

From: [Josh Wheeler](#)
To: [Christina Robertson-Gardiner](#)
Subject: FW: Response to City Stormwater Questions from Josh Wheeler and John Lewis
Date: Tuesday, January 7, 2020 9:50:01 AM
Attachments: [image008.png](#)
[image009.png](#)
[image010.png](#)
[image011.png](#)
[image001.png](#)

Josh Wheeler, PE
Assistant City Engineer
Public Works Department
City of Oregon City
Email: jwheeler@orc.org
503.496.1548 Direct dial

From: Brian Lee <brianl@paceengrs.com>
Sent: Monday, January 6, 2020 1:40 PM
To: Josh Wheeler <jwheeler@orc.org>
Cc: Jamison Luther <jamisonluther@gmail.com>; David Poulson <davep@paceengrs.com>; Erick Staley <estaley@geodesigninc.com>
Subject: Response to City Stormwater Questions from Josh Wheeler and John Lewis

Josh,

See my answers to your storm water questions below. We request that these be entered into the record:

1. The existing pond (and previously approved stormwater management facility) is significantly deteriorated due to ground movements and deferred maintenance. From our recent in-field observations only the downhill berm remains. To be consistent with Geotechnical recommendations to dewater the more regional slide affected area, the existing pond will not be restored or reused. The proposed stormwater management system, as shown and detailed on PACE's submitted drawings, is placed northwest and significantly away from the originally constructed pond and stormwater management facility. This proposed system is designed to prevent subterranean infiltration while providing the detention function required per Oregon City stormwater design standards. Please see PACE's drawings that show the non-infiltration detention stormceptor pipes located at the lower access road area. This location was selected in consideration of past documented ground movement. Only the discharge pipe will extend downhill to discharge into the unnamed creek tributary. Disturbance/ Improvements to the existing downhill (lower) berm will be limited to what is required to reestablish a discharge piping system and its associated outflow energy dissipation provisions.
2. The discharge pipe is connected to a control structure that has a orifice plate sized to release at the code limited rate (see PACE's drawings and preliminary storm report).
 - a. We are not expecting to impact any trees as we are following the exact same route as

- the previous pipe.
- b. According to GeoDesign, they reviewed our design, made a few suggestions (such as avoiding the historic ground movement areas with the detention system) and are in agreement with the design and construction including excavation.
 - c. Yes, the discharge hydraulic energies are quantifiable and a (rip-rap) energy dissipation system has been designed accordingly.
 - d. No, we will not be impacting more than 50 CY which is the current earthwork volume threshold above which a DSL permit is required.
3. The dewatering system outfall discharge will be conveyed by underground tight lined piping. It will connect to the new stormwater system downstream of the new detention flow control manhole. (please see PACE's drawings)
- a. Downstream of the underground storm management system.
 - b. No, not in quantity because the ground water (or base creek flow) is hydraulically and hydrologically connected to the creek – i.e. it contributes to the creek flow rate naturally. PACE recognizes that the dewatering well pump system is concentrating that naturally contributing flow, thus the need to provide an engineering design for (riprap) energy dissipation. Furthermore, the discharge from of the dewatering wells will not coincide with the erosive energies from peak flow stormwater discharges (which are infrequent events – 2,10,25,100 yr frequencies) and thus will not contributed to an increase in peak (erosive) stream flows.
 - i. The erosion potential will be mitigated by the riprap energy dissipator.
4. No, the lowering of the groundwater level will not alter the volume of rainfall infiltration that surface plants use. Nor will the dewatering increase the infiltration rate through the soil as the soil itself is the most restrictive attribute that controls the rate of infiltration.
5. Yes, the upper campus storm water system is functioning and will be connected to the lower campus storm water system using a flexible connection as shown in the submitted drawings.
6. Yes, all the stormwater is being released on the owners property.

Respectfully submitted,



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Our Lake Oswego office has moved! Please note our new location.

From: Josh Wheeler <jwheeler@orccity.org>

Sent: Thursday, January 2, 2020 10:50 AM

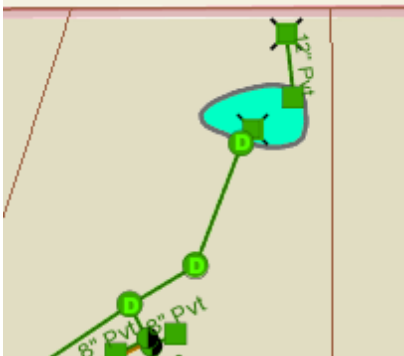
To: Brian Lee <brianl@paceengrs.com>

Subject: RE: Response to City Questions from Josh Wheeler and John Lewis

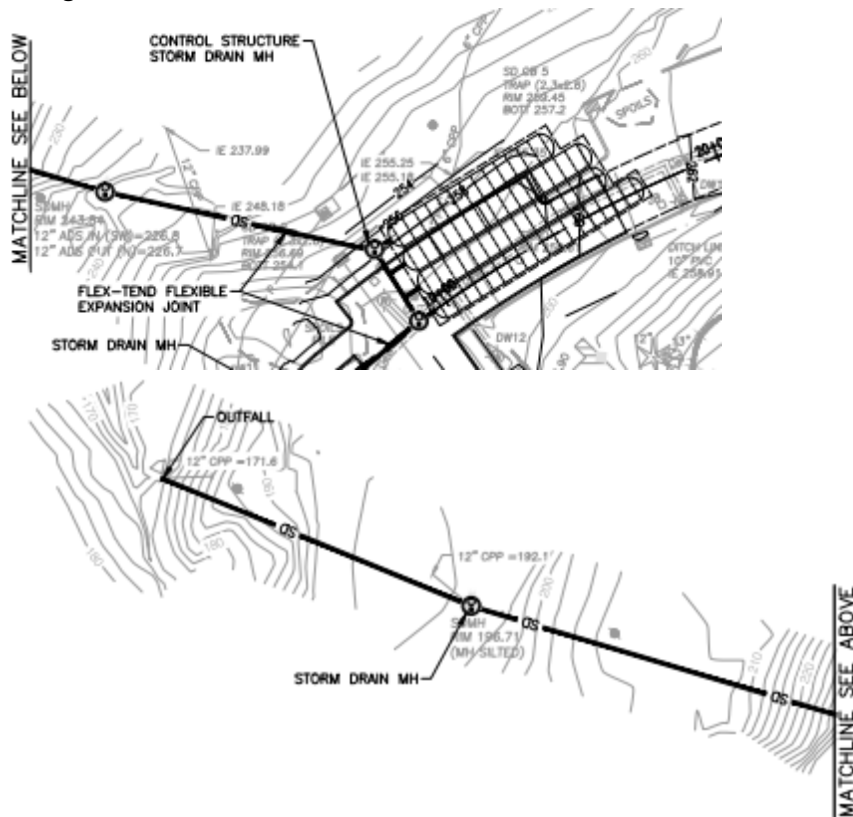
Hello Brian,

We are finishing the staff report and have the following additional questions :

1. What is being proposed with the existing stormwater management area? If it is being abandoned, how is it being abandoned?



2. How will the new pipe release stormwater from the stormwater management system to the existing stream?



- a. Will you be impacting any trees?
 - b. Is the ground stable to excavate?
 - c. Will the outfall require riprap?
 - d. Will the outfall require a DSL permit to connect to a stream?
2. How will the dewatering system connect to the storm system?
 - a. Will it connect prior to or after the underground storm management system?
 - b. If after, will the outlet pipe be sending more water to the stream than it previously experienced?

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