

LETTER TO CONSTRUCTION

Project 1550-21-71

USH 63

Cumberland – Spooner

South County Line to Woodyard Road

Washburn County

The purpose of this resurfacing project is to preserve the roadway for another 12 – 15 years, until the next improvement project on this segment of USH 63. At that time it is anticipated that the need for a northbound passing lane will be re-evaluated, the mainline shoulders will be widened to 10 feet, the cut and fill slopes will be graded and flattened, and all of the culverts will be extended or replaced.

The following information describes work shown in the plan and proposal that was not fully investigated during the design process and that needs to be reviewed and confirmed or revised during construction. Information is also provided about post letting plan revisions, reasons for differences in the scope of culvert work shown in the plan and recommended in the culvert inspection reports, and need to create a project web site and notify affected interests when notification by the contractor is not required by the contract.

- The existing 24" culvert at Sta. 473+33 was not located during the field survey for this project. Its right end was found by the culvert inspector on 11-1-13, but was not located by station/offset or coordinates at that time. The station shown on the inspection report is from the as-built plan 1550-03-72, built in 1989, and from the culvert inventory listing for this segment of USH 63. The plan stationing for this culvert was calculated based on the centerline distance from the south county line to the culvert shown in the as-built plan for Project F.A.P. NO. 29 RE-OP, built in 1938, and was rounded down to the nearest foot. The stationing for this culvert was checked based on the centerline distance from the south county line to the culvert shown in the as-built plan for Project 1555-1-71, built in 1973, and was determined to be Sta. 473+28, which was rounded up to the nearest foot. Current and as-built plan sheets showing calculations for this culvert's stationing are on the CD under the Existing_Culvert_Info_Correspondence folder. The station location of this culvert needs to be field verified.
- The elevation of the existing 24" culvert at Sta. 473+33 was estimated based on what is shown for this culvert in the cross sections in the as-built plan for Project F.A.P. NO. 29 RE-OP. The invert elevation of the proposed 36" RCCP is intended to be at the same elevation as the invert of the existing culvert. MGS Guardrail 3 is specified on both sides of the roadway at this location. The post embedment for standard installation should be above the top of the proposed 36" RCCP, but this needs to be field verified. A post for MGS Guardrail 3 K located directly above the proposed 36" RCCP would probably be driven into its top, and the proposed 36" RCCP may not fit in between two MGS Guardrail 3 K posts. This is why a 50' plan length (43.75' revised length) of MGS Guardrail 3 is specified on the RT side of the roadway at the

culvert replacement location, in between two runs of MGS Guardrail 3 K. A cross section sheet from the as-built plan for Project F.A.P. NO. 29 RE-OP showing the plan elevation of this culvert is on the CD under the Existing_Culvert_Info_Correspondence folder.

- The station locations of the posts in the proposed MGS Guardrail installation at Chain Lake per the plan on the LT side and revised from the plan on the RT side are shown in an Excel file and a .pdf file on the CD in the MGS_Guardrail folder. The changes indicated in these files are that the MGS Guardrail 3 K limits shown on the plan are revised to 472+06.25 – 473+00 RT and 473+43.75 - 475+12.5 RT so that the post spacing and beam splice locations will work out correctly at the transitions between MGS Guardrail 3 and MGS Guardrail 3 K in accordance with the Half Post Spacing (HS) and Half Post Spacing With Longer Posts (K) front view detail on SDD 14 B 42-3b. These files also indicate that at the location of the proposed 36" RCCP at Sta. 473+33 the post locations of the MGS Guardrail 3 are directly across from each other on the opposite sides of the roadway. If possible it would probably be preferable that the proposed 36" RCCP be centered between the MGS Guardrail posts, so that the culvert's centerline will be located at 473+34.375, slightly north of the plan location. If the existing culvert is found at a location other than the plan location where MGS Guardrail 3 will be located on both sides of the roadway, it would probably be preferable that the proposed 36" RCCP be centered between the MGS Guardrail posts if possible. If the existing culvert is found at a location where there will be MGS Guardrail 3 K on the RT side of the roadway, then the limits of the MGS Guardrail 3 K can be moved north or south so that the MGS Guardrail 3 is extended to the culvert location, as long as 2' of flat grading can be provided behind the posts without impacting or increasing impact on the adjacent wetland. Changes to the proposed MGS Guardrail layout and grading that increase impacts to the adjacent wetland would require coordination with the DNR and the ACOE. If the proposed 36" RCCP cannot be installed without conflicting with proposed guardrail post(s), then the conflicting post(s) will need to be omitted and posts driven at half post spacing on either side of the omitted post(s), per the Post Driving for Continuous Underground Obstruction detail on SDD 14 B 42-3c. When the existing beamguard is reinstalled after the installation of the proposed 36" RCCP, conflicting post(s) may need to be omitted and posts driven at half post spacing on either side of the omitted post(s) in accordance with the Post Driving for Continuous Underground Obstruction detail on SDD 14 B 15-8c, on one or both sides of the roadway.
- At the proposed reconstructed field entrance at Sta. 484+85.8 LT, the south end of the treeline shown on the raster (aerial photo) image is approximately 9 feet north of the south end of the treeline shown on the plan mapping as measured about 2 feet inside of the existing right-of-way line when both the raster image and the mapping are attached to the Microstation base file (see plan view sheet on the CD in the PropertyOwners_AffectedInterests folder). Based on the raster image, it appears that vehicles entering and exiting the proposed reconstructed field entrance will be able to get past the south end of the treeline between the treeline and the wetland to access the adjacent property, as long as some clearing and grubbing is done within the existing right-of-way. Based on the plan mapping, it appears trees along and just outside the existing right-of-way line may prevent vehicles entering and exiting the proposed reconstructed field entrance from accessing the adjacent property without encroaching into the wetland. Based on a Google Maps Street View image of the field entrance from Sep 2008, it appears that the field

entrance as it goes away from the highway passes under the branches of the trees at the south end of the treeline (see the .pdf of this image on the CD in the PropertyOwners_AffectedInterests folder). When the proposed reconstructed field entrance is laid out, verify that the existing clearance between the south end of the treeline and the wetland will be maintained. If this clearance will be reduced, then it may be necessary to obtain a construction permit from the property owner to do the minimum amount of clearing and grubbing outside the existing right-of-way needed to maintain the existing clearance, if the property owner wants to maintain it. If clearing and grubbing outside the existing right-of-way is necessary under a construction permit it should be done working outward from within the existing right-of-way in order to minimize the area of ground disturbance. However, if the proposed reconstructed field entrance will touch down so that vehicles can pass under the branches of the trees as the Sep 2008 Street View image appears to show, then perhaps minimal clearing and grubbing within the existing right-of-way or no clearing and grubbing at all will be sufficient. Note: The proposed geometric layout of the field entrance was designed so its entire width (or most of its width) will touch down on the high ground between the wetland and the roadside ditch to the north as indicated by dtm contours, and so that the AEW of the new culvert under it will end at the wetland edge with a 6:1 sideslope from the culvert end to the edge of the field entrance. By locating the field entrance so the culvert's AEW end will be at the edge of the wetland, it will not be necessary to excavate a ditch between the wetland and the culvert's AEW that could increase the probability of impacting the adjacent FO line. The design intent is to install the new culvert under the proposed reconstructed field entrance without disturbing the FO line.

- It may be necessary to adjust the elevation and length of the proposed cattle pass liner at Sta. 570+67. The existing apron elevations of the cattle pass measured by field survey are approximately 1.5' lower at the left end and 1.8' lower at the right end than the adjacent existing ditch elevations shown on the cross section cut from the dtm existing surface (see plan cross sections). However, note that the inlet flow line elevation of the side culvert at 572+81 RT is approximately 1.25' above the existing apron elevation at the RT end of the cattle pass, with both elevations measured by field survey. A list of existing cross drain culvert elevations, including the cattle pass elevations, and a drawing of the side culvert at 572+81 RT showing its top of pipe elevations, is on the CD in the Existing_Culvert_Info_Correspondence folder.
- Some plan revisions were made after the letting. The plan cross sections at the proposed MGS Guardrail location and at the proposed cattle pass liner location were revised. At both locations the cross sections were revised to be consistent with the proposed shoulder treatment shown on the plan mainline typical finished section and its associated details. At the MGS Guardrail Terminal EAT locations 4" Base Aggregate Dense 1 ¼ - Inch base course was added where the proposed paved shoulder extends more than 6' from the edge of the travel lane. The estimated quantity of additional Base Aggregate Dense 1 ¼ - Inch at all 4 locations combined is 51 Tons (26 CY x 1.5 Tons/CY x 1.3 Shrinkage). Revised earthwork quantities at the proposed MGS Guardrail location were computed. No revised quantities were computed at the proposed cattle pass liner location. The slope stake reports for the proposed MGS Guardrail location and the proposed cattle pass liner location in the Proposed_Cross_Section_Data folder in the Contractor Staking

Packet are based on these revised cross sections. The plan Typical Grading Half Section for MGS Terminals was revised to add the 4" Base Aggregate Dense 1 1/4 - Inch base course mentioned above. A note describing the proposed paved shoulder at the cattle pass liner location was added to the 5% upper layer cross slope Paved Shoulder Detail that is associated with the mainline typical finished section to indicate what is shown on the revised cattle pass liner location cross sections. The Typical Half Section for Temporary Widening for Culvert Replacement was revised to a 4" Base Aggregate Dense 3/4 - Inch driving surface over 4" Base Aggregate Dense 1 1/4 - Inch base course. No revised quantities were computed for this change. The revised cross section sheets, revised typical sections, and revised earthwork quantities for the proposed MGS Guardrail location mentioned in this paragraph are in the Contractor Staking Packet on the CD.

- An item for removing the existing field entrances at 556+17 RT, 556+21 LT, 558+55 RT, and 588+08 LT was missed during design and is not included in the as-let contract. The removal of these field entrances is shown on the plan. A contract modification is needed to add an item for this work. Field entrance removal notification letters to the property owners are on the CD.
- The plan quantity of Roadside Clearing is probably too high. At some locations the 45' from C/L clearing limit is between the edge of the canopy, which is shown as the treeline on the plan mapping, and the tree trunks. Consult with the WisDOT Project Manager on how to measure the Roadside Clearing item.
- Culvert Inspection Reports and Pictures done for this project are on the CD. At some locations the plan culvert work is less than the recommendation shown on the inspection report. The WisDOT Project Manager and WisDOT Designer reviewed the inspection reports and photos at all cross drain culvert locations, and at some locations decided to go with a lesser level of work (generally resetting end sections instead of total replacement) based on the judgment that the existing culverts are in good enough condition to last another 12 – 15 years until the next improvement project on this segment of USH 63. At some locations the inspection report recommends lining the pipe, but WisDOT generally does not line concrete pipes because this does not address voids that may already exist in the backfill above or alongside the pipe that could cave in and cause a sinkhole in the lanes, shoulders, or slopes, even after a liner is installed.
- The new "Brick Yard Rd" Type 2 street sign with arrows called for at Sta. 476+30 RT (Sign Location No. 2-2) in the plan will be within 20' from the back of the proposed MGS Guardrail Terminal EAT, if it is installed at the same location as the existing sign. According to FDM 11-45-2.4.1.2 Fixed Object Placement and EATs, this new sign should not be installed at this location, even if the posts are breakaway. In order to get this sign out of the 75' x 20' area behind the EAT, consider installing it at Sta. 475+50 +/-, 23' – 29.5' RT (minimum offsets). According to FDM 11-45 Attachment 2.22, the working width for standard MGS Guardrail 3 with 2' of flat grading behind the posts is 5.00' measured from the impact face of beam. With the face of beam at 18' RT at this location, the working width extends to 23' RT. It may be a good idea to install the sign at 23.5' – 30' RT, or some other offset as appropriate for the embankment slope at that location, to provide a little extra space for the working width. Moving this sign 80' south of the plan

location will provide northbound traffic with a little more advance notification of the Brickyard Road intersection and locating it behind the standard MGS Guardrail should protect it from errant vehicles, as long as it is outside the working width and the 75' x 20' area mentioned above.

- Chris Ouellette, WisDOT NW Region Communication Manager, has stated in writing “....we would create a project web site for this to keep people informed before and during the project.” See the Public Involvement Plan on the CD. Coordinate with Chris Ouellette and the WisDOT Project Manager to have a web site created for this project.
- Notify local governments, agencies, businesses, organizations and residents that will be significantly affected by the project about the highway closure and other project work as appropriate when notification by the contractor is not required by the contract. A list of adjacent property owners, affected businesses not adjacent to the project, and local officials is on the CD in the PropertyOwners_AffectedInterests folder. The list of adjacent property owners was updated in February 2015 by reviewing the Washburn County GIS Property Listings. The persons named with affected businesses not adjacent to the project attended public information meetings, and the local officials listed either attended or were notified of public information meetings for the project. The phone numbers shown on the list were obtained from public information meeting attendance rosters or were obtained by other means as needed during the design process.

By: Greg Pesola
WisDOT DTSD NW Region Superior Office Project Development Section
(715) 392-7998
March 24, 2015