Comment Report: All Comments
Project: Fargo Moorhead Metro - Reach 4 Design by MVK
Review: PER - DQC Review
Displaying 23 comments for the criteria specified in this report.

Id	Discipline	DocType	Spec	Sheet	Detail
4763917	Hydraulics	Plans	n/a'	21	n/a

Comment Classification: N/A

USBR Monograph 25 and Research Report 24 specify conditions that require the culvert to be vented to the atmosphere. The plans do not indicate the inclusion of venting. Has a detailed analysis been completed that proves venting is not required?

Submitted By: Robert Gambill (901 544-4091). Submitted On: Aug 07 2012

1-0 Evaluation **Concurred**
Venting of the culverts was not initially considered. Provisions for the venting of both conduits will be provided.

Submitted By: Raymond Wilson (601-631-5738) Submitted On: Aug 15 2012

1-1 Backcheck Recommendation **Open Comment**
Answer accepted. Comment remains open until review of revised document.

Submitted By: Robert Gambill (901 544-4091) Submitted On: Aug 22 2012

1-2 Backcheck Recommendation **Close Comment**
Issue resolved.

Submitted By: Robert Gambill (901 544-4091) Submitted On: Oct 23 2012
Current Comment Status: **Comment Closed**

4763934	Hydraulics	Plans	n/a'	21	n/a

Comment Classification: N/A

Is there any guidance , or examples of the addition of flap gates to this type of impact basin?

Submitted By: Robert Gambill (901 544-4091). Submitted On: Aug 07 2012

1-0 Evaluation **For Information Only**

We have so far been unable to find any specific guidance or examples of flap gates associated with the proposed impact basin type. However we believe the gates will not diminish the effectiveness of the impact basin at higher flows for two reasons. (1) The gate opening angle at the higher flows will probably result in the flow impacting the baffles nearly the same as it would with no gates and (2) the section of the impact basin between the pipe outlet and the baffle will be nearly full of water, with the end of the pipe submerged, at higher flows. Also, at lower flows the flap gate will act as an energy dissipater by deflecting the flow against the floor of the basin. The main concerns related to the flap gates are (1) clearance between the maximum swing radius of the gates and the baffles, (2) flow interference affecting the operation of the gates resulting from side flow, and (3) access to the gates for maintenance. All of those concerns will be addressed in the final design.

Submitted By: Raymond Wilson (601-631-5738) Submitted On: Aug 15 2012

1-1 Backcheck Recommendation **Close Comment**

Answer accepted.

Submitted By: Robert Gambill (901 544-4091) Submitted On: Aug 22 2012

Current Comment Status: **Comment Closed**

4766003 Geotechnical Design Memorandum or Report n/a' n/a n/a

Comment Classification: N/A

STA 516+50 Stability Analyses: GSE = 889, Action Level for 10' BGS boundary condition in SlopeW is 875. The value in SlopeW should be 879 (889 – 10 = 879).

Submitted By: David Thompson (901 544-3381). Submitted On: Aug 08 2012

1-0 Evaluation **Concurred**

Concur. The boundary condition will be changed to 879 ft.

Submitted By: Heather Sibley (601-631-5917) Submitted On: Aug 08 2012

1-1 Backcheck Recommendation **Close Comment**

A review of the slope stability files revealed that the boundary condition is now correct.

Submitted By: David Thompson (901 544-3381) Submitted On: Aug 16 2012

Current Comment Status: **Comment Closed**

4766005 Geotechnical Design Memorandum or Report n/a' n/a n/a

Comment Classification: N/A

STA 516+50 Stability Analyses: Top of Argusville in SlopeW is 845.26. This value does not agree with the stratigraphy drawing in ProjectWise. Also, the top of Sherack is shown as 882.06 which does not agree with stratigraphy drawing in ProjectWise. The values do agree with the stratigraphy drawing in the Reach 4 PER. Kurt Heckendorf advised that there may be an error in the ProjectWise drawing. This will have to be resolved.

Submitted By: David Thompson (901 544-3381). Submitted On: Aug 08 2012

1-0 Evaluation **Concurred**
Awaiting guidance from MVP.

Submitted By: Heather Sibley (601-631-5917) Submitted On: Aug 08 2012

1-1 Backcheck Recommendation **Close Comment**
As noted in the revised Geotechnical Appendix D, additional analyses may be required if MVP revises the reach stratigraphy.

Submitted By: David Thompson (901 544-3381) Submitted On: Aug 22 2012
Current Comment Status: **Comment Closed**

4766007 Geotechnical Design Memorandum or Report n/a' n/a n/a
Comment Classification: N/A

. STA 331+60 Stability Analyses: Top of Argusville in SlopeW is 838.75. This value does not agree with the stratigraphy drawing in ProjectWise. The value does agree with the stratigraphy drawing in the Reach 4 PER. Kurt Heckendorf advised that there may be an error in the ProjectWise drawing. This will have to be resolved.

Submitted By: David Thompson (901 544-3381). Submitted On: Aug 08 2012

1-0 Evaluation **Concurred**
Awaiting guidance from MVP.

Submitted By: Heather Sibley (601-631-5917) Submitted On: Aug 08 2012

1-1 Backcheck Recommendation **Close Comment**
As noted in the revised Geotechnical Appendix D, additional analyses may be required if MVP revises the reach stratigraphy.

Submitted By: David Thompson (901 544-3381) Submitted On: Aug 22 2012
Current Comment Status: **Comment Closed**

4766009 Geotechnical Design Memorandum or Report n/a' n/a n/a
Comment Classification: N/A

The font in the soil properties box on several of the SeepW and SlopeW plates in Attachment 4 is to small to read. An example is Reach 4, Section 1, STA 331+60, Case 2 with 22 foot EMB height.

Submitted By: David Thompson (901 544-3381). Submitted On: Aug 08 2012

1-0 Evaluation **Concurred**
Concur. Font size will be increased in the soil properties boxes.

Submitted By: Heather Sibley (601-631-5917) Submitted On: Aug 08 2012

1-1 Backcheck Recommendation **Close Comment**
The soil data can now easily be read.

Submitted By: David Thompson (901 544-3381) Submitted On: Aug 22 2012
Current Comment Status: **Comment Closed**

4766010 Geotechnical Design Memorandum or Report n/a' n/a n/a
Comment Classification: N/A

Table of Reach 4 Stability Results: FS for section 1, 331+60, Config 2B, 65' offset, 23' height, case 4, global is shown as 1.332. Plate shows value as 1.34.

Submitted By: David Thompson (901 544-3381). Submitted On: Aug 08 2012

1-0 Evaluation **Concurred**
Concur. Factor of safety in table will be revised to match the plate.

Submitted By: Heather Sibley (601-631-5917) Submitted On: Aug 08 2012

1-1 Backcheck Recommendation **Close Comment**
The factor of safety is correct.

Submitted By: David Thompson (901 544-3381) Submitted On: Aug 17 2012
Current Comment Status: **Comment Closed**

4766011 Geotechnical Design Memorandum or Report n/a' n/a n/a
Comment Classification: N/A

Drawing B301 (Stratigraphy): No line between Unit "A" Till and "Soft Till". The label "Oxidized Brenna" is in the Brenna stratum.

Submitted By: David Thompson (901 544-3381). Submitted On: Aug 08 2012

1-0 Evaluation **Concurred**
Concur. Line will be drawn between the Till layers and Oxidized Brenna label will be moved up.

Submitted By: Heather Sibley (601-631-5917) Submitted On: Aug 08 2012

1-1 Backcheck Recommendation **Close Comment**
Review of the drawing indicated that it is now correct.

Submitted By: David Thompson (901 544-3381) Submitted On: Aug 16 2012
Current Comment Status: **Comment Closed**

4766013 Geotechnical Design Memorandum or Report n/a' n/a n/a

Comment Classification: N/A

Drawing B306 (Stratigraphy): The label "Oxidized Brenna" is in the Brenna stratum. The label "Sherack" is in the Oxidized Brenna stratum.

Submitted By: David Thompson (901 544-3381). Submitted On: Aug 08 2012

1-0 Evaluation **Concurred**

Concur. Labels will be moved up to fall in correct stratums.

Submitted By: Heather Sibley (601-631-5917) Submitted On: Aug 08 2012

1-1 Backcheck Recommendation **Close Comment**

Review of the drawing indicated that it is now correct.

Submitted By: David Thompson (901 544-3381) Submitted On: Aug 16 2012

Current Comment Status: **Comment Closed**

4766016 Geotechnical Design Memorandum or Report n/a' n/a n/a

Comment Classification: N/A

Soil Exploration Map: The Reach 4/Reach 5 boundary needs to be moved about 5,000 feet downstream.

Submitted By: David Thompson (901 544-3381). Submitted On: Aug 08 2012

1-0 Evaluation **Concurred**

Concur. We were unable to open and modify the map package file. We hope to get this issue resolved so that we can change the reach limits and add additional new hand augers to the map by the next review.

Submitted By: Heather Sibley (601-631-5917) Submitted On: Aug 08 2012

1-1 Backcheck Recommendation **Close Comment**

The soil exploration map has been corrected.

Submitted By: David Thompson (901 544-3381) Submitted On: Aug 22 2012

Current Comment Status: **Comment Closed**

4766017 Geotechnical Design Memorandum or Report n/a' n/a n/a

Comment Classification: N/A

. Boring 12-164M is shown on the Soil Exploration Map but a stick log for the boring is not shown on the stratigraphy plates.

Submitted By: David Thompson (901 544-3381). Submitted On: Aug 08 2012

1-0 Evaluation **For Information Only**
Boring 12-164M falls right in line with borings 10-73M and 10-72M so was left off for clarity. Borings 73 and 72 are closer to centerline so they were presented. MVP has stated this was the philosopy they used in Reach 1.

Submitted By: Heather Sibley (601-631-5917) Submitted On: Aug 08 2012

1-1 Backcheck Recommendation **Close Comment**
That is satisfactory.

Submitted By: David Thompson (901 544-3381) Submitted On: Aug 16 2012
Current Comment Status: **Comment Closed**

4766019 Geotechnical Design Memorandum or Report n/a' n/a n/a
Comment Classification: N/A

Geotechnical Appendix D, paragraph D.3.1: The Soil Exploration Map indicates 11 machine borings instead of 8.

Submitted By: David Thompson (901 544-3381). Submitted On: Aug 08 2012

1-0 Evaluation **Concurred**
Concur. Paragraph D.3.1 will be updated to say 11 machine borings instead of 8.

Submitted By: Heather Sibley (601-631-5917) Submitted On: Aug 08 2012

1-1 Backcheck Recommendation **Close Comment**
11 machine borings are indicated.

Submitted By: David Thompson (901 544-3381) Submitted On: Aug 17 2012
Current Comment Status: **Comment Closed**

4766020 Geotechnical Design Memorandum or Report n/a' n/a n/a
Comment Classification: N/A

Geotechnical Appendix D, Table D-2: All required factors of safety are not shown. For Case 2 add EMB Global Check, EMB Left Slope Undrained, and EMB Left Slope Drained. For Case 3 add EMB Global Check. For Case 4 add EMB Global Check and remove Undrained.

Submitted By: David Thompson (901 544-3381). Submitted On: Aug 08 2012

1-0 Evaluation **Concurred**
Concur. Some factors of safety were left off of the tables. Additional guidance was provided by MVP on 8-8-12 and will be used in determining all factors of safety to present in the tables.

Submitted By: Heather Sibley (601-631-5917) Submitted On: Aug 08 2012

1-1 Backcheck Recommendation **Close Comment**
All required factors of safety are shown.

Submitted By: David Thompson (901 544-3381) Submitted On: Aug 17 2012
Current Comment Status: **Comment Closed**

4766022 Geotechnical Design Memorandum or Report n/a' n/a n/a
Comment Classification: N/A

Geotechnical Appendix D, Table D-3: All required factors of safety are not shown. For Case 2 add EMB Global Check, EMB Left Slope Undrained, and EMB Left Slope Drained. For Case 3 add EMB Global Check. For Case 4 add EMB Global Check and remove Undrained.

Submitted By: David Thompson (901 544-3381). Submitted On: Aug 08 2012

1-0 Evaluation **Concurred**
Concur. Some factors of safety were left off of the tables. Additional guidance was provided by MVP on 8-8-12 and will be used in determining all factors of safety to present in the tables.

Submitted By: Heather Sibley (601-631-5917) Submitted On: Aug 08 2012

1-1 Backcheck Recommendation **Close Comment**
Previous Table D-3 has been added to new Table D-2 and all required factors of safety are shown.

Submitted By: David Thompson (901 544-3381) Submitted On: Aug 17 2012
Current Comment Status: **Comment Closed**

4766023 Geotechnical Design Memorandum or Report n/a' n/a n/a
Comment Classification: N/A

Geotechnical Appendix D, paragraph D.4.1.2 (3): The slope facing the channel from the inside toe of the stepped EMB to the inside top of the stepped EMB is 1V:6H.

Submitted By: David Thompson (901 544-3381). Submitted On: Aug 08 2012

1-0 Evaluation **Concurred**
Concur. Will add sentence "The slope facing the channel from the inside toe of the stepped EMB to the inside top of the stepped EMB is 1V:6H." to paragraph D.4.1.2

Submitted By: Heather Sibley (601-631-5917) Submitted On: Aug 08 2012

1-1 Backcheck Recommendation **Close Comment**
Slope shown as 1V:6H

Submitted By: David Thompson (901 544-3381) Submitted On: Aug 17 2012
Current Comment Status: **Comment Closed**

4766026 Geotechnical Design Memorandum or Report n/a' n/a n/a
Comment Classification: N/A

Geotechnical Appendix D, Table D-4: All required factors of safety are not shown

Submitted By: David Thompson (901 544-3381). Submitted On: Aug 08 2012

1-0 Evaluation **Concurred**
Concur. Some factors of safety were left off of the tables. Additional guidance was provided by MVP on 8-8-12 and will be used in determining all factors of safety to present in the tables.

Submitted By: Heather Sibley (601-631-5917) Submitted On: Aug 08 2012

1-1 Backcheck Recommendation **Close Comment**
Old Table D-4 consolidated with new Table D-2. All required factors of safety are shown.

Submitted By: David Thompson (901 544-3381) Submitted On: Aug 17 2012
Current Comment Status: **Comment Closed**

4766028 Geotechnical Design Memorandum or Report n/a' n/a n/a
Comment Classification: N/A

Geotechnical Appendix D, paragraph following Table D-4: The slope facing the channel from the inside toe of the stepped EMB to the inside top of the stepped EMB is 1V:6H.

Submitted By: David Thompson (901 544-3381). Submitted On: Aug 08 2012

1-0 Evaluation **Concurred**
Concur. Will add sentence "The slope facing the channel from the inside toe of the stepped EMB to the inside top of the stepped EMB is 1V:6H." to paragraph D.4.1.2

Submitted By: Heather Sibley (601-631-5917) Submitted On: Aug 08 2012

1-1 Backcheck Recommendation **Close Comment**
slope shown as 1V:6H

Submitted By: David Thompson (901 544-3381) Submitted On: Aug 17 2012
Current Comment Status: **Comment Closed**

4769818 Environmental Other n/a' n/a n/a
Comment Classification: N/A
Coordinating Discipline(s): Project Management

There are no technical comments. Editorial comments have been provided to the PM and Environmental PDT member.

Submitted By: Randall Devendorf (651-290-5267). Submitted On: Aug 09 2012

Revised Aug 10 2012.

1-0 Evaluation **Concurred**
Your comment has been noted.

Submitted By: Raymond Wilson (601-631-5738) Submitted On: Aug 15 2012
Backcheck not conducted
Current Comment Status: **Comment Open**

4775504 Civil Preliminary Design Analysis n/a' n/a n/a
Comment Classification: N/A

In the Beginning Paragraphs of Section 2.1, suggest adding a sentence stating the project flows from south to north. The second paragraph tells where the ties are but a general sentence on the direction of flow would help the introduction. Maybe a flow arrow on Figure 1 would help too.

Submitted By: Shane Callahan ((901) 544-3665). Submitted On: Aug 13 2012

1-0 Evaluation **Concurred**
The proposed change will be incorporated into the 65% submittal.

Submitted By: Jonathan Boone (601-631-5502) Submitted On: Aug 17 2012
Backcheck not conducted
Current Comment Status: **Comment Open**

4775506 Civil Preliminary Design Analysis n/a' n/a n/a
Comment Classification: N/A

Section 1.5 – Update list of reference documents for Reach 4.

Submitted By: Shane Callahan ((901) 544-3665). Submitted On: Aug 13 2012

1-0 Evaluation **Concurred**
Updated references will be included in the 65% submittal.

Submitted By: Jonathan Boone (601-631-5502) Submitted On: Aug 17 2012
Backcheck not conducted
Current Comment Status: **Comment Open**

4775507 Civil Preliminary Design Analysis n/a' n/a n/a

Comment Classification: N/A

Section 2.2 – Grade control structures spaced at 5000' apart are listed as part of the scope of work in 2.2. This requirement has been eliminated and should be deleted from the current scope of work. This is mentioned in 5.2.4 also but in this section it appears that the PER states that further design is needed to complete the needed grade control design.

Submitted By: Shane Callahan ((901) 544-3665). Submitted On: Aug 13 2012

1-0 Evaluation **Concurred**

The vertical grade control requirment every 5000 feet will be eliminated, however vertical grade control at bridges and drainage structures will remain.

Submitted By: Jonathan Boone (601-631-5502) Submitted On: Aug 17 2012

Backcheck not conducted

Current Comment Status: **Comment Open**

4775508 Civil Preliminary Design Analysis n/a' n/a n/a

Comment Classification: N/A

Section 2.2.4 – Will there be a different channel design section under the new bridge? Will all the bridges span the entire design cross section?

Submitted By: Shane Callahan ((901) 544-3665). Submitted On: Aug 13 2012

1-0 Evaluation **For Information Only**

The 35% channel design under the bridge indicated the channel design will be different. The bridge will span the entire design cross section.

Submitted By: Jonathan Boone (601-631-5502) Submitted On: Aug 17 2012

Backcheck not conducted

Current Comment Status: **Comment Open**

4775511 Structural Preliminary Design Analysis n/a' n/a n/a

Comment Classification: N/A

Section 8.5 – It is not clear when the final decision of the headwall alternative was selected? Is the much smaller inlet of the Flared end section a problem. What makes it smaller?

Submitted By: Shane Callahan ((901) 544-3665). Submitted On: Aug 13 2012

1-0 Evaluation **For Information Only**

The PDT and the local sponsor got together and decided to go with the headwall alternative. I will make that more clear when this decision was made. The flared end sections would be precast and would require less concrete to construct. However, the headwall alternative was chosen to allow for a larger trash screen that will reduce the

potential of flooding from blocked inlets.

Submitted By: Marneshia Richard (601-631-7055) Submitted On: Aug 16 2012
Backcheck not conducted
Current Comment Status: **Comment Open**