24" steel pipes
- u. MP 44.72 existing 18" CMP will be replaced by two 36" steel pipes
- v. MP 44.86 one existing 24" pipe will be replaced by three 24" pipes

Patrick Engineering will investigate whether there is any change in the flow line for the previous three culverts.

8. At Milepost 47.41 just west of the proposed bridge over the NS Railroad tracks, the track plans developed during the preliminary engineering phase of the Project provide for a retaining wall to be built along NICTD's south right-of-way line at the base of the widened embankment for the added new track there. It was assumed that the adjacent land is NPS property and providing the retaining wall would avoid impacts to that land. In discussing this arrangement, the NPS noted this adjacent land may not belong to them. The NPS and NICTD will research the ownership status of this property further.
9. Patrick Engineering will provide the NPS a narrative and detailed map showing the locations of each of the culverts discussed during this meeting to promote their understanding, review and providing of any follow-up comments regarding them. That document will be provided by February 21 and will contain the following:
 - Each culvert, identified by Milepost
 - Indication for each culvert whether its was included in the HEC RAS hydraulic modeling
 - If a Special Use permit from the NPS is anticipated due to short-term construction work being required on its land adjacent to NICTD right-of-way
 - "In progress" 60% plans, where available, or preliminary plan sheets, indicating areas of proposed riprap. The quantities of rip rap are currently being evaluated as part of the 60% design of the Project that will be completed by early Spring 2020.