From: Teresa Barnes
To: "Kyle J. Wrentmore"
Cc: Melissa A. Miller
Subject: RE: Burger King - Horseshoe Bend Rd.
Date: Wednesday, July 18, 2018 11:55:31 AM

Kyle and Melissa

I have reviewed the updated drawings and calculations and have the following comments:

1. The calculated 100-year ponding elevation is stated to be 753.65; however, structures 10, 11 and 15 have grate elevations below this. Therefore, water will be exiting these structures – has this volume been accounted for? Options would be to increase the size of the basin to lower the elevation or raise the structure grate elevations. Please note that it is not permissible to utilize the parking lot as ponding/storage for detention purposes.
2. The N-value used to calculate the depth of water within the re-routed channel is 0.015. Per the ODOT Hydraulic Manual, the minimum N-value for rip rap is 0.023 – with a normal value of 0.033. If the higher N-value is used – what is the water surface elevation within the re-routed channel compared to the existing water surface elevation? Would grouting the rip-rap for the first 50-feet of the channel be possible – this would allow for the lower N-value to be used. Again, we need to ensure that the new channel does not alter the existing water surface elevation on the property to the south.

Let me know if you have any questions.
THANKS

Teresa

Teresa K. Barnes, P.E., CPESC
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From: Kyle J. Wrentmore [mailto:KWrentmore@manniksmithgroup.com]
Sent: Friday, June 29, 2018 4:59 PM
To: Teresa Barnes
Cc: Melissa A. Miller
Subject: RE: Burger King - Horseshoe Bend Rd.

Teresa,

The following documents are attached addressing the comments mentioned below.

- Revised construction site plans
- Stormwater management report
- Disposition of comments
- Tele-vac email regarding water quality structure maintenance.

Please let us know if you need anything further.

Thank you,

Kyle J. Wrentmore, EI
Civil Engineer
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From: Teresa Barnes <BarnesT@bceo.org>
Sent: Friday, June 15, 2018 4:42 PM
To: Kyle J. Wrentmore <KWrentmore@manniksmithgroup.com>
Cc: Melissa A. Miller <MAMiller@manniksmithgroup.com>

Subject: RE: Burger King - Horseshoe Bend Rd.

Kyle

I sincerely apologize for the delay – there has just been a massive rush of submittals – and I am getting through things as fast as I possibly can.

Below are comments for the proposed Burger King

1. The proposed entrance of Horseshoe Bend indicates the painting of a "straight" arrow in; however, the traffic is not permitted to go straight – therefore, this arrow should be changed to a "right-only" arrow
2. "Do Not Enter" signs should also be added to the plan – not just the painting on the pavement.
3. Is there a cross-access agreement with the property to the west along SR 4? Will a cross-access easement be provided through this site? How does this proposed access point align with the existing improvments on the west property? Why is the pavement stopped short of the property line – if this stops short – who is responsible for completing the pavement in the future? Ensure that the grading of this area allows for the water to get to the nearby catch basin, the proposed sidewalk appears high.
4. The proposed culvert under the sidewalk will be required to a 12-inch diameter pipe minimum.
5. Sheet C300, lists the Existing Storm Structure schedule – using numbers to identify the structures; #6 invert appears to be below the invert for #5 which is downstream – please verify and revise accordingly; and where is structure #7
6. The proposed storm structures are also labeled with numbers – this is very confusing with the existing storm structures; please consider different labeling. Reference to the proposed structures should be included with the existing structure schedule.
7. The proposed water quality structure is proposed to be installed approximately 40-feet from pavement. The specified structure will require maintenance – usually performed using a vactor truck – how will the truck be able to access this structure?

8. Include invert information on the orifice plate detail for structure #3 on sheet C301.
9. The proposed/required silt fence must be placed on the Burger King property (not on the property to the south)
10. Page 64 of the storm water report indicates that the 100-year water elevation within the relocated ditch will reach 753.68; however, on sheet C300, the 100-year elevation is marked well below that elevation; please verify and revise accordingly.

The placement of a private drainage easement over the re-routed drainage easement is a possibility – however, it really does not alter anything – it is a natural waterway that is required to be maintained by the property owner – therefore, the inclusion of a drainage easement would not be "required" by BCEO.

Let me know if you have any questions.
THANKS
Teresa

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From: Kyle J. Wrentmore [mailto:KWrentmore@manniksmithgroup.com]
Sent: Wednesday, May 23, 2018 11:37 AM
To: Teresa Barnes
Cc: Melissa A. Miller
Subject: Burger King - Horseshoe Bend Rd.

Teresa,

Per our phone conversation last Friday, attached is a current set of site construction drawings and a copy of the Stormwater management report for engineering review. Will the proposed re-route of the ditch along the southwest portion of the site require a drainage easement? Refer to sheet C300.

Please let us know if you need anything further.

Thank you,

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